



Rapid Watershed Assessment Door Kewaunee River Watershed

Rapid watershed assessments provide initial estimates of where conservation investments would best address the concerns of landowners, conservation districts, and other community organizations and stakeholders. These assessments help landowners and local leaders set priorities and determine the best actions to achieve their goals.

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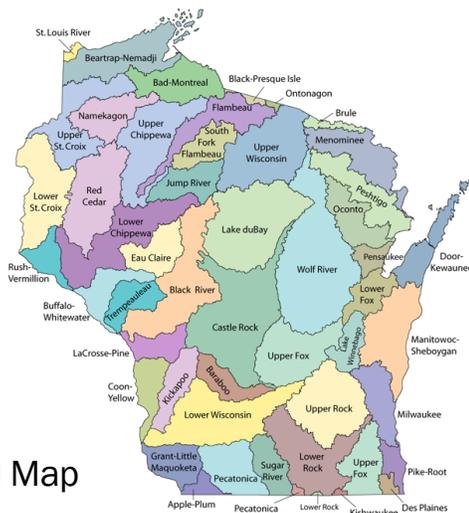


INTRODUCTION¹

The Door-Kewaunee Watershed in northeast Wisconsin is essentially a peninsula extending northeast into Lake Michigan and encompassing all of Door County, the northeast corner of Brown County, and the northern two-thirds of Kewaunee County. All surface waters eventually drain to Lake Michigan. The Kewaunee River, which flows southeast and enters Lake Michigan at Kewaunee, and the Ahnapee River, flowing southeast to Lake Michigan at Algoma, are the most significant drainages.

The area is a very popular recreation destination due to large amount of scenic shoreline, angling opportunities, and state parks on the peninsula, particularly northeast of Sturgeon Bay. North of Sturgeon Bay there are still several orchards in operation but much of the land is idled and no longer in production. Wheat production has increased dramatically on Washington Island, off the tip of the Door County peninsula, due to its use in the brewing of a popular Wisconsin beer. South of Sturgeon Bay, dairy farms dominate the land use and primary crops are corn, soybeans, and alfalfa.

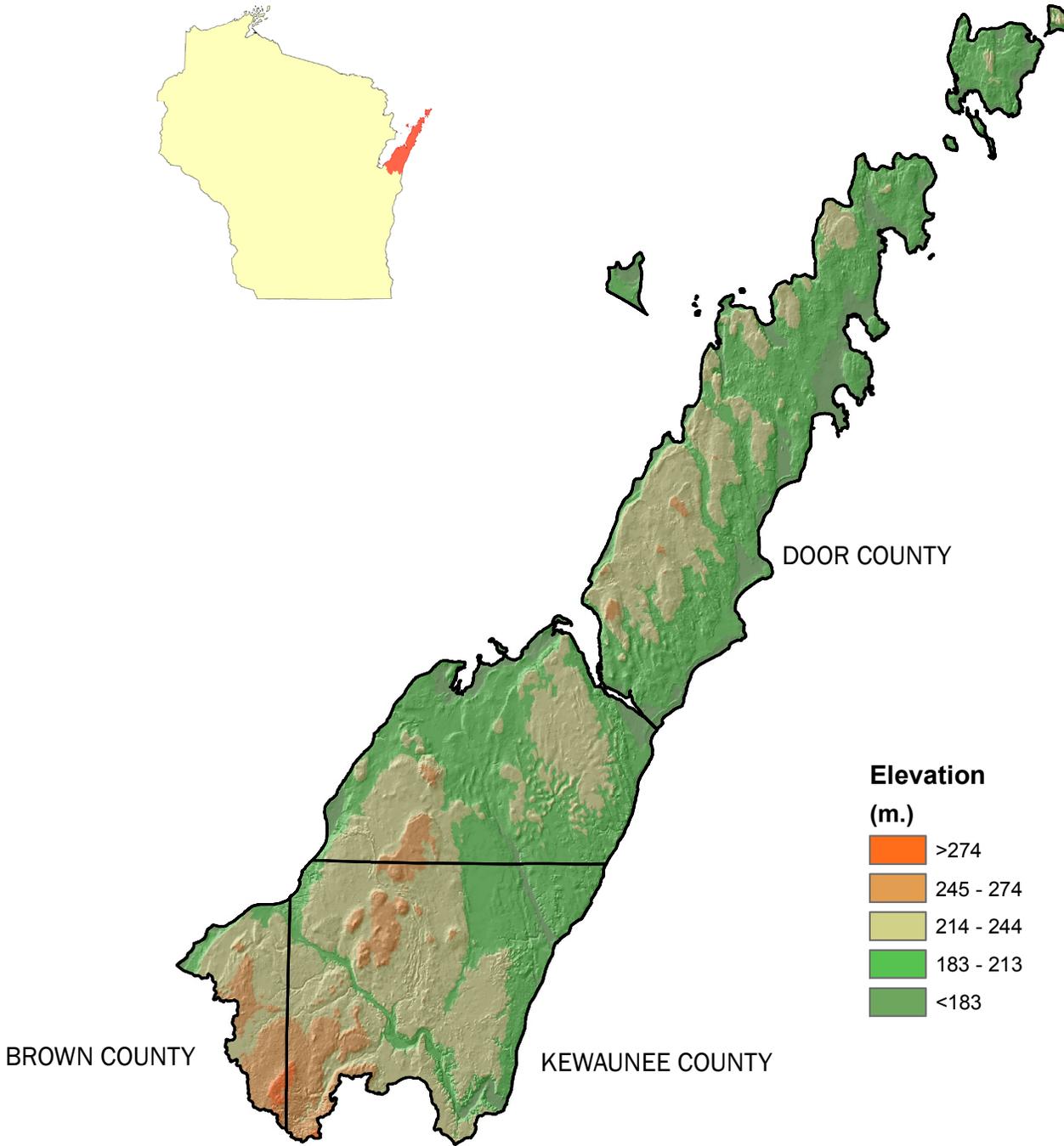
Small towns and villages are most common with the biggest city being Sturgeon Bay, with a population of 9,180. The area, however, due to the tourism economy and the close proximity of Green Bay, faces a great deal of development pressure.



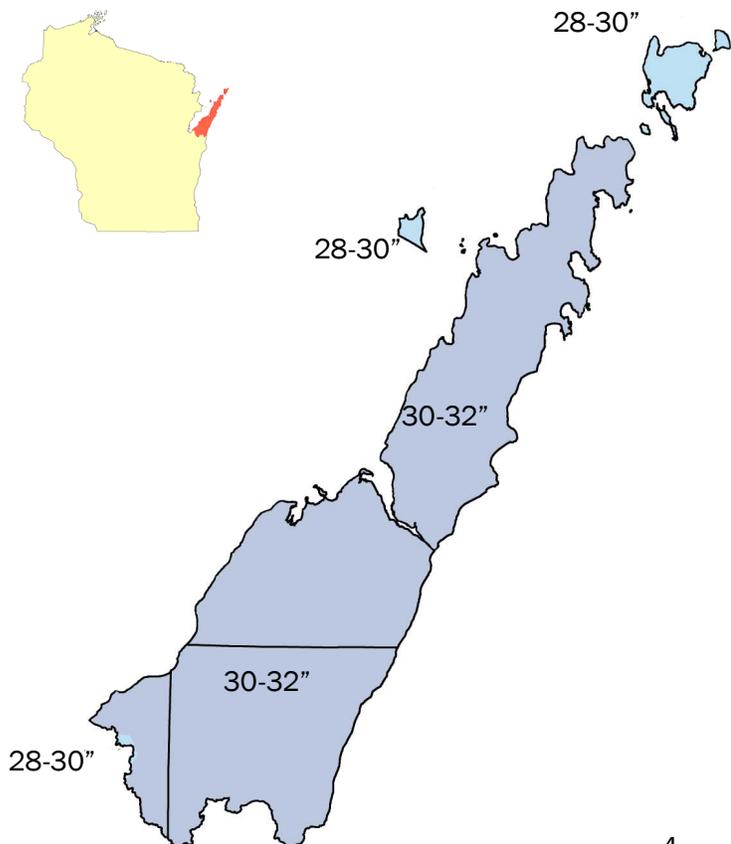
Wisconsin Watershed Map

Acreage in the Door Kewaunee Watershed

County	County Acres	Acres in HUC	% of HUC from County	% of County from HUC
Brown	342266	30575	6	8.9
Kewaunee	220149	147313	30	66.9
Door	313094	311459	64	99.5



Elevation Map³.



