

INTRODUCTION

Part II of the Lincoln County All-Hazard Mitigation Plan provides general geographical information on Lincoln 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

Lincoln County is located in north-central Wisconsin (See Map 1). The largest urban areas are the City of Merrill, located along the Wisconsin River in the south-central portion of the County, and the City of Tomahawk, located along the Wisconsin River in the north-central portion of the County. There are also several unincorporated hamlets. The County is bounded on the north by Oneida County, on the east by Langlade County, on the south by Marathon County, and on the west by Taylor and Price Counties.

Lincoln County lies approximately 110 miles northwest of Green Bay; 118 miles northwest of the Fox Valley; 210 miles northwest of Milwaukee; 15 miles north of Wausau; 7 miles south of Rhinelander; 167 miles north of Madison; and 185 miles northeast of La Crosse. Major metropolitan areas outside of Wisconsin with transportation linkages to Lincoln County are Chicago, 299 miles southeast; Minneapolis-St. Paul, 190 miles west; and Duluth, 213 miles north.

CIVIL DIVISIONS

There are 18 municipalities (16 towns, City of Tomahawk, and City of Merrill) in the Lincoln County planning area. These units of government provide the basic

structure of the decision-making framework. The County has a total surface area of 907 square miles, of which 3.1% is water. The area and proportion of the County within each civil division are presented in Table 1.

Table 1: Geographical Size by Municipality				
Minor Civil Division	Area in square Miles			Area as % of County
	Total Area	Water area	Land area	
Birch town	36.11	0.47	35.64	4.0%
Bradley town	63.15	8.24	54.91	7.0%
Corning town	146.43	0.25	146.19	16.1%
Harding town	72.84	1.45	71.39	8.0%
Harrison town	72.33	3.38	68.95	8.0%
King town	36.93	3.43	33.5	4.1%
Merrill city	7.8	0.57	7.24	0.9%
Merrill town	53.43	1.58	51.85	5.9%
Pine River town	64.02	0.53	63.49	7.1%
Rock Falls town	49.17	1.49	47.68	5.4%
Russell town	36.33	0.54	35.79	4.0%
Schley town	48.36	0.21	48.15	5.3%
Scott town	30.73	0.56	30.17	3.4%
Skawanaw town	35.89	0.59	35.31	4.0%
Somo town	36.29	0.14	36.16	4.0%
Tomahawk city	9.34	1.58	7.76	1.0%
Tomahawk town	71.63	1.73	69.9	7.9%
Wilson town	36.22	1.29	34.92	4.0%
Lincoln County	907	28.03	878.97	100.0%

Source: Census 2010 Summary File 1, Geographic Header Record G001.

TOPOGRAPHY

Lincoln County is in the Northern Highland physiographic region of Wisconsin. This region has some of the highest elevations in the State, and elevations in the County range from about 1,910 feet above sea level just east of Ament Lake in the northeast to about 1,220 at the point where the Wisconsin River leaves the County. Merrill is about 1,300 feet above sea level, and Tomahawk is about 1,450.

The physiography, relief and drainage of the County are primarily the result of glaciation. They are modified by ridges of hard bedrock in the southern part of the County. The landscape is very diverse. Moraines, eskers, kames, ice-contact lake basins, and drift-mantled ridges and hills of bedrock are generally in the highest positions on the landscape. These landforms are interspersed with lower areas of outwash plains, drumlins, lake plains, and bogs and other depressional areas where organic soils have formed.

Insert Map 1 - Location

To reduce file size for ease of emailing and downloading, the maps are omitted from this draft. To view the maps go to www.ncwrpc.org/lincoln/lincolnhazplan/index.html

The most prominent physiographic feature is the broad belt of end moraine that extends across the County from the northeastern part to the south-central and then through the west-central area. This end moraine area has the highest elevations and the roughest terrain in the County.

CLIMATE

Winters in Lincoln County are very cold, and summers are short but fairly warm. The short frost-freeze period limits the production of crops. An annual average of 126.9 days had a snow depth equal to or greater than .1 inches. The prevailing wind is from the southwest, and average wind speed is highest in spring at 12 miles per hour. Precipitation is fairly well distributed throughout the year, reaching peak in summer, and snow covers the ground during much of the period from late fall through early spring.

