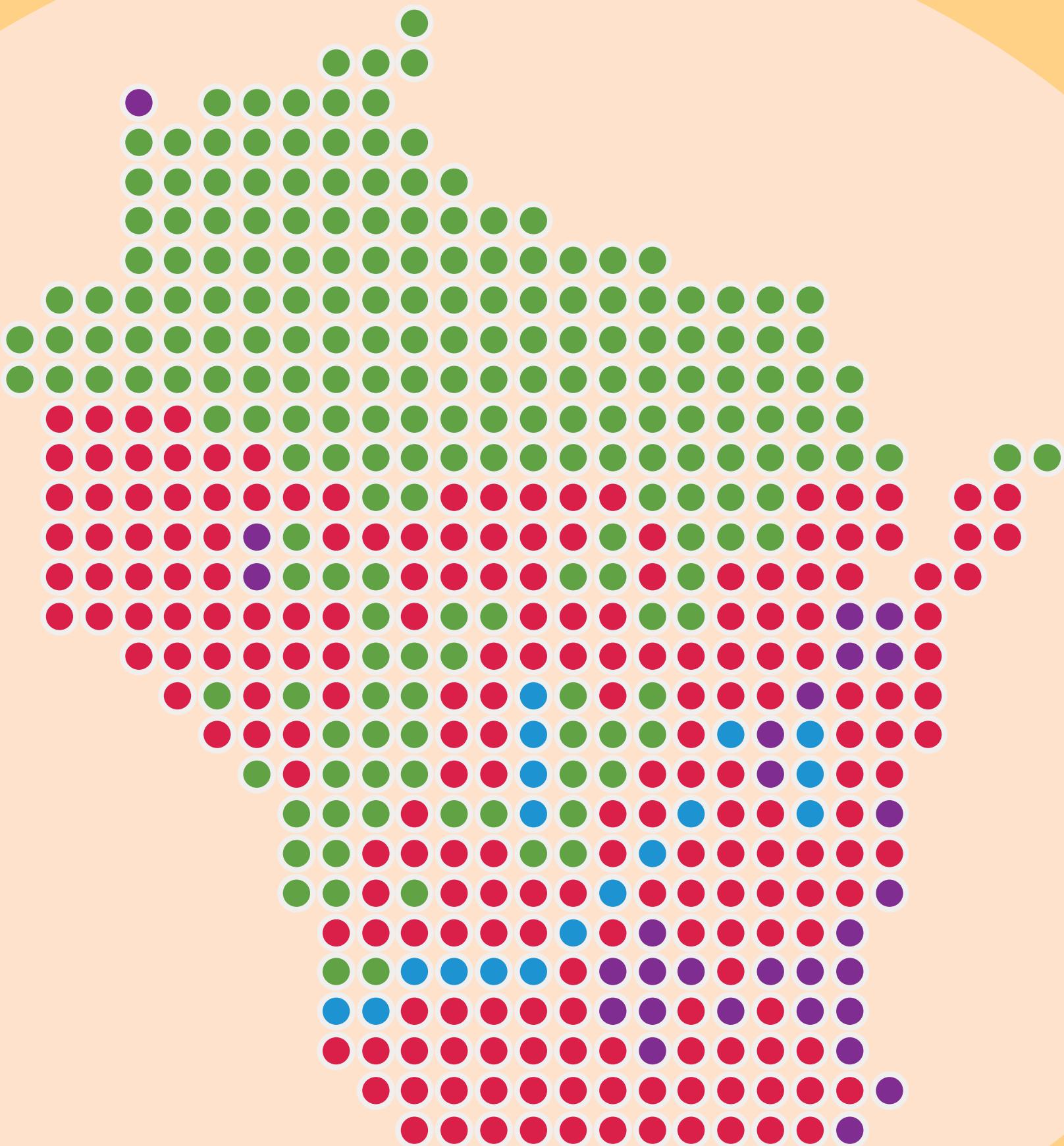
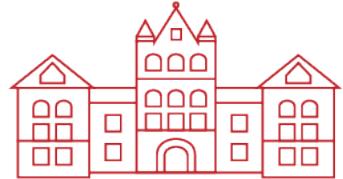


REENVISIONED ATLAS OF WISCONSIN

Carto Production and Project Management, Spring 2024



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The Reenvisioned Atlas of Wisconsin

Dedicated to the Wisconsin Idea

This Reenvisioned Atlas of Wisconsin is the product of the Geography 495/570 Cartographic Production and Project Management course during the Spring 2024 semester. Students acting as atlas team members and topic leads pitched, managed, coordinated and produced the diverse Wisconsin topics covered in this abridged atlas. The course is modeled after a real-world cartographic production environment where students are not simply learners but are team members collaborating towards a common project goal. This Atlas is the cumulation of their hard work and dedication.



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STATE PARKS OF WISCONSIN

The History

In 1909, John Nolen, a landscape architect, drafted a plan for a state park system in Wisconsin. The document provided guidelines and recommended four sites to be included in Wisconsin's state park system. Although this document was published in 1909, the Wisconsin State Legislature established the first state park, "The State Park," in 1878. This location was not included in the four site recommendations. More than 100 years later, today Wisconsin has 69 state parks,

41 state trails, and over 800 square miles of state forests. Today, the Wisconsin State Park system is run by the Wisconsin Department of Natural Resources (DNR). These parks are important for several reasons, including but not limited to, positive economic impact, community health and well being, and environmental conservation. All Wisconsin DNR properties, including state parks, see over 20 million visits a year. The parks generate roughly 1.5 billion dollars a year in economic activity. Specifically in 2015, they generated over 13,000 local jobs

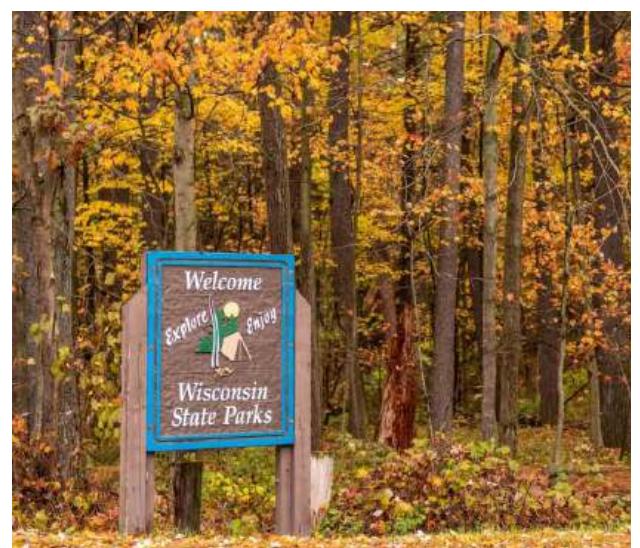


Photo Caption: Picture of welcome sign at a Wisconsin State Park



and \$550 million in income to Wisconsin residents. The state parks and other DNR run properties are very important for travel and tourism to rural areas in Wisconsin and therefore vital to the state's economy. Despite how important the state parks are to the overall wellbeing of Wisconsin, the system has been threatened by politics in recent years. The Governor of Wisconsin has shown intent to sell state lands to developers and to weaken environmental protection laws and regulations.

Weakening environmental protection laws and regulations could irreparably hurt Wisconsin's vast array of native species, including over 1800 plant species and over 650 vertebrates. Additionally, the state parks are an opportunity to regrow Wisconsin's old-growth forests, of which only about 1% currently remain within Wisconsin's forests. It is important environmentally to regrow Wisconsin's old-growth forests so native species can be protected in their natural habitat.

Photo Caption: Picture of Devil's Lake State Park, specifically the Devil's Doorway Trail, during sunset.



Photo Caption: Picture of rocks along the St. Croix River at Interstate State Park

Interstate State Park

Although Wisconsin's state park system was established after Nolen's 1909 proposal, Interstate State Park stands today as Wisconsin's oldest state park established in 1900. Interstate Park was included as one of the four sites recommended in Nolen's proposal. The park is located in Polk County along the 250 mile long St. Croix National Scenic Riverway and includes the Dalles of the St. Croix, a steep-sided gorge on the river. Interstate State Park is also home to a portion of the 1,200 mile long Ice Age National Scenic Trail. Despite being the

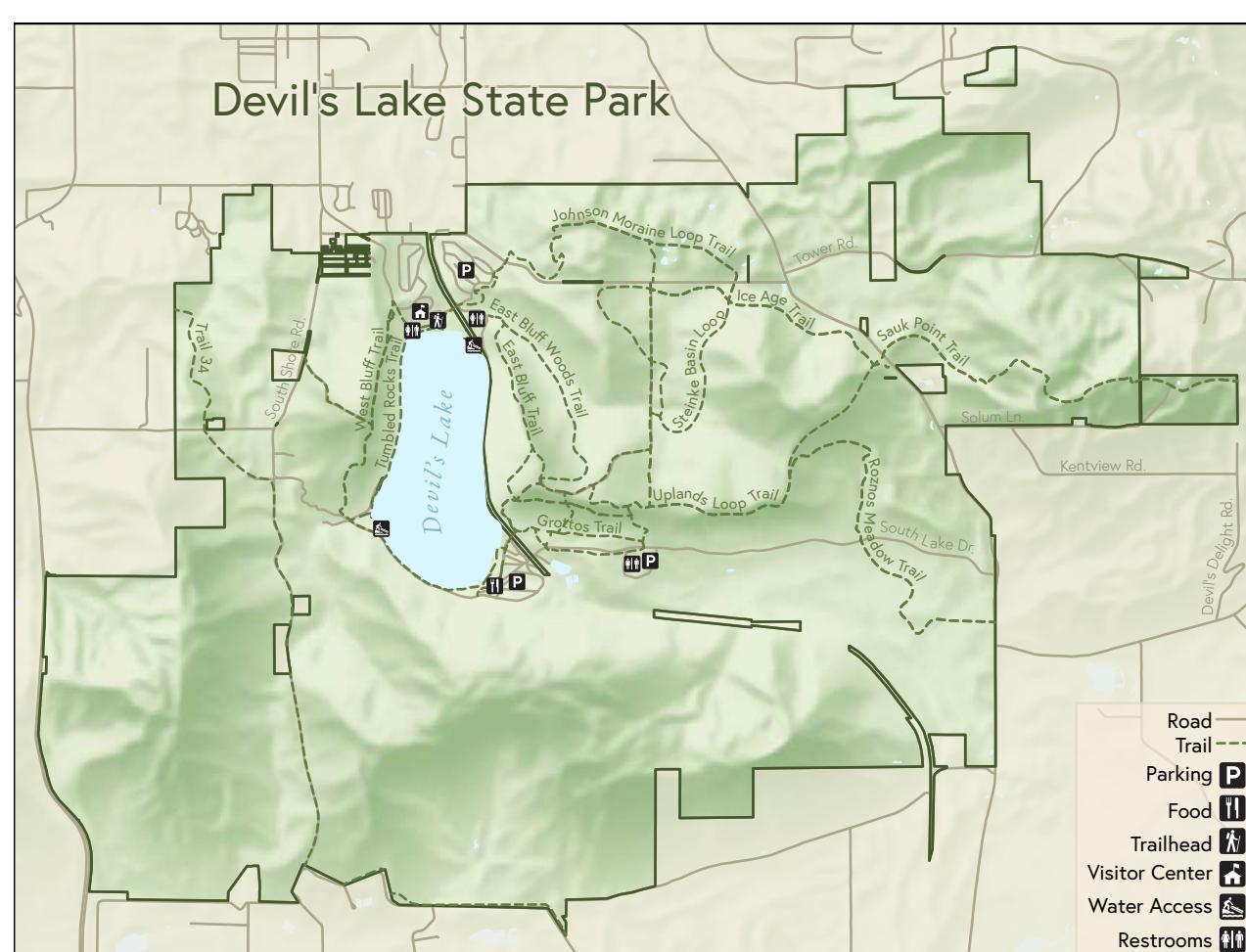
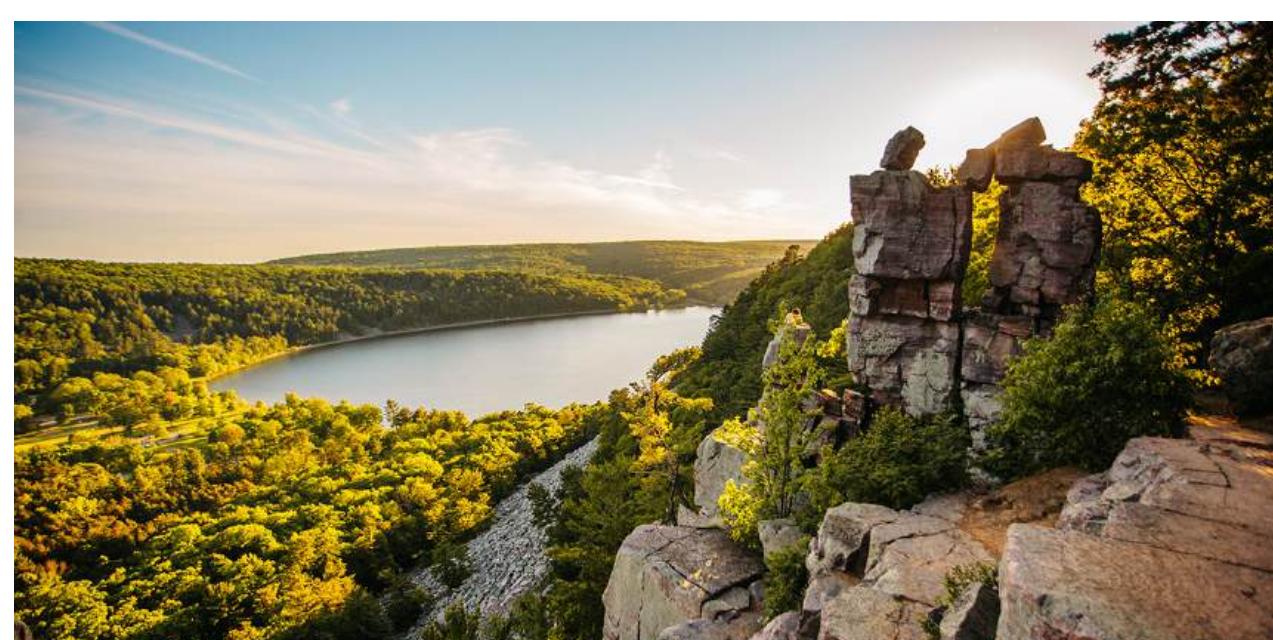


Map caption: Boundaries of the roughly 1,300 acres of Interstate State Park with recreation opportunities labeled and symbolized.

oldest state park in Wisconsin and having some magnificent scenic views, Interstate State Park saw under 300,000 visitors in 2018, only a small portion of the roughly 17 million visitors of DNR properties that year. Nonetheless, the park is famous for its potholes which were created from the glaciers that once covered this part of Wisconsin and Minnesota.

Devil's Lake State Park

In addition to Interstate State Park, Nolen recommended the Devil's Lake site as part of the original four state park sites in his proposal. Devil's Lake was founded in 1911, two years after Nolen's proposal was published, and is Wisconsin's third-oldest state park. Not only that, but Devil's Lake is safely said to be Wisconsin's most popular state park, seeing over 2.6 million visitors in 2018, roughly 15% of all DNR property visitors that year. Furthermore, visitors spent more than \$120 million in 2015. The park features 500ft bluffs that overlook the 360-acre Devil's Lake with roughly 29 miles of hiking trails. These trails include a portion of the Ice Age National Scenic Trail, just like Interstate State Park.



Map caption: Boundaries of the roughly 9,200 acre Devil's Lake State Park in Sauk County, Wisconsin with recreation opportunities labeled and symbolized.



Photo Caption: Picture of Devil's Lake State Park with kayaks

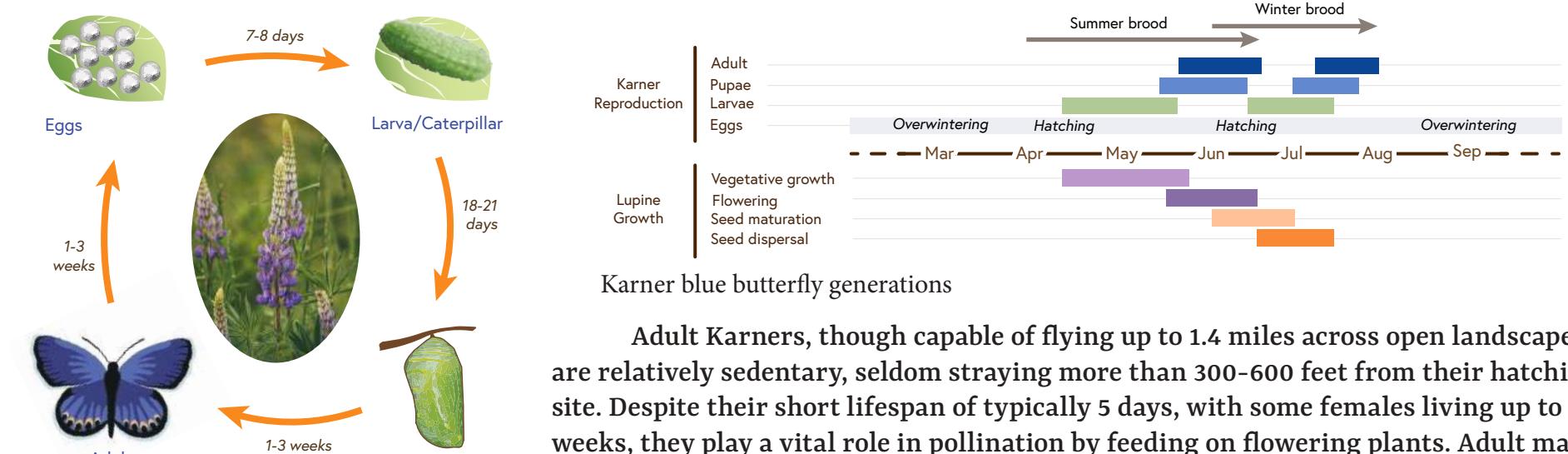
KARNER BLUE BUTTERFLY

Wisconsin's Endangered Beauty



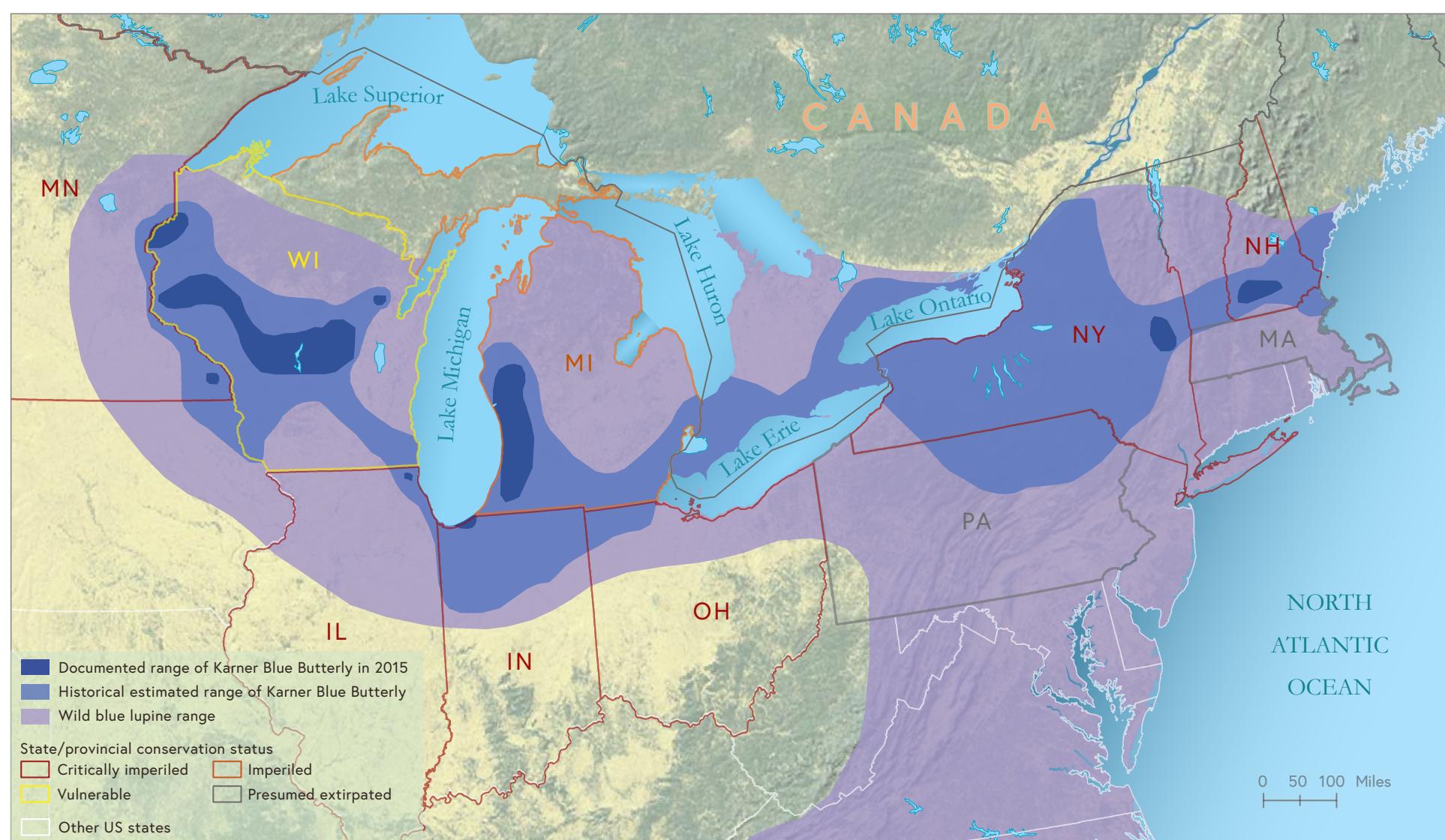
Karner blue butterfly (*Lycaeides melissa samuelis*) is a diminutive species typically with a wingspan of around one inch. They are signified by striking violet-blue wings bordered by black margins and adorned with white fringes in males, while females feature grayish brown color with violet-blue center with marginal orange crescents along the hind wings. The underside of both sexes is gray with a continuous band of orange crescents along the edges, interspersed with black spots encircled by white.

The species undergoes two annual broods of offspring - spring and summer. Larvae emerge in April from overwintered eggs that exclusively feed on wild blue Lupine (*Lupinus perennis*). Therefore, their reproductive success is profoundly reliant on the abundance of Lupine plants. Following pupation at the end of May or early June, adult butterflies emerge from their cocoon-like chrysalis, mate and lay eggs in June on Lupine plants. Their eggs hatch in a week and the caterpillars feed for about three weeks. The second brood emerges from mid-July to early August and their eggs overwinter to hatch again in April.



Wild blue Lupine (center) and the life cycle of Karner blue butterfly

Adult Karners, though capable of flying up to 1.4 miles across open landscapes, are relatively sedentary, seldom straying more than 300-600 feet from their hatching site. Despite their short lifespan of typically 5 days, with some females living up to 2 weeks, they play a vital role in pollination by feeding on flowering plants. Adult males also drink from moist sand. Karners have a unique symbiotic relationship with ants, which attend to their larvae, collecting a sugary secretion in exchange for protection from predators and parasites.



Karner Blue Butterfly and wild blue Lupine range

The Karner blue was identified only in 1944 in Karner, NY. They once soared through the upper midwest's oak savannas and pine barrens ecosystems from western Wisconsin eastward to the Atlantic seaboard. However, its range has seen drastic declines in the 1970s and 1980s and dwindled to scattered pockets in New York, Michigan, Ohio and, notably, Wisconsin, where it remains most prevalent. Although typically found in rural areas and flat grassy ecosystems, Karners' existence is intimately entwined with the well-drained sandy landscapes in the central and northwest Wisconsin where the perennial wild blue Lupines thrive.

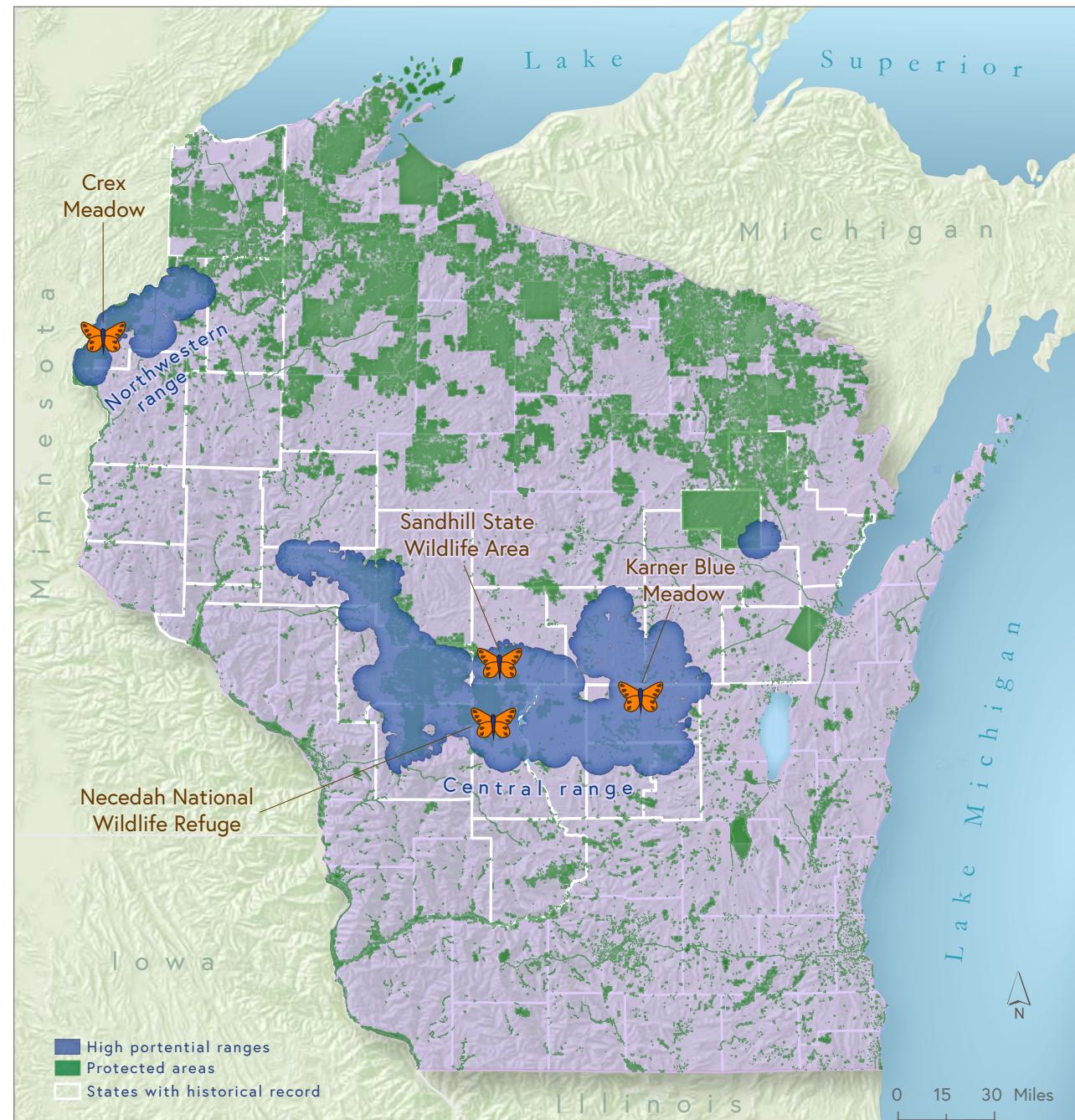
Federally listed as endangered since 1992 by the United States Fish and Wildlife Service (USFWS), their decline is primarily attributed to habitat loss, fire suppression and grazing. They are extremely sensitive to temperature and precipitation changes. Other rare species like frosted elfin, phlox moth, persius dusky wing, prairie fameflower, and the western slender glass lizard often co-occur with Karners, emphasizing the need for conservation efforts.

