ROSCOMMON COUNTY
COMMUNITY WILDFIRE PROTECTION PLAN

August 2016

ROSCOMMON COUNTY
COMMUNITY WILDFIRE PROTECTION PLAN

Prepared by:
Roscommon County Wildfire Committee
Michigan Department of Natural Resources
East Michigan Council of Governments

The preparation of this plan was funded by:
Michigan Department of Natural Resources

The Roscommon County Community Wildfire Protection Plan (CWPP) was developed under the planning guidance of the Healthy Forest Restoration Act of 2003. This CWPP represents the efforts and cooperation of the local governments, a number of agencies and organizations all located in Roscommon County. The CWPP also represents the commitment of people working together to improve the preparedness for wildfire events in Roscommon County, while reducing the factors of risk. The CWPP will support and complement the Roscommon County Hazard Mitigation Plan.

Robert Schneider — 8-24-16

Robert Schneider, Chairman
Roscommon County Board of Commissioners — Date

Bill O'Neill — 8/4/16

Bill O'Neill, State Forester
Michigan Department of Natural Resources — Date

Tim Mepham — 8/6/16

Tim Mepham, President
Roscommon County Fire Chiefs Association — Date

Leslie Auriemmo — 8/2/16

Leslie Auriemmo
Forest Supervisor
Huron-Manistee National Forest — Date

TABLE OF CONTENTS

CHAPTER 1
INTRODUCTION/PLANNING PROCESS

Roscommon County is located in the mid-section of the lower peninsula of Michigan. The County is bordered on the north by Crawford County, on the west by Missaukee County, on the south by Gladwin and Clare Counties, and on the east by Ogemaw County. According to the U.S. Census, the County covers an area of 370,951 acres or about 580 square miles. Using the 2010 U.S. Census population figure of 24,449, the population density of the county is roughly 42 people per square mile. The County consists of eleven townships and one village. The county seat is located in the Village of Roscommon.

Roscommon County is considered to be in a high risk area for wildfires, as there are high risk fuels such as jack pine, red pine, and oak forests found throughout the County. This has resulted in many high value infrastructure, including residential structures, located in the Wildland Urban Interface, in need of protection from wildfires. The U.S. Fish & Wildland Service defines the Wildland Urban Interface (WUI) as, "the zone where natural areas and development meet." The WUI has gained increasing importance as more Americans build homes in rural settings adjacent to public lands.

Purpose

The purpose of the Roscommon County Community Wildfire Protection Plan is to protect human life and reduce property loss due to catastrophic wildland fire in Roscommon County (the County). The Community Wildfire Protection Plan (CWPP); identifies and prioritizes WUI areas within the County; recommends strategies for hazardous fuels reduction treatments; recommends local planning and zoning Firewise strategies communities can implement; and outlines Firewise measures for mitigating wildfire impacts to structures/areas throughout the County. The CWPP is a supporting plan to the Roscommon County Hazard Management Plan (Hazard Analysis and Hazard Mitigation Plan), which was approved by FEMA in 2007, and is currently being updated.

Wildfire mitigation can be defined as those actions taken to reduce the likelihood of loss due to wildfire. Effective wildfire mitigation can be accomplished through a variety of methods including managing wildland fuels, creating strategic fuel breaks, utilizing fire-resistant building materials and creating defensible space landscaping for homes, and enhancing emergency preparedness and response capabilities, upgrading current infrastructure, and developing programs that foster community awareness and neighborhood activism.

It is critical that communities and land-owners both recognize the importance of this document and strive towards an effective implementation of the CWPP. Community leaders can assist by promoting and adopting the recommendations and strategies of the CWPP, many of which are based on the National Fire Protection Association's (NFPA) Firewise Program. The NFPA Firewise Communities' program teaches people how to adapt to living with wildfire and encourages neighbors to work together and take action to prevent losses. Firewise strategies include:

- Firewise education programs that target residents living in Wildland Urban Interface (WUI) areas;
- development guidelines that promote growth in a sustainable, hazard-free manner by incorporating Fire Mitigation Strategies into community zoning ordinances, land use planning, and building code standards.

Planning Context

The National Fire Plan developed in 2001, and the Healthy Forests Restoration Act enacted in 2003 has enabled hundreds of communities across the US to develop community fire plans, engaged in Firewise activities, and take action at a community level to reduce the risk to wildfire.

The benefits of having a CWPP include access to funding resources such as the National Fire Plan, which provides millions of dollars annually to help states and communities with community fire planning, hazardous fuels reduction, and wildfire prevention across the nation. In addition, the United States Forest Service and the Bureau of Land Management may be able to expedite the implementation of fuel treatments identified in a Community Wildfire Protection Plan though alternative environmental compliance options offered under the Health Forests Restoration Act.

The purpose of the Healthy Forest Restoration Act of 2003 (HFRA) is to reduce the risk of wildfires while upholding environmental standards. It builds on existing efforts to restore healthy forest conditions near communities and essential community infrastructure by authorizing expedited environmental assessment, administrative appeals, and legal review for hazardous fuels projects on federal land. The Healthy Forest Restoration Act also defines a Community Wildfire Protection Plan and emphasizes the need for federal agencies to work collaboratively with local communities, States, tribes, and landowners in developing hazardous fuel reduction projects as identified by a Community Wildfire Protection Plan.

The minimum requirements for a Community Wildfire Protection Plan (CWPP) as described in the Healthy Forest Restoration Act of 2003 (HFRA) are:

1. Collaboration: A CWPP must be collaboratively developed by local and state government representatives, in consultation with federal agencies and other interested parties.
2. Prioritized Fuel Reduction: A Community Wildfire Protection Plan must identify and prioritize areas for hazardous fuel reduction treatments and recommend the types and methods of treatment that will protect one or more at-risk communities and essential infrastructure.
3. Treatment of Structural Ignitability: A Community Wildfire Protection Plan must recommend measures that homeowners and communities can take to reduce the ignitability of structures throughout the area addressed by the plan.

Planning Process

The Roscommon County Emergency Management office is responsible for protecting against the loss of life and disruptions to the local economy from natural disasters, technical hazards, and civil disruptions/terrorist activities. Ensuring the safety of Roscommon County's residents and visitors while maintaining its economic well-being is a high priority of the County. Roscommon County Emergency Management is working in partnership with government officials at the federal, state, and local levels as well as the private sector, to ensure that the County is better prepared to prevent, protect against, respond to, and recover from any natural disasters, technological incidents, and civil disruptions/terrorist activities.

In December 2014, the Roscommon County Emergency Management Director submitted a grant application to the Michigan Department of Natural Resources' Michigan Communities at Risk program to seek funding to complete a Community Wildfire Protection Plan (CWPP). Funds were approved in January 2015. The East Michigan Council of Governments (EMCOG) was hired to assist in the development of the CWPP.

In addition to the assistance from the MDNR staff, two handbooks were utilized in developing the CWPP, "Preparing a Community Wildfire Protection Plan" (March 2004) and COMMUNITY GUIDE to Preparing and Implementing a Community Wildfire Protection Plan (August 2008). Both handbooks were produced through multiple partners including the Communities Committee, National Association of State Foresters, Society of American Foresters, and the Western Governors' Association. These two documents outline an approach to the creation of a CWPP that engages stakeholders and produces a community-involved plan. The planning process is broken down into steps that produce a comprehensive wildfire protection and response plan. These steps follow a progression in plan development and provide the framework for meetings and meeting content, thus guiding the community input and public feedback aspects of plan creation.

Step One: Convene Decision Makers
This is the initial step in developing the CWPP and involves the creation of a core team representing local government, local fire authorities, and the state fire management agency. This group forms the decision making responsibility and members must agree to the plan's contents.

Step Two: Involve Federal Agencies
Once the core team is formed they will engage local representatives of the USFS, BLM, and other federal agencies to share perspectives and information that are part of the planning process.

Step Three: Engage Interested Parties
The core team effectively engages all interested stakeholders into the planning process, in a manner leading to substantial input from community that represents and reflects the community's priorities. This step also aides in the implementation of the recommended projects.

Step Four: Establish a Community Base Map
The core team and stakeholders use the best available technology combined with local expertise to develop a base map of the community. The base map provides a baseline to assess and make recommendations regarding protection and risk reduction priorities. The base Oceana County CWPP – Introduction 3 map should identify developed areas, critical infrastructure, and provide the basis for the designation of the wildland urban interface.

Step Five: Develop a Community Risk Assessment
The risk assessment helps stakeholders and the core team effectively prioritize areas for treatment and identify the best allocation of resources.

Step Six: Establish Community Hazard Reduction Priorities and Recommendations to Reduce Structural Ignitability
This step provides the basis for essential discussion regarding the results of the fire risk assessment and its impact on local protection and prevention needs. This leads to the prioritization of fuel treatment projects across property boundaries.

Step Seven: Develop Action Plan and Assessment Strategy
This step involves the core team and key community partners in the development of a prioritized actionable list of fire mitigation projects the community wishes to consider.

Step Eight: Finalize the Community Wildfire Protection Plan
Following the collaborative development process of the plan and a brief public comment period, the plan's contents are agreed upon by the core team and supported by the local

unit of government. All comments are considered and changes to the draft are proposed and discussed by the steering committee.

Roscommon County Wildfire Committee

After the award of the grant, the Roscommon County Wildfire Committee (the "Committee") was formed to provide input for the completion of the CWPP. The Committee was made up of representatives from the local governments, local fire authorities, state agencies, and a local interest group. The Committee met multiple times throughout the process and provided information on wildfires/townships, as well as reviewed that information in its completed form. The Committee members are identified below.

Roscommon County Wildfire Committee

TABLE 1.1

Name	Municipality/Agency/Neighborhood Group
Jodi Valentino	Roscommon County Board of Commissioners
Mike Beaty	Roscommon County Emergency Management
Jacob Figley	Michigan Department of Natural Resources
Bryce Avery	Michigan Department of Natural Resources
Julie Crick	Michigan State University-Extension
Vance Stringham	Roscommon 911
Eric Tiepel	Roscommon County Sheriff's Department
Ken Elmore	Markey Township Fire Department
Tim Mepham	Higgins Township Fire Department
Jim Lippert	Gerrish Township Fire Department
Steve Nurse	U.S. Forest Service
Josh Lator	Michigan State Police
Duane Pinkelman	Au Sable River Estates Firewise Community
Bill Ernat	East Michigan Council of Governments

In addition to the Committee, township fire chiefs/representatives, Roscommon County officials, and other state and municipal representatives also attended these public meetings. The first meeting was held in April 2015, with a total of thirteen meetings held in conjunction with the development of the CWPP. Over 25 persons attended one or more of these meetings. The completed CWPP was discussed and approved by the Roscommon County Board of Commissioners on _____, 2016.

The Roscommon County Community Wildfire Protection Plan has been developed in accordance with requirements of HFRA. The CWPP provides information on existing conditions such as population, housing, economic conditions, community services and facilities, and natural

resources. A community risk and vulnerability assessment was used to identify areas that are of highest risk for loss of lives, property, and resource values by the threat of catastrophic fire. The outcome of the assessment is a composite risk ranking for specific geographic areas of the County accompanied by relevant information and maps that can be used to identify appropriate fire mitigation strategies and allocation of resources. Finally, the plan identifies treatment areas and priorities in and around the Wildland Urban Interface areas (WUI). Recommendations and strategies are included in the plan.

CHAPTER 2:
EXISTING CONDITIONS

Natural Features of Roscommon County

Roscommon County is in the mid-section of the lower peninsula of Michigan. The County is bordered on the north by Crawford County, on the west by Missaukee County, on the south by Gladwin and Clare Counties, and on the east by Ogemaw Counties. The County covers an area of 370,951 acres or about 580 square miles. Using the 2000 US Census population figures, the population density of the county is roughly 43.9 people per square mile. The County consists of eleven townships, and one village. The county seat in located in the Village of Roscommon.

The main river in the county is the Muskegon River which flows on the western side of the county north to south eventually into Lake Michigan. Other major waterways are the South Branch Au Sable River, Wolf Creek, Denton Creek, and Bear Creek. Two of the largest inland lakes in Michigan are located in Roscommon County, and they are Higgins Lake and Houghton Lake. Forests, inland waters, and wetlands comprise over 90% of the County's surface area. Agricultural uses account for approximately 1.2% of the area. Also there are many residential areas along the lakeshores of Higgins Lake, Houghton Lake, and Lake St. Helen.

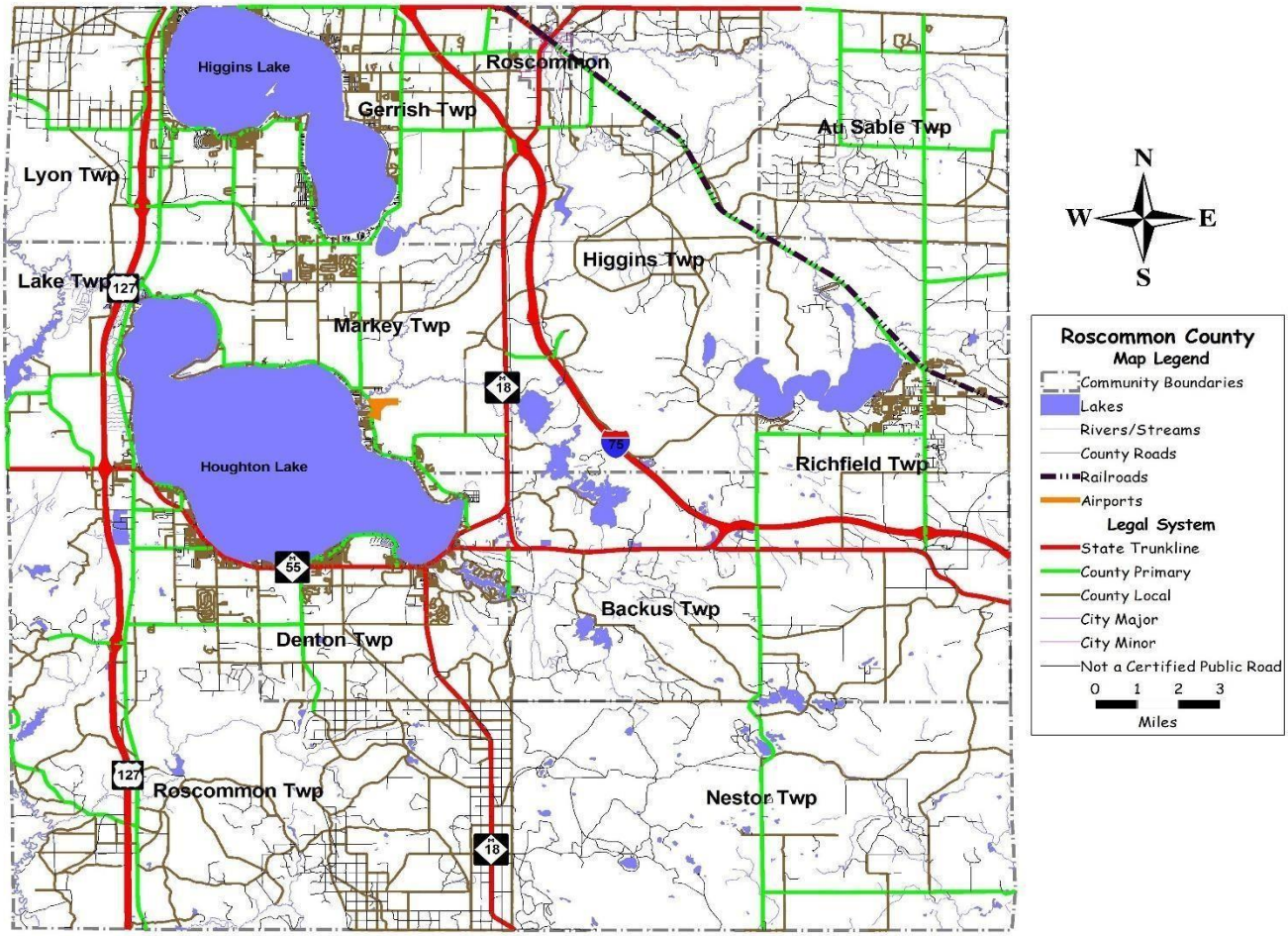
North-south access is provided by I-75 in the northeast and M-18 in the middle portion of the county with US-127 on the western side of the county. East-West access is provided by M-55 through the middle of the county. Business Loop 75 spurs off M-18 through the Village of Roscommon and connects back to Interstate 75.

Roscommon County contains twelve (12) local units of government, including eleven (11) townships, one incorporated village and no cities. The Village of Roscommon is the County seat. These communities are represented by a five (5) member Roscommon County Board of Commissioners which cover as many districts. The 2010 census of the County was 24,449.

Roscommon County is covered by District 7 of the Emergency Management & Homeland Security Division of the Michigan State Police.

ROSCOMMON COUNTY

MAP 2.1



ROSCOMMON COUNTY POPULATION

TABLE 2.1

Municipality	2000 Population	2010 Population	Change in population
Au Sable Twp.	281	255	-9.3%
Backus Twp.	350	330	-5.7%
Denton Twp.	5817	5557	-4.5%
Gerrish Twp.	3072	2993	-2.6%
Higgins Twp.	928	857	-6.3%
Lake Twp.	1351	1215	-10.1%
Lyon Twp.	1462	1370	-6.3%
Markey Twp.	2424	2360	-2.6%
Nester Twp.	263	295	12.2%
Richfield Twp.	4139	3731	-9.9%
Roscommon Twp.	4249	4411	3.8%
Village of Roscommon	1133	1075	-5.1%
TOTAL	25,469	24,449	-4.0%

Source: 2000 and 2010 U.S. Census

Higgins Township population does not include the population of the Village of Roscommon.