In winter, the average temperature is 15 degrees F with the average daily minimum at 4 degrees. The lowest temperature on record (Merrill) was -48 in January of 1909. Soils usually freeze to depth ranging from a few inches up to one foot, but occasionally can freeze to several feet when cold temps occur before appreciable snow cover. In summer, the average temperature is 66 degrees and the average daily maximum temperature is 79 degrees. The highest recorded temperature was 110 degrees in July of 1936.

Average total annual precipitation is 32 inches. Of this about 70% usually falls in April through September. The heaviest 1-day rainfall on record (Merrill) was 11.25 inches over July 23 and 24 of 1912. Thunderstorms occur on about 34 days each year. Average seasonal snowfall is about 53 inches, with 104.3 inches (2014-15) being the greatest total on record. The 21.2 inches was highest single snowfall in the County, recorded in 1929.

DEMOGRAPHIC AND ECONOMIC PROFILE

POPULATION AND HOUSEHOLDS

The official state 2015 population estimate for Lincoln County shows a population of 28,835 people for the County. This represents a 0.3 percent increase over the 2010 Census reported population of 28,743 people. This is a slow growth rate, but similar compared to many of the surrounding counties and slightly below the state average (refer to Table 2). From 2000 to 2010, the County grew 3.3 percent. If the growth rate continues at the current level, there will be approximately 30,100 people in Lincoln County in 2025 and 29,355 people in 2040.

Population concentrations and trends are important when prioritizing hazard mitigation strategies. Approximately 38 percent of the population is classified by the Census as urban and 62 percent is rural. The City of Merrill is the most densely populated and developed area in the County. Other areas of population concentrations are the City of Tomahawk, waterfront development in the Towns

of Harrison, King, Bradley, Wilson, Merrill, and Harding, and the unincorporated “hamlets” of Gleason, Bloomville, and Irma. Map 2 (Land Use) shows areas of population concentrations in the County. Overall population density of the County is 32.7 persons-per-square-mile and ranges from a high of 1,335 in the City of Merrill to a low of 3.2 in the Town of Somo.

County	2010	2015	Change	% Change
Lincoln	28,743	28,835	92	0.32%
Langlade	19,977	19,907	-70	-0.35%
Marathon	134,063	135,341	1,278	0.95%
Oneida	35,998	36,232	234	0.65%
Price	14,159	14,133	-26	-0.18%
Taylor	20,689	20,715	26	0.13%
Wisconsin	5,686,986	5,753,324	66,338	1.17%

Source: WisDOA Estimates 2015

Between 2010 and 2016, most of the communities within Lincoln County have experienced a slight to moderate increase in their population base with the exception of the City of Merrill, the City of Tomahawk, and the towns of Corning and Schley (refer to Table 3). The highest level of growth occurred in the Town of Birch with a 16.5 percent increase between 2010 and 2015. A majority of the population change in percentage ranged between -2.0 to 2.2 percent in the municipalities. However, since 2000, the population has decreased 3 percent.

The growth in households continues to outpace the growth in population, with the Town of Some increasing 40.4%, for a net increase of 21 households. Water bodies in the northern half of the County are significant attractions and retirees converting cabins to year-round residences have fueled this growth. According to the UW-Extension Lincoln County Housing Profile, retirement-age residents (65 years and over) account for 18.3 percent of Lincoln County residents, compared to 13.7 percent for the state of Wisconsin. There were exceptions to household growth, with the percent of households decreasing in the Town of Corning, the Town of Merrill, and the Town of Russell.

According to the Wisconsin Department of Workforce Development the average age in Lincoln County is 46.4 or 7.3 years older than the state average of 39.2 years. By 2020 the expected average age of County residents will be 42.9 years and 44.6 by 2030. This puts the County's average age above the state's expected averages of 39.6 in 2020 and 41 in 2030.

