Langlade County

All Hazards Mitigation Plan

Update





Prepared by: North Central Wisconsin Regional Planning Commission

LANGLADE COUNTY ALL HAZARDS MITIGATION PLAN UPDATE

prepared for:

Langlade County Emergency Management

by:

North Central Wisconsin Regional Planning Commission

adopted by Langlade County Board on:

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This update was prepared at the request and under the supervision of the Langlade County Public Safety Committee and its Emergency Management Director by the North Central Wisconsin Regional Planning Commission (NCWRPC). For more information, contact:

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Introduction

Part I of the Langlade County All Hazards Mitigation Plan (AHMP) Update describes and documents the process used to develop the plan update. This includes how it was prepared and who (committee, organizations, departments, staff, consultants, etc.) was involved in the update process. It also describes the local government's involvement, the time period in which the update was prepared, and who to contact to answer questions and make recommendations for future amendments to the plan.

Disaster Mitigation Act of 2000

The development of the Langlade County All Hazards Mitigation Plan Update is a response to the passage of the Disaster Mitigation Act of 2000 (DMA2K). On October 30, 2000, DMA2K was signed into law by the federal government in an attempt at stemming the losses from disasters, reducing future public and private expenditures, and speeding up response and recovery from disasters. This Act (Public Law 106-390) amended the Robert T. Stafford Relief and Emergency Assistance Act. The following is a summary of the parts of DMA2K that pertain to local governments and tribal organizations:

- The Act establishes a new requirement for local governments and tribal organizations to prepare an All Hazards Mitigation Plan in order to be eligible for funding from FEMA through the Pre-Disaster Mitigation Assistance Program and Hazard Mitigation Grant Program.
- The Act establishes a requirement that natural hazards such as tornados, floods and wildfires need to be addressed in the risk assessment and vulnerability analysis parts of the All Hazards Mitigation Plan. Manmade hazards such as hazardous waste spills are encouraged, but not required, to be addressed.
- The Act authorizes up to seven percent of Hazard Mitigation Grant Program funds available to a state after a federal disaster to be used for development of state, local and tribal organization All Hazards Mitigation Plans.
- The Act establishes November 1, 2004 as the date by which local governments and tribal organizations are to prepare and adopt their respective plans in order to be eligible for the FEMA Hazard Mitigation Grant Program and Pre-Disaster Mitigation Program.
- If a plan is not prepared by November 1, 2004, and a major disaster is declared, in order for a local government or tribal organization to

be eligible to receive funding through the Hazards Mitigation Grant Program, they must agree to prepare an All Hazards Mitigation Plan within one year.

- In addition, by not having an All Hazard Mitigation Plan, local governments and tribal organizations cannot utilize funding through the Pre-Disaster Mitigation Grant Program.
- All Hazard Mitigation Plans must be updated every five years.

The Five Parts of an All Hazards Mitigation Plan Update

The Langlade County All Hazards Mitigation Plan Update was categorized into five parts to address FEMA's local mitigation plan requirements. The five parts are:

- PartI:Update Planning ProcessPartII:Planning AreaPartIII:Risk AssessmentPartIV:Mitigation Strategy
- Part V: Plan Maintenance Process and Adoption

Development of the All Hazards Mitigation Plan Update

The Langlade County Emergency Management Department received a Planning Grant in 2018 to develop an All Hazards Mitigation Plan Update through the Pre-Disaster Mitigation (PDM) Grant Program.

In late 2018, The North Central Wisconsin Regional Planning Commission (NCWRPC) finalized a work agreement with Langlade County and began updating the All Hazards Mitigation Plan at the request of the County Emergency Management Director in January of 2019.

The update process included Taskforce committee meetings as well as extensive involvement from the local units of government within Langlade County and the counties surrounding Langlade. A variety of local and regional agencies were involved in the development of the update at various stages, and extensive opportunity for public participation was provided including public informational meetings. All sections of the plan update report were reviewed by the planning team at subsequent meetings and revised as established in the design of the update process for this Plan.

The remainder of this chapter expands on and provides more detail on key aspects of the update development process.

Key Elements of the Update to the 2013 Plan

The major enhancements to the Langlade County All Hazards Mitigation Plan developed through this update are as follows:

- ✓ Review of Recommended Revisions The final Crosswalk for the previous plan approval passed the plan with no recommended revisions.
- Review and update of planning area chapter The planning area description and inventory was expanded and improved with additional information and updated statistics.
- ✓ Review and update of risk assessment The risk assessment was updated with documentation on recent hazard events. The priority level of hazards facing the County was also reviewed and updated.
- ✓ High Hazard Dams High hazard potential dams were specifically addressed in the risk assessment, as well as other areas of the Plan Update.
- Review and update of Mitigation Strategy The mitigation strategies chapter begins with a complete progress report on the strategies from the 2013 plan, establishment of new set of strategies for next five-year cycle and an updated prioritization of projects.
- ✓ Concept of Community Resiliency is introduced into the Plan, see Chapter 5.

All Hazards Mitigation Plan Update Taskforce

The Langlade County All Hazards Mitigation Plan was prepared under the guidance of an advisory taskforce that consisted of the current members of the County Public Safety Committee. Periodic meetings were held with the NCWRPC staff, the County Emergency Management Director, and the committee Taskforce to provide input on the types of hazards to be considered, appropriate mitigation strategies, and to review draft reports. Committee members are as follows:

- Arlene Bonacci, Chair
- Douglas Nonnenmacher
- Ben Pierce
- Richard Schuh
- George Shinners

Local Government Involvement

There were a number of opportunities for the local units of government to become involved in the update process. All incorporated jurisdictions participated in the original plan as well as this update through one or more of these opportunities. In addition, unincorporated jurisdictions received a survey and may have participated in other opportunities during the process.

In March of 2019 a hazard mitigation issues survey was sent to each town chairperson and clerk requesting which hazards are a concern, input on past and future mitigation measures, and to document other information that could be incorporated into the All Hazards Mitigation Plan Update. Responses were received from 4 of 17 towns. A significant amount of information was gleaned from these questionnaires and incorporated into the planning document.

The City of Antigo was formally introduced to the update process at a separate meeting on July 24, 2019. The Public Works Committee was selected by the City, and they were provided information on hazards that have significance to the City, discussed critical facilities and provided mitigation strategy ideas for the plan update. The following City officials participated in this planning meeting:

- City Administrator Mark Desotell
- Public Works Director Charley Brinkmeier
- Barb Rebstock, City Council
- Sandra Fisher, City Council
- Tom Bauknecht, City Council
- Kirk Packard, City of Antigo
- Jaime Horswill, City of Antigo
- Rick LeBrun, City Council
- Scott Henricks, City Council

Discussion from this meeting indicated that the City is most concerned about spring flooding, chemical spills and ice storm resulting in long term power outage. The City has been engaged in addressing the effects of flooding on the Spring Brook. Extensive work has been accomplished upstream including building removal as well as vegetation and debris clearing. Dam operations have also been addressed, and lake levels are lowered in the fall to maximize capacity for snowmelt. The focus in now downstream where there remain a couple of businesses and some residences within the floodway. The Highway 45 Bridge is a restriction point in the stream flow that should be addressed. The potential for significant ice storms in northern Wisconsin is a significant concern for city officials with regard to dealing with a long term power outage situation. Concerns discussed include space for sheltering large numbers of people (such as the high school or armory) plus power generation capability for heating and availability of dispensable fuel supplies to power emergency and essential service vehicles.

The Village of White Lake was formally introduced to the update process at the Village Board meeting on July 9, 2019. The participants at this meeting provided information on hazards that have significance to the village, discussed critical facilities and provided mitigation strategy ideas for the plan. The following Village officials participated in this planning meeting:

- Tom Edelman, Village President
- Patsy Listle, Village Trustee
- Christopher Oatman, Village Trustee
- Carol Blawat, Village Clerk/Treasurer

Discussion from this meeting revealed that the Village is most concerned about tornados. Since the 2007 tornado, the Village has been working to be better prepared. A neighborhood watch program with block captains has been organized in a community-wide effort. Storm spotter training and monitoring weather conditions for natural disasters is a major part of this effort. The new school gym was designed to double as a shelter including back-up power generators.

Neighboring Community Involvement

One of the requirements of the update planning process was to include neighboring communities. In previous plans, the NCWRPC experienced low attendance in response to invitations to county emergency management staff from surrounding counties. As a result, NCWRPC staff teleconferenced with staff from Forest, Oneida, Lincoln, Marathon, Shawano, Menominee and Oconto counties. Ideas were exchanged about All Hazards Mitigation planning processes and strategies between the various counties.

Local and Regional Agency Involvement

Another requirement of the update planning process was to involve local and regional agencies in hazard mitigation activities, and agencies that have the authority to regulate development, as well as businesses, academia, and other private and non-private interests. To meet this objective, the NCWRPC invited a diverse group of stakeholders to discuss potential hazard mitigation strategies. The meeting was held on August 7, 2019 at County Courthouse in Antigo. Agencies and organizations represented include the following:

Tracy Chernetski	-	County Social Services
Mike Winski	-	Town of Antgo Fire Department
Lynn Wineland	-	American Red Cross
Don Wineland	-	Town of Langlade Fire
Jordan Schult	-	Northcentral Technical College
Kari Lazers	-	Northcentral Technical College
Jamie Roth	-	Langlade County Health Dept.
Stepanie Thiede	-	Langlade County Health Dept.
Duane Haakenso	n-	Langlade County Land Conservation

A number of other agencies were invited but chose not to attend. including: WDNR, University of Wisconsin – Extension, and the various local fire departments and EMS units.

During the meeting, the Plan and its components were introduced to the attendees. A summary of proposed mitigation strategies was given to each person present. The mitigation measures were discussed at length with the group. Part IV of the Plan was revised based on the meeting.

Meeting attendees identified a number of issues including ice dams on the rivers causing flooding, cyber-attacks, controlling and organizing volunteers during disaster events, and power outages.

Local emergency operations planning needs to address these issues. Communication is key. There was an After Action Review (AAR) done after the July 19th storm event to discuss ways to improve on communication between the county and local municipalities. Organizational learning requires that teams continuously assess their performance to identify and learn from successes and failures. The AAR is a simple but powerful tool to help do this. Conducting an AAR at the end of a project, program or event can help teams learn from their efforts. Furthermore, sharing the results from the AAR can help future teams learn successful strategies and avoid pitfalls that have previously been overcome.

Public Review Process and Plan Update Adoption

Opportunities for public comment were provided to review the Plan Update during the drafting stage and prior to Plan Update approval. See APPENDIX A for copies of public meeting notices. A copy of draft Plan Update elements were made available on the Internet during the update process. Links that open an email submission form to the County Emergency Management Director or NCWRPC Staff were provided for questions or comments. The final Plan Update document will remain on the Internet until the next draft update is posted for review. The public can continue to submit questions or comments at any time via the email link. (See Contact Information, below, for web addresses.)

County Public Safety Committee meetings are always open to the public (unless entering into legal closed session), and the public can bring questions or comments regarding this Plan Update to any regular meeting. Meeting schedules can be obtained by checking the County website, contacting the County Clerk's Office or the Emergency Management Director (see Contact Information, below).

A public informational meeting on the draft plan update was held in the Langlade County Courthouse on July 11, 2019. Notice was published in the local newspaper. Unfortunately, no members of the public chose to attend this meeting. In addition, no comments were received via U.S. Mail or email as a result of this meeting.

The County Public Safety Committee will review the Plan Update prior to forwarding it to County Board for approval. The Plan will then be forwarded to the County Board for final adoption. The adopting resolution will be included in APPENDIX B along with details on any plan changes resulting from Committee and/or County Board action.

The City and Village were asked to adopt the Plan Update for their jurisdiction at their own properly posted and open public meeting, see APPENDIX B for the local units' resolutions of adoption.

Incorporated Plans, Studies, Reports And Technical Data

Many plans, reports, and technical data sources were referenced and incorporated into the Langlade County All Hazards Mitigation Plan Update. These sources include but are not necessarily limited to the following:

Wisconsin Department of Natural Resources, North Central Wisconsin Regional Planning Commission and Langlade County geographic information system databases provided much of the base data for the mapping and analysis within the Update. Statistical reports and data from the US Census and Wisconsin Departments of Administration, Revenue and Workforce Development where used for the demographic background in Part 2 of this Update. Land use data in Part 2 was obtained from the Langlade County Comprehensive Plan. Wisconsin Department of Natural Resources Wetlands Inventory and Dams Database were used to identify and map wetlands and dams within the County in Parts 2 and 3. The WisDNR Dams Database provided information on high hazard potential dams within the County. FEMA DFIRM NFIP flood zone maps for Langlade County provided the mapping of 100-year floodplain areas for the flooding risk assessment in Part 3.

NOAA National Climatic Data Center severe weather event data was used extensively for the risk assessment in Part 3. The wildfire section of the risk assessment was based on the Wisconsin Department of Natural Resources' fire occurrence database and statewide Communities At Risk (CAR) assessment.

Other plans, reports, and documents were reviewed by staff during the update process including but not limited to the State of Wisconsin Hazard Mitigation Plan; the Hazard Analysis for the State of Wisconsin, the Wisconsin Repetitive Loss Report, the Langlade County Zoning Ordinance, the Langlade County Land and Water Resource Management Plan, and the Langlade County Emergency Operations Plan. Although these may not have been directly incorporated, the review provided valuable insight and direction to the update process.

Contact Information

Questions or comments related to this Plan Update can be directed to the County Emergency Management Director at any time. For more information contact:

Detective Sergeant Cassandra Doemel, Director Langlade County Emergency Management 840 Clermont Street Antigo, WI 54409

715-627-6440

CDoemel@co.langlade.wi.us

Go to:

http://www.co.langlade.wi.us/departments/sheriffs-office/emergency-management/

http://www.ncwrpc.org/langlade/ahmp.html

https://dma.wi.gov/DMA/wem/mitigation/hazard-mitigation

https://www.fema.gov/hazard-mitigation-planning

INTRODUCTION

Part II of the Langlade County All-Hazard Mitigation Plan provides general geographical information on Langlade County including demographic and economic characteristics. The general development patterns of the county are described in terms of current land use and future development trends.

In addition to developing an understanding of the planning area, this chapter represents the beginning stages of assessing vulnerability by inventorying the numbers, types and values of existing buildings, infrastructure and critical facilities within each participating jurisdiction in the planning area. This overall summary of each jurisdiction's vulnerability to hazards describes the potential impact on the community.

Land use and development trends are analyzed to project the number and type of potential future buildings, infrastructure and critical facilities within each jurisdiction so that mitigation options can be considered in future land use decisions.

The resulting information is an important element of the planning process, since sound alternative mitigation strategies cannot be formulated and evaluated without an in-depth knowledge of the relevant conditions in the study area.

GENERAL GEOGRAPHY

Location

Langlade County is located in northern Wisconsin (See Map 1). The largest city and county seat is Antigo in the south-central portion of the county. The Village of White Lake is located in the eastern part of the county. There are also several unincorporated places dispersed around the county. The county is bounded on the north by Oneida and Forest Counties, on the east by Oconto County, on the south by Menominee, Shawano and Marathon Counties, and on the west by Lincoln County.

Langlade County lies approximately 81 miles northwest of Green Bay; 181 miles northwest of Milwaukee; and 170 miles north of Madison. Major metropolitan areas outside of Wisconsin are Chicago, 267 miles southeast; Minneapolis-St. Paul, 207 miles west; and Duluth, 229 miles northwest.

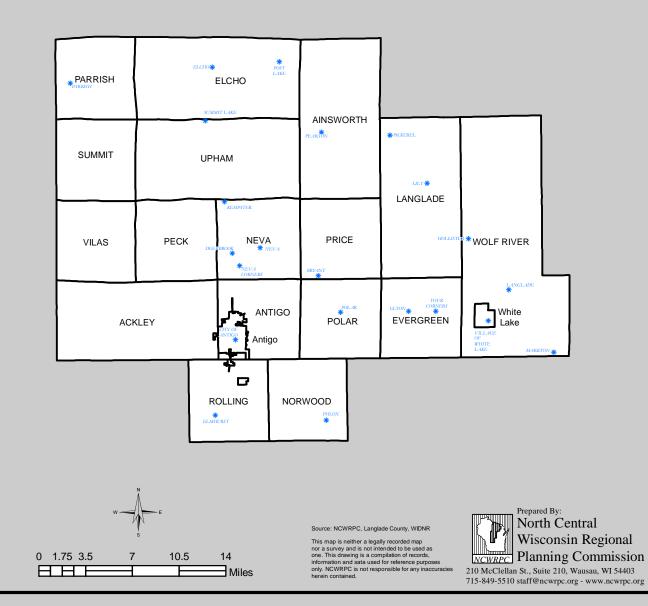
Langlade County, Wisconsin

Location

Map 1







Civil Divisions

There are 19 municipalities (17 towns, one village and one city) in the Langlade County planning area. These units of government provide the basic structure of the decision making framework. The county has a total area of about 888 square miles, of which 1.9 percent is water. The area and proportion of the county within each civil division are presented in Table 1.

Area in square miles*						
Municipality	Water area	Land area	Total area	Area as % of County*		
Ackley town	0.35	70.63	70.98	8.0%		
Ainsworth town	2.80	69.14	71.94	8.1%		
Antigo town	0.04	31.03	31.08	3.5%		
Elcho town	4.28	70.97	75.24	8.5%		
Evergreen town	0.46	35.78	36.24	4.1%		
Langlade town	1.00	71.42	72.42	8.2%		
Neva town	0.45	37.29	37.74	4.3%		
Norwood town	0.56	35.57	36.13	4.1%		
Parrish town	0.41	36.18	36.58	4.1%		
Peck town	0.18	37.04	37.22	4.2%		
Polar town	0.37	35.55	35.92	4.0%		
Price town	0.12	36.12	36.32	4.1%		
Rolling town	0.05	35.91	35.96	4.1%		
Summit town	0.02	36.40	36.43	4.1%		
Upham town	3.61	70.31	73.92	8.3%		
Vilas town	0.03	35.81	35.84	4.0%		
Wolf River town	2.08	116.78	118.86	13.4%		
White Lake village	0.29	2.18	2.47	0.3%		
Antigo city	0.05	6.54	6.59	0.7%		
Langlade County	17.24	870.64	887.88	100.0%		

Source: U.S. Census and NCWRPC * Totals may not add due to rounding.

Topography

The landscape of Langlade County is primarily the result of glaciation. The relief is characterized by moraines, outwash plains, and a variety of other glacial features. The moraines are primarily gently sloping to very steep. The outwash plains are smooth and level. The Antigo Flats, a major outwash plain, in the south-central part of the county was an area not covered by ice during the most recent glaciation. Elevations range from about 1,070 feet above sea level in the southeast corner (Wolf River) to 1,903 feet above sea level in the Town of Langlade.

Climate

Langlade County has a continental climate characterized by cold, snowy winters, warm summer days and cool summer nights. The short frost-free period during the summer restricts suitable crops mainly to forage, small grain, and vegetables. Precipitation is fairly well distributed throughout the year, reaching a peak in summer. Snow covers the ground much of the time from late fall until early spring., For the last year the average annual precipitation of 29.22 inches and average annual snowfall of 53 inches. June was the wettest month 3.9 inches of rain and December was the month with the most snow of 15 inches. The prevailing wind is from the southwest. Average wind speed is highest in spring at 12 miles per hour.

DEMOGRAPHIC AND ECONOMIC PROFILE

Population and Households

The 2017 ACS 5-year population estimate reported a population base of 19,190 people. This represents a decrease of 3.9 percent or 787 residents from the 2010 Census reported population of 19,977 people. Langlade County has underperformed along with most of its neighbor counties versus the overall state average (refer to **Table 2**). Within Langlade County itself, most of the individual municipalities lost population. Only seven towns: Neva, Parrish, Price, Rolling, Summit. Upham, and Vilas townships saw growth between 2010 and 2017 (refer to **Table 3**).

Wisconsin Applied Population Lab reports indicate that this decline in population is part of a larger pattern of rural population loss across the Midwest. In Wisconsin, the northern counties were the most affected. One big factor was the experiencing more deaths than births in these areas. In addition, young people are tending to move out of more rural areas for multiple reasons including: job opportunities, educational opportunities, the excitement of city-life, and desire for diversity and cultural amenities.

Table 2 - Population of Adjacent Counties					
County	2010	2017	Change	% Change	
Langlade	19,977	19,190	-787	-3.9%	
Forest	9,304	9,034	-270	-2.9%	
Oconto	37,660	37,465	-195	-0.5%	
Menominee	4,232	4,506	274	6.5%	
Shawano	41,949	41,136	-813	-1.9%	
Marathon	134,063	135,293	1,230	0.9%	
Lincoln	28,743	27,994	-749	-2.6%	
Oneida	35,998	35,352	-646	-1.8%	
Wisconsin	5,686,986	5,763,217	76,231	1.3%	

Source: U.S. Census Bureau, 2013-2017 American Community Survey 5-Year Estimates

Table 3 - Popu	lation and I	Households	Size of Civi	Divisions		
						2010 – 2017 % Change
MINOR CIVIL		2010 Households			in Population	in Households
Ackley town	524		491		-6.30%	
Ainsworth town	469		422	223	-10.02%	
Antigo town	1,412	580	1,352	555	-4.25%	-4.31%
Elcho town	1,233	579	1,032	517	-16.30%	-10.71%
Evergreen town	495	209	443	188	-10.51%	-10.05%
Langlade town	473	223	424	208	-10.36%	-6.73%
Neva town	902	369	930	357	3.10%	-3.25%
Norwood town	913	360	862	346	-5.59%	-3.89%
Parrish town	91	36	143	45	57.14%	25.00%
Peck town	349	144	343	136	-1.72%	-5.56%
Polar town	984	384	925	388	-6.00%	1.04%
Price town	228	94	261	103	14.47%	9.57%
Rolling town	1,504	576	1,598	590	6.25%	2.43%
Summit town	163	71	191	71	17.18%	0.00%
Upham town	676	320	739	354	9.32%	10.63%

Langlade County Total	19977	8587	19190	8646	-3.94%	0.69%
Antigo city	8,234	3,613	7,817	3,749	-5.06%	3.76%
White Lake village	363	156	275	143	-24.24%	-8.33%
Wolf River town	731	347	680	355	-6.98%	2.31%
Vilas town	233	93	262	106	12.45%	13.98%

Source: U.S. Census Bureau, 2013-2017 American Community Survey 5-Year Estimates

Between 2010 and 2017, the most significant growth occurred in the Town of Parrish a 57.14% increase. The Town of Summit was second with a 17.18% increase. Also notable was Town of Vilas with a 12.45% increase. Significant losses were experienced by the Village of White Lake down 24.24%, Town or Elcho down 16.3% and Town of Ainsworth down 5%. The City of Antigo also exhibited a decline of about 5%.

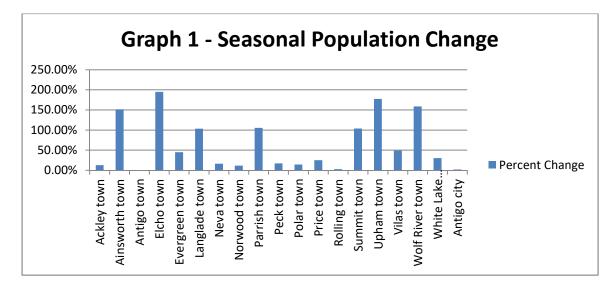
Population concentrations and trends are important when prioritizing hazard mitigation strategies. Approximately 41% of the population is classified by the Census as urban and 59% is rural. The City of Antigo is the most densely populated and developed area in the county. Other areas of population concentrations are the Village of White Lake, and 17 unincorporated places including Bryant, Deerbrook, Elcho, Elmhurst, Elton, Holister, Kempster Langlade, Lily, Neva, Neva Corners, Parrish, Pearson, Phlox, Pickeral, Polar and Summit Lake. Map 2 (Land Use) shows areas of population concentrations in the county. Map 11 Tornado Vulnerability also shows development density throughout the county to help show areas of full and seasonal populations. Overall population density of the county is 22 persons per square mile which ranges from a high of 1,203 in the City of Antigo to a low of 4 in the Town of Parrish.