Average Annual Precipitation Map (inches)⁴.

COMMON RESOURCE AREAS².

Common Resource Area delineations are defined as a geographical areas where resource concerns, problems and treatment needs are similar. Common Resource areas are a subdivision of an existing Major Land Resource Area (MLRA). Landscape conditions, soil, climate and human considerations are used to determine the boundary of Common Resource Areas.

94B.2. MARINETTE PLAINS

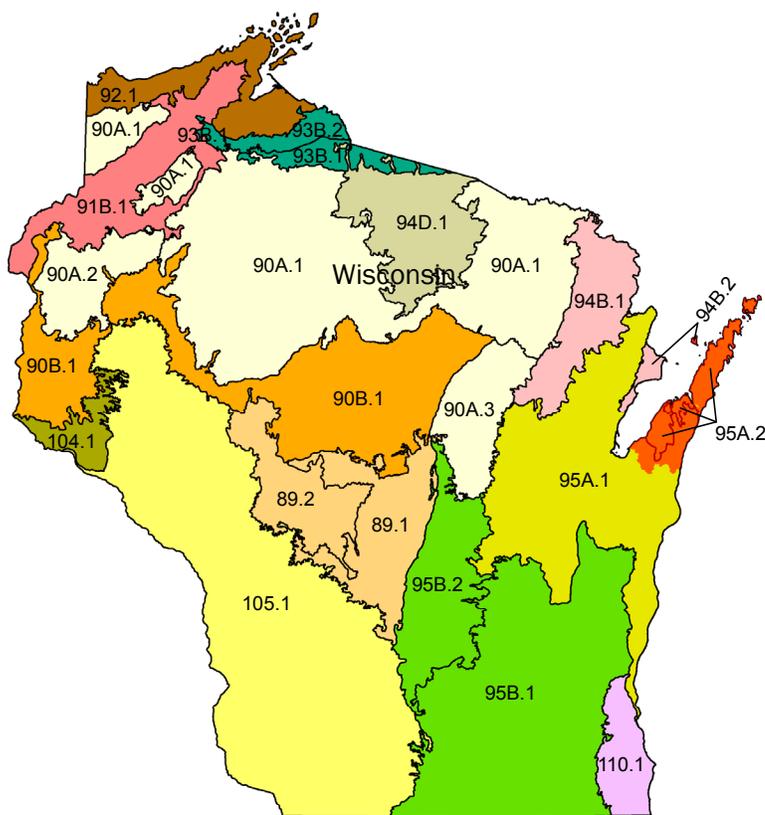
Nearly level and gently sloping somewhat poorly drained sandy soils on lake plains with organic soils in the depressions. Mostly deciduous and coniferous forest and wetlands. Scattered cropland, grazing land, and the Green Bay-Lake Michigan shoreline. Primary resource concerns are soil erosion, groundwater quality, surface water quality, forestland productivity and wildlife habitat.

95A.1. EASTERN WISCONSIN TILL PLAIN

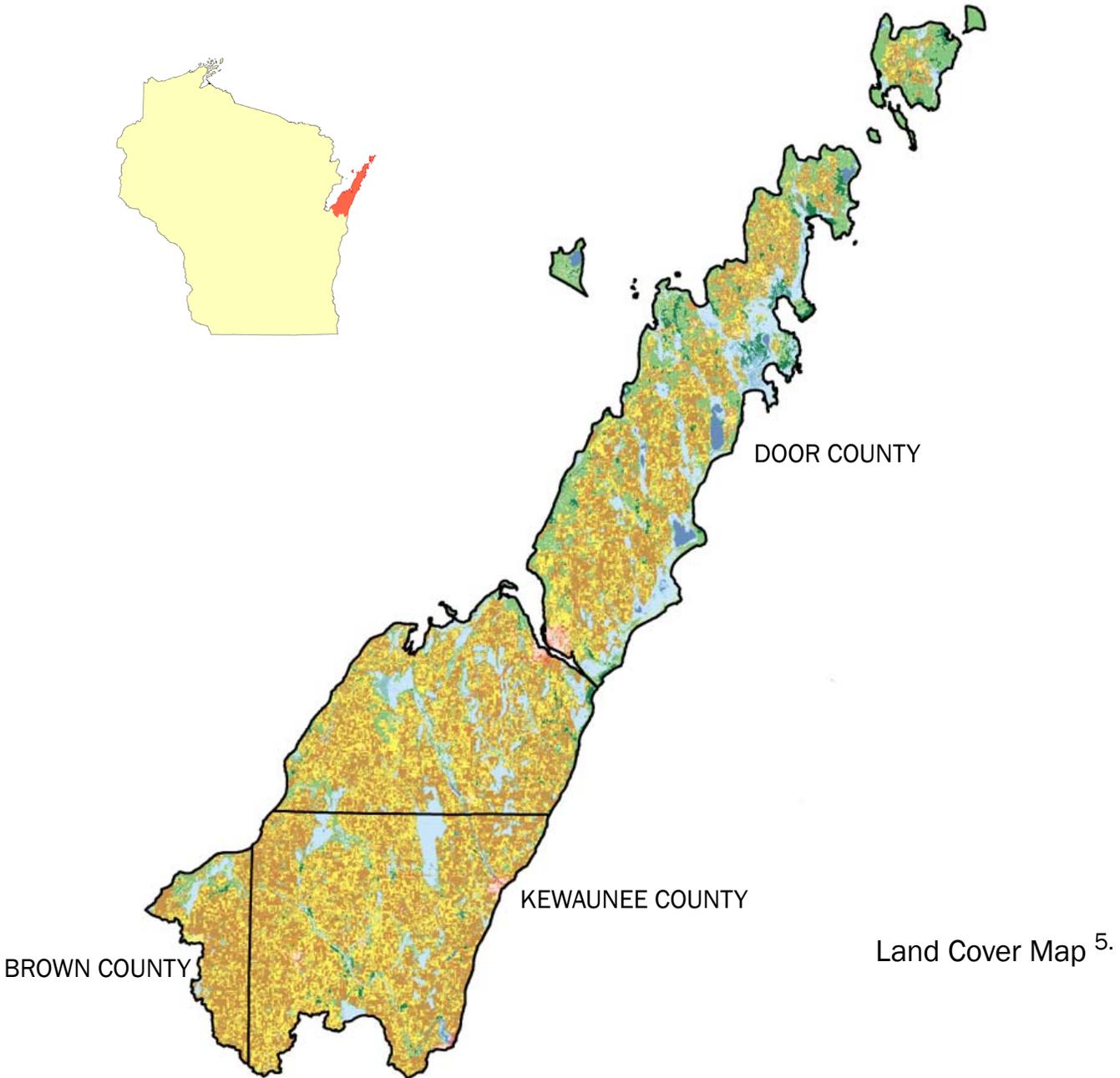
Gently sloping till plain with moderately well drained to somewhat poorly drained loamy and clayey soils, and poorly drained organic soils in the depressions. Lake Winnebago and Lake Michigan shorelines and significant wetland complexes are included. Cropland is the major land use with some large dairy farms, grazing land, and deciduous and coniferous forestland. Development pressure is high. Primary resource concerns are cropland and construction site erosion, stormwater management, nutrient management, surface water and ground water quality, and wetland habitat management and restoration.