PRINCIPAL EMPLOYERS IN ROSCOMMON COUNTY

TABLE 2.2

EMPLOYER	NO. OF EMPLOYEES
Lear Corporation	470
Houghton Lake School District	222
Walmart	185
Roscommon County	180
Kirtland Community College	160
COOR ISD	120
Roscommon School District	119

Home Depot	105
King Nursing & Rehabilitation	62

Source: Region 7B Michigan Works – Top Employers

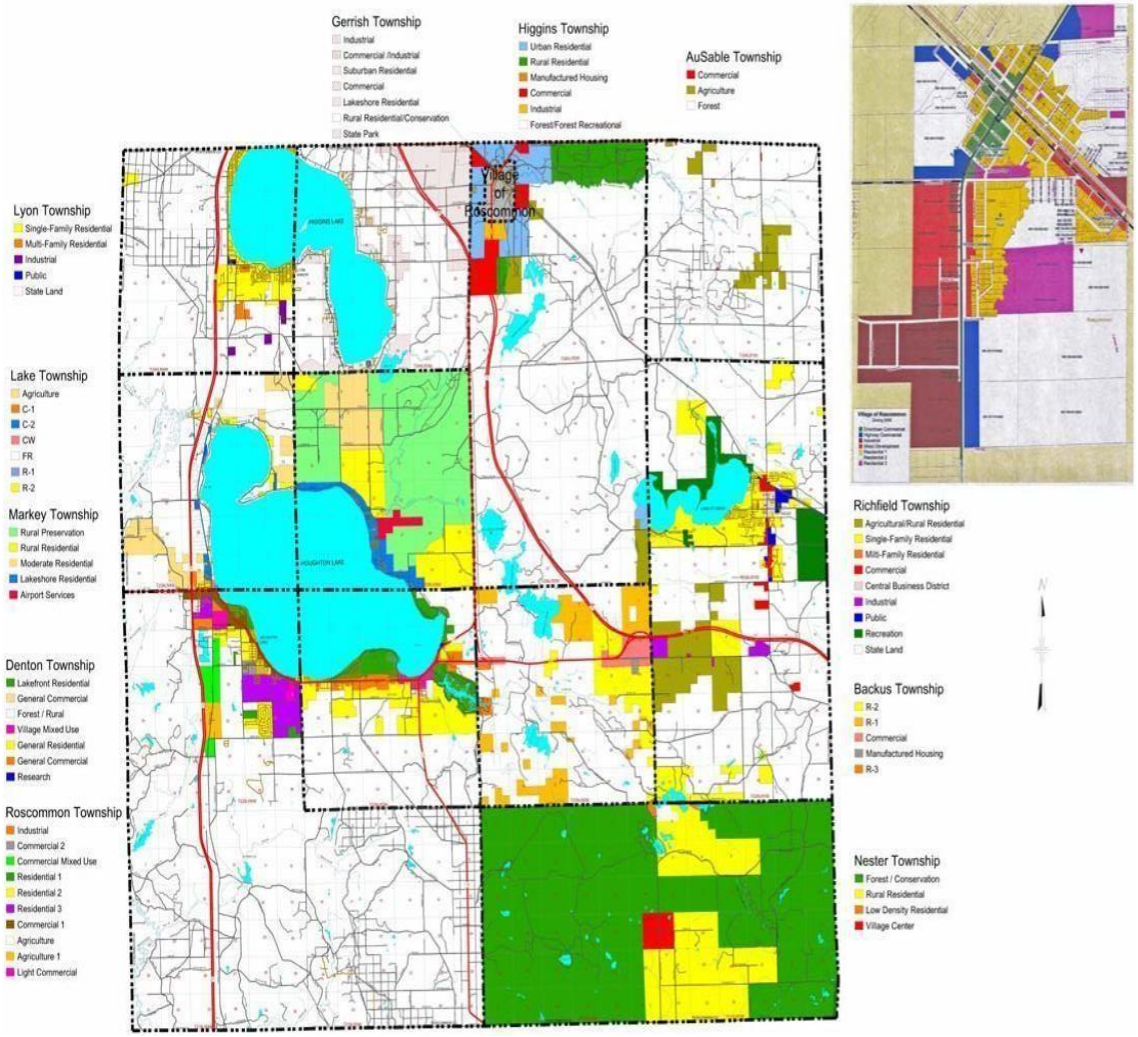
LAND USE

Roscommon County covers 580 square miles, or some 370,951 acres. Of this area, approximately 1.2% is devoted to agricultural production. Another major land use is forest land which covers 70.3% of the county.

The majority of development in Roscommon County is located near the Village of Roscommon, and three Census Designated Places (CDP), St. Helen CDP, Prudenville CDP, Houghton Lake CDP. Development is also located around Houghton and Higgins Lakes. Urbanized areas take up approximately 4.3% of the County's land area. The majority of development in urbanized areas involves tourist and resort attractions. Inland waters and wetlands comprise over 20.2% of the County's surface area. All of the townships and cities in Roscommon County separately have prepared Land Use and/or Zoning Ordinances.