According to the US Census 2013-2017 American Community Survey 5year estimates the median age of residents in Langlade County is 47.6. The combination of negative natural increase combined with the outflow of younger residents will likely continue the aging of the county population compared to the state as a whole.

Seasonal Population

In addition to the regular full-time resident population, the impact of seasonal population cannot be overlooked when planning for hazards. Although not as significant as in neighboring counties, 25% of Langlade's housing stock has been identified as seasonal/recreational. **Table 4** shows

estimated seasonal residents by municipality. Determining when and for how long these seasonal residents will be in the county is problematic, but the numbers give some indication of what weekend or other peak period population levels might be. Seven of the nineteen municipalities can see their populations more than double with seasonal population. Towns of Elcho, Upham and Wolf River see the largest percentage increases in seasonal population. See **graph 1**.



Another component of the seasonal population includes short-term accommodations such as campgrounds or hotel-style lodging. The scope of this plan did not provide for a detailed inventory of accommodations; however the Wisconsin DNR completed a general inventory as part of its statewide comprehensive outdoor recreation plan. That inventory identified 430 hotel/motel beds, 7 bed and breakfast beds and 42 other types of beds available around the county. The DNR also identified 546 campsites in various campgrounds across the county as well as educational/recreational camps with capacity for 1,752 individuals. The seasonal population can increase the total population of the count by more than 36% at peak times.

Table 4 - Estimated	Seasonal Reside	ent Population
	2017 Seasonal	Estimated Seasonal
Civil Division	Housing Units	Population
Ackley town	28	63
Ainsworth town	284	639
Antigo town	0	0
Elcho town	895	2,014
Evergreen town	89	200
Langlade town	195	439
Neva town	67	151
Norwood town	44	99
Parrish town	67	151
Peck town	26	59
Polar town	59	133
Price town	29	65
Rolling town	19	43
Summit town	88	198
Upham town	583	1,312
Vilas town	57	128
Wolf River town	480	1,080
White Lake village	37	83
Antigo city	64	144
Langlade County	3,111	7,000

Source: U.S. Census 2013-2017 American Community Survey 5-Year Estimates and NCWRPC

Employment

In addition to seasonal swells in employment, the number of people working in a given locality fluctuates on a daily basis. The county is a net exporter of labor. In other words, the county has fewer local jobs than residents who work. Nearly 19% of working residents travel to work outside the county, while only about 12% of the county's workforce enters from other counties. The top five counties that Langlade County has inflow from are Marathon, Shawano, Oneida, Lincoln and Portage. The top five destination counties for Langlade commuters are Marathon, Brown, Oneida, Lincoln and Shawano.

There is a cluster of seasonal leisure and hospitality employment within the county, however, three employment sectors have the greatest impact on Langlade County's economy, comprising over 60% of the job base in the county or about 4,555 workers. The Trade, Transportation & Utilities sector employs 25% of the workforce, the Education and Health Services sector employs 20% and the Manufacturing sector employs 19%. The importance of these sectors can be seen in the listing of the county's top employers. Table 5 identifies the top employers and their general location in the county.

Table 5 - Top Employers in Langlade County					
Company	Product or Service	Size	Location		
Langlade Memorial	General Medical/	250-499	City of Antigo		
Hospital	Surgical Hospitals				
Antigo School	Elementary &	250-499	City of Antigo		
District	Secondary Schools				
Amtech Corp.	Ammunition Mfg.	250-499	City of Antigo		
Wal-Mart	Discount Dept. Stores	100-249	City of Antigo		
Plaspack USA Inc	Plastics Bag Mfg	100-249	City of Antigo		
County of Langlade	Exec. & Legislative	100-249	Various locations		
	Offices - Gov't				
Eastview Rehab.	Nursing Care	100-249	City of Antigo		
Center	Facilities				
Waukesha Bearings	Mechanical Equip.	100-249	City of Antigo		
Corp.	Mfg.				
Covantage Credit	Credit Unions	100-249	City of Antigo		
Union					
Fleet Wholesale	General	100-249	City of Antigo		
Supply Co.	Merchandise Stores				
Walmart	General	100-249	City of Antigo		
	Merchandise Stores				

Source: Wisconsin DWD County Workforce Profile and NCWRPC

Retail trade makes up the majority of employment in the county's Trade, Transportation & Utilities sector and is represented by Wal-Mart and Fleet Wholesale in the City of Antigo. The Education and Health Care Centers sector is well represented on the top employers list with the number one spot in Langlade Hospital and the Antigo School District at number two, as well as Eastview Rehab Center. These are primarily located within the City of Antigo.

Amtech Corporation, Plaspack Inc., and Waukesha Bearings are the Counties major manufacturing employers located in the City of Antigo Industrial Park on the north side of the city. Manufacturing has direct and indirect links to employment in natural resources, business services, transportation and wholesale trade.

Identifying locations of large employment is important when prioritizing hazard mitigation strategies. From the list of top employers, the City of Antigo is clearly the primary employment and service hub in the county.

LAND USE / COVER AND DEVELOPMENT PATTERNS

Land use is an important determinant in the potential impact a particular hazard may have, and in the actions which may be taken to mitigate that impact. An understanding of the amount, type, and spatial distribution of urban and rural land uses within the county is an important consideration in the development of a sound hazard mitigation plan.

The North Central Wisconsin Regional Planning Commission (NCWRPC) has categorized land use in Langlade County into general classifications using 2015 aerial photography to digitize a land use Geographic Information System (GIS) coverage. Map 2 shows the land use and development patterns in Langlade County. **Table 6** shows the acreage and percent of each classification. **Map 8** Areas of Vulnerability also shows development density throughout the county to help show areas of potential impact.

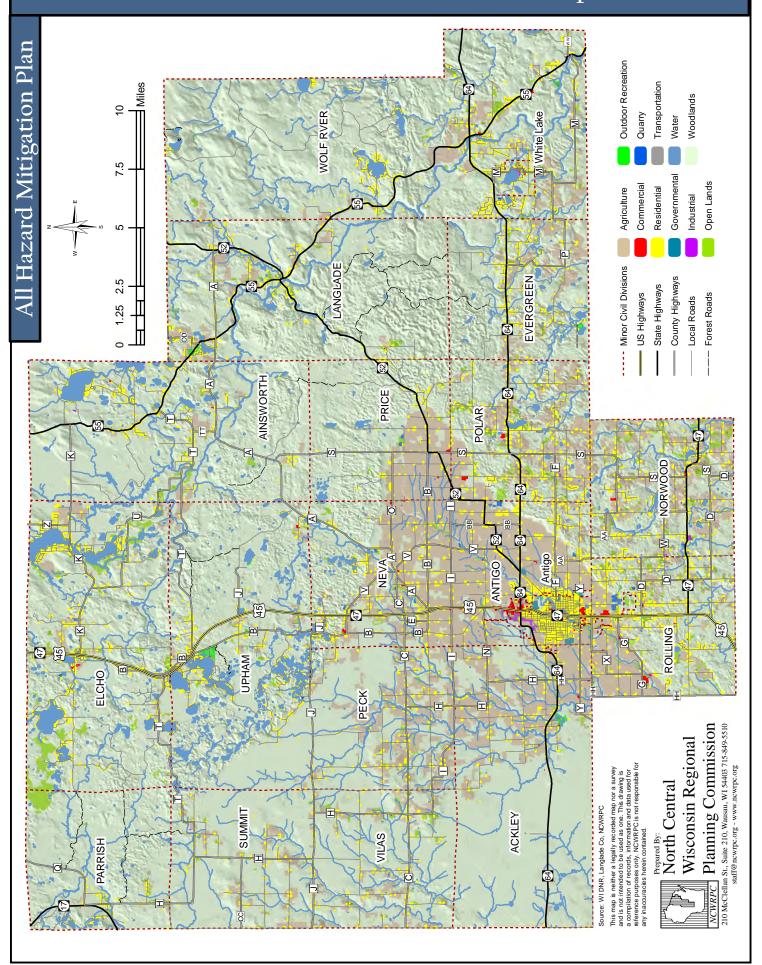
Agriculture and Forestry

The dominant land-use in Langlade County is forestry. Land area in the county is approximately 77 percent forested, with about 436,000 acres of woodland. Forest products are a significant element of the county's economy from saw logs to veneer, to cordwood and pulp, to Christmas trees and boughs, and even maple syrup. Agricultural land, which is mostly located on previously forested tracts that were cleared by early settlers, covers another 15.3 percent of the county's land area. Agriculture is also an important part of the county's economy. Langlade County is one Wisconsin's leading producers of both potatoes and oats. Wheat, barley, snap beans and forage hay are also significant crops. Dairy and beef production continue to be significant but have been declining over time.



Generalized Land Use Map

Map 2



Commercial, Industrial and Institutional Development

Commercial, industrial and institutional development makes up only about 0.5 percent of the total area of the county. Commercial and industrial land uses are mostly located in the City of Antigo, but pockets are scattered around the county. Much of the industry is related to processing forest and agricultural products. There are three serviced industrial parks in Langlade County including a 146 acre site in the City of Antigo, a 20 acre site in the Town of Elcho and a 10 acre site in the Village of White Lake. A number of non-metallic mining sites, or quarries, are also included with industrial. Government and other institutional facilities are concentrated in the City of Antigo, however a variety of facilities are scattered throughout the county, such as rural schools, town halls and the Langlade County airport just east of Antigo.

Residential Development

Residential development makes up approximately two percent of the total county land area. Residential concentrations are scattered throughout the county (see "Population and Households" above). Much of the rural development is related to recreational demand as various

types of housing have clustered along streams and lakes.

There are a number of mobile home parks in the county. According to the U.S. Census, there were about 866 mobile homes in 2017. This is 7 % of housing units for the County compared to 3.8 percent for the entire state. This is significant due to their vulnerability in hazards especially natural tornadoes. Map 8 (Areas of Vulnerability) includes areas of mobile home concentrations in the County.

Table 6 - Land Use in Langlade County					
Description	Acres	Percent			
Agriculture	82,200	14.5%			
Commercial, Industrial,					
Institutional	2,662	0.5%			
Forest/Woodland	435,896	76.8%			
Recreation	837	0.1%			
Residential	11,739	2.1%			
Open Space / Other	17,002	3.0%			
Surface Waters	11,125	2.0%			
Transportation	5,866	1.0%			
Total	567,326	100.0%			

Source: NCWRPC 2015 Generalized Land Use

Surface Water

Langlade County is part of three major river basins partially containing fourteen watersheds. The Wolf River and Upper Wisconsin River basins each have six watersheds within the county, while the Upper Green Bay Basin has two. The county has 843 lakes and 225 streams within the watersheds (see Map 3). Most of the lakes are spring or seepage lakes with some drainage or drained lakes. The majority of the lakes are small. Only 13 lakes are 100 acres or larger, but these account for about half of the surface area of lakes. White Lake is the largest spring lake. Sawyer Lake and the other spring lakes are landlocked. Upper Post Lake, an impoundment and drainage lake, is the largest in the county. The deepest lake is Jack Lake, which is up to 85 feet deep. All the streams, like the lakes, are important in the hydrological and ecological regime and are protected by shoreland zoning and physical protective measures.

Floodplains and wetlands are important subsidiary components to the surface water system, as described below.

Floodplains

The primary value of floodplains is their role in natural flood control. Flood plains represent areas where excess water can be accommodated whether through drainage by streams or storage by wetlands and other natural detention/retention areas. Specific areas that will be inundated will depend upon the amount of water, the distance and speed that water travels, and the topography of the area. If left clear of development, the areas shown on a map as floodplains should be able to handle the severest (regional) flood, i.e. those that have a probability of occurring once every one hundred years.

There is a value in preserving and protecting these natural flood control areas from encroachment. First, by preventing development in the floodplain, the cost of building dikes, levees, or other man-made flood control devices will be saved. Second, for each structure that is constructed in a flood-prone area, that area expands, potentially subjecting other structures originally built outside the delineated flood hazard area to the risk of flooding. Each new structure (or modification to existing) placed in the floodplain puts more life and property in danger.

Counties, cities, and villages are required to adopt reasonable and effective floodplain zoning ordinances. The requirement is found in section 87.30 of the Wisconsin Statutes and Chapter NR 116 of the Wisconsin Administrative Code. Floodplain zoning is designed to protect individuals, private property, and public investments from flood damage.

Floodplain zoning maps identify areas where major floods occur. Regulations prohibit development in the floodway, the most dangerous flood area. In other flood areas, the flood fringe, development that is built above flood levels and otherwise flood-protected is allowed if it is in accordance with local ordinances. For regulatory purposes, a floodplain is generally defined as land where there is a one percent chance of flooding in any year (also known as the 100-year floodplain).

In order to participate in the Federal Emergency Management Agency's (FEMA) National Flood Insurance Program, the county and the City of Antigo, have each completed a Flood Insurance Study and Flood Insurance Rate Maps (FIRMs) that encompass most of Langlade County, see Table 6a for a summary of NFIP status. The FIRMs delineate the "A" Zones including the floodway and flood fringe, those areas inundated by the 100-year flood within the county. The Village of White Lake had flood hazard areas identified within its boundaries but never participated in the program. Langlade County is not yet scheduled for map modernization at this time, so upgraded Digital Flood Insurance Rate Maps or DFIRMs are not yet available for the County.

Table 6aFEMA Community Status Book ReportCommunities Participating in the National Flood Insurance ProgramWisconsin - Langlade County				
Community	Initial FHBM	Initial FIRM	Current Map	Program Entry
Langlade County	05/14/82	09/28/90	09/28/90	09/28/90
City of Antigo	11/30/73	11/30/73	10/31/75	11/30/73
Village of White Lake	10/01/76	n/a	10/01/76	n/a
Source: FEMA, 2019				

The NCWRPC digitized the existing county FIRMs for use in this plan. Although unofficial, this digital file indicates there are 25,495 acres of floodplain in Langlade County, or 4.5 percent of the land area. Map 4 shows these approximate floodplains. Floodplains in Langlade County are small and floods occur only during periods of exceptionally heavy rainfall. Currently, there are no repetitive loss structures, those with multiple flood insurance claims, in Langlade County.

The Biggert-Waters Flood Insurance Reform Act was signed into law in July, 2012. This act implemented significant reforms to the structure of flood insurance under the National Flood Insurance Program (NFIP). Then, on March 21, 2014, President Obama signed the Homeowner Flood Insurance Affordability Act of 2014 (HFIAA) into law amending the NFIP further. These new laws impact the various elements of the NFIP, including Insurance, Flood Mapping, Mitigation, and Floodplain management.

HFIAA repeals and modifies certain provisions of the Biggert-Waters Flood Insurance Reform Act, and makes additional program changes to other aspects of the program not covered by that Act. Many provisions of the Biggert-Waters Flood Insurance Reform Act remain and are still being implemented. The new law lowers the recent rate increases on some policies, prevents some future rate increases, and implements a surcharge on all policyholders. The Act also repeals certain rate increases that have already gone into effect and provides for refunds to those policyholders. Both of these laws are important to local floodplain managers and planners because rate structure increases may increase interest of policy holders that own floodprone properties in alternatives to mitigate both flood risk and flood insurance costs for those properties.

Wetlands

Wetlands perform many indispensable roles in the proper function of the hydrologic cycle and local ecological systems. In terms of hazard mitigation, they act as water storage mechanisms in times of high water. Like sponges, wetlands are able to absorb excess water and release it back into the watershed slowly, preventing flooding and minimizing flood damage. As more impermeable surfaces are developed, this excess capacity for water runoff storage becomes increasingly important.

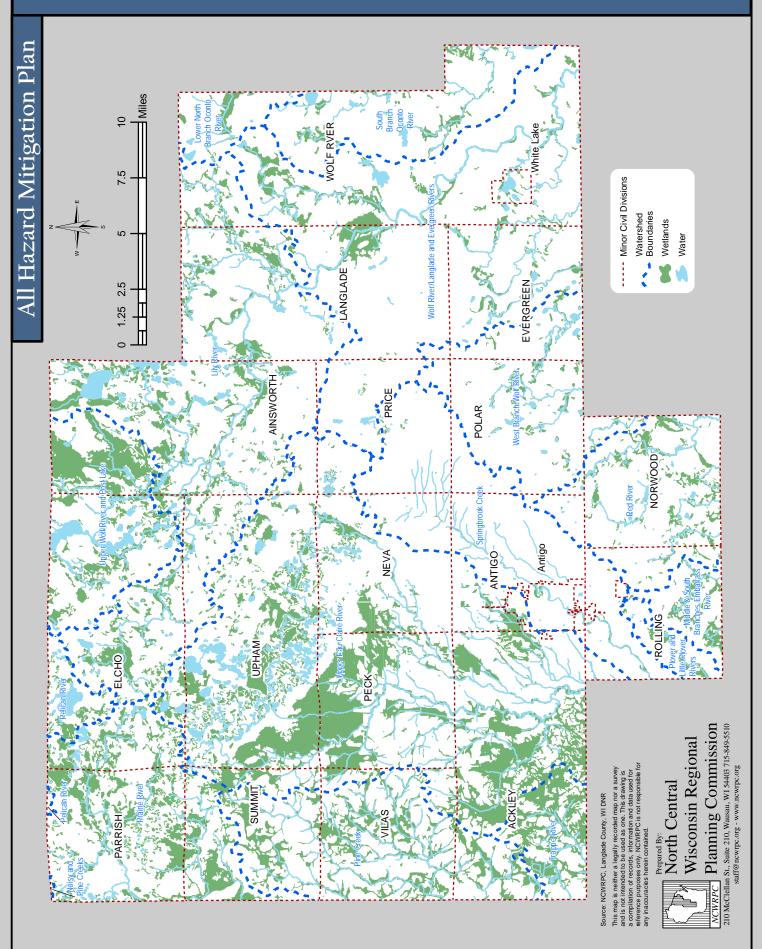
The DNR has identified the location of wetlands on their digital wetland GIS database. According to this, Langlade County has 107,094 acres, or about 18.9 percent of its total area. Map 3 shows these wetland areas to be scattered throughout Langlade County. Wetlands are more extensive in the northwestern half of the county including the towns of Ackley, Vilas, Peck, Summit, Upham, Parrish, Elcho and Ainsworth.

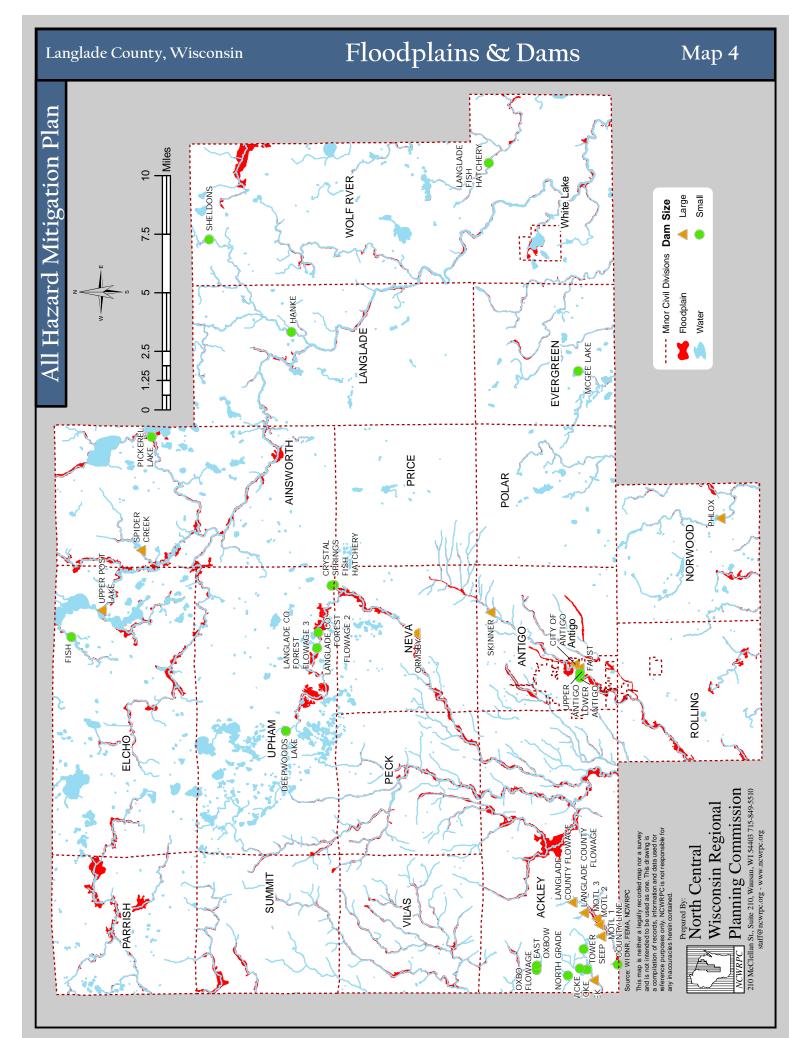
Destruction of wetlands can occur through the use of fill material, which can destroy the hydrological function of the site and open the area to improper development. The Wisconsin Department of Natural Resources (DNR) has promulgated minimum standards for managing wetlands.



Surface Water & Watersheds

Map 3





Other Land Cover/Uses

Recreational lands including parks and outdoor sports facilities total about 837 acres or 0.1 percent of the county land area. Other lands may have recreational aspects, particularly woodlands. Open space and other lands are a catch all for open undeveloped land not wooded or part of a farm such as grassland. The transportation category is primarily the roadway travel corridors for federal, state, county and local highways and roads. Sometimes overlooked, transportation land use can be significant. In Langlade County, surface transportation facilities consume about 5,866 acres of land or about 1.0 percent of total land area. Note that this is three times as much land area as is used for commercial, industrial and institutional uses in the county.

FUTURE GROWTH AND DEVELOPMENT IN LANGLADE COUNTY

According to the current Langlade County Comprehensive Plan completed in 2019, future land use reflects no major changes in land use over the next 20 years. Forestry will continue to be the major land use in the County, accounting for over 56% of the land area, followed by preservation areas and open space (much of which is wooded wetland) at about 20% and agriculture at about 16%.

Residential growth is planned to the east and west of the City of Antigo in the Towns of Ackley and Antigo. The northern fringe of the City is expected to be more mixed uses with commercial and industrial. Elsewhere, scattered, low-density development is found in many parts of the County. Outside the city and village, there is some concentration of residential development around many of the larger lakes in the northern part of the County.

The Comprehensive Plan projects overall residential land demand based on the addition of 225 units for year round residents. This does not account for seasonal housing making up about 20 percent of the housing stock. Assuming a county wide average of about 2 acres of land needed per unit, 23 acres per year on average is expected to be needed to accommodate anticipated housing unit growth by the year 2040.

Commercial and industrial development is subject to market forces and difficult to predict, however, the Comprehensive Plan projects future development of about 221 acres for commercial uses and about 179 acres for industrial uses over the next 20 years.

Therefore, between 2020 and 2040 based on projections presented in the County Comprehensive Plan, it is anticipated that approximately 250 acres will be needed every five-years to support residential, commercial and industrial development demands in Langlade County. Over the twenty-year period about 1,000 acres will be needed to meet overall development demands. However, the backlog of parcels currently available will buffer the amount of "new" acreage taken for development.

New infrastructure or public facilities will be somewhat minimal as budget constraints will continue to curtail local government ability to develop new facilities and result in a tendency to make do with existing infrastructure and delay expansion plans. However, a new firehouse is under construction in the Village of White Lake.

The county's population is generally older with a median age of 47.6 years, versus statewide median age of 39.2 years. Over the next few decades, the population will become even older, aging much more quickly than the state as a whole. In fact, based on previous projections which under the new population trends are unlikely to change directions, the number of persons 65 and older will exceed the population under 20 by 2020. This will have implications affecting the demand for emergency services.

PUBLIC FACILITIES AND SERVICES

Transportation

The transportation system of Langlade County provides the basis for movement of goods and people into, within and out of the County. An efficient system is essential to the sound social and economic development of the county and region. The analysis of transportation routes is important in the possible event of a disaster (See **Map 5**).

The principle highway serving Langlade is the north-south U.S. Highway 45 which bisects the county through the City of Antigo. State Highway 64 provides the main east-west route across the southern part of the county through both Antigo and the Village of White Lake. State Highways 17, 47, 52 and 55 also serve the county. These highways link the county with neighboring communities and are vital to the county's tourism and recreation-based economy.