95A.2 DOOR\ESCANABA PENINSULAS AND LAKE PLAINS

Gently sloping well drained silty and loamy soils over bedrock with common wetlands and swamps. Mostly dairy and beef farm influenced cropland with some cash grain, grazing land, and fruit farms. Mixed deciduous and coniferous forest along the Lake Michigan shoreline. Significant development pressure on the Green Bay shoreline. Primary resource concerns are groundwater and surface water quality, nutrient management, cropland and construction site erosion, and recreational use.



Common Resource Area Map



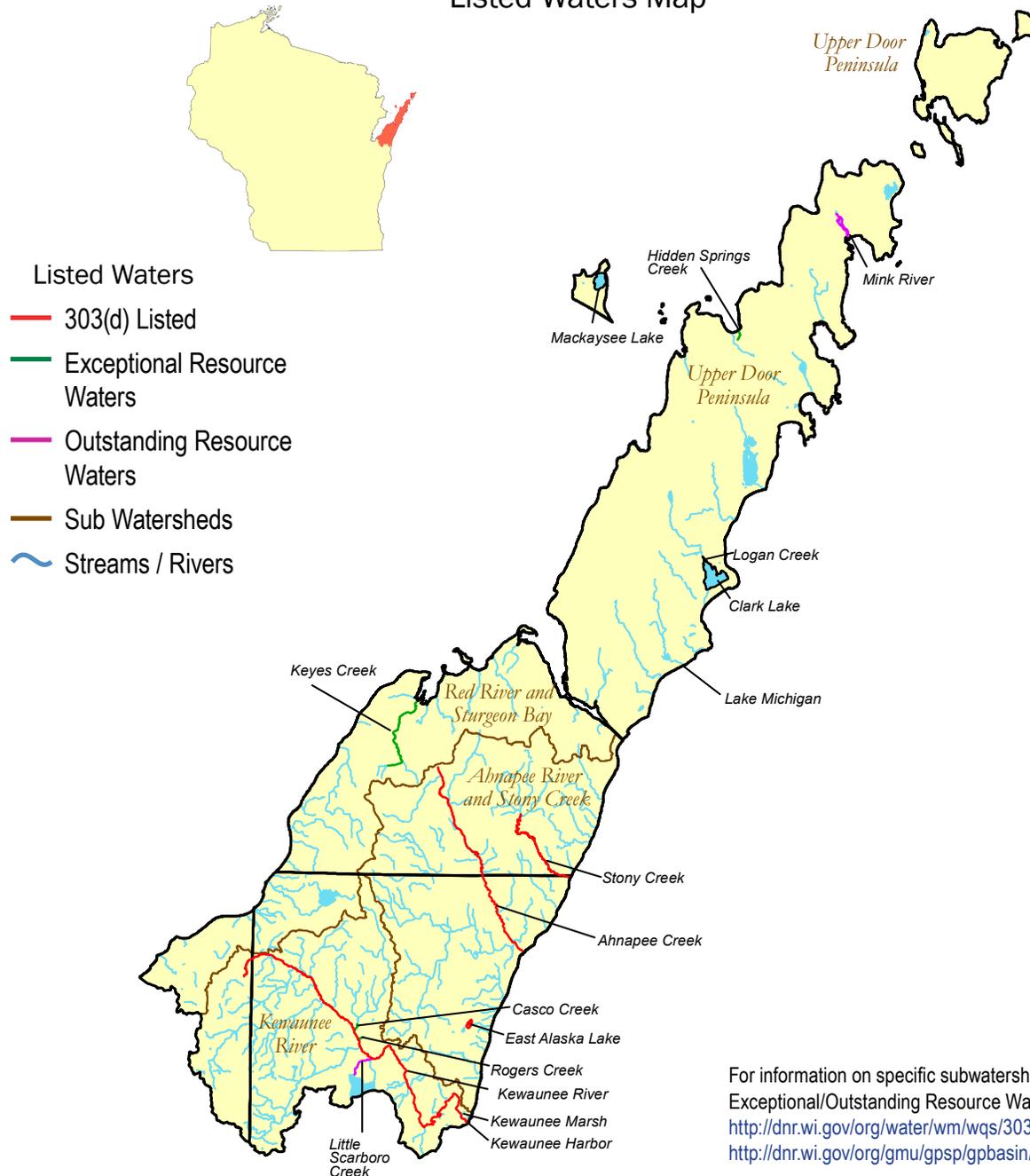
Land Cover Map ⁵.

	Acres	Percent		Acres	Percent
 Pasture Hay	303,201	33.3	 Low Intensity Residential	3,300	0.4
 Deciduous Forest	332,678	36.5	 High Intensity Residential	1,457	0.2
 Row Crops	155,667	17.1	 Evergreen Forest	2,514	0.3
 Open Water	52,465	5.8	 Mixed Forest	4,750	0.5
 Woody Wetlands	20,680	2.3	 Transitional	175	0.0
 Small Grains	61	0	 Urban / Recreational Grasses	463	0.1
 Emergent Herbaceous Wetlands	15,545	1.7	 Quarries / Strip Mines, Gravel Pits	227	0.0
 Commercial/Industrial / Transport	6,790	0.7	 Bare Rock / Sand / Clay	0	0.0
 Grasslands / Herbaceous	11,216	1.2			
			Total Acres	911,189	100

ASSESSMENT OF WATERS ^{6.}

Section 303(d) of the Clean Water Act states that water bodies that are not meeting their designated uses (fishing, swimming), due to pollutants, must be placed on this list. The 303(d) impaired Waters List is updated every two years. Wisconsin is required to develop TMDLs, Total Maximum Daily Loads, for water bodies on this list. Exceptional Resource Waters (ERW) provide valuable fisheries, hydrologically or geologically unique features, outstanding recreational opportunities, unique environmental settings, and which are not significantly impacted by human activities may be classified as exceptional resource waters. Outstanding Resource waters (ORW) and ERW differ in that ORW do not have an associated point source discharge, where ERWs do.