In Wisconsin's natural history, Karner blue, often confused as the Melissa Blue, holds a unique place. While it wasn't recognized in the 1970 book Butterflies of Wisconsin, records of the Northern Blue may have actually referred to this species. Over time, however, the decline of the Karner blue in Wisconsin has become unmistakable, primarily due to loss of suitable habitat with Lupine, caused by land clearing for urbanization and agriculture, fire suppression, and off-road vehicle use ultimately contributing to its endangered status.

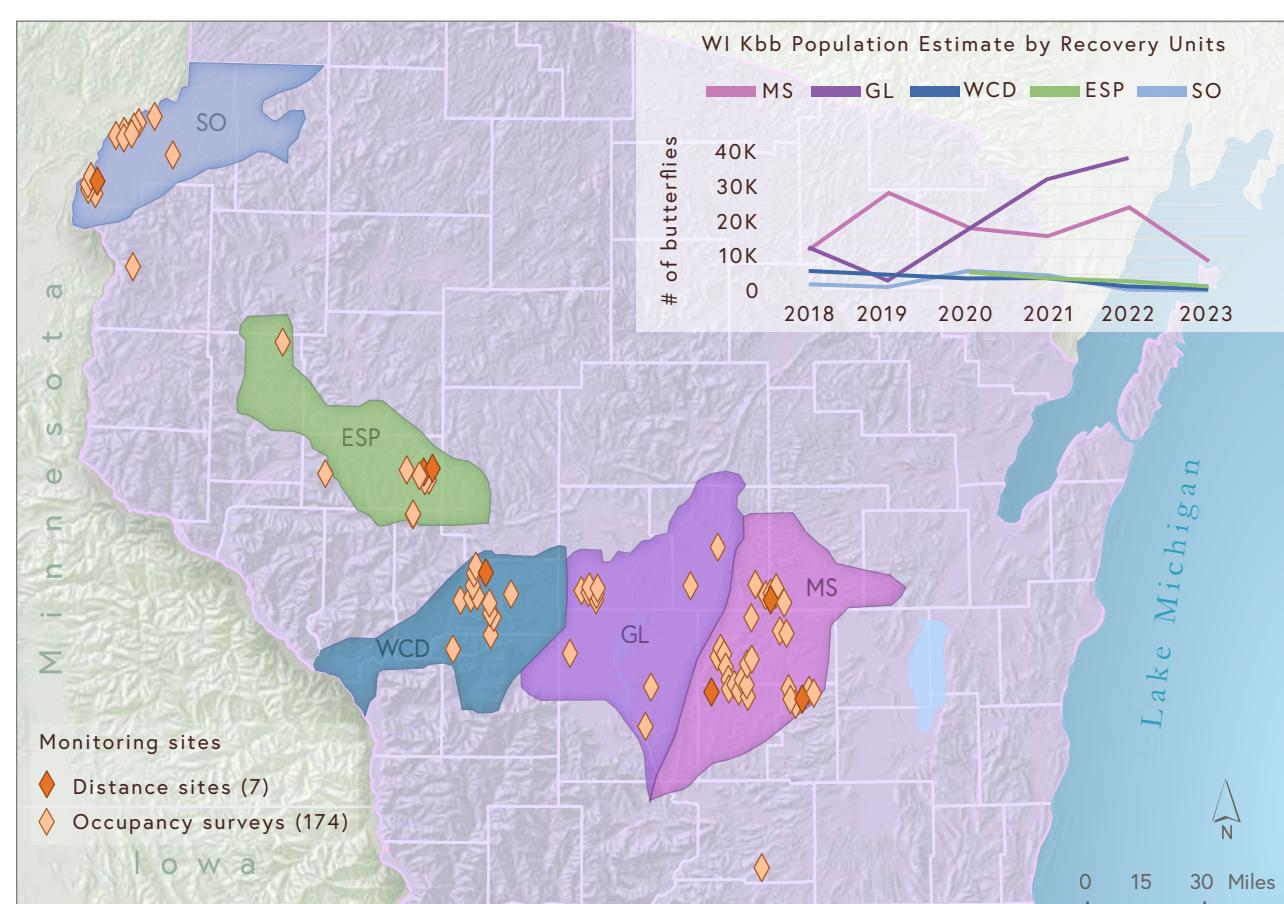
Efforts to conserve ecosystems through prescribed burns, mowing, and habitat restoration is crucial for maintaining stable Karner habitats. The Wisconsin Department of Natural Resources (DNR) took a pioneering step in 1994 initiating the first statewide Habitat Conservation Plan streamlining recovery efforts across landowners and agencies. In collaboration with over 50 partners, this ambitious plan has protected more than 792,000 acres of critical habitat, establishing Wisconsin as a primary stronghold for the species. Notable sites like the Karner Blue Meadow in Waushara County are managed specifically for the benefit of this delicate butterfly, serving as sanctuaries in a landscape increasingly fragmented by human activity. Similar efforts exist in sites like Sandhill Wildlife Area, Necedah National Wildlife Refuge, Crex Meadows among others.

The Karner blue Recovery Program in Wisconsin comprises five units - Morainal Sands (MS), Escarpment & Sandstone Plateau (ESP), West Central Driftless (WCD), Glacial Lakes (GL) and Superior Outwash (SO). They employ population and occupancy surveys to monitor the species' health and population dynamics. In 2023, population surveys, using distance sampling, estimated a total population of 10,460 individuals across 229 acres, representing a decrease compared to previous years. Occupancy surveys, using less intensive methods, indicate Karners' presence in 78% of surveyed sites. Despite low estimates, colonization and extinction rates remain favorable, suggesting is persisting within its Wisconsin habitats. However, lack of repeated sampling and biased site selection, highlight the need for more robust monitoring.

The Karner blue butterfly has become a flagship species for restoration initiatives across Wisconsin. While landowners can play a critical role in creating suitable habitats on their properties, individuals can support conservation efforts through advocacy, volunteering in and making donations to like DNR, Nature Conservancy, Southern Wisconsin Bird Alliances and other nature preserve sites to fuel the resilience of Wisconsin's natural heritage.



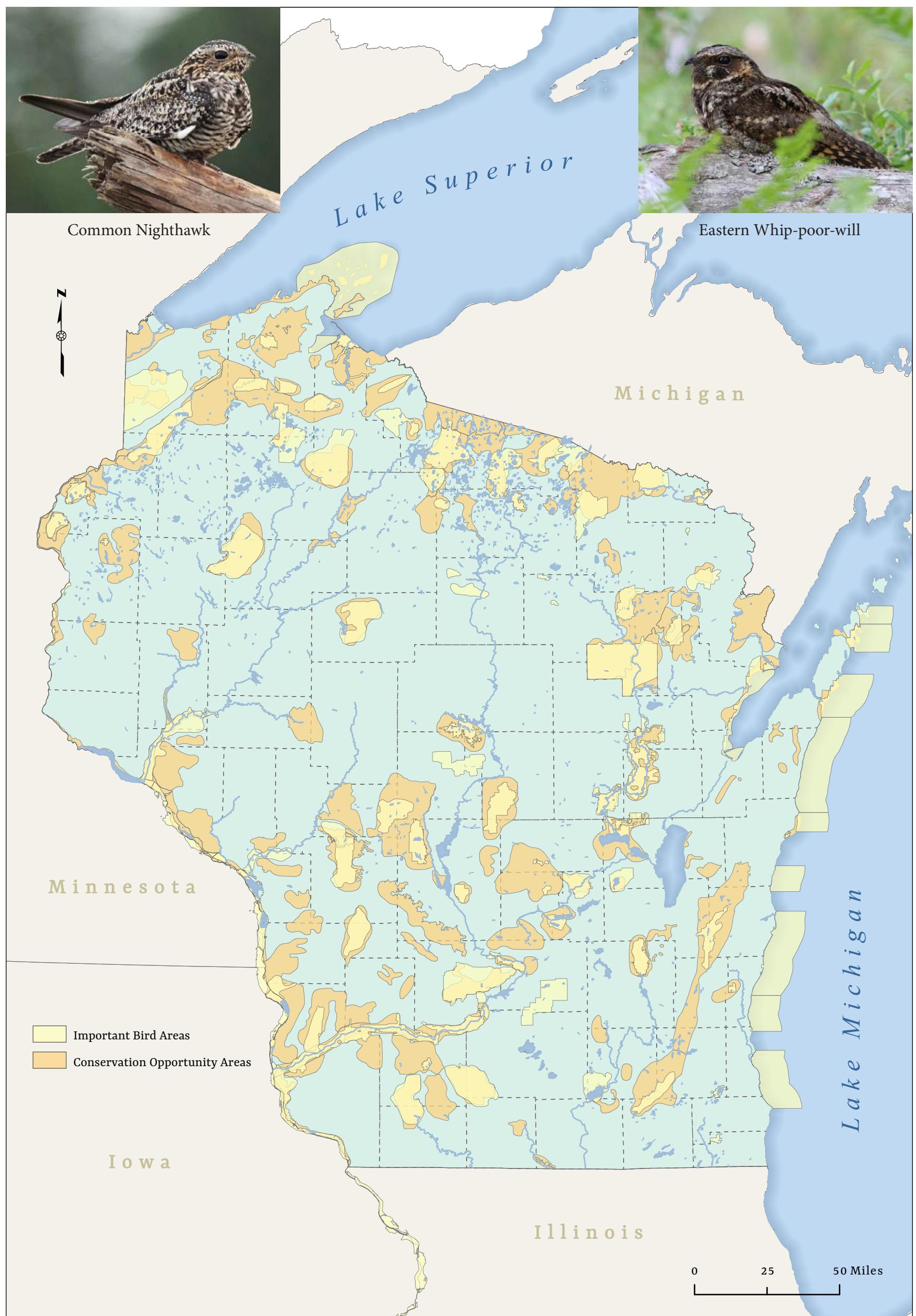
Images from some of the major habitats of Karner Blue Butterfly in Wisconsin (from left to right) - a Wild Blue Lupine plant from the Karner Blue Meadow (State Natural Areas of Wisconsin), a Karner on a prairie flower at the Sandhill Wildlife Refuge (State Journal), Wild Lupine at Crex Meadows, Grantsburg and a Karner on Bird's-foot Trefoil; Necedah National Wildlife Refuge (The Photonaturalist).



Recovery units and monitoring sites of Wisconsin DNR, 2023

IMPORTANT BIRD AREAS

Wisconsin hosts crucial habitats to support diverse bird populations & migratory routes with a plethora of bird watching areas

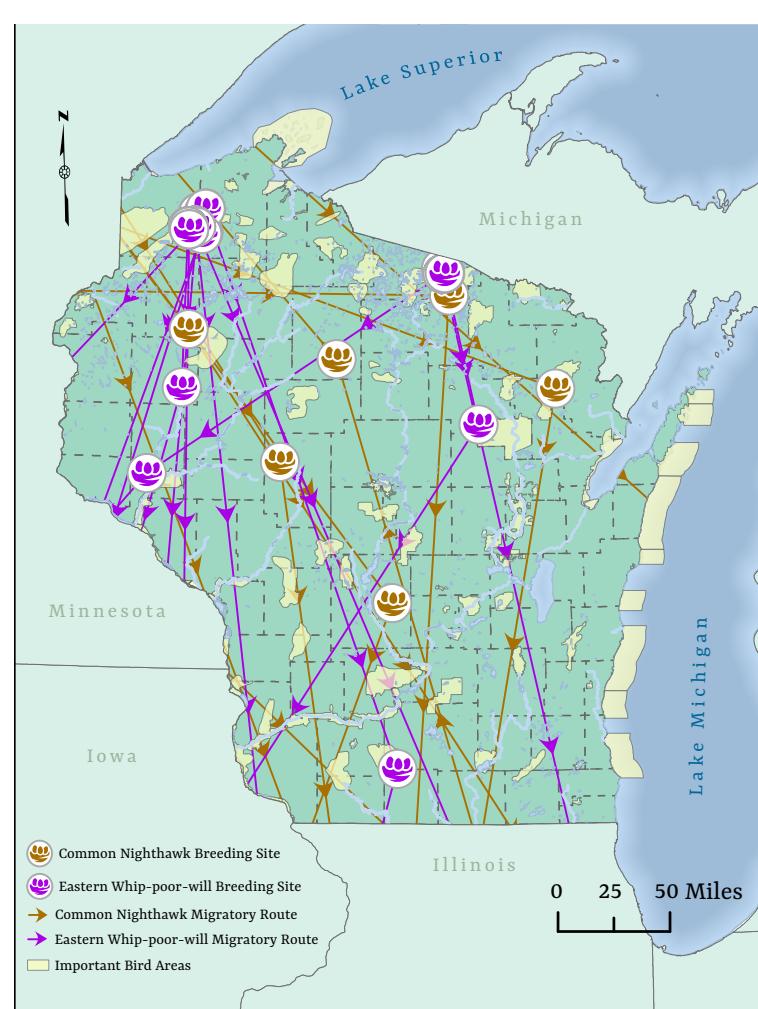
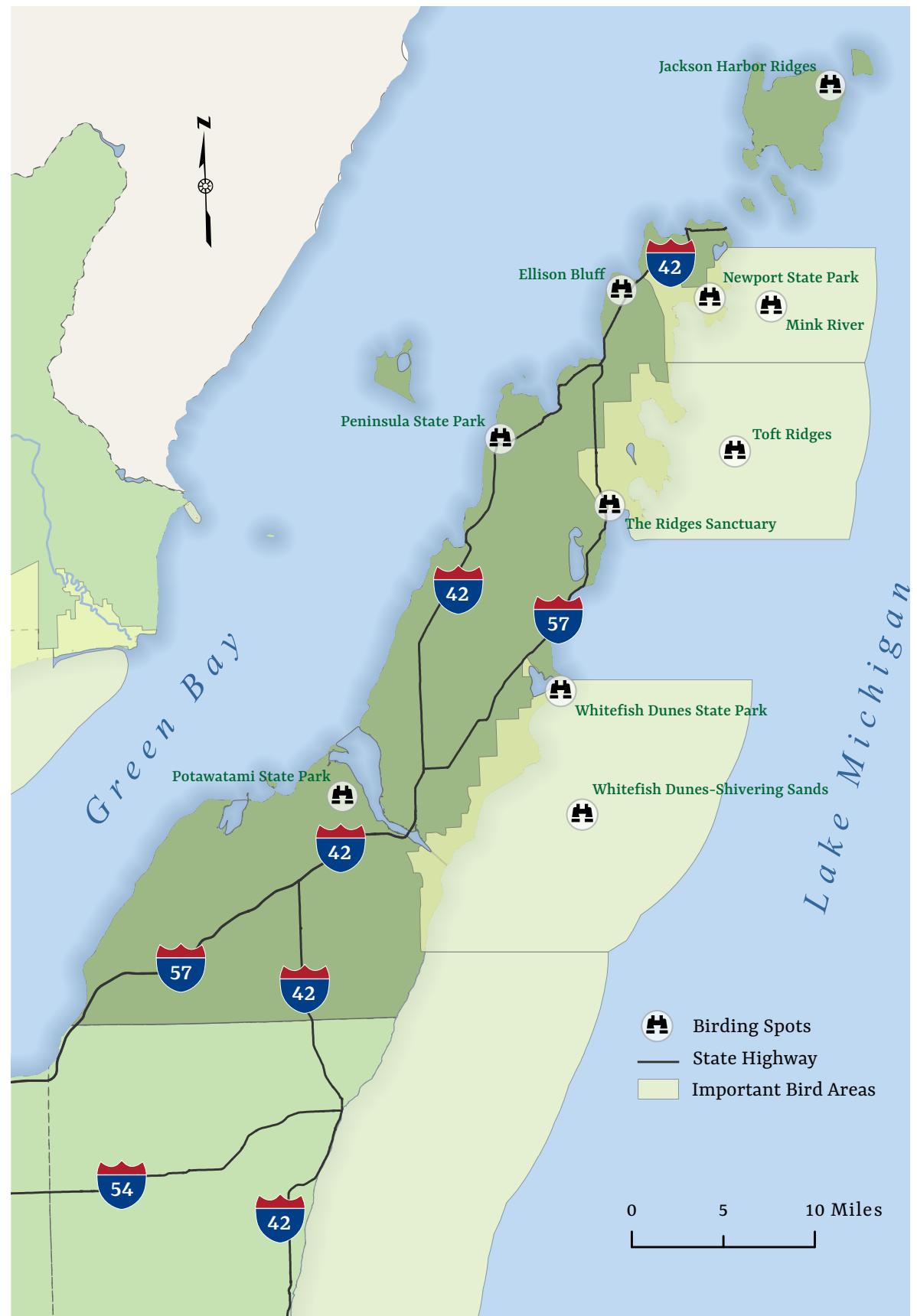


Map: Important Bird Areas and Conservation Opportunity Areas in Wisconsin

Important Bird Areas (IBAs) are sites identified as being globally important for the conservation of bird populations on the basis of an internationally agreed upon set of criteria. IBAs are identified using standardized, science-based criteria that aims at identifying a site for its significance in conserving bird biodiversity. These sites are classified as IBAs for inhabiting globally threatened species, restricted-range species, biome-restricted species, and congregatory species. Wisconsin hosts crucial habitat for over 300 species and protected areas provide essential habitat for threatened and/or sensitive species. Additionally, the state holds 92 Important Bird Areas covering over 3.2 million acres of land. Biologically rich landscapes and thus birds of Wisconsin are threatened by residential development, overharvesting timber, and poor energy development plans. Each IBA requires a unique conservation plan. The National Audubon Society is at the forefront of protecting important bird habitat through engagement of individuals, communities, landowners, businesses, organizations, and agencies to conserve IBAs.



Image: Common Nighthawk in flight displaying the white patches on their wings

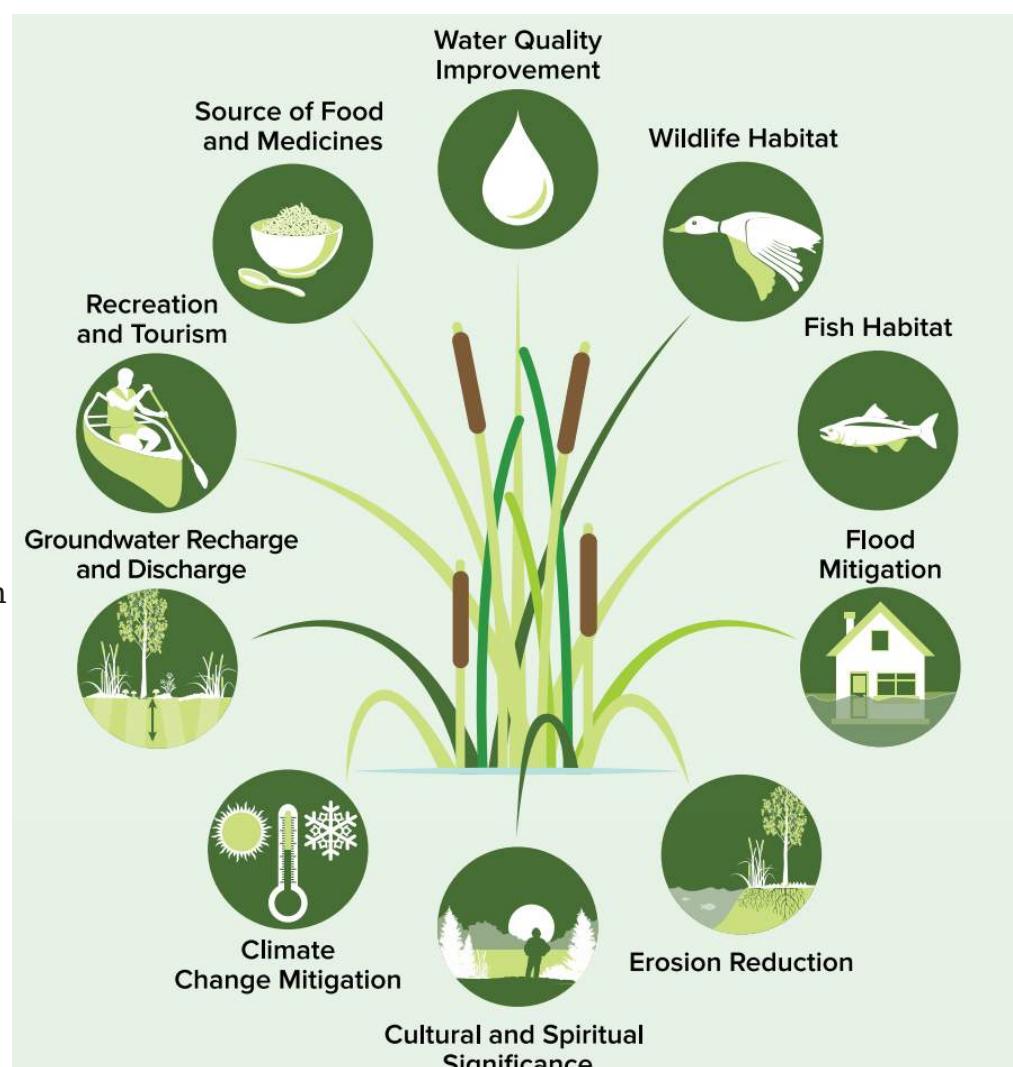


Map: GPS Tracking of individual Common Nighthawks and Eastern Whip-poor-wills migratory routes in 2015 within Wisconsin

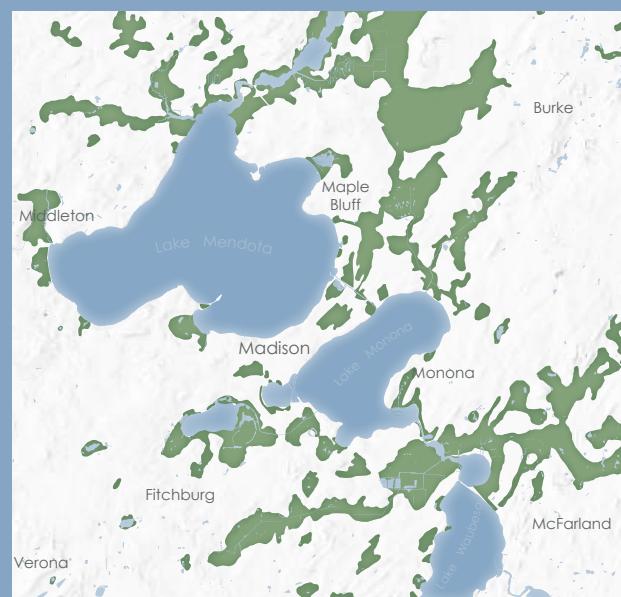
WETLANDS IN MADISON, WISCONSIN

Ecosystem Benefits

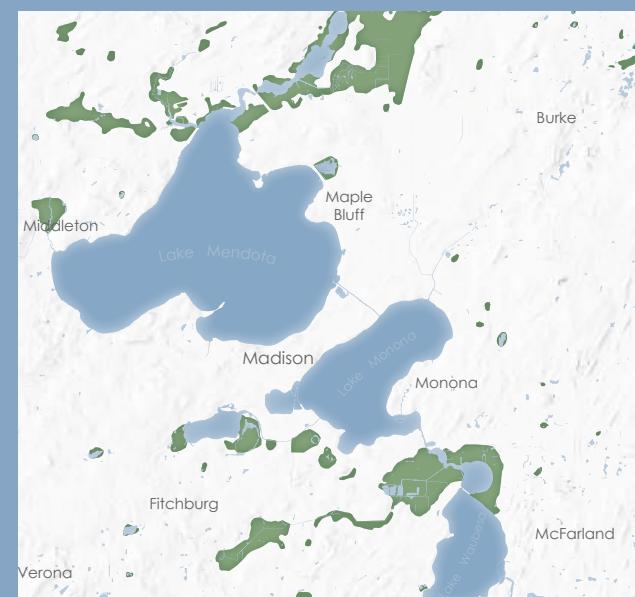
Wetlands are crucial ecosystems that offer significant benefits, including flood mitigation, water quality improvement, and biodiversity support. By storing floodwaters, they reduce the impact of storms and flooding on downstream communities. Wetlands also filter harmful toxins and nutrients from water, enhancing its quality and supporting the health of aquatic ecosystems. Additionally, they are vital for carbon sequestration, capturing atmospheric carbon and thus contributing to climate change mitigation. Biodiverse habitats within wetlands support a wide range of plant and animal species, boosting ecological resilience. Programs like the National Wetlands Inventory by the U.S. Fish and Wildlife Service provide essential data for managing and restoring these valuable ecosystems, ensuring their preservation and functional integrity amidst development pressures. Conserving wetlands is not only essential for their ecological functions but also for preserving cultural heritage and traditional practices that rely on these unique landscapes.



1890



1906



1959



100 Year Floodplain

This map displays areas that are expected to be inundated by a 100-year flood, also known as the 1% chance floodplain. These floodplains are low lying areas, typically adjacent to rivers or streams, that store water during storm events. Identification of these areas is important for flood mitigation and wetland restoration efforts as they should be focused in these areas. The areas that are more likely to flood are often dredged wetlands.



The Madison Airport is situated in an area that is prone to flooding. Development in the area has reduced the natural ability of the landscape to manage water effectively.



Cattails

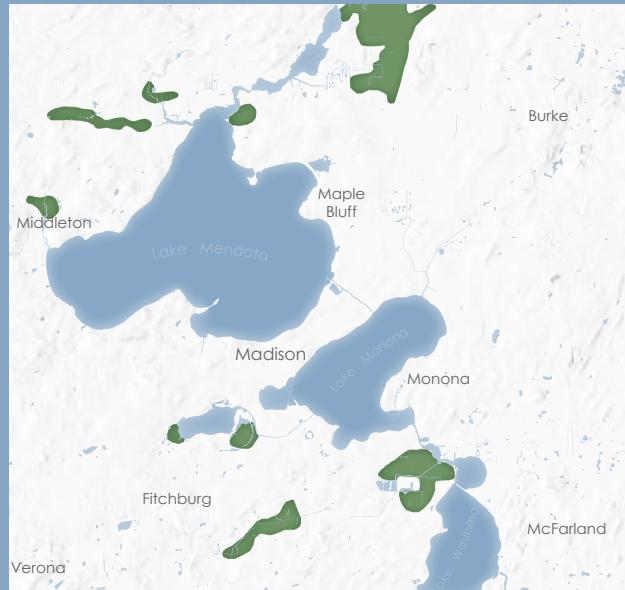
Wildlife Habitat

Many animals spend their whole lives in wetlands; for others, wetlands are critical habitat for feeding, breeding, resting, nesting, escape cover or travel corridors. Wisconsin wetlands are spawning grounds for northern pike, nurseries for fish and ducklings, critical habitat for shorebirds and songbirds and life-long habitat for some frogs and turtles. Wetlands also provide essential habitat for smaller aquatic organisms in the food web, including crustaceans, mollusks, insects, and plankton. These habitats support complex food webs, where predator-prey interactions and symbiotic relationships contribute to the overall biodiversity and ecological balance of wetland environments.