Networks of county trunk highways collect traffic from rural land uses. These county highways serve an important role in linking the area's agricultural and timber resources to population centers and major highways. Local roads provide access to local development, farming and forest areas, as well as the county's lake areas.

The Wisconsin Department of Transportation maintains 13 bridges on U.S./State highways within the county. Langlade County itself owns another 26 bridges on various county highways. Local roads include forty bridges with ten in the City of Antigo and thirty in various towns.

Through the Aging and Disability Resource Center of Central Wisconsin, Langlade County coordinates transit services for the elderly and disabled in the county, both in the city and to rural towns. The service is also open to the general public including service to the Northcentral Technical College. Other transportation is coordinated on an as needed basis for groups such as children and veterans.

The Langlade County Municipal Airport, located just east of the City of Antigo, serves the area. The airport provides general aviation service for private airplanes and daily airfreight. The airport is classified as a Transport/Corporate airport. This category includes corporate jets, small passenger and cargo jets used in regional service and small airplanes used in commuter air service. These aircraft generally have a gross takeoff weight of less than 60,000 pounds and wingspans of less than 118 feet with approach speeds below 141 knots. There are private landing strips located in the Towns of Norwood and Upham, as well as a heliport at the Antigo hospital. The nearest commercial passenger service is located in Rhinelander or Wausau.

There are currently no active rail lines within Langlade County. The nearest access to freight rail would be the east-west line through Rhinelander or the north-south line through Wausau.

Utilities

Utility systems are important in hazard mitigation planning because of the dependence on water, wastewater treatment, gas service, electricity, and telecommunications. Because of this reliance and vulnerability to hazards, utility systems must be identified for this Plan, see Map 6.

The protection of the public water supply facilities from potential contamination from hazards such as flooding is a consideration for hazard mitigation planning. The City of Antigo, Village of White Lake and the Town of Elcho provide municipal water supplies for domestic and commercial use.

The protection of the wastewater facilities is an important consideration for hazard mitigation planning because of its potential to contaminate nearby waterbodies in the event of high water. Also of concern during periods of flooding is the threat of damage to infrastructure of associated facilities. Three municipal wastewater treatment facilities serve Langlade County: the City of Antigo, the Village of White Lake and the Town of Elcho.

The infrastructure of electric and telephone lines can be threatened in the events of high wind, ice storms, tornadoes, flooding, and fire. Wisconsin Public Service and Alliant Energy provide electric service throughout the county. Since 2001, an independent company, American Transmission Company LLC (ATC), has owned, maintained, and operated the major transmission facilities located in the State of Wisconsin, including Langlade County. The general locations of the major electrical transmission facilities, owned by ATC are shown on Map 6. Frontier is the primary provider of telephone service in the county.

Nationwide, cellular telephone systems account for about half of all 911 calls. Service coverage is based upon the handset receiving a direct lineof-sight signal from a system provider's antenna on a tower. See Map 6 for tower locations within the County. Limitations for receiving a signal include topography and the thickness & type of building materials. Signals generally cannot travel well in dense forest cover, over tall hills, or through thick or multiple cement walls. There are remote areas of the County where there are gaps in cellular coverage or service is spotty.

The ANR pipeline is the main source of natural gas for Langlade County. A main line runs north-south between Lincoln and Marathon counties. A spur line serves the City of Antigo in Langlade County, branching off the main near the Lincoln-Marathon border. From this spur, City Gas Company provides residential and commercial gas service in Antigo and the surrounding area.

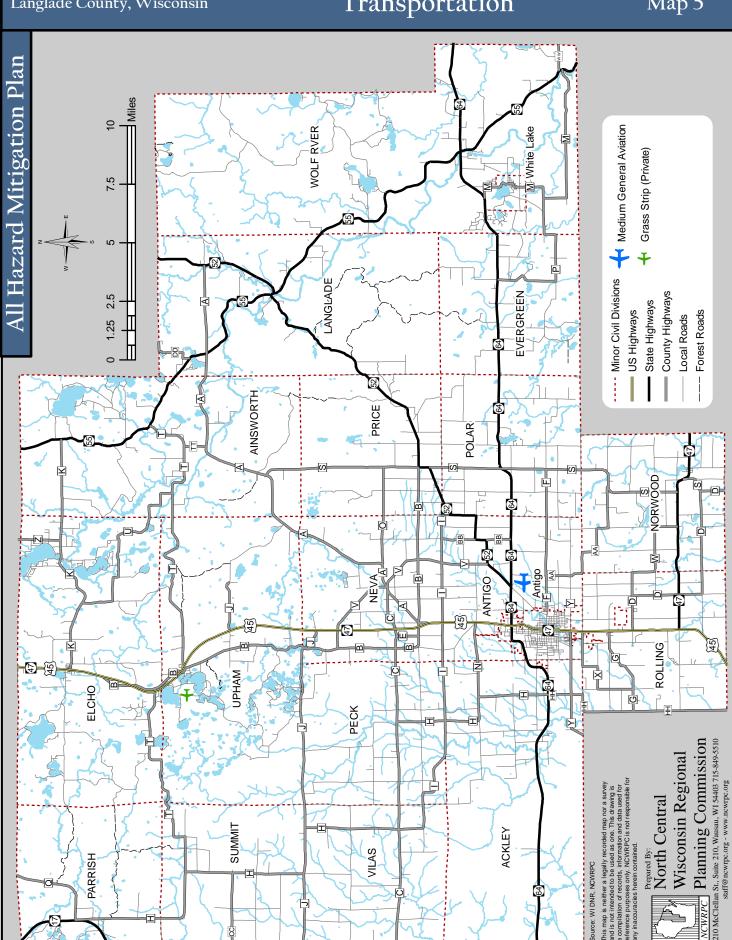
Emergency Services and Facilities

The type and location of public emergency services are an important consideration in hazard mitigation planning, because of the potential direct involvement of such facilities in certain hazard situations.

There are ten fire stations located within Langlade County, see **Map 7** for fire service areas. Certain areas of the county are served by fire departments stationed outside the county. These include the Towns of Parrish and Summit that are served by the Town of Russell Fire Department located in Lincoln County, and remote parts of the Town of Wolf River that receive service from the Doty Fire Department (Oconto County), Wabeno Fire Control (Forest County) or the Townsend Fire Department. The Pickerel Fire Department covers the Town of Ainsworth within Langlade County and part of the Town of Nashville in Forest County. The Town of Antigo Fire Department has two stations to cover the Towns of Antigo, Polar and Price. The City of Antigo Fire Department is the only force in the county that provides full-time, paid service, while the rest of the departments rely on volunteers for this service.

There are three EMS providers based in the County. City of Antigo EMS provides service to Antigo and 10 towns. Pickerel EMS serves the Towns of Ainsworth and Langlade. Troutland EMS is based in White Lake and serves the village and the Towns of Evergreen and Wolf River. From outside the county, the Town of Parrish is served by Rhinelander EMS, and Town of Norwood is serviced by Birnamwood EMS.

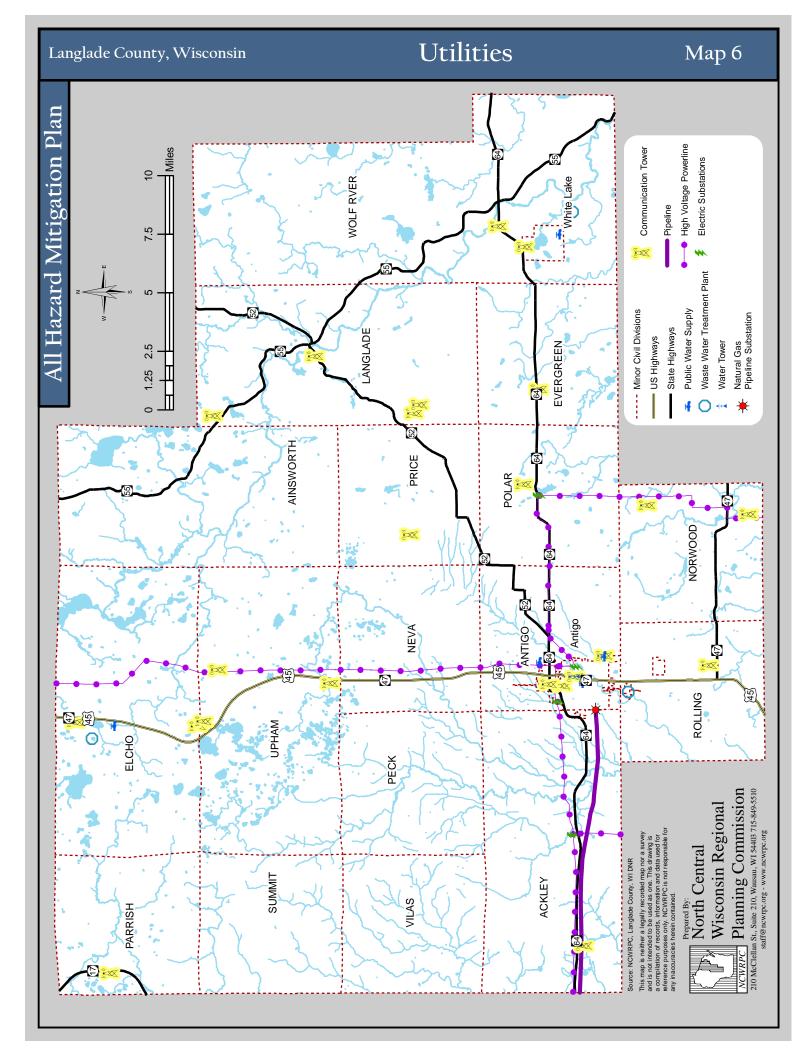
The Langlade County Sheriff's Department provides service to all the towns and the village for law enforcement. The Sheriff's Department has eighteen officers, eight dispatchers and sixteen jail employees. The City of Antigo has its own police department. The main correctional facility within the county is the Langlade County Jail in Antigo.



Langlade County, Wisconsin

Transportation

Map 5



To coordinate these services, Langlade County has created an *Emergency Operations Plan (EOP)*. This provides a general overview for county and municipal emergency response personnel during response to a number of disasters. This document serves to coordinate the County and local units of government during times of response and recovery. It also provides a link between the county and municipal plans.

Critical Community Facilities

In addition to emergency service facilities, other community facilities are also important in hazard mitigation planning. Government administration buildings serve as the headquarters that link to resources in helping solve potential problems. Hospitals are very important for knowing where to transport injured residents and as to how many people can be accommodated if a hazard occurs.





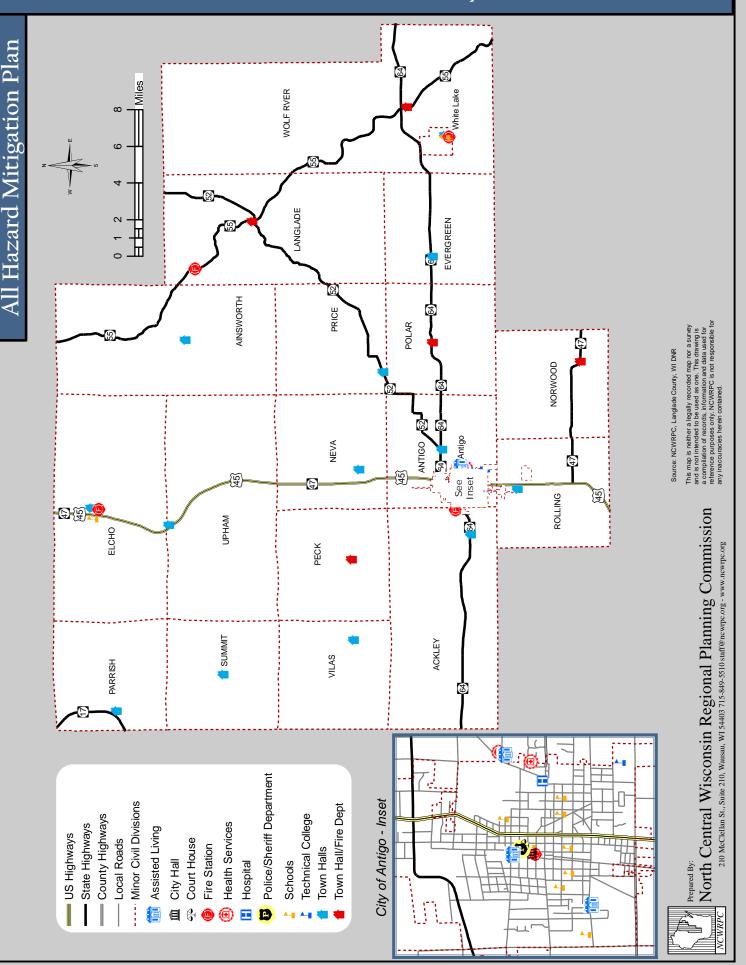
Langlade Memorial Hospital in the City of Antigo is a 24-bed, 95,000 square feet two-story level 4 trama center facility affiliated with more than 70 health care providers. There two clinics also in the city as well as one located in Elcho. There are three nursing homes within the City and a number of other facilities dedicated to the care and sheltering of the

elderly and disabled around the county. Nursing homes are vulnerable, because of the high level of services required by the residents. The schools are facilities that are important, since hundreds of the county's children are there for most of the year. Map 7 shows the location of selected types of critical community facilities within Langlade County.



Critical Community Facilities

Map 7



INVENTORY & VALUE OF STRUCTURES/PROPERTY IN LANGLADE COUNTY

The value of the real estate and personal property in a community reflects the upper end of the potential for property damages in each community. The assessed value of each municipality represents the estimate of market value. **Table 7** lists each municipality's assessed values for real estate, personal property, and land. The term personal property includes: all goods, wares, merchandise, chattels and effects of any nature or description having any marketable value and not included in the term "real property."

Table 7		Tax Values by Municipality					
Municipality	Improvement Value	Land Value	Personal Property	Total	% of Total		
Ackley town	\$25,764,100	\$13,718,700	\$106,900	\$39,589,700	2.4%		
Ainsworth town	\$41,772,100	\$35,551,700	\$931,800	\$78,255,600	4.7%		
Antigo town	\$79,087,890	\$19,108,758	\$528,700	\$98,725,348	5.9%		
Elcho town	\$124,013,800	\$127,557,500	\$4,934,100	\$256,505,400	15.4%		
Evergreen town	\$19,898,600	\$12,887,500	\$58,900	\$32,845,000	2.0%		
Langlade town	\$39,036,100	\$26,418,600	\$594,200	\$66,048,900	4.0%		
Neva town	\$49,835,100	\$20,569,300	\$184,300	\$70,588,700	4.2%		
Norwood town	\$53,168,640	\$19,024,240	\$309,800	\$72,502,680	4.4%		
Parrish town	\$7,297,900	\$5,651,140	\$110,700	\$13,059,740	0.8%		
Peck town	\$15,785,800	\$12,027,900	\$27,000	\$27,840,700	1.7%		
Polar town	\$54,745,900	\$22,614,500	\$107,500	\$77,467,900	4.7%		
Price town	\$12,085,700	\$6,976,400	\$209,200	\$19,271,300	1.2%		
Rolling town	\$79,225,700	\$21,780,000	\$1,122,900	\$102,128,600	6.1%		
Summit town	\$8,606,300	\$11,637,490	\$544,400	\$20,788,190	1.2%		
Upham town	\$98,157,700	\$85,706,200	\$1,543,400	\$185,407,300	11.1%		
Vilas town	\$13,797,440	\$14,025,617	\$371,600	\$28,194,657	1.7%		
Wolf River town	\$72,838,900	\$48,628,600	\$159,900	\$121,627,400	7.3%		
White Lake village	\$10,370,800	\$3,887,900	\$599,100	\$14,857,800	0.9%		
Antigo city	\$282,072,700	\$45,672,700	\$12,404,200	\$340,149,600	20.4%		
Langlade County	\$1,087,561,170	\$553,444,745	\$24,848,600	\$1,665,854,515	100.0%		

Langlade County Tax Roll 2017 & Dept. of Revenue

As stated above, the valuation of property in a community reflects the potential for property damages across the community. However, only taxable properties are included in this valuation. Tax exempt government properties are not included. With Langlade County owning many critical facilities that are needed in times of disaster, the potential for damages to these structures could be devastating for the county. In **Table 8a**, the county owned critical facilities are listed with the general location they are in and the value of the facilities. Estimates for local government facilities are given in Table 8b - d.

Table 8aValue of County Owned Properties						
Name	Value*	Location				
Airport	\$3,845,188	Antigo town				
Camp Lyle	\$449,678	Elcho				
Camp Susan	\$629,957	Deerbrook				
Courthouse	\$6,987,761	Antigo city				
Fairgrounds	\$10,447,634	Antigo city				
Health Services Center	\$6,663,959	Antigo city				
Highway Department	\$8,033,493	Antigo city				
Highway Department	\$178,617	Lily				
Jack Lake	\$1,833,836	Deerbrook				
Kettlebowl Ski Hill	\$451,742	Price town				
Other Misc. Property	\$101,410	Various locations				
Other Parks & Rec	\$685,842	Various locations				
Post Lake Dam Area	\$448,984	Elcho				
Resource Center	\$1,472,751	Antigo city				
Safety Building	\$14,351,900	Antigo city				
Sheriffs Storage	\$517,432	Antigo city				
Total	\$57,100,184	Above Locations				

*=Includes insured buildings, contents, and property in the open. Source: Statement of Values State of Wisconsin Local Government Property Insurance Fund.



Langlade County Courthouse and Safety Building



Table 8b: Value of City Owned Properties						
Property	Value*					
Cemetery	\$349,239					
City Hall / Fire Dept.	\$3,890,373					
Landfill	\$1,261,114					
Library	\$5,617,479					
Library Branches**	\$89,282					
Llfe Beyond Wheat Bldg	\$1,672,155					
Lift Stations	\$675,347					
Parks & Recreation	\$4,174,228					
Police Department	\$169,739					
Public Works Shop	\$3,465,385					
Sewage Treatment Plant	\$32,074,970					
Water Works	\$12,445,771					
Well Locations	\$784,915					
Misc. Other Property	\$962,370					
Total	\$67,632,366					

*=Includes insured buildings, contents, and property in the open.

** = Locations: Elton, White Lake, Elcho.

Source: Statement of Values State of Wisconsin Local Government Property Insurance Fund – estimated by NCWRPC.

Table 8c: Value of Village Owned Property						
Property	Value*					
Municipal Bldg / Shop	\$1,390,359					
Fire Station	\$563,433					
Well Locations	\$535,561					
Ball Park	\$249,671					
Pavilion Lake Park	\$602,318					
Storage Garage	\$61,073					
Erdman Road Lagoon	\$79,643					
Water Tank	\$415,243					
Misc. Other Property	\$729,798					
Total	\$4,627,099					

*Includes insured buildings, contents, and property in the open.

Source: Statement of Values State of Wisconsin Local Government Property Insurance Fund.

Table 8d: Value of Town Owned Properties						
Town	Property	Value*				
Ackley town	Town Hall	\$242,204				
Ainsworth town	Town Hall	\$242,204				
Antigo town	Town Hall / Fire Dept.	\$478,399				
Elcho town	Town Hall & Misc. Facilities	\$2,183,676				
Evergreen town	Town Hall	\$212,283				
Langlade town	Town Hall / Fire Dept.	\$477,650				
Neva town	Town Hall & Storage Bldg	\$144,460				
	School Building	\$30,756				
Norwood town	Town Hall / Shop & Fire Dept.	\$466,466				
Parrish town	Town Hall	\$260,960				
Peck town	Town Hall	\$242,204				
Polar town	Town Hall	\$242,204				
Price town	Town Hall	\$242,204				
Rolling town	Town Hall	\$138,402				
Summit town	Town Hall	\$242,204				
Upham town	Town Hall	\$282,094				
Vilas town	Town Hall	\$242,204				
Wolf River town	Town Hall	\$242,204				
*Includes insured buildings, contents, and property in the open. Source: NCWRPC Estimates.						

INTRODUCTION

Analyzing the hazards facing a community is an important step in the mitigation planning process. Before mitigation strategies can be determined, a risk assessment must be made. Part III of the Langlade County All-Hazards Mitigation Plan will focus on the following:

- Identification of all types of natural hazards that can affect Langlade County
- An analysis of each hazard identified as pertinent to Langlade County

The hazard analysis will consist of:

- Background information
- History of previous occurrences of hazard events
- An analysis of the County's vulnerability to future events
- An estimate of future probability and potential losses from the hazard

HAZARD IDENTIFICATION

The process of identifying those hazards that should be specifically addressed in the Langlade County All-Hazards Mitigation Plan was based on consideration of a number of factors. The process included a review of past hazard events to determine the probability of future occurrences and threat to human safety and property damage.

Worksheets from the Wisconsin Guide to All-Hazards Mitigation Planning were used by the Planning Taskforce to evaluate and rank the listing of possible hazards to help identify which hazards should be included in the Plan according to threat to human safety and possible damage to property. This hazard scoring exercise resulted in the selection of the following hazards listed in priority order:

- 1. Flooding / Dam Failure
- 2. Thunder Storm / Lightning / Hail
- 3. Tornado/ High Wind
- 4. Winter Storm / Extreme Cold
- 5. Forest Fire / Wildfire
- 6. Drought / Extreme Heat

Flooding / Dam Failure was rated the top hazard based on the potential damage to life and property and the frequency of these type of events in the surrounding areas in the last few years. Many are concerned about bridges and culverts failing during high water. Thunder Storm / Lightning / High Winds as well were ranked high because of recent high winds experienced within the county and in neighboring Oneida and Oconto County area. Tornados rank high again even though the last tornado was over 10 years ago.

Winter storms were rated high on the list based on severity and the potential for extreme cold and ice hazards in northern Wisconsin. Forest Fire / Wildfire and Drought ranked relatively high based on the persistent drought conditions across the state and the potential impacts this can have on this heavily agricultural county.

This plan focuses on natural hazards that have or could cause disasters that can be mitigated on a local level. Technological or manmade hazards include things like transportation incidents, hazardous materials incidents, civil disturbances, mass casualty events, war, and terrorism. Langlade County already has action plans for these types of events, so they are not included in this planning process. Low magnitude earthquakes occur in Wisconsin every few years, but none have exceeded a magnitude of 3.9, which would have vibrations similar to the passing of a semi-truck, therefore, earthquakes are not covered in this plan. Langlade County does not have avalanche, coastal hazard, hurricane, tsunami or volcano issues and conditions for landslide, subsidence or expansive soil problems are not significant in the county.

Although a significant concern, human communicable diseases are not addressed in the plan. The Langlade County Health Department and area hospitals work with the Wisconsin Department of Health and Family Services – Division of Public Health (WDHFS) and the CDC to monitor and plan for these situations.

HAZARD ANALYSIS

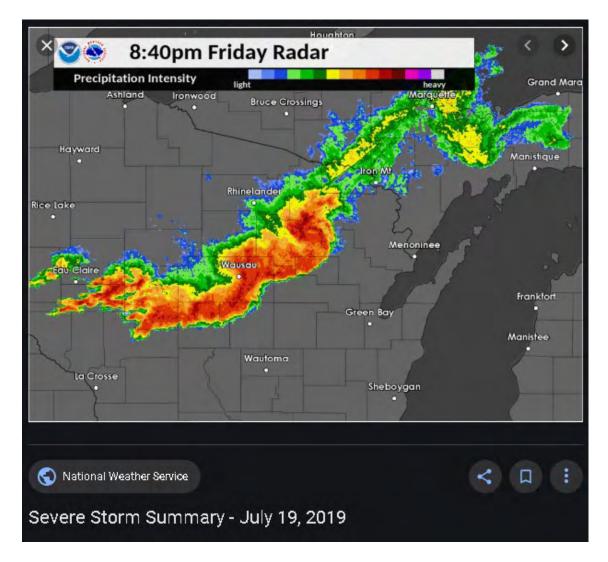
The hazard analysis for each hazard included in this plan is broken down into four components, as follows:

1. Background on Hazard - The next step after identifying a hazard is to define the hazard and give some general background behind it. This can include occurrence of hazard within the county or state. This section may also give some indication of the risk to public health and safety and to personal and public property.

2. History of Hazards - Past experience of disasters is an indication of the potential for future disasters to which Langlade County would be vulnerable. A review of past occurrences for each identified hazard in Langlade County was completed.