Listed Waters Map



303-D LISTED WATERS

303(d) Waters	Mercury	PCBs	Aquatic Toxicity	Fish Consumption Advisory Pollutant Unspecified	Metals Other than Mercury	(Wildlife) Cause Unknown - Biological Integrity	Degraded Habitat	Sediment
Ahnapee River		x						
Clark Lake		x						
East Alaska Lake	x							
Green Bay - South of Marinette and it's tributaries including the Menominee, Oconto, Fox & Peshtigo Rivers from their mouths to the first dam	x							
Kewaunee Harbor			x	x	x			
Kewaunee Marsh			x		x	x		
Kewaunee River		x						
Lake Michigan	x	x						
Mackaysee Lake	x							
Stony Creek							x	x

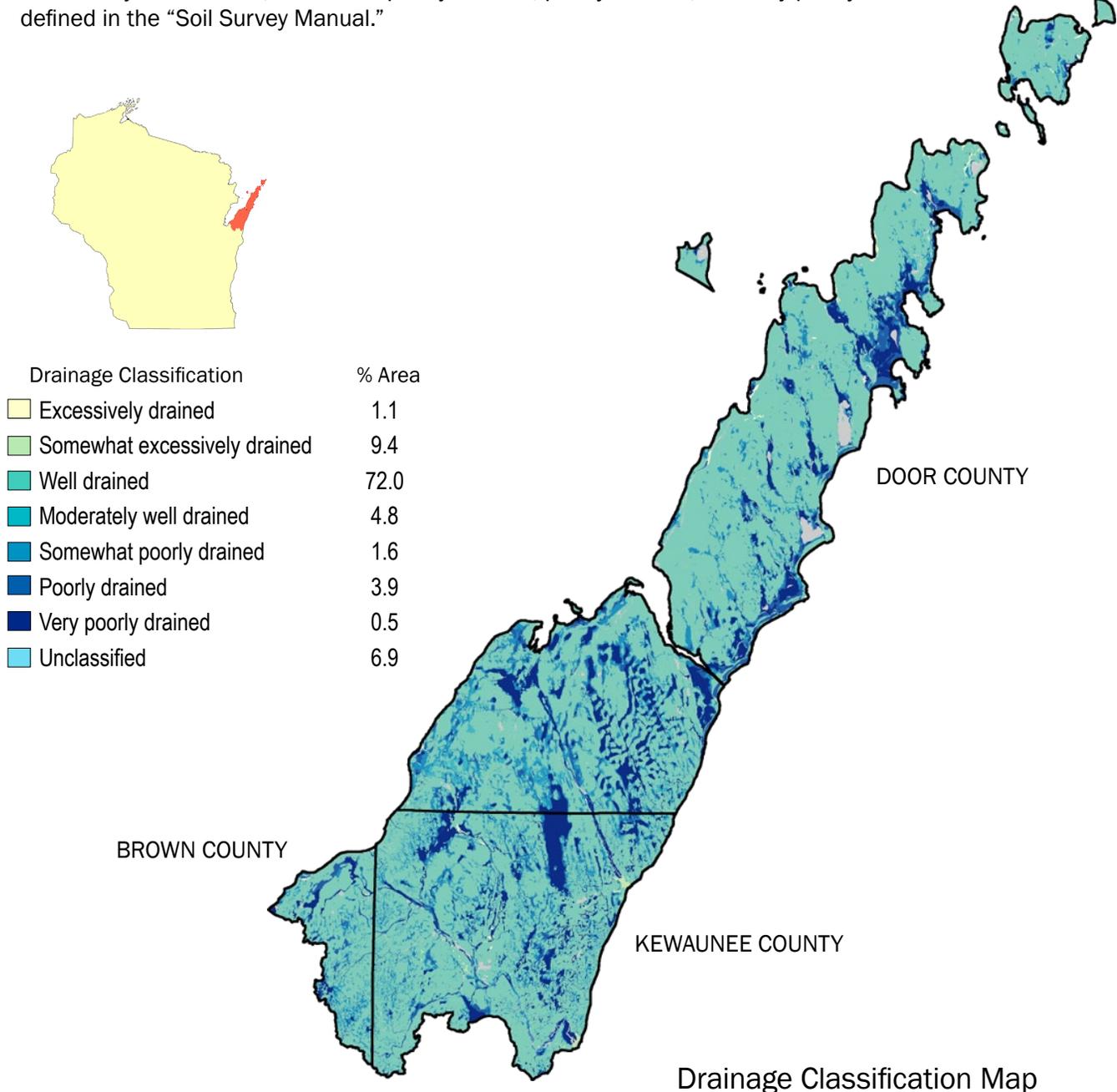
SOILS ^{7.}

The soils in this watershed have formed on a variety of different landforms and from a variety of different parent materials.

The majority of the watershed is a moraine of both the Holy Hill and Kewaunee Formations (Green Bay and Lake Michigan Lobes) deposited during the Late Wisconsinian Glaciation. Much of the landscape is an undulating bedrock-controlled till plain with karst topography that is the result of dissolution of the underlying limestone or dolomite bedrock by surface water or groundwater. The soils formed in brown to reddish-brown calcareous sandy loam to clay till and have surface textures that include loam and silt loam. These soils are generally moderately well drained, but range from well drained to somewhat poorly drained, and typically have perched water tables. They have moderate to slow permeability and moderate to high available water capacity. The major river valleys have soils formed in sandy and loamy alluvium, range from moderately well drained to very poorly drained, and have areas subject to periodic flooding. Along the coast of Lake Michigan and Green Bay shoreline deposition formed beaches, beach ridges, terraces, spits, fans, dunes, swamps, and sloughs. These soils are sandy or silty, range from excessively drained to poorly drained, and typically have apparent water tables. They have rapid to slow permeability and low to very high available water capacity. Scattered throughout the watershed are wetlands with very poorly drained and poorly drained soils that formed in non-acid muck, loamy till, or sandy to silty lacustrine deposits.

DRAINAGE CLASSIFICATION

Drainage class (natural) refers to the frequency and duration of wet periods under conditions similar to those under which the soil formed. Alterations of the water regime by human activities, either through drainage or irrigation, are not a consideration unless they have significantly changed the morphology of the soil. Seven classes of natural soil drainage are recognized—excessively drained, somewhat excessively drained, well drained, moderately well drained, somewhat poorly drained, poorly drained, and very poorly drained. These classes are defined in the “Soil Survey Manual.”