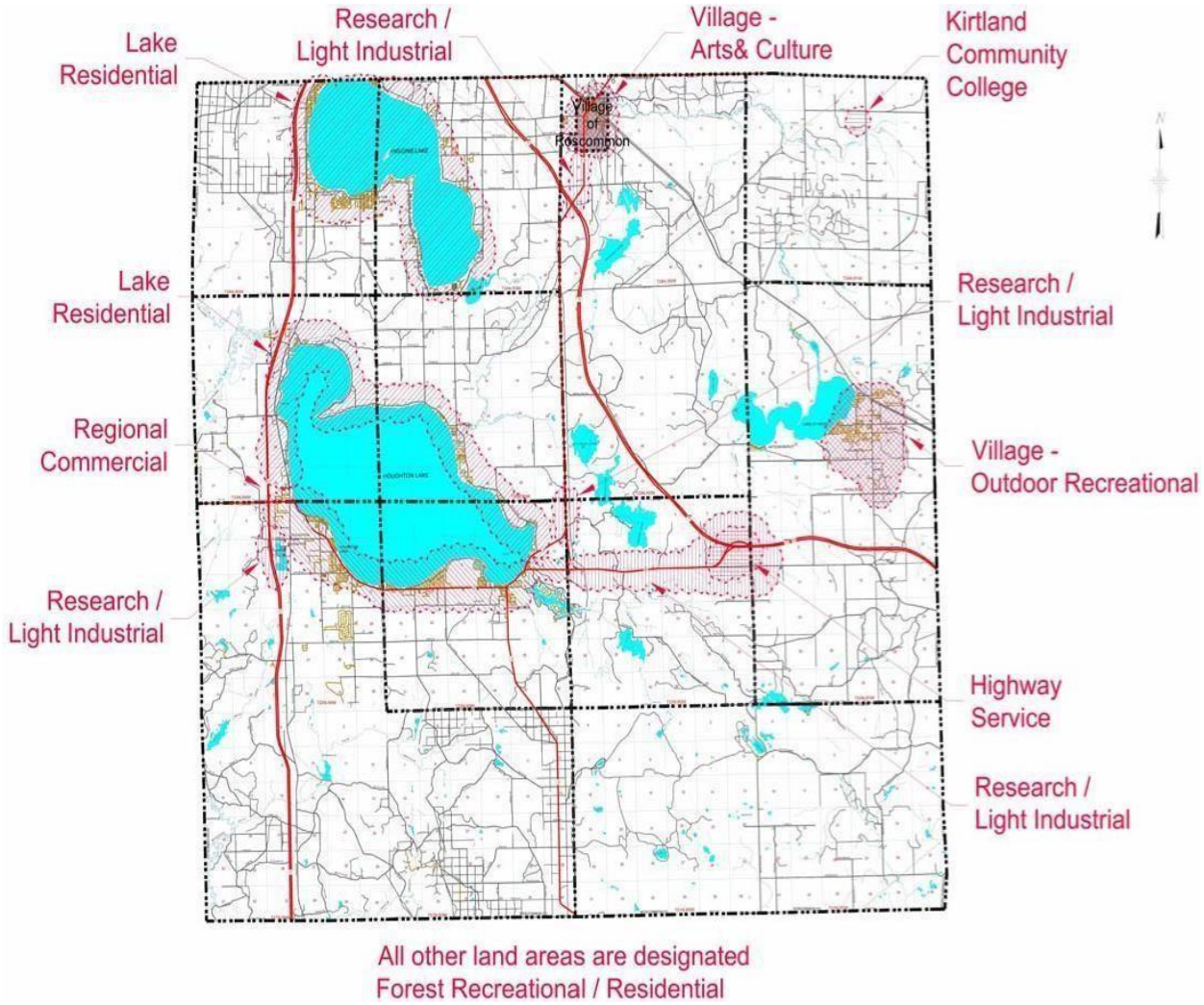
ROSCOMMON COUNTY CURRENT LAND USE MAP

MAP 2.2

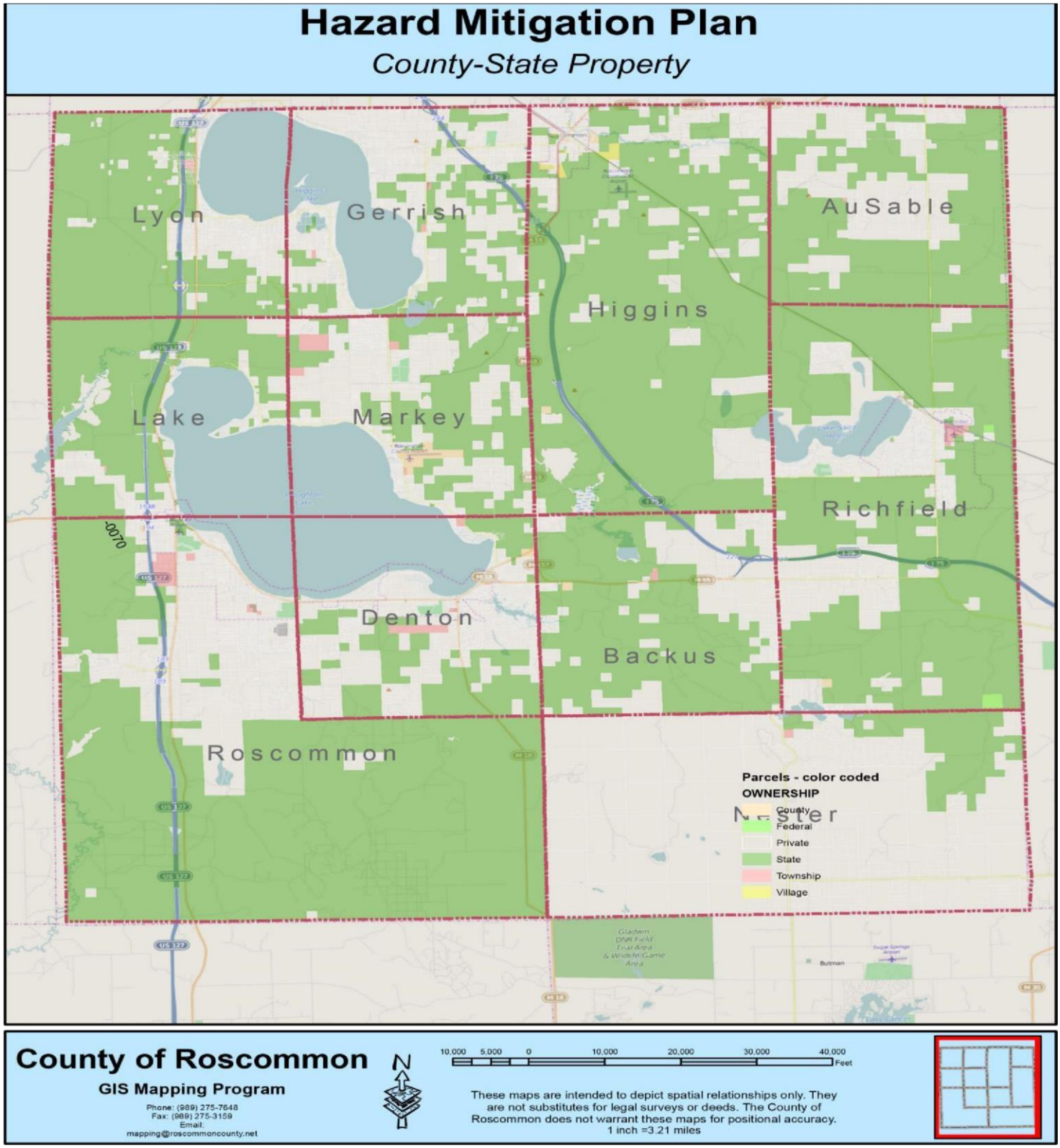


ROSCOMMON COUNTY FUTURE LAND USE

MAP 2.3



ROSCOMMON COUNTY STATE/COUNTY-OWNED LAND
MAP 2.4

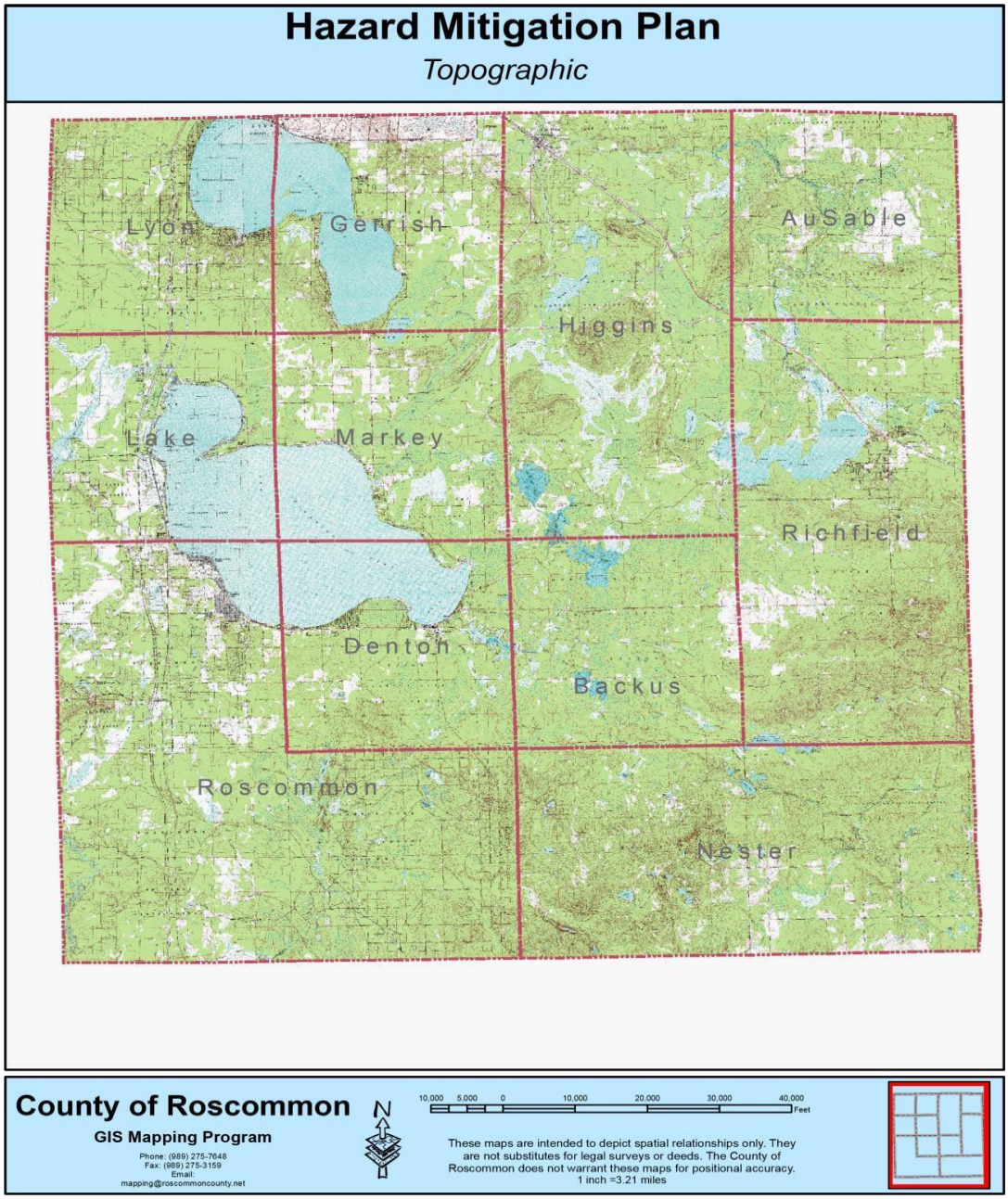


Topography

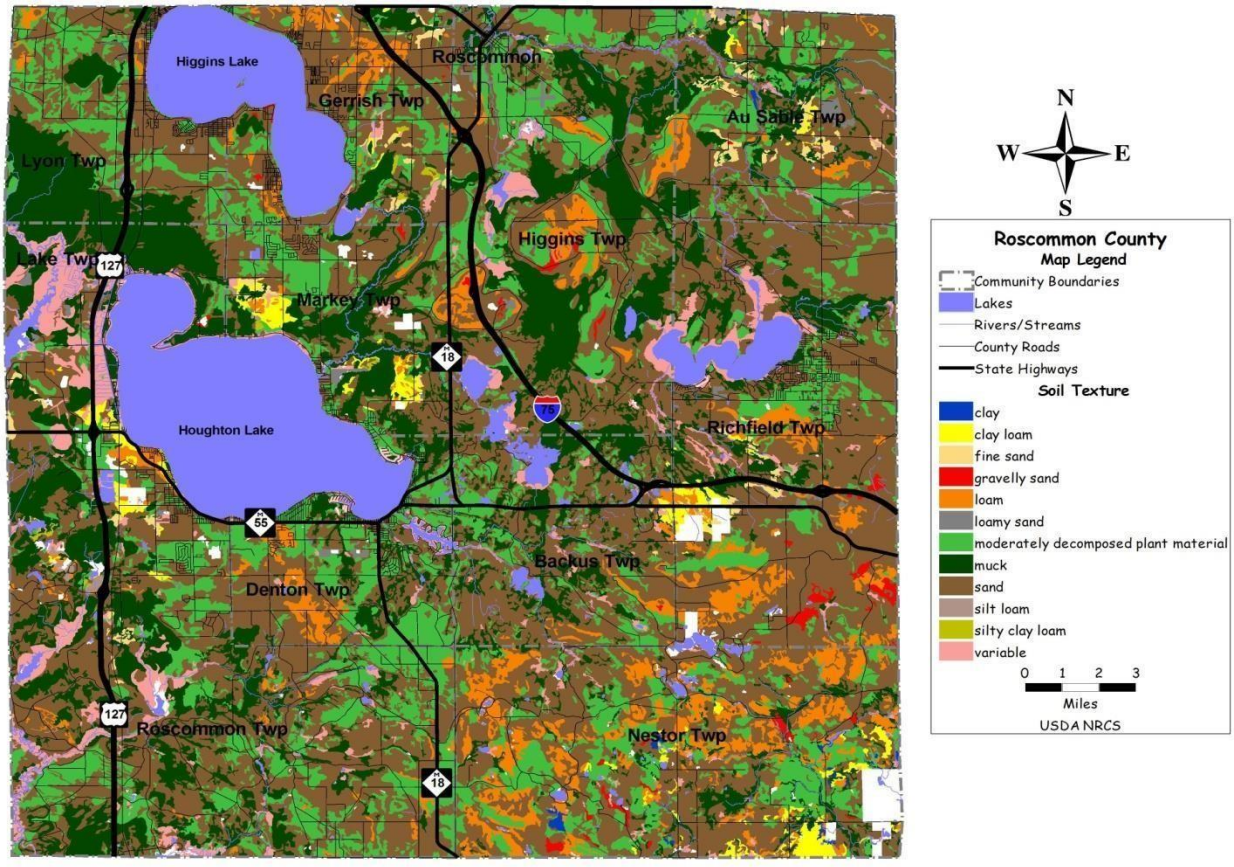
Roscommon County's topography will indicate a total relief of about 721 feet with the lower points being at the southeast corner with an elevation of 853 ft. Elevations increase moving in towards the northeastern area of the county with an area of steeper slopes and an elevation of 1,574 feet. Generally speaking, the terrain in the county varies from flat areas to gently rolling or hilly areas. The most significant relief and topographic features can be seen in the southeastern area of the county.

ROSCOMMON COUNTY TOPOGRAPHIC MAP

MAP 2.5



ROSCOMMON COUNTY GENERAL SOILS MAP
MAP 2.6



CLIMATE

Roscommon County's climate varies greatly throughout the year, as does most of Michigan. In the winter the average temperature is 20.1 degrees F, with the lowest recorded temperature being –48 degrees F on February 1, 1918. In the summer the average temperature is 65.6 degrees, with the record high of 107 degrees on June 1, 1934. Total annual precipitation is 28.8 inches. The most precipitation falls between April and September adding up to 17.5 inches. Most thunderstorms occur in the month of July with an average of about 28 days of each year. The heaviest one-day rainfall of record fell on July 8, 1957 -- 5.18 inches. The average snowfall is 64 inches. On average, 108 days a year have at least one inch of snow on the ground. The greatest recorded seasonal snowfall of 124.1 inches fell in the winter of 1970-71. The lowest recorded seasonal snowfall was 24.0 inches in 1936-37.

The National Weather Service office at Houghton Lake (Roscommon County Airport) reports that the average relative humidity in mid-afternoon is about 64%. Humidity is higher at night, and average at dawn is about 85%. The sun shines 68 percent of time possible in summer and 32% in winter. The prevailing wind is from the southwest. Average wind speed is highest, 10.1 miles per hour, in January.

Freezing temperatures typically include the months of November through March with occasional freezes in September, April and May. The frost-free season is about 120 days. The average last killing frost is June 10th and the earliest is September 10th but killing frosts have been recorded in every month of the year.

These climate factors, as well as the relatively poor quality of soils for agriculture previously discussed, have made attempts to farm in Roscommon County mostly unsuccessful. There are still a few cattle raising operations, but, by and large, the county has developed as part of a residential, tourism and light industrial region.

Water Features and Estimated Floodplains

Roscommon County has a variety of water features such as rivers, streams, lakes and wetlands. The County has about 36,207 acres of lake surface and 38,617 acres of wetlands. Together they account for 20.2% of the County's total acreage.

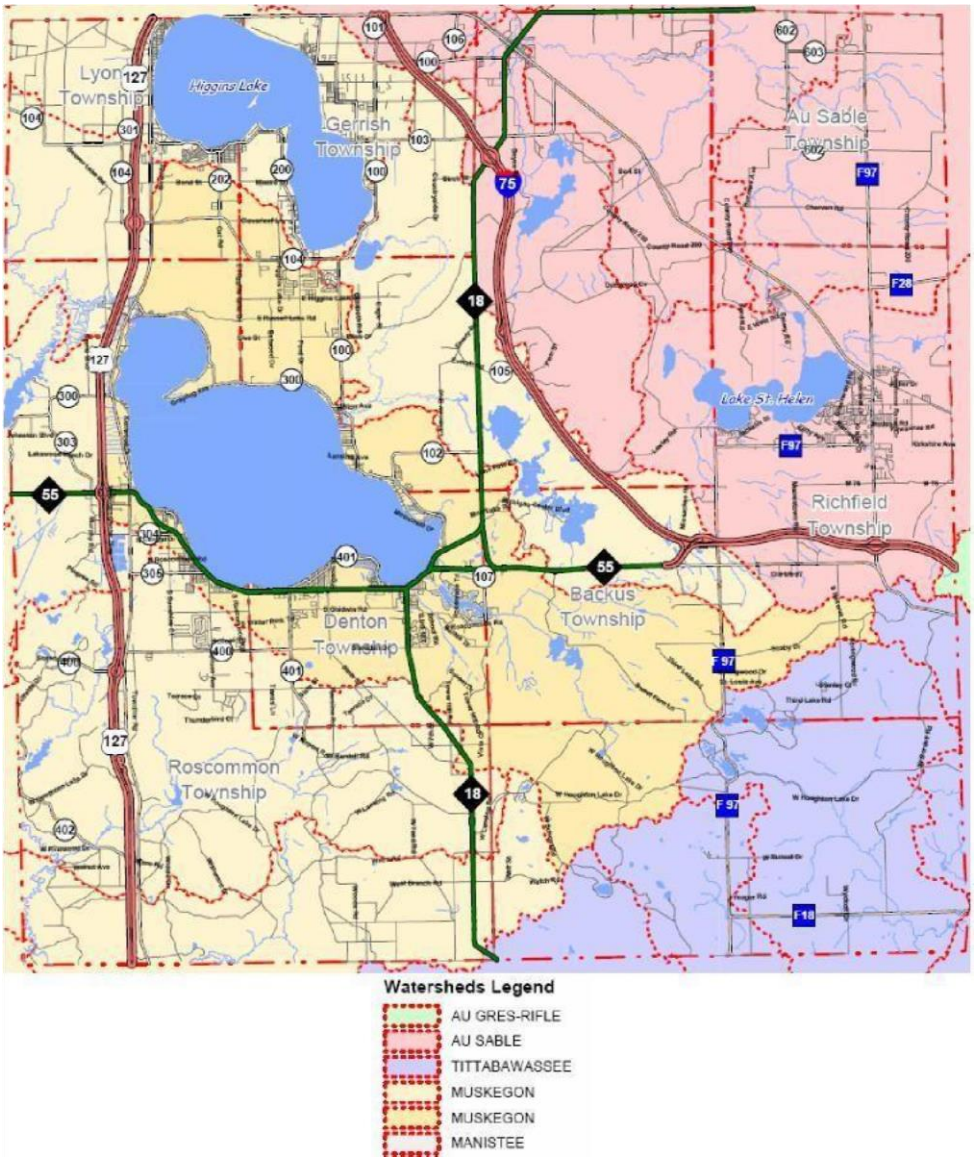
Seventeen lakes of more than 100 acres in area are within the County and provide ample opportunity for water related activities such as fishing and boating. The most significant lakes include: Houghton Lake (17,600 acres), Higgins Lake (10,160 acres), Lake Saint Helen, Marl Lake, Backus Lake, Robinson Lake, Lake James, West Twin Lake, Shadow Lake, and Russell Lake.

There are a few small watersheds that are within the county. Those watersheds are the Muskegon, Au Sable, and Tittabawasee. The Au Sable and Tittabawasee Watersheds eventually drain into Lake Huron while the Muskegon eventually drains into Lake Michigan.

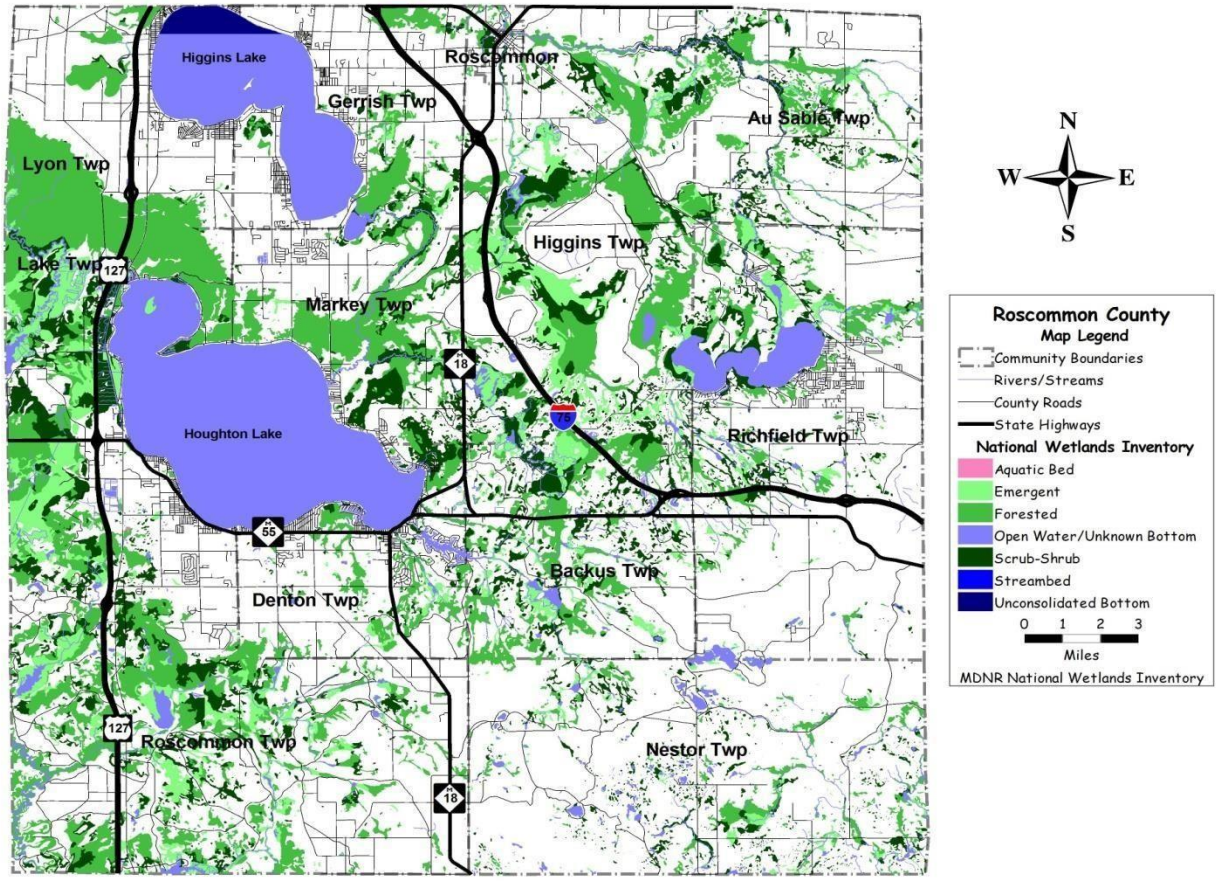
Wetlands are defined by the existence of water, either on or near the surface for a portion of the year and by the type of vegetation is present. Wetlands may have many names and are often referred to as bogs, marshes, and swamps. Wetlands are an important resource to the people of Roscommon County. They improve the water quality of lakes and streams by filtering polluting nutrients and chemicals. More importantly, wetlands recharge aquifers, support wildlife and vegetation, and protect shorelines from erosion. The western side of the county has a significant amount of wetlands that cover large continuous areas along the Muskegon River. The middle of the township has a considerable amount of wetlands including a large area located around Lake Saint Helen. The townships that have considerable amount of wetlands include Lake Twp, Roscommon Township, Markey Township, Backus Township, Higgins Township, and Richfield Township.

Roscommon County has many flood prone areas. These municipalities are in FEMA's National Flood Insurance Program: Higgins Twp and Village of Roscommon.

ROSCOMMON COUNTY WATERSHEDS
MAP 2.7



ROSCOMMON COUNTY WETLANDS MAP
MAP 2.8



Forest Cover

About 70 percent of the county is forested and, an analysis of forest types will assist in defining vulnerable areas and populations. The Michigan Resource Information Systems (MIRIS) 1978 land use inventory compiled land cover maps that depict forest types in the county. Tree species vary depending upon the soils, moisture and past activities such as logging, fires and land clearing. Aspen-Birch, central hardwoods, and pine are the most common forest types. Under dry spring conditions forest fires can occur in any forest type. However some forest types have higher risks. Jack and red pine forests have a high risk for wildfires. Oak and white pine forests have a moderate risk for wildfires. Draughty, low fertility sandy soils, found in outwash plains and channels, supported pre-settlement pine forests that for thousands of years were perpetuated by wildfires. Today, residential development has occurred within the same wildfire prone areas. There is a concentration of pine forest types in Au Sable Twp, Backus Twp, Denton Twp, Gerrish Twp, Higgins Twp, Lake Twp, Lyon Twp, Richfield Twp, Roscommon Twp, and the Village of Roscommon. There is a concentration of central hardwoods in Nestor Twp.

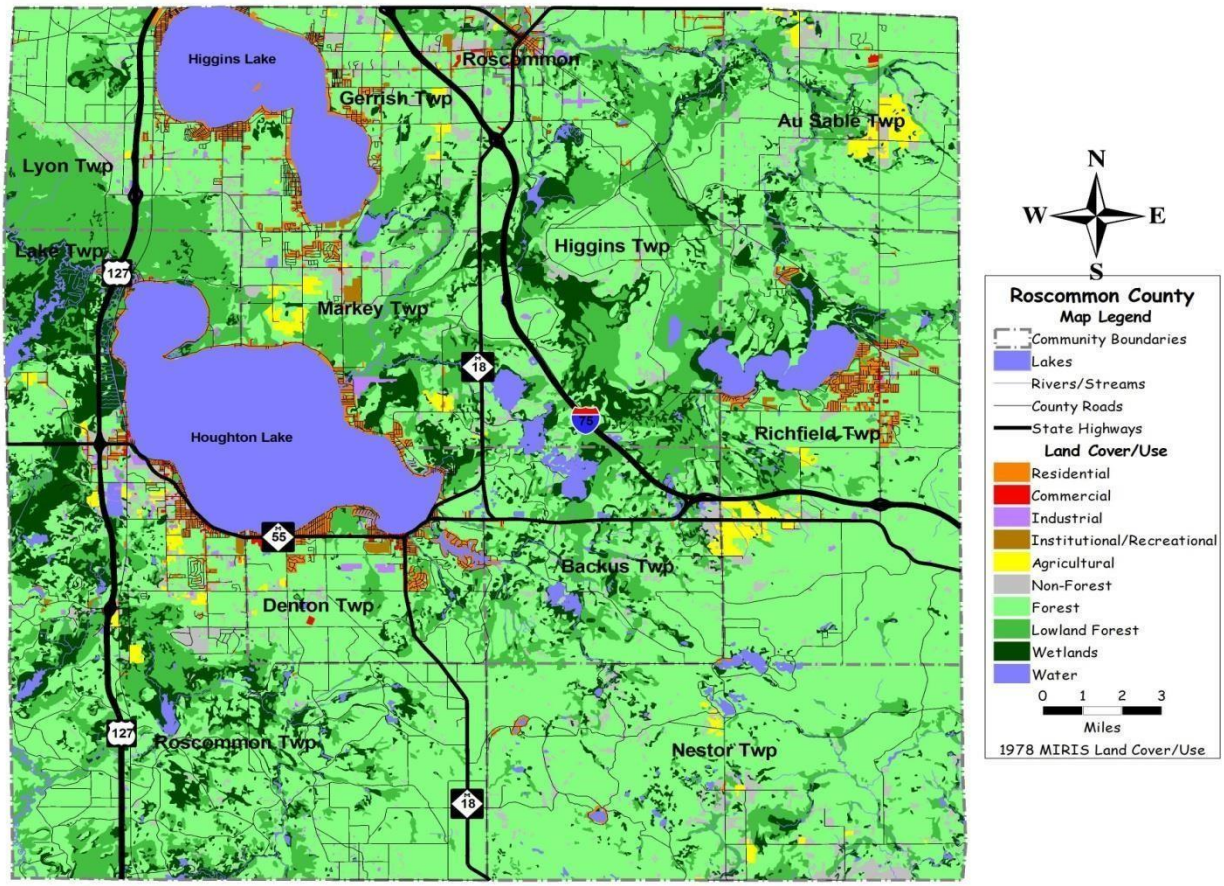
Red jack and white pine forest types are included in the pine forest category. Bigtooth aspen, quaking aspen, white birch, red maple and red oak are the primary tree species found in the aspen-birch type. Red oak, white oak, black oak and northern pin oak are the primary species growing in the oak forests.