Some disasters have had damages that exceeded the capabilities of local communities and state agencies. Federal assistance is then requested. Federal assistance may be offered through a variety of programs. Assistance may be directed to agricultural producers, individuals and families, businesses, or local governments. There have been nine natural disasters in Langlade County, where a Presidential Declaration was requested from 1971-2019 (4 received a Presidential Declaration). They include the following:

- 1971 Flooding
- 1971 Tornado
- 1973 Flooding Presidential Disaster Declaration
- 1975 Army Worm Infestation
- 1976 Drought Presidential Emergency Declaration
- 2002 Severe Storms/Flooding/ Presidential Disaster Declaration
- 2004 Flooding
- 2007 Tornado
- 2019 Thunderstorm Wind/ Presidential Disaster Declaration



It should be noted that this significantly understates the number of events that have occurred in Langlade County. Almost every year there are significant weather events or disasters that cause millions of dollars in damage for which no Federal disaster assistance is requested. Major indicators of hazard severity are the deaths, injuries, and economic losses resulting from natural hazards and disasters.

The National Oceanic and Atmospheric Administration (NOAA) and National Climatic Data Center (NCDC) publish the National Weather Service (NWS) data describing recorded weather events and resulting deaths, injuries, and damages. From May 4, 1959 to July 19, 2019, NCDC reported 346 severe weather events for Langlade County. Over that 60 year period that is almost 6 severe weather events per year.

Note that since the NCDC data is somewhat incomplete, this report focuses on the 10-year period from July 1, 2009 to July 1, 2019 for hazard analysis purposes. Other sources of data are used to supplement the NCDC data. These sources include Wisconsin Emergency Management, Wisconsin Department of Natural Resources, Langlade County Emergency Management and local news reports.

3. Vulnerability Assessment For Hazards - For each hazard identified, a summary of the impact that may be caused to the community is given. When possible, existing buildings, infrastructures, and critical facilities located in the hazard areas are identified. Critical facilities are community buildings that are especially important to the health and welfare of the population following hazard events. Examples of such facilities include hospitals, police & fire stations, town halls, and shelters.

Because this is a multi-jurisdictional plan, FEMA requires that the plan access each jurisdiction's risks where they vary from the risks facing the entire planning area. This section of the plan will identify variations in vulnerability for specific municipalities where they occur.

4. Future Probability and Potential Dollar Losses for Hazard - The historic data and vulnerability assessment for each hazard is used to project the potential future probability of that hazard occurring in the county, and the potential damages in dollars that might be reasonably expected. This section sets a benchmark for mitigation for each hazard.

HAZARD ANALYSIS: TORNADOS/HIGH WIND

Background on Tornado/High Wind Hazard:

A tornado is a relatively short-lived storm composed of an intense rotating column of air, extending from a thunderstorm cloud system. It is nearly always visible as a funnel, although its lower end does not necessarily touch the ground. Average winds in a tornado, although never accurately measured, are between 100 and 200 miles per hour, but some tornados may have winds in excess of 300 miles per hour.

A tornado path averages four miles, but may reach up to 300 miles in length. Widths average 300 to 400 yards, but severe tornados have cut swaths a mile or more in width, or have formed groups of two or three funnels traveling together. On average, tornados move between 25 and 45 miles per hour, but speeds over land of up to 70 miles per hour have been recorded. Tornados rarely last more than a few minutes in one location or 15 to 20 minutes in a ten-mile area.

Tornados are classified into six intensity categories, EFO-EF5, see Table 9. This scale is an updated or "enhanced" version of the Fujita Tornado Scale (or "F Scale"). The scale estimates wind speeds within tornados based upon the damage done to buildings and structures. It is used by the National Weather Service in investigating tornados and by engineers in correlating building design standards against anticipated damage caused by different wind speeds.

Wisconsin lies along the northern edge of the nation's maximum frequency belt for tornados, known as "Tornado Alley". Tornado Alley extends northeast from Oklahoma into Iowa and then across to Michigan and Ohio. Winter, spring and fall tornados are more likely to occur in southern Wisconsin than in northern counties. Tornados have occurred in Wisconsin every month except February.

High wind events, although technically not tornados, are included here due to the similarity of damages. Measured wind speeds are typically in the range of a EFO tornado and may even approach EF1 speeds. High or strong wind events can be associated with tornadic episodes, thunderstorms or even winter storms. The effects are often widespread, impacting areas hundreds of miles from the actual areas of thunderstorms or snow. Trees, signs and power poles are the most commonly affected by high wind events, but significant damage and bodily injury or death can occur.

Table 9 Tornado Wind and Damage Scale				
Tornado Scale	Wind Speeds	Damage		
EFO	65 to 85 MPH	Some damage to chimneys, TV antennas, roof shingles, trees, and windows.		
EF1	86 to 110 MPH	Automobiles overturned, carports destroyed, trees uprooted		
EF2	111 to 135 MPH	Roofs blown off homes, sheds and outbuildings demolished, mobile homes overturned.		
EF3	136 to 165 MPH	Exterior walls and roofs blown off homes. Metal buildings collapsed or are severely damaged. Forests and farmland flattened.		
EF4	166 to 200 MPH	Few walls, if any, standing in well- built homes. Large steel and concrete missiles thrown far distances.		
EF5	OVER 200 MPH Jational Weather Serv	Homes leveled with all debris removed. Schools, motels, and other larger structures have considerable damage with exterior walls and roofs gone. Top stories demolished		

Source: National Weather Service

EFO	EF1	EF2	EF3	EF4	EF5	
Weak	Moderate	Significant	Severe	Extreme	Catastrophic	
65-85 mph	86-100 mph	111-135 mph	136-165 mph	166-200 mph	200+ mph	

History of Tornados/High Wind in Langlade County:

Langlade County has had 9 reported tornados from 1959 to 2013, with 5 occurring prior to 1985, see Table 10. The most recent tornado event occurred on July 22, 2013. The storms produced a funnel cloud, isolated wind damage, and large hail as they moved across northeast Wisconsin. A funnel cloud was spotted west of Deerbrook (Langlade Co.), and thunderstorms winds downed trees near Keshena (Menominee Co.) and Oconto Falls (Oconto Co.). Golf ball

size hail fell near Summit Lake (Langlade Co.), and quarter size hail fell near Abrams (Oconto Co.) and Byrant (Langlade Co.).

On July 9, 2013, A tornado formed near the Lincoln/Langlade County line and moved east shortly after 3:30 PM CDT. The tornado track was not continuous and damage was restricted to trees, tree limbs and power lines. The average path width was 75 yards.

On April 10, 2011 an EF1 tornado formed about five miles south of Parrish at 6:50 pm CDT and moved just east of north for a little over five miles. The tornado affected about 1600 acres of hardwood and softwood trees. It was estimated that over one million trees were snapped, uprooted, or suffered serious damage. The loss to timber alone is estimated at over one million dollars. One cabin was destroyed by fallen trees. The tornado was seen by a storm chaser at 6:55 pm CDT. The average width of the tornado was 250 yards.

On June 7, 2007, a powerful EF3 tornado with winds estimated at 150 to 160 mph caused significant damage in the White Lake area. The Bear Paw Outdoor Adventure Resort was severely damaged with every building (10) destroyed or damaged, including the three-story inn which pushed over by the high winds. One employee sustained minor injuries. Fortunately, there were only 9 people on site during the tornado; hundreds of visitors were due to arrive the next day. In addition, hundreds of acres of trees were flattened and 9 homes were damaged. Damages were estimated at approximately \$2.2 million. This tornado persisted for an extended amount of time crossing several counties and was one of a 5-tornado outbreak that resulted in over \$60 million in total damages and 4 injured. Presidential disaster declaration was applied for but not awarded.

A reported funnel cloud in 1994 formed over White Lake, but did not touch down until reaching Marathon County. Thunderstorm winds associated with this funnel cloud damaged trees and power lines. Another funnel cloud was reported in 2013 in Deerbrook. On April 27, 1984, a F2 tornado touched down for 8 miles causing \$2.5 million in damages and injuring one person. Three barns, several cattle and two houses were destroyed, along with extensive tracts of timber. Two tornados actually occurred on the same day in 1976 within less than an hour as two separate F1 tornados. No one was injured in these events and property damage was relatively light at about \$6,000. In September of 1971, the County experienced a powerful F3 tornado that cut a 30-mile long 200-yard wide path injuring 1 and causing \$250,000 in damages. Request for Presidential disaster declaration was not approved. Little information is available on the 1959 tornado.



Table 10)	Reported Tornados ir	Reported Tornados in Langlade County					
DATE	TIME	LOCATION	LENGTH (miles)	WIDTH (yards)	DEATHS	INJURIES	ef- Scale	
7/22/2013	4:44 PM	Deerbrook	N/A	N/A	0	0	*	
7/9/2013	2:32 PM	Parrish	9.52	100	0	0	EFO	
4/10/2011	5:50 PM	Parrish	5.3	400	0	0	EF1	
6/7/2007	3:48 PM	V. White Lake	7.4	1,000	0	1	EF3	
7/8/1994	2:50 PM	V. White Lake	N/A	N/A	0	0	*	
4/27/1984	2:50 PM	Ackley, Vilas, Peck	7.5	75	0	1	EF2	
6/13/1976	9:00 AM	Ackley, Peck, Neva	4.7	33	0	0	EF1	
6/13/1976	8:10 AM	Rolling, Norwood, Polar, Evergreen	17.2	50	0	0	EF1	
9/28/1971	4:10 PM	Rolling, Antigo, C. Antigo, Polar, Evergreen, V. White Lake, Wolf River	29.5	200	0	1	EF3	
5/4/1959	11:45 AM	Neva	1	100	0	0	EFO	

Source: National Climatic Data Center * Funnel Cloud

The National Climatic Data Center database shows 5 high or strong wind events from 2009 to 2019.

On July 14, 2010 numerous thunderstorms moved across the western Great Lakes, producing wind gusts up to 95 mph, leaving 22,000 homes without power and downing trees near Elcho.

On March 7, 2017 a strong low pressure system moved in creating a wind gust measured at 68 mph near Antigo.

On July 19, 2019 a line of severe thunderstorms moved across much of central, north central, and eastern Wisconsin during the evening hours. Widespread tree and power line damage was reported from central Wisconsin into the Fox Valley and lake shore. WPS reported over 50,000 outages at the height of the storm. The worst damage was associated with a macro-burst, a large downburst of

straight-line winds that affected a large swath from Pelican Lake in Oneida County, southeast through Langlade and Oconto counties. Hundreds of thousands of trees were snapped or uprooted, resulting in damage to dozens of homes and cottages. The damage path was about 60 miles long and up to 10 miles wide at times. Winds were likely near 100 mph in the hardest hit areas near Lily in northeast Langlade County and near the Langlade-Oconto County line southwest of Boot Lake.

Tornado / High Wind Vulnerability Assessment:

Though Langlade County is mostly a rural county, there are concentrations of population scattered throughout. Subdivisions, rural unincorporated communities, the City of Antigo and Village of White Lake can be regarded as more vulnerable because tornados pose more of a threat to human safety and property damage in more concentrated areas, see Map 8.

Mobile homes are of significant concern in assessing the hazard risks from tornados. In general, it is much easier for a tornado to damage and destroy a mobile home than a site-built home. Mobile homes comprise 7 percent of Langlade County's housing units. Research by the NWS shows that between 1985 and 1998, 40 percent of all deaths in the nation from tornados were in mobile homes, compared to 29 % in permanent homes, and 11 % in vehicles.

The 2017 U.S. Census estimated 866 mobile homes in Langlade County. While mobile homes are scattered throughout the county, many are in mobile home parks. Map 8 also displays the location of the mobile home parks with approximate number of units in the density calculations to create Map 8.

In addition to mobile homes, campground patrons are vulnerable to tornados because there usually is little shelter provided. Camp Susan 4-H Camp is a summer, youth camp that holds day programs for area youth. Dormitories are located on-site for extended stays. Emergency shelter is built into these facilities. There are a number of other public and private recreational campgrounds as well as Boy/Girl Scout camps around the County. Refer to Map 8.

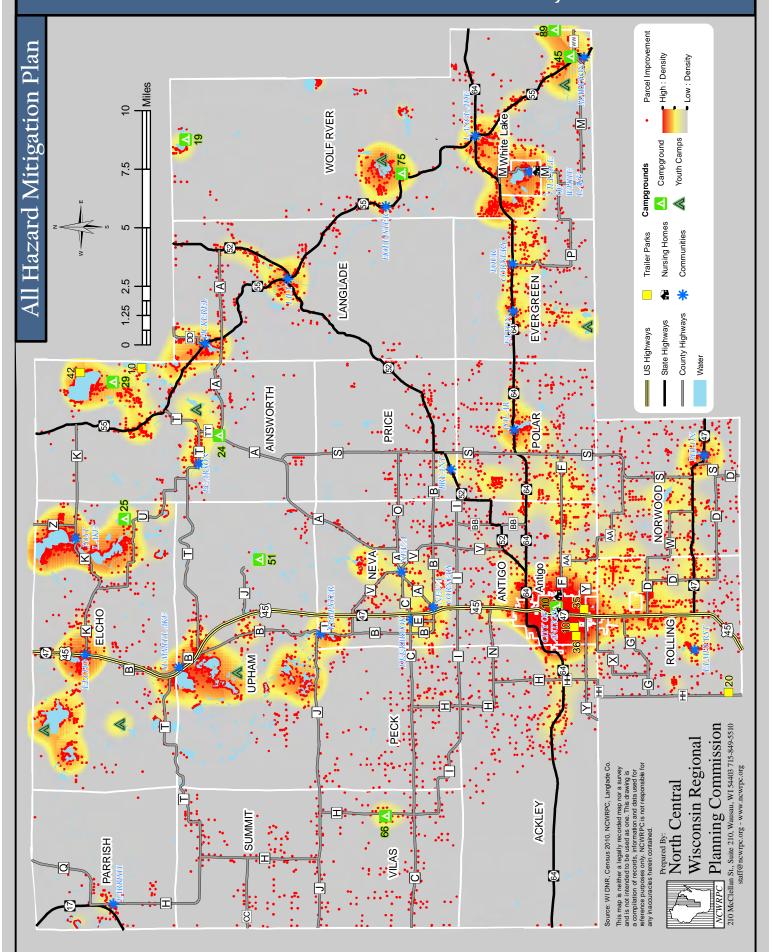
The following is a list of things that may be affected by a tornado. Much of this list can be referenced in Part II.

- Community facilities hospitals, schools
- Public Service police and fire departments
- Utilities power lines, telephone lines, radio communication
- Transportation debris clean-up
- Residential nursing homes, garages, trees and limbs, siding, & windows
- Businesses signs, windows, siding, & billboards
- Agricultural buildings, crops, & livestock

Langlade County, Wisconsin

Areas of Vulnerability

Map 8



Based on review of the historic events of tornados and high wind, there are no specific areas in the county that have unusual risk of occurrence. The events are a countywide concern. In mitigation planning meetings for this Plan, both the City and Village noted that tornado was their top priority hazard concern. General vulnerability by geographic area (local unit of government) is identified in Map 8.

Future Probability and Potential Dollar Losses – Tornados / High Wind:

Based on the historic data presented here (frequency of past events), between 2009 and 2019 Langlade County experienced three tornados or about 1 every 3 years. The historic pattern between 1959 and 2019 (60 years) a total of nine tornados have been reported. In the last 10 years tornado frequency has increased. So, Langlade County can likely expect a tornado about once every 10 years on average. This equates to a probability of 0.15 or about a 15 percent chance in a given year. There is not enough data to indicate the probability of tornados of a specific magnitude.

High wind events are more common in Langlade County with 5 occurring in the last 10 year period from 2009 to 2019. Thus, the County can expect .5 high wind events per year. In other words, the probability to have a high wind event is 50 percent chance in a given year.

Historic data is again used to estimate potential future dollar losses due to a tornado. Estimated damages resulting from various tornados in Langlade County range from \$0 to \$2.5 million. On average, Langlade County might expect damage of \$756,250 per tornado; however, three of the historic tornados resulted in damages of \$1 million or more. High wind damages are typically spread over a wide area making it difficult to single out a specific county. Damage estimates range between \$0 and \$14.3 million per incident.

HAZARD ANALYSIS: WINTER STORMS / EXTREME COLD

Background on Winter Storms/Extreme Cold Hazard:

A variety of weather phenomena and conditions can occur during winter storms. For clarification, below are National Weather Service approved descriptions of winter storm elements:

Heavy snowfall – the accumulation of six or more inches of snow in a 12-hour period, or eight or more inches in a 24-hour period.

Blizzard – the occurrence of sustained wind speeds in excess of 35 miles per hour accompanied by heavy snowfall or large amounts of blowing or drifting snow.

Ice Storm – an occurrence where rain falls from warmer upper layers of the atmosphere to the colder ground, freezing upon contact with the ground and exposed objects near the ground.

Freezing drizzle/freezing rain – the effect of drizzle or rain freezing upon impact on objects that have a temperature of 32 degrees Fahrenheit or below.

Sleet – solid grains or pellets of ice formed by the freezing of raindrops or the refreezing of largely melted snowflakes. This ice does not cling to surfaces.

Wind chill – an apparent temperature that describes the combined effect of wind and low air temperatures on exposed skin.

Winter storms can vary in size and strength and include heavy snowfall, blizzards, ice storms, freezing drizzle/freezing rain, sleet, wind chill, and blowing and drifting snow conditions. Extremely cold temperatures accompanied by strong winds can result in wind chills that cause bodily injury such as frostbite and death.

True blizzards are rare in Wisconsin. They are more likely to occur in the northwestern part of the state than in south-central Wisconsin, even though heavy snowfalls are more frequent in the southeast. However, blizzard-like conditions often exist during heavy snowstorms when gusty winds cause the severe blowing and drifting of snow. Heavy snow and ice storms have been part of nearly every winter in Langlade County.

Dangerously cold conditions can be the result of the combination of cold temperatures and high winds. The combination of cold temperatures and high wind creates a perceived temperature known as "wind chill". Wind chill is the apparent temperature that describes the combined effect of wind and air temperatures on exposed skin. When wind blows across the skin, it removes the insulating layer of warm air adjacent to the skin. When all factors are the same, the faster the wind blows the greater the heat loss, which results in a colder feeling. As winds increase, heat is carried away from the body at a faster rate, driving down both the skin temperature and eventually the internal body temperature.

The National Weather Service issues wind chill advisories when wind chill readings of -20 to -34 degrees are expected. Wind chill warnings are issued when wind chill values are expected at or below -35 degrees. Extreme cold events are most likely during the months of January and February.

History of Winter Storms/Extreme Cold in Langlade County:

The NCDC has reported 37 major winter storm events for Langlade County since 2009. These storms typically contain some form of heavy snow, blowing snow,

ice, freezing rain or drizzle, or glaze. Below are some highlight events over the last 10 years.

Most recently on April 4, 2019 a strong low pressure system over the Plains moved across northwest Wisconsin on its way to Quebec. The system brought heavy snow, freezing rain, and gusty winds to central and northern Wisconsin. Thunderstorms and some sleet were also reported in parts of central Wisconsin. The highest measured snowfall totals in Langlade County were 12.5 inches near White Lake, and 12.0 inches in Antigo. The 12.0 inches of snow in Antigo breaks the previous snowfall record for April 11th of 4.0 inches that was set in 2007.

On February 24, 2019 a fierce, late-winter storm produced heavy snow, freezing rain, and high winds across much of central and northern Wisconsin on February 23-24 as an area of low pressure rapidly deepened across the Great Lakes. At the height of the storm on the 24th, travel was not recommended across parts of central and northern Wisconsin as blizzard conditions made travel nearly impossible. The combination of ice, snow, and strong winds caused power outages and tree damage in many locations. Strong winds and near-blizzard conditions shut down a few rural stretches of heavily traveled highways across east-central Wisconsin on February 24. Snow and blowing snow caused whiteout conditions in Langlade County for most of the afternoon. A gust of 37 mph was recorded at Langlade County Airport in Antigo.

On February 29, 2012 a low pressure system out of Colorado produced a broad area of heavy snow over Minnesota and Wisconsin. This system deposited 18 to 20+ inches of snow between Rhinelander and Crandon, including parts of Langlade County.

Between December 11 and 12 of 2010, a strong winter storm developed as low pressure moved from Wyoming to Lake Michigan causing numerous cancellations and rescheduling. The pressure difference between an arctic high over southern Canada and the low pressure storm system generated strong winds resulting in severe blowing snow and blizzard conditions across the State. Fourteen inches of snow fell in western Langlade County with winds gusting up to 46 mph recorded near Antigo. The Governor declared a state of emergency in all 72 counties and the state's Emergency Operations Center was activated. The State Patrol advised against traveling as it was difficult to keep the blowing and drifting snow off the highways. There were numerous slide-offs and accidents across the state. Frigid temperatures followed the storm with actual air temps dropping to -23 degrees in some areas.

From the NCDC, six extreme cold temperature events have affected Langlade County from 2009 to 2019. Most recently, on January 29, 2019 Cold air moved into northern Wisconsin as a strong low pressure system departed and high pressure over the Plains moved toward the region. Low temperatures on the morning of January 30th were mainly in the -15 degree F to -30 **degree** F range and wind chills mostly -35 to -55 degree F. The low temperature in Antigo was negative 28 degrees on the morning of January 31st.

Winter Storms/Extreme Cold Vulnerability Assessment:

Winter storms and extreme cold present serious threats to the health and safety of affected citizens and can result in significant damage to property. Heavy snow or accumulated ice can cause the structural collapse of buildings, down power lines, motor vehicle accidents, or isolate people from assistance or services. Extreme cold includes the risk of frostbite and hypothermia.

The following is a list of things that may be adversely affected by a winter storm or extreme cold. Much of these community assets can be referenced in Part II.

- Infrastructure operation of emergency services, operation of public facilities and schools
- Utilities down power and telephone lines
- Transportation automobile accidents, roadway plowing, salting/sanding
- Residential roofs
- Businesses commerce
- Agricultural livestock

Based on review of the historic events of winter storms and extreme cold, there are no specific areas in the county that has an unusually high risk. The risk for winter storms and extreme cold is relatively uniform and a county-wide concern. In their mitigation planning meeting, the City of Antigo identified the potential risk of power outage associated with a major winter/ice storm as a significant concern with regard to the issue of availability of adequate warming shelter space.

Future Probability and Potential Dollar Losses – Winter Storms/Extreme Cold:

Based on historical frequency, Langlade County can expect 3.7 major winter storms per year on average. In other words the probability is 1.0 or a 100% chance of multiple storms in a given year.

For extreme cold temperatures, based on historical frequency, Langlade County can expect an occurrence about every 2 years. Although, extreme cold temperatures may also accompany winter storms, so a probability of 100% chance in a given year cannot be ruled out.

Estimating potential future losses for winter storms is difficult. Damages and losses are typically widespread. Auto accidents and additional snow removal time are typical impacts of winter storms, and such claims are not aggregated

or tracked for monetary damage. Winter storms do have the potential to be extremely destructive, particularly in the case of ice storms. Potential future losses per incident might range from \$5,000 to \$2 million based on experiences from other counties.

HAZARD ANALYSIS: DROUGHT/EXTREME HEAT

Background on Drought/Extreme Heat Hazard:

A drought is an extended period of unusually dry weather, which may be accompanied by extreme heat (temperatures which are 10 or more degrees above the normal high temperature for the period). There are basically two types of drought in Wisconsin: agricultural and hydrologic. Agricultural drought is a dry period of sufficient length and intensity that markedly reduces crop yields. Hydrologic drought is a dry period of sufficient length and intensity to affect lake and stream levels and the height of the groundwater table. These two types of drought may, but do not necessarily, occur at the same time.

Droughts, both agricultural and hydrologic, are relatively common in the state. Small droughts of shortened duration have occurred at an interval of about every ten years since the 1930's.

