



Wisconsin natural resources. Vol. 7, No. 4 July-August 1983

Madison, Wisconsin: Wisconsin Department of Natural Resources,
July-August 1983

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Wisconsin

NATURAL RESOURCES

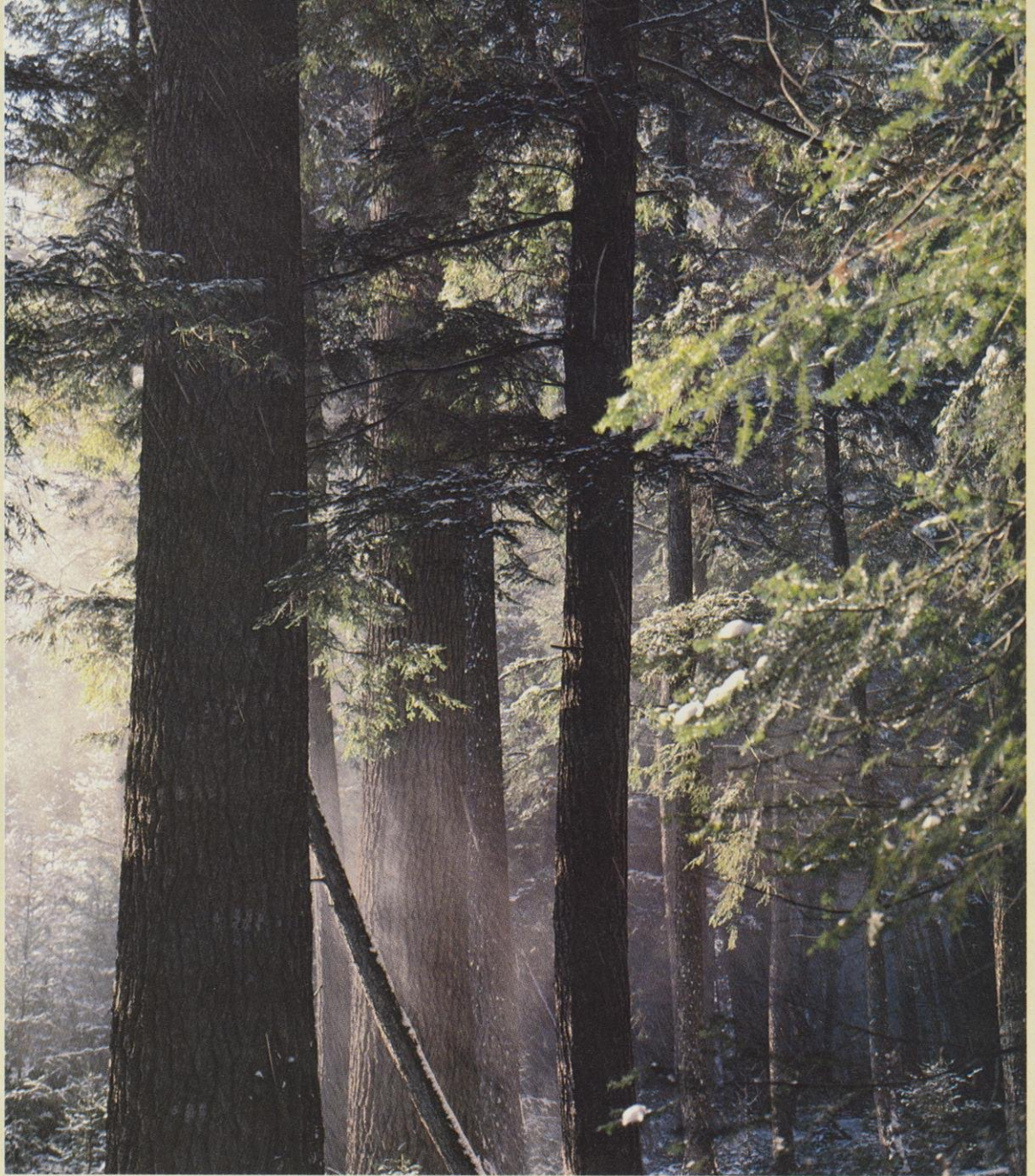
July-August 1983 Volume 7, Number 4

\$1.50

*Special
Northwoods
Edition*



Old growth pine and hemlock still are symbols of Wisconsin's Northwoods. As the region evolves, planning can help this image endure.
Photo by Ron Eckstein



THE NORTHWOODS EDITION



JEFF SMOLLER,
Director, DNR Bureau
of Information and
Education

Front Cover:

Up North
Wisconsin Division of Tourism
photo.

Wisconsin's Northwoods. Special! Unique! An identity and history all its own!

Wisconsin Natural Resources magazine has brought together a variety of opinions and perspectives about the past, present and future of this very special region. With particular help from DNR's Northern field staff — directed by John Brasch, Charlie Higgs and Dave Jacobson and from the dedicated people at Northland College — the magazine has tried to convey a feeling for the natural resources, the people and the places that make the North so special to residents and visitors alike.

But special places are also vulnerable places. And it is because of this the Northwoods edition was prepared. The North is caught up in a web of headline-grabbing, resource-related issues: acid rain, mining, radioactive waste disposal, public land management and Project ELF, to name a few. How these and other issues are resolved will affect the future of the North. They are big statewide stories.

But the story of the North's future is really a local one. The many, many personal and local decisions made daily are collectively and incrementally determining the future character and destiny of the North. Personal lifestyles, timber management, lake development, recreational investment, pollution control, planning and zoning, land use, industrial development, transportation, education and more. Decisions in these areas are determining the North our children will experience.