Insert Map 2 Generalized Land Use

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Civil Division	Census 2010 Population	Census 2010 Households	WisDOA 2015 Estimated Population	ACS 2014 Estimated Households	2010 – 2015 % Change in Population	2010 – 2014 % Change in Households
Birch town	594	189	692	226	16.5%	19.6%
Bradley town	2,408	1,089	2,441	1,089	1.4%	0.0%
Corning town	883	330	881	314	-0.2%	-4.8%
Harding town	372	140	379	160	1.9%	14.3%
Harrison town	833	356	842	366	1.1%	2.8%
King town	855	373	874	440	2.2%	18.0%
Merrill town	2,980	1,204	2,999	1,199	0.6%	-0.4%
Pine River town	1,869	754	1,883	793	0.7%	5.2%
Rock Falls town	618	266	628	271	1.6%	1.9%
Russell town	677	276	682	273	0.7%	-1.1%
Schley town	934	378	929	433	-0.5%	14.6%
Scott town	1,432	537	1,442	605	0.7%	12.7%
Skanawan town	391	165	400	188	2.3%	13.9%
Somo town	114	52	115	73	0.9%	40.4%
Tomahawk town	416	193	426	215	2.4%	11.4%
Wilson town	309	137	314	139	1.6%	1.5%
Merrill city	9,661	4,175	9,573	4,173	-0.9%	0.0%
Tomahawk city	3,397	1,480	3,335	1,526	-1.8%	3.1%
Lincoln County	28,743	12,094	28,835	12,483	0.3%	3.2%

Source: 2010 Census, 2014 ACS 5 Year Estimates, WisDOA Population Estimates

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 Oneida County, 20.3 percent of Lincoln's housing stock has been identified as seasonal/recreational. Roughly 30 percent of the County's seasonal housing units are in Bradley. There are also significant units in the towns of Harrison (12.5%) and King (14.8%). 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.

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 713 hotel/motel beds, 28 bed and breakfast beds and 76 other types of beds available around the County. The DNR also identified 574 campsites in various campgrounds across the County as well as educational/recreational camps with capacity for 406 individuals. Short term, special event attendance can result in a major influx of population in a given localized area and present unique problems in a disaster situation. For example, the annual Tomahawk Fall Ride brings many thousands of people into the area for just a few days.

Civil Division	Est. 2014 Seasonal Housing Units	Est. 2014 Seasonal Population
Birch town	49	107
Bradley town	1,037	2,064
Corning town	136	316
Harding town	125	329
Harrison town	429	935
King town	506	1,032
Merrill town	42	103
Pine River town	29	68
Rock Falls town	253	567
Russell town	107	268
Schley town	40	95
Scott town	11	28
Skawanaw town	55	135
Somo town	71	137
Tomahawk town	250	485
Wilson town	195	427
Merrill City	33	73
Tomahawk City	57	119
Lincoln County	3,425	7,287

Source: 2014 ACS 5 Year Estimates, NCWRPC

EMPLOYMENT

According to the Wisconsin Workforce Development, the Manufacturing sector, the Trade, Transportation, and Utilities sector, Healthcare and Education Services sector are the top employers in Lincoln County. The Manufacturing industry produces everything from wood products to motorcycle accessories and parts to paper and metal products and is the largest employer, with 2,608 workers. The Trade, Transportation, and Utilities sectors employed 2,156 workers in 2014. The school districts and healthcare facilities are also some of the largest employers in the area, employing 1,659 persons. Together these four sectors employ over 59 percent of the County's workers. Identifying locations of

large employment is important when prioritizing hazard mitigation strategies. Table 5 displays the top employers in the area.

Company	Product or Service	Size	Location
Merrill Public School	Public Education	500-999	Various locations
Church Mutual Insurance Co.	Insurance Carrier	500-999	City of Merrill
County of Lincoln	County Public Employment	250-499	Various locations
Packaging Corp. of America	Paper Mill	250-499	City of Tomahawk
WI Dept. of Corrections	Correctional Facilities - Public	250-499	Various Locations
Harley-Davidson Motor Co.	Motorcycles and Parts	250-499	City of Tomahawk
Lincoln Wood Products, Inc.	Wood Windows and Doors	100-249	City of Merrill
Semling Menke Co, Inc.	Wood Windows and Doors	100-249	City of Merrill
Weinbrenner Shoe	Leather Finishing	100-249	City of Merrill
School District of Tomahawk	Public Education	100-249	City of Tomahawk

Source: Wisconsin DWD County Workforce Profile, 2013 and NCWRPC.