Extended periods of warm, humid weather can create significant risks for people, particularly the elderly who may lack air conditioning or proper insulation or ventilation in their homes. Animals are also at risk during extended periods of heat and humidity. The National Weather Service issues a Heat Advisory when the Heat Index ranges from 105 to 114 degrees daytime and remains at or above 80 degrees at night, during a 24-hour period. The heat index combines the effects of heat and humidity to better reflect the risk of warm weather to people and animals. When heat and humidity combine to reduce the amount of evaporation of sweat from the body, outdoor activity becomes dangerous even for those in good shape. The index measures the People exposed to the sun would apparent temperature in the shade. experience an even higher apparent temperature. A heat index of 105 is considered dangerous and prolonged exposure can result in heat stroke, exhaustion and cramps. People should be reminded to use extreme caution when the heat index is between 95 and 105. A heat index of 95 occurs when the temperature is 90 degrees and the relative humidity is 50 percent.

History of Drought/Extreme Heat in Langlade County:

An extended period of drought conditions are recorded going back to 2005 for Langlade County and much of Wisconsin but, eased a bit in 2011. Periods of below normal precipitation led to ongoing moisture deficits despite periodic storm events creating breaks in the dry pattern. In 2009 reports from County Agricultural Agents across northern Wisconsin indicated that crops were drought stressed and would have been in worse shape if temps had not been cooler than normal. The report from Langlade County indicated a 20 to 25 % loss of the corn and soybean crop through July of 2009. During this period, the Governor declared a state of emergency to get assistance to the state's agricultural sectors. The extended dry conditions posed serious challenges for farmers from drought stressed crops to issues providing feed for livestock.

NCDC reports indicate drought periods from September to October 2005, August through October 2007, September 2008 through April 2009, July through October 2009 and from May through June 2010. No drought events were recorded by NCDC since 2010 in Langlade County.

The drought of 1976-1977, affected an area stretching from north to south across the state. Stream flow measuring stations recorded recurrence intervals from 10 to 30 years. Numerous private and municipal wells went dry due to the lowered groundwater tables and agricultural losses during this drought were set at \$624 million. Langlade County was one of 64 counties that were declared federal drought areas and deemed eligible for assistance under the Disaster Relief Act. Federal monies totaled only 19% of losses attributed to the drought.

Langlade County also experienced the drought of 1987-1988 and a dry spell in 1999.

The county has experienced four extreme heat waves from 1994 to 2012. The first of these was recorded was in July 1995 when a heat wave came across Wisconsin for three days. Temperatures across the state reached highs of 100 to 109 degrees. During this heat wave, 141 lives were claimed with 70 directly related and 71 in-directly related in the state of Wisconsin. Most deaths occurred in the major urban centers.

A heat wave was recorded on July 23, 1999 when over a week of extreme temperatures and humid weather swept across the state. In some places it was so hot that concrete roads began to buckle. There was widespread heat related illness, and three deaths resulted outside Langlade County. More recently, on July 31, 2006 temperatures near 100 and dew points in the lower 70s led to heat indexes near 110 degrees. No extreme heat waves have been recorded by NCDC from 2009 to 2019.

Drought/Extreme Heat Vulnerability Assessment:

Droughts can have a dramatic effect on Langlade County. The County has 87,000 acres of farmland. With agriculture being a critical sector of the County's economy, droughts have disastrous effects. Even small droughts of limited duration can significantly reduce crop growth and yields, adversely affecting farm income. More substantial events can decimate croplands and result in total loss, hurting the local economy.

Irrigation can negatively impact the environment by drawing water that naturally goes to aquifers and surface water. Drought can exacerbate the problem when high withdrawal rates versus little precipitation deplete water bodies and aquifer supplies, thereby decreasing drinking water supplies, drying streams, and hindering aquatic and terrestrial wildlife. During severe droughts, some wells - mainly private wells - will go dry.

Droughts can trigger other natural and man-made hazards as well. They greatly increase the risk of forest fires and wildfires because of extreme dryness. In addition, the loss of vegetation in the absence of sufficient water can result in flooding, even from average rainfall, following drought conditions.

The following is a list of things that may be adversely affected by a drought. Much of these community assets can be referenced in Part II.

- Infrastructure municipal water supplies
- Surface water –groundwater reserves, recreation, and wildlife
- Forests
- Agricultural crops, livestock

The areas most susceptible to drought conditions would be agricultural communities. Agricultural land is scattered throughout the south and southeast parts of the County. The primary towns include Ackley, Antigo, Neva, Norwood, Peck, Polar, Price, Rolling and Vilas, but several other towns also contain varying amounts of agricultural land.

According to the Wisconsin Emergency Management, excessive heat has become the most deadly hazard in Wisconsin in recent times. Extreme heat can happen anywhere within Langlade County affecting everyone, however the elderly and young are the ones with the highest risk of getting heat related injuries, which can lead to death. Ways to prevent injuries include wearing lightcolored clothing, drink plenty of water, slow down, and do not stay in the sun for too long.

Future Probability and Potential Dollar Losses – Drought/Extreme Heat:

Based on the historic data presented here (frequency of past events), Langlade County can expect a drought every ten years on average, which is a probability of 0.10 or a 10 percent chance in a given year. Significant severe drought is somewhat less common, affecting Wisconsin once about every 15 years.

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Drought is another hazard lacking good loss figures at the county level. However, a look at aggregate data for the last two major droughts can give some indication of potential impact. The last two major droughts in Wisconsin resulted in losses of \$9.6 million (1976-77) to \$18 million (1987-88) per county on average.

Normally, northern Wisconsin is known for its cold winters, however, extreme heat waves will affect Langlade County in the future. Langlade County can expect a heat wave once about every 5 years or a 20 percent chance in a given year based on the historic data presented.

HAZARD ANALYSIS: FLOODING/DAM FAILURE

Background on Flooding/Dam Failure Hazard:

There are a variety of classifications for flooding including coastal, dam failure, flash, lake, riverine, stormwater and urban/small stream. Langlade County has the potential for all these types except coastal. The following descriptions of the types of flooding are compiled from various FEMA and other notable hazard planning sources:

Coastal – Different from other types of flooding which relate to movement of water through a watershed, coastal flooding is due to the effect of severe storm systems on tides resulting in a storm surge. Primarily known as an ocean-based event, the Great Lakes coastal areas can also be affected.

Dam Failure – More of a technology related hazard than a natural hazard, various factors can result in the failure of the structural technology that is a dam, thus causing flooding of areas downstream of the dam often similar in effect to flash flooding.

Flash – Involves a rapid rise in water level moving at high velocity with large amounts of debris which can lead to damage including tearing out of trees, undermining buildings and bridges, and scouring new channels. Dam failure, ice jams and obstruction of the waterway can also lead to flash flooding. Urban /built-up areas are increasingly subject to flash flooding due to removal of vegetation, covering of ground with impermeable surfaces and construction of drainage systems.

Lake – Prolonged wet weather patterns can induce water-level rises that threaten lakeshore areas.

Riverine – Also known as overbank flooding, this is the most common type of flooding event. The amount of flooding is a function of the size and topography

of the watershed, the regional climate, soil and land use characteristics. In steep valleys, flooding is usually rapid and deep, but of short duration, while flooding in flat areas is typically slow, relatively shallow, and may last for long periods.

The cause of flooding in rivers is typically prolonged periods of rainfall from weather systems covering large areas. These systems may saturate the ground and overload the streams and reservoirs in the smaller sub-basins that drain into larger rivers. Annual spring floods are typically due to the melting of snowpack.

Stormwater – Water from a storm event that exceeds the capacity of local drainage systems, either man-made or natural, can result in flooding. Inadequate storm sewers and drainage systems are often the primary factor resulting in this type of flooding.

Urban and Small Stream – Locally heavy rainfall can lead to flooding in smaller rivers and streams. Streams through urban or built-up areas are more susceptible due to increased surface runoff and constricted stream channels.

Flooding problems in Langlade County tend to occur in the spring when melting snow adds to normal runoff and, in summer or early fall, after intense rainfalls. Flooding occurs in the spring due to snowmelt and frozen soil. This build up continues until the river or stream overflows its banks, for as long as a week or two and then slowly recedes inch by inch. The timing and location of this type of flooding is fairly predictable and allows ample time for evacuation of people and protection of property.

Flooding is a significant hazard in Langlade County, particularly because the Springbrook runs right through the middle of the county's principle city. As described in Part II, there are approximately 225 rivers and streams in Langlade County within 14 main watersheds and 3 major river basins.



Table 11 Dams in Langlade C				
Dam Name	Size	Ownership	Hazard Rating	Stream
Phlox Pond	Large	Town	Significant	Red
Skinner	Large	County	High	Spring Brook
Spider Creek	Large	DNR	Low	Spider Creek
Lower Trappe	Large	DNR	Low	Trappe River
Middle Trappe	Large	DNR	Low	Trappe
Upper Trappe	Large	DNR	Low	Trappe
Fourth Avenue	Large	City	Low	Spring Brook
Ormsby Pond	Large	Private	Low	West Branch Eau Claire
Upper Post Lake	Large	Private	Low	Wolf River
Pot Flowage	Large	DNR	Low	Trappe River Tributary
Section 27 Dike	Large	DNR	Low	Trappe River Tributary
Skunk Creek	Large	County	Low	Skunk Creek
Sheldons	Small	Private	Low	East Branch Lily
Greater Bass Lake	Small	Private	Low	Outlet
Pickerel Lake	Small	Private	Low	Pickerel Creek
Fish (Schuett)	Small	Private	Low	Pollock Creek
Langlade Fish Hatchery	Small	DNR	Low	Dalton Creek
Lower Antigo	Small	City		Spring Brook
Upper Antigo	Small	City		Spring Brook
Crystal Springs Fish Hatchery A	Small	DNR		E Branch Eau Clare Trib
Crystal Springs Fish Hatchery B	Small	DNR		E Branch Eau Claire Trib
Hanke	Small	Private	Low	Lily
Deepwoods Lake	Small	Private	Low	East Branch Eau Claire
McGee Lake	Small	DNR		Outlet of McGee Lake
Upper Wicke	Small	DNR		Skunk Creek Tributary
County Line	Small	DNR		Trappe River Tributary
Lower Wicke	Small	DNR		Skunk Creek Tributary
Tower Seep	Small	DNR		Trappe River
North Grade	Small	DNR		Pine River Tributary
Middle Eau Claire Flowage	Small	DNR		East Branch Eau Claire
Upper Eau Claire Flowage	Small	DNR		East Branch Eau Claire
Oxbo Flowage	Small	DNR	Low	Oxbo Creek
Gleason	na	DNR		Skunk Creek
White Lake	na	Village		White Lake Outlet
Mikkelson	na	Private	Low	Drew Creek
Neva Dam	Small	Town		East Branch Eau Claire
Ackley Wildlife Area Dam	na	DNR		na

Source: WisDNR on-line database & NCWRPC, 2019

These floodplains are narrow along tributaries and lakes, but extensive throughout the county. Floodplains are described in Part II and shown on Map 4. The North Central Wisconsin Regional Planning Commission digitized these floodplains from FEMA Flood Insurance Rate Maps (FIRMs). While not official, these digital floodplains are useful planning tools.

There are 37 dams in Langlade County (see Map 4/Table 11), but most do not pose a significant hazard if they were to fail. According to the DNR, Langlade County has 12 large dams, 21 small dams and the other 4 were not classified. The Wisconsin DNR regulates all dams on waterways to some degree; however, the small dams are not stringently regulated for safety purposes. Only one dam, Skinner, has a high hazard rating which indicates that a failure would most likely result in loss of life and significant property damage.

A dam can fail for a number of reasons such as excessive rainfall or melting snow. It can also be the result of poor construction or maintenance, flood damage, weakening caused by burrowing animals or vegetation, surface erosion, vandalism or a combination of these factors. Dam failures can happen with little warning resulting in the loss of life and significant property damage in an extensive area downstream of the dam.

History of Flooding/Dam Failure in Langlade County:

Flooding was a principal cause of damage in four of nine Presidential Disaster Declaration requests in Langlade County from 1971 to 2019. One of the worst flood events experienced by Langlade County was the flooding of 2004. News reports identified this flooding in the City of Antigo as the worst flooding in four decades. Rapid snowmelt and a heavy weekend rainfall caused the



Flooding in Antigo, 2004

Springbrook (Skinner) Dam to overflow. The Governor declared a state of emergency in Langlade County and sent in the National Guard. About 99 homes and 39 businesses were evacuated and schools were closed. Parts of US Highway 45 were flooded and closed. The local street network was extensively damaged including several bridges. Overall damages exceeded \$1 million, however; a Presidential Disaster Declaration was not awarded.

In 1971, Langlade was one of 24 counties included in a request for Presidential declaration for flooding. That request was denied. Then in 1973, significant flooding affected a total of 35 counties, including Langlade, and a request for Presidential Disaster Declaration was awarded. One person drowned. Total private and public damage losses were set at \$24 million across the 35 counties. Again in 2002 a combination of severe storms and flooding included Langlade and 19 other counties in a Presidential Disaster Declaration.

In addition to the 2004 flood, NCDC data shows flood events in Langlade County in 1999 and 2000. In 1999, urban and small stream flooding affected Antigo on July 8 and again on July 16. Over topping of Spring Brook Dam was a

Part III – Risk Assessment

major factor. Streets were flooded and homes experienced basement flooding. In July of 2000, Antigo had significant flooding and Deerbrook experienced urban and small stream flooding. Surrounding rural areas experienced some crop damage.

Additional information from the County shows that flood damage has been recorded in Antigo in 1961, 1965, 1967 and 1988. These events were all a result of rapid snowmelt and heavy rain exceeding Springbrook Dam's storage capacity and overtopping.

Flooding/Dam Failure Vulnerability Assessment:

Flood events in the county have caused substantial property and infrastructure damage in the past and have the potential to cause future damage, since a significant number of structures still exist in the floodplain. Looking at past events, the following have been significantly impacted by flooding:

- Infrastructure flooded public facilities, and schools
- Utilities down electric lines/poles/transformers, telephone lines, and radio communication
- Roadways washouts, inundated roadways, debris clean-up
- Residential structures flooded basements, damaged septic systems
- Businesses loss of commerce
- Agriculture inundated cropland

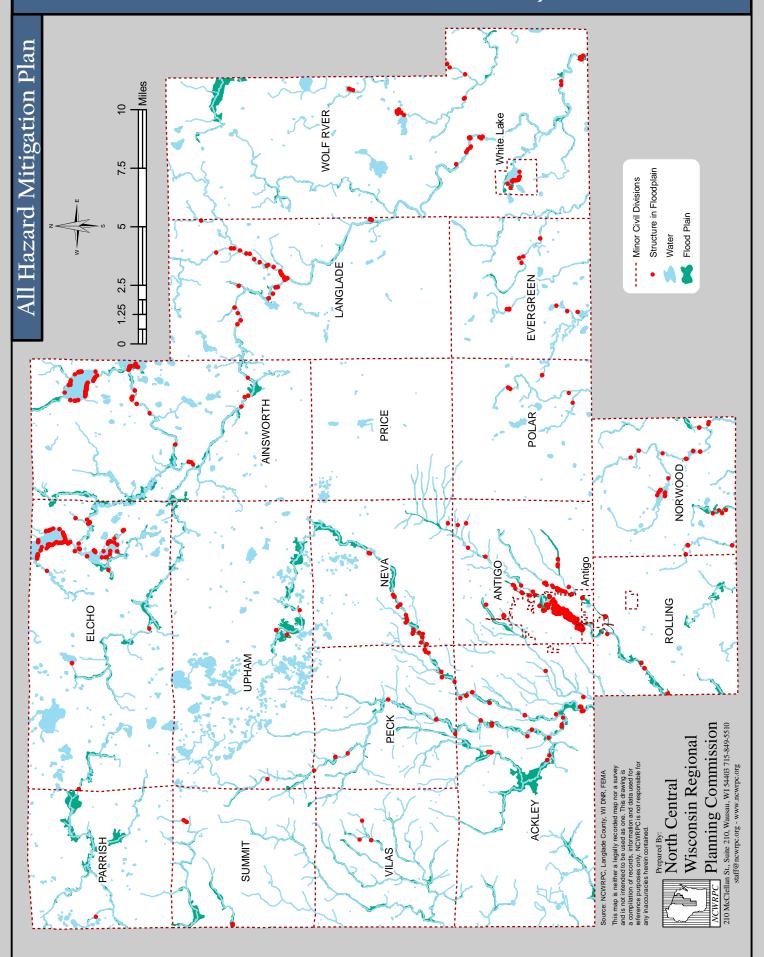
To assess the vulnerability of Langlade County to flooding hazards, basic inventory data in Part II must be analyzed. For this purpose, consideration should be given to structures (specifically critical facilities), infrastructure, and cropland.

One of the first reports to reference in assessing vulnerability to structures during flooding is the Wisconsin Repetitive Loss Report. This Report provides the status of repetitive loss structures by community. FEMA, through the Federal Insurance Administration, describes a repetitive loss structure as "when more than one flood insurance claim of at least \$1,000 is made within a ten-year period." The information is used as a floodplain management tool and to supplement information provided by communities for flood mitigation grants administered by WEM. According to the report, there are no repetitive loss structures in Langlade County. Since no structures are listed in the Repetitive Loss Report, structures within floodplains were analyzed. The floodplain boundaries within Langlade County are shown on Map 4.



Flood Vulnerability

Map 9



Part III – Risk Assessment

Table 12 shows the number of structures in each municipality identified as "vulnerable to flooding" according to proximity to floodplains. There were a total of 578 structures identified in the designated floodplain boundaries, see Map 12.

Methodology – Structures within Floodplains:

1. NCWRPC digitized (electronically traced) the individual FEMA FIRM

	floodplain maps into a GIS coverage for the County.	Table 12 Approximate Values of Structures in Floodplains in Langlade County				
2.	A building point cover was digitized from	Municipality	Number Parcels	Improved Value	Average Improved Value	
	current aerial photos.	Ackley town	25	\$2,505,700	\$100,228	
	conem dendi prioros.	Ainsworth town	72	\$5,584,700	\$77,565	
3.	The floodplain coverage	Antigo town	39	\$4,172,970	\$106,999	
5.	was then combined with	Elcho town	91	\$9,529,000	\$104,714	
	the building point	Evergreen town	9	\$659,000	\$73,222	
	0	Langlade town	31	\$2,528,200	\$81,555	
	coverage and County parcel data to identify	Neva town	17	\$1,843,300	\$108,429	
	•	Norwood town	25	\$2,394,600	\$95,784	
	those parcels within the	Parrish town	1	\$137,500	\$137,500	
	floodplain boundary.	Peck town	12	\$1,193,300	\$99,442	
	Total paraola within the	Polar town	4	\$226,200	\$56,550	
4.	Total parcels within the	Price town	0		\$138,200	
	floodplain were then	Rolling town	5	\$678,700	\$135,740	
	tabulated by	Summit town	3	\$29,900	\$9,967	
	municipality.	Upham town	3	\$674,000	\$224,667	
~		Vilas town	3	\$228,300	\$76,100	
5.	Land records data for	Wolf River town	35	\$2,940,800	\$84,023	
	those parcels was used	White Lake Village	21	\$1,580,400	\$75,257	
	to tabulate the total	Antigo city	182	\$12,807,200	\$70,369	
	value for the identified	Langlade County	578	\$49,713,770	\$86,010	
	vulnerable properties.	Source: NCWRPC & I	analada (County Tax Pace	ls	

Source: NCWRPC & Langlade County Tax Pacels

In addition to structural damage from flooding, there may also be significant damages to public roadways, particularly to roadway surfaces, culverts and bridges. Floods may inundate roadways in the county for varying periods. Such interruptions in the county transportation network may cause travel delays through detours. The agriculture industry is one sector that faces substantial losses during floods. Cool, rainy/wet, cloudy weather in the spring and summer can create a general condition of high water and saturated soils throughout the county.

Flood conditions can leave farmers with these economic obstacles:

- Delayed planting (reduced growing season)
- Seed and agricultural chemicals washing out of fields
- Rotting crops due to excess moisture
- Areas where planted crops are left in the fields due to excessive moisture
- Crops not reaching full maturity or stunted growth
- Requirements by farmers to expend higher amounts of money on additional soil amendments
- Lower quality (nutritional value) of harvestable crops as a feed source.

Reductions in yields can result in loss of revenues from cash crops and increased expenses for purchasing needed livestock feed from outside sources. Additionally, reductions in crop quality result in lower prices received for cash crops and increased amounts spent for nutritional supplements to animal feed, which often need to be added even in much of the purchased feed.

Economic losses to farmers can generate a ripple effect to the local community as well. Reduction in farm income curtails farmers' ability to purchase new equipment and make other improvements. Farmers have less money to spend at farm dealers, farm supplies, building/hardware suppliers, fertilizer, feed and seed dealers, and other agribusiness and retail establishments. The State will have reduced tax revenues. Farmers increase their debt load and have less money to save and invest.

The forest products industry is affected similarly to agriculture. Forestlands become too wet for logging operations and many water logged tree plantations suffer high mortality rates. Mill inventories become very low, resulting in increased prices for consumers.

Considering both the agricultural and forestry sectors, virtually the entire county faces significant risk due to flooding, however; the areas most considered to have a higher risk for impact from flooding include those communities with structures in floodplains as shown in Map 9.

Future Probability and Potential Dollar Losses – Flooding/Dam Failure:

The NCDC data shows that Langlade County had one flood from 2009-2019, however, this data does not include the 1973, 2002, and 2004 flooding, which received Presidential Disaster Declaration, nor the 1961, 1965, 1967, 1971 or 1988 flooding. Based on this combination of historic data (frequency of past events), Langlade County can expect a significant flood event about every six years on

average. This equates to a probability of 0.16, or about a 17 percent chance in a given year.

Historic data is again used to estimate potential future dollar losses from flooding. Based on the past flood events for which we have loss figures, Langlade County can anticipate property and crop losses of approximately \$1 million, on average, between the public and private sector for each significant flood occurrence. Over the next ten-year period, flood losses in Langlade County could exceed \$2 million.

Potential losses for structures by jurisdiction are reflected in Table 12. While structures outside mapped floodplains may also be lost or damaged in a flood, structures within flood plains represent the greatest risk for flood damages.

HAZARD ANALYSIS: SEVERE THUNDERSTORMS/LIGHTNING/HAIL

Background on Severe Thunderstorm Hazard:

The National Weather Service definition of a severe thunderstorm is a thunderstorm event that produces any of the following: downbursts with winds of 58 miles per hour or greater (often with gusts of 74 miles per hour or greater), hail 1 inch in diameter or greater, or a tornado. Hail and lightning will be addressed in this section; however, tornadoes are discussed as a separate hazard due to their potential level of severity.

Lightning results from discharge of energy between positive and negative areas separated by rising and falling air within a thunderstorm. This discharge heats the surrounding air to 50,000 degrees. Hail results as the warm rising air cools, forming ice crystals which are held by the updrafts until accumulating enough weight to fall. The hail size depends on strength of the updrafts keeping it up.

Thunderstorm frequency is measured in terms of incidence of thunderstorm days or days on which thunderstorms are observed. Wisconsin averages between 30 and 50 thunderstorm days per year depending on location. A given county may experience ten or more thunderstorm days per year. The southwestern area of the state normally has more thunderstorms than the rest of the state.

History of Severe Thunderstorms in Langlade County:

The NCDC has reported 42 severe storm events for Langlade County since 2009. These storms typically contain some form of heavy rain and strong winds and often lightning or hail. Back in 2002, a combination of severe storms and flooding resulted in a Presidential Disaster Declaration for Langlade and 19 other counties. Most recently, in June, August, September, and October of 2018, storms downed trees and power lines in White Lake, Phlox, and Antigo areas.

On May of 2012, thunderstorms developed in unstable air as cold fronts passed through northern Wisconsin. The storms produced heavy rains, golf balls sized hail (5-20-12) and numerous trees and power lines blown down around Antigo, destroyed a bandstand in Neva, and near Summit Lake (5-24-12) downed trees and produced a funnel cloud in Marathon County.

On July 30, 2011, a bow echo squall line passed through northeast Wisconsin blowing down trees and knocking out power to 36,000 customers. Downed trees damaged the Bass Lake Country Club and Golf Course. Strong winds lifted a paddle boat out of Summit Lake and depositing up a hill. On June 10, 2005 a thunderstorm knocked a tree onto a house in Pickerel. On July 31, 2003, thunderstorm downed trees and power lines in eastern Langlade County.