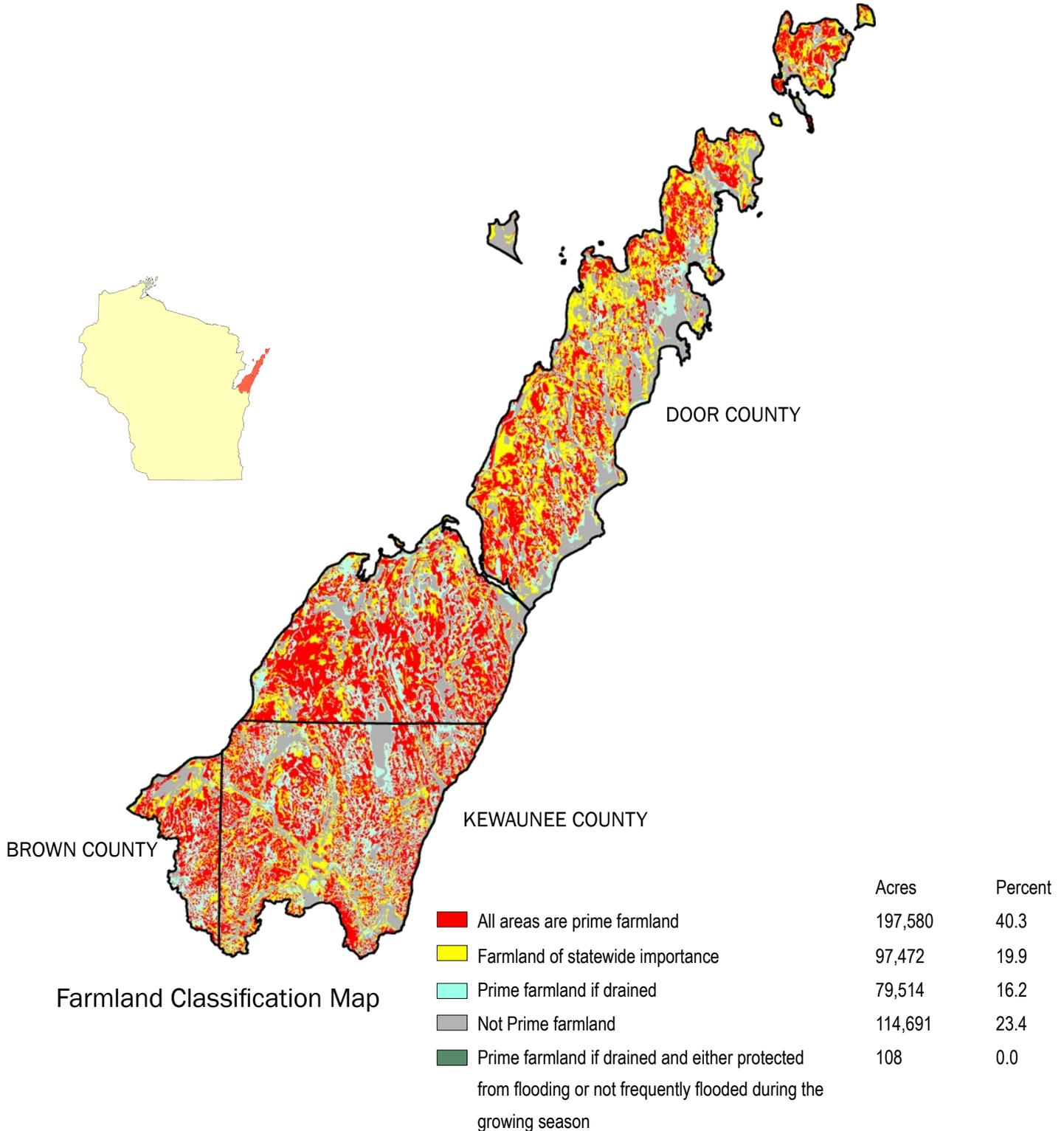
Drainage Classification Map

Visit the online Web Soil Survey at <http://websoilsurvey.nrcs.usda.gov> for official and current USDA soil information as viewable maps and tables.

Visit the Soil Data Mart at <http://soildatamart.usda.gov> to download SSURGO certified soil tabular and spatial data.

FARMLAND CLASSIFICATION

Farmland classification identifies map units as prime farmland, farmland of statewide importance, farmland of local importance, or unique farmland. Farmland classification identifies the location and extent of the most suitable land for producing food, feed, fiber, forage, and oilseed crops. NRCS policy and procedures on prime and unique farmlands are published in the Federal Register, Vol. 43, No 21, January 31, 1978.