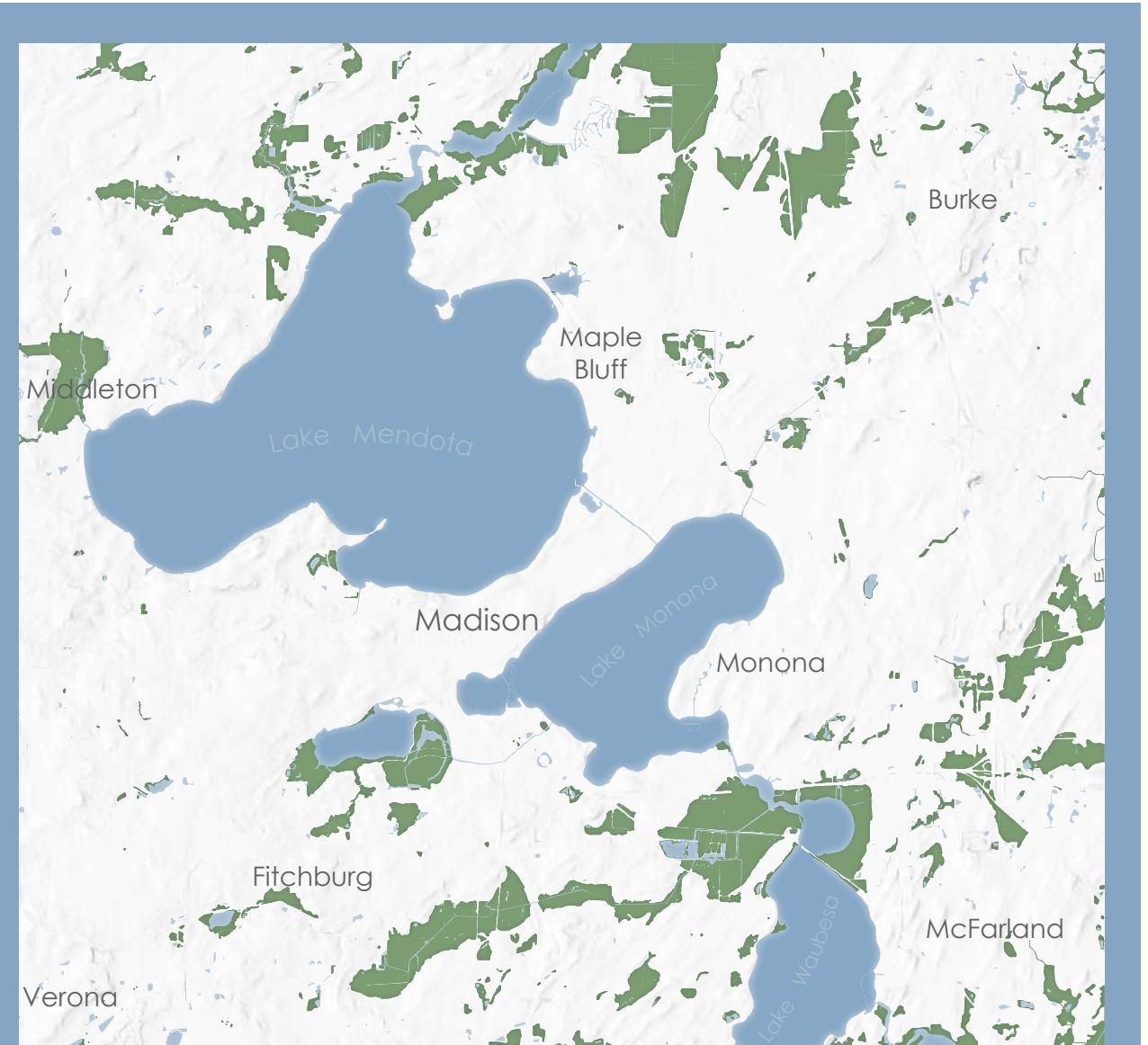


Sandhill Crane

231.1 acres of
wetlands were
restored in Dane
County from
2020-2022



1991

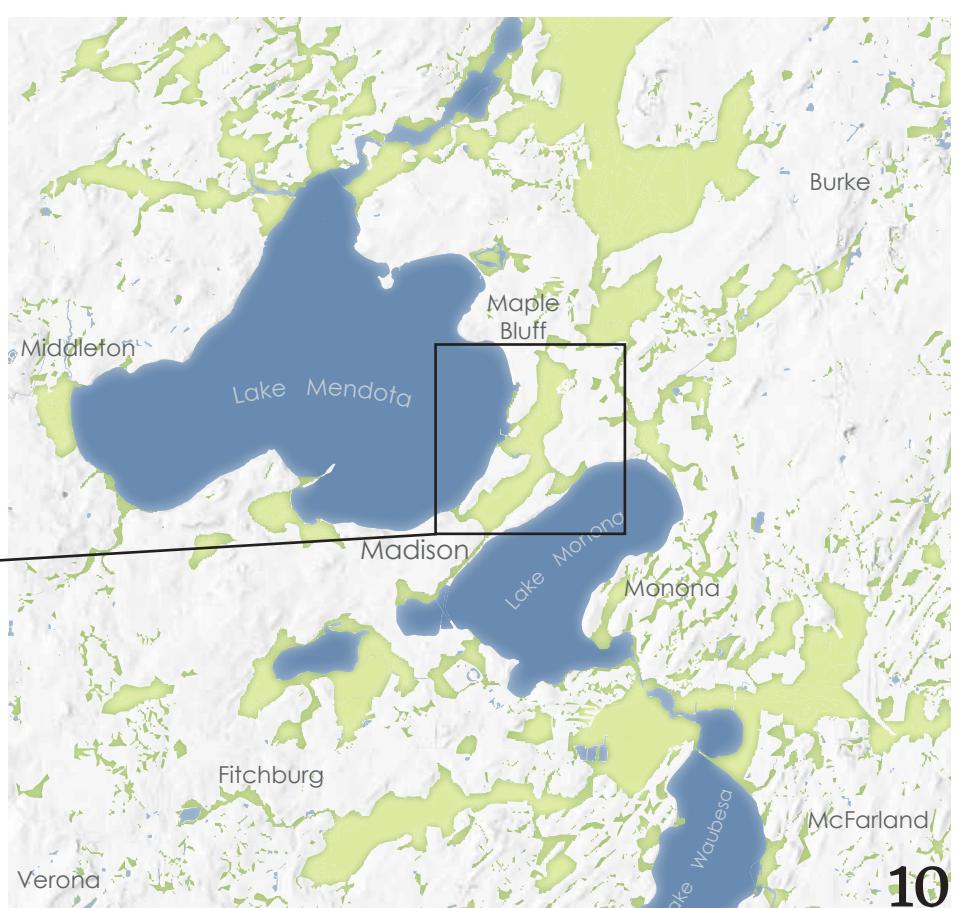
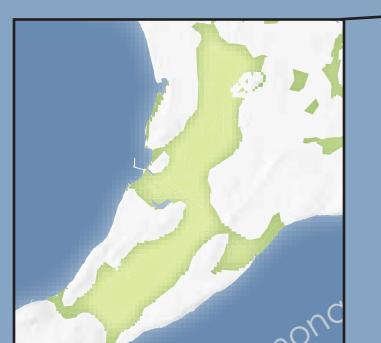


Present Day Wetland Extent

Wetland Restoration

Wetland restoration is the process of manipulating a former or degraded wetland's physical, chemical, or biological characteristics to return its natural functions. Restoration takes place on land that has been, or still is, a wetland. Restoring wetlands can be a cost-effective solution to flooding compared to human-made infrastructure. This map visualizes potentially restorable wetlands, or areas that contain poorly drained soil.

Low-lying areas on the Madison Isthmus between Monona and Mendota lakes are highly susceptible to flooding. While they are now heavily developed, they were once wetlands.



LAKE MENDOTA

Covering 15.2 square miles, Lake Mendota is a freshwater lake that is the largest of the four lakes in Madison, Wisconsin. With an average depth of 42 feet, it contains over four hundred thousand acre-feet of water and is normally covered in ice from late December to late March. Originated after the Wisconsin glaciation that began to retreat 14,000 years ago, water left behind by retreating glaciers filled the current lake bed of

Lake Mendota. Lake Mendota has been called the most studied lake in the world with the University of Wisconsin's Center for Limnology on its southern bank. Beyond its scenic allure, Lake Mendota holds a significant place in the cultural and scientific tapestry of the region. From its role as a recreational haven for boating and fishing enthusiasts to its importance as a research hub for ecological studies.



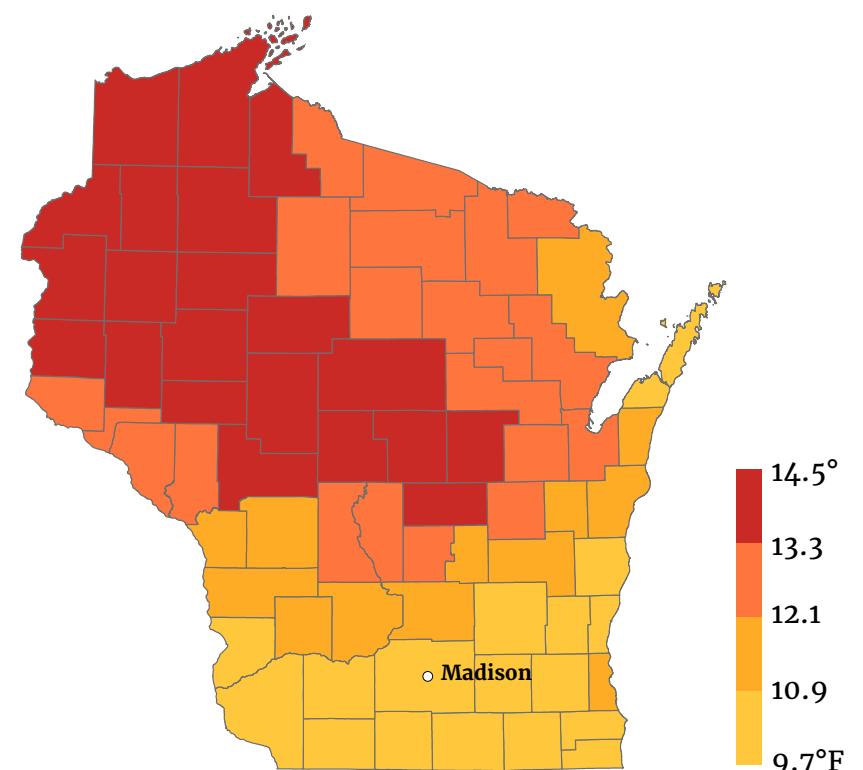
2024 was an unconditionally hot year, dubbed the “lost winter” the record breaking warmth was caused by an exceptionally strong El Nino and long term warming trend. This one-two punch meant that Wisconsin experienced an exceptionally mild winter caused in part by the northward displacement of the jet stream that causes Arctic air masses to remain in Canada. The statewide average temperature was 28.3 degrees, surpassing the previous record by a full 2 degrees. Ice cover for Lake Mendota lasted only 44 days, closed snowmobiles trails, unsafe ice conditions for fishing, and cancelled winter festivals all stem from meager ice coverage that was on record the second shortest ice cover period for Lake Mendota and the shortest period for Lake Monona.

This February was unseasonably warm with not one, but two tornado sightings during the month were caused by unseasonably warm, humid air combined with wind shear led to the creation of unprecedented February tornadoes. Dry winter, early spring will lead to potentially significant wildfires during the late Spring through to the Summer months.

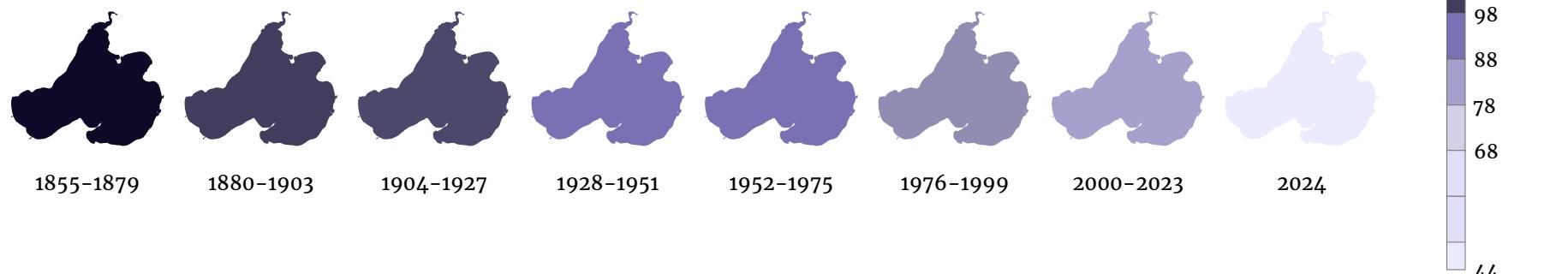
As climate change continues, the increase in average temperatures throughout the year will continue to rise which will result in shorter and shorter periods of ice cover for all Madison lakes. Changes in ice cover can also affect the lake's ecosystem, a shorter ice season may alter the timing of nutrient cycling and other ecological processes, potentially impacting the abundance and distribution of species that rely on winter habitats.

Shifts in temperature and water quality can disrupt the habitats of various species inhabiting Lake Mendota. Some species may struggle to adapt to these changes, leading to shifts in species composition and potential declines in biodiversity. This,

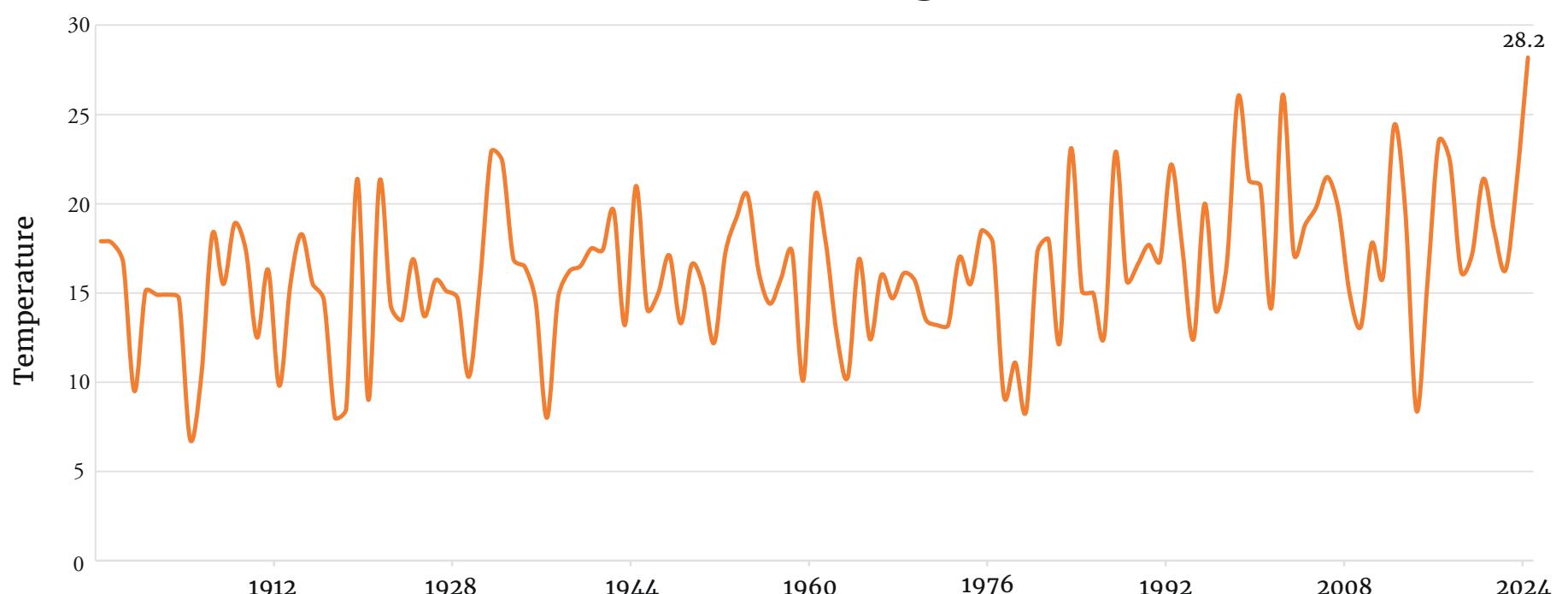
in turn, can have cascading effects throughout the food web and ecosystem dynamics. Additionally, warmer temperatures can exacerbate issues like algal blooms, which thrive in warmer conditions, potentially leading to water quality degradation.



Average Days of Ice Cover per 24 Year Interval



Wisconsin December – February Average Temperature



WISCONSIN HUNTING

2023 Black Bear Hunt Harvest

The Wisconsin Department of Natural Resources data for the 2023 bear hunting season, shocked many hunters and ecologists in the state's wildlife management. Recorded as the lowest annual bear harvest since 2008, hunters across the state's vast landscapes harvested 2,922 bears—a sharp decline from the previous year's 4,009. The Black bear hunting seasons last from the 6th of September to the 10th of October, averaging about 4000 harvests (successful hunts). With a harvest falling well below the annual average of approximately 4,000 bears, figure 1 is a visual representation of the ecological and human-influenced dynamics at play. Wisconsin's bountiful acorn crop in 2023 played a pivotal role in diminishing the effectiveness of hunters' baits, leading to a notable drop in hunter success rates to 23%, down from a five-year average of 32%. This natural supply for bears meant a tougher season for hunters, particularly in Zones E and F, where success rates dwindled to about 5%.

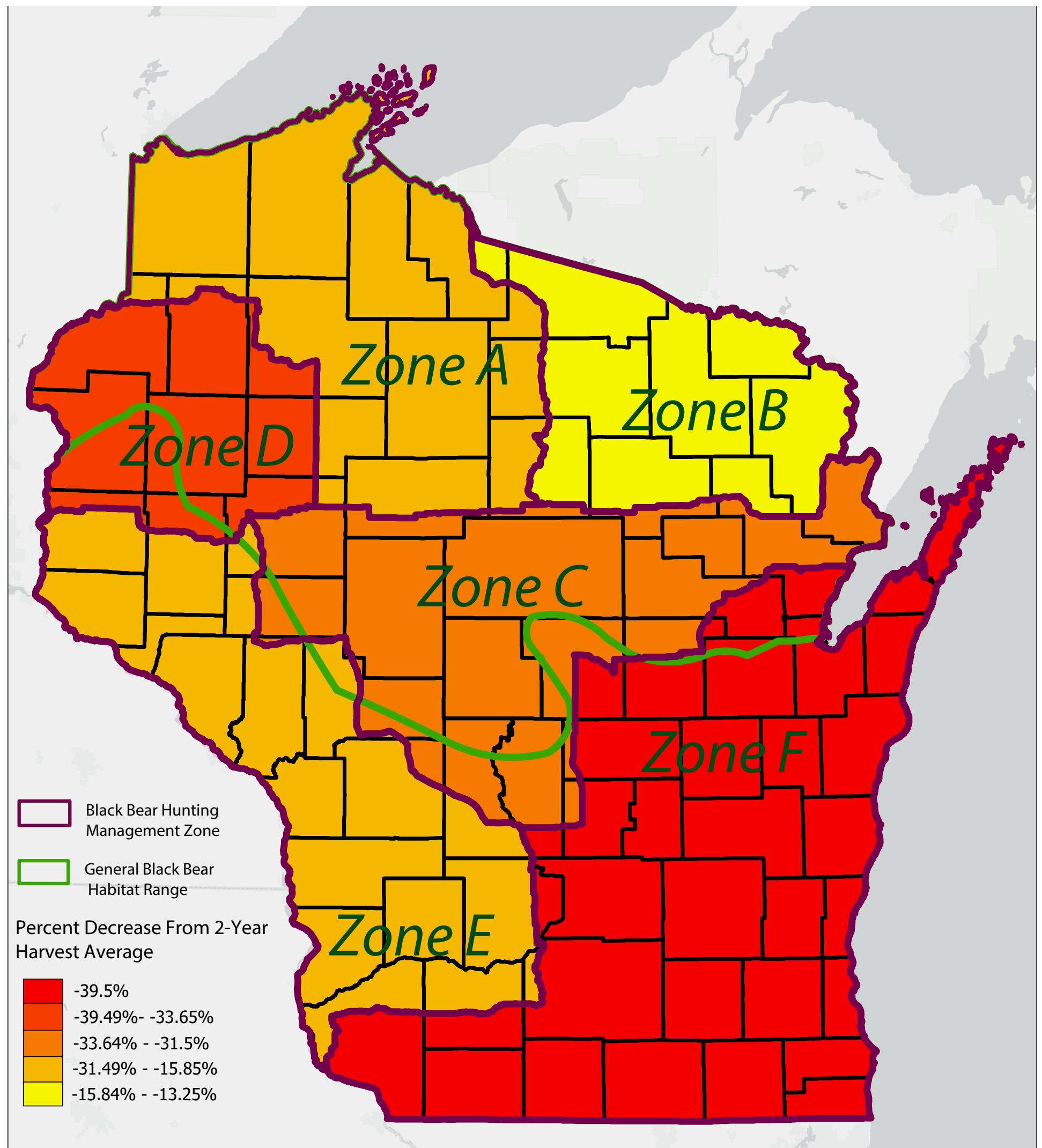


Figure 1: Wisconsin Bear hunting zones separated by graduated colors to visualize a decreased harvest quantity compared to the average.

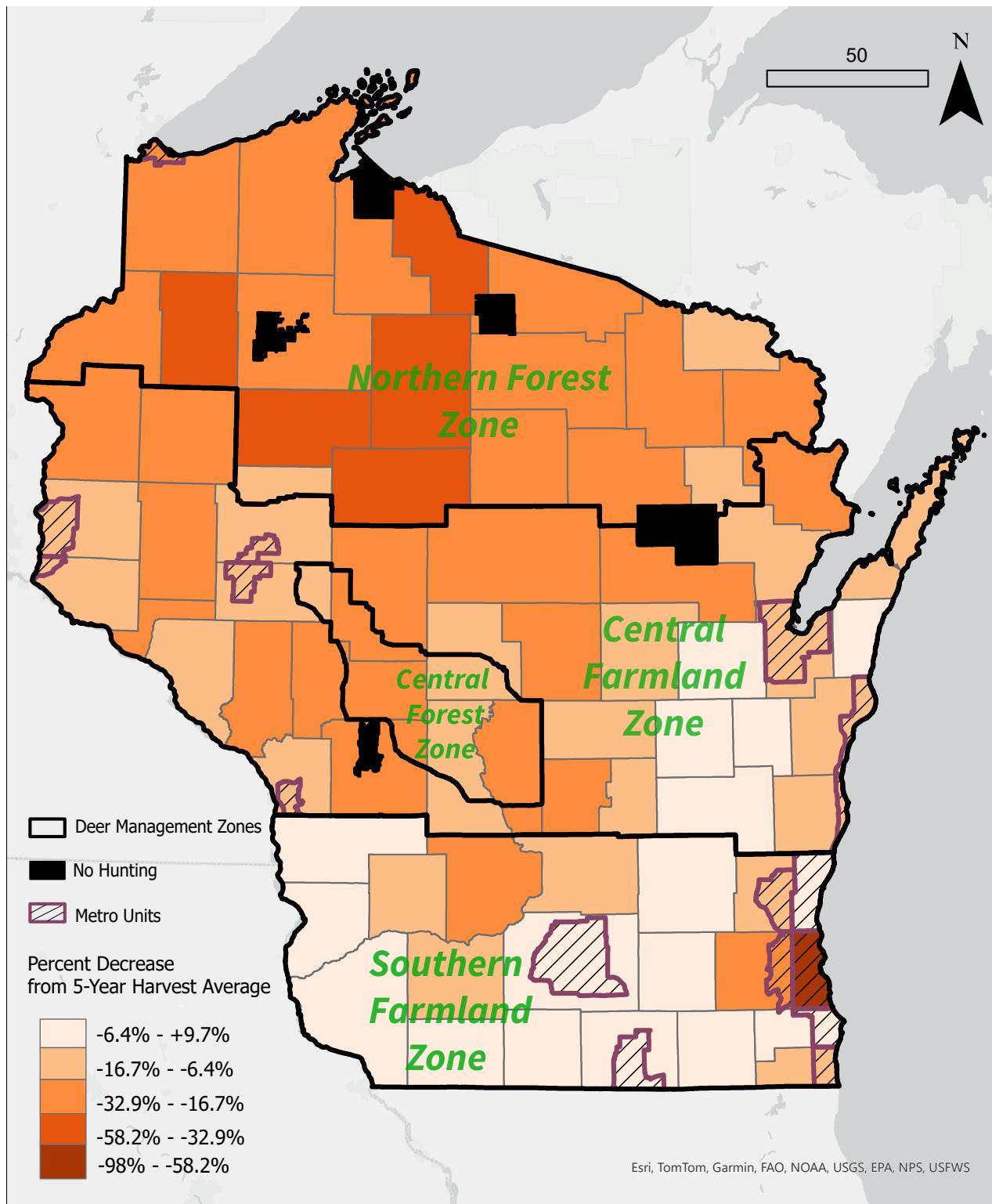


Figure 2: County deer harvest totals separated by graduated colors to visualize a decreased harvest quantity

2023 Gun Deer Hunt Harvest

The 2023 deer hunting season in Wisconsin witnessed a notable decline in white-tailed deer registrations, signaling a challenging year for hunters and an intriguing point of study for wildlife ecologists. Throughout the state, hunters registered a total of 173,942 deer during the nine-day gun deer season, marking an 18% decrease from the previous year and 11% below the five-year average. This season, which included 85,390 bucks and 88,552 antlerless deer, showed declines across all deer management regions: the central farmland, southern farmland, northern forest, and central forest.

The season spanned from November 18 to November 26, coinciding with varying weather conditions and environmental factors that influenced hunting outcomes. Notably, the absence of snow across much of the state for the majority of the season presented additional visibility challenges for hunters, complicating tracking and hunting efforts. Figure 2 provides a detailed visual analysis of these dynamics, illustrating the relationship between environmental factors and deer movement. Additionally, a significant acorn crop throughout Wisconsin offered abundant natural food sources for deer, further reducing their movement and complicating hunters' efforts.

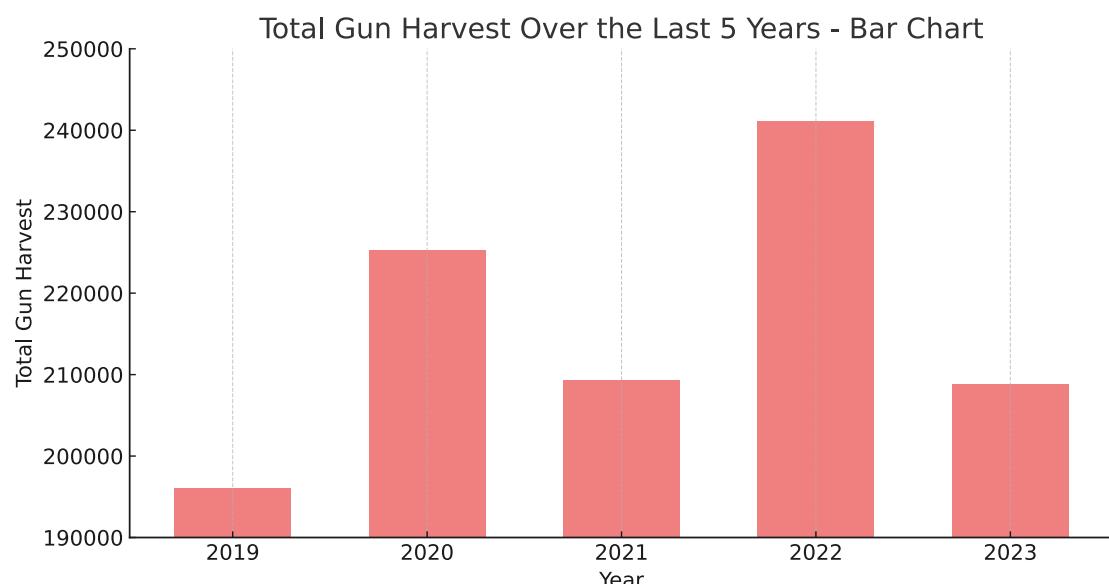


Figure 3: Yearly Gun Harvest totals to visualize the recent harvest patterns

Despite the downturn in this year's deer registrations, the data closely mirrors the figures from 2021, underscoring the cyclical nature of wildlife populations and hunting success rates. This year's top counties for deer harvest were Marathon, Vernon, Shawano, Waupaca, and Polk, with Adams County recording the highest density of deer kills per square mile.