Severe Thunderstorm Vulnerability Assessment:

The National Weather Service can forecast and track a line of thunderstorms that may be likely to produce severe high winds, hail, and lightening, but where these related hazards strike and how powerful they might be remains unpredictable. The distribution of thunderstorms and related hazard events have been widely scattered throughout the County.

Many thunderstorm events (without tornadoes) have caused substantial property and infrastructure damage, and have the potential to cause future damage. In order to assess the vulnerability of the Langlade County area to thunderstorms and related storm hazards, review of the past events indicate significant impacts to:

- Infrastructure hospitals, schools, street signs, police and fire departments
- Utilities electric lines/poles/transformers, telephone lines, radio communication
- Transportation debris clean-up
- Residential mobile homes, garages, trees and limbs, siding, & windows
- Businesses signs, windows, siding, & billboards
- Agricultural buildings, crops, & livestock
- Vehicles campers, boats, windshields, body, & paint

Based on review of the historic patterns of thunderstorms associated with high wind, hail, or lightening, there are no specific municipalities that have unusual risks. The events are relatively uniform and a countywide concern.

Future Probability and Potential Dollar Losses – Severe Thunderstorms:

Based on historical frequency, Langlade County can expect 4.2 thunderstorm events per year on average. In other words, the probability is 1.0 or a 100% chance of multiple storms in a given year. The probability of a thunderstorm with damaging hail (0.75 inch diameter or greater) in Langlade County is also at 1.0 or 100% chance with about 1.5 incidents in a given year. There is not enough date available regarding lightning events to indicate probability.

According to the NCDC, historic thunderstorm events with associated high wind and reported damages ranged from \$1,000 to \$10,000 in property damage per incident, and \$5,000 in reported crop damage. Historic thunderstorm events with associated hail that reported property damage averaged \$1,000. Historic thunderstorm events with associated lightening that reported property damage averaged \$25,000. Losses in Langlade County associated with severe thunderstorms could approach \$775,000 over the next ten-year period.

HAZARD ANALYSIS: FOREST FIRES/WILDFIRES

Background on Forest Fires/ Wildfires Hazard:

A forest fire is an uncontrolled fire occurring in a forest or in woodlands outside the limits of incorporated villages or cities. A wildfire is any instance of uncontrolled burning in brush, marshes, grasslands or field lands. For the purpose of this analysis, both of these kinds of fires are being considered together.

Forest fires and wildfires can occur at any time whenever the ground is not completely snow covered. The season length and peak months may vary appreciably from year to year. Land use, vegetation, amount of combustible materials present and weather conditions such as wind, low humidity and lack of precipitation are the chief factors for fire season length.

History of Forest Fires/Wildfires in Langlade County:

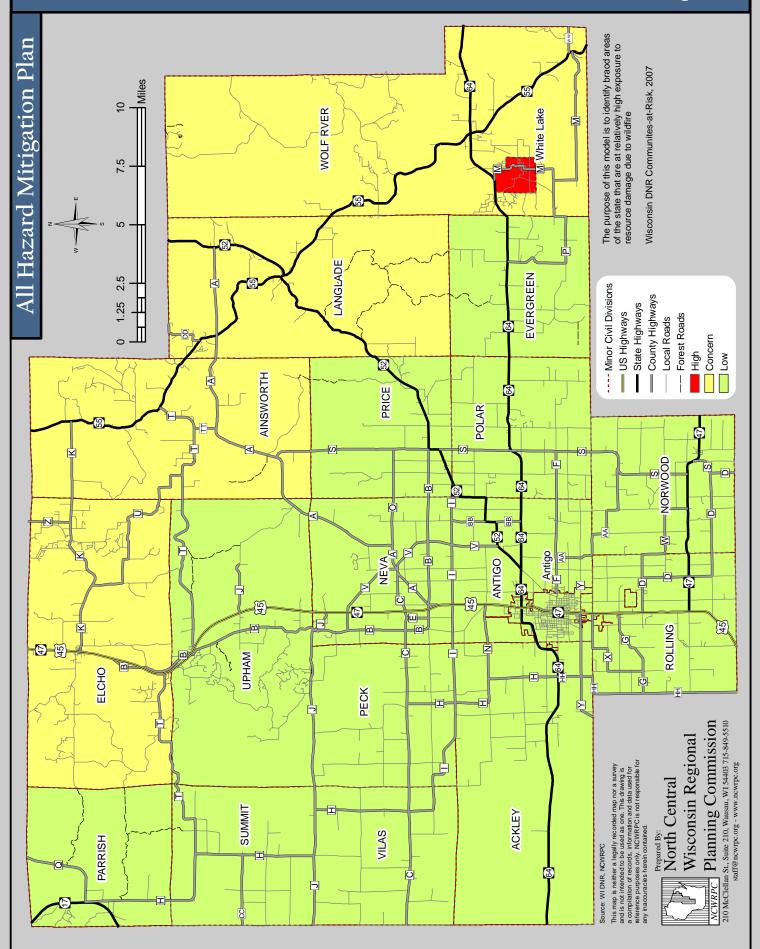
The Wisconsin DNR maintains a database of forest fires for Langlade County. From 2004 to 2014 there have been about 21 fires annually. However, there is significant annual variability ranging from 1 fire in 2004 to 29 in 2007. The typical fire in Langlade County burns less than one acre. The largest recorded wildfire burned 95 acres in 2007.

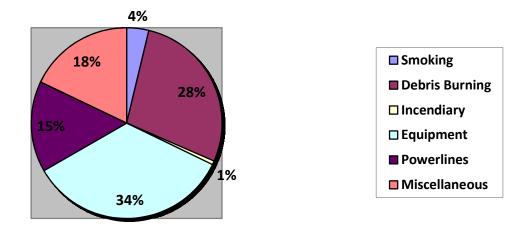
The drought period of 2005-2010 appears to have had an influence on wildfire activity in the County. In 2007 the highest total for acres burned in a year was 111 acres in 29 fires. Overall from 2005-2010 there were 161 fires reported (32 fires per year). From 2011 to 2014 there were 47 fires report (about 12 fires per year).

Langlade County, Wisconsin

Wildfire Risk

Map 10





The chart above breaks down the causes of wildfire within Langlade County as classified by the Wisconsin DNR. The principle cause of wildfire in the County which resulted in 34% of wildfires within the County was caused by equipment which includes vehicle, motor and other machinery related causes except railroad. Debris burning came in second with 28%. Miscellaneous was 18% which includes causes that include fireworks, and improper ash disposal to name a few. Powerlines cause 15% of wildfires.

Forest Fires/Wildfires Vulnerability Assessment:

Langlade County has 439,243 acres of forestland scattered throughout the County, or 77 percent of the land area. The potential for property damage from fire increases each year as more recreational and retirement homes are developed on wooded land.

The trend toward introducing more human development into fire prone areas has brought about the term wildland urban interface or WUI. The WUI identifies areas where structures and human developments meet or intermingle with undeveloped wildlands. It is within these areas where wildfire poses the greatest risk to human lives and property.

Rural buildings may be more vulnerable because of lack of access. Access to buildings off main roads is often via long and narrow driveways with minimal vertical clearance and no turn around areas large enough for emergency vehicles making it difficult to combat fires. These buildings also may not have much of a defensible space because of little area between the structures themselves and highly flammable vegetation. Campgrounds are also a concern because campfires cause 7 percent of fires. Langlade County has 4 public (plus Camp Susan) and 13 private campgrounds with a total of more than 550 campsites (see Map 8).

Some towns may be identified as more vulnerable than others based on the DNR data. Eight of the 19 total municipalities in the County had 50 or more wildfires between 1982 and 2009: Ainsworth (60), Antigo (58), Elcho (99), Langlade (58), Norwood (60), Polar (70, including 12 on August 20, 2008), Rolling (75), and Wolf River (90). Elcho and Wolf River standout with 99 and 90, respectively.

Future Probability and Potential Dollar Losses – Forest Fires/Wildfires:

Forest and wild fires are relatively common occurrences in Langlade County. Over the period analyzed here, there has been an average of 30 fires per year in the County. In other words, the probability is 1.0 or 100% chance of wildfire each year.

Because of the relatively small impact of typical individual fires in the County, loss data is not tracked. This makes it difficult to develop an estimate of potential future dollar losses. However, with 30 fires per year, the County should expect some fires to "get out of hand" with the potential to exceed the \$1.4 million in damages of the Cottonville Fire that occurred in Southern Wisconsin



Cottonville Fire, 2005

INTRODUCTION

Hazard mitigation is any action taken to reduce or eliminate the long-term risk to human life and property damage from natural hazards. This chapter describes the mitigation goals and actions to be taken by Langlade County and its local units of government for each of the hazards identified in Part III – Risk Assessment. The intention is to reduce or avoid long-term vulnerability to the identified hazards.

Part IV of the Langlade County All Hazards Mitigation Plan will discuss the following factors in establishing the multi-jurisdictional mitigation strategies:

- Benchmark Progress of Previous Plan 2013-2017
- Review of Mitigation Goals
- Prioritize Identified Mitigation Strategies
- Establish Mitigation Action Plans

PROGRESS REPORT 2013 - 2017

Table 13 identifies the completed, deleted or deferred mitigation actions from the original 2013 Plan. For each action recommendation, a brief status report is provided, which describes the progress made on that measure. If an item remains unchanged, a description is provided as to why no action has been taken and whether that item is deferred to the new plan.

The table also provides the new status of each recommendation with regard to the updated plan alongside the original timeframe target for comparison. Many of the recommendations are on-going efforts and are carried over as such in the updated action plan. Some have had significant progress or have been deferred, but are recommended for further action with new target date or on-going status. If the recommendation has been completed with no further specific action anticipated within the next five year planning period, it is shown as "Removed from list" and will not appear in the updated action plan. In some cases, an incomplete action is not selected for various reasons (noted) and is also shown as "Removed from list."

This progress report serves as a benchmark for progress in achieving the multijurisdictional mitigation goals of Langlade County and the local jurisdictions that participated in the Plan.

Table 13 Benchmark F	or Progress 2013 - 2017 Plan		
2013-2017 Plan Measure	Progress Report	Original Status	New Status
Continue to promote the increased use of National Oceanic and Atmospheric Administration (NOAA) weather radios.	Working on grants to purchase radios to be distributed, primarily to the disabled, elderly, high risk areas and as replacements at critical facilities	On-going (1)	On-going (1)
Continue to add/update Emergency Management Department link off existing County website.	The Emergency Management site is continually updated with relevant information.	On-going (2)	On-going (2)
Develop emergency response zone atlas.	Atlas last updated in 2012; Change recommendation to maintain updates on 5-yr cycle. With staffing changes this item was delayed. Will work on updating the atlas or possible digital option to reduce print costs	2009 (3)	2021 (3)
Work toward development of county-wide early warning systems possibly including all telephone message cast & cable TV broadcast, among others.	The County has promoted the Everbridge system, a subscriber based notification system. This is used to promote local events to encourage subscribers.	On-going (4)	On-going (4)
Update county-wide disaster shelter plan including available shelters, trailer park shelter needs, notification procedures, etc.	County continues working with other agencies on shelter issue. No new shelters have been added. Listing of existing shelters is being formalized.	On-going (5)	On-going (5)
Develop local emergency operation plans.	The County has developed a template for local plans and is working to assist the Towns.	2010 (7)	2021 (6)
Acquire digital aerial photos with appropriate contour levels (2 ft) to facilitate update and modernization of FEMA Flood Insurance Maps.	Aerial photography was obtained in 2015, LiDAR was acquired in 2017. Extend recommendation tor contour data to modernize FIRMs. Recommend to update aerial photography every 5 years	2010 (8)	2024-25 (7)
The Town of Upham should install emergency backup generator at Town Hall / Garage	Completed	2014 (8)	Removed from list (-)
Establish emergency "tornado" shelters in the Towns of Langlade, Norwood, Polar, Upham and Parrish.	Updated to include all towns. Will continue to work with towns to look at options for emergency shelters.	2017 (9)	2023(8)

Table 13 Continued			
2013-2017 Plan Measure	Progress Report	Original Status	New Status
Trim trees near power lines that risk electrical service within the Town of Langlade.	Completed	2014 (10) (9)	Removed from list (-) (14)
The Town of Upham should install emergency backup generator at Town Hall / Garage	Completed	2014 (8)	Removed from list (-)
Promote winter hazards awareness including home and travel safety measures.	County continues to use social media and local outreach to promote awareness.	On-going (11)	On-going (9)
Develop countywide drought mitigation plans.	Work with Co. Land and Water Conservation Dept. and UW Extension to create plans.	As needed (12)	As Needed (10)
Assist population with reducing heat disorders through awareness program as needed.	County continues to use social media and local outreach to promote awareness.	As needed (13)	On-going (11)
Require stormwater management plans for new development on the urban fringe.	City requires stormwater management plans prior to construction, particularly for large industry and retail projects.	2016 (14)	On-going (12)
Continue to work with dam owners to review Emergency Action Plan (EAP) for each significant and high hazard dam.	County continues to work with each dam owner to review EAP.	On-going (15)	On-going (13)
County / City continued compliance in the National Flood Insurance Program (NFIP) Village of White Lake NFIP compliance *	No progress to date County continues to work on FEMA to update DFRIMs. LiDAR has been acquired can be used to assisted with new maps.	On-going (16)	On-going (14)
If evidence of recurring flooding is an issue with specific properties after a significant flood event, investigate, as a possible solution, the voluntary acquisition / removal of buildings in a floodplain with flood damage.* (FEMA NFIP requirement)	Continue to work with local municipalities to remove buildings within the floodplain.	As needed (17)	As needed (15)
Complete remaining relocations from Spring Brook flooding area	Most buildings have been removed. As remaining structures reach end of life they will be razed and no new buildings in the floodplain are allowed.	2017 (18)	Removed from list (-)

Table 13 Continued			
2013-2017 Plan Measure	2013-2017 Plan Measure	2013-2017 Plan Measure	New Status
Town Road Improvements / Flood Proofing.	Added all towns. Continue to work with towns to identify areas to improve	2015 (19)	As needed (16)
Town of Parrish / STH 17 Culvert. Lift station flood proofing and back-up power.	Continue to work with WisDOT to improve this area of STH 17 Project completed. Generator installed. Flood proofing occurs prior to flooding.	2016 (20) 2016 (21)	2022 (17) Removed from list (-)
Determine if critical facilities are adequately grounded to eliminate lightning damage	Some of the facilities have had grounding updated. Continue to work on as budgets allow.	2017 (22)	2022 (18)
Promote Firewise program and related educational material to increase community awareness of wildfire risk within the County.	County continues to use social media and local outreach to promote awareness.	On-going (23)	On-going (19)
Promote Firewise program and related educational material to increase community awareness of wildfire risk within the County.	Continue to work with WisDNR and North Central WI Regional Planning Commission to develop CWPP for higher risk towns.	On-going (24)	On-going (20)
Develop driveway ordinances and private road standards to ensure emergency vehicle access.	Continue to work with Land Conservation and Zoning to encourage towns to devlop ordinances for driveways and private roads.	On-going (25)	On-going (21)

LOCAL HAZARD MITIGATION GOALS

The mitigation strategy is based on a set of goals to reduce or avoid long-term vulnerabilities to the hazards identified in the Risk Assessment. The goals were established by the previous Planning Taskforce during the development of the last update. The Plan Update Taskforce reviewed the goals and concurred that these goals continue to represent the desired conditions to strive for through the mitigation efforts of the County and municipalities with the addition a new goal specifically addressing high hazard potential dams.

The mitigation goals for reducing or avoiding the long-term vulnerability of Langlade County are as follows:

- Prepare residents and visitors of Langlade County for natural hazard events and protect from the effects of such events to the extent possible.
- Protect health, safety, and welfare of county residents and visitors, along with mitigating future loss of property from tornados and high wind events.
- Create safety awareness in citizens and travelers of Langlade County to protect them during and after winter storm events.
- Improve County preparedness for dealing with extended drought.
- Create safety awareness in citizens of Langlade County to help protect themselves during extreme heat events.
- Lessen the impact floods have on people, property and the environment.
- Prevent the loss of life and reduce the risk of property damage in downstream areas that result from a dam failure.
- Reduce long-term vulnerabilities from high hazard dams that pose a significant risk to the public.
- Minimize the threat to human life and property damages caused by severe storms and associated hail and lightning.
- Protect the safety and property of residents and visitors from forest and wildfires.

PRIORITIZATION OF STRATEGIES

The Plan Update Taskforce considered a number of factors in identifying and ranking proposed mitigation strategies. The matrix, below, describes the factors incorporated into the prioritization process. The resulting priority of each strategy is shown in the strategy Table 14.

Strategy Prioritization Factor	Description of Factor Considerations
Priority of Hazard Type	The ranking of hazard types, tornado, flooding, etc., accounts for threat to human safety and possible property damage and was carried over to groups of strategies by hazard type. Strategies believed to benefit multiple hazards (listed under "All Hazards") were valued higher.
Ease of Implementation	Strategies where existing staff and resources are adequate were valued higher than those where additional resources are necessary. Consideration was also given to strategies that meet other countywide goals or were incorporated as part of another County project. Project timing was also a consideration as to when funding such as grant applications might be available and when various activities could be scheduled.
Perceived Cost versus Potential Benefit	Although a detailed cost-benefit analysis was deemed beyond the scope of this study, the Task Force weighed the perceived costs of each strategy against the potential benefit anticipated. Proposals that seemed economically unfeasible were rejected.
Multi-jurisdictional Application	Strategies benefiting multiple jurisdictions were valued more than those pertaining to fewer jurisdictions.

Prioritization Factors for Langlade County Mitigation Strategies

For the previous Plan, each strategy was scored by the Taskforce based on these prioritization factors and assigned a high, medium or low rating to reflect their relative level of priority for that strategy. A 3-point weighted scale was used to average the scores into the overall high, medium or low priority for the County or local units as shown in Table 14.

Using the prioritization factors as a guide, the Plan Update Taskforce took the original ranking, making minor adjustments to reflect current conditions.

MITIGATION ACTION PLAN

The recommended mitigation strategies are organized by hazard beginning with some overall strategies that apply to a number of different hazards and are listed under the category, "all hazards". Each strategy is intended to help achieve one or more of the Local Hazard Mitigation Goals outlined earlier in this chapter.

The mitigation strategies are outlined in Table 14, below. Each strategy is broken down as follows:

Mitigation Measure:

Describes the proposed mitigation strategy to be implemented.

Responsible Units:

The proposed lead agencies or jurisdictions are identified along with other agencies or jurisdictions that the recommended action applies to. This does not preclude other agencies or jurisdictions from participating in the action.

Cost Estimate:

Cost estimates included where known. Other strategies are implemented primarily through day-to-day staff efforts under their departmental budgets.

Existing and Potential Resources to Implement:

Identifies resources currently in use or that may be leveraged to complete projects either through the budgeting process or submission of grant applications to relevant funding programs.

Project Timeframe:

Recommended or anticipated completion target for the strategy. Some projects are on-going due to their inherent nature, such as the need to continually inform or educate the public on a recurring hazard issue or to keep a program going such as technology based early warning systems. Actual project implementation may depend on availability of adequate funding and/or staff time to carry out actions to implement.

Priority Level:

The relative priority level of the recommended strategies in relationship to oneanother, see previous section on Prioritization of Strategies for details on the ranking criterion and process. Useful in decision making on the allocation of limited financial and human resources.

TAB	TABLE 14 MITIGATION ACTION PLAN LANGLADE COUNTY ALL HAZARDS MITIGATION PLAN	N ACTION PL/ RDS MITIGAT	an Ton Plan		
MITIGATION MEASURES	RESPONSIBLE UNITS	COST ESTIMATE	EXISTING AND POTENTIAL RESOURCES TO IMPLEMENT	PROJECT ** TIMEFRAME	PRIORITY LEVEL
	ALL HAZARDS	SQ			
1. Promote the increased use of National Oceanic and Atmospheric Administration (NOAA) weather radios.	County EM Dept.	Staff Time	Radio sales cover cost of radios. Grant to cover costs	On-going	MEDIUM
 Continue to add/update Emergency Management Department link off existing County website. 	County EM Dept.	Staff Time	Dept. Budget	On-going	MEDIUM
 Maintain County Emergency Response Zone Atlas on a five-year update cycle. 	County EM Dept.	\$20,000	Wisconsin DNR tech. assist. and funding / WEM funding	2021	MEDIUM
 Continued development of county-wide early warning systems including expanded use of current and emergency technologies such as EAS and IPAWS. Evaluate utilization of the Everbridge System. 	County EM Dept. / City of Antigo / Village of White Lake / All Towns	Costs to be determined	Dept. Budgets	On-going	НОН
 Update county-wide shelter plans including i.d. available shelter options, procedures for activation & use, trailer park sheltering, event sheltering, power, heating/cooling & transportation needs and maintenance. 	County EM Dept. / Co. Health Dept. / Red Cross / City / Village / All Towns	Costs to be determined	Dept. Budgets	On-going	MEDIUM
 Each Town should develop an EOP to help prepare for disasters; including developing a system for welfare checks as well as addressing debris management. 	All Towns	Staff Time	Dept. Budgets	2021	ндн
7. Update aerial photography every 5 years to be use by Langlade County, City and Village emergency services.	Co. Land Records Dept. / City of Antigo / Village	\$70,000	Dept. Budget / Local Match Funds / WI Land Information Program Retained Fees	2024-25	MEDIUM
	TORNADO / HIGH WINDS	H WINDS			
 8. Establish emergency "tornado" shelters in the Towns of Langlade, Norwood, Polar, Upham and Parrish. 	Towns of Langlade, Norwood, Polar, Upham & Parrish	Costs to be determined	Local Funds / FEMA / Hazard Mitigation Grants / CBDG Program	2017	MEDIUM

MITIGATION MEASURES	RESPONSIBLE UNITS	COST ESTIMATE	EXISTING AND POTENTIAL RESOURCES TO IMPLEMENT	PROJECT ** TIMEFRAME	PRIORITY LEVEL
	WINTER STORMS / EXTREME COLD	TREME COLD			
9. Promote winter hazards awareness including home and travel safety measures.	County EM Dept. / City / Village/ Towns	Staff Time	Dept. Budgets	Annual	MEDIUM
	DROUGHT / EXTREME HEAT	EME HEAT			
10. Develop countywide drought mitigation plans.	County EM Dept. / Co. Land & Water Conservation Dept. / Co. UW Extension	Staff Time	Dept. Budgets	As needed	LOW
11. Assist population with reducing heat disorders through awareness program as needed.	County EM Dept. / County Health Dept. / City / Village / All Towns	Staff Time	Dept. Budgets	As needed	гом
	FLOODING / DAM FAILURE	FAILURE			
12. Require stormwater management plans for new development on the urban fringe.	Co. Land Records & Regulations Dept. / City of Antigo / surrounding Towns	Costs to be determined	Dept. Budgets	On-going	MEDIUM
13. Continue to work with dam owners to review Emergency Action Plan (EAP) for each significant and high hazard dam.	County EM Dept.	Staff Time	Dept. Budget	On-going	MEDIUM
14. County / City continued compliance in the National Flood Insurance Program (NFIP) Village of White Lake NFIP compliance *	Co. Land Records & Regulations Dept. / City of Antigo / Village ofWhite Lake	Staff Time	Dept. Budgets	On-going	MEDIUM
15. If evidence of recurring flooding is an issue with specific properties after a significant flood event, investigate, as a possible solution, the voluntary acquisition / removal of buildings in a floodplain with flood damage.* (FEMA NFIP requirement)	Co. Land Records & Regulations Dept. / City of Antigo / Village of White Lake	Costs to be determined	Mitigation Grants	As needed	MEDIUM
16. Town Road Improvements / Flood Proofing.	Towns of Ainsworth, Antigo & Polar	Costs to be determined	Dept. Budgets / DOT funding program / Mitigation Grants	As needed	MEDIUM

MITIGATION MEASURES	RESPONSIBLE	COST	EXISTING AND POTENTIAL	PROJECT **	PRIORITY
	UNITS	ESTIMATE	RESOURCES TO IMPLEMENT	TIMEFRAME	LEVEL
17. Town of Parrish / STH 17 Culvert.	Town of Parrish	Costs to be determined	WisDOT	2022	MEDIUM
SEVE	SEVERE THUNDERSTORMS / LIGHTNING / HAIL	, LIGHTNING / H	IAIL		
18. Determine if critical facilities are adequately grounded to eliminate lightning damage	County EM Dept. / City / Village/ Towns	Staff Time	Dept. Budget	2022	HIGH
	FOREST / WILDFIRE	DFIRE			
19. Promote Firewise program and related educational material to increase community awareness of wildfire risk within the County.	County EM Dept.	Staff Time	Dept. Budget	On-going	MEDIUM
20. Develop Community Wildfire Protection Plans (CWPP) for high risk towns.	Towns of Anisworth, Elcho, Langlade, Wolf River, and Village of White Lake	\$24,999	WisDNR National Fire Plan Funding	On-going	LOW
21. Develop driveway ordinances and private road standards to ensure emergency vehicle access.	Various Towns	Costs to be determined	Dept. Budgets	On-going	MEDIUM
* Denotes actions related to compliance with NFIP. **Actual project implementation dependent on funding and staff availability.	d staff availability.				