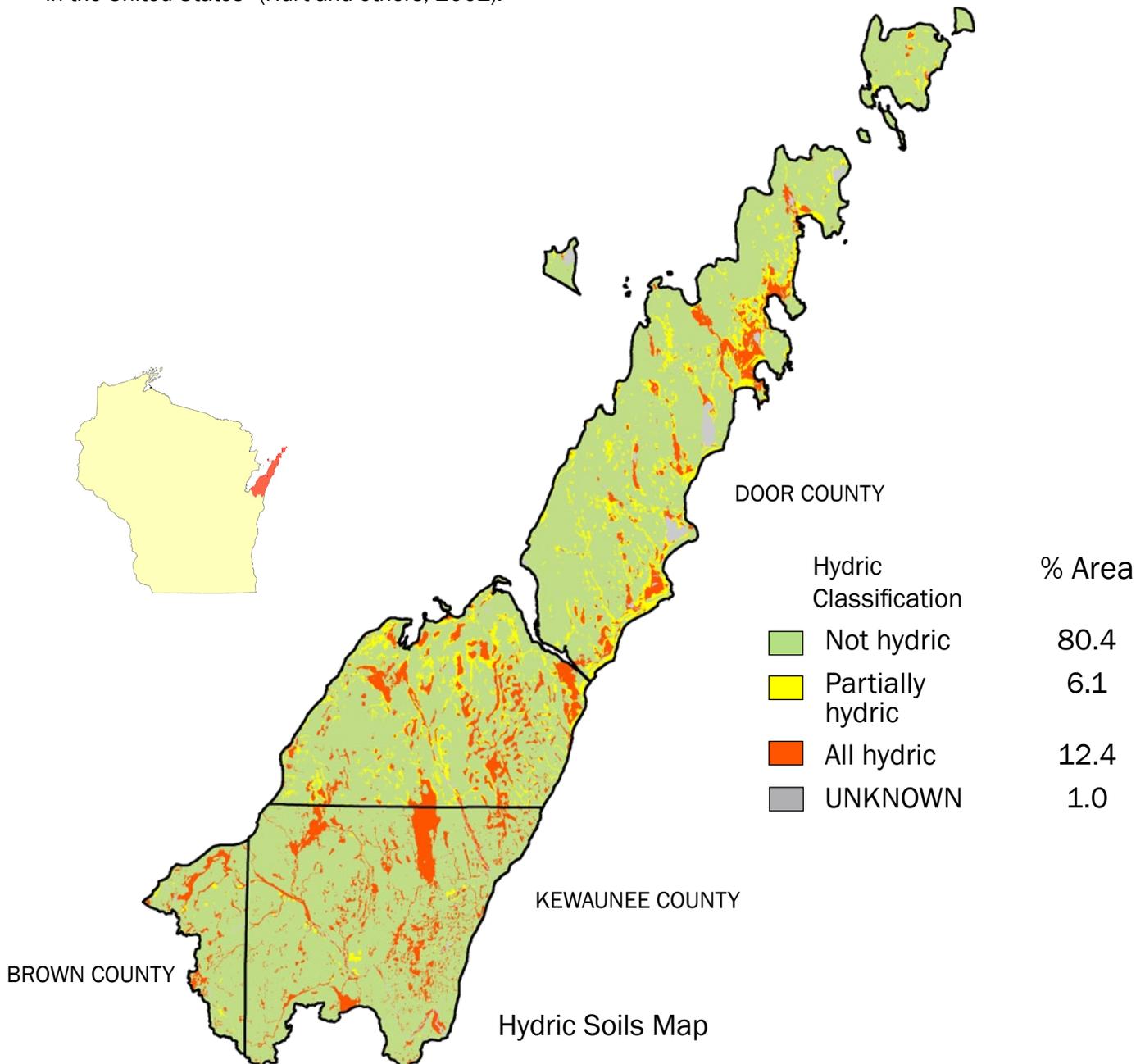


Farmland Classification Map

HYDRIC SOILS

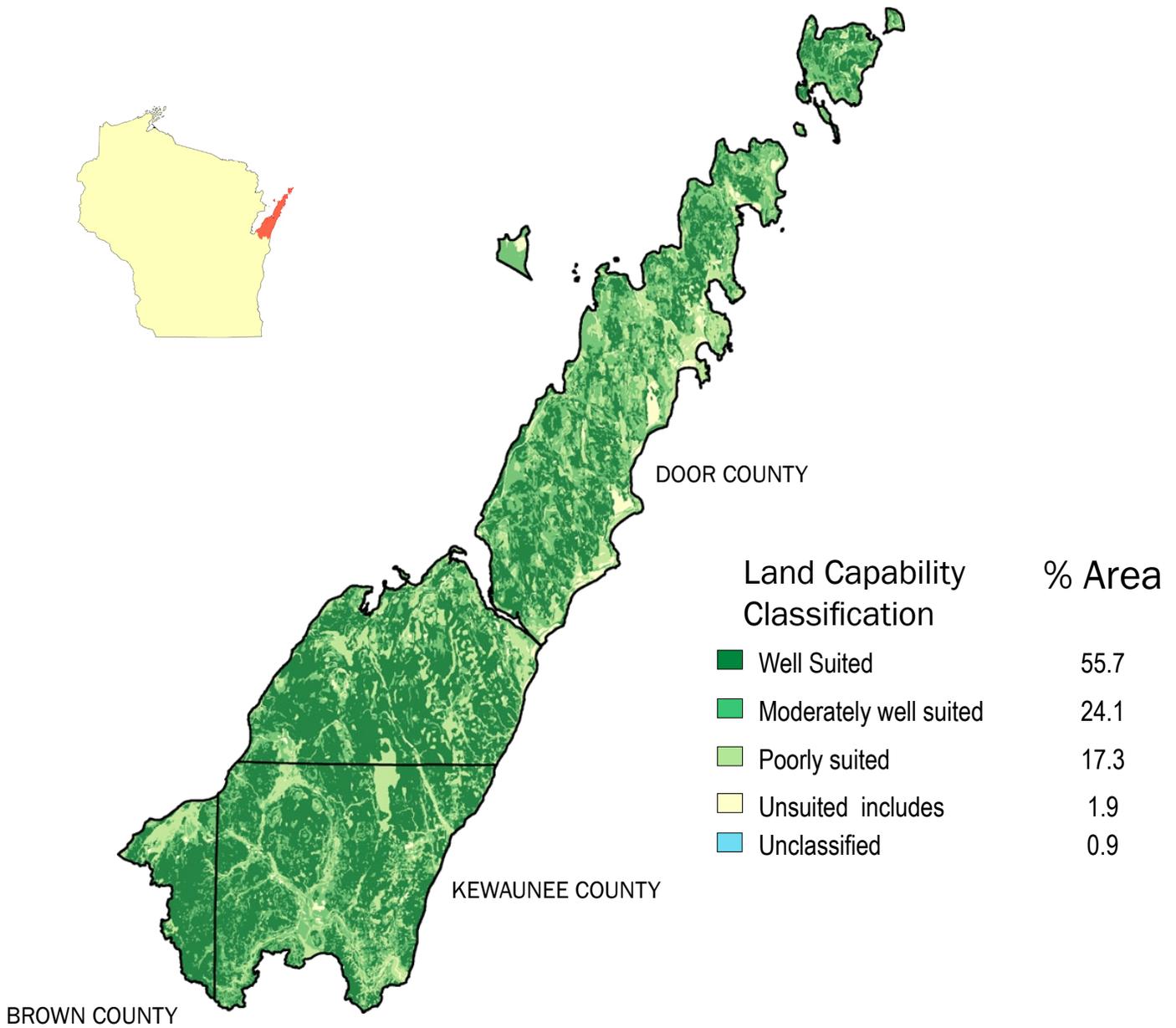
This rating provides an indication of the proportion of the map unit that meets criteria for hydric soils. Map units that are dominantly made up of hydric soils may have small areas, or inclusions of non-hydric soils in the higher positions on the landform, and map units dominantly made up of non-hydric soils may have inclusions of hydric soils in the lower positions on the landform.

Hydric soils are defined by the National Technical Committee for Hydric Soils (NTCHS) as soils that formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part (Federal Register 1994). These soils, under natural conditions, are either saturated or inundated long enough during the growing season to support the growth and reproduction of hydrophytic vegetation. If soils are wet enough for a long enough period of time to be considered hydric, they should exhibit certain properties that can be easily observed in the field. These visible properties are indicators of hydric soils. The indicators used to make on site determinations of hydric soils are specified in "Field Indicators of Hydric Soils in the United States" (Hurt and others, 2002).



LAND CAPABILITY CLASSIFICATION

Land capability classification shows, in a general way, the suitability of soils for most kinds of field crops. Crops that require special management are excluded. The soils are grouped according to their limitations for field crops, the risk of damage if they are used for crops, and the way they respond to management. The criteria used in grouping the soils do not include major and generally expensive land forming that would change slope, depth, or other characteristics of the soils, nor do they include possible but unlikely major reclamation projects. Capability classification is not a substitute for interpretations designed to show suitability and limitations of groups of soils for rangeland, for forestland, or for engineering purposes.



Land Capability Classification Map

RESOURCE CONCERNS

Excessive nutrients and harmful levels of pathogens in groundwater are the largest resource concerns in the watershed. Areas of thin soils over fractured limestone or dolomite bedrock with many sinkholes can result in nearly direct conduits to groundwater. Consequently, manure storage, nutrient management, wastewater treatment strips, and well decommissioning are important agricultural conservation practices. Excessive nutrients and harmful levels of pathogens in surface water are also concerns.

Lake Michigan shoreline areas provide important spawning habitat for many fish species, including whitefish. The watershed also includes several State Natural Areas due to the number of unique, threatened, or endangered plant species found in the area. Development and invasive species are threats to the fisheries and native plant communities in the watershed.

PRS AND OTHER DATA ⁸.

The following table is a product of the NRCS Performance Results System (PRS) and reflects progress made over the past several years on several key areas of conservation. The PRS provides support for reporting the development and delivery of conservation programs, analyzing and reporting progress, and management applications by NRCS and conservation partners. The public can generate additional reports by visiting the following link: <http://ias.sc.gov.usda.gov/prsreport2006/>

PRS PERFORMANCE MEASURES



PRS Performance Measures	FY99	FY00	FY01	FY02	FY03	FY04	FY05	TOTAL
Total Conservation Systems Planned (acres)	0	4,766	1,174	7,408	5,983	N/A	8,606	27,937
Total Conservation Systems Applied (acres)	0	1,889	643	7,408	7,160	N/A	8,538	25,638
Conservation Practices								
Total Waste Management (313) (numbers)	0	9	3	0	5	7	2	26
Riparian Forest Buffers (391) (acres)	0	4	8	0	70	0	0	82
Erosion Control Total Soil Saved (tons/year)	35	10,192	2,195	2,536	3,606	N/A	N/A	18,564
Total Nutrient Management (590) (Acres)	0	0	0	7,145	5,874	1,972	5,917	20,908
Pest Management Systems Applied (595A) (Acres)	0	0	0	0	4,498	0	382	4,880
Prescribed Grazing 528a (acres)	0	0	0	0	109	38	0	147
Tree & Shrub Establishment (612) (acres)	577	395	412	314	141	119	59	2,017
Residue Management (329A-C) (acres)	0	60	25	809	739	323	169	2,125
Total Wildlife Habitat (644 - 645) (acres)	805	293	435	610	543	12	1	2,699
Total Wetlands Created, Restored, or Enhanced (acres)	0	8	1	21	8	0	41	79
Acres Enrolled in Farmbill Programs								
Conservation Reserve Program	0	1,004	404	0	42	N/A	69	1,519
Wetlands Reserve Program	0	0	0	0	0	N/A	41	41
Environmental Quality Incentives Program	0	1,889	0	1,047	5,956	N/A	5,727	14,619
Wildlife Habitat Incentive Program	0	0	0	0	0	N/A	0	0
Farmland Protection Program	0	0	0	0	0	N/A	0	0

9.