LAND USE/LAND COVER AND DEVELOPMENT PATTERNS

Description	Acres	%
Agriculture	52,916.41	9.1%
Commercial	1,123.48	0.2%
Cranberry Bog	254.00	0.0%
Governmental/Institutional	790.35	0.1%
Industrial	1,623.04	0.3%
Open Lands	15,071.41	2.6%
Outdoor Recreation	890.85	0.2%
Residential	12,808.46	2.2%
Transportation	7,907.59	1.4%
Water	17,370.41	3.0%
Woodlands	469,417.15	80.9%
Total	580,173.15	100.0%

Source: NCWRPC, 2015

Land use is an important determinant in the potential impact a particular hazard may have, and in actions which may be taken to mitigate the hazard impacts. 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 Lincoln County into eleven classifications based on land use data compiled in 2015 and analyzed in 2016. This generalized land use provides a "big-picture"

understanding of land use and development patterns with in Lincoln County. Map 2 shows the land use and surface water in Lincoln County. Table 6 shows the acreage and percent of each classification.

FORESTRY AND AGRICULTURE

The dominant land-use in Lincoln is forestry. Land area is approximately 81 percent forested, comprised of approximately 469,417 acres of woodland. Agricultural land covers another 9.1 percent of the County's land area, which is mostly located on previously forested tracts that were cleared by early settlers. Dairy, beef, cash crops, ginseng, strawberries, cranberries, apples and maple syrup make up the core of what Lincoln County farmers produce off the land. A short growing season, irregular topography, and relatively poor soil productivity, limits most of the agricultural production to the southern portions of the county.

COMMERCIAL AND INDUSTRIAL DEVELOPMENT

Commercial and industrial development makes up only about 0.2 percent of the total County area. Such land use is mostly located in and around the two cities of Merrill and Tomahawk. There are three designated industrial parks in the County; one in each of the cities and Town of Merrill. Other industrial sites are located in the Town of Bradley. Commercial activity is also located in the Cities of Merrill & Tomahawk and the Towns of Bradley & Merrill where these areas serve as sub-regional service hubs supported by the surrounding forestry and agri-business industry. Commercial activity in the unincorporated areas is primarily dominated by private commercial recreation. However, some rural centers act as mini service hubs with notable commercial/industrial development. For example, within Gleason there is a bank, gas station, bowling alley, post office, race track, limited commercial, and a variety of restaurants.

RESIDENTIAL DEVELOPMENT

Land in residential development makes up approximately 2.2 percent of the total county area. Residential concentrations are scattered throughout the County (see "Population and Households" above). Much of the scattered rural development is related to direct 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 2014 American Census 5 Year Estimates, there were 1,285 mobile homes in 2014. This is about 8 percent of housing units for the County compared to about 4 percent for the entire State. This is significant due to their vulnerability in natural hazards especially tornadoes. Map 8 (Tornado Vulnerability) displays the mobile home concentrations within the County.

SURFACE WATER

Lincoln County is located in the Upper Wisconsin River drainage basin. There are thirteen watersheds within the County, with seven major tributaries: Somo, Spirit, New Wood, Copper, Pine, Prairie and Tomahawk Rivers all flowing into the Wisconsin River, which generally bisects the County from north to south.

Insert Map 3 Surface Water and Watersheds

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www.ncwrpc.org/lincoln/lincolnhazplan/index.html

The total surface water area of lakes and streams in Lincoln County contains approximately 17,370 acres. More than half of the County's 500 plus lakes are artificial impoundments on the Wisconsin River. Lake Mohawksin is the largest of these lakes at 1,909 acres. Over eighty-six percent of the lakes are less than 10 acres, while only 3% are over 100 acres.

Within the watersheds, there are 246 interior rivers and streams covering about 668 miles (see Map 3). All the streams, like the lakes, are important in the hydrological and ecological regime and should be protected by shoreland zoning and physical protective measures. The 285-foot drop of the Wisconsin River is moderated by six water control structures, which help to control flooding.

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 through 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 uninterrupted by 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, levies, or other man-made flood control devices will be saved. Second, for each structure that is built 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 flood plain 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).

Insert Map 4 Floodplain and Dams

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www.ncwrpc.org/lincoln/lincolnhazplan/indez.html

In order to participate in the Federal Emergency Management Agency’s (FEMA) National Flood Insurance Program (NFIP), the County, City of Merrill, and City of Tomahawk have completed a Flood Insurance Study and a Flood Insurance Rate Map (FIRM) that encompasses Lincoln County, see Table 7 for summary of NFIP status.. This FIRM delineates the “A” Zones including the floodway and flood fringe which are those areas inundated by the 100-year flood within the County.