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INTRODUCTION

Part V of the Langlade County All Hazards Mitigation Plan Update describes the Update adoption, implementation, and evaluation & maintenance processes.

PLAN UPDATE ADOPTION

The adoption of the Langlade County All Hazards Mitigation Plan Update lends itself to serve as a guiding document for all local government officials. It also certifies to program and grant administrators from the FEMA and WEM that the plan's recommendations have been properly considered and approved by the governing authority and the jurisdiction's citizens. Finally, it helps to ensure the continuity of mitigation programs and policies over time because elected officials, staff, and other community decision-makers can refer to the official document when making decisions about the community's future.

Before adoption of the Plan Update by the incorporated areas, the Update must be sent to the state and federal level to verify that all DMA2K requirements are met. Once a draft of the updated Plan has been completed, it is submitted to the State Hazard Mitigation Officer (SHMO) at the state level at WEM. Previous drafts of the Update have already been reviewed prior to this submittal. The SHMO will determine if the updated Plan meets DMA2K and/or other state program requirements. Upon approval of the draft by WEM, the SHMO is responsible for showing the Update to the FEMA Region V Office for review.

Prior to final approval by WEM and FEMA, the Plan Update must be formally adopted by Langlade County and its incorporated areas by resolution. Incorporated communities that do not adopt the Update cannot apply for mitigation grant funds unless they opt to prepare, adopt, and submit their own plan. Adoption of the Plan Update gives the jurisdiction a legal basis to enact ordinances, policies, or programs to reduce hazard losses and to implement other mitigation actions.

All general purpose units of government (i.e. cities, villages, towns) within Langlade County were offered one or more avenues to participate in the development of this Plan Update. Adoption of the Plan by a local unit of government certifies their participation. The Langlade County Board has adopted this Update. Resolutions of adoption are contained in APPENDIX B.

PLAN UPDATE IMPLEMENTATION

Administrative Responsibilities

Once the Plan Update has been approved, stakeholders must be informed. The County Emergency Management Director will distribute notice of availability to stakeholders. The County will also make the Plan Update available to the public by linking the report on their web site.

Along with monitoring the progress of the action projects, the County Emergency Management Director and Public Safety Committee should also work to secure funding to implement the Plan Update. State and federal agencies, nonprofit organizations, and foundations continually make grants available. Emergency Management should research these grant opportunities to determine eligibility for the County and its local units of government.

When implementing this Plan Update, the County Public Safety Committee and staff team should consider innovative ways to involve active participation from nonprofit organizations, businesses, and citizens to implement the Plan Update. The relationship between these groups will result in greater exposure of the Plan Update and provide greater probability of implementation of the action projects listed.

The role of department administrators, elected officials, and local administrators are to ensure that adopted actions from Part IV are considered in their budgets. It is understood that projects may not be carried out as they are scheduled in Part IV due to budget constraints. However, since many of these action projects are considered an investment in safeguarding the publics' health, safety, and property, they should be carefully considered as a priority.

Promote Success Of Identified Projects

Upon implementing a project covered by this Plan Update, it is important to promote the accomplishment to the stakeholders and to the communities. This will help inform people that the Plan Update is being implemented and is effective.

Community Disaster Resilience

There has been a growing movement in emergency management planning circles toward a "new" buzz word: resilience. There is a wide range of definitions for community resilience and what it entails, but in 2012 the National Academy of Sciences looked at the major federal agencies and independent organizations with work efforts related to resilience and determined that "resilience is the ability to prepare and plan for, absorb, recover from, and more successfully adapt to adverse events. Enhanced resilience allows better anticipation of disasters and better planning to reduce disaster losses—rather than waiting for an event to occur and paying for it afterward."

Many weather experts now expect severe weather events to become increasingly more frequent and intense. Recent events seem to corroborate this condition with multiple "short duration - high volume" rainfalls causing devastating flooding around the state in 2015, 2016, 2017 and 2018. Some of Langlade County's northern Wisconsin neighbors to the west, including Ashland and Bayfield counties have experienced significant flooding in each of the past three years.

It is recommended that the County acknowledge these changing conditions and begin working toward an approach to incorporating a community resilience component into its planning and operations. County could coordinate with the City of Antigo and its other local units of government on resiliency efforts.

Incorporation Into Other Local Planning Mechanisms

FEMA requires a process by which the mitigation plan is incorporated into other planning mechanisms where appropriate. When undergoing any planning process, County departments, local units of government and/or any professional staff assisting them, typically review and incorporate any related pre-existing plans as a matter of course. However, to help ensure this outcome, Langlade County has established a two-part process to incorporate the updated All Hazards Mitigation Plan into other County and local planning efforts as follows:

- Notification of County Departments and Local Units of Government

 Upon adoption of the All Hazards Mitigation Plan Update, the County EM Director will distribute a letter that explains how the Plan Update applies to other planning efforts they might undertake and how to obtain copies of the updated Mitigation Plan.
- Promotion by EM Director The EM Director will promote incorporation of the updated All Hazards Mitigation Plan as is made aware of or becomes a participant in any new planning process.

A number of upcoming planning efforts have been identified for incorporation of the updated All Hazards Mitigation Plan. Upcoming planning efforts at the County or local levels include: updates to local unit Comprehensive Plans. Currently, the County's All Hazard Mitigation Plan is already incorporated into another planning process, the Langlade County Comprehensive Plan, as follows.

Langlade County Comprehensive Plan

The following concepts were considered when developing the Langlade County Comprehensive Plan, based on the nine elements of the Wisconsin comprehensive planning law:

- Issues and Opportunities Element a summary of major hazards local government is vulnerable to, and what is proposed to done to mitigate future losses from the hazards.
- Housing Element an inventory of the properties that are in the floodplain boundaries, the location of mobile homes, recommendation on building codes, shelter opportunities, and a survey of homeowners that may be interested in a voluntary buyout and relocation program.
- Utilities and Community Facilities Element identify critical facilities such as shelter, schools, medical, water infrastructure, etc. and make recommendations on how to mitigate specific risks factors
- Transportation Element identify any transportation routes or facilities that are more at risk during flooding, winter storms, or hazardous material spills.
- Agricultural, Natural Resources, and Cultural Resources Element identify the floodplains and agricultural areas that area at risk to hazardous events. Incorporate recommendations on how to mitigate future losses to agricultural areas.
- Economic Development Element describe the impact past hazards have had on County and municipal business.
- Intergovernmental Cooperation Element identify intergovernmental police, fire, and rescue service sharing agreements that are in effect, or which may merit further investigation, consider cost-sharing and resource pooling on government services and facilities.
- Land Use Element describe how flooding have impacted land uses and what is being done to mitigate negative land use impacts from flooding; map and identify hazard areas such as floodplains, hazardous materials areas, and soils with limitations.
- Implementation Element have action plans from this Plan implemented into comprehensive plans.

PLAN UPDATE EVALUATION AND MAINTENANCE

Planning is an ongoing process. Because of this, this document should grow and adapt in order to keep pace with growth and change of the County and its local jurisdictions. DMA2K requires that local plans be evaluated and updated at least every five years to remain eligible for assistance.

The updated Plan will be reviewed and evaluated on an annual basis. Within this period, the County Emergency Management Director will evaluate incoming information against the contents of the Plan Update as needed to prepare for revisions. It is recommended that the County Public Safety Committee discuss evaluation and revisions to the Plan one year from its adoption and annually thereafter as it fits the Committee's scheduling. The Emergency Management Director is encouraged to consult/coordinate with the NCWRPC at the time of revision.

County Public Safety Committee meetings are always open to the public, and the public can bring questions or comments regarding this Plan Update to any regular meeting. The final plan document will be available on the Internet until the next draft update is posted for review. The public can continue to submit questions or comments at any time via an email link.

The Plan Update must also be evaluated and revised following disaster events to determine if the recommended actions are appropriate given the impact of the event. The risk assessment (Part III) should also be reviewed to see if any changes are necessary based on the pattern of disaster damages.

Full updates are required every five years. As a result, every fifth year, the annual review will be expanded to an overall plan update to meet FEMA requirements. All stakeholders and the public will again be involved in the update. The County will conduct a survey and open comment meeting. This also provides an opportunity to inform on the progress of any projects.

The County Public Safety Committee and County Board must approve all changes and updates to the Plan.

Appendix A – Meeting Notices

800 CLERMONT STREET ANTIGO, WI 54409-1948 WWW.CO.LANGLADE.WI.US



TELEPHONE: (715)627-6200 FAX: (715)627-6303

AGENDA

Public Safety Committee: Date: Tuesday, May 7, 2019 9:00 AM Time: Location: County Board Room, Basement of Safety Building, 840 Clermont Street, Antigo, WI 54409 The Committee may discuss and take action on any of the agenda items listed below: 1. Call the meeting to order at 9:00 AM 2. Conduct Roll Call 3. Recite the Pledge of Allegiance 4. Approve or amend the Public Safety minutes of the April 2, 2019 Public Safety Meeting 5. Public comment on agenda items, and consideration of requests for items to be added to future meeting agendas 6. District Attorney's Report 7. Discuss and take possible action regarding purchasing office furniture in advance of County Prosecutor start date 8. Coroner's Report 9. Child Support Report 10. Discuss with possible action approval of second financial/program assistant child support position 11. Emergency Management Report 12. North Central WI Regional Planning Commission (NCWRPC) updating Hazard Mitigation Plans, with Darryl Landeau 13. Car Report 14. Sheriff/Jail Office/Nurse Report 15. Discuss with possible action replacement of the Moducom Equipment in the Dispatch Center 16. Review Capital Improvement Program (CIP) Request from Sheriff Office 17. Superion (RMS) Project Update 18. At approximately 9:30 a.m., consider moving into closed session pursuant to §19.85(1)(c) and (e), Wis. Stats., considering employment, promotion, compensation or performance evaluation data of any public employee over which the governmental body has jurisdiction or exercises responsibility and to conduct public business whenever competitive or bargaining reasons require a closed session, to bargain Law Enforcement Association. 19. At approximately 9:45 a.m., return to open session with possible action taken on any matters discussed in closed session. 20. Review Monthly Departmental Budgets presented to the Committee 21. Set date of next meeting 22. Adjourn meeting Approved on April 30, 2019 Arlene Bonacci **Chairman Public Safety Committee** If there is a quorum of any other governmental body present at the meeting, the existence of the quorum shall not constitute a meeting as no action of such body is contemplated. Please note that, upon reasonable notice, efforts will be made to accommodate the needs of disabled individuals through appropriate aids and services. For additional information or to request this service, contact Judy Nagel, County Clerk, 800 Clermont Street, Antigo, Wisconsin 54409. Telephone 715-627-6200. Additional items may be discussed with no action taken during the meeting for the purpose of preparing future meeting agendas. Don Bergbower **Robin Stowe** CC: **Committee Members** Mark Westen John Schunke Larry Shadick Becky McPhail Antigo Daily Journal **Results Broadcasting** Elizabeth Constable Ron Barger Chief Roller

800 CLERMONT STREET ANTIGO, WI 54409-1948 WWW.CO.LANGLADE.WI.US



TELEPHONE: (715)627-6200 FAX: (715)627-6303

MEETING MINUTES

Committee:	Public Safety
Date:	Tuesday, May 7, 2019
Time:	9:00 AM
Location:	County Board Room, Basement of Safety Building, 840 Clermont St., Antigo, WI 54409

The following discussion was held by the Committee at the meeting detailed above:

- 1. Meeting called to order at 9:00 AM by Chairman Bonacci
- 2. The Committee recited the Pledge of Allegiance.
- 3. Roll call was conducted.

	Public Safety Commit	itee
Name	Role	Status
Arlene Bonacci	Chair	Present
Richard Schuh	Member	Present
Ben Pierce	Member	Present
Gloria Oberneder	Member	Present
Douglas Nonnenmacher	Member	Present
	Non- Committee Members	s Present
Name		Interest
Reinhardt Balcerzak	Supervisor	
Mark Westen	Sheriff	
John Schunke	Chief Deputy	
Dan Bauknecht	Lieutenant	
Don Bergbower	Jail Administrator	
Larry Shadick	Coroner	
Jim Balzer	EM Director	
Becky McPhail	Child Support Director	
Elizabeth Gebert	District Attorney	
Tina Ver Hagen	Human Resources	
Andy Faust	NCWRPC	
Judy Nagel	County Clerk/Recording Secret	tary

- 4. Approve or amend the Public Safety minutes of April 2, 2019 Public Safety Meeting: Motion by Oberneder, second by Nonnenmacher to approve the Public Safety Minutes of April 2, 2019. All ayes, motion carried.
- 5. Public comment on agenda items, and consideration of requests for items to be added to future meeting agendas: County Prosecutor start date, regarding annual funding
- 6. District Attorney's Report: District Attorney Gebert addressed the Committee. Gebert announced that the County Prosecutor will be starting May 31, 2019. Gebert described the transition of cases moving

Meeting Minutes (Continued)

forward with the County Prosecutor. Motion by Schuh, second by Pierce to accept the District Attorney's report. All ayes, motion carried.

- 7. Discuss and take possible action regarding purchasing office furniture in advance of County Prosecutor start date: Gebert requests office furniture for the County Prosecutor, with funding coming from the County Prosecutor wage account. Gebert is requesting to transfer \$2624 from the wage account to the District Attorney Office equipment account under \$5000. Motion by Pierce, second by Oberneder to transfer \$2624 from the District Attorney County Prosecutor Wage Account to the District Attorney Office Equipment Account under \$5000 for the purchasing of office furniture. All ayes, motion carried.
- 8. Coroner's Report: Coroner Larry Shadick distributed and discussed the Coroner's report with the Committee, with the Coroner discussing the high number of cremations. Motion by Nonnenmacher, second by Schuh to accept the April Coroner's report. All ayes, motion carried. Report on file in the County Clerk's Office.
- 9. Child Support Report: Child Support Specialist Becky McPhail presented and reviewed the April Child Support Report with the Committee. McPhail requested the Committee read the Wisconsin Counties Association magazine, May 2019 issue, regarding the changes in the Child Support Community, still enforcement agency, but also job service related. Motion by Pierce, second by Oberneder to accept the Child Support report. All ayes, motion carried. Report on file in the County Clerk's Office.
- 10. Discuss with possible action approval of second financial/program assistant Child Support position: McPail is requesting the approval of a second financial/program assistant in the Child Support Office, creating a promotion from within, as crossing training will occur with the two financial/program assistants. Costs for the position discussed and waiting until the six month probationary period expires for the current secretary. Motion by Schuh, second by Pierce to approve the second financial/program assistant in the Child Support Office. All ayes, motion carried.
- 11. Emergency Management Report: Emergency Management Director Balzer presented and reviewed the April Report. Balzer discussed the Aspirus shooter exercise that occurred last week. Balzer thanked Sergeant Eldridge for assisting in the exercise. Motion by Oberneder, second by Schuh to accept the Emergency Management Report for April. All ayes, motion carried. Report is on file in the County Clerk's Office.
- 12. North Central WI Regional Planning Commission (NCWRPC) updating Hazard Mitigation Plans, with Darryl Landeau: Andy Faust, for Darryl Landeau, NCWRPC, explained the Hazard Mitigation Plans, a federal requirement, last updated in 2013. NCWRPC will coordinate the update to the plan, involving stakeholders and report back to the Public Safety Committee. Faust presented a survey identifying hazards within the county, to be completed by the Committee members and returned to Balzer. Information only.
- **13. Car Report:** Sheriff Westen presented the Car Report. Discussion held. Motion by Schuh, second by Pierce, to accept the Car Report. All ayes, motion carried. Report on file in the County Clerk's Office.
- 14. Sheriff/Jail Office/Nurse Report: Jail Administrator Bergbower distributed a copy of the Sheriff/Jail Office/Nurse Report to the Committee. Bergbower noted that the inmate population is down, the Marathon County Inmate population is also down. Discussion held. Sheriff Westen publically thanked Don Bergbower for being the contact person with the implementation of the RMS system, which is up and running.

Meeting Minutes (Continued)

Sheriff Westen reviewed projects and possible changes for the Sheriff's Office: replacement of the Moducom Equipment, working on an RFP with Marathon County, reviewing the compatibility of the radio system and the phone system with a replacement Moducom system. Second item of discussion was the Courthouse Security, taking into consideration a point of entrance, requesting two additional staff to man the security scanner that would be moved to the point of entrance. Discussion held. Nonnenmacher refers Courthouse Security to the Executive Committee for further action. The third item of discussion from Sheriff Westen was a request for an additional administrative assistant position, needed for backup and cross training. Motion by Pierce, second by Oberneder to accept the Sheriff/Jail Office/Nurse Report. All aye, motion carried. Report on file in the County Clerk's Office.

- **15.** Discuss with possible action replacement of the Moducom Equipment in the Dispatch Center: Information only. This will be an ongoing agenda item.
- **16. Review Capital Improvement Program (CIP) Request from Sheriff Office:** Sheriff Westen reviewed the 2020 CIP requests with the Committee. Westen is requesting an increase for squad replacement; continuation of upgrading the mobile radios; replacement of Moducom software. The ranking sheet was distributed to the Committee. Motion by Pierce, second by Schuh to forward the Sheriff's Office ranked 2020 CIP requests to the Finance Committee. All ayes, motion carried.
- 17. Superion (RMS) Project Update: RMS is live. Information only. On-going agenda item.
- 18. At approximately 9:30 a.m., consider moving into closed session pursuant to §19.85(1)(c) and (e), Wis. Stats., considering employment, promotion, compensation or performance evaluation data of any public employee over which the governmental body has jurisdiction or exercises responsibility and to conduct public business whenever competitive or bargaining reasons require a closed session, to bargain Law Enforcement Association. Personnel Committee has already acted on this.
- **19.** At approximately 9:45 a.m., return to open session with possible action taken on any matters discussed in closed session. The Committee remained in open session.
- **20. Review Monthly Departmental Budgets presented to the Committee:** Budgets were distributed and reviewed by the Committee. Information only.
- **21. Set date of next meeting**: Discussion as to changing the meeting start time in the summer months. The next meeting will be June 4, 2019 at 2:30 p.m., County Board Room. Chief Deputy John Schunke was invited to the meeting at this time. Chairman Bonacci thanked Schunke for his years of service to Law Enforcement and to Langlade County. Schunke thanked the Committee and Sheriff Westen for 29 part-time and full-time law enforcement years.
- **22.** Adjourn the meeting: Motion by Pierce, second by Oberneder to adjourn the meeting at 10:55 A.M. All ayes, motion carried.

Respectfully submitted by: Judy Nagel, Recording Secretary

VILLAGE OF WHITE LAKE Regular Monthly Meeting 6:00pm Tuesday, July 9, 2019 Community Center; 615 School St.

Agenda

Call to order Pledge of Allegiance Posting of Meetings Approve Agenda Approve prior month minutes Approve bills/financials Public Comments Old Business

- MSA Contracts
- Resolution 05-2019 Transfer Change Route of CTH M

New Business

- Discussion on County-wide Hazard Mitigation Plan Update
- Discussion of ATV route on a portion of CTH M
- CDBG Housing RLF Program transfer to DEHCR

Old Business Trustee Reports Clerk's Report Public Works Report Adjourn

Carol Blawat Clerk/Treasurer

> Notice Posted 07/05/2019 WL Market, Public Bulletin Board, CC Bulletin Board, & Village Website Published 07/06/19; Antigo Daily Journal

****** Discussion with possible board action on any items listed on agenda ******

Langlade County All Hazards Mitigation Plan Update Village of White Lake Planning Meeting SIGN-IN

July 9, 2019 - 6:00 PM

	Name	Representing?	Email (Optional)
1	Patricia Listle	Village Board	plistle Qaranite wave
2	Christopher Datman Tom Edelman	Village Board Village Board Village Board	plistle Q granite wave christopher. Datman @gmail.com
3	Tom Edelman	VillAge Boand	Tom CEDELMAN MESTS. Com.
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CITY OF ANTIGO

PUBLIC WORKS COMMITTEE MEETING

MULTI-PURPOSE ROOM CITY HALL, 700 EDISON STREET

Wednesday, July 24, 2019 5:30 PM

Call to Order

Discussion and Action May Occur on Any of the Following Agenda Items:

- 1. Approval of the Minutes from the June 10, 2019 Meeting
- 2. Langlade County All Hazards Mitigation Plan Update (Requested by Andy Faust, North Central Wisconsin Regional Planning Commission)
- 3. Review of Final Design Plans as Submitted by MSA Professionals for the Saratoga Industrial Park Storm Sewer Expansion Project Located from the Intersection of Bridge/Saratoga Streets to Pierce Avenue
- 4. Consideration of a Professional Services Agreement with MSA for Construction Administration & Inspection for the Storm Sewer Expansion Project through Saratoga Industrial Park

Any Other Matters Authorized by Law to be Considered

Adjournment

Upon reasonable notice, efforts will be made to accommodate disabled individuals through appropriate aids and services. For additional information, contact Jaime Horswill, 700 Edison Street, Antigo, Wisconsin 54409. (715) 623-3633 extension 100. Members of and possibly a quorum of members of other governmental bodies may be in attendance to gather information. Any governmental body other than that specifically referred to above will take no action.

DATE MAILED: July 18,2019

TOM BAUKNECHT

Langlade County All Hazards Mitigation Plan Update City of Antigo Planning Meeting SIGN-IN

July 24, 2019 - 5:30 PM

	Name	Representing?	Email (Optional)
1	MARK DESCIELL	CEMICE ANTEGO	mdesatell cantigo-city org
2	ScottMARTIN	MSA	
3	Rick LeBour	Ward G	
4	Jaime Horswill	City of Antiso	
5	Kink Packand	City of Antisa	
6	Sold Reported	1 Based	
7,	Scott Denrecht	WARD 9	
8	Sandy Fisther	Ward 2	
9	Tom BAUKNECHT	WARDH - ANTOLO	
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840 Clermont Street Antigo, WI 54409 Phone: 715-627-6440 chuettl@co.langlade.wi.us

MEMORANDUM

TO:	Government agencies, County department staff, and other private or non- profit organizations within Langlade County
FROM:	Detective Sergeant Cassandra Doemel, Acting Director \mathcal{CD}
DATE:	July 11, 2019
RE:	Langlade Co. All-Hazards Mitigation Plan Update Interest Group Meeting

Langlade County has received a grant through the Federal Emergency Management Agency (FEMA) to complete an update of its All-Hazards Mitigation Plan to protect the health and safety of residents from the impacts of natural hazards and to minimize and prevent damages caused by these events. The North Central Wisconsin Regional Planning Commission (NCWRPC) is assisting Langlade County with this plan.

As a requirement of the planning process, an opportunity to participate in the process must be provided to local and regional agencies involved in hazard mitigation activities, and agencies that have the authority to regulate development, as well as business, academia and private and non-profit interests. To meet this requirement, an agency and interest group meeting is scheduled for the following date and place:

When:Wednesday, August 7, 2019 at 2:30 p.m.Where:County Boardroom, Langlade County Safety Building, Lower Level
840 Clermont Street, City of Antigo

In addition to meeting FEMA requirements, this meeting will be a way to gather ideas on how to safeguard the residents and visitors of Langlade County and protect property in the event of natural disasters. Since you live and/or do business in or around Langlade County, your input in this process is very valuable.