As hunter participation slightly declines, with a 0.8% decrease in license sales from the previous year, the Wisconsin DNR continues to use harvest data to refine management strategies and ensure the sustainability of deer populations and hunting traditions in the state. The insights from this season are crucial for future planning and conservation efforts, creating a deeper understanding of the relationship between natural food availability, weather conditions, and deer behavior.



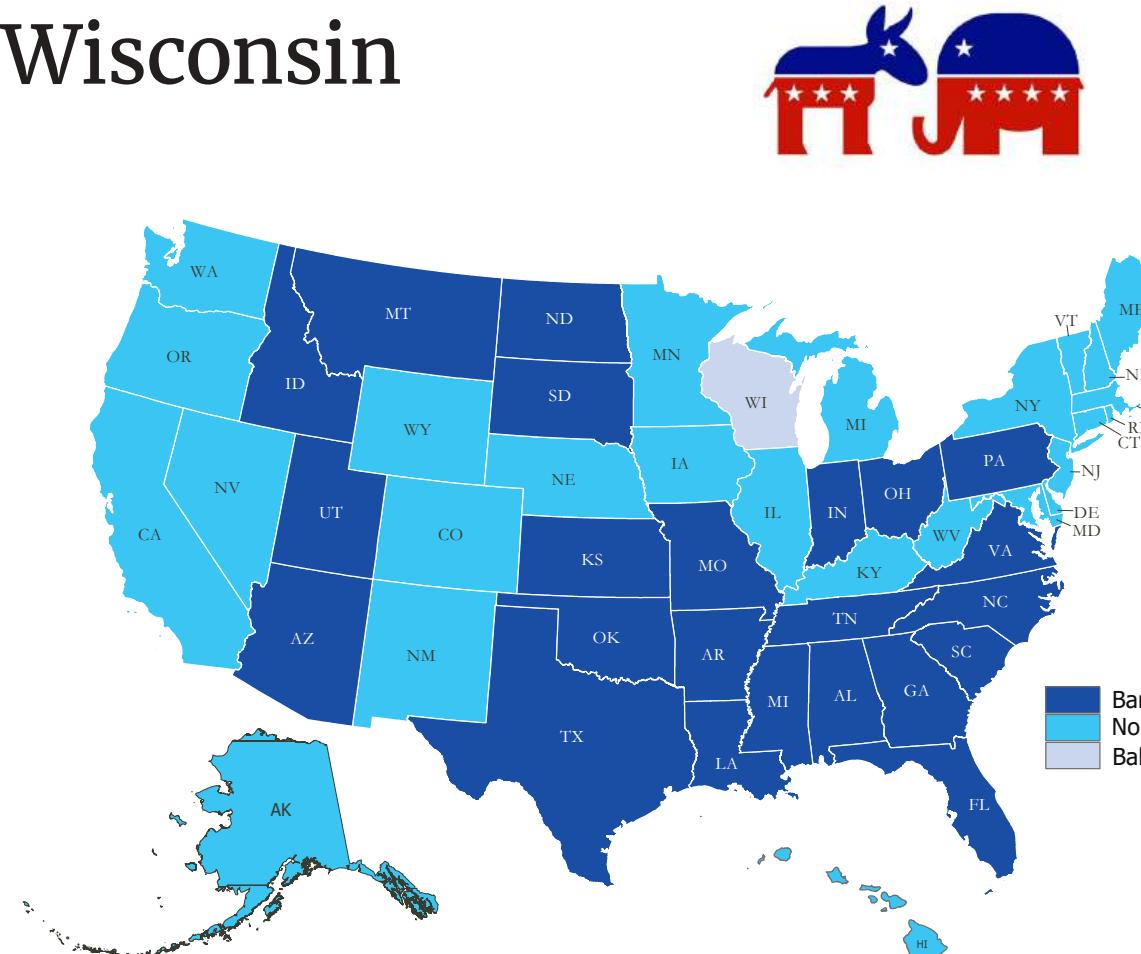
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NAVIGATING A PANDEMIC ELECTION

In Dane County, Wisconsin

By: Veronica Judson

The COVID-19 pandemic tested election administration in unprecedented ways during the elections of 2020. With the first wave of COVID hitting the US during the primaries, election officials confronted changing election administration laws and a shortage of poll workers in an election with record turnout rates. The unprecedented challenges posed by the pandemic presented heightened monetary challenges to election offices. In the face of these challenges, Facebook CEO Mark Zuckerberg and his wife donated over \$400 million to a nonprofit, the Center for Tech and Civil Life (CTCL), to distribute grants to jurisdictions nationwide. During the 2020 election, 23 states applied for CTCL grants to assist with local election administration (Ludwig, 2023). In total, CTCL distributed grants to 2,500 local jurisdictions (depicted in the figure to the right). How local election officials utilized these funds across different jurisdictions with vari-

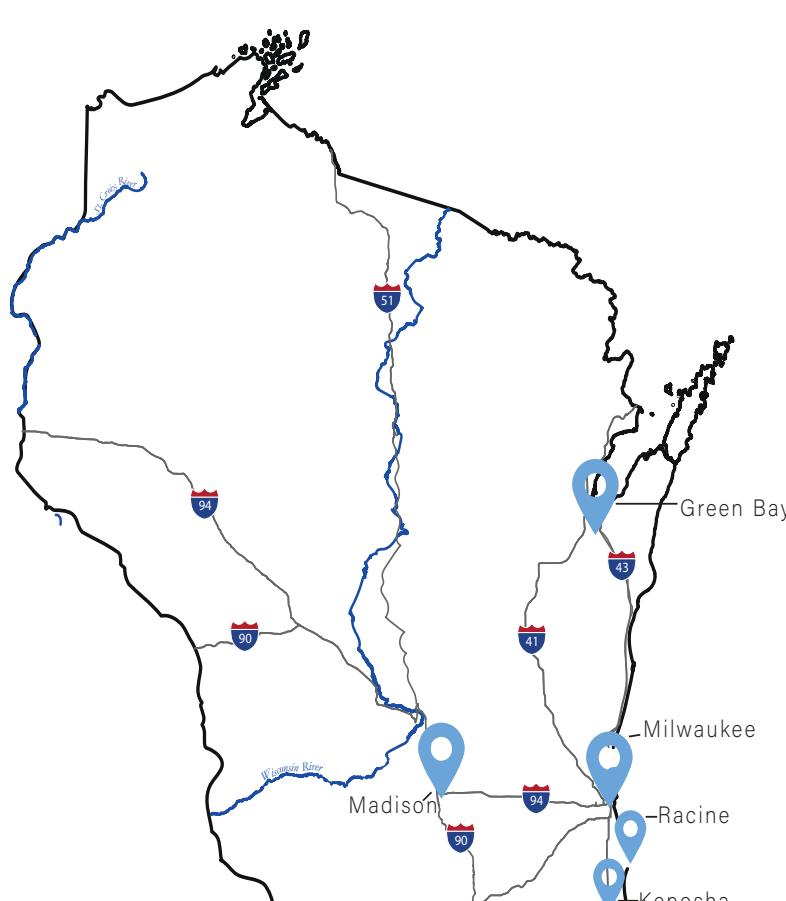


Nationwide Bans on Private Election Funding

*Data collected from NCSL

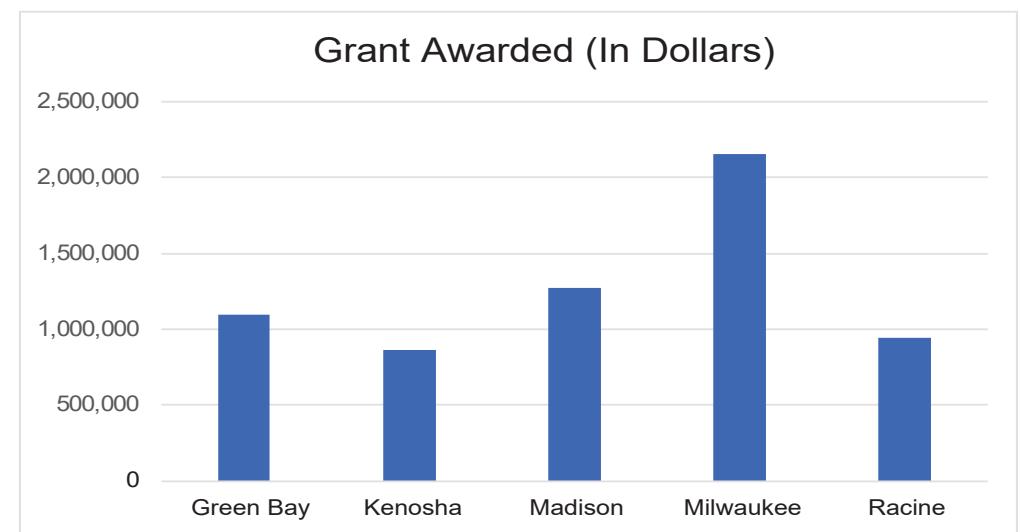
ous political leanings, and whether these funds affected the 2020 election results is unclear. Private funding is a common feature of political campaigns, but there is little work on how private companies work with state election departments. Local election officials, and local

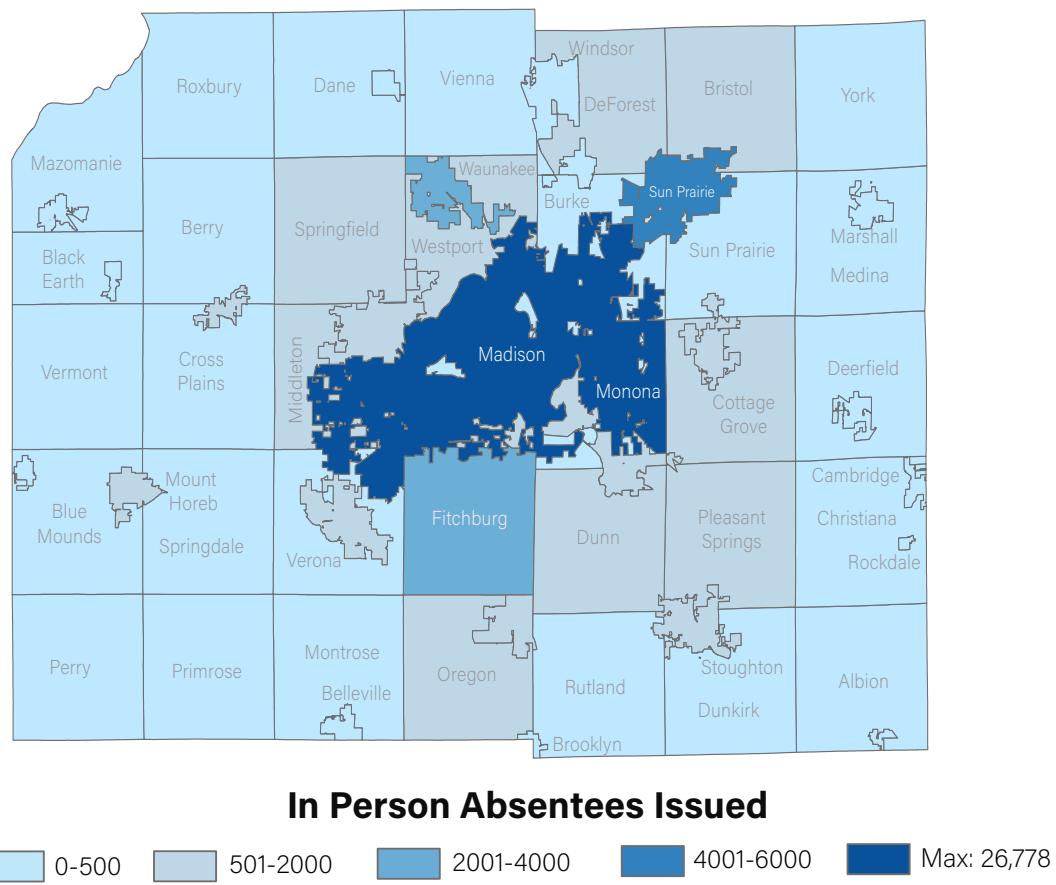
election departments are political neutral institutions, and funds may be utilized solely for bureaucratic purposes. However, recent efforts to curb grants from non-profit organizations suggests that a degree of skepticism exists on the political neutrality of Facebook's actions. As of April 2024, Wisconsin held primaries and voted on a measure to ban private election funds or not. Election results from the primary has put Wisconsin as the latest state to ban private election funds. In 2020, five of Wisconsin's cities applied for the CTCL grants in 2020. These cities included Green Bay, Kenosha, Madison, Milwaukee, and Racine.



Cities Awarded Grants from the CTCL

*Data collected from NCSL





Dane County Absentees Issued by Ward (2020)

*Data collected from Wisconsin Election Commissions

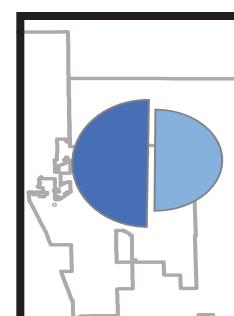
2020 election saw record voter turnout (Yoder et al. 2021). From the grant, over \$2,572,839 dollars went to help Wisconsin voters comply with absentee ballot requests and certification requirements. The 2020 election, set against the backdrop of the pandemic, emerged as a pivotal moment in American electoral history, characterized not only by unprecedented challenges but also by remarkable turnout rates that underscored the resilience of democratic participation. A compelling illustration of this surge in voter engagement is depicted in the figure below, which delineates Dane County voter turnout by ward in the 2016 and 2020 elections. The

visual narrative presented therein portrays a striking narrative: turnout in Dane County exhibited a marked increase across nearly all wards in 2020 compared to 2016, with only one ward experiencing a deviation from this trend. This substantial uptick in voter participation prompts a critical inquiry into the factors driving this surge in electoral engagement. Chief among them was the imperative need for political parties to recalibrate their ground game strategies. Traditional in-person canvassing, long regarded as linchpins of electoral mobilization efforts, were constrained by social distancing protocols. Political operatives turned their focus towards

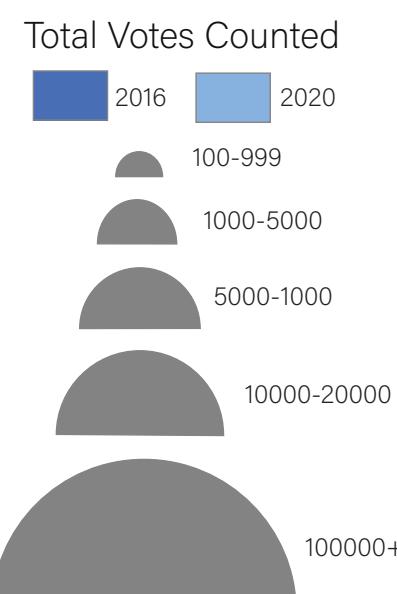
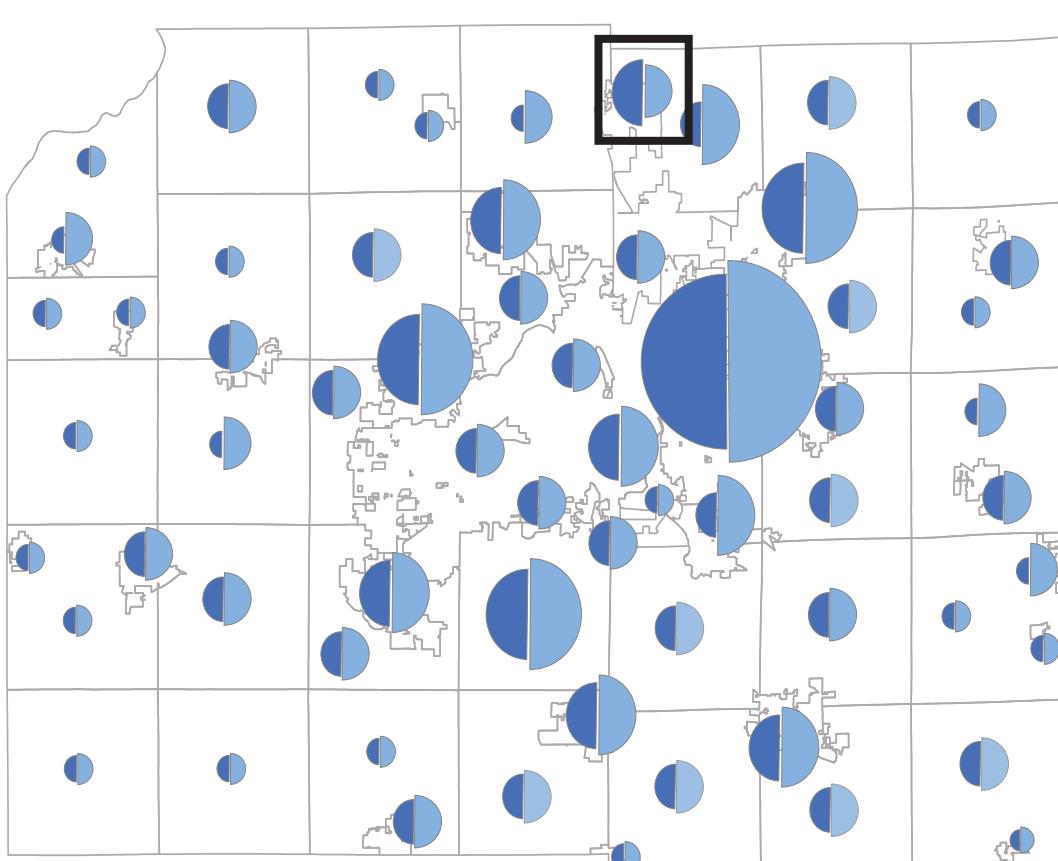


Faced with unprecedented public health challenges posed by the COVID-19 pandemic, election officials and voters across the United States adapted their voting procedures and voting habits. As a result, absentee voting emerged as a crucial alternative for millions. The surge in absentee voting can be seen in Dane County in the figure to the right. The Madison ward saw the highest number of absentee ballots issued. Despite these challenges posed by the pandemic, the

bolstering digital outreach, leveraging the ubiquity of online platforms and digital communication tools to disseminate campaign messaging and engage with prospective voters. Moreover, the electrifying and often contentious nature of the 2020 election served as a potent catalyst for mobilizing voters and galvanizing political participation across the ideological spectrum. Generally, however the surge in voter turnout represents a testament to the enduring vitality and resilience of American elections despite a global pandemic.



The ward Windsor in Dane County was the only ward to have a higher turnout in 2016 than 2020.



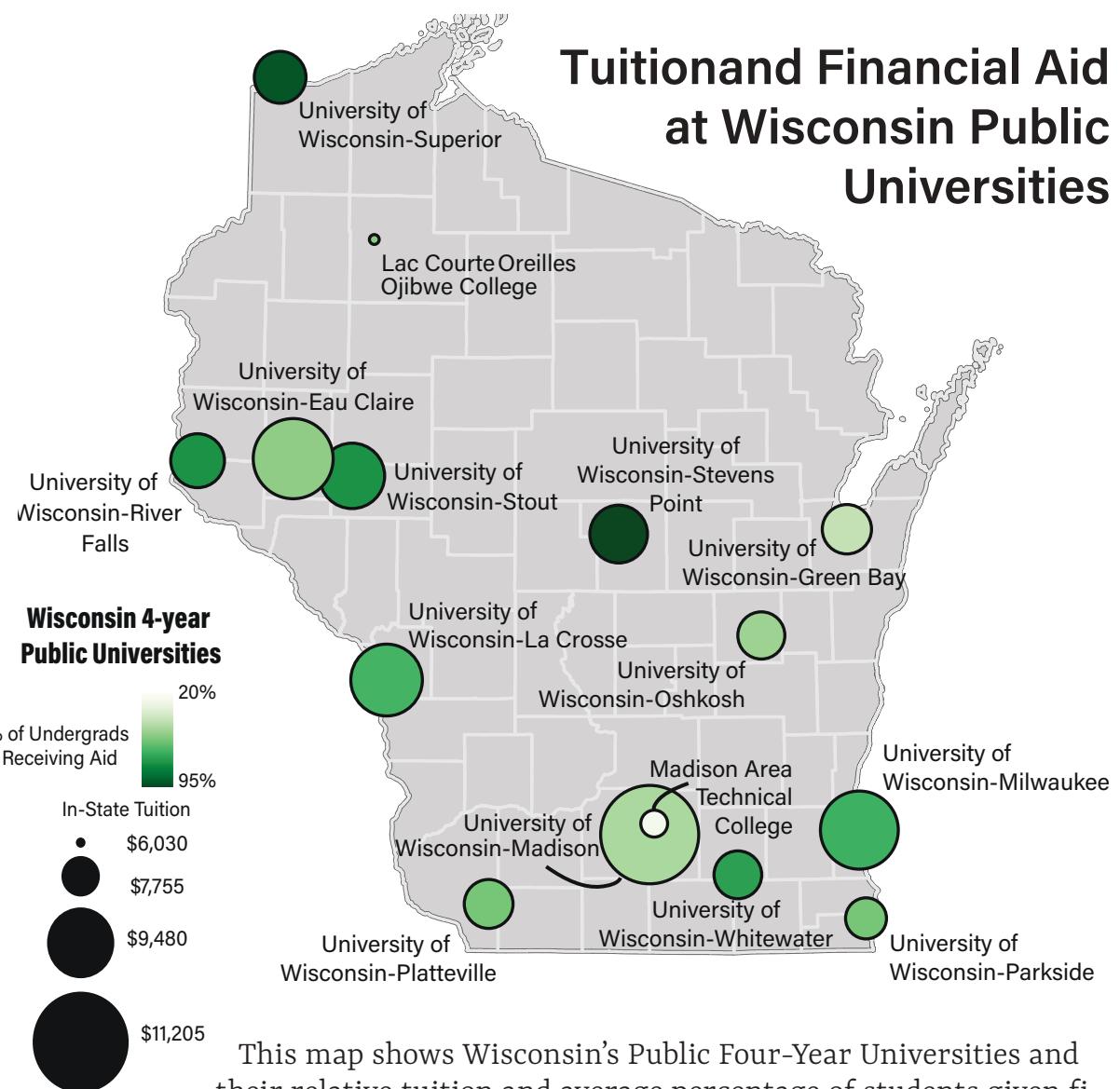
Dane County Voter Turnout by Ward (2016 & 2020)

THE PRICE OF KNOWLEDGE IN WISCONSIN



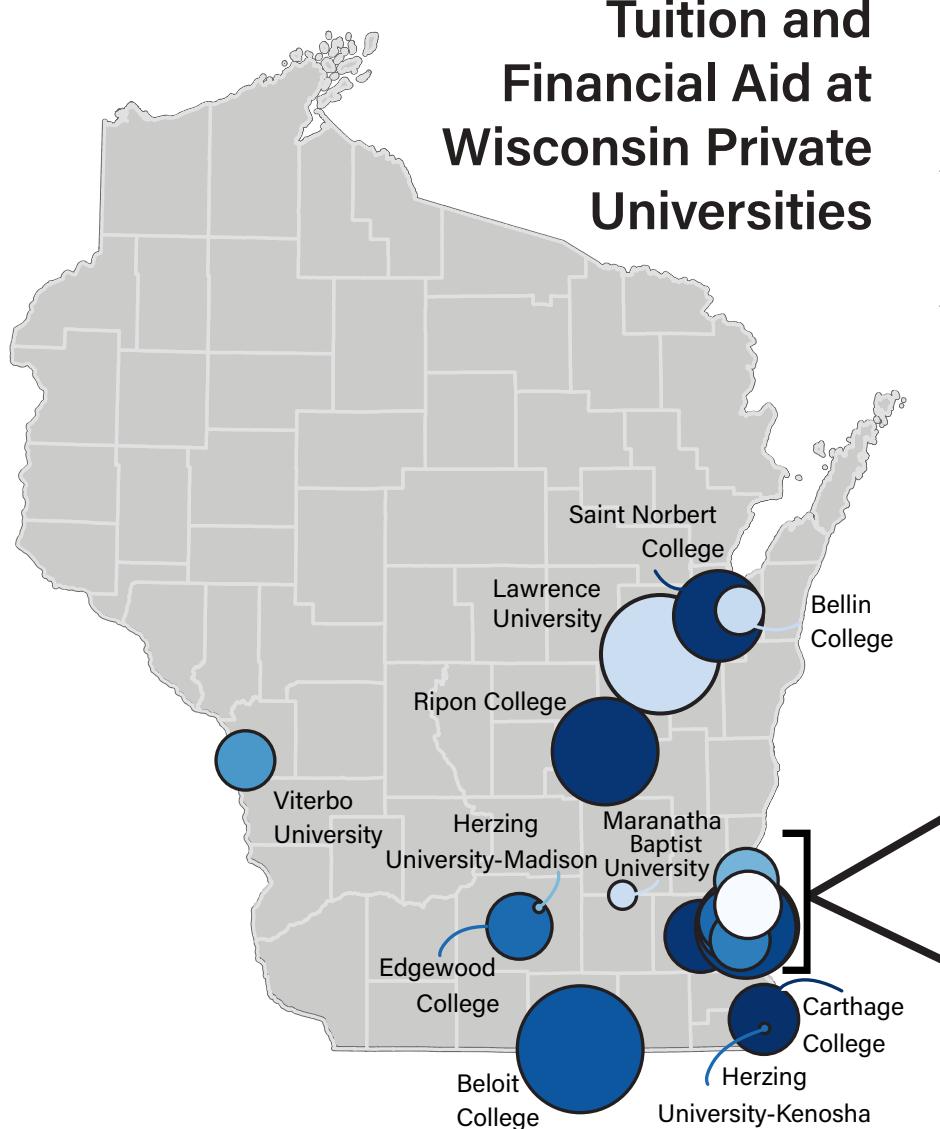
How much does it cost a Wisconsin resident to attend a Four Year University?

In recent years, the dollar has been able to buy less and this. This increase of prices has affected the average U.S. consumer with every commodity, knowledge being one of them. The average cost of tuition has risen substantially over the last several decades and they continue to increase across the board. Many residents of Wisconsin opt to attend college within the state to avoid out of state rates which can over double and even triple what is available within their home state. However, gaining an education within one's state of residence is becoming more and more expensive, leaving some less inclined or unable to attend. University students around the country and in Wisconsin have acquired staggering amounts of debt which have proven to take near entire professional careers to pay off. Wisconsin has 37 four year higher education institutions, 15 that are public and 22 that are private. Each has a different tuition rate and supplies their students with various amounts of funding. The maps featured on this page display the tuition of each university and the average percentage of first year students that receive financial aid. In addition to policy changes and innovative solutions,



This map shows Wisconsin's Public Four-Year Universities and their relative tuition and average percentage of students given financial aid. With public schools being less expensive than private institutions, students are less likely to qualify for financial aid.

addressing the rising cost of education may also require increased investment in public higher education institutions. By providing more funding to these institutions, states like Wisconsin can help to mitigate the need for tuition increases and reduce the financial burden on students. Efforts to streamline the transfer process between community colleges and four-year universities could make higher education more affordable and accessible. Those who choose to begin their academic journey at a community college before transferring to a larger institution. Promoting financial literacy and education about student loans could also empower students to make more informed decisions about their education financing options and avoid taking on excessive debt.