Table 7 FEMA Community Status Book Report Communities Participating in the National Flood Insurance Program Wisconsin - Lincoln County				
Community	Initial FHBM	Initial FIRM	Current Map	Program Entry
Lincoln County	09/22/78	02/19/86	08/16/11	02/19/86
City of Merrill	na	07/20/73	08/16/11	07/20/73
City of Tomahawk	na	09/04/85	08/16/11	09/04/85
<i>Source: FEMA, 2016.</i>				

Lincoln County participated with FEMA in updating its FIRM to new digital standards. The digital FIRMs are referred to as DFIRM. The NCWRPC downloaded the DFIRM from the County for use in this plan. Although unofficial, the digital files indicate there are 18,100 acres of floodplain in Lincoln County, or 3.1 percent of the land area. Map 4 shows the approximate floodplains in Lincoln County. Floodplains in Lincoln are generally 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 Lincoln 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 (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 devices 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.

According to the GIS mapping of Lincoln County in 2015, there are 121,356.56 acres of wetlands, or 21 percent of its total area. Map 3 shows these wetland areas to be scattered throughout Lincoln County. There are no main concentrations of wetlands, except that cattails and bulrushes in shallow water, and alder, sedges and grasses in the saturated areas dominate wetland communities.

Eradication of wetlands can occur through the use of fill material. This 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 and generally, local zoning does permit development of these areas.

OTHER LAND COVER/USES

Recreational lands including parks and outdoor sports facilities total about 890.85 acres or .15 percent of the County area. Other lands may have recreational aspects, particularly woodlands. Governmental, public and institutional lands total about 0.14% of the County area. Open lands cover about 15,071 acres or 2.6% of County area. These include grasslands, scrub and other barren lands.

FUTURE GROWTH AND DEVELOPMENT IN LINCOLN COUNTY

Natural features, including the Wisconsin River, and the region's major transportation corridors, particularly U.S. 51, have largely dictated the County's land use pattern. The County's adopted Comprehensive Plan predicts this will continue to be the case.

Lincoln County's population has increased slightly over the last five years. By 2035, Lincoln County will have grown to a population of about 30,750, a gain of 2,007 residents from the 2010 Census, according to the Wisconsin DOA 2013 county projections. In addition, household sizes continue to decrease, resulting in a need for more housing units to accommodate these households. The following discusses how these new housing units might be dispersed across the County and what other development will be brought along with it.

The northern two-thirds of the County is dominated by publicly and privately owned forest lands. Public forest uses are most prevalent in the Towns of

Harding, Harrison, Somo, Tomahawk and Wilson. So growth will be slower in those areas. Private managed forest covers large portions of the Towns of Corning, Harding and King, so these areas should see slow but steady growth over time.

Agricultural areas cover much of the southern portion of the County, throughout the Towns of Russell, Schley, Pine River, Scott and eastern Corning, particularly along the Prairie River basin. Several Christmas tree farms are interspersed with general agricultural uses in the Town of Pine River. Tree farms are also common in King, Skanawan and Wilson. As with the forestry based communities mentioned above, the agro-forestry nature of these towns indicate a slow growth dispersed widely across the landscape over time. Commercial developments will be very minimal, and typically of a home-based business variety. New infrastructure or public facilities will be very minimal, if any.

The central part of the County contains large areas of recreational land. Public recreation uses like Council Grounds State Park, Newwood Wildlife Area, Menard Island Resource Area and Underdown Recreation Area, can be found in the Towns of Birch and Merrill. Private recreational uses like golf courses, racetracks and campgrounds are located in the Towns of Bradley, Rock Falls, Merrill and Scott. These recreational amenities along with easy access to the freeway make these areas more attractive for residential developments; however, it is still expected to be primarily dispersed, low-density. Commercial developments will again be very minimal, as well as, new infrastructure or public facilities. A new industrial park was established in the Town of Merrill but has attracted only one tenant (LP fuel facility) thus far.