CENSUS AND SOCIAL DATA (RELEVANT)

There are 1,584 farms in the watershed, covering a total of 268,570 acres. Average farm size in the watershed is 170 acres compared to a statewide average of 201 acres in Wisconsin. Please refer to the tables below for more detailed information or visit the web site of the Wisconsin Office of the National Agricultural Statistics Service at: http://www.nass.usda.gov/Statistics_by_State/Wisconsin/index.asp

2002 Ag Census Data		Brown	Door	Kewaunee	Total
	Farms (number)	100	872	612	1,584
	Land in farms (acres)	17580	134425	116565	268,570
	Total cropland (acres)	15231	98670	95364	209,265
	Irrigated land (acres)	35	828	119	982
	Principal operator by primary occupation - Farming (number)	63	472	405	940
Farms by Size	Farms by size - 1 to 10 acres	13	44	18	74
	Farms by size - 11 to 49 acres	31	262	149	442
	Farms by size - 50 to 179 acres	29	345	250	624
	Farms by size - 180 to 499 acres	20	173	153	346
	Farms by size - 500 to 999 acres	3	38	31	72
	Farms by size - 1,000 acres or more	3	11	12	26
Livestock and Poultry	Livestock and poultry - Cattle and calves inventory (farms)	52	305	326	683
	Livestock and poultry - Cattle and calves inventory - Beef cows (farms)	11	102	70	183
	Livestock and poultry - Cattle and calves inventory - Milk cows (farms)	26	150	187	363
	Livestock and poultry - Hogs and pigs inventory (farms)	5	29	25	59
	Livestock and poultry - Sheep and lambs inventory (farms)	2	31	9	42
	Livestock and poultry - Layers 20 weeks old and older inventory (farms)	4	50	21	74
	Livestock and poultry - Broilers and other meat-type chickens sold (farms)	2	13	5	20
Selected Crops Harvested	Selected crops harvested - Corn for grain (acres)	2864	12797	16069	31,730
	Selected crops harvested - Corn for silage or greenchop (acres)	2169	6333	14428	22,930
	Selected crops harvested - Wheat for grain, all (acres)	870	8079	5264	14,212
	Selected crops harvested - Wheat for grain, all - Winter wheat for grain (acres)	0	8079	0	8,079
	Selected crops harvested - Wheat for grain, all - Spring wheat for grain (acres)	0	0	0	0
	Selected crops harvested - Oats for grain (acres)	488	5360	4516	10,363
	Selected crops harvested - Barley for grain (acres)	51	775	788	1,615
	Selected crops harvested - Soybeans for beans (acres)	1882	8689	8702	19,273
	Selected crops harvested - Forage - land used for all hay and all haylage, grass silage, and greenchop (see text) (acres)	5345	27654	34780	67,779
	Selected crops harvested - Vegetables harvested for sale (see text) (acres)	77	9471	1529	11,077
	Selected crops harvested - Land in orchards (acres)	16	3005	101	3,122

POPULATION ETHNICITY ^{10.}

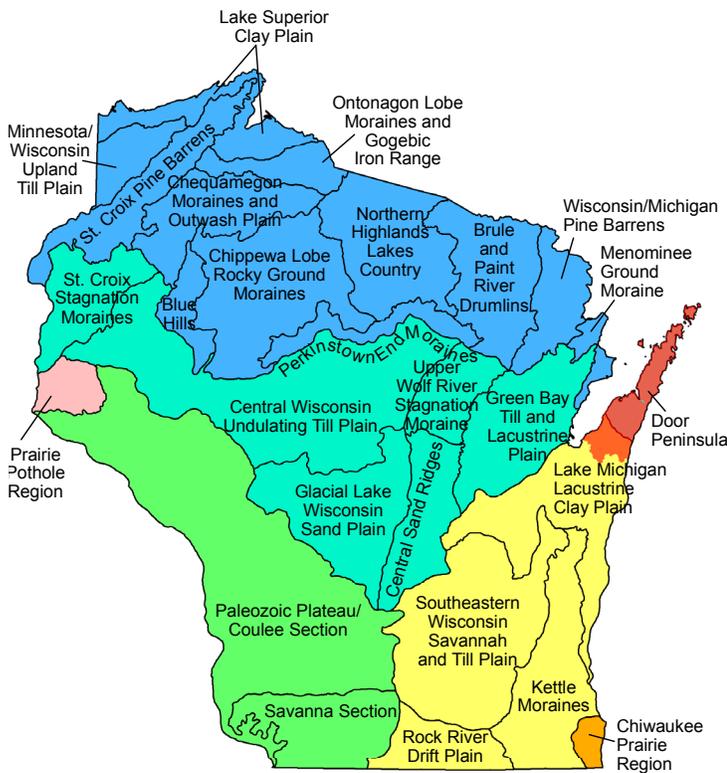
Total Population = 45,704
 Urban population = 11,695
 Rural Population = 34,010
 White alone = 44,692
 Hispanic or Latino = 420
 Two or more races = 353
 Black or African American alone = 69
 Some other race alone = 200
 American Indian and Alaska Native alone = 248
 Asian Alone = 147
 Native Hawaiian and Other Pacific Islander alone = 0

URBAN POPULATION ^{11.}

Name	1990	2000	2004	Median Income*
Ephraim	261	353	325	52,500
Luxemburg	1,151	1,935	2,211	45,000
Casco	544	572	564	44,583
Egg Harbor	183	250	263	41,667
Forestville	470	429	400	39,167
Kewaunee	2,750	2,806	2,877	36,420
Algoma	3,353	3,357	3,197	35,029
Sister Bay	675	886	879	33,224
Sturgeon Bay	9,176	9,437	9,180	31,935



ECOLOGICAL LANDSCAPES ¹².
GENERAL DESCRIPTIONS



DOOR PENINSULA

Gently sloping well drained silty and loamy soils over bedrock with common wetlands and swamps. Mostly dairy and beef farms with some cash grain, grazing land, and fruit farms. Mixed deciduous and coniferous forest along the Lake Michigan shoreline. Significant development pressure on the Green Bay shoreline. Primary resource concerns are groundwater and surface water quality, nutrient management, cropland and construction site erosion, and recreational use.

LAKE MICHIGAN LACUSTRINE CLAY PLAIN

Gently sloping till plain with moderately well drained to somewhat poorly drained loamy and clayey soils, and poorly drained organic soils in the depressions. Lake Winnebago and Lake Michigan shorelines and significant wetland complexes are included. Cropland is the major land use with scattered grazing land and deciduous and coniferous forestland. Large dairy farms and urban development in the Fox Valley and along the Lake Michigan shoreline and State Highway 41 have a significant influence on the area. Primary resource concerns are cropland and construction site erosion, nutrient management, surface water quality, stormwater management, and wetland habitat management and restoration.

WATERSHED ASSESSMENT

To assess a watershed’s agricultural nonpoint pollution potential, a model was used to generate a watershed assessment score relative to other 8-digit watersheds in Wisconsin. Factors used in the model include acres of cropland, acres of highly erodible land (HEL), and the number of animal units in the watershed. Scores ranged from 0.0 (lowest conservation need) to 24.2 (highest conservation need). The scores may be useful in determining funding allocations on a watershed basis for agricultural nonpoint pollution control initiatives. The model does not attempt to measure pollution levels and does not reflect pollution potential from point sources of pollution or other nonpoint pollution sources beyond the above criteria.

The watershed assessment score for the Door - Kewaunee Watershed is 4.1.

WATERSHED PROJECTS, STUDIES, MONITORING, ETC.