Please call or email our planner, Andy Faust at the NCWRPC, if you have any questions regarding this meeting. His number is 715-849-5510 ext. 305, and his email is afaust@ncwrpc.org. Or, contact me at 715-627-6440 or chuettl@co.langlade.wi.us.

I highly encourage at least one staff person from your department or agency with responsibilities relating to or potentially impacted by natural hazards / disaster to attend.

Thank you.

Mike Winski, Chief Town of Antigo Fire Dept 720 E 8th Ave Antigo, WI 54409

Gerald Waldvogel Norwood Fire Department N1112 Co. Hwy S Antigo, WI 54409

Neal Wozniak, Chief Rural Fire Control 611 Lincoln Street Antigo, WI 54409

Sheriff Mark Westen Langlade Co. Sheriff's Office 840 Clermont Street Antigo, WI 54409

Ron Barger – Director Langlade County Health Department 1225 Langlade Road Antigo, WI 54409

WPS P.O. Box 8 Antigo, WI 54409

Karalee Brock UW Extension Langlade County 837 Clermont Street Antigo, WI 54409

Erik Rantala, Adminstrator Langlade Co. Forestry 1633 Neva Road Antigo, WI 54409

Duane Haakenson, Director Langlade Land Rec's & Reg's 837 Clermont Street Antigo, WI 54409

Dr Lori Weyers, President Northcentral Tech. College 1000 Campus Dr Wausau, WI 54401 Bob Jensen, Chief Elcho Fire Department W10479 Colleen Lane Elcho, WI 54428

Dave Gregurich, Chief Peck Fire Department N5855 Franc Rd Deerbrook, WI 54424

Dan Nickolai, Chief White Lake Fire Dept N3445 Buettner Rd White Lake, WI 54491

Lynn VerHagen Pickerel EMS 9469 Deer Rd Pearson, WI 54462

Josh Walker, Manager Langlade Co. Airport N3689 Langlade Rd Antigo, WI 54409

George Bornemann City Gas Manager 733 5th Avenue Antigo, WI 54409

Shanna Hackel, Dean NTC Antigo Campus 312 Forest Avenue Antigo, WI 54409

Molly McKay, Land Conservationist Langlade Co. Land Conservation 837 Clermont Street Antigo, WI 54409

Jon Petroskey, Chief City of Antigo Fire Dept. 700 Edison St Antigo WI 54409

Carl Bloechl Elcho EMS N11222 Antigo St Apt # 2 Elcho, WI 54428 Greg Steewit, Chief Langlade Fire Department N7992 Larzeler Ln Lily, WI 54491

Ted Jacobsen, Chief Pickerel Fire Department W6206 Pickerel Lake Rd Pearson, WI 54462

Alex Emerich, Chief Wolf River Fire Department W1974 Buettner Lane White Lake, WI 54491

Brian Braun, Commissioner Langlade Co. Highway Dept. 1521 Arctic Street Antigo, WI 54409

Deb Witman, Emergency Preparedness Coordinator Aspirus Langlade Hospital 112 E. Fifth Avenue Antigo, WI 54409

Sadie Brown WI Dept. Natural Resources 223 East Steinfest Rd Antigo, WI 54409

Gordon Hayes EMS Coordinator W8056 Hwy 64 Antigo, WI 54409

Tracy Chernetski, CPS Supervisor Langlade Co. Social Services 1225 Langlade Road Antigo, WI 54409

Angie Close, Director Langlade County EDC 312 Forrest Avenue Antigo, WI 54409

Eric Roller, Chief City of Antigo Police Dept. 840 Clermont St Antigo, WI 54409 STATE OF WISCONSIN, Langlade County ss.

Langlade County

Hazard Mitigation Plan Public Informational Meeting

Notice is hereby given by the Langlade County Emergency Management Department that there will be a public informational meeting at the Langlade County boardroom, Safety Building, lower level, 840 Clermont Street, in Antigo on Wednesday, August 7th from 5:00 to 6:00 p.m. to discuss the update of the county's All Hazards Mitigation Plan.

The meeting will be an open house format and provide information about the natural hazards that can affect the county and the strategies being developed to mitigate against future loses and reduce public expenditure for response and recovery. Information on the plan can be reviewed on the Web at

http://www.ncwrpc.org/langlade/ahmp.html.

All interested parties are encouraged to attend. Contact Detective Sergeant Cassandra Doernel at 715-627-6640 for more information.

WNAXLP

Fred A. Berner Being duly sworn on his oath, says that he is the foreman of the Berner Bros. Publishing Company, whose principal place of business is at Antigo, Wisconsin, and that as such foreman, he makes this affidavit in its behalf and is authorized so to do:

That the said Company is the publisher and printer of the Antigo Daily Journal, a daily newspaper published and printed, in the City of Antigo, Langlade County, State of Wisconsin, and that the notice of which the annexed is a copy, taken from the paper in which it was published, was published in said newspaper on the following dates:

August 3, 2019

Affiant says that the said daily newspaper has a bona fide circulation to actual subscribers of not less than three hundred copies per day, and has been regularly and continuously published in the said City of Antigo, Langlade County, State of Wisconsin, at least six days in each calendar week, holidays excepted, for at least two years immediately before the date of said notice.

Affiant further says that all facts set forth in this affidavit are true to his personal knowledge.

Subscribed and sworn to before me this

day of.

Notary Public, Langlade County, Wis.

60.20



My commission expires December 26, 2021.

Langlade County All Hazards Mitigation Plan Update

Agency and Interest Group Meeting SIGN-IN

	Name	Department/Organization	Email
1	Tracy Chemetsice	JUDSS	
2	MIKE WINSKI	TOWN of ANTIGOFD	HChernetskip (D. Wrykydr. 1) MMWINE DWAVE. Net
3	Don Wineland	Town of langlade FD	×
4	Lynn Wineland	American Red (Ross	
5	Jordan Schult	Northcentral technical Lake	e SchulteNTC. edu
6	Lari Carriel	NTC	lazers ente. edus
7	Jamie Roth	ICHD	iroth @ co. langlade. Wi US
8	Stephanie threade	LCHAD	sthrede @ co. langlade. Wi. US
9	Duane Haakenson	LRRD LC	dhaakenson@ co. langlade. wi, us
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August 7, 2019 - 2:30 PM

12

800 CLERMONT STREET ANTIGO, WI 54409-1948 WWW.CO.LANGLADE.WI.US



TELEPHONE: (715)627-6200 FAX: (715)627-6303

AGENDA

Committee:Public SafetyDate:Thursday, July 2, 2020Time:5:00 PM

Location: County Board Room, Lower Level of the Safety Building

The Committee may discuss and take action on any of the agenda items listed below:

- 1. Call the meeting to order at 5:00 PM
- 2. Conduct Roll Call
- 3. Recite the Pledge of Allegiance
- 4. Approve or amend the Public Safety minutes of the June 9, 2020 Public Safety Committee Meeting and Public Hearing
- 5. Public comment on agenda items, and consideration of requests for items to be added to future meeting agendas
- 6. District Attorney's Report
- 7. Coroner's Report
- 8. Child Support Report
- 9. Office of Corporation Counsel Report on activities
- 10. NCHC report on activities
- 11. Emergency Management Report
- 12. Discuss All Hazard Mitigation Plan Update, Discuss and Approve RS #29-2020
- 13. Car Report
- 14. Sheriff/Jail Office/Nurse Report
- 15. Discuss purchase of a Skytron UVC Disinfectant Robot
- 16. Update on the replacement of the ModUcom Equipment in the Dispatch Center
- 17. Discuss referral from Executive Committee: Courthouse Security
- 18. Superion (RMS) Project Update
- 19. Review Monthly Departmental Budgets presented to the Committee
- 20. Set date of next meeting

Approved on Thursday, June 25, 2020

Doug Nonnenmacher, Chairman Public Safety Committee

If there is a quorum of any other governmental body present at the meeting, the existence of the quorum shall not constitute a meeting as no action of such body is contemplated.

Please note that, upon reasonable notice, efforts will be made to accommodate the needs of disabled individuals through appropriate aids and services. For additional information or to request this service, contact Judy Nagel, County Clerk, 800 Clermont Street, Antigo, Wisconsin 54409. Telephone 715-627-6200.

Additional items may be discussed with no action taken during the meeting for the purpose of preparing future meeting agendas.

cc: Committ	ee Members I	Mark Westen	Dan Bauknecht	Don Bergbower	Robin Stowe
Larry Sha Elizabeth		,	Antigo Daily Journal Chief Roller	Results Broadcasting	Dennis Clark

800 CLERMONT STREET ANTIGO, WI 54409-1948 WWW.CO.LANGLADE.WI.US



TELEPHONE: (715)627-6200 FAX: (715)627-6303

MEETING MINUTES

Committee:	Public Safety
Date:	Thursday, July 2, 2020
Time:	5:00 PM
Location:	County Board Room, Lower Level of the Safety Building

The following discussion was held by the Committee at the meeting detailed above:

- 1. Meeting called to order at 5:00 PM by Chairman Nonnenmacher
- 2. The Committee recited the Pledge of Allegiance.
- **3. Roll call was conducted.** All present. Chairman Nonnenmacher requests all in attendance silence cell phones and properly use the microphones.

	Public Safety Commit	itee	
Name	Role	Status	
Doug Nonnenmacher	Chair	Present	
Arlene Bonacci	Member	Present	
Reinhardt Balcerzak	Member	Present	
Dave Krochalk	Member	Present	
Robert Curran	Member	Present	
A CONTRACTOR OF A CONTRACTOR	Non- Committee Members	s Present	
Name	Interest		
Mark Westen	Westen Sheriff		
Robin Stowe	Corporation Counsel		
Ron Barger	Health and Social Services Director		
Andy Faust (by phone)	aust (by phone) NCWRPC		
Judy Nagel	county Clerk/Recording Secretary		

- 4. Approve or amend the Public Safety minutes of June 9, 2020 Public Safety Meeting: Motion by Bonacci, second by Curran to approve the previous meeting minutes of June 9, 2020 Public Safety Meeting. All ayes, motion carried.
- 5. Public comment on agenda items, and consideration of requests for items to be added to future meeting agendas: None.
- 6. Discuss referral from Board of Health: Request for mandatory use of face masks in County Owned Buildings for the health and safety of both County Employees, policy makers and the public: Barger discussed the referral from Board of Health, discussing the proposed mandatory use of face masks, as Board of Health is looking for support for wearing masks in all county owned buildings, increased compliance. Stowe discussed the lack of enforcement, needing a local ordinance based upon State Statute 252 regarding communicable disease, as the County is looking to possibly have an advisory referendum. Barger advised that there are some exemptions for wearing face masks. Discussion on mandatory use, encouraging use of face masks, masks vs. face shields, COVID case count in the County also discussed. Motion by Curran to not support this request for mandatory use of face masks in County Owned Buildings for the health and safety of both County Employees, policy makers and the public because of the word mandatory. Chairman Nonnenmacher called three times for a second. Motion

Meeting Minutes (Continued)

failed due to lack of a second. Discussion continued. Motion by Curran, second by Balcerzak to take out the words "for mandatory" and refer this to the County Board. All ayes, except Bonacci nay. Motion carried.

- 7. District Attorney's Report: District Attorney Gebert was not present, no report.
- 8. Coroner's Report: Coroner Larry Shadick was not present, no report.
- 9. Child Support Report and Introduction of Child Support Agency for new Committee members: Child Support Agency Director/Corporation Counsel Stowe addressed the Committee, discussing the report that was mailed to the Committee, highlighting the ongoing furloughs, tracking hours allocated to Child Support. Stowe stated that some COVID-19 issues have been disruptive to the agency.
- 10. Office of Corporation Counsel Report on activities: Corporation Counsel Stowe will continue to report to this Committee until an oversight committee is determined for Corporation Counsel's Office. Stowe distributed a report of activities from Office of Corporation Counsel stated that he has been reviewing and updating County Personnel Policies adding the role and authority of the County Manager. Stowe also discussed furloughs in his office. Chairman Nonnenmacher requests Stowe explain the Open Meetings Law, as this will be discussed at the next full Board meeting. Stowe also discussed NCHC meeting regarding Sober Living Facility, funding and closure on the Environmental Testing. Information only.
- **11. NCHC report on activities:** Corporation Counsel Stowe stated that NCHC report will be on the Social Services Agenda.
- **12. Emergency Management Report:** Emergency Management Director Doemel submitted a written report to the Committee.
- **13.** Discuss the Langlade County All Hazard Mitigation Plan Update, Discuss and Approve RS #29-2020: Balcerzak questions 4.4 in the Plan, as #23 and #24 seem to be saying the same thing. Sheriff Westen contacts Andy Faust, NCWRPC, by phone. Faust will review 4.4 of the Plan. Motion by Balcerzak, second by Curran to accept the plan and forward Resolution #29-2020 to the full Board. All ayes, motion carried. RS #29-2020 will be on the July County Board.
- **14. Car Report:** Sheriff Westen distributed the Car Report. Discussion held, still considering the Fleet Management option.
- **15.** Sheriff/Jail Office/Nurse Report: Sheriff Westen distributed the Jail Report. Westen noted a spike in nurse follow-ups due to an incident with TB and COVID screening. Westen also noted that a case of interest, with impact to jail medical expenses. Westen stated one Dispatcher is currently on quarantine due to COVID.
- **16. Discuss purchase of a Skytron UVC Disinfectant Robot:** Sheriff Westen discussed the UVC Disinfectant Robot, the effectiveness of the portable robot, that could be used not only in the Jail but also in the squad cars, with possible savings on chemical cleaners, as grant funding will be used to purchase the robot. Motion by Bonacci, second by Krochalk to purchase a disinfectant robot for the Jail and refer this request to the Finance Committee. All ayes, motion carried.
- **17. Update on the replacement of the ModUcom Equipment in the Dispatch Center:** Sheriff Westen updated the Committee discussing the lack of Frontier cooperation, setting back the go live date.

Meeting Minutes (Continued)

- **18.** Discuss, with possible action, referral from Executive Committee: Courthouse Security: Sheriff Westen stated nothing new with Courthouse Security.
- **19. Superion (RMS) Project Update:** Sheriff Westen again reported that continual communication with Central Square, obtaining further training to deal with some issues with RMS update.
- **20. Review Monthly Departmental Budgets presented to the Committee:** Budgets were distributed and reviewed by the Committee. Information only.
- 21. Set date of next meeting: August 6, 2020 at 1:30 p.m. in the County Board Room.
- **22.** Adjourn the July 2, 2020 Public Safety Meeting: Motion by Curran, second by Bonacci to adjourn the meeting at 6:25 p.m.

Respectfully submitted by: Judy Nagel, County Clerk Recording Secretary

LANGLADE COUNTY BOARD OF SUPERVISORS MEETING COUNTY BOARD ROOM, SAFETY BUILDING 840 CLERMONT STREET, ANTIGO, WI 54409

Attached are the Instructions for Call in Number for County Board.

Public Attendance: For Public Attendance: Zoom Call-In Number: 1-312-626-6799 Meeting ID: 421 344 108 Password 5264

AGENDA 5:30 P.M. TUESDAY, JULY 21, 2020 MONTHLY MEETING OF COUNTY BOARD SUPERVISORS IN THE COUNTY BOARD ROOM, SAFETY BUILDING

THE COUNTY BOARD MAY DISCUSS AND TAKE ACTION ON ANY OF THE AGENDA ITEMS LISTED BELOW:

The Chair requests that all cell phones and pagers be silenced for the duration of the meeting.

- A. Meeting called to order at 5:30 P.M.
- B. Roll call.
- C. Pledge of Allegiance.
- D. A moment of silence.
- E. Approve or amend the agenda
- F. Approve or amend the minutes of the June 16, 2020 meeting as printed
- G. Recognition of County Employees, enclosed list
- H. Correspondence: Census Information and Acknowledge Card
- I. Public comment on agenda items and consideration of requests for items to be added to future meeting agendas.
- J. Citizens and Delegations:
 - Recognize others in Attendance.
- K. Old Business:
 - County Board Vacancies
 - Acknowledge Communication from 2020 Census Partnership Specialist Daniel R. McCollum
 - Northwoods Rail Transit Commission: Pay annual dues or not
 - Sober Living Update, Resolution #13-2019
 - Revisions to County Board Rules:
 - 1. Language should be updated/changed to a recommended staffing level at the discretion of the County Manager, continued from the June 16, 2020 meeting
- L. New Business:
 - Redistricting: The Process of Drawing New Political District Boundaries for Langlade County
 - Referral from Board of Health and Public Safety: Wearing masks in County owned Buildings mandatory
 - Presentation from District Attorney Gebert: First Offender Program
 - Strategic Planning Process Update Tim McKeough
 - Discuss oversight for County Manager and Corporation Counsel and reporting structure
- M. CONSENT AGENDA:
 - 1. Elections or Appointments: Appoint Tony Koss to another 3 year term to the Zoning Adjustment Board
 - 2. Letter, Petitions and Communications:
 - Zoning Ordinances: ORD #4-2020Z Request for Zone Change: Town of Price, Langlade County
 - 4. Resolutions:
 - 5. Ordinances:
- N. Committee Reports: A summary of information contained in recent committee minutes on file in the County Clerk's Office. Discussion on Committee Chairperson and Department Head(s) prepare to report to the Full Board once annually.
- O. Ordinances:

Ordinance #2-2020 Create Section 3.06 of the Langlade County Code of Ordinances: 3.06 Penalty on Delinquent Property Tax Settlements

P. RESOLUTIONS:

RS #16-2020 Resolution Authorize Funding for the City-County Library HVAC Project

RS #29-2020 Resolution Adopting the Langlade County All Hazards Mitigation Plan Update

RS #30-2020 Resolution Designate the ADRC-CW as the Adult-At-Risk Agency Serving Langlade County RS #31-2020 Resolution Formalize by Resolution Creation of a Full-Time Environmental Health

Specialist/Sanitarian Position in the Langlade County Health Department per Prior County Board Recommendation

- **RS #32-2020** Resolution to Approve an Administrator for the Northwoods Community Development Block Grant (CDBG) Housing Rehab Program
- **RS #33-2020** Authorize Use of "Cash on Hand" Funds for Unbudgeted Expenditures Incurred Due to COVID-19 and Eligible for Reimbursement Under the Routes to Recovery Grant
- **RS #34-2020** Assign Funds for Capital Improvement Projects Related to Information Technology Subject to Authorization by the Finance Committee
- Q. Adopt County Board Rule 18.1 "These Rules of the Langlade County Board may not be rescinded, changed or suspended, except by a three-fourths (3/4) vote of the members present."
- R. Committee Referrals: Referral of any matters to committees having proper jurisdiction with no discussion or action taken on the referral.
- S. County Manager's Report:
- T. Policy Report: Corporation Counsel Open Meeting Law Compliance and Confidentiality
- U. At approximately 6:45 p.m., consider moving into closed session pursuant to Section 19.85 (1)(c)(f), Wis. Stats., to review employment, promotion, compensation or performance evaluation data of any public employee over which the governmental body has jurisdiction or exercises responsibility; and/or to review financial, medical, social or personnel histories of specific persons, which if discussed in public, would be likely to have a substantial adverse effect upon the reputation of any person referred to in such histories or data; to review how the County's Accountability and Complaint Resolution Policy addresses complaints between members of the County Board.
- V. At approximately 7:15 p.m. return to open session with possible action taken on any matters discussed in closed session.
- W. Adjournment

Additional items may be discussed, with no action taken during the meeting, for the purpose of preparing future meeting agendas.

Judy Nagel Langlade County Clerk Benjamin Pierce Chairman Langlade County Board

Please note that, upon reasonable notice, efforts will be made to accommodate the needs of disabled individuals through appropriate aids and services. For additional information or to request this service, contact Judy Nagel, Langlade County Clerk, 800 Clermont Street, Antigo, WI 54409. Telephone 715-627-6200.

Cc: Board Members Robin Stowe County Department Heads Judy Nagel Antigo Journal Results Broadcasting City of Antigo Antigo Times Antigo Public Library Dennis Clark



RESOLUTION #29-2020

INTRODUCED BY: PUBLIC SAFETY COMMITTEE

INTENT: ADOPTING THE LANGLADE COUNTY ALL HAZARDS MITIGATION PLAN UPDATE

WHEREAS, Langlade County recognizes the threat that natural hazards pose to people and property; and

WHEREAS, under taking hazard mitigation actions before disasters occur will reduce the potential for harm to people and property and save tax payer dollars; and

WHEREAS, an adopted All Hazards Mitigation Plan is required as a condition of future grant funding for mitigation projects; and

WHEREAS, all hazard mitigation plans are required to be updated every 5-years; and

WHEREAS, Langlade County adopted its last All Hazards Mitigation Plan Update on October 22, 2013; and

WHEREAS, Langlade County participated jointly in the planning process with the other local units of government within the County to prepare an update to the existing multi-jurisdictional All Hazards Mitigation Plan;

NOW, THEREFORE, BE IT RESOLVED, that the Langlade County Board of Supervisors, hereby adopts the Langlade County All Hazards Mitigation Plan Update as an official plan; and

BE IT FURTHER RESOLVED, that the Langlade County Emergency Management Department will submit, on behalf of the County and other participating municipalities, the adopted All Hazards Mitigation Plan Update to Wisconsin Emergency Management and Federal Emergency Management Agency officials for final review and approval.

PUBLIC SAFETY COMMITTEE:

Douglas Nonnenmacher, Chairman

Arlene Bonacci an phardt Balcerzak Dave Krochalk Ф Bob Curran

ADOPTED BY THE COUNTY BOARD OF LANGLADE COUNTY THIS 21 DAY OF 101 V, 2020.

Judy Nagel, Langlade County Clerk

Vagel, hanglade County Clerk Certifving Officia

VK DPC

RESOLUTION #

ADOPTING THE LANGLADE COUNTY ALL HAZARDS MITIGATION PLAN UPDATE

WHEREAS, the City of Antigo recognizes the threat that natural hazards pose to people and property; and

WHEREAS, under taking hazard mitigation actions before disasters occur will reduce the potential for harm to people and property and save tax payer dollars; and

WHEREAS, an adopted All Hazards Mitigation Plan is required as a condition of future grant funding for mitigation projects; and

WHEREAS, all hazard mitigation plans are required to be updated every 5-years; and

WHEREAS, the City of Antigo adopted the last All Hazards Mitigation Plan Update on December 11, 2013; and

WHEREAS, the City of Antigo participated jointly in the planning process with Langlade County and the other local units of government within the County to prepare an update to the existing multi-jurisdictional All Hazards Mitigation Plan;

NOW, THEREFORE, BE IT RESOLVED BY THE COMMON COUNCIL, that the City of Antigo hereby adopts the Langlade County All Hazards Mitigation Plan Update as an official plan; and

BE IT FURTHER RESOLVED, that the Langlade County Emergency Management Department will submit, on behalf of the City, the adopted All Hazards Mitigation Plan Update to Wisconsin Emergency Management and Federal Emergency Management Agency officials for final review and approval.

PASSED:_____

Certifying Official

RESOLUTION #

ADOPTING THE LANGLADE COUNTY ALL HAZARDS MITIGATION PLAN UPDATE

WHEREAS, the Village of White Lake recognizes the threat that natural hazards pose to people and property; and

WHEREAS, under taking hazard mitigation actions before disasters occur will reduce the potential for harm to people and property and save tax payer dollars; and

WHEREAS, an adopted All Hazards Mitigation Plan is required as a condition of future grant funding for mitigation projects; and

WHEREAS, all hazard mitigation plans are required to be updated every 5-years; and

WHEREAS, the Village of White Lake adopted the last All Hazards Mitigation Plan Update on December 10, 2013; and

WHEREAS, the Village of White Lake participated jointly in the planning process with Langlade County and the other local units of government within the County to prepare an update to the existing multi-jurisdictional All Hazards Mitigation Plan;

NOW, THEREFORE, BE IT RESOLVED, that the Village of White Lake Board of Trustees, hereby adopts the Langlade County All Hazards Mitigation Plan Update as an official plan; and

BE IT FURTHER RESOLVED, that the Langlade County Emergency Management Department will submit, on behalf of the Village, the adopted All Hazards Mitigation Plan Update to Wisconsin Emergency Management and Federal Emergency Management Agency officials for final review and approval.

PASSED:_____

Certifying Official