Northern hardwoods include species such as sugar maple, red maple, American beech, basswood and yellow birch.

Poorly drained, lowland areas support northern white cedar, tamarack, balsam fir, black spruce, eastern hemlock, white pine, balsam poplar, trembling aspen, paper birch, black ash, speckled alder and shrub willows. Northern white cedar dominates the wetland areas where there is good lateral water movement and the soils are high in organic content. Lowland forests are typically located adjacent to water features and function as riparian forests and water quality buffers. The network of lowland forests, associated with rivers and creeks, also function as wildlife corridors and are the backbone of large regional ecological corridors. Lowland forests adjacent to the Great Lakes are prone to flooding during periods of high lake levels. Lowland forests adjacent to rivers and streams are prone to flooding during the spring snowmelt, particularly when combined with heavy spring rains. Extensive areas of lowland forests can be found in Au Sable Twp, Backus Twp, Denton Twp, Gerrish Twp, Higgins Twp, Lake Twp, Lyon Twp, Markey Twp, Richfield Twp, and Roscommon Twp. See map that follows.

ROSCOMMON COUNTY FORESTED AREAS

MAP 2.9



COMMUNITY ORGANIZATION AND RESOURCES, including County and Local Community Agencies, Departments and organizations potentially relevant for Hazard Mitigation/Community Wildfire Protection.

Emergency Services

Emergency services are very important for the Hazard Mitigation Process. These services help serve the public in times of natural disasters and other emergency situations. It is crucial for the public to know a) that these services exist b) where they are located and c) how to reach them in times of need.

Roscommon County Emergency Management
Mike Beaty, Director
101 South Second Street
Roscommon, MI 48653 989-275-8740 beatym@roscommoncounty.net

This office was established under the provisions of the Michigan Emergency Management Act, PA 390 of 1976, as amended, to ensure a coordinated public response in the event of a natural or man-made disaster. The purpose of Emergency Management is to plan and prepare for high impact, low probability events. The Roscommon County Emergency management office assesses local capabilities to respond to emergency and disaster situations, and advocate emergency preparedness in both the public and private sectors and works to assure a comprehensive approach is used involving a range of public and private agencies including local police, fire and EMS agencies, the Michigan State Police Emergency Management and Homeland Security Division, the Michigan Department of Environmental Quality, the Homeland Security Board and the National Weather Service. Other agencies coordinating with emergency management include the American Red Cross, local and state health departments, educators and amateur radio operators. This office tends to be central for all major threats and incidents within the county. This office also handles all 211 Services, NOAA Weather alerts, Broadband, and Homeland Security matters.

Warning Sirens or System

Roscommon County has no active warning sirens.

Police

Roscommon County has one (1) County-specific police department within the County. In addition, there is also police presence provided by the Michigan State Police Post in Houghton Lake. The County has three (3) township police departments.

Roscommon County Sheriff's Department
111 South Second Street, P. O. Box 206
Roscommon, MI 48653
989-275-5101 989-275-5858 (Fax)
www.roscommoncounty.net

Michigan State Police Post #75
9011 W. Lake City Rd.
Houghton Lake, MI 48629
989-422-5103

Gerrish Township Police
3075 E. Higgins Lake Dr.
Roscommon, MI 48653
989-821-5207
www.gerrishpolice.org

Denton Township Police Department
2559 S. Gladwin Rd.
Prudenville, MI 48651
989-366-4518

Richfield Township Public Safety
PO Box 128
Saint Helen, MI 48656
989-389-4071
www.richfieldtownship.org/Police.php

Fire

There are ten (10) Fire Departments and Fire Stations in Roscommon County. There is a county-wide mutual aid agreement between all ten departments.

Gladwin, MI – One (1) Fire Department – Nester Township
Higgins Lake, MI - One (1) Fire Department – Lyon Township
Houghton Lake, MI – Twp (3) Fire Departments – Roscommon Township, Markey Township, and Lake Township
Prudenville, MI – One (1) Fire Department – Denton Township
Roscommon, MI – Three (3) Fire Departments – MI DNR – Roscommon Management Unit, Higgins Township, and Gerrish Township Fire – EMS
St. Helen, MI – One (1) Fire Department – Richfield Township Public Safety – Fire Division

Ambulance

The county has four (4) full time and three (3) volunteer ambulance services. They are:

Gerrish Twp EMS (full time)
Denton Twp EMS (full time)
Higgins Twp EMS (full time)
Houghton Lake EMS (full time)
Lyon Twp EMS (MMR has ALS for the township)
Markey Twp EMS
Richfield Twp EMS

Health Care

Medical Control Authority: North Central Medical Control, Grayling Mercy Hospital in Grayling, MI

Area Hospitals and Emergency Rooms: Hospitals and ER's are located in Grayling and West Branch.

There are no hospitals located in Roscommon County but there are several clinics for the population.

Central Michigan District Health Department
Roscommon County Branch Office
1015 Short Dr. P.O. Box 739
Prudenville, MI

Government Facilities

Government facilities may have a large impact on how emergencies are handled. They provide services to the public such as shelter in times of natural disasters. They also serve as a way to distribute information on how to handle emergency circumstances.

ROSCOMMON COUNTY GOVERNMENT CONTACTS

TABLE 2.3

Township Contacts	
AuSable Township	9181 N. Keno Road St. Helen, MI 48656 989-389-3541
Backus Township No regular hall hours	3888 S. Maple Valley Road St. Helen, MI 48656 989-389-3271
Denton Township	2565 S. Gladwin Road., PO Box 289 Prudenville, MI 48651 989-366-5913 989-366-7123 (Fax)
Gerrish Township	2997 E. Higgins Lake Drive Roscommon, MI 48653 989-821-9313 989-821-8627 (Fax)
Higgins Township M-Thursday: 9 to 1	700 S. Fifth Street, P.O. Box 576 Roscommon, MI 48653 989-275-8112 989-275-8990 (Fax)
Lake Township No regular hall hours	1380 North Michelson Road, PO Box 536 Houghton Lake, MI 48629 989- 422-4577 989-422-7505 (Fax)
Lyon Township (Hall Hours 9-2 M-Th; clerk@lyontownship.org	7851 West Higgins lake Drive, P. O. Box 48 Higgins Lake, MI 48627 989-821-9694 989-821-5118 (Fax)

Markey Township	4974 East Houghton Lake Drive Houghton Lake, MI 48629 989-366-9614 989-366-8631 (Fax) clerk@markeytownship.org
Nester Township	7855 Maple Valley Road St. Helen, MI 48656 989-389-1199 No regular hall hours
Richfield Township	1410 North M-76, P. O. Box 128 St. Helen, MI 48656 989-389-4994 989-389-2013 (Fax)
Township Contacts	
Roscommon Township Mon-Friday: 8:30 – 4:30	8555 Knapp Road, P. O. Box 610 Houghton Lake, MI 48629 989-422-4116 or 989-422-4093 989-422-6115 - Fax
Village Contacts	
Village of Roscommon	702 Lake Street P. O. Box 236 Roscommon, MI 48653 989-275-5743 989-275-5998 (Fax)
Roscommon County Commissioners	
District 1 David Russo (989) 275-8021 (Courthouse) davidrusso@roscommoncounty.net	District 2 Ken Melvin 989-275-8021 (Courthouse) kenmelvin@roscommoncounty.net
District 3 Bob Schneider, Chairman 989-275-8021 (Courthouse bobschneider@roscommoncounty.net	District 4 Mark J. Milburn, Vice Chair 989-275-8021 (Courthouse) marcmilburn@roscommoncounty.net
District 5 Gary Stefanko 989-275-8021 (Courthouse) lowellsouder@roscommoncounty.net	Jodi Valentino, Controller 500 Lake Street Roscommon, MI 48653 989-275-7861 989-275-3161 – Fax controller@roscommoncounty.net
Roscommon County Board of Commissioners **Attn. Name of Commissioner** **500 Lake Street** **Roscommon, MI 48653**	

Schools

There are two school districts in Roscommon County – Gerrish Higgins School District and Houghton Lake Community School District. There are eighty (8) public schools and two (2) private. There is one Charter Academy located in the Village of St. Helen. The following table lists the name and location of each school along with the district that each school belongs too.

ROSCOMMON COUNTY SCHOOLS

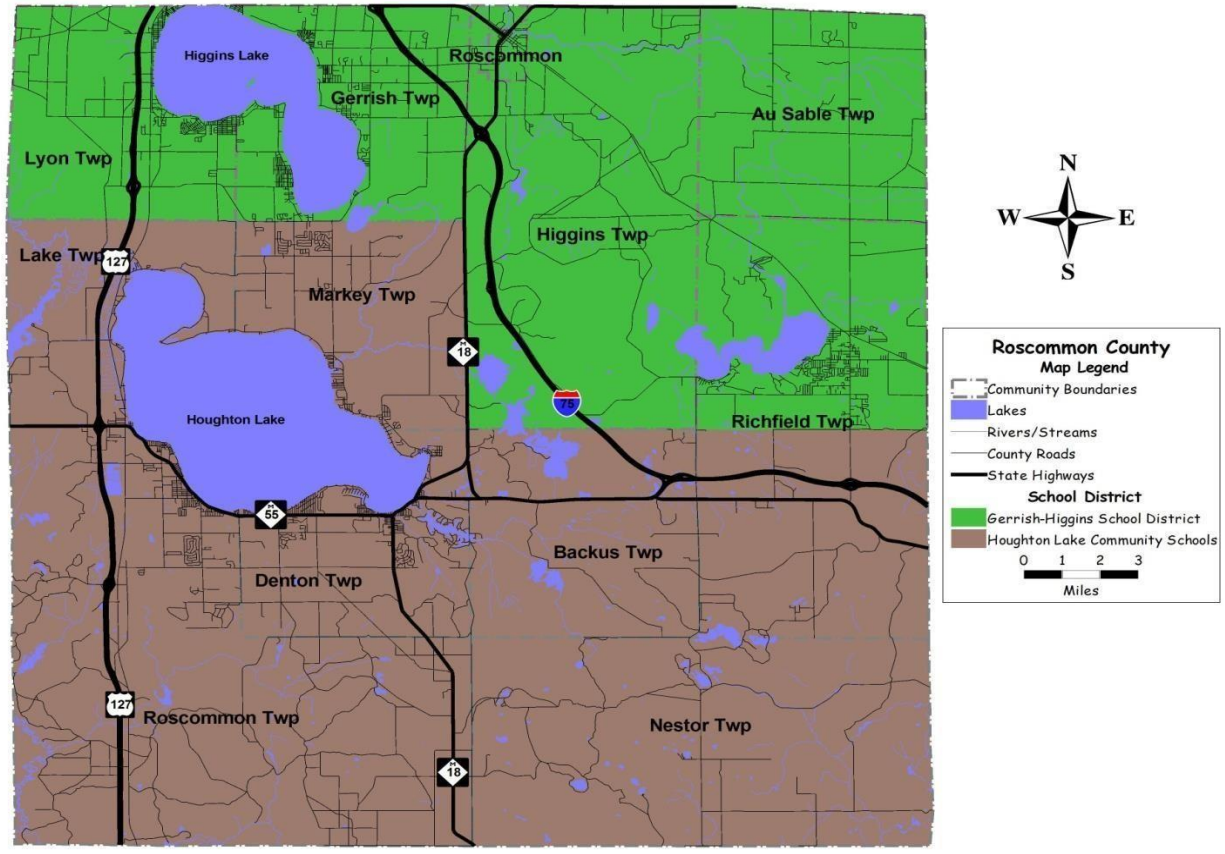
TABLE 2.4

Name	Address	District	# Students
Collins Elementary School Grades: K-3	4451 W. Houghton Lake Drive Houghton Lake, MI 48629 989-366-2048	Houghton Lake Community School District	407
Houghton Lake Middle School Grades: 4-7	4441 W. Houghton Lake Dr. Houghton Lake, MI 48629 989-366-2000	Houghton Lake Community School District	467
Houghton Lake High School Grades: 8-12	4433 West Houghton Lake Dr. Houghton Lake, MI 48629 989-366-2005	Houghton Lake Community School District	
Houghton Lake Adult Ed Grades: 9-12	179 Cloverleaf Lane Houghton Lake, MI 48629 989-422-6161	Houghton Lake Community School District	NA
Roscommon Elementary School Grades: K-5	175 West Sunset Drive Roscommon, MI 48653 989-275-6610 989-275-4745 – Fax	Gerrish Higgins School District	496
Roscommon Area Public Schools Grades: 6-8	299 West Sunset Drive Roscommon, MI 48653 989-275-6640	Gerrish Higgins School District	421
Roscommon High School Grades: 9-12	10600 Oakwood Drive Roscommon, MI 48653 989-275-6053	Gerrish Higgins School District	475
Charlton Heston Academy (Patriots) Grades: K-8	1350 N. St. Helen Rd. St. Helen, MI 48656 989-632-3390 989-632-3393 – Fax	Charter School	NA

Private Institutions			
Our Lady of the Lake Elementary Grades: Pre-K to 8	1039 West Houghton Lake Dr. Prudenville, MI 48651	Parochial	94
Immanuel Christian Grades: K-12	2794 West Maplehurst Dr. Roscommon, MI 48653	Parochial	31

ROSCOMMON COUNTY SCHOOL DISTRICT MAP

MAP 2.10



Institutions of Higher Learning

There is one institution of higher learning in Roscommon County – Kirtland Community College. Kirtland Community College is the largest community college geographically in the state of Michigan covering approximately 2,500 square miles and servicing all of Ogemaw, Oscoda, Roscommon and Crawford counties and parts of five additional surrounding counties. The College also has sites in Gaylord and West Branch, Michigan.

Kirtland's central campus, located at 10775 N. St. Helen Road, Roscommon, Michigan, approximately eight miles north of St. Helen, is close to the geographic center of the college's district, is accessible by F-97 from the north and south and by M-18 to County Road 603 from the west. The location is very rural and is approximately 170 miles north of Detroit, Michigan.

Kirtland offers 63 degrees and certifications including transfers of credits.

Utilities

Information on the utilities provided to communities within the County is essential to distribute information to the public in times of need. Also, certain locations that provide these services may be the source of emergency situations (transformer problems, gas leaks, etc.).

Consumers Energy Company provides electric utility service to Roscommon County, while DTE provides gas utility service to county residents.

Utility gas is the most common form of heating fuel type for households in the county. Bottled, tank or LP gas, however, also provides a large portion of the heat fuel to houses that are located primarily beyond traditional gas utility lines found in urbanized areas.

Telephone Service

The following Roscommon County information was obtained by accessing the Michigan Public Services Commission at (http://www.michigan.gov/mpsc).

Incumbent Telephone Companies:

AT&T, CenturyTel of Michigan, Frontier North

Competitive Telephone Companies:

Access One, Access Point, ACD Telecom, ACN Communications Services, Advanced Integrated Technologies, Airespring, American Broadband and Telecommunications, AT&T Corp., Bandwidth.com, Birch Telecom of the Great Lakes, Broadwing Communications, Budget Phone, Bullseye Telecom, Call Giant, Call One, Castle Wire, Cavalier Telephone, Cbeyond Communications, CenturyTel Acquisition, CenturyTel Solutions, Charter Fiberlink-Michigan, Cincinnati Bell Any Distance, Clear Rate Communications, Comcast Phone of MI dba CIMCO, Crexendo Business Solutions, CynergyComm.net, dPi Teleconnect, Entelegent Solutions, Farm Bureau Connection, First Communications, France Telecom Corporate Solutions, Global Connection Inc. of America, Global Crossing Local Services,, Globalcom dba First Communications of IL, Granite Telecommunications, Grid 4 Communications, IBC Telecom, ITELECOM, Level 3 Communications, Lightyear Network Solutions, Lucre, Lynx Network Group, Mass Communications, Matrix Telecom, McGraw Communications, MClmetro Access Transmissions Services, McLeodUSA, MetTel, Michigan Access, Navigator Telecommunications, Nexus Communications, Norlight, NOS Communications, Onvoy Voice Services, PNG Telecommunications, QuantumShift Communications, Quick Communications, Qwest Communications Company, RACC Enterprises, Sage Telecom, Superior Spectrum Telephone & Data, TC3 Telecom, TDS Metrocom, TelCove Operations, Teleport Communications America, Telnet Worldwide, Three Rivers Telecom, TNCI, TouchTone Communications, tw telecom data services, US Xchange of Michigan dba Earthlink Business, Velocity the Greatest Telephone

Company Ever, Westphalia Broadband, Wholesale Carrier Services, Winn Telecom, XO Communications Services.