There are two basic exceptions to the development pattern described thus far: the Cities of Merrill and Tomahawk and the County's waterfront areas. Within the central recreation area lie the two cities of Merrill (south central) and Tomahawk (north central). It is in and around these cities where the most significant concentrated new residential development will occur. Sizeable new subdivisions have already been platted. These areas in and around the cities contain the most intensive land uses in the County including a mixture of residential, commercial and industrial. More substantial infrastructure is also anticipated in association with this other development. New roads, sewer and water lines are the most common infrastructure to expand with new development adjacent to the cities. In Merrill, two new multifamily housing complexes have added 36 and 60 new units, and there has been a boom of commercial developments on the City's east side. Tomahawk has had some new residential and commercial (new shopping plaza and convenience store) development and some industrial expansion and reuse.

Waterfront residential development is most prominent in the Towns of Bradley, Harding, Harrison, King, Merrill and Wilson. Waterfront areas in these municipalities will continue to see development pressure.

New public and community facilities include a new town hall built in Birch and one being planned by Town of Skanawan. Within the last five years in the City Merrill a number of new projects have been completed or under construction. These include: a new fire station, new airport terminal, new Human Society building, new grandstand and other upgrades at the festival grounds, high school football field, Enrichment Center and Expo Hall, Aquatic Center, a new water treatment plant. In Tomahawk there is a new nursing home, new homeless shelter and two new assisted living facilities, and plans are being made for a new public safety building. The County is currently constructing a major expansion of its Pine Crest Nursing Home.

PUBLIC FACILITIES AND SERVICES

TRANSPORTATION

The transportation system of Lincoln County provides the basis for movement of goods and people into, out of, through, and within the County. An efficient transportation system is essential to the sound social and economic development of the County and the Region. The analysis of transportation routes should be considered in the possible event of a disaster (See Map 5).

Two major U.S. Highways, U.S.H. 8 and U.S.H. 51 serve Lincoln County. U.S. 8 runs an east-west arc through the extreme northern portion of the County, while U.S. 51 runs a north-south course through the center of the county. U.S. 51 is a four-lane facility and links the County to Interstate 39 at Wausau.

Four state highways access the County. Highways 64 and 86 run east-west paths. Highway 86 is in the northern half of the County through Tomahawk, while Highway 64 serves the southern half, running through the City of Merrill. Highway 107 moves north-south connecting Tomahawk and Merrill. Highway 17 cuts a northeasterly track through the southeast corner of 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 the county's two cities and major highways. Local roads provide access to local development, farming and forestry areas, as well as the County's lake areas.

The U.S./State and County highways in Lincoln County include a large network of bridges owned by the federal, state, county and local governments. The majority of the State bridges are under/over passes along U.S. 51. The County system contains the majority of bridges in the area.

Insert Map 5 Transportation

To reduce file size for ease of emailing and downloading, the maps are omitted from this draft. To view the maps go to

www.ncwrpc.org/lincoln/lincolnhazplan/indez.html

Lincoln County Commission on Aging coordinates transit services for the elderly and disabled in the county. Private operators and non-profits provide mobility services for both median and non-emergency transportation, including bus reservations, volunteer drivers, and discounted taxi cabs. Abby-Vans Inc. provides transportation to Lincoln County's neighboring areas, including weekend travel. In Merrill, the city's transit service provides this function on week days at a discounted rate for seniors and those with disabilities within the City limits, but riders must call ahead in advance.

The Tomahawk Railway and the Canadian National (CN) Railroad serve Lincoln County. The Tomahawk Railway is a 6-mile rail line serving the mills and distribution center in the City of Tomahawk. The CN line runs through the center of the County and connects Merrill and Tomahawk to the freight rail network.

The Merrill Municipal Airport located north of the City of Merrill and the Tomahawk Municipal Airport located west of the City of Tomahawk serve the area. Both airports provide general aviation service for private airplanes and daily airfreight. There are private landing strips located in the Towns of Schley, Russell, Rock Falls, and Corning. The nearest commercial passenger service is located in Rhinelander or Mosinee.

UTILITIES

Utility systems are important in hazard mitigation planning because of the dependency on water, wastewater treatment, gas service, electricity, and communications. 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 from potential contamination from hazards such as flooding is a consideration for hazard mitigation planning. The City of Merrill and Tomahawk provide municipal water supplies for domestic and commercial use, while the Lincoln Hills School provides water for their students.

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, such as the Wisconsin River. Also of concern during periods of flooding is the threat of damage to infrastructure of associated facilities. Three municipal wastewater treatment facilities serve Lincoln County. The Cities of Merrill and Tomahawk, along with the Gleason area in the Town of Russell are provided with service.