Since 1982 there have been three Wisconsin Department of Natural Resources Priority Watershed projects in the Door-Kewaunee watershed that provided cost-sharing and technical assistance to landowners for the implementation of best management practices (BMPs). The Kewaunee River and Upper Door Peninsula projects are completed, as is the sign-up for the Red River-Little Sturgeon Bay project, where implementation continues in 2008. The watershed projects were carried out with county land conservation/soil and water conservation departments and other partners.

A large portion of the watershed, south and west of Sturgeon Bay, is within the project area of the Conservation Reserve Enhancement Program (CREP). CREP is local, state, and federal partnership effort that builds upon the USDA Conservation Reserve Program (CRP). Practices such as filter strips, riparian buffers, and grassed waterways are available to landowners to agree to a fifteen year agreement that involve installation, practice, and annual payments with the option of perpetual easement.

The WDNR conducts water quality monitoring in the watershed each year. The WDNR Surface Water Data Viewer (SWDV) is an online interactive mapping tool with multiple water-related datasets.

(<http://dnrmaps.wisconsin.gov/imf/imf.jsp?site=SurfaceWaterViewer>) The Discovery Farms program also conducts economic and environmental Best Management Practice (BMP) research and monitoring on a dairy farm in the watershed.

PARTNER GROUPS

- Discovery Farms
- Door County Environmental Council <http://www.dcec-wi.org/>
- River Alliance of Wisconsin <http://www.wisconsinrivers.org/>
- Trout Unlimited
 - Green Bay Chapter www.greenbaytu.com
 - Lakeshore Chapter
- USDA Farm Service Agency <http://www.fsa.usda.gov/wi/news/default.asp>,
- US Fish and Wildlife Service <http://www.fws.gov/midwest>
- USDA-Natural Resources Conservation Service <http://www.wi.nrcs.usda.gov>
- University of Wisconsin Cooperative Extension <http://www.uwex.edu/ces/> and <http://basineducation.uwex.edu>
- Wisconsin Department of Agriculture, Trade, and Consumer Protection <http://www.datcp.state.wi.us>
- Wisconsin Department of Natural Resources <http://dnr.wi.gov/>
- Wisconsin Land and Water Conservation Association (County Land Conservation Committee organization) www.wlwca.org
 - Land and Water Conservation Directory <http://datcp.state.wi.us/arm/agriculture/land-water/conservation/pdf/ar-pub-119-2007.pdf>

FOOTNOTES/BIBLIOGRAPHY

All data is provided “as is.” There are no warranties, express or implied, including the warranty of fitness for a particular purpose, accompanying this document. Use for general planning purposes only.

1. Introduction and the description of resource concerns of the Door - Kewaunee Watershed 1. “The State of the Lakeshore Basin” August 2001, WDNR <http://www.dnr.state.wi.us/org/gmu/>
2. Common Resource Area (CRA) Map delineations are defined as geographical areas where resource concerns, problems, or treatment needs are similar. It is considered a subdivision of an existing Major Land Resource Area (MLRA) map delineation or polygon. Landscape conditions, soil, climate, human considerations, and other natural resource information are used to determine the geographic boundaries of a Common Resource Area. Online linkage: <http://soils.usda.gov/survey/geography/cra.html>.
3. The relief map was created using the National Elevation Dataset (NED) 1 arc second, approximately 30 meters, digital elevation model (DEM) raster product assembled by the U.S. Geological Survey (USGS). A hillshade grid was derived from the 30m DEM and draped over the DEM to symbolize the map and create a 3-D effect. The data was downloaded from the NRCS Geospatial Data Gateway <http://datagateway.nrcs.usda.gov/>. For more information about NED visit <http://ned.usgs.gov/>.
4. Average Annual Precipitation data was originated by Chris Daly of Oregon State University and George Taylor of the Oregon Climate Service at Oregon State University and published by the Water and Climate Center of the Natural Resources Conservation Service in 1998. Annual precipitation data was derived from the climatological period of 1961-1990. Parameter-elevation Regressions on Independent Slopes Model (PRISM) derived raster data is the underlying data set from which the polygons and vectors were created. For more information about PRISM visit http://www.ocs.orst.edu/prism/prism_new.html. Precipitation data was downloaded from the NRCS Geospatial Data Gateway <http://datagateway.nrcs.usda.gov/>.
- 5 The Land Use/Land Cover data was generated from the National Land Cover Dataset (NLCD) compiled from Landsat satellite TM imagery (circa 1992) with a spatial resolution of 30 meters and supplemented by various ancillary data (where available). The data was assembled by the USGS and published in June of 1999. The analysis and interpretation of the satellite imagery was conducted using very large, sometimes multi-state image mosaics. For more information about NLCD visit <http://edcwww.cr.usgs.gov/programs/lccp/nationallandcover.html>. The data was downloaded from the NRCS Geospatial Data Gateway <http://datagateway.nrcs.usda.gov/>.
6. 303(d) listed streams were derived from the Water Quality Standards Section of the Wisconsin Department of Natural Resources (WDNR) website: [http://dnr.wi.gov/org/water/wm/wqs/303d/Lists303d/Approved_2004_303\(d\)_list.pdf](http://dnr.wi.gov/org/water/wm/wqs/303d/Lists303d/Approved_2004_303(d)_list.pdf). For more information about the individual sub-watersheds visit <http://dnr.wi.gov/org/gmu/gpsp/gpbasin/index.htm>. For a list and explanation of Outstanding and Exceptional Resource Waters visit: <http://dnr.wi.gov/org/water/wm/wqs/orwerw/>.
7. Soil Survey Geographic Database (SSURGO) tabular and spatial data were downloaded for the following surveys:
 - Brown Co., WI (WI009) Published 20060303
 - Door Co., WI (WI029) Published 20060303
 - Kewaunee Co. WI (WI061) Published 20060303

Metadata and SSURGO data for the aforementioned surveys were downloaded from the NRCS Soil Data Mart at <http://soildatamart.nrcs.usda.gov>. Component and layer tables from the tabular data were linked to the spatial data to derive the soil classifications found in this section. Visit the online Web Soil Survey at <http://websoilsurvey.nrcs.usda.gov> for official and current USDA soil information as viewable maps and tables.

8. Performance Results System (PRS) data was extracted from the PRS homepage by year, conservation systems and practices and Hydrologic Unit Code (HUC) level. HUC level reporting was not available where N/A is listed. For more information on these and other performance reports visit <http://ias.sc.egov.usda.gov/prshome/>.

9. Ag Census data were downloaded from the National Agricultural Statistics Service (NASS) Website and the data were adjusted by percent of HUC in the county. For more information on individual census queries visit the NASS website at <http://www.nass.usda.gov/>.

10. Population ethnicity data were extracted from the Census 2000 Summary File 3 compiled by the U.S. Census Bureau. The data were adjusted by Block Group percentage in the HUC. Population items were selected from the SF30001 table. For more information on census data and definitions visit <http://www.census.gov/Press-Release/www/2002/sumfile3.html>.

11. Urban population and median household income data were derived from the American FactFinder assembled by the U.S. Census Bureau. American FactFinder is a quick source for population, housing, income and geographic data. For other census items and trends visit http://factfinder.census.gov/home/saff/main.html?_lan

12. Level III and IV Ecoregions Regions of Wisconsin map and descriptions were derived from electronic coverages available from Wisconsin DNR, Bureau of Integrated Science Services Branch in cooperation with the U.S Environmental Protection Agency. For more information visit ftp://ftp.epa.gov/wed/ecoregions/wi/wi_eco_pg.pdf