Transportation

There are four highways in Roscommon County. M-18, US-27, and Interstate 75 are north/south trunk lines while M-55 is a major east/west trunk line. The county and local governments maintain all road networks. MDOT contracts with the County to maintain their roadways.

General aviation and or freight air service is available at the Roscommon County Blodgett Memorial Airport in southern Markey Twp and at Houghton Lake State Airport in Roscommon Township.

Roscommon County Road Commission 820 E. West Branch Rd. P.O. Box 710
Prudenville, MI 48651
989-366-0333
989-366-0299 – Fax www.roscommoncrc.com

Houghton Lake -Roscommon County Blodgett Memorial Airport
5218 E. Houghton Lake Dr.
Houghton Lake, MI 48629
989-366-7660
Erich Jaroch, Airport Manager
Cell: 989-390-2398
ric.jaroch@gmail.com

Houghton Lake State Airport
8717 N. Roscommon
Roscommon, MI 48653
(989) 275-5151
Bill Green, Airport Manager

Roscommon County Transportation Authority (RCTA)
2665 S. Townline Rd.
P.O. Box 284
Prudenville, MI 48651
989-366-5309
989-366-4122 – Fax
transit@rcta-transit.net
RCTA also connects to Indian Trails for longer distance travel

MDOT Gaylord Transportation Service Center
Region Office (North)
1088 M-32 East
Gaylord, MI 49735
989-731-5090
989-731-0536 - Fax
Toll-free – 1-888-304-6368

ROSCOMMON COUNTY (2010 population: 24,449)

ROSCOMMON County Drain Commissioner/Soil Erosion
500 Lake Street
Roscommon, MI 48653
989-275-8323
989-275-5675 – Fax
Drain Commissioner – Rex Wolfsen drains@roscommoncounty.net
The mission of this office is to provide for the health, safety and welfare of Roscommon County citizens, the protection of surface waters and the environment, and to promote the long-term environmental sustainability of Roscommon County by providing storm water management, flood control, soil erosion controls and education. The office is particularly relevant for hydrological hazards.

Roscommon County Community Mental Health
2715 Townline Road
Houghton Lake, MI 48629
1.800.492-5742
989-366-8550

Central Michigan District Health Department
Roscommon County Branch Office
1015 Short Drive, P. O. Box 739
Prudenville, MI 48651
989-366-9166
989-366-8921 - Fax
The mission of the Central Michigan District Health Department exists is to promote health and physical well-being by providing preventive health care, education and environmental safety to all members of the community and to become recognized by the public as the local advocate in promoting, assessing and safeguarding public health and the environment. This will be done through coordinated planning, resource development, and service delivery. The human impacts of hazards may require their involvement. Public health emergencies threatening the area would certainly involve this department.

Michigan State University Extension Service - Roscommon Office
500 Lake Street
Roscommon, MI 48653
989-275-5043
989-275-8864 – Fax
Msue.roscommon@county.msu.edu
The office is involved in various educational and outreach activities involving agriculture and health. They should be valuable in events concerning such matters, such as droughts, pandemics, etc.

Roscommon County Planning Commission
500 Lake Street
Roscommon, MI 48653
989-275-3163

The mission of the Roscommon County Planning Commission is to assist with the creation of a healthy, safe and sustainable community of choice, through leadership, education, partnerships and stewardship of resources and assets. The Planning Commission works closely with the Department of Community Development.

Roscommon County Road Commission
820 East West Branch Road
Prudenville, MI 48651
989-366-0333
989-366-0299 – Fax www.roscommoncrc.com
The Roscommon County Road Commission uses their expertise, energy, and funds to provide the safest and most convenient road system possible, and contributes to economic development and the high quality of life throughout the county. Their goal is to maintain a county road system that is safe and convenient for public travel and to manage the roadside environment, with a view toward preservation.

Roscommon County Sheriff's Office
111S. Second Street
Roscommon, MI 48653 Phone: (989) 275-5101 www.roscommoncounty.net/199/Sheriff
The Sheriff's Office provides law enforcement and services to protect the lives and property of Roscommon County citizens—enforcing State laws and local ordinances, investigating crimes, and detaining prisoners remanded to the county jail. This is accomplished in a manner that maintains the highest degree of professional excellence, integrity, and courtesy. Sheriff's Office personnel would be involved in protective actions during a serious community emergency.

Roscommon County Transit Authority (RCTA)
2665 S. Townline Road, P. O. Box 284
Prudenville, MI 48651
989-366-5309 989-366-4122 – Fax www.roscota.net
The purpose of the Roscommon County Transit Authority (RCTA) is to plan, promote, finance, acquire, improve, enlarge, extend, own, construct, operate, maintain, replace, and contract for public transportation service by means of one or more public transportation systems and public transportation facilities within the jurisdictional boundaries of the County of Roscommon. They may have resources useful for the transportation or evacuation of residents during emergency situations.

Village of Roscommon (2010 population – 1,075)
702 Lake Street, P. O. Box 236
Roscommon, MI 48653
989-275-5743
089-275-5998 - Fax www.roscommonvillage.com
Founded in the 19th Century, the village is the County seat and provides a wide array of activities and recreational opportunities for residents and visitors. The following village department is the most relevant to emergency management and hazard mitigation considerations.

Village of Roscommon Department Public Works
1050 S. Main Street
Roscommon, MI 48653
989-275-8222
Dave Lindeman, Director
dpwdirector@roscommonvillage.com
The department oversees the provision of village services such as waste disposal, fresh water supply, and storm drainage systems. They would have important resources to help deal with disasters or emergencies involving debris, water, and drainage systems.

CHAPTER 3
RISK AND VULNERABILITY ASSESSMENT

Wildfire Description

Most Michigan wildfires occur close to where people live and recreate, which puts people, property, and the environment at risk. Development within and around forested areas often increases the potential for loss of life and property from wildfires, since most fires are caused by human activities, such as outdoor burning.

Wildfires are a normal ecological phenomenon and serve long-term functions for vegetation and the natural environment. Wildfires can burn excessive brush, maintain large savannah-like openings, and restore wetlands by forcing out unwanted brush and vegetation. The natural function of fires within the environment can be considered a renewal or "cleansing process" as long as the fire is not too severe.

- The negative impacts and immediate danger from wildfires are destruction of timber, property, wildlife, and injury or loss of life to persons who live in the affected area or who are using recreational facilities in the area. Other long-term and corollary effects of wildfire may include: Increased erosion and flooding, due to the disappearance of vegetation that would otherwise protect soils and slow surface runoff of water;
- Smoke (poor visibilities and air quality), closed roadways, and infrastructure impacts that may interfere with ordinary life, the economy, and planned tourism-based events; and
- Structural fires, particularly near outdoor recreation areas and wildland-urban interfaces.

The threat of wildfire may be elevated in times of drought, high heat, high wind, and/or low humidity. Unfortunately these conditions often coincide with attractive conditions for outdoor activity and recreation. This only compounds the fact that most wildfires are induced by human activity, rather than as a part of natural processes. Other factors that may increase the risk or severity of wildfire include: mild winters with abnormally low precipitation, allowing brush and other wildfire fuels to dry out; wind storms and frost/freeze damage, increasing the availability of dead fuels; and slow/late green-up in the spring.

Conversely, a harsh winter with a heavy deep snowpack can mitigate wildfire risk in the spring. These conditions compact dead fuels, reducing their surface-to-mass ratio, allowing them to retain moisture longer.

Wildfire History

Contrary to public belief, most wildfires in Michigan are not the large wildland fires that generally occur in California and other western states, often generating daily news coverage for extended

periods of time. Most Michigan wildfires are small and never make news headlines. However, Michigan has had its share of large, devastating wildfires, including major fires within the last two decades.

Wildfires occur throughout the spring, summer and fall in Michigan, however, most take place in March, April, and May. During this period, much of the existing vegetation has been killed due to winter temperatures and most of the vegetation is dead, brown and combustible. Also, there is little green vegetation to serve as a barrier for a moving wildfire. In the spring, residents are raking yards and collecting yard waste that has accumulated over the winter. Many residents elect to burn their yard waste and this leads to the majority of wildfires. The MDNR estimates that one-third to one-half of Michigan wildfires are due to people burning debris.

The most devastating wildfire that impacted Michigan occurred on October 8, 1871, near Peshtigo, Wisconsin on the Michigan-Wisconsin state line. Burning over 2400 square miles in northern Wisconsin and Michigan, this wildfire caused 1300 to 1500 fatalities, while consuming the town of Peshtigo and many other communities and homes. Eye-witness accounts reported that in the town of Peshtigo—a town of approximately 1700 residents—only one building was left standing.

Ten years later, in 1881, a large wildfire occurred in the "Thumb" area of Michigan which consumed over 1500 square miles and took 282 lives. The Thumb wildfire is said to have been caused by a combination of logging, land-clearing fires, and low humidity.

More recently, on May 5, 1980, the Mack Lake Fire near Mio, Michigan, consumed over 40 square miles of wildland. The fire destroyed 44 homes and claimed the life of one fire fighter.

In 1990, the Stephan Bridge Road Fire near Grayling consumed 8 miles of vegetation in a 4-hour time period. While no one was killed, the fire destroyed 76 homes and another 125 out-buildings. A smoldering brush fire, wind, and neighboring jack pines led to the cause and extent of this fire.

A significant task of this CWPP was to collect and compile wildfire records from each fire district and the MDNR. Each department provided wildfire records going back from 2000 to 2015. Unfortunately no two departments in the County record and maintain records of wildfire the same way. As such, it was not possible to conduct countywide statistical analyses of wildfire histories based on the information provided. However, the information provided can help identify general observations, such as:

- Fire department calls for wildfire are most common where people live and recreate.
- Nearly all wildfires in Roscommon County have been the result of human activity.
- Nearly half (167 out of 375 wildfires) were not identified and were labeled as miscellaneous.

- The two most common causes of wildfire from 2000-2015 were debris burning and campfires.
- Only 10 out of the 375 documented fires were attributed to lightning.
- Only 10 out of 375 documented fires were attributed to smoking.

It would be beneficial to establish a countywide standard for reporting and recording wildfires. This would enable a more useful analysis of county wildfire patterns, which could be used to inform the selection of appropriate wildfire mitigation measures.

Wildfire Setting

Forests cover approximately two-thirds of Roscommon County's land area. The forest cover is a boon for the economy and quality of life. However, it also makes many areas of the county potentially vulnerable to wildfires. Throughout the county, private developed lands, critical facilities, infrastructure, and agriculture can be found adjacent to or scattered within forested lands. This section provides a summary of wildfire concerns in Roscommon County that were identified during meetings of the Roscommon County Wildfire Advisory Committee.

Perhaps the greatest wildfire concern in Roscommon County is the area around Houghton and Higgins Lakes, the population centers of Roscommon County. Development there is often characterized by dwellings tucked away on wooded lots. Adding to this concern is the prevalence of poor or inadequate access for first responders, such as narrow drives, extreme topography, and abundant fuels. This environment hinders fire suppression efforts and puts emergency responders at risk.

Additional wildfire concerns in Roscommon County include potential economic impacts of wildfire on agriculture, tourism, and recreation. Even a small fire could disrupt local commerce given the right circumstance. Other factors that contribute to wildfire risk in Roscommon County include blight (associated with trash burning), pine stands, and oil/gas wells (specifically those with known detectable levels of hydrogen sulfide).

Wildland-Urban Interface (WUI)

A crucial step in local level wildfire management is the designation of the wildland urban interface or "WUI." The wildland urban interface is defined by the National Wildfire Coordinating Group as:

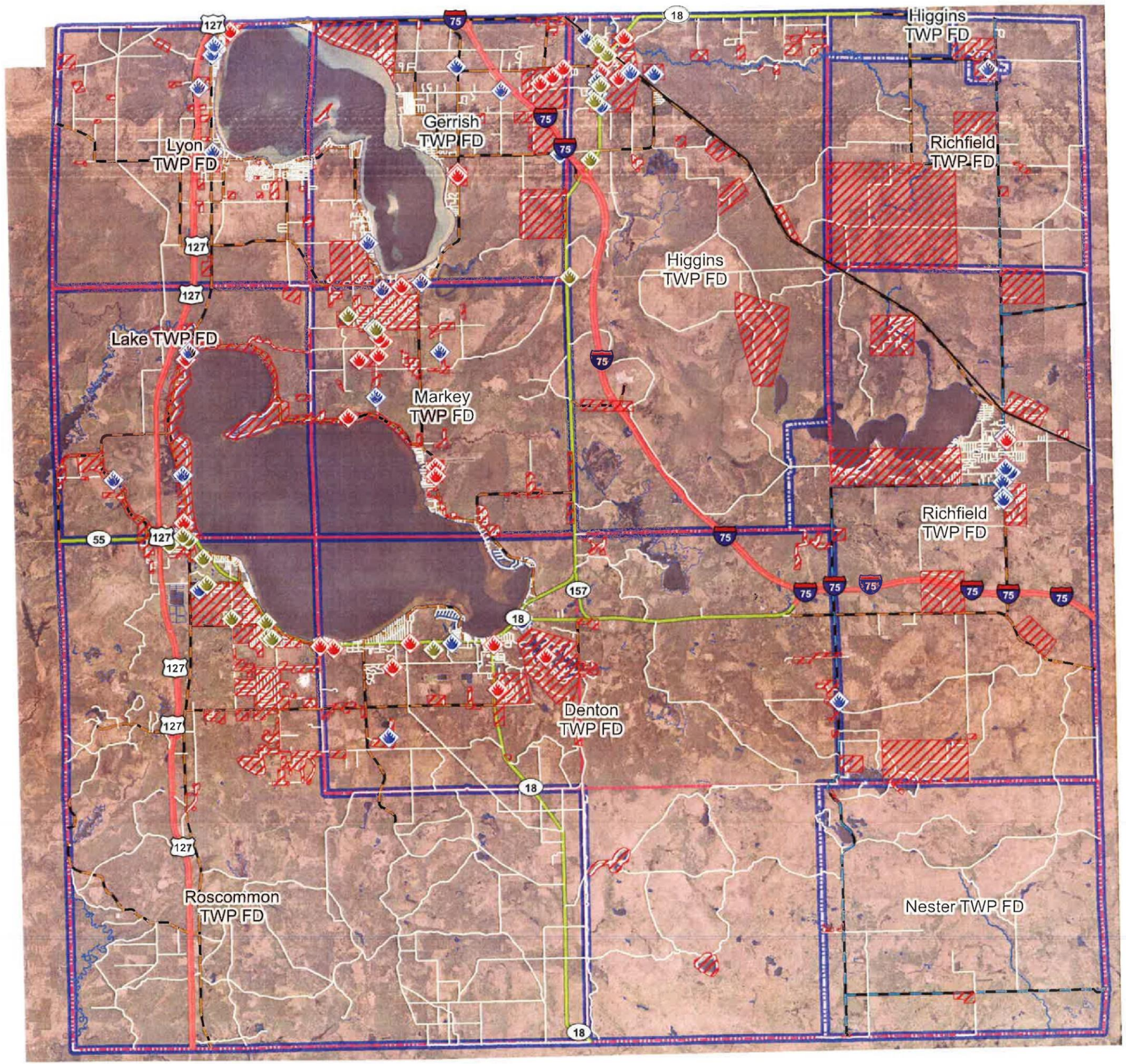
> "The line, area, or zone where structures and other human development meet or intermingle with undeveloped wildland or vegetative fuels."

In general, the WUI is an area that is subject to the natural conditions of the wildland. When conditions are right for fire in the wildland, there is a corresponding threat to structures, life, and property. The presence of human inhabitants also poses a special risk in these areas by way of

non-natural ignition sources. In general, the threat of fire increases in the area designated as the WUI due to this human activity.

WUI is a fundamental issue in community wildfire protection plans. It is the local level where human development may be threatened by wildfire. This defined area must be reviewed, verified, and accepted by the local authority having jurisdiction and state fire management to meet the objectives of HFRA 2003.

Roscommon County contains a variety of landscapes, which has resulted in development occurring in many different settings. Due to the nature of the developments and resulting location of the infrastructure/facilities it was difficult to establish consistent Wildland Urban Interface (WIU) areas within the County. Following are several maps depicting the wildfire risk per fuels, the WUI in relation to the risk (fuels), the WUI and critical infrastructure, and the WUI in relation to the local fire departments.