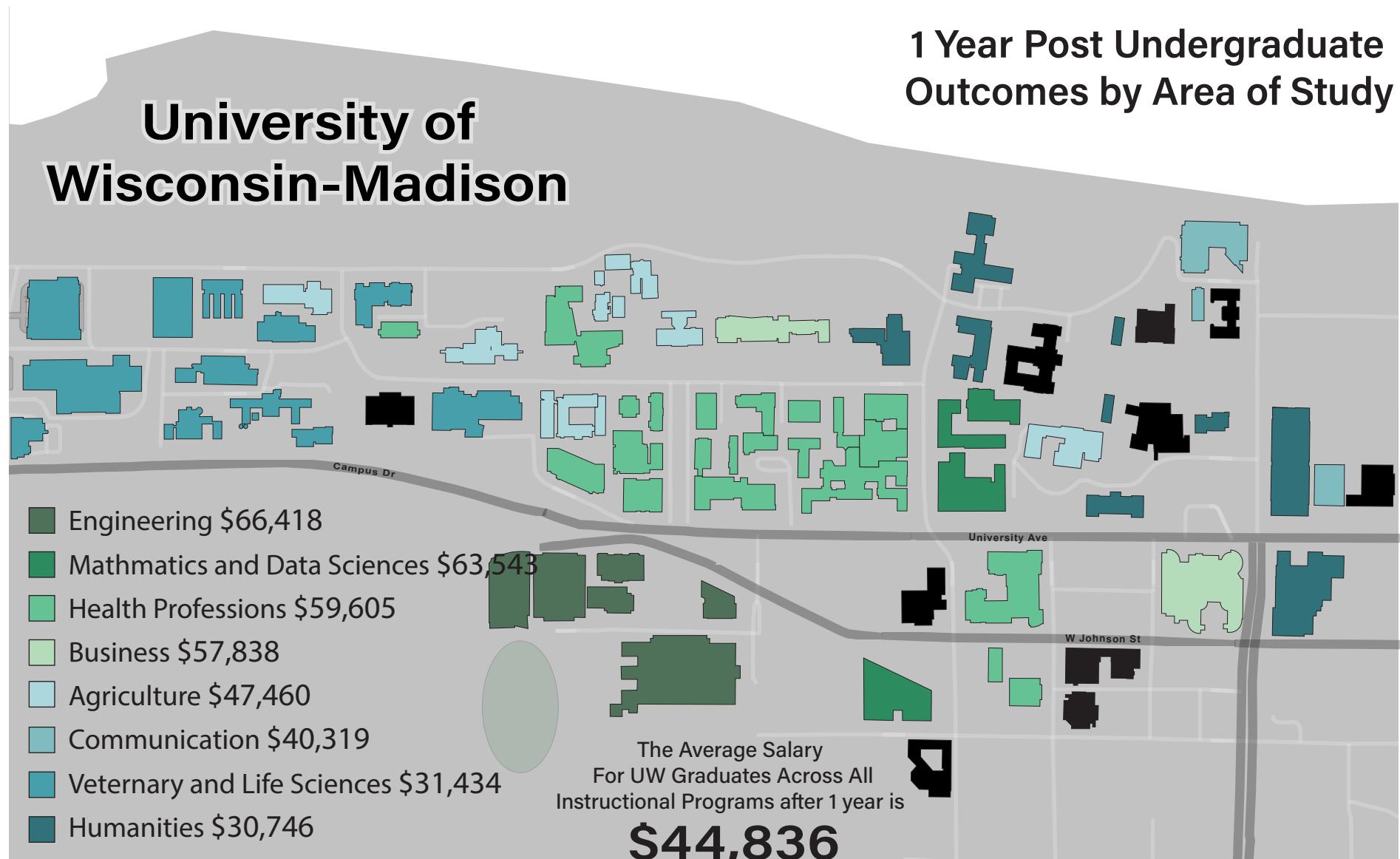
WHAT KNOWLEDGE BUYS



YOU IN THE WORKFORCE AT UW-MADISON

Reported Post Graduate Outcomes by Area of Study

The University of Wisconsin-Madison is one of the premier public colleges in the United States and known around the world. It is a known research institution and offers a wide variety of undergraduate, graduate, and professional programs. As Wisconsin's state college, Wisconsin residents can enjoy in-state tuition if they attend. However, tuition is still the most expensive among all Wisconsin public universities. The price of living in the city of Madison and attending a leading learning institution is costly for students. The value of a degree at UW-Madison is high and attractive to employers. But is the value of a degree at UW-Madison enough to offset doubt acquired over four years of schooling and living expenses? The answer to that question depends on the area of study by UW-Madison graduates. Depending on what kind of degree and in what major, a bachelor's degree can yeild



different outcomes. Some degrees offered at UW-Madison seem to give graduates a better start like those in Engineering or Business. Other degree fields like Humanities and Veterinary and Life Sciences require more education and experience in the workforce to yield a higher salary. As the U.S. dollar continues to decrease in value, As the U.S. dollar continues to decrease in value, young people are forced to consider the costs and benefits of attending college. The University of Wisconsin offers opportunities that may better graduate's chances at receiving higher earning positions. However, some degrees may prove to endanger the financial future of young people, sending them off into the world with thousands in debt.

How do Outcomes Change with Graduate Degrees?

Area of Study	Masters Degree	Doctoral Degree
Engineering	\$81,348	\$98,150
Mathematics and Data Sciences	\$105,365	\$80,798
Health Professions	\$59,619	\$66,480
Business	\$59,619	\$163,330
Agriculture/Veterinary Medicine	\$105,365	\$76,125
Communication	\$39,882	\$66,922
Humanities	\$35,298	\$51,688

The table above shows the projected salaries of students in various areas of study graduating with a Master's degree and Doctorate degree at UW-Madison. These outcomes differ in every catagory from the outcomes seen with just a Bachleor's one year after graduation.

Metadata

Author and Cartographer: Morgan Jensema

Data acquired from:

Wisconsin Department of Public Instruction, Colleges and Universities, Wisconsin, 2021, June 9th, 2023

College Tuition Compare, 2024

United States Census Bureau, Center of Economic Studies, Post-Secondary Employment Outcomes Explorer

University of Wisconsin-Madison Geodata Portal, Buildings Dane County, WI 2023

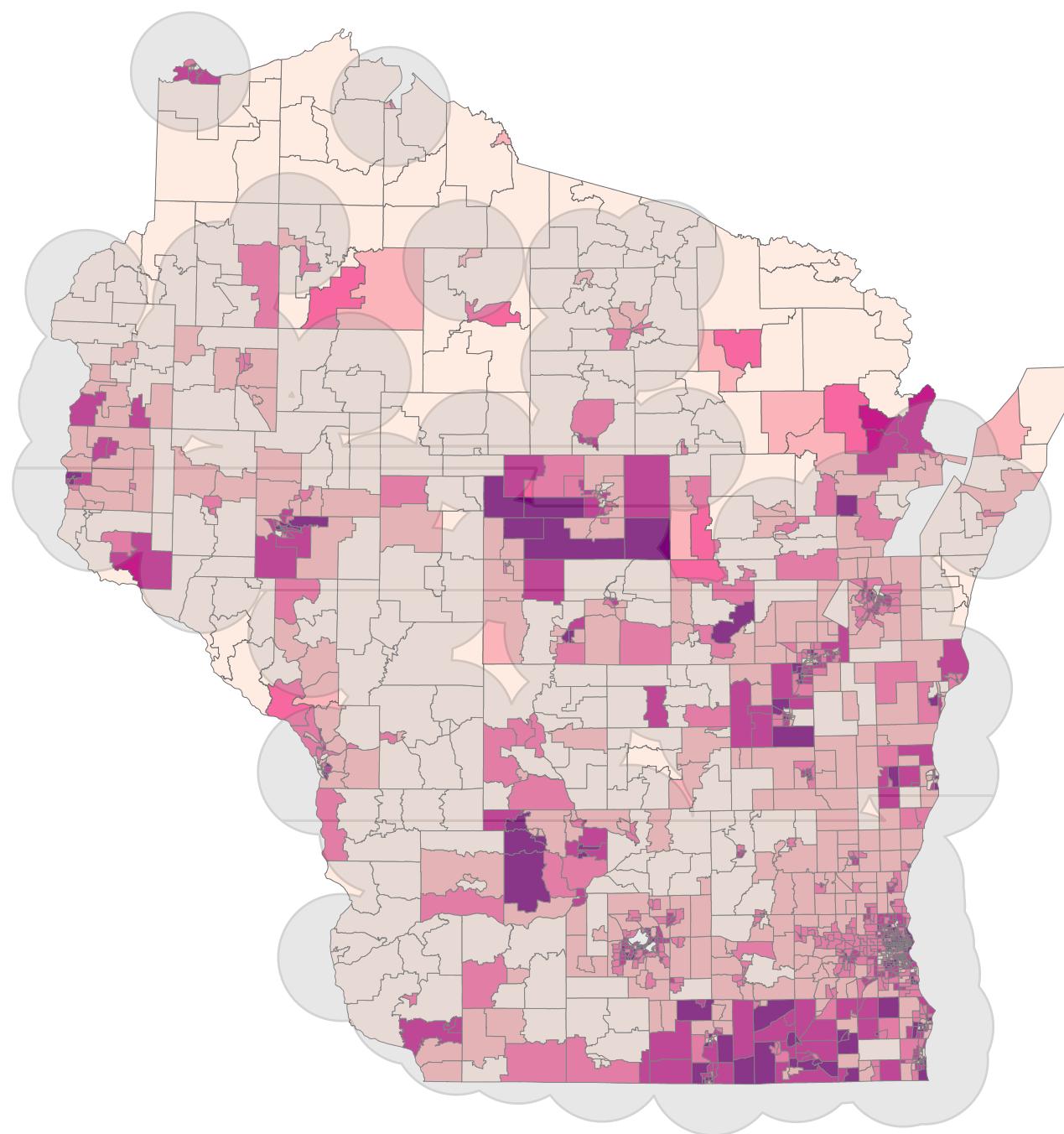
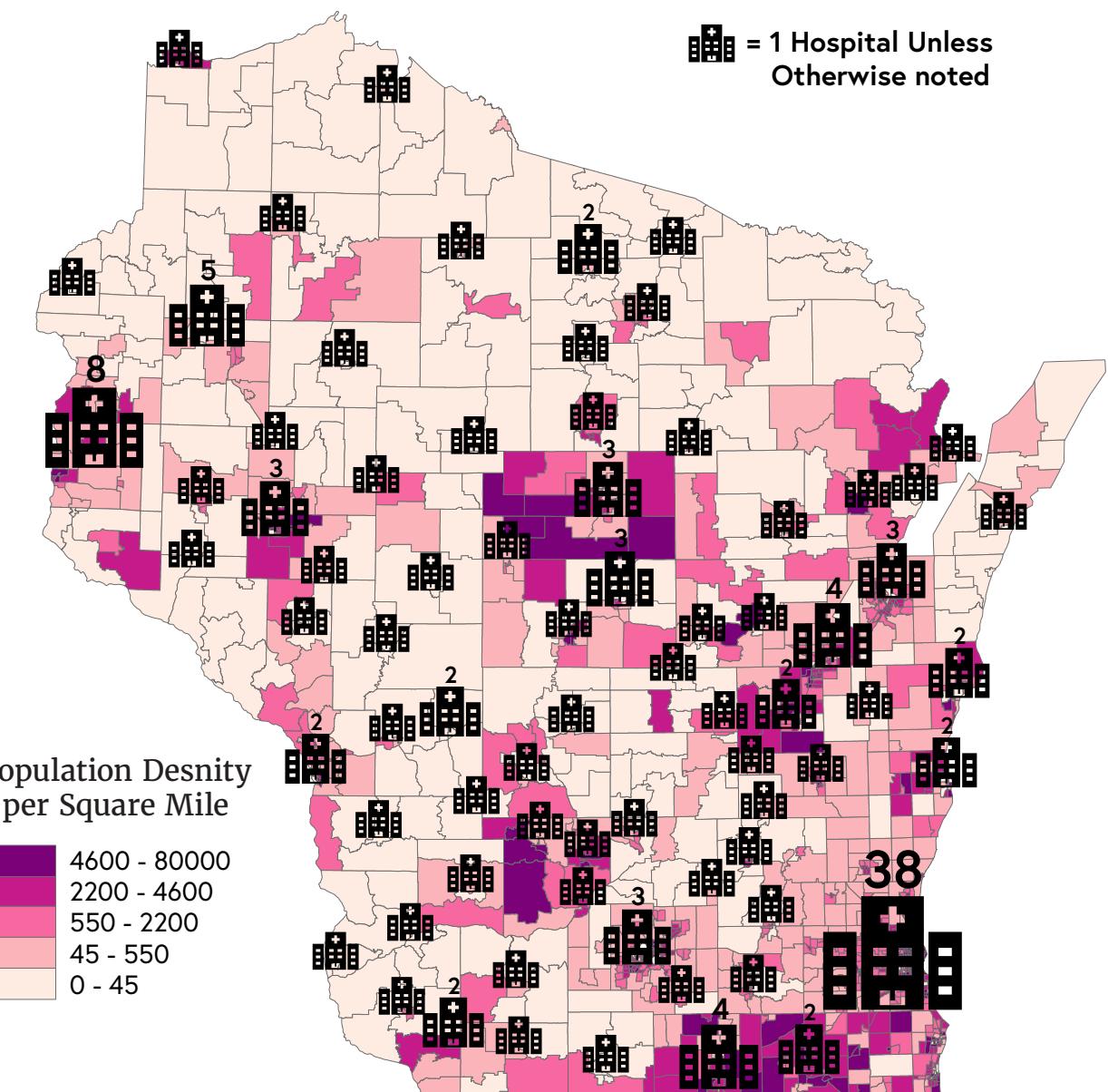
University of Wisconsin-Madison Campus Map

This is a map of all of the major hospitals in the state of Wisconsin, based on data from the Wisconsin Department of Health Services. Each of the pins represents one hospital. These hospitals span the entire state and encompass a multitude of different healthcare providers and hospital systems. This network of hospitals that provides services to the citizens of Wisconsin is vital to the state's overall healthcare operation.

It is important to note that these hospitals are not the only ways that people in Wisconsin can receive medical treatment. There are alternative options that include clinics, emergency care centers, and smaller rural healthcare centers. However, it is important to note that hospitals play the largest role in long term care and major operations on patients, as well as providing other services in house like regular check ups and pharmacy services.

Without access to hospitals, citizens of Wisconsin would struggle to receive the life-saving care that they might need. These hospitals, and the staff they employ, are some of, if not the most, important places and people in the entire state. The hospital system in place in Wisconsin is extraordinary, and without, who knows where the citizens of Wisconsin would be. The hospitals lie on top of a map displaying population density.

WISCONSIN HOSPITALS

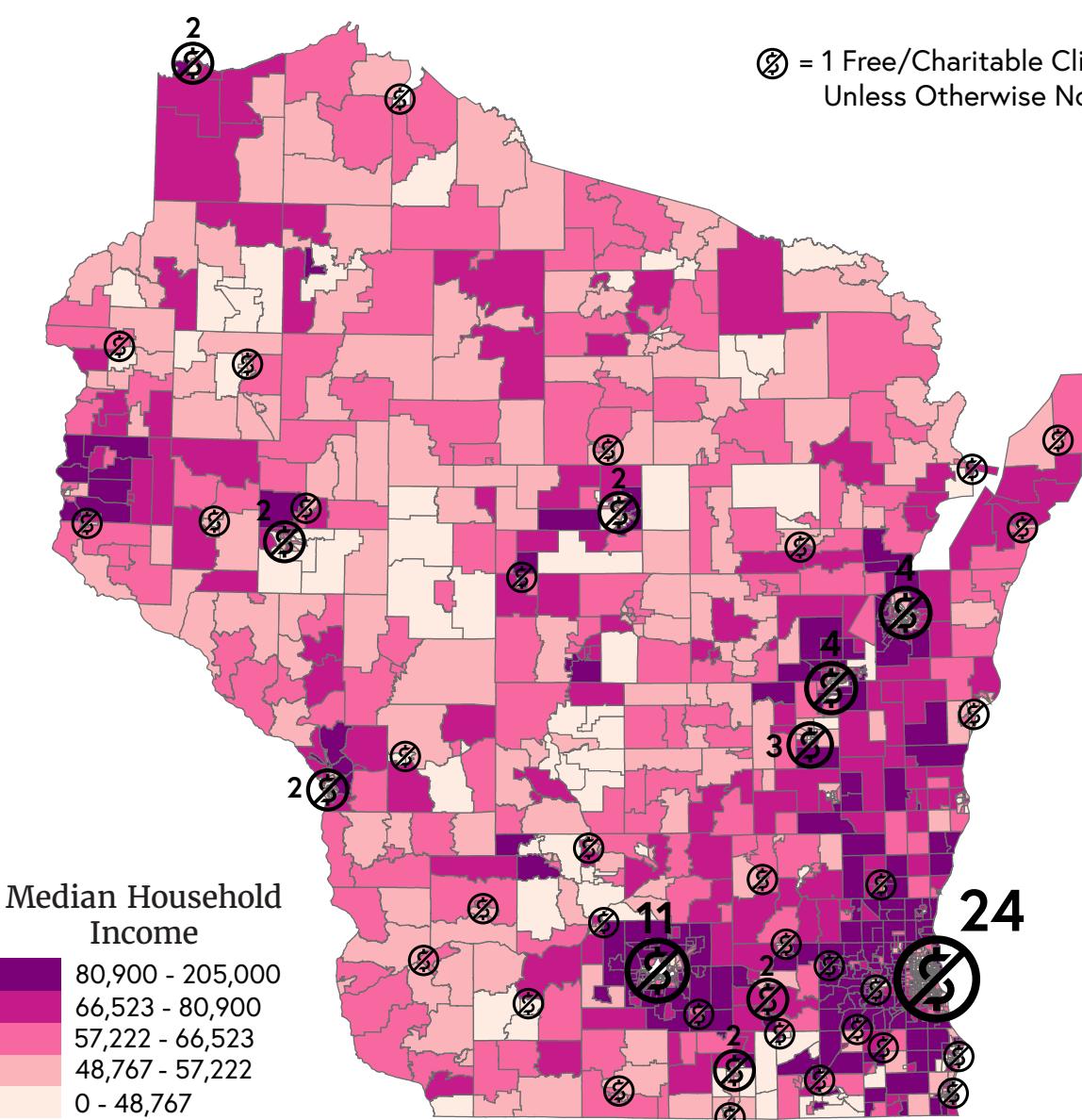


This map introduces a 25 mile buffer around all of the hospitals in the state of Wisconsin. This 25 mile buffer is an arbitrary figure that depicts the service area of any given hospital. Obviously there are potential extenuating circumstances where one might be willing to travel further than 25 miles for specialized care, but generally, if in need of emergency surgery or general hospital care, driving further than 25 miles seems quite far. The buffer zones around the hospitals illuminate gaps in the Wisconsin hospital system as well as certain trends.

The hospitals and buffer zones are overlaid on top of a choropleth map of Wisconsin census tracts displaying population density per square mile. This data was retrieved from Social Explorer and utilizes the 2020 American Community Survey 5-Year Estimate dataset.

The buffer zones in conjunctions with the map of population density reveal some intriguing facts about how Wisconsin prioritizes their hospital system. The first is that rural Wisconsinites will be expected to drive further to receive care. This generally makes sense when considering that the hospitals in rural areas do not serve as large of a population, but there are clear gaps that still should be addressed.

Wisconsin Free and Charitable Clinics

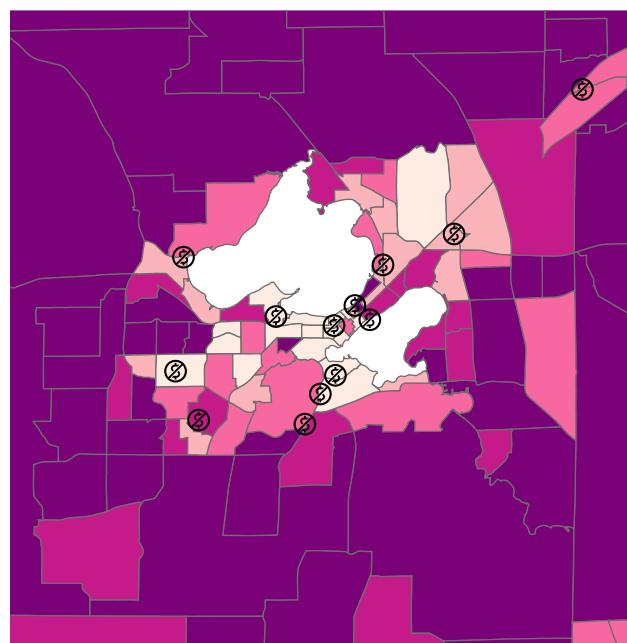


This map depicts the free and charitable health clinics in the state of Wisconsin overlayed onto a choropleth map of median household income by census tract. This data was pulled from the Wisconsin Department of Health Services and Social Explorer respectively.

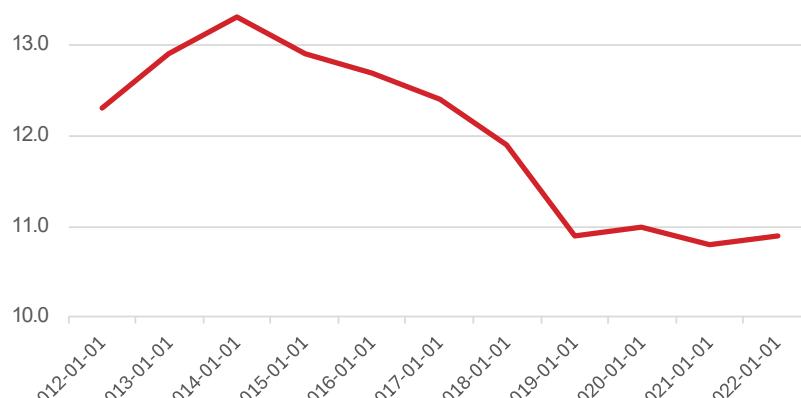
This data is important to the citizens of the state of Wisconsin as many areas, mainly urban and extremely rural, have people who cannot afford healthcare or health insurance. Both Madison and Milwaukee, two of the largest metro areas in the state, have seen an increasing homeless population in line with the rest of the United States. These people do not have the resources to get Badger Care, the state's Medicaid plan, and they are some of the most vulnerable to disease. Ensuring these people can get the care that they need is extremely important to keeping the overall health of the cities up.

There are also charitable clinics in the poorer and more rural areas of the state. This is important as those areas experience a different type of poverty than the metro areas, and still require healthcare services. It is also important to note that many of these clinics may offer "rural healthcare" services that can tend to injuries more often sustained on farms rather than in big cities.

Madison Area

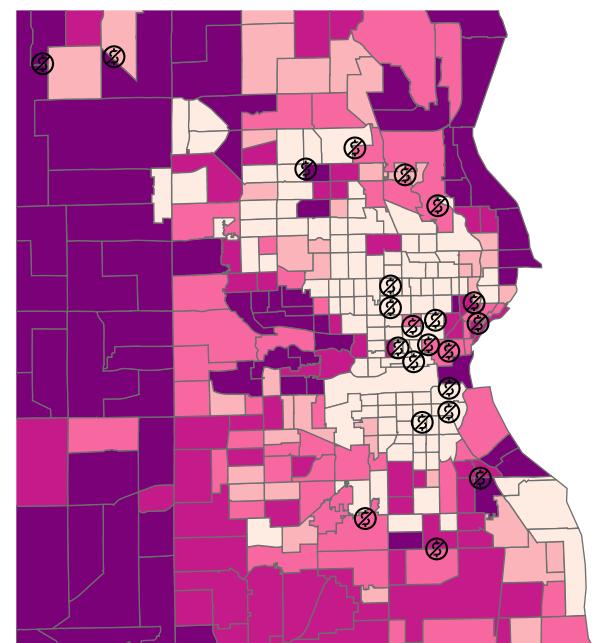


Madison Poverty Rate

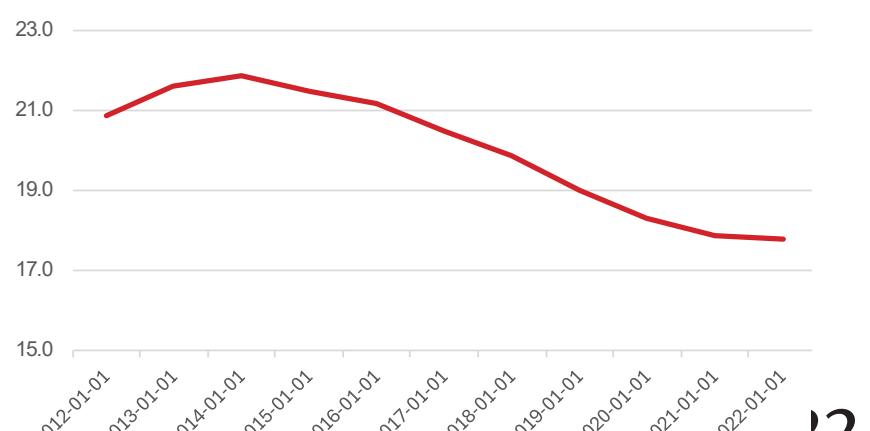


Madison and Milwaukee are the two largest metro areas in the state of Wisconsin. They are denoted on the map above by the 11 (Madison) and 24 (Milwaukee) free and charitable clinics. These two metro areas also see some of the highest poverty rates, even if not shown by the map. While the rate of impoverished people has steadily decreased in the last decade, the poverty problem is still very noticeable. For people struggling to get by, healthcare, which leads the way in terms of inflation, can be a back-breaking cost. There are families out there who must go without healthcare or fight the incredibly difficult state healthcare system to receive care. Working with government insurance, whether Medicare or Medicaid, can be a long and difficult process that can be impossible to complete when other, higher priority tasks need to be completed. The graphs show data from the St. Louis Federal Reserve.