The infrastructure of electric and telephone lines should be considered in the events of high wind, ice storms, tornadoes, flooding, and fire. Wisconsin Public Service provides Lincoln County with electric service throughout the County. As of 2001, an independent company, American Transmission Company LLC (ATC), owns, maintains, and operates the major transmission facilities located in

the State of Wisconsin, including Lincoln County. The general locations of the major electrical transmission facilities, owned by ATC are shown on Map 6.

Frontier is the primary provider of traditional telephone service in the County. With cellular phones playing an increasingly important role in communications, see Map 6 for tower locations within the County.

The ANR pipeline is the main source of natural gas in the County. A segment of the pipeline traverses the County north-south between Merrill and Tomahawk. A spur line to serve the City of Antigo in Langlade County branches off the main north-south line near the Marathon County line and lies just inside Lincoln County.

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 six fire service providers that serve the local units of governments in Lincoln County. The Cities of Merrill and Tomahawk, and Towns of Russell, Corning, and Pine River offer fire services to the areas and one department, Crescent, lies outside the County. The Merrill Fire Department is the only one that provides full-time service, while the remainder of the departments relies on volunteers for this service.

Additionally, there are three EMS and three First Responder providers in the County: Merrill EMS, Tomahawk EMS, Oneida County EMS, Tripoli First Responders, Russell First Responders and Pine River First Responders.

The Lincoln County Sheriff's Office provides service to all the towns and the cities for law enforcement. The Cities of Merrill and Tomahawk also have their own police departments. The main correctional facilities within the County include the Lincoln County Jail in Merrill and Lincoln Hills School, a state facility for troubled youth, near Irma.

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 injured residents have to be transported and as to how many people each hospital can handle if a hazard would breakout. The County has hospitals in Merrill and Tomahawk. Nursing homes are vulnerable, because of the high level of assistance with the residents that live there. The schools are another facility that is important, since hundreds of the county's children are there for most of the year. Map 7 shows the location of selected critical community facilities within Lincoln County.

Insert Map 6 Utilities

To reduce file size for ease of emailing and downloading, the maps are omitted from this draft. To view the maps go to www.ncwrpc.org/lincoln/lincolnhazplan/index.html

Insert Map 7 - Critical Facilities

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www.ncwrpc.org/lincoln/lincolnhazplan/indez.html

INVENTORY & VALUE OF STRUCTURES/PROPERTY IN LINCOLN 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 annual equalized value of each municipality represents the Department of Revenue estimate of market value (Agricultural land is included at Use Value) of all taxable property. Property tax levies of jurisdictions are apportioned to each municipality on the basis of equalized value. Table 8 lists each municipality's total equalized values for real estate, personal property, and all property and the percent each municipality represents of the county total.

Municipality	Real Estate	Personal Property	Total	% of Total
Birch town	\$38,002,300	\$261,900	\$38,264,200	1.65%
Bradley town	\$419,709,800	\$12,589,100	\$432,298,900	18.68%
Corning town	\$67,899,700	\$1,488,000	\$69,387,700	3.00%
Harding town	\$46,530,200	\$4,500	\$46,534,700	2.01%
Harrison town	\$161,492,600	\$633,400	\$162,126,000	7.01%
King town	\$156,171,200	\$667,100	\$156,838,300	6.78%
Merrill town	\$190,248,000	\$1,141,100	\$191,389,100	8.27%
Pine River town	\$133,166,300	\$884,900	\$134,051,200	5.79%
Rock Falls town	\$82,422,900	\$861,000	\$83,283,900	3.60%
Russell town	\$40,279,900	\$644,900	\$40,924,800	1.77%
Schley town	\$63,150,300	\$480,500	\$63,630,800	2.75%
Scott town	\$94,199,600	\$829,300	\$95,028,900	4.11%
Skanawan town	\$50,040,400	\$566,900	\$50,607,300	2.19%
Somo town	\$21,112,400	\$17,800	\$21,130,200	0.91%
Tomahawk town	\$67,484,700	\$644,300	\$68,129,000	2.94%
Wilson town	\$62,323,400	\$1,988,600	\$64,312,000	2.78%
Tomahawk city	\$213,300,900	\$11,647,800	\$224,948,700	9.72%
Merrill city	\$352,442,000	\$19,068,700	\$371,510,700	16.05%
Lincoln County	\$2,259,976,600	\$54,419,800	\$2,314,396,400	100.00%

Source: WI Department 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 Lincoln 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 9, 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 Tables 9b - d.