County WUI & Critical Infrastructure

Last update:
July 13, 2016

Township:
All

Community Wildfire Protection Plan

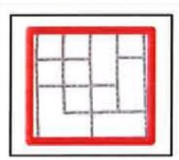
Map Legend

Critical Structures - Overall Risk

- High
- Medium
- Low
- Railroad
- Wildland Urban Interface
- Township
- Fire Departments Zones of Coverage

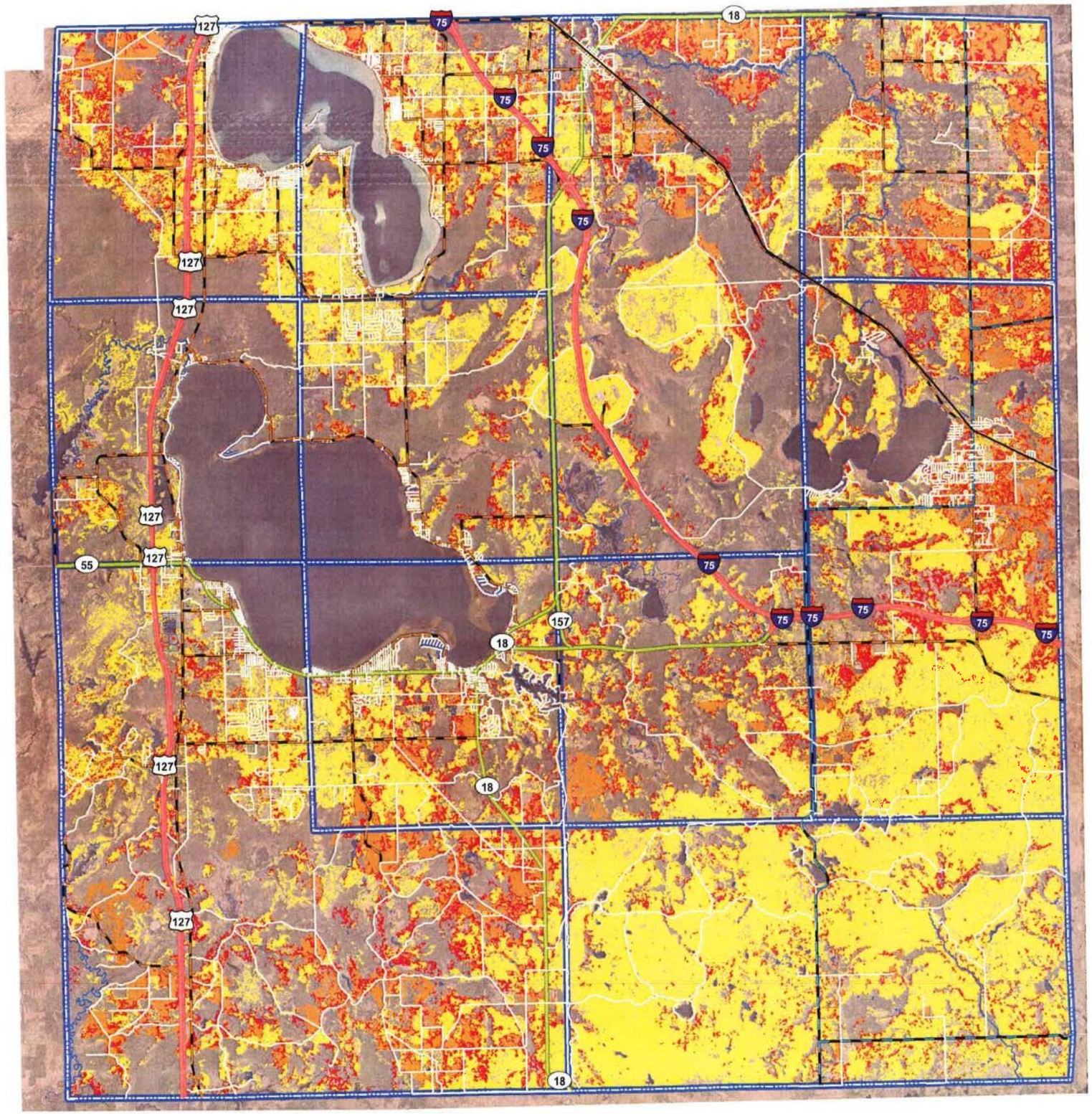
1 inch =2,38 miles

4,600 2,300 0 4,600 9,200 13,800 18,400
Feet



County of Roscommon
GIS Mapping Program

Phone: (989) 275-7648
Fax: (989) 275-3159
Email:
mapping@roscommoncounty.net



Map Legend

Railroad

Township

Wildfire Risk

GRIDCODE

- Aspen, Birch (Low risk)
- Central Hardwood (Moderate risk)
- Pine (High risk)

Community Wildfire Protection Plan

County Wildfire Risk

Last update:
July 13, 2016

Township: All

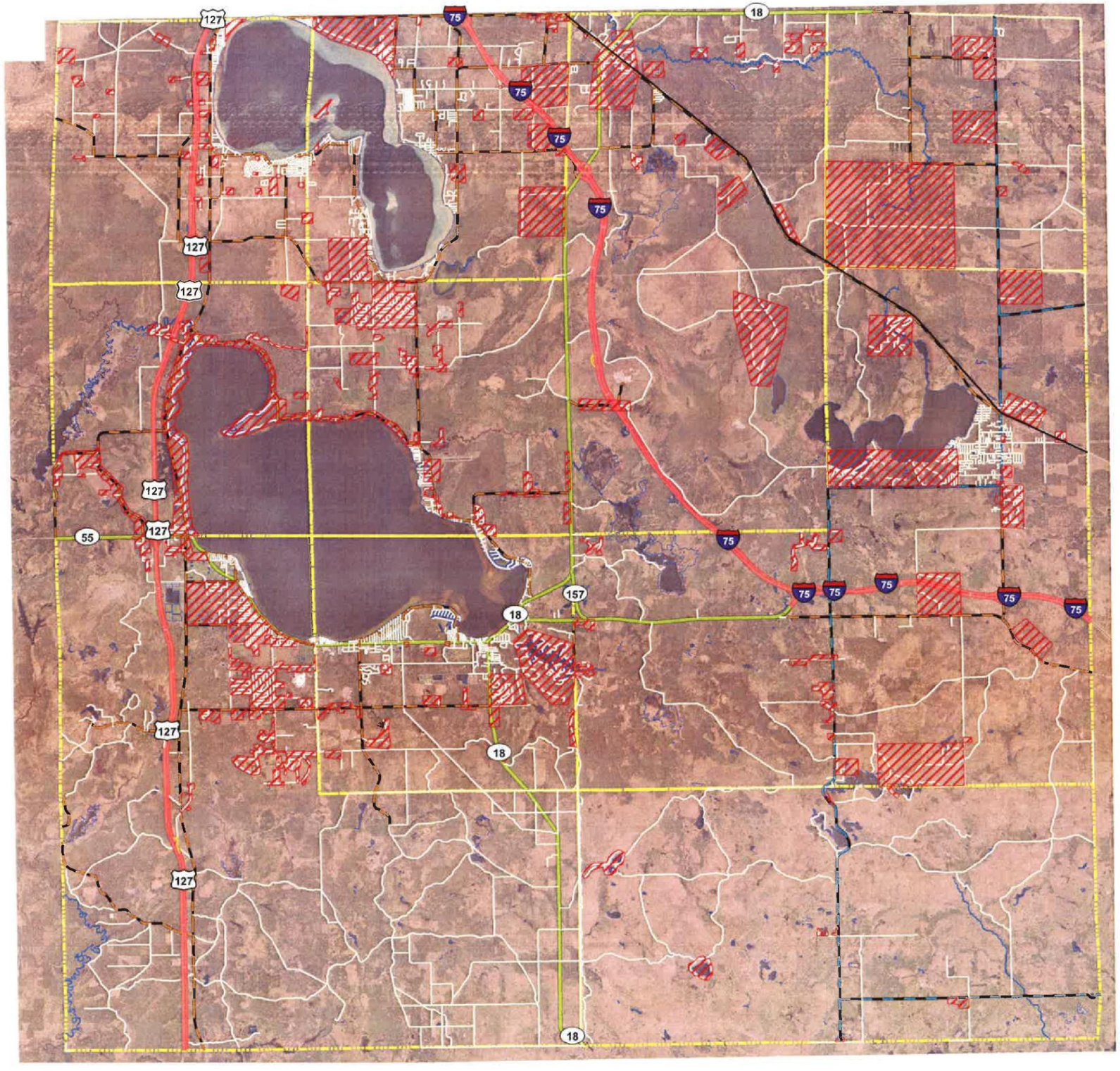
1 inch =2.38 miles

4,600 2,300 0 4,600 9,200 13,800 18,400 Feet

N

County of Roscommon
GIS Mapping Program

Phone: (989) 275-7648
Fax: (989) 275-3159
Email:
mapping@roscommoncounty.net



Map Legend

- Railroad
- Wildland Urban Interface
- Township

Community Wildfire Protection Plan

County Wildland Urban Interface (WUI)

Last update:
July 13, 2016

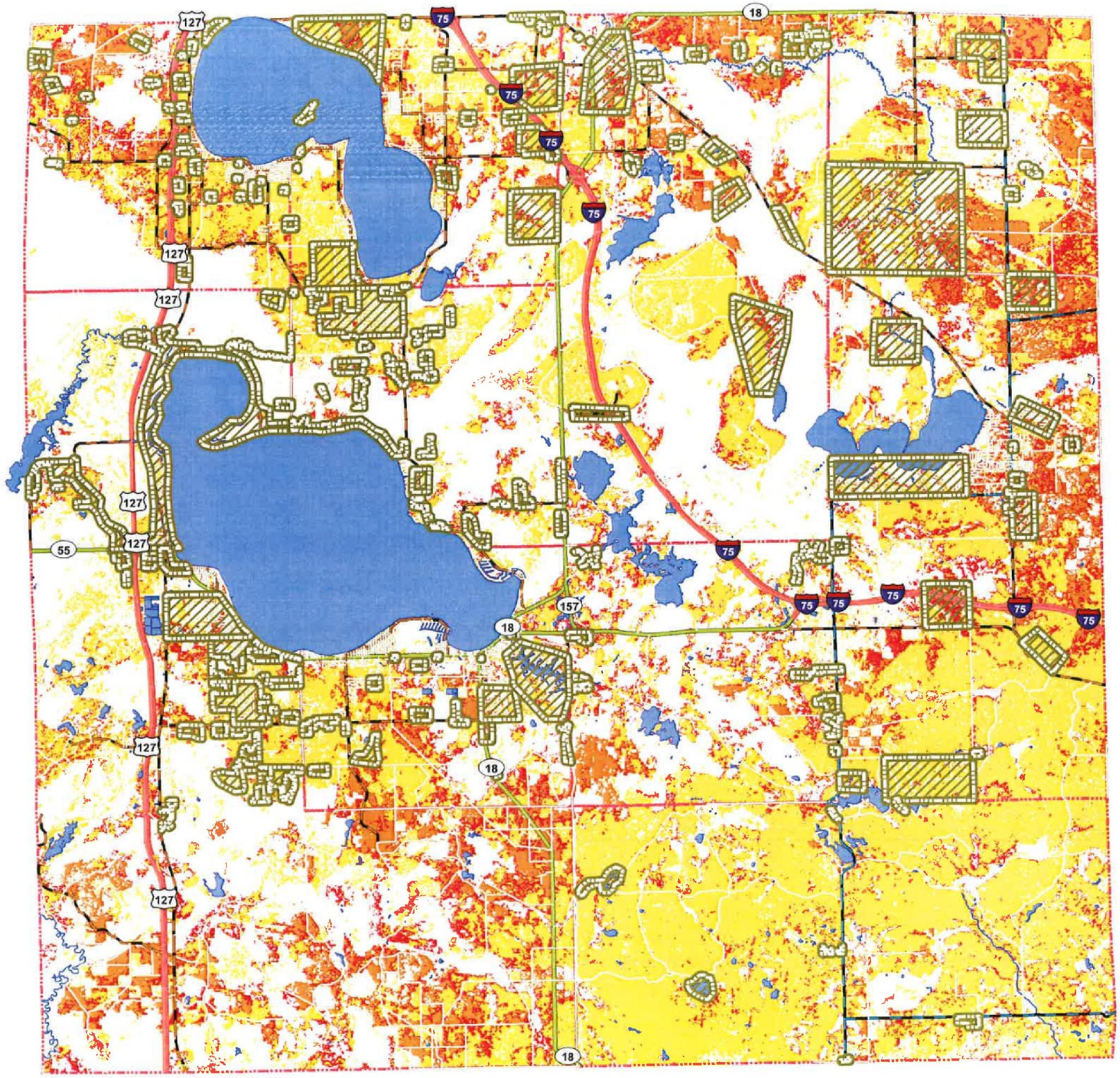
Township: All

1 inch =2,38 miles

4,600 2,300 0 4,600 9,200 13,800 18,400 Feet

County of Roscommon
GIS Mapping Program

Phone: (989) 275-7648
Fax: (989) 275-3159
Email:
mapping@roscommoncounty.net



County WUI & Wildfire Risk

Last update:
July 13, 2016

Township:
All

Community Wildfire Protection Plan

Map Legend

- Wildland Urban Interface
- Township

Wildfire Risk

GRIDCODE

- Aspen, Birch (Low risk)
- Central Hardwood (Moderate risk)
- Pine (High risk)

1 inch =2.38 miles

4,600 2,300 0 4,600 9,200 13,800 18,400 Feet

N

County of Roscommon
GIS Mapping Program

Phone: (989) 275-7648
Fax: (989) 275-3159
Email:
mapping@roscommoncounty.net

CHAPTER 4
MITIGATION ACTION PLAN

Mitigation Strategies

According to the Michigan State Police Emergency Management and Homeland Security Division there are five basic hazard mitigation strategies.

Strategy #1 – Modify the hazard to remove or eliminate it. Modification will reduce its size or amount, or control the rate of release of the hazard. Examples include hazardous fuels reduction techniques such as prescribed burning, vegetation removal, vegetation clearing and/or thinning, slash removal and vertical clearance of tree branches.

Strategy #2 – Segregate the hazard to try to "keep the hazard away from the people." This can be done by creating defendable spaces around homes and improving ingress and egress to homes which could provide fuel breaks in areas of continuous fuels.

Strategy #3 – Limit development in locations where people and structures would be at risk. This approach seeks to "keep the people away from the hazard" and includes a variety of land use planning and development regulation tools, such as comprehensive planning, zoning, Firewise ordinances, capital improvements planning, disclosure laws, and the acquisition and relocation of hazard-prone properties.

Strategy #4 – Alter design and construction to make structures less vulnerable to disaster damage. Also known as "interacting with the hazard," it focuses on engineering structures to withstand potentially destructive impacts. Examples include incorporation of the Firewise Construction standards, retrofitting structures to install ignition resistant building materials, and retrofitting of ignition resistant building techniques including closed decks, balconies, and porches.

Strategy #5 – Early warning and public education to ensure that the public is aware of potential hazards, and that proper warning and communication systems are in place to save lives and protect property.

Source: Local Hazard Mitigation Planning Workbook, MSP EMHSD, February 2003

The Firewise Construction standards, 2006 International Wildland / Urban Interface Code and 2006 International Fire Code set standards for new construction in the following areas:

- Ignition resistant building materials including fire resistant or non-combustible roof coverings, roof sheathing, roof flashing, roof skylights, roof and attic vents, roof eaves, gutters, siding, windows and screens, and fences and decks.

- Ignition resistant building techniques including closed decks, balconies, and porches to prevent debris and embers to collect.
- Driveway access for fire apparatus
- Vegetation plans for new residences and subdivisions that provide defensible space.
- Sprinkler system on structures over 5,000 square feet.
- Proper address labels for emergency response
- Other restrictions on outdoor burning, outside storage

FEMA and the Institute for Business and Home Safety (IBHS) are two organizations that conduct evaluations and suggest revisions for insufficient or inappropriate codes. The IBHS is an insurance industry research center dedicated to maintaining specific building code standards to reduce deaths, injuries, property damage, economic losses and human suffering caused by natural disasters such as wildfire, tornadoes, freezing weather and hail. The IBHS maintains a program called Its "Fortified…for safer living" which specifies construction, design, and landscaping guidelines to increase a new home's resistance to disaster from the ground up. Additional recommendations for fortification can be viewed at the IBHS website, www.ibhs.org.

The Building Code Effectiveness Grading Schedule (BCEGS) is maintained by Insurance Services Office, Inc. (ISO), which also rates fire-protection services. The BCEGS is a national measure of local building codes and code enforcement and is used by the insurance industry to determine how well new construction is protected from non-flood natural hazards. The BCEGS operates under the assumption communities with well-enforced, up-to-date codes will experience fewer damages. Homeowners within the participating communities can therefore receive lower insurance rates. This often provides communities with enough incentive to rigorously enforce their building codes.

Standards for Manufactured Homes

Manufactured or "mobile" homes are usually not regulated by local building codes since they are built in out-of-state factories and then shipped to sites. However, manufactured homes must comply with the U.S. Department of Housing and Urban Development's National Manufactured Home Construction and Safety Standards put into effect June 15, 1976 and meet local standards for on-site installation in terms of location and technique. The greatest mitigation concern with manufactured housing is protection from wind damage, which is best achieved through appropriate installation.

FEMA's Building Performance Assistance Team (BPAT) found that newer manufactured housing, designed to better transmit wind up-lift and overturning forces to the foundation, performed better when anchored to permanent foundations. Unfortunately, they also found that building officials were often unaware of manufacturer's installation guidelines with respect to permanent foundations. The Michigan Department Environment Quality (MDEQ) has a Manufactured Housing Program which conducts the following activities: plan review for new construction of

manufactured housing developments, initial inspections; work with the Michigan Department of Consumer and Industry Services for agreements, certifications, enforcement, and annual inspections where needed; and on-site water and wastewater inspections.