Milwaukee Area



Milwaukee Poverty Rate





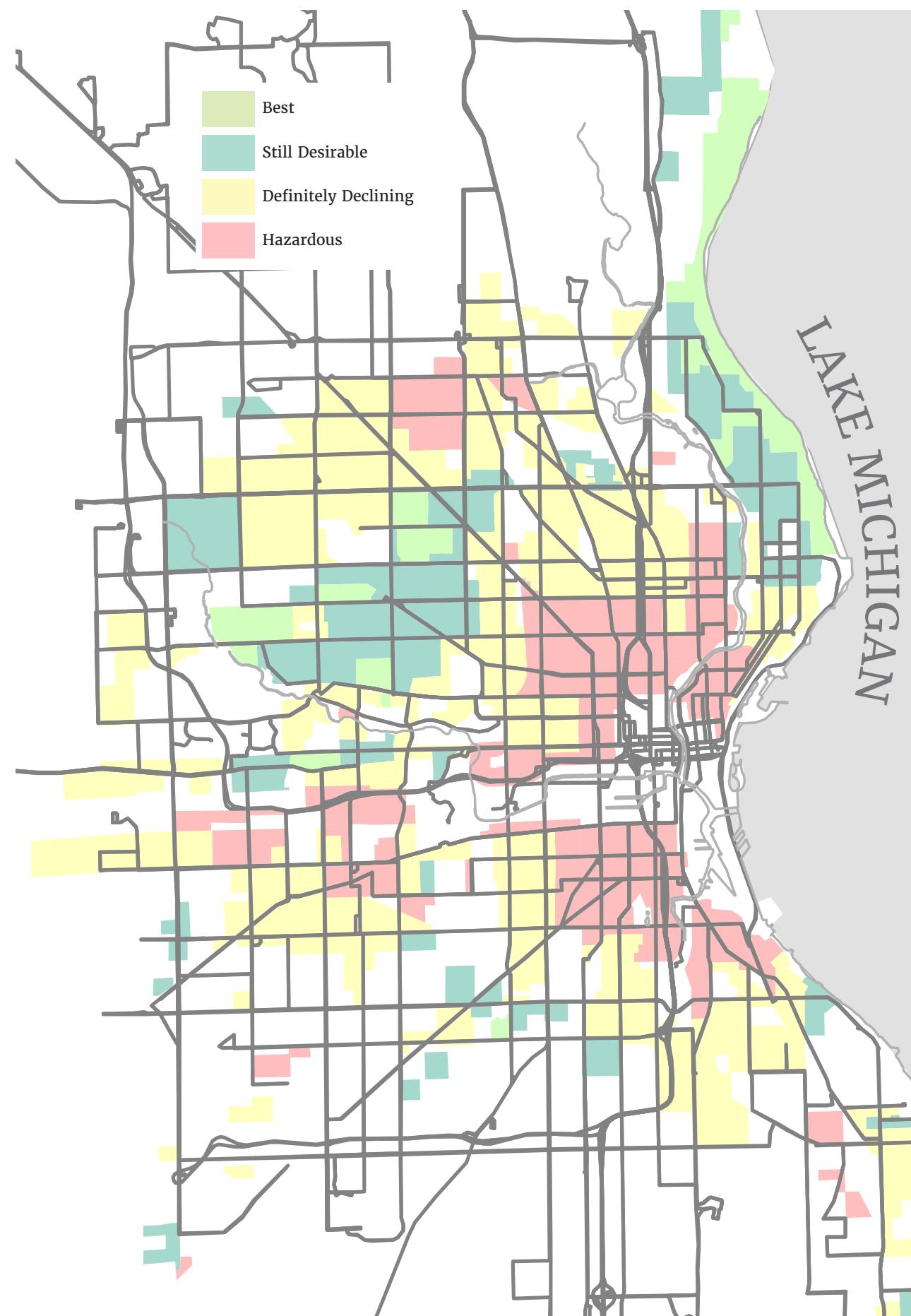
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PUBLIC TRANSPORTATION

Milwaukee, WI History: Redlining

Milwaukee, Wisconsin is one of the most segregated cities in the United States, in part due to its extensive history of redlining and housing discrimination. Redlining is the practice of systematically denying minority populations equal access to housing and home loans. It began in Milwaukee in the 1930s, when, in an effort to fix the housing market during the Great Depression, the National Housing Act of 1934 was enacted, creating the Federal Housing Administration (FHA), which aimed to prevent foreclosures as homeowners struggled with the effects of the Great Depression. Throughout the '30s and onward, the FHA worked with the Home Owners' Loan Corporation (HOLC), which was a lending agency that helped to refinance mortgages for homeowners during this time, to create maps of "residential security," which aimed to show "investment risk" of houses in these neighborhoods. Banks and other lenders would then use these maps to determine whether people living in the neighborhoods would qualify for a loan.

The metrics by which the HOLC evaluated residential areas were far from fair. Neighborhoods were filed into four classes: "Best," "Still Desirable," "Definitely Declining," and "Hazardous." These decisions were made based on factors such as aesthetics, age of houses, access to amenities, and environmental health risks, but more prevalently, demographics of those living in the neighborhoods. Many of the evaluation questions were directly or indirectly related to race, ethnicity, and religion, and the resulting neighborhood ratings were directly affected by the biases of the HOLC assessors. Neighborhoods in the "Best" class were aesthetically appealing and made up entirely of white families. These areas often had associations with policies forbidding homes from being sold to anyone who was not white. "Still Desirable" areas also excluded African American people, but they had a few "foreign-born" families and included a mix of newer and older homes. "Definitely Declining" neighborhoods still included no Black residents, but residents were considered "unstable buyers" and were often denied home loans. Finally, the "Hazardous" areas were considered old, in bad condition, and had Black resi-



Map: Current Milwaukee County Bus Routes compared with HOLC neighborhood ratings from 1930s mortgage investment risk maps. 1:150,000 Scale. Redlining data from Mapping Inequality, Milwaukee County Bus Routes from Milwaukee Department of City Development.

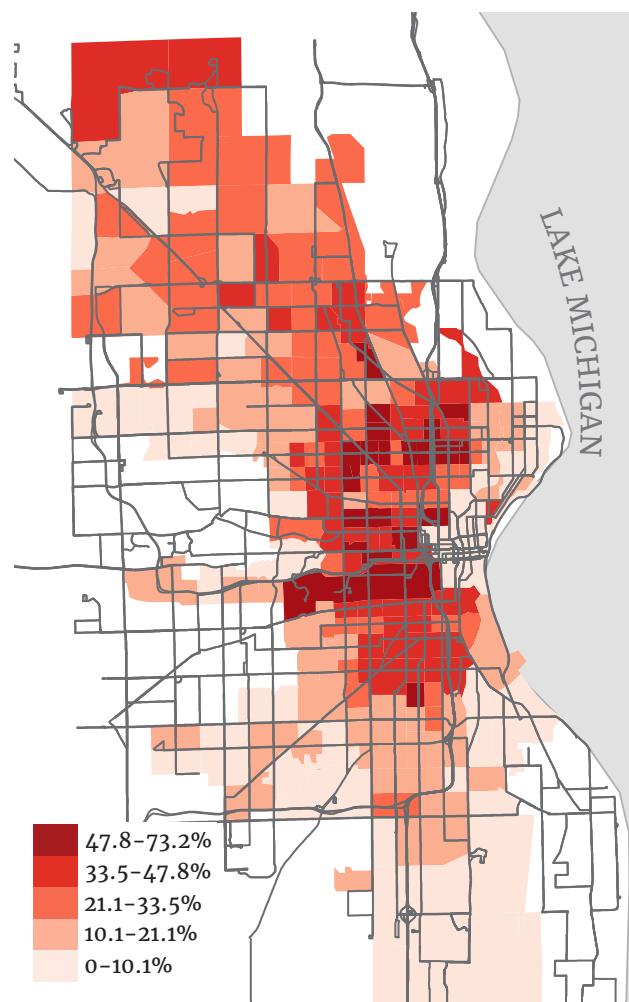
dents. Residents of these neighborhoods would find it nearly impossible to be approved for any sort of loan due to this categorization.

The boundaries drawn by the HOLC shaped housing outcomes for many decades, and the racial distribution of residents of Milwaukee even today reflect the maps drawn nearly a century ago. Because lenders would not invest in "undesirable" neighborhoods, the residents faced poorer and poorer conditions, little education funding, many environmental health hazards, and increased distance from amenities like grocery stores and medical facilities. This kept poor people poor, and residents of these neighbor-

hoods could never leave. In the 1960s, housing and other forms of discrimination were outlawed, but the effects of redlining could still be felt, and other forms of segregation continued to flourish.



Image: Civil Rights Activists marched for 200 consecutive days in 1967 and 1968 in protest of housing discrimination in Milwaukee.



Map: Current Milwaukee County Bus Routes compared with estimated percent of families in poverty by U.S. Census tract. 1:250,000 Scale. Data from Data You Can Use.

Poverty Rates in Milwaukee

As shown in the map above, the effects of redlining can be seen to this day. Areas of Milwaukee with high poverty rates match up very well to areas historically labeled “Hazardous” or “Definitely Declining.” This visualizes how the lack of investment in these areas historically led to a positive feedback loop of more and more poverty in these areas. 22.1% of Milwaukee residents have an income below the poverty line, but in the census tract with the highest poverty rate, 73.2% of families are living in poverty. The gap between the richest and poorest citizens in Milwaukee is massive, and the lingering effects of redlining make it extremely difficult to narrow the gap.



Image: Milwaukee Streetcar on West Wisconsin Avenue in the 1920s. Image from Milwaukee County Historical Society via Milwaukee NPR.

Narrowing the Gap: Public Transit

Both the redlining map and the poverty map share another similarity: there are more current bus routes in the areas historically labeled as “Hazardous,” which now suffer from higher poverty rates. This is a step in the right direction to narrowing the income gap in Milwaukee. Historically, these poorer areas had no transportation, which meant no mobility and no access to shopping, medical care, and arguably most importantly, jobs. The only way to bring more money into these poor neighborhoods is for the residents to earn money to spend, which can be very difficult without transportation. Many new jobs in the Milwaukee area are in the suburbs or on the outer edge of the city.

The map to the right shows the percentage of individuals in areas of Milwaukee with no access to a personal vehicle as of 2000. Again, the lingering effects of redlining can be seen. Areas closer to the center of the city have much higher rates of individuals without vehicle access. These are the areas with the highest public transportation need, so it follows that these are the areas with the most bus routes. Many people in these areas rely solely on public transportation to access jobs further out in the city, so more expansion of bus routes is needed to ensure that this population is able to access jobs further out in the city.

Expansion of the public transportation network should focus on running bus routes more frequently, increasing rides and routes to suburbs of Milwaukee and the outer city, and increasing funding for the reduced fare funding program, which offers seniors, children, and individuals with disabilities reduced bus fare. Programs like these increase mobility for

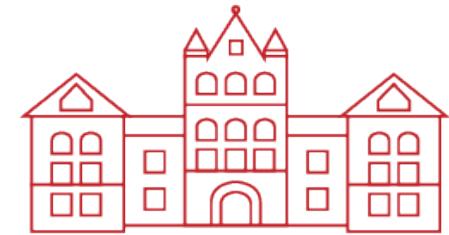
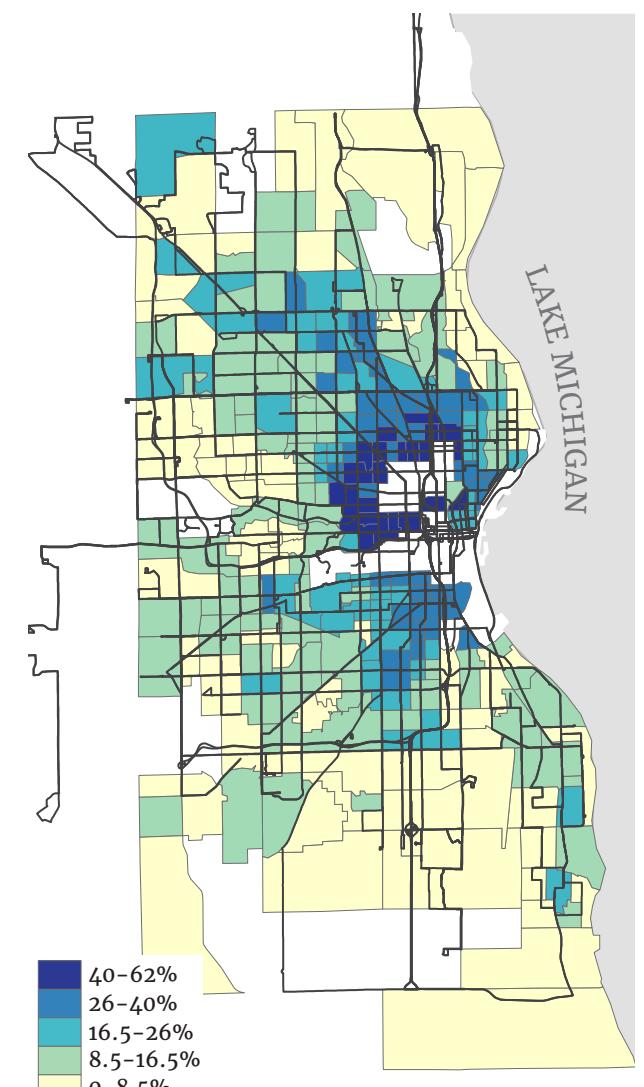


Image: Milwaukee County Transit bus welcoming riders aboard.

those who are unable to drive themselves. By increasing the frequency of buses and the density of bus routes, individuals from underprivileged neighborhoods can access the resources and jobs available in other places, bringing the benefits of these services and income to their own neighborhoods and closing the gap.

Text Sources:

- Milwaukee Neighborhood News Service
- WisContext.org
- Milwaukee Transit Riders’ Union
- Milwaukee County Transit Service



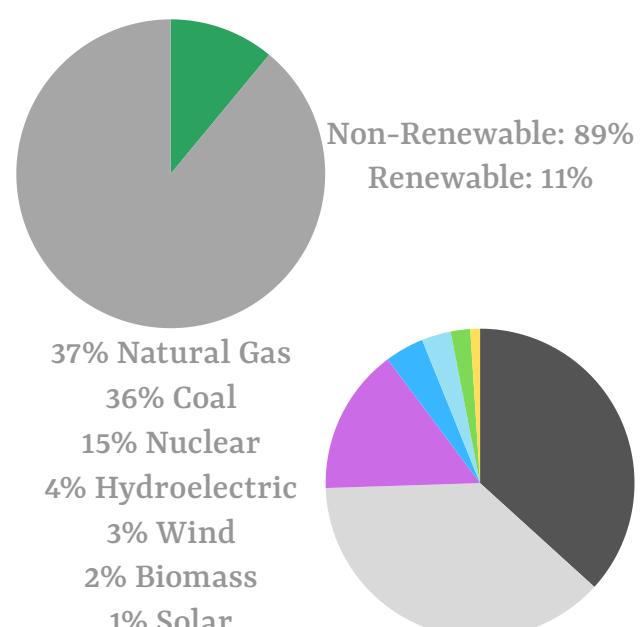
Map: Current Milwaukee County Bus Routes compared with percent of population with no access to a vehicle in 2000 by census tract. 1:305,000 Scale. Data from U.S. Census

WISCONSIN ELECTRICAL GRID

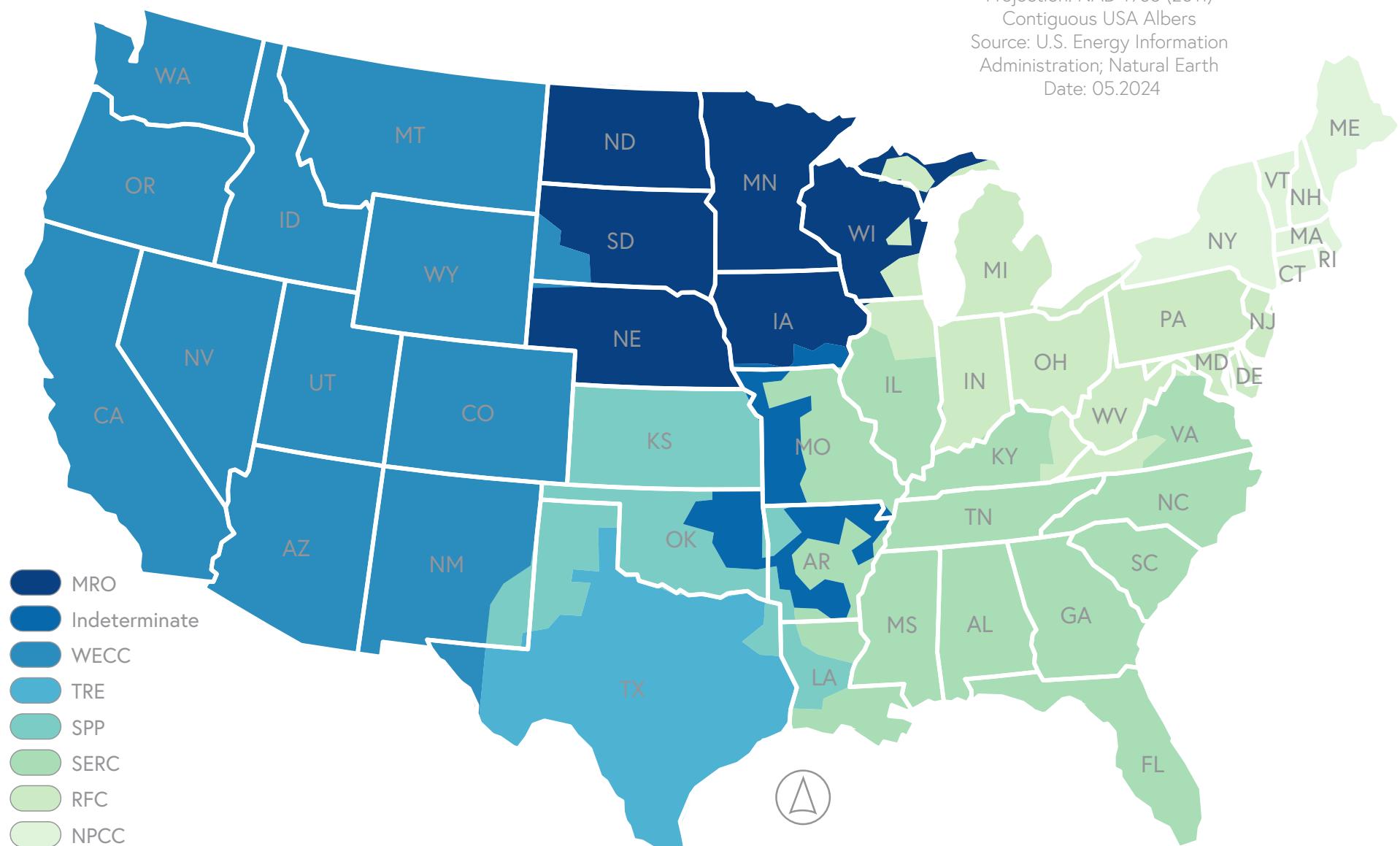
Electricity Generation

Elizabeth Gediman

The electrical grid is a complex network of interconnected power generation, transmission, and distribution systems that deliver electricity from power plants to consumers. In Wisconsin, electricity generation accounts for the largest share of greenhouse gas emissions in the state (~32%). As the state increasingly prioritizes sustainability, there is a growing emphasis on transitioning towards renewable energy sources to mitigate environmental impacts and combat climate change. This is a dramatic change from traditional, non-renewable sources such as coal and natural gas. Decarbonization, especially to meet the state's carbon-free electricity consumption by 2050 is a massive undertaking, but Wisconsin has made some progress.

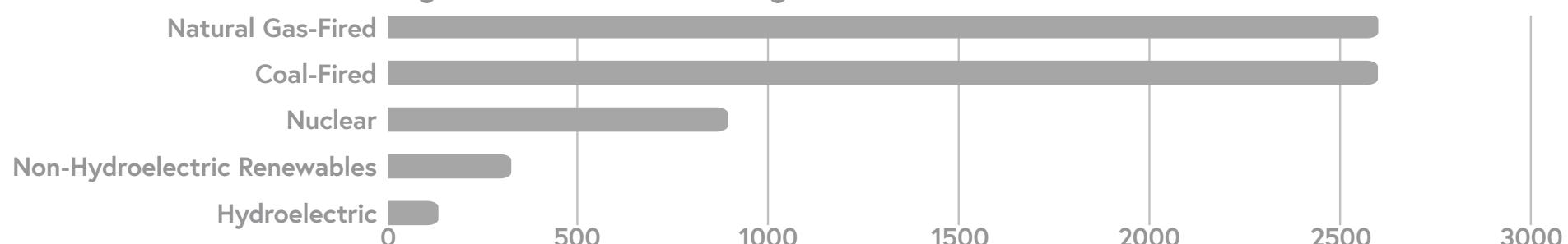


North American Electric Reliability Corporation (NERC) Regions



The North American Electric Reliability Corporation (NERC) plays a crucial role in ensuring the reliability and security of the bulk power system across North America. As the continent's primary regulatory authority for electric reliability, NERC develops and enforces standards to protect the integrity of the grid and prevent disruptions. Collaborating with industry stakeholders, NERC continually assesses risks, identifies vulnerabilities, and implements measures to maintain a resilient electricity infrastructure.

WI Net Electricity Generation by Source (thousand MWh/month)



Wisconsin's electricity generation is predominantly fueled by a mix of coal, natural gas, nuclear, and renewable energy sources. Coal has historically played a significant role in the state's energy portfolio, but there has been a gradual shift towards cleaner alternatives. Natural gas has become increasingly important due to its lower emissions and flexibility in power generation. Nuclear power contributes a significant portion of the state's electricity, providing a reliable baseload source. Wind power, in particular, has seen significant growth in recent years, positioning Wisconsin as a leader in renewable energy adoption within the Midwest region.

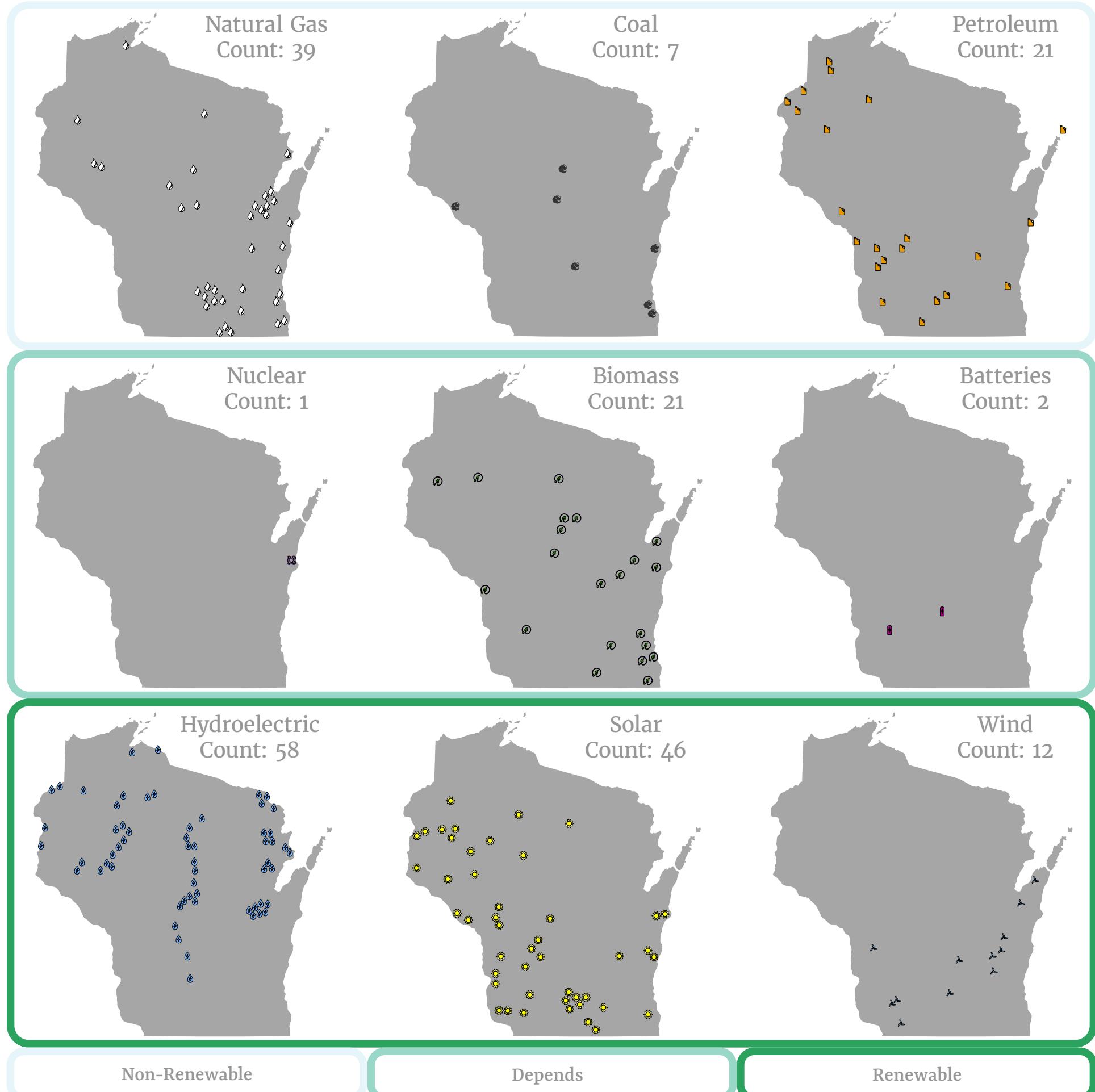
Figure 1: Wisconsin Office of Sustainability and Clean Energy: State of Wisconsin Clean Energy Plan Progress Report, May 2023.

Figure 2: United States Energy Information Administration, Electric Power Monthly.

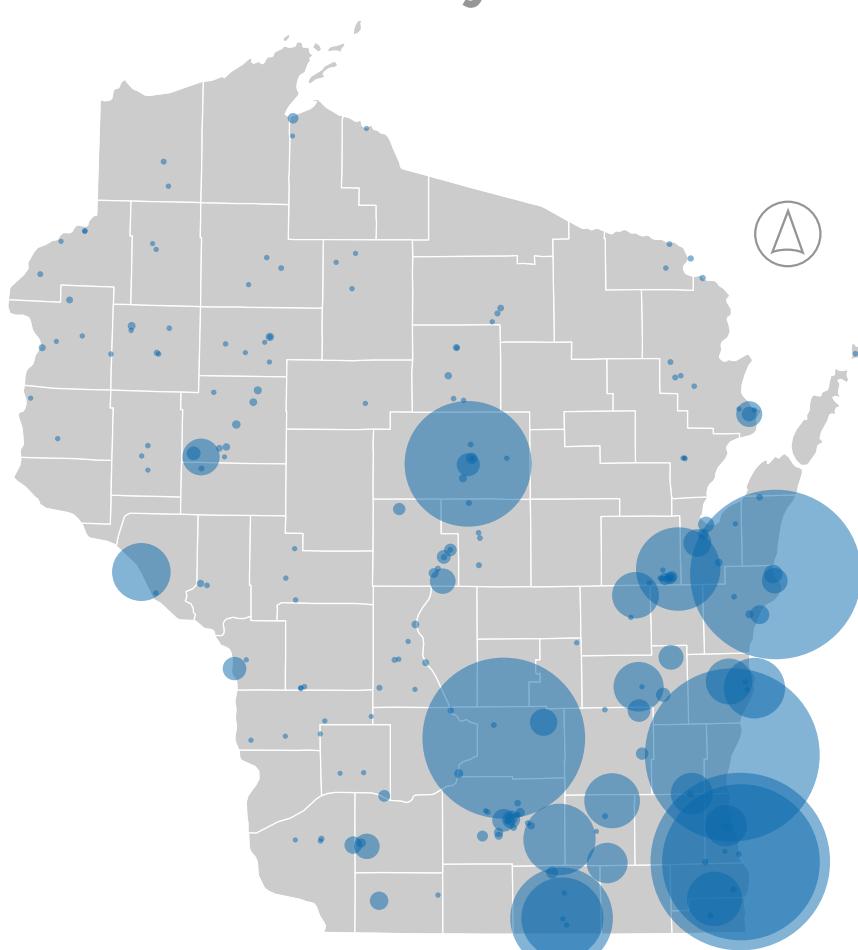
Figure 3: Wisconsin Office of Sustainability and Clean Energy.

Source: North American Electric Reliability Corporation (NERC); Natural Earth.