Table 9a Value of County Owned Properties		
Name	Value*	Location
Courthouse	\$10,168,667	Merrill City
Service Center	\$7,456,602	Merrill City
Sheriff/Safety Building	\$21,641,694	Merrill City
Health & Human Services	\$5,150,474	Merrill City
Lincoln Industries	\$1,342,941	Tomahawk City
Pine Crest Nursing Home	\$17,283,265	Merrill City
Developmental Disabilities Center	\$1,486,341	Merrill City
Central Highway Department	\$5,176,160	Merrill City
Salt Shed	\$200,748	Merrill City
Highway Sign Shop	\$962,698	Merrill City
Highway Facilities - Tomahawk	\$1,567,597	Tomahawk City
Salt Shed	\$188,681	Tomahawk City
Forestry Shop	\$1,760,925	Irma
Forestry Building - Harrison Hills	\$66,635	Gleason
Outdoor Recreation Facilities	\$298,742	Various Locations
Solid Waste	\$1,639,611	Merrill City
Total	\$76,391,781	

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

Source: Statement of Values State of Wisconsin Local Government Property Insurance Fund, 2017.

Table 9b Value of City Owned Properties Tomahawk	
Property	Value*
Airport	\$604,156
City Hall	\$1,650,202
Fire Station	\$1,109,595
Harley North	\$1,181,626
City Garage	\$1,509,869
Library	\$3,834,309
Wastewater Plant & Lift Stations (4)	\$4,871,261
Senior Center	\$313,491
Historical Society & Museum	\$401,404
Waterworks	\$2,457,515
Kwahamot Ski Area	\$368,382
Other Parks and Rec.	\$3,595,704
Misc Other	\$3,129,472
Total	\$25,026,986

*includes insured building contents and property in the open.

Source: Local Gov't Property Insurance Statement of Values, 2011 & NCWRPC Est.

Property	Value*
Landfill Site (former)	\$54,849
Airport	\$2,705,807
City Hall/Police	\$9,854,571
Fire Station 1	\$3,637,878
City Garage	\$3,662,041
Library	\$8,422,045
Wastewater Plant	\$17,688,427
Weinbrenner Factory	\$16,584,582
Warehouse	\$2,107,403
Pump Houses (3)	\$507,800
Lift Stations (2)	\$318,932
Merrill Area Rec. Center (MARC)	\$4,920,498
MARC Multipurpose Building	\$5,277,322
Merrill Festival Grounds	\$2,219,246
Other Parks and Rec.	\$2,122,776
Misc Other	\$3,173,204
Total	\$83,257,381

**includes insured building, contents and property in the open.*

Source: Local Gov't Property Insurance Statement of Values, 2017

Table 9d: Value of Town Owned Properties		
Municipality	Property	Value*
Birch town	Town Hall	\$105,000
Bradley town	Town Hall/Community Center	\$435,000
	Other Buildings	\$296,000
	Other Property	\$159,000
Corning town	Town Hall	\$105,000
	Fire Station	\$210,000
Harding town	Town Hall	\$115,000
	Storage Garage	\$14,000
	Outhouse	\$8,000
Harrison town	Town Hall	\$105,000
King town	Town Hall	\$105,000
Merrill town	Variety of properties	\$297,000
Pine River town	Town Hall/Fire Station/Misc.	\$1,659,253
Rock Falls town	Town Hall	\$105,000
Russell town	Town Hall/Fire Station	\$301,000
Schley town	Town Hall / Garage	\$288,783
Scott town	Town Hall	\$105,000
Skawanaw town	Town Hall	\$105,000
Somo town	Town Hall	\$105,000
Tomahawk town	Town Hall	\$105,000
Wilson town	Town Hall	\$95,000
	Storage Building	\$10,000
	Storage Building	\$11,000
	Storage Building	\$5,000
<p><i>*Includes insured buildings, contents and property in the open. Source: Local Government Property Insurance Declarations, 2015 and NCWRPC Estimates, 2017.</i></p>		