Planning, Zoning, and Capital Improvements Planning

Land-use planning and zoning are governmental functions critical to public safety including fire protection. But because these functions are political as well, they are subject to intense differences of opinion and to public controversy. Therefore, they tend to lag behind development until the problem becomes aggravated, much in the fashion of the traffic light that is installed only after eight or ten deaths have occurred at the intersection. Being political they are also subject, even after enactment into law, to pressures for variances and modifications. Therefore, they are seldom as effective as fire protection personnel would like to see them. With few exceptions, they cannot be made retroactive and, consequently, older developments are not much affected by them. Where land-use planning and zoning have been enforced, however, they have achieved significant degrees of fire safety (Oreg. St. Dep. For. 1978b, San Bernardino County Bd. Sup. 1974).

While building codes provide guidance on how to build in hazardous areas, planning and zoning activities direct development away from these areas, especially floodplains and wetlands. They do this by designating land uses that are compatible to the natural conditions of the land, such as open space or recreation in a flood plain, or by simply allowing developers more flexibility in arranging structures on a parcel of land through the planned development approach.

Comprehensive planning is the primary tool used by communities to address future development. Master Plans can reduce future wildfire damages by recommending Firewise landscaping and construction to reduce the ignition of homes. Unfortunately, they are not always connected to implementation ordinances and do not always consider natural hazards in specific land use recommendations.

Zoning is considered one of the primary tools to implement a community master plan. Zoning regulates development by dividing communities into zones or districts and setting development criteria, such as types and densities, for each zone or district. As such, zoning provides communities a means to implement Firewise strategies for land use development, which , may include standards for private/public road construction; driveway standards; requirements for developments (such as subdivisions, condominium, commercial, recreational and industrial) to have two egress ingress roads; and house addresses to be displayed on 911 signs at the driveway end.

Another important zoning tool available to communities is the Planned Unit Development (PUD). Use of PUDs provides flexibility to both the community and developer to incorporate Firewise development standards. In high risk areas, PUD standards should include use of defensible zones, fuel breaks, road and driveway design, signage for street identification, ingress and egress roads,

underground utilities and vegetative maintenance for managing dangerous fuel loads in high fire risk areas.

Capital improvement plans guide major public expenditures for communities for the next 5 to 20 years. Capital expenditures may include creating access roads and fire breaks, hazardous fuels reduction projects including community vegetation management, vegetation removal, and vegetation clearing and/or thinning, and retrofitting existing public structures against wildfire, etc.

Model wildfire code ordinances

Ordinance provisions fall into four categories: vegetative fuel clearance, building requirements, roadway and driveway standards, and planning and assessment. Communities are increasingly adopting or strengthening wildland fire ordinances to minimize wildfire damage.

The majority of community wildland codes address:

1) vegetative fuel clearance around structures
2) vegetative maintenance
3) vehicular access requirements

Primarily, these fire codes and ordinances attempt to reduce damage and the risk of possible injury for homeowners and firefighters in the WUI.

Wildfire mitigation may occur:

1) In the regulations for new and existing developments
2) in the development review process
3) in zoning, covenant or deed restrictions, requirements for fuel modification in high risk zones
4) in building and construction standards

Disadvantages to wildfire regulations include:

1) potentially higher construction and maintenance costs for homeowners or associations,
2) resistance to adopting regulations by homeowners
3) possibility of conflict with existing tree or natural resource ordinances
4) monitoring, administration and enforcement costs
5) lack of guarantees that proper maintenance will be kept in the absence of administration and enforcement

National Firewise Communities Program in 2005 to reflect the relationships between Community Wildfire Protection Plans, Firewise Communities® planning, and hazard reduction considerations for the home ignition zone.

This method organizes the hazard assessment process into a series of steps that include:

1) selection of areas to be evaluated
2) hazard components to be considered in the assessment
3) ranking of hazard components
4) compilation of hazard rankings into a usable format

The objective should be preventing ignition of structures and that water supplies, road width, and street signage were suppression issues and have little or nothing to do with preventing ignitions.

The standard outlines the essential requirements for land use conversion that results in community design and development, including road widths and emergency vehicle accessibility, water supplies, topography, construction materials, and available fire protection strategies.

Building Codes

The International Code Council, Inc. (ICC) produced the International Urban-Wildland Interface Code® in 2003. The ICC is a nonprofit organization dedicated to developing single sets of national model construction codes.

The International Code Council, Inc. (ICC) produced the International Urban-Wildland Interface Code® in 2003. The ICC is a nonprofit organization dedicated to developing single sets of national model construction codes. This ready to adopt wildland-urban interface code is for municipalities and county jurisdictions and bridges the code requirements of the pre-existing International Building Code® and the International Fire Code®. The document provides for the minimum regulations for land use and development in wildland-urban areas. It covers the administration and authority of government, definitions, special building construction regulations, fire protection requirements, and general requirements.

Vegetative fuel clearance`

A major provision of many ordinances concerns the distance between heavy vegetation types and the proposed or existing structures. The zone immediately adjacent to a dwelling is the area of maximum fuel modification and management, and typically extends 30 feet from the structure. The second zone is a transition area to any adjacent woodland. This zone is managed for fuels between the woodland and a structure regardless of property ownership. In conjunction with codes regulating vegetation fuel clearance, vegetative maintenance is critical for managing dangerous fuel loads in high fire risk areas.

Roadway and driveway standards

These standards ensure access for large emergency vehicles by stipulating minimum road/drive widths, minimum vertical clearance, an appropriate surface material, maximum grade, turnaround distances and radii, street identification, and premise identification.

Subdivision Regulations

These regulations set construction standards and govern how land will be subdivided. These standards generally address roads, sidewalks, utilities, storm sewers and drainage ways. They can include the following hazard protection standards:

- Identification of all hazardous areas;
- Road standards that allow passage of firefighting equipment and snow plows and are no more than one foot below flood elevation;
- Buried power or phone lines;
- Minimum water pressures adequate for firefighting; and
- Subdivisions without access to public water sources should provide water source either by providing water storage or a water well with adequate water pressures.

The purpose of Michigan's Land Division Act of 1967, formerly known as the Subdivision Control Act, is to regulate the division of land; promote the public health, safety, and general welfare; promote the orderly layout and use of land; provide for proper ingress and egress to lots and parcels; promote proper surveying and monumenting of land subdivided and conveyed by accurate legal descriptions; provide for the approvals to be obtained prior to the recoding and filing of plats and other land divisions; provide for the establishment of special assessment districts and for the imposition of special assessments to defray the cost of the final plat; establish the procedure for vacating, correcting, and revising plats; control residential building development within floodplain areas; provide for reserving easements for utilities in vacated streets and alleys; etc. It also allows county drain commissions to publish rules governing the internal drainage of proposed subdivisions and outlets for drainage.

Open Space Preservation

Another approach to preventing damage to new developments is to limit, prevent, or remove development within hazard areas such as flood plains. Open space can be maintained in agricultural use or can serve as parks, greenway corridors, and golf courses. Community master plans play an important role in increasing awareness of natural areas and helping to encourage preservation and protection of more open spaces. Capital improvement plans and comprehensive Master Plans can also identify areas to be preserved through any or all of the following means:

- Acquisition;
- Dedication by developers;
- Dedicating or purchasing an easement to keep the land open; or

- Specifying setbacks or buffer zones where development is not allowed.

Site Modification

Natural hazards, particularly wildfires can damage undeveloped areas as well as threaten people and improved property. With the use of Firewise strategies conditions can be modified to reduce risks and damages associated with wildfires.

For example, a home may survive a wildfire because a "defensible space" was created and maintained between it and adjacent wild lands. This "defensible space" is similar in concept to that of "firebreaks", wherein brush and other fuel are cleared away in areas of state and national forests. A clearing around homes for at least 30 feet on all sides will discourage wildfires from spreading directly to them. Proper maintenance of adjacent property including short grass, thinned trees, removal of low-hanging branches, selection of fire-resistant vegetation, etc. is also helpful in keeping wildfires away. The need for local homeowners to "fireproof" their properties is probably the county's primary wildfire vulnerability.

Retrofitting

An alternative to modifying the site to keep the hazard away is to modify or "retrofit" the site or building to minimize or even prevent damage. There are a variety of techniques to do this. This section looks at the measures that can be implemented to protect existing buildings from damage by wildfires, structural fires, floods, sewer backup, tornadoes, high winds, winter storms, hail, and extreme temperatures.

Modifications to prevent damages from wildfires not only include the creation of a "defensible space" but also a number of other very effective actions such as the use of fire-resistant siding and roofing materials as well as functional shutters and heavy fire resistant drapes. Homeowners can sweep clean their roofs, decks and eaves to prevent blowing embers from igniting twigs and leaves. They can move woodpiles and combustibles away from buildings enclose eaves and any openings under structures that would allow blown embers in, and clean up yard and house waste and flammable oils and spills, which are generally in garages and driveways. They can assure that driveways are wide, high, and level enough and bridges are strong enough for fire equipment to access the property particularly in hilly areas where space can be limited, and can clearly display their addresses so that fire fighters can identify them. Homeowners can also make sure that adequate water supply has been identified for fire-fighters.

The National Wildfire/Urban Interface Fire Program sponsors a program, called Firewise Communities/USA that is intended to help protect urban communities from wildfires. Through preparedness and education, participating communities are guided through this three-tiered planning process:

- Wildland fire staff from federal, state, or local agencies provides a community with information about co-existing with wildfire along with mitigation information tailored to that specific area.
- The community assesses its risk and creates its own network of cooperating homeowners, agencies and organizations.
- The community identifies and implements local solutions.

Modifications to prevent damages from structural fires include: the safe installation and maintenance of electrical outlets and wiring; the installation of firewalls; and provision of equipment needed to inhibit fire dangers (such as sprinkler systems, smoke alarms, and fire extinguishers). In urban areas, the denser pattern of development may allow a fire in one structure to spread to one or more other structures. Appropriate firewall use in connected units or downtown commercial/pedestrian strips can help to protect property against the spread of fire. Older attached structures especially should be checked for safety and code compliance.

Any special facility such as a nursing home, day care center, or health clinic should ensure that it has a workable fire plan and is equipped with the equipment needed to inhibit fire dangers, such as sprinkler systems, functioning smoke alarms, and usable fire extinguishers. In rural areas, proper education on and maintenance of non-utility heat sources will help allay this hazard. The National Fire Protection Association has information available for homeowners on how to prevent fires. Proper cleaning of chimneys, fire places and wood stoves, keeping objects away from heating sources to prevent malfunction or ignition, and proper installation and fueling of heaters are all important. Space heaters should be at least three feet from objects.

Insurance

Insurance does not mitigate damage caused by a natural hazard. However, it does help the owner repair, rebuild and afford to incorporate some of the other mitigation measures in the process. A standard homeowner's insurance policy will cover a property for the hazards of wildfire. Each company has different amounts of coverage, exclusions, deductibles, arrangements, and costs. Most insurance policies will only pay for the replacement costs of the home and personal property. In addition, it may take up to a year or more to rebuild and return to a new home.

Critical facilities should be inventoried and proper insurance coverage should be reviewed and insured. Larger local governments can self-insure and absorb the cost of damage to one facility, but if many properties are exposed to damage, self-insurance can be a major drain on the treasury. Communities cannot expect federal disaster assistance to make up the difference.

Technical and Financial Assistance

Property protection measures are usually considered the responsibility of the property owner. However, there are various roles the county or a municipality can play in encouraging and supporting implementation of these measures.

One of the first duties of a local government is to protect its own facilities. Fire stations, water treatment plants and other critical facilities should be a high priority for retrofitting projects and insurance coverage. Often public agencies discover after the disaster that their "all-hazard" insurance policies did not cover the property for the type of damage incurred.

Providing basic information to property owners is an important action that can be taken to support property protection measures. Another step is to help pay for a retrofitting project. Financial assistance can range from full funding of a project to helping residents find money from other programs. Some communities assume responsibility for sewer backups, street flooding, and other problems that arise from an inadequate public sewer or public drainage system. Less expensive community programs include low-interest loans, forgivable (after a certain period of occupancy) loans and rebates. These approaches don't always fully fund the project but they either cost the community less or increase the owner's commitment to the retrofitting project. In addition, communities can assist residents with referrals to home repair programs and heating assistance programs.

The more common outside funding sources for hazard mitigation are listed below. Unfortunately, some are only available after a disaster, not before, when damage could be prevented. Following past disaster declarations, FEMA, the Emergency Management Division of the Michigan State Police (MSP EMHSD), and the Michigan Department of Natural Resources have provided advice on how to qualify and apply for these funds.

<u>Pre-disaster funding sources:</u>

- FEMA's Pre-Disaster Mitigation (PDM) grants (administered by MSP EMHSD);
- FEMA's Flood Mitigation Assistance (FMA) grants (administered by MSP EMHSD);
- Community Development Block Grant (CDBG) funds (administered by the Michigan Economic Development Corporation);
- Michigan Department of Natural Resources (MDNR); and
- Conservation organizations, such as the West Michigan Land Conservancy, although generally these organizations prefer to purchase vacant land in natural areas, not properties with buildings on them.

<u>Post-disaster funding sources:</u>

- Insurance claims; and
- The National Flood Insurance Program's Increased Cost of Compliance provision, which increases the claim payment to cover a flood protection project required by code as a condition to rebuild the flooded building (administered by FEMA).

Post-disaster funding sources based on a Federal disaster declaration:

- FEMA's disaster assistance for public properties. However, the amount of assistance will be reduced by the amount of flood insurance that the public agency should have carried on the property (administered by MSP EMHSD);

- Small Business Administration (SBA) disaster loans (for non-governmental properties); and FEMA's Hazard Mitigation Grant Program (HMGP) funds (administered by MSP EMHSD).

The community can be the focal point in an acquisition project. Most funding programs require a local public agency to sponsor the project. The county or a municipality could process the funding application, work with the owners, and/or provide some or the entire local share. In some cases, the local government would be the ultimate owner of the property, but in other cases a public agency could assume ownership and maintenance responsibilities. The West Michigan Land Conservancy is an organization that can help by purchasing and holding certain lands until a government agency or other party can take possession.

Resource Protection

Resource protection activities are generally aimed at preserving (or in some cases restoring) natural areas as development occurs so that these areas can, in turn, provide hazard protection. For instance, watersheds, floodplains, and wetlands can reduce runoff from rainwater and snow melt in pervious areas; reduce overland flood flow and store floodwaters; remove and filter excess nutrients, pollutants and sediments; absorb flood energy and reduce flood scour; and recharge groundwater. These natural benefits can be preserved through regulatory steps for protecting natural areas or natural functions. General regulatory programs are discussed in the section on Preventive Measures. This section covers resource protection programs and standards, including the following:

- Fuels management
- Active forest management and timber harvesting
- Best management practices;
- Urban forestry;
- Wetland protection;
- Erosion and sedimentation control;
- River restoration;
- Dumping regulations; and
- Farmland protection.

Urban Forestry

The major damage caused by winds and snow/ice/sleet storms is to trees. Downed trees and branches break utility lines and damage buildings, vehicles, increase wildfire fuel loading, and anything else under them. An urban forestry program, developed by a municipality, can reduce the damage potential of trees by addressing proper tree care prior to a storm and recommend actions for managing trees before, during, and after a storm. Urban foresters or arborists can select hardier trees that better withstand high wind and ice accumulation and trees that are

shorter than utility lines for use in power and telephone line rights-of-way. They can review damaged trees to determine if they should be pruned or removed.

A properly written and enforced urban forestry plan can lessen the frequency of fallen trees and limbs caused by wind and ice build-up, reduce liability, assist in assuring that utility lines are not damaged, and provide guidance on repairs and pruning after a storm. Such a plan helps a community qualify to be a "Tree City USA". "Tree City USA" is a program sponsored by The National Arbor Day Foundation, in cooperation with the USDA Forest Service and the National Association of State Foresters, to ensure that every qualifying community has a viable tree management plan and program. It provides direction, technical assistance, public attention, and national recognition for urban and community forestry programs.

In addition, utility companies are heavily involved in tree management. A recent Consumers Energy brochure states that; since the company is responsible for providing safe, reliable electricity; employees (and companies hired to help) "are sent out on a planned, rotating schedule to clear trees and bushes from electric rights-of-way". Following guidelines from the National Arborist Association and working under required permits, Consumers Energy promises the following actions:

- Trees next to distribution lines, which carry electricity from pole to pole, will be trimmed a safe, clear distance from lines.
- The safety of employees and the public, particularly children, may require removal of a tree. A tree may have to be removed because it is dead, dying, damaged, or subject to falling because of wind or a shallow root system-making it a safety and power outage threat. Some fast-growing trees can be a continuing hazard and may have to be removed.
- Trimming methods are aimed at helping the tree heal, decreasing future trimming needs, and directing future growth away from electric lines.
- The need for these activities is eliminated when utility lines are buried. Burying the lines is recommended when they are being upgraded or installed for new developments.

<u>Public Education and Awareness</u>

Public education and awareness programs are necessary to periodically inform the public (property owners, renters, businesses and local officials) about the wildfire hazard in Roscommon County, the measures necessary to minimize potential damage and injury, and what actions are being taken. This information is primarily intended to precipitate appropriate actions. Information can be disseminated through the media (newspapers, newsletters, websites, television, radio, etc.) and at public forums and civic meetings. It can be distributed through schools and made available in public buildings or shopping areas. Brochures can be available at libraries and government offices, including building inspection offices. Special populations can be reached through direct mailings, workshops, and seminars. Signage along hazardous areas can also be effective.