Wisconsin Power Plants by Type



Power Plant by % of mWh



Although there are a wide variety of power plants in Wisconsin, they are not equal in their output of energy. Many of the renewable power plants are fairly small and produce a fraction of the energy that the larger, non-renewable power plants produce. As Wisconsin works towards decarbonizing the electrical grid, this discrepancy in generation by type needs to be addressed. Nuclear power is especially promising in delivering a large capacity from a singular plant. As you can see, there is only one nuclear power plant operating in Wisconsin, and it provides the third highest electricity generation in the state, around 15%. Wisconsin's electricity generation landscape is undergoing a transformation as the state increasingly embraces renewable energy sources. The State of Wisconsin has a goal of 100% carbon-free elec-

Projection: NAD 1983,
Transverse Mercator
Central Meridian: -90
Source: U.S. Energy Information
Administration; Natural Earth;
Artists: Daniel DeLorenzo, Gregor
Cresnar, Michael Wohlwend, Icon
Fields, Yayat Dayar, DinosoftLabs,
Lars Meiertoberens, Adrien Coquet
Projection: NAD 1983,
Transverse Mercator
Central Meridian: -90
Source: U.S. Energy Information
Administration; Natural Earth
Date: 05.2024

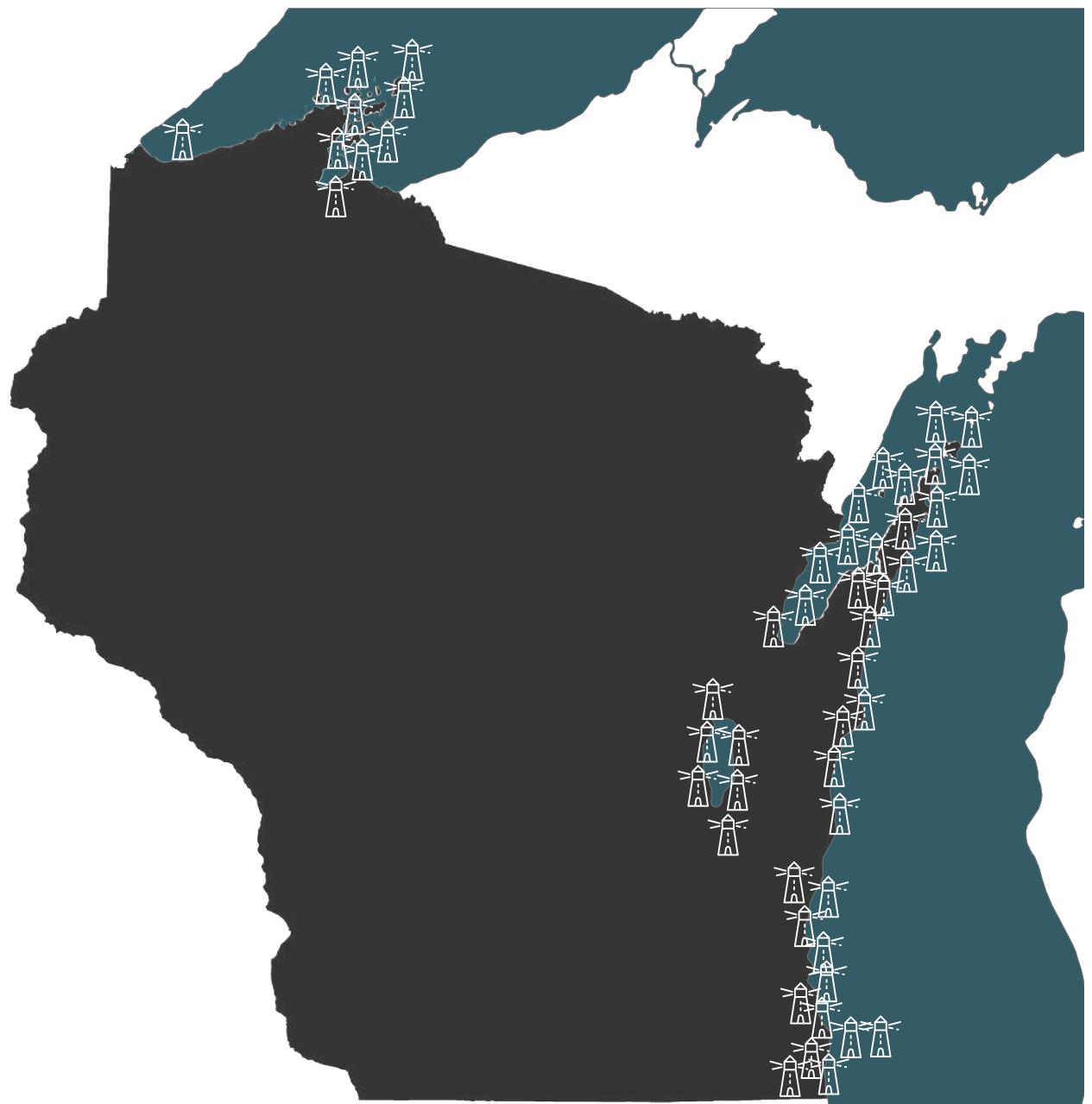
tricity consumed by 2050. Strategies for decarbonizing the electrical grid include the development and deployment of energy storage, demand response, carbon capture, community solar, and utility-scale solar. Creative financing incentives will also play a major role in this transition.

Source: Energy Information Adminis-
tration; Wisconsin Office of Sustain-
ability and Clean Energy.

Lighthouses of Wisconsin

By: William Weatherhead

Oceanic navigation has been integral to shaping the world in which we live, from the first ships crossing the Mediterranean to the massive cargo liners bringing goods all over the world. Hundreds of things can go wrong at sea. Underwater rocks can smash your ship, wrong bearings can take you off course, and the lack of landmarks make it difficult to know where to go. In time before modern GPS services, these issues were solved via lighthouses. Lighthouses are used to mark the entrances to harbors, as well as point out dangerous reefs and rocks to avoid. While Lake Michigan and Lake Superior are no oceans, the dangers they hold are not lessened. Lake effect weather can generate winds up to 100 mph, and ships without safe harbor can easily meet a quick end. Although most are autonomous today and a few have become defunct, lighthouses still remain an important part of Wisconsin maritime culture.



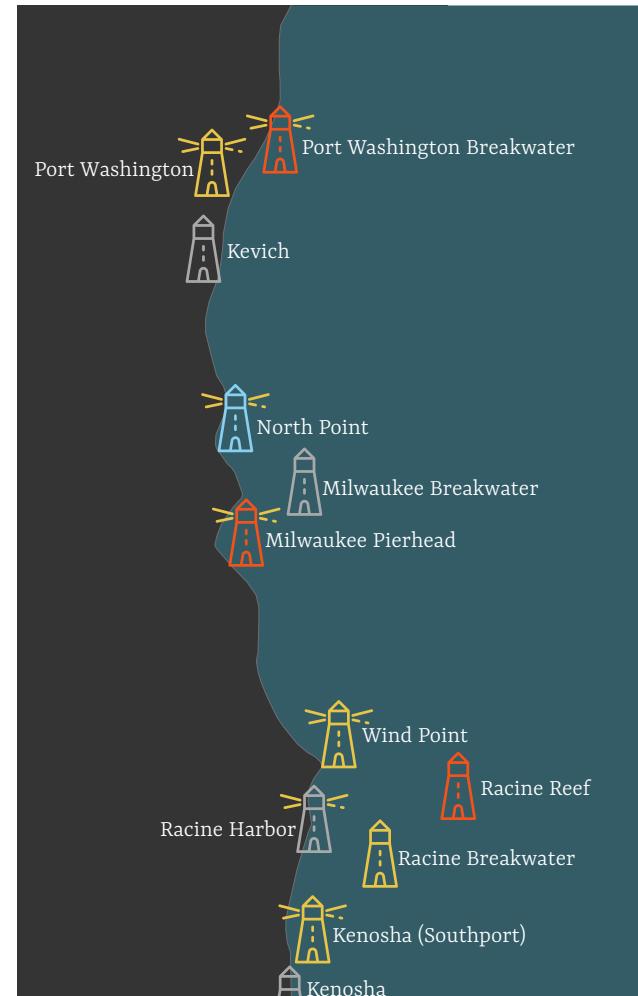
Data sourced from LighthouseFriends, DNR, Natural Earth

Wisconsin

There are 50 active lighthouses in Wisconsin, with most lining the shores of Lake Michigan and the Apostle Islands. Of all 55, 13 are owned by the coast guard, 10 are owned by City in which they are located, 3 are owned by the Wisconsin DNR, 2 are club owned, 8 are privately owned, 5 are county owned, and 9 are owned by the Federal Government (NPS and US F&W)

South Lake Michigan

The southern half of Lake Michigan is home to many port lighthouses thanks to the plethora of major cities there, such as Milwaukee, Racine, and Kenosha. The southern half of Lake Michigan features less hazards than the northern half, with Racine reef being one of the exceptions, a major hazard to ships coming in and out of Racine. The port of Milwaukee is a major feature of this region. As an international port, it sees a lot of ship traffic which once required lighthouses to mark the way: one on the breakwater to avoid collisions, and one on the pierhead to mark the start of the harbor. Although the breakwater is now privately owned, the pierhead is still being used today. The Milwaukee seal even features this lighthouse on the right side. Most cities on the south coast feature this layout, as harbors are profitable thanks to the large scale of Lake Michigan and the barges that can move freely.



Data sourced from LighthouseFriends

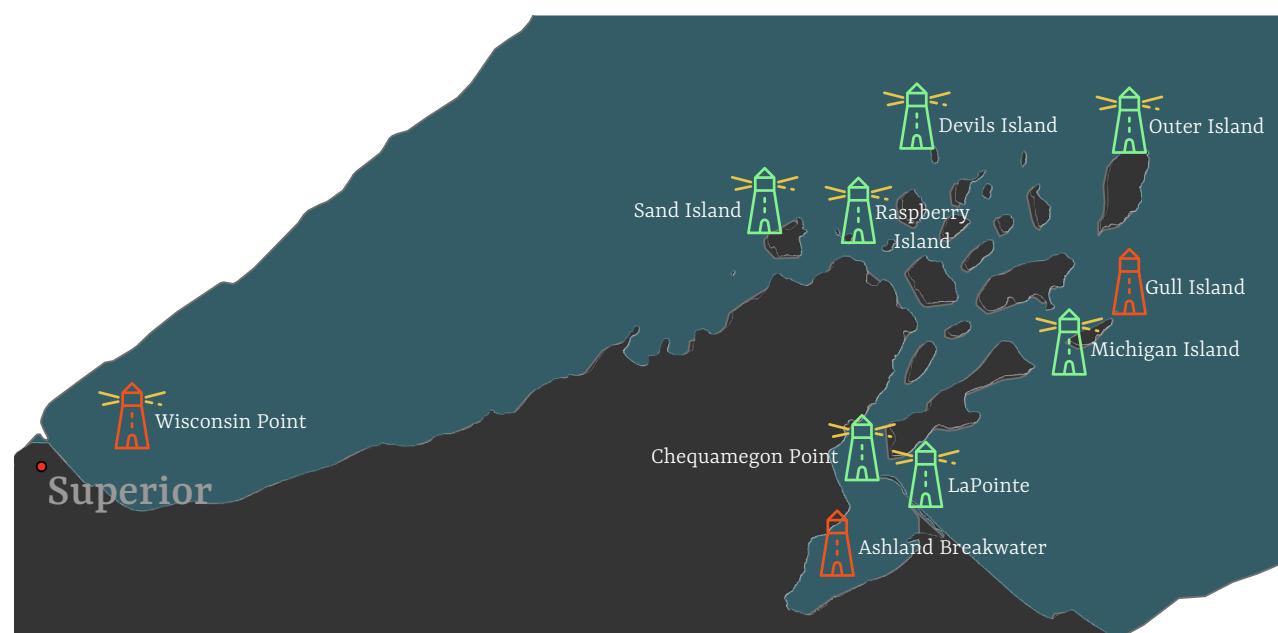


Door County

Door county was specifically named after the addage "Death's Door", named after the deadly passage between Plum Island and the main peninsula that has caused numerous shipwrecks since the area has been inhabited. Formed by glaciation, Door County has a plethora of underwater hazards which led to the creation of 19 lighthouses across the region.



Data sourced from LighthouseFriends



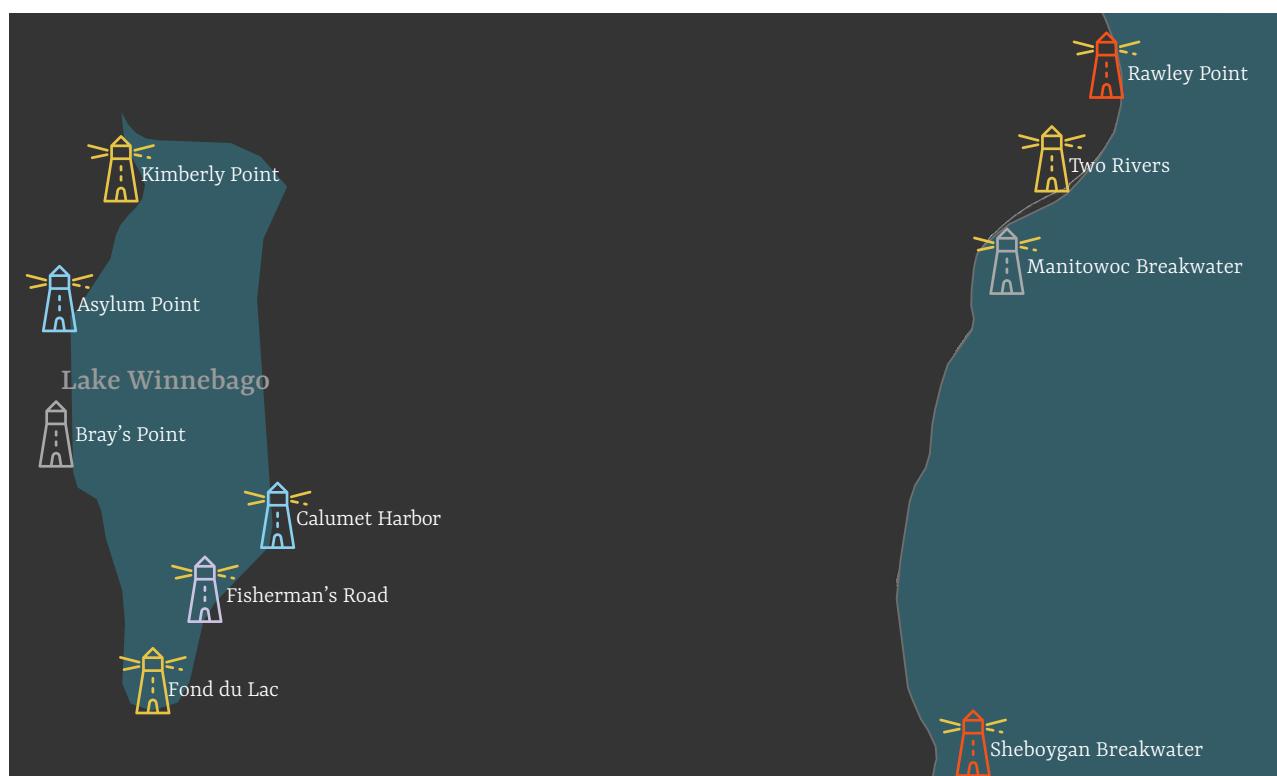
Data sourced from LighthouseFriends

Apostle Islands

The Apostle Islands were once on the major iron shipping route from Superior to the Canada or deeper into Lake Superior. The existing lighthouses helped facilitate navigation, but nowadays most of them have been turned over to the National Park Service, open for public enjoyment.

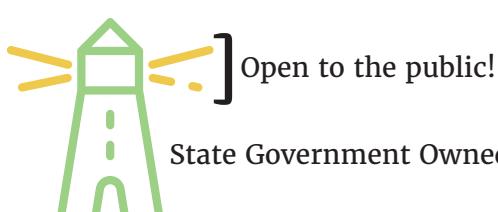
Lake Winnebago

Wisconsin's largest internal lake has 6 lighthouses that call it home. These lighthouses are easily accessible, as near all of them are on land and feature gorgeous public grounds near cities such as Oshkosh and Fond Du Lac. Though not as perilous as the great lakes, Lake Winnebago can still be treacherous as it houses a number of shipwrecks.



Data sourced from LighthouseFriends

Who owns those?



	State Government Owned		County Owned		Club Owned		City Owned
	Federal Government Owned		Coast Guard Owned		Privately Owned		

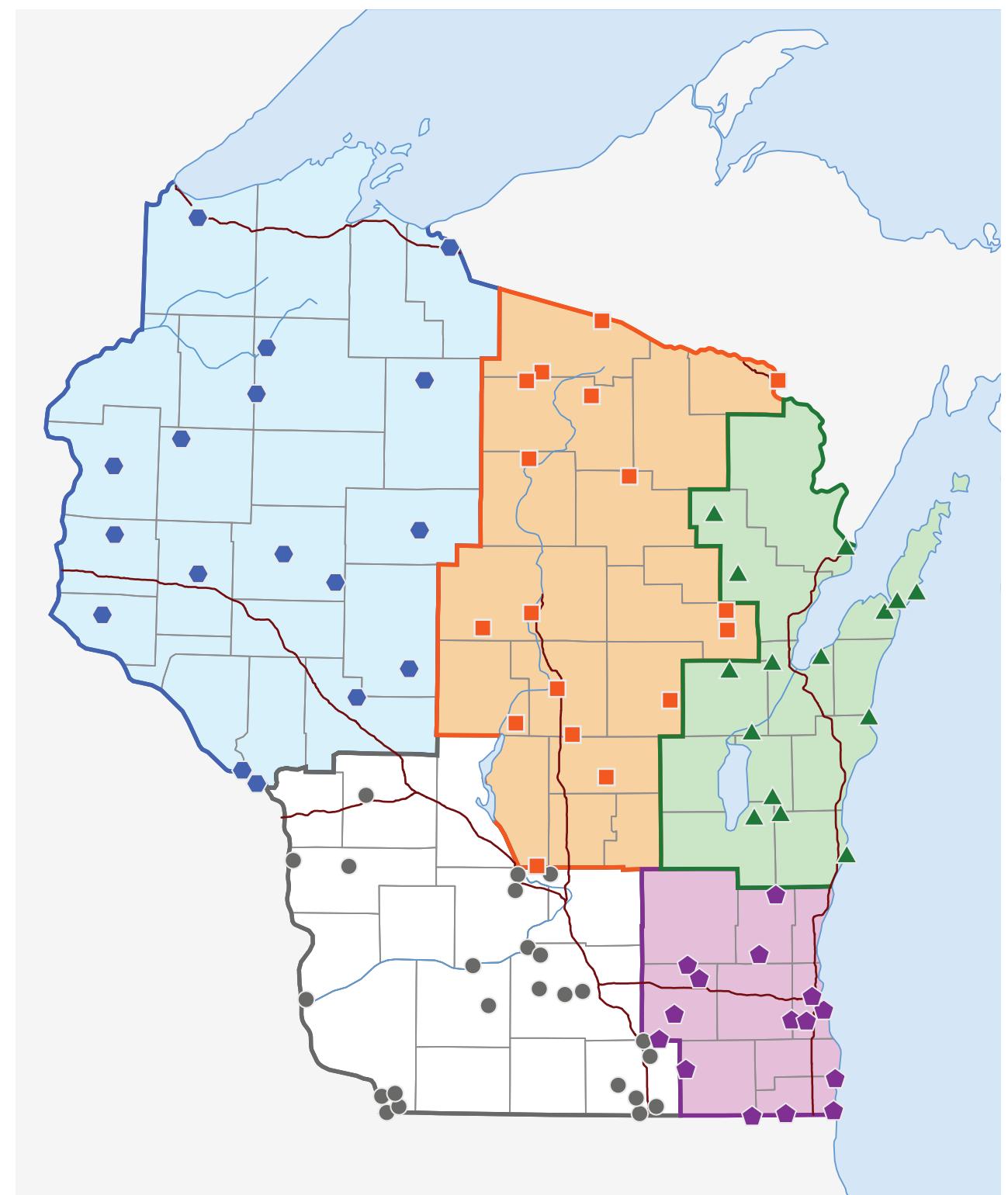


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WISCONSIN SUPPER CLUBS:

Prime Rib and Old Fashioned Experiences in Modern Times

The Wisconsin Supper Club is a staple of the Wisconsin landscape and the summer lake experience for many Wisconsinites and visiting families and friends. Many of these visitors may have had a common experience the first time they were offered the supper club experience, exactly what is a supper club? A supper club is not exactly clearly defined with everyone in agreement on what makes something a supper club versus what does not make a place a supper club. The best place to find a definition for what makes a supper club a supper club is perhaps the owners and patrons of these establishments themselves. For this look no further than Ron Faiola's 2011 An Old Fashioned Experience a 55-minute PBS style documentary about the history and future the supper club. Here defining characteristics are but not limited: being open for dinner but not lunch or breakfast (i.e. no day service), not a part of a chain, is family run, feel nostalgic with a dark wood and warm light atmosphere, is located along a lake, and serves "meat and potato" fare with rotating fresh fish and weekend Prime Rib specials which pair well with the Brandy Old Fashioneds and Manhattans that line the bar rails at all of these iconic establishments.



Map 1: The map above and the table below are a partner pair and highlight the supper clubs that were incorporated in Ron Faiola's 2013, 2016, or 2023 edition of his book Wisconsin Supper Clubs, An Old-Fashioned Experience. The subregion categories are the same used by Faiola's on his Wisconsin Supper Club website for ease of use and comparison between these products.

North Western	North Central	North Eastern	South Eastern	South Western
5 O'Clock Club	Branding Iron Supper Club	Boarding House	Colony House	The 615 Club
Castle Hill Supper Club	El Capitan Supper Club	Club Chalet	Dobie's Steaks & More	Arthur's Supper Club
Hillside Fish House	Four Seasons Supper Club	Gib's on the Lake	Donny's Girl II	Club Oasis
Jake's Supper Club	Pine Tree Supper Club	Nightingale Supper Club	Edgewater Supper Club	The Del Bar
Kimball Inn	Silver Birch Supper Club	The River's Edge	Fitzgerald's Genoa Junction	Delaney's
Kutzee's Supper Club	Two Lakes	Blanck's Supper Club	Five O'Clock Steakhouse	Green Acres Supper Club
Northwoods Supper Club	Antlers Supper Club	Donny's Glidden Lodge	Stagecoach Inn	Old Towne Inn
Old Abe's Supper Club	The Bear Trap Inn	Geno's Steakhouse	The Village Supper Club	The Village Bar Supper Club
Pine Ridge	Buck-A-Neer Supper Club	Kropp's Supper Club	The Copper Dock	3 Mile House
Dreamland Supper Club	Club 23	Lox Club	Diamond Jim's Steakhouse	Benedetti's Club 51
Fannie's Supper Club & Motel	Norwood Pines Supper Club	Maiden Lake Supper Club	The Duck Inn	Buckhorn Supper Club
High View Inn	Pinewood Supper Club	Majerle's Black River Grill	Elias Inn Supper Club	The Butterfly Supper Club
Indianhead Supper Club	Silvercryst Supper Club	The Mill Supper Club	Great Outdoors Supper Club	Chop's Kall Inn
The Laurel Supper Club	Sky Club	Roepeke's Village Inn	The Hob Nob	Cimaroli's Supper Club
The Ranch Supper Club	Washington Inn Supper Club	Schwarz's Supper Club	The Steakout	Club 23
Shady Grove	White Stag Inn			Country Heights Supper Club
Sullivan's Supper Club	Wolff's River Inn			Ding-A-Ling Supper Club

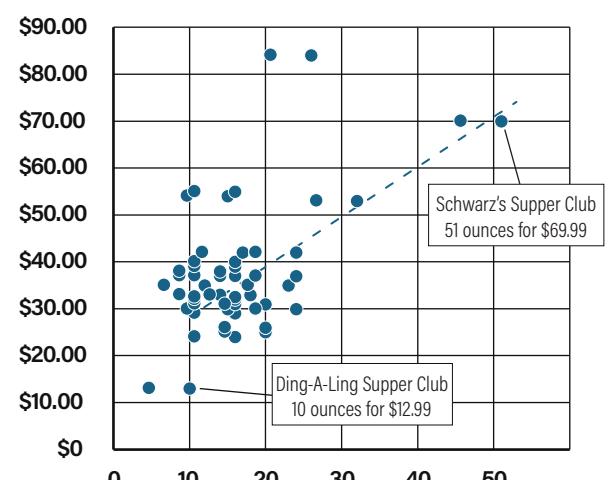
Table 1: The table above is a partner pair to the map at the top right of the page. The table shows the names of the supper clubs that are shown on the map and organized by state subregion for ease of use when trying to find new supper clubs to try in your area.

Can Supper Clubs Adapt to Present Day Sports Bar Culture?

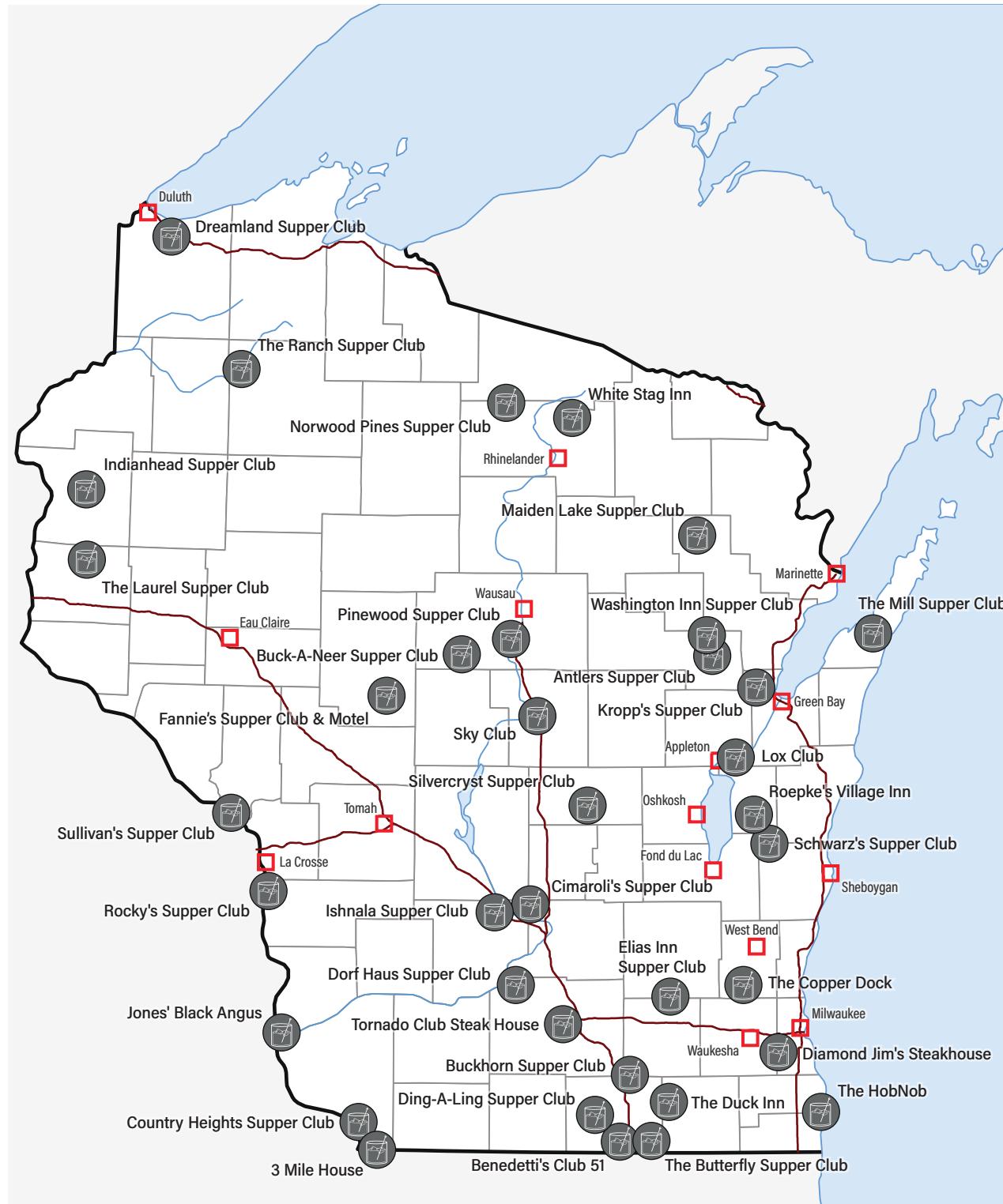
Supper clubs are unlike the clubs of today, they do not have tens of TVs playing any possible sporting event imaginable in every corner of the place and the music if any is not overbearing but subtle. The ambiance of the Wisconsin Supper Club is one community and communication compared to brash entertainment that never ends. Supper Clubs in other words are seen as community third places where people from the nearby town or village can hang out and chat outside of work, school, and church were catching up with your neighbors or a friend you have not been able to see in a while is a perk of the visit not a detraction from the visit. However, it is this polar opposite of the sports bar setup that some supper club owners and chefs point to as the reason for the down trend in the supper clubs vitality in the state as the younger generation is more interested in the constant action and noise of a sports bar compared to the slower more intimate supper club setting. The vibe is not the sole po-



Prime Rib (USD/Ounces)



tential reason for a lack of the following generations interest with the supper club lifestyle. The above chart shows the cost of the prime rib special at many of the supper clubs listed in the table (opposite page) and labeled on the map to the left by the number of ounces that you get for the price. This graph helps to visualize the second potential limit to growth into the younger demographics and that is cost. A weekend prime rib special for one and one cocktail will have the bill sitting pretty high already add just one more and the bill could easily be topping \$100. Paying the higher than sports bar bills multiple times a month if not a week which can be the frequency of visits by some supper club regulars can make the experience out of reach for the younger generation many of whom do not have the money to afford that lifestyle.



Map 2: The above map depicts only the supper clubs that were included in both the 2013 and the 2023 print editions of Wisconsin Supper Clubs book. In other words highlighted here are the supper clubs that have carved a space for themselves and have survived if not thrived even as supper clubs as a restaurant style are falling to the wayside in many areas.

Acknowledgements, Credits, and Sourcing:

Created: Spring 2024

Cartographer and Author: Jack Sagers

Assistant Cartographers: Morgan Jensema & Simone Schneider

Old Fashioned Icon: Created by Anthony Ledoux from the Noun Project

Base Map Data Source: Natural Earth

Thematic Supper Club Data: Wisconsin Supper Clubs by Ron Faiola

Scale: 1:3,000,000

Projection: USA Contiguous Albers Equal Area Conic
central meridian: -89.5 degrees west, standard parallels: 42.5 and 47.0 north

Prime Rib and Prime Time for the Supper Club

Although the prime years of the supper club era are more than likely behind us it does not mean that it is an entirely dying restaurant genre. As the map on the left depicts there are plenty of supper clubs across the state that have been opened and going strong for more than a decade since the first questions and concerns about the longevity of these businesses began to swirl. The key to the continued success of these supper clubs and the rest around the state according to many owners is simply introducing the next generation to them by taking them and treating them to a meal so that when they grow up and potentially have the financial stability they will remember the experience fondly and return for an old fashioned.

CHEESEMAKING

Everything, from Dairy to Diets A Brief History of Everything Cheese!

There may not be anything more "Wisconsin" than our proud cheese heritage! Although we only started producing cheese here in the past couple hundred years, the history of cheesemaking goes back thousands.

It was a delicacy enjoyed by many great, ancient civilizations, and it all may have been started by an accidental discovery.

Traditionally, animal stomachs were used as liquid carrying sacks; some stomachs are lined with rennet, a necessary combination of enzymes to produce cheese, meaning with enough jostling and heat, humans may find their milk sacks to have turned into cheese ones!

It was not just delicious though, for this fermentation of milk also proved to make the food last longer as preservation and refrigeration was often a difficult process to maintain.

The cheesemaking tradition of Wisconsin has existed since at least 1863, though it was likely made within families before that. Many of dairy's most important innovations were also made in the region, such as Stephen M. Babcock's test for milk fat quality at the University of Wisconsin-Madison in 1890.

Nowadays, our demand for cheese outstrips the supply of milk; thus, many factories need to import the milk from outside the state. Similarly, some factories immediately sell and ship their cheeses across and beyond the American continent!

What is that Map?

Ever wondered how many factories you might find around "Cheese Country?"

Well, in just Southwest Wisconsin, there have been upwards of 600, and some are still running to this day!

Need a taste? How about a souvenir?

Does that factory have a number?
That means they have a store!
Try visiting for some local cheese!

Find the labels on the map below!

Find the store in the list to the right!

Factory, or Farmer Get-Together?

Back in the day, communication was slow and people were far. For farmers, going to the local cheese factory was a great time to see all their neighbors and hear the talk of the town!

Although the tradition is gone, there remains a distinct sense of belongingness you feel when you come from "cheese country."

CONSIDER LOCAL CHEESE!

1. Hook's Cheese Company

320 Commerce Street
Mineral Point, WI 53565

2. Silver-Lewis

Cheese Cooperative
W3075 County EE
Monticello, WI 53570

3. Chalet Cheese

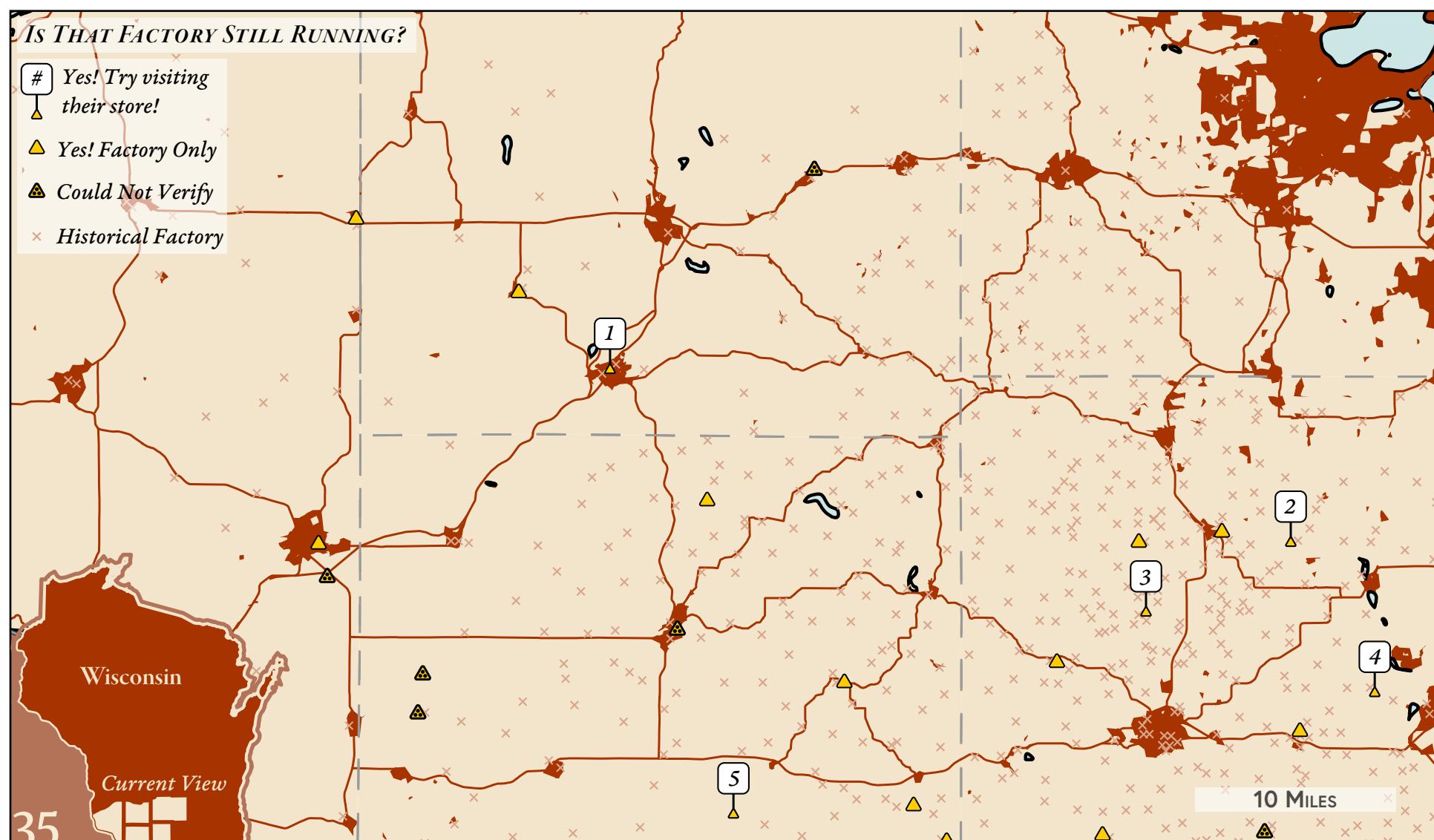
N4858 County Highway N
Monroe, WI 53566

4. Decatur Dairy

W1668 County Highway F
Brodhead, WI 53520

5. Shullsburg Creamery

208 W Water Street
Shullsburg, WI 53586



Not Cheesy Enough for you? Come see the Real Thing!

There may be no place in the world that is better equipped to **moo-ve** you on Wisconsin's cheese than the...

~ National Historic ~
~ Cheesemaking Center ~

Open every summer season, it has it all! Souvenirs, history, and, if you are lucky, maybe even a real cheesemaker!

Those at the factory are always ready to hear about your interests, questions, and about you! And if you want to get on a caboose, they have one of those too!

Address: 2108 6th Avenue
Monroe, WI 53566



SPECIAL THANKS

Thank you to the **National Historic Cheesemaking Center**, for without their aid, making this Atlas would not have been possible.

Additionally, a special thanks to **Paul Vassalotti**, Wisconsin Cheesemaking Historian, for graciously sharing the data he has gathered. One hope's this Atlas's re-interpretation of it meets his expectations.

And finally, a thank you to all the **cheesemakers** and **farmers** who shaped Wisconsin into America's Dairyland.

Together, we make Wisconsin home.



Tired of Reading About it? Come Taste the Cheese Instead!

If you are ever itching to see how we celebrate cheese, there may be no better opportunity than to

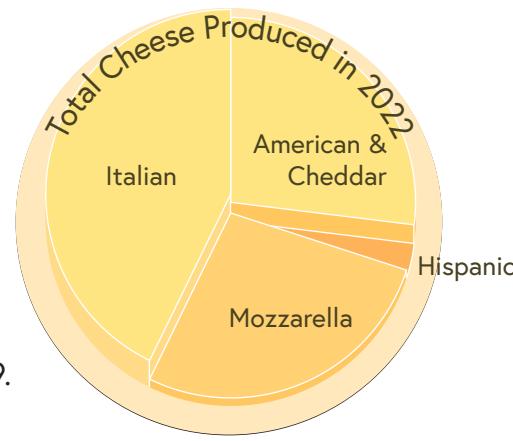
~ Come to Cheese Days in Monroe! ~

Green County Cheese Days is held every second year and open to all! We have food! We have beer! We have parades! Oh, and you bet we have cheese!

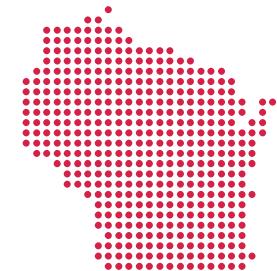
There is something for everyone, so if you are ever around, come on downtown!

For more information, check out the website: www.CheeseDays.com

2022 saw approximately 3.5 BILLION pounds of cheese produced, almost 20x the amount produced in 1949.



PAGE AND
CARTOGRAPHY BY
FRANCISCO V. OCAMPO



Come be part of the Cheesemaking Tradition!

Every year, the **National Historic Cheesemaking Center** makes a wheel of Swiss Cheese using traditional equipment and practices.

Come see the Master Cheesemakers in action! Check the website for dates!

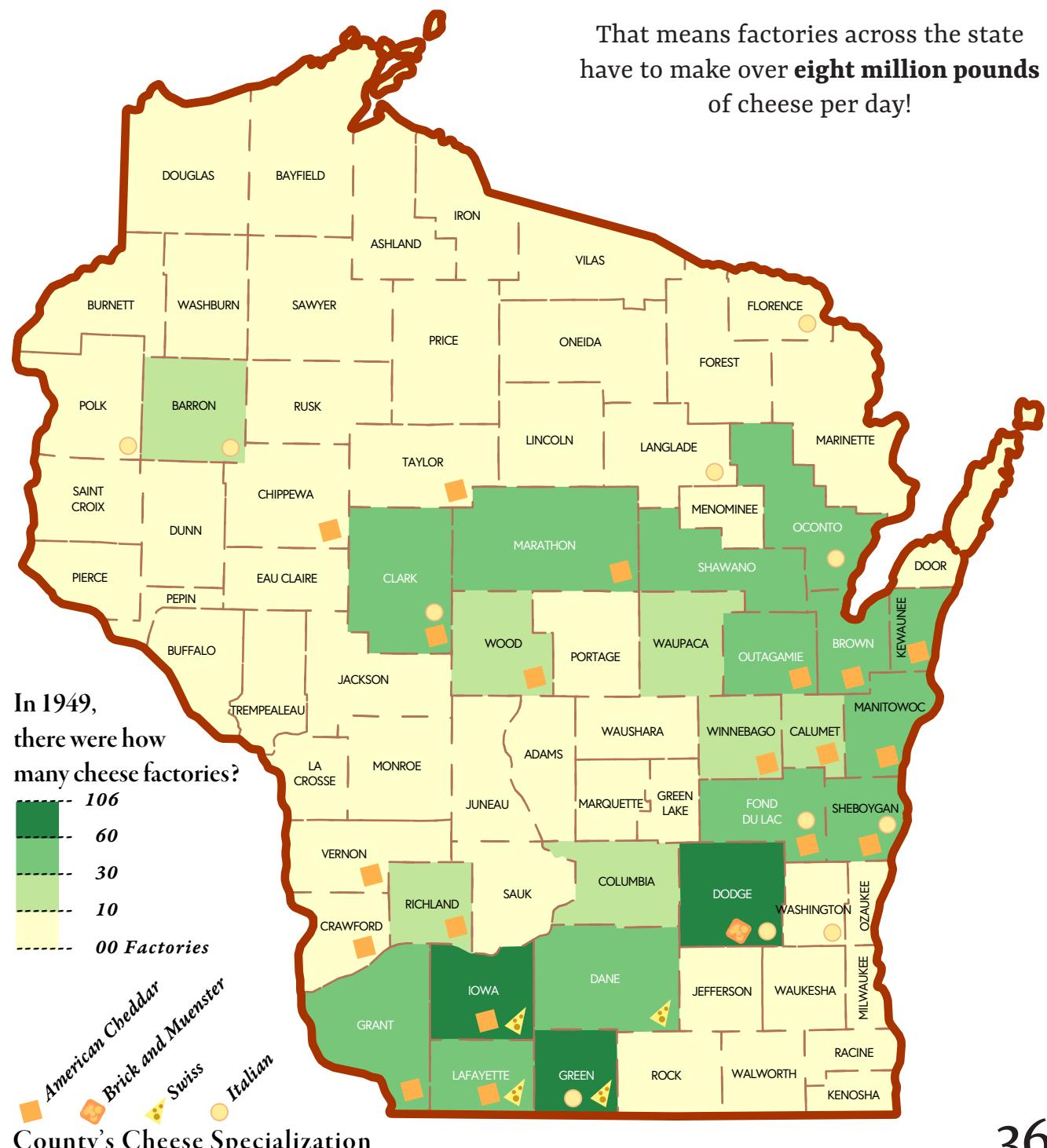
What is That Map? And Chart?

Ever wondered where all these factories are? Wisconsin has a strong "Cheese Belt" of factories wrapping around the state.

Although the number of factories has dwindled over the years, leaving about 100 scattered around the state, total cheese production has exploded!

As of 2022, the Wisconsin makes over **THREE BILLION pounds** of cheese annually!

That means factories across the state have to make over **eight million pounds** of cheese per day!



WISCONSIN'S BREWING HISTORY

Breweries and the “Drunkest Cities”

Wisconsin has a rich history of brewing culture which dates back to the early 1800s. This history is rooted in an influx of German immigrants moving into the state in the first half of 19th century, and primarily moved to the larger cities. Milwaukee quickly developed a reputation as a brewing capitol of not just the country but the world as well, with the city being the first commercial brewery opening in 1840. Milwaukee later became home to some well known breweries in the late 19th century. These notable breweries included Miller, Leinenkugels, and Pabst. The Pabst brewery, most notably, would go on to win a blue ribbon prize for their beer at the 1893 World's Exhibition in Chicago. There were a few cultural and legal battles over the years concerning the sales of alcohol, despite the economic impact and popularity of breweries in the state. Laws passed in the late 1840s required tavern owners to claim responsibility and cover costs of any damages caused by the intoxicated patrons. Later, in the 1870s, a law was passed to hold tavern owners responsible for selling to “known drunks”. In 1919 the most well known legal action went into effect, as the Volstead Act was passed, thus declaring a state of Prohibition throughout the US. In this time, Wisconsin breweries, as all breweries in the country, became resourceful. They turned to selling a wide variety of things during the 14 year span of Prohibition. These items included sodas, malt syrups, ice cream, amongst other things. Many breweries also closed their doors, and some sadly never opened again. The malt syrup helped support the long tradition of home brewing, which many Wisconsinites participated in.

Nonetheless, brewing culture prevailed here in America's DairyLand. National regulations were lifted in the late 70s and early 80s aided in the accessibility of homebrewing, and laid the foundation to the rise of breweries which opened in the 1980s and 1990s. These breweries include many contemporary Wisconsin staples like New Glarus, Sprecher, Lakefront, and Great Dane to name a few. Beer and brewing culture is so ingrained (pun intended) in Wisconsin's state identity that in 1969 they named the state's only professional major league baseball team to honor this history.

The national craft beer scene saw a spike in demand during the 2010s, with regional breweries and tap houses reaping much of this new found popularity. Wisconsin certainly saw a rise in the number of tap houses at this time. I suspect the appealing atmosphere of a place which serves both craft beer and food is a key driver in this popularity. Additionally, as of 2022, Wisconsin ranked in the top 10 nationally per capita for barrels of craft beer brewed, gallons consumed annually (7.6), and in the economic impact which breweries have on the state's economy.

Definitions of Breweries

Microbrewery

A brewery that produces less than 15,000 barrels of beer per year and sells 75 percent or more of its beer off-site. The beer is sold to wholesale distributors, at restaurants, or to customers directly either for carry-out or inhouse consumption.

Brewpub

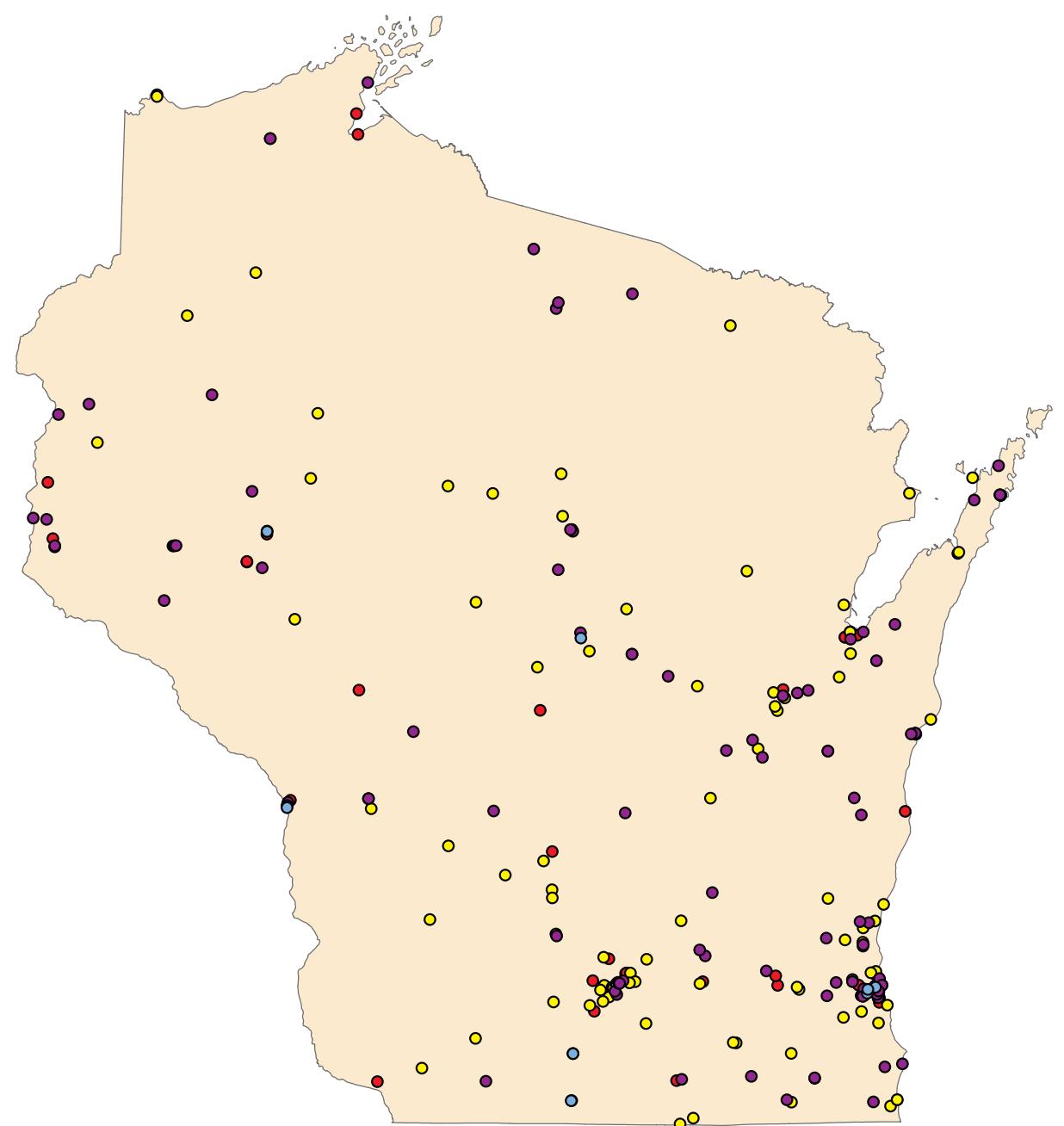
A restaurant-brewery that sells 25 percent or more of its beer on-site and offers kitchen services. The beer is primarily made and sold in the restaurant facilities.

Taproom

A brewery that sells 25 percent or more of its beer on-site with basic food services available. Like brewpubs, the beer is primarily brewed and sold in the taphouse facilities.

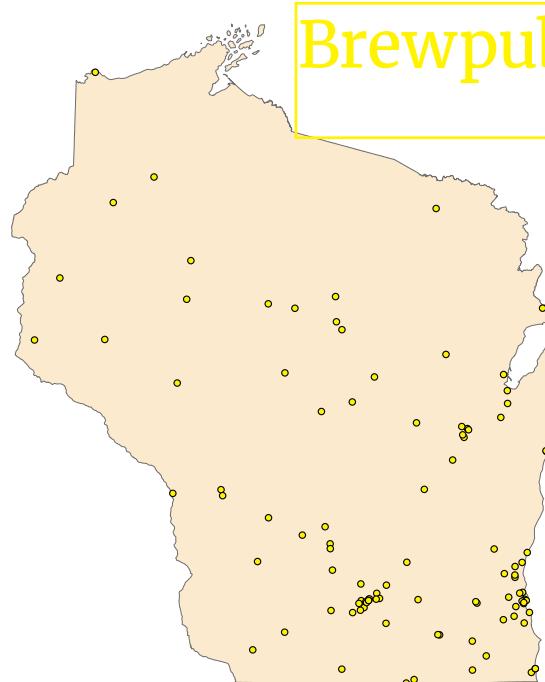
Regional/Large

A brewery with an annual beer production of between 15,000 and 6,000,000 barrels.



Brewpubs

The brewpubs, found across the state, appear more frequent in population centers along with places like Door County and the Fox River Valley.



Taphouses



Taphouses can be found across the state but seem to be found most often in the eastern half of the state, and in more populated places like Milwaukee.

Ranking	City
1	Green Bay
2	Eau Claire
3	Appleton
4	Madison
6	Oshkosh
9	Wausau
10	La Crosse
12	Fond du Lac
15	Sheboygan
20	Milwaukee

“Drunkest Cities in Wisconsin”

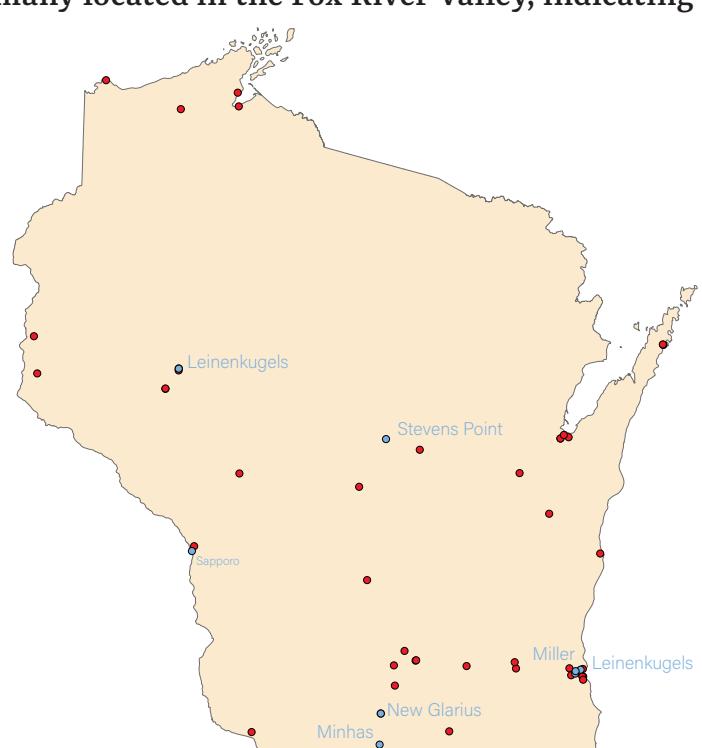


24/7 Wall Street compiled a list of “most drunk” cities in the US. This research is based on a range of variables including statistics from the CDC and a number of surveys which asked adults how often they drank and how often in excess. In the list of 50 cities, Wisconsin claimed 12 of the slots in the top 20. There are certainly a wide range of reasons why Wisconsin’s drinking culture is such, and the state’s brewery scene likely only plays a contributing factor and not exclusively responsible. The compiled list includes the top 50 cities in the whole country. The list includes cities like Milwaukee, the state’s largest city, and Madison which is home to the largest university in the state. There are also smaller cities, many located in the Fox River Valley, indicating other reasons for their spot on the list, including social and economic factors.

Microbreweries & Regional and Large breweries

The microbreweries in the state seem to be more clustered in population centers, with few found in the smaller cities across the state. Regional breweries are also scattered around the state, while the largest breweries are headquartered in Milwaukee or La Crosse. Pabst, though founded in Wisconsin, has moved out of state. The Miller brewery was bought out by a multinational conglomerate company, Molson Coors.

Sources include: NaturalEarth, Wisconsinhistory.org, BrewersAssociation.org, 247WallStreet.com, NounProject



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8. Birdwatching Areas WI Office of Outdoor Recreation
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2. Wisconsin Supper Clubs by Ron Faiola
3. Anthony Ledoux from the Noun Project

Cheesemakers

1. National Historic Cheesemaking Center

Breweries

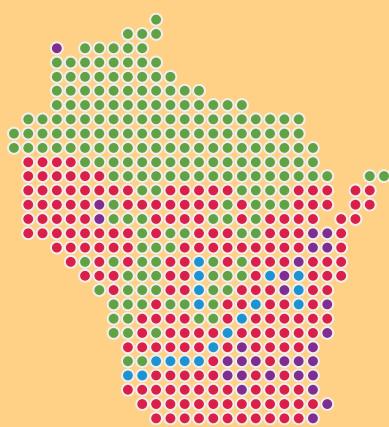
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4. 247WallStreet.com
5. The Noun Project

Miscellaneous book elements

1. The Noun Project
2. The Board of Regents of the University of Wisconsin System



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Reenvisioned Atlas of Wisconsin

The Reenvisioned Atlas of Wisconsin is a comprehensive cartographic endeavor aimed at creating an informative and visually captivating representation of the diverse landscapes, cultures, and heritage of the state of Wisconsin. This project serves as a testament to our commitment to geospatial excellence and our dedication to showcasing the richness of Wisconsin's geography.