Distribution of Existing Information

There is a great deal of information regarding hazards and hazard mitigation available to communities and the public on the national level. The Institute for Business and Home Safety gives detailed information on how to increase a new home's resistance to disaster; which is helpful to homeowners, building inspectors, and builders; through its "Fortified…for safer living" program. The National Wildfire/Urban Interface Fire Program provides information about coexisting with wildfire along with mitigation information through its "Firewise Communities/USA" tailored program. The National Fire Protection Association has information available for homeowners on how to prevent fires. The National Arbor Day Federation provides direction on tree management.

Unfortunately, this information doesn't always reach the intended target audience; whether that audience is communities, the general public, or specific populations. Local efforts can be made to select pertinent information and get it out to places and people where it is needed (such as information on wildfire hazards to campers). Programs and web sites can be publicized. Brochures can be stockpiled and distributed. This information can be very helpful, although it is not specific to the community.

Fire Prevention Activities by the Michigan Department of Natural Resources (MDNR)

- Planned fuelbreaks will be completed as soon as time and funding allow. All fuelbreaks will be maintained by hand, mechanical means, or prescribed burning as funding allows. Maintenance may be done by the Michigan Department of Natural Resources (MDNR) on state land. Proposed fuelbreaks will be considered/created as time and funding allows. Maps showing the location of existing fuelbreaks will be provided to the local VFD have jurisdiction in that area.
- Scoping letters for proposed projects on National Forest System lands will include information about the Wyden amendment and how to participate in hazardous fuels reduction activities on their property in conjunction with the Forest Service. (This amendment allows the Forest Service to enter into agreements with landowners to do hazardous fuels reduction activities on their property if their property is adjacent to National Forest land.)
- To the extent time and funding allows, training will be provided by the MDNR and it cooperators for local fire departments.
- The MDNR and its cooperators will participate in fire prevention activities, including but not limited to, parades, informational booths at fairs and festivals, home inspections, fire prevention visits to schools, etc. as time and funding allows.

Wildfire Mitigation Actions

Goal: To protect life, property, and natural resources.

Objective 1: Complete risk/vulnerability assessment for Roscommon County
Action Item 1: Create a hierarchy of buildings/facilities/areas to protect from wildfires. Identify all buildings/facilities/areas within the County that have cultural, economic, historical, or recreational value and prioritize them (high, medium, or low) accordingly.

- Location: County-wide
- Participating Agencies: Office of Emergency Management (OEM), Local Fire Departments
- Potential Funding Source(s): Not Applicable
- Project Cost: Not Applicable
- Schedule: Ongoing

Action Item 2: Create a red-line zone map that identifies zones that cannot be protected. Develop a map that identifies zones that are inaccessible and cannot be saved from wildfires due to mitigating circumstances.

- Location: County-wide
- Participating Agencies: Office of Emergency Management (OEM), Local Fire Departments
- Potential Funding Source(s): Not Applicable
- Project Cost: Not Applicable
- Schedule: Ongoing

Action Item 3: Work with DNR/US Fire Service to evaluate fire loads. Secure fire load information from DNR/US Fire Service, which then can be used when fighting fires.

- Location: County-wide
- Participating Agencies: Office of Emergency Management (OEM), Local Fire Departments, Michigan DNR, US Fire Service
- Potential Funding Source(s): Not Applicable
- Project Cost: Not Applicable
- Schedule: Ongoing

Action Item 4: Develop list of properties that have limited ingress/egress. Evaluate potential accessibility issues for critical infrastructure/residential properties/recreational areas that have limited access or one means of ingress/egress.

- Location: County-wide
- Participating Agencies: Office Of Emergency Management (OEM), Local Fire Departments
- Potential Funding Source(s): Not Applicable
- Project Cost: Not Applicable
- Schedule: 2017

Action Item 5: Promote improved access to properties with limited access/access problems. Work with property owners that have limited access or one means of ingress/egress to improve accessibility during times of emergency.

- Location: County-wide
- Participating Agencies: Office of Emergency Management (OEM), Local Fire Departments, Township Building Departments
- Potential Funding Source(s): Not Applicable
- Project Cost: Not Applicable
- Schedule: 2018

Objective 2: Develop training/education program for wildfires in Roscommon County

Action Item 1: Train local elected/selected public officials in National Incident Management System (NIMS) principles.

- Location: County-wide
- Participating Agencies: Office of Emergency Management (OEM), Local Fire Departments, Roscommon County Township Association
- Potential Funding Source(s): Not Applicable
- Project Cost: Not Applicable
- Schedule: 2017

Action Item 2: Work with communities to coordinate Firewise activities within the goals of the CWPP.

- Location: County-wide
- Participating Agencies: Office of Emergency Management (OEM), Local Fire Departments
- Potential Funding Source(s): Not Applicable
- Project Cost: Not Applicable
- Schedule: 2018

Action Item 3: Target Public Service Announcements (PSAs) for public on the specific local issues and prevention of wildfires. (Will coordinate with MDNR.)

- Location: County-wide
- Participating Agencies: Office of Emergency Management (OEM), Local Fire Departments, Michigan State Police
- Potential Funding Source(s): Michigan State Police Communication Budget, Local Fire Department Associations
- Project Cost: $4,000/Annually
- Schedule: 2017-2020 Summers

Action Item 4: Target communications in multiple media for seasonal population.

- Location: County-wide
- Participating Agencies: Office of Emergency Management (OEM), Local Fire Departments, Houghton Lake Tourism Bureau, Chambers of Commerce

- Potential Funding Source(s): Donations, Local Fire Department Associations, Region 7
- Project Cost: $2,500
- Schedule: 2017

Action Item 5: Utilize local merchants to promote fire safety.

- Location: County-wide
- Participating Agencies: Office of Emergency Management (OEM), Local Fire Departments, Chambers of Commerce
- Potential Funding Source(s): Not Applicable
- Project Cost: Not Applicable
- Schedule: 2017

Objective 3: Improve firefighting resources

Action Item 1: County-wide equipment assessment to determine need of additional equipment.

- Location: County-wide
- Participating Agencies: Office of Emergency Management (OEM), Local Fire Departments
- Potential Funding Source(s): Not Applicable
- Project Cost: Not Applicable
- Schedule: 2017

Action Item 2: Secure additional funding for firefighting capacity.

- Location: County-wide
- Participating Agencies: Office of Emergency Management (OEM), Local Fire Departments
- Potential Funding Source(s): State and Federal Fire Specific Grants
- Project Cost: To Be Determined
- Schedule: After Completion of Assessment as Funding Becomes Available

Action Item 3: Increase/train firefighting personnel.

- Location: County-wide
- Participating Agencies: Local Fire Departments, DNR Wildfire Division, Department of Licensing and Regulatory Affairs (LARA) Firefighter Training Division
- Potential Funding Source(s): FEMA Firefighter Grants, Local Millages and Special Assessments
- Project Cost: To Be Determined
- Schedule: After Completion of Action Item 1. As Funding Becomes Available

Objective 4: Implement Firewise planning and zoning strategies at local level

Action Item 1: Identify benefits of Firewise program.

- Location: County-wide
- Participating Agencies: Office of Emergency Management (OEM), Local Fire Departments, Michigan State University-Extension (MSUE), DNR
- Potential Funding Source(s): Not Applicable

- Project Cost: Not Applicable
- Schedule: 2017

Action Item 2: Promote the adoption/endorsement of recommendations and strategies of the Firewise program in local municipal planning documents.

- Location: County-wide
- Participating Agencies: Office of Emergency Management (OEM), Local Fire Departments, MSUE
- Potential Funding Source(s): Not Applicable
- Project Cost: Not Applicable
- Schedule: 2018

Action Item 3: Create Firewise model home(s), including landscaping, to demonstrate ideas on reducing ignitability of homes.

- Location: County-wide
- Participating Agencies: Office of Emergency Management (OEM), Local Fire Departments, Roscommon County Treasurer, MSUE
- Potential Funding Source(s): County Tax Payment Fund, Donations
- Project Cost: $40,000
- Schedule: 2018/19

Action Item 4: Seek funding to assist in Firewise education programs and post-education programs.

- Location: County-wide
- Participating Agencies: Office of Emergency Management (OEM), Local Fire Departments
- Potential Funding Source(s): Grants
- Project Cost: To Be Determined
- Schedule: 2017

Action Item 5: Partner with MSU-Extension to provide educational opportunities to property owners to learn benefits of Firewise programs.

- Location: County-wide
- Participating Agencies: Office of Emergency Management (OEM), Local Fire Departments, MSUE
- Potential Funding Source(s): OEM Budget
- Project Cost: $1,500
- Schedule: 2018

Action Item 6: Identify sources of funds for potential programs for Firewise programs or to become Firewise communities.

- Location: County-wide
- Participating Agencies: Office of Emergency Management (OEM), Local Fire Departments

- Potential Funding Source(s): Not Applicable
- Project Cost: Not Applicable
- Schedule: 2017

Objective 5: Improve communication system throughout Roscommon County

Action Item 1: Identify limitations on current communications system.

- Location: County-wide
- Participating Agencies: Office of Emergency Management (OEM), Central Dispatch, Local Law and Fire, and Emergency Medical Services (EMS) Agencies
- Potential Funding Source(s): Not Applicable
- Project Cost: Not Applicable
- Schedule: 2017

Action Item 2: Develop county-wide communications plan.

- Location: County-wide
- Participating Agencies: Central Dispatch, Local Law Enforcement, Fire, and EMS Agencies
- Potential Funding Source(s): Not Applicable
- Project Cost: Not Applicable
- Schedule: 2018

Action Item 3: Locate funding sources for improved communication system.

- Location: County-wide
- Participating Agencies: Office of Emergency Management (OEM), Central Dispatch, Local Law Enforcement, Fire, and EMS Agencies
- Potential Funding Source(s): Not Applicable
- Project Cost: Not Applicable
- Schedule: 2018

Action Item 4: Educate public on utilization of communication system.

- Location: County-wide
- Participating Agencies: Office of Emergency Management (OEM), Central Dispatch, Local Law Enforcement, Fire, and EMS Agencies
- Potential Funding Source(s): OEM Budget, Fire and EMS Budgets
- Project Cost: $1,500-2,500
- Schedule: 2018

CHAPTER 5:
IMPLEMENTATION

Under the Healthy Forest Restoration Act, the local government officials are one of the three entities, along with local fire chiefs and the state forestry agencies, which must agree on the final contents of a Community Wildfire Protection Plan (CWPP). The following process was utilized to complete the CWPP.

Local Municipal Entities

Their role in this process is as follows:

- Engage local community leaders and stakeholders in the planning process and along with local fire chiefs, provide local leadership in assessing community fire protection needs and determining the complexity of planning necessary.

- Enlist state and federal agency assistance and support for the planning effort.

- Ensure that the Community Wildfire Protection Plan is collaboratively developed. Local officials must meaningfully involve state government representatives, federal agencies that manage land in the vicinity of the community, and other interested parties.

- In conjunction with local fire chiefs, local government officials will clearly communicate to home and business owners their responsibility to reduce the ignitability of their homes and other structures, and to create defensible space around them.

- Incorporate recommendations from the CWPP into local master plans and ordinances

Local Fire Chiefs:

Their role in this process is as follows:

- As trusted community members and leaders, take the lead in encouraging diverse local understanding of and support for the development of a Community Wildfire Protection Plan, in organizing the planning process, and in ensuring meaningful participation from other community leaders and diverse stakeholders.

- Use local fire protection expertise to lead the assessment of community fire protection needs and to determine the necessary complexity of fire preparedness and response planning.

- Local fire departments will pursue grants to purchase equipment and materials needed to conduct Firewise education programs and home assessments.

- In conjunction with local government officials, clearly communicate to home and business owners their responsibility to reduce the ignitability of their homes and other structures, and to create defensible space around them.

- Consider using The "Leaders Guide for developing a Community Wildfire Protection Plan", developed by the International Association of Fire Chiefs (IAFC), to guide the process.

Michigan Department of Natural Resources:
Their role in this process is as follows:

- Provide statewide leadership in encouraging local, state, federal, and nongovernmental stakeholders in development of the Roscommon County Community Wildfire Protection Plan and facilitate the participation of state personnel in the development process.

- Through established relationships with Roscommon County village, township, and county officials, local fire chiefs, state and national fire organizations, federal land management agencies, private homeowners, and community groups:
    - Assist in bringing together diverse community partners.
    - Initiate the planning dialogue, if necessary.
    - Facilitate the implementation of priority actions across ownership boundaries.

- Bring specialized natural resource knowledge and technical expertise into the planning process.

- Provide statewide leadership in developing and maintaining a list, or map, of communities at risk within the state and work with partners to establish priorities for action.

- When allocating federal grant funds (such as the mitigation portion of State Fire Assistance) for projects on nonfederal lands, to the maximum extent possible, give priority to communities that have adopted a Community Wildfire Protection Plan.

US Forest Service:
Their role in this process is as follows:

- The US Forest Service will plan fuel reduction projects on federal and adjoining land:
    - Ensure full collaboration with local communities, state agencies, and all interested parties.

- Give priority to projects that provide for the protection of at-risk communities or watersheds, or that implement recommendations in a Community Wildfire Protection Plan.

- Provide funding opportunities for projects and activities identified in a Community Wildfire Protection Plan.

Michigan State University Extension:

The local MSU Extension Office will provide educational programs to individuals and groups on how to protect their homes and buildings from wildfires. They will also provide educational articles suitable for reproduction in newspapers, newsletters, etc. as funding and staffing is available.

Community Events

Local fire departments, in coordination with the MDNR and its cooperators, will attend community events to promote the Roscommon County Community Wildfire Protection Plan as funding and staffing allows. The primary focus will be to encourage use of Firewise principles to protect structures from wildfires.

Michelle M. Stevenson

Roscommon County Clerk / Register of Deeds
clerk@roscommoncounty.net

Jamie Paille, Chief Deputy
Kari Hopkins, Chief Deputy
Nichole Massara, Deputy
MaryAnn Marsh, Deputy

500 Lake St.
Roscommon, MI 48653
Clerk: 989-275-5923
Register: 989-275-5931
Fax: 989-275-8640

September 2, 2016

Moved by Melvin, Seconded by Russo, to approve the "Resolution of Adoption for the Roscommon County Community Wildfire Protection Plan, effective Wednesday August 24, 2016."

RESOLUTION OF ADOPTION FOR THE ROSCOMMON COUNTY
COMMUNITY WILDFIRE PROTECTION PLAN

WHEREAS, Roscommon County, Michigan has experienced wildfires that have damaged commercial, residential, and public properties, displaced citizens and businesses, closed streets and bridges, and presented general public health and safety concerns; and

WHEREAS, Roscommon County has prepared a *Community Wildfire Protection Plan* that outlines the County's options to reduce overall damage and impact from wildfires; and

WHEREAS, the *Community Wildfire Protection Plan* has been reviewed by County residents, local fire chiefs, business owners, federal, state, and local agencies, and has been revised to reflect their concerns.

NOW, THEREFORE, BE IT RESOLVED THAT

1. The *Roscommon County Community Wildfire Protection Plan* is hereby adopted as an official plan of Roscommon County, Michigan.

2. The *Roscommon County Community Wildfire Protection Plan* is hereby incorporated into the Roscommon County Hazard Mitigation Plan as an addendum.

3. The Hazard Mitigation Planning Committee established as a permanent county advisory body shall also be an advisory body to the *Community Wildfire Protection Plan* and shall be consistent with the duties designated in the Hazard Mitigation Plan.

4. The Hazard Mitigation Committee is charged with supervising the implementation of the *Community Wildfire Protection Plan's* recommendations within the funding limitations as provided by the Roscommon County Board of Commissioners or other sources.

5. The Hazard Mitigation Committee shall give priority attention to action items recommended by the *Hazard Mitigation Plan and Community Wildfire Protection Plan* as high priority.

6. The Hazard Mitigation Committee's facilitator (Emergency Management Director) shall convene the Hazard Mitigation Committee at least once per year. The Committee shall monitor the implementation of the Plan and shall submit a written progress report to the County Board of Commissioners in accordance with the following format:
    a. A review of the original plan.
    b. A review of any disasters, emergencies, or wildfires that occurred during the previous calendar year.
    c. A review of the actions taken, including what was accomplished during the previous year.
    d. A discussion of any implementation problems.
    e. Recommendations for new projects or revised action items. Such recommendations shall be subject to approval by the County Board of Commissioners.

On Roll Call: Ayes: Russo, Melvin, Schneider, Stefanko. Milburn excused absence. Nays: None. Motion Carried

State of Michigan }
County of Roscommon}

I, Michelle M. Stevenson, Clerk of the Board of County Commissioners for the County of Roscommon do hereby certify that the above is a true and correct copy of a resolution adopted by the Roscommon County Board of Commissioners at a regular session held on August 24, 2016. That I have compared the same with the original and it is a copy transcript therefrom, and of the whole thereafter.

In testimony whereof, I have hereunto set my hand and affixed the official seal at Roscommon, Michigan on September 2, 2016.

Michelle M Stevenson

Michelle M. Stevenson
Clerk of the Board of County Commissioners