We expect reading the Northwoods edition will bring you memories, as well as knowledge, frowns as well as smiles. But our fondest hope is that it brings you determination. Determination to support or bring about an increased consciousness about the North and a personal commitment to positively affect its destiny. As you will read, some have already accepted the challenge: the citizens involved in the Ashland area's Chequamegon Bay 2,000 effort, those at Green Bay and others. We can learn from them.



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Wisconsin Natural Resources is an official bi-monthly publication of the Wisconsin Department of Natural Resources, 101 S. Webster St., Madison, Wisconsin 53702. The magazine is sustained through paid subscriptions. No tax monies or license monies are used.

Subscription rates are: \$6.97 per year, \$11.97 for two years and \$15.97 for three years. Single copies \$1.50. Notification of address changes must include mailing label and new address. Allow six weeks. Send subscription information requests to: Wisconsin Natural Resources, P.O. Box 7191, Madison, Wisconsin 53707.

Second-class postage paid at Madison, Wisconsin.

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Wisconsin Natural Resource Magazine (USPS #34625000) is published bimonthly by the Wisconsin Department of Natural Resources, 101 S. Webster St., Madison, WI 53702. Subscription rates are: \$6.97 for one year, \$11.97 for two years, \$15.97 for three years. Second class postage paid at Madison, WI. POSTMASTER: Send address change to: Wisconsin Natural Resources, P.O. Box 7191, Madison, WI 53707.



I CHARACTERISTICS



Wholesome recreation for kids lures parents to the Northwoods.
Wisconsin Division of Tourism photo.



THE REGION

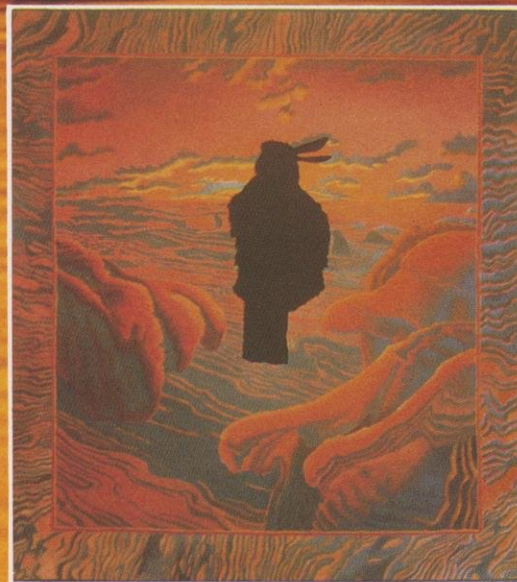


J. Brady Foust

J. BRADY FOUST,
ANTHONY R. de
SOUZA and INGOLF
VOGELER, University
of Wisconsin-Eau
Claire

Sometimes the distinctiveness of a region is strong enough to be captured with a single word or phrase. The term "Northwoods" invokes a graphic image. We think of vast and dark evergreen forests, clear lakes and rushing streams. Over time, images of Indians, fur traders, lumberjacks, stump farmers and Chicago tourists are conjured up. The Northwoods have a distinctive look, smell and feel.

Geographers use the concept of a "vernacular region" to delimit distinctive places. A vernacular region is defined by the use of a common or vernacular name which identifies the region to both residents and outsiders. The name "Northwoods" qualifies. To confirm this, the relative frequency of "northwoods," "northern," "northbound," "northstar" and similar words were tabulated from telephone books around the state. South of Highway 29, "northern" terms were few and far between, but they increased rapidly to the north — representing over 5% of all commercial listings in Bayfield and Vilas counties.



Indians controlled northern Wisconsin for more than 20,000 years.
Painting by Artist Tom Uttech, 2582
N. Cramer, Milwaukee, WI 53211

Much of the regional character of the Northwoods results from its resource base, which is quite different from the rest of the state. The natural environment was used in different ways by different groups of people. Each successive wave had to earn a living from the land in the most productive way possible, given the technology, goals and needs of the inhabitants. Each era of human settlement in the Northwoods has played a role in producing its regional distinctiveness.

Indians controlled the northern section of the state for over 20,000 years. In the first part of the 16th century, they began trading furs for European products. First, they traded with the French, later with the British, and finally with the Americans.

Indians played a crucial role in providing furs to the European traders, who managed the fur trade, but rarely hunted or trapped the animals. After 1820, when the fur-bearing animals had been depleted and the fur trade had moved north into Canada, the Indians had no useful role to play for the Europeans. Indeed, for white settlers they represented obstacles to lumbering and later agricultural expansion. Consequently, the Indian nations of the Northwoods were forced to cede their lands, mostly from 1836 to 1842.

After the Indians had ceded their land, whites created the reservation system. The earliest ones were established in 1854 and all the large reservations in the State — Red Cliff, Bad River, Lac du Flambeau, Lac Courte Oreilles and Menominee — are found today in the Northwoods. These reservations are a distinctive reminder of the once dominant Indian people.

With the removal of Indians to the reservations, European settlers started a second phase of resource exploitation, one not based on Indian skills but on Western capital, machinery and labor.

By the 1840s the forests of northern Wisconsin began to supply the American Manufacturing Belt, the treeless prairies of the Midwest, and the Great Plains with lumber. Wisconsin lumber also found a market in Europe, South America and the West Indies.

The forest was located north of a line from Manitowoc to Portage and west to the St. Croix. The southern edge, about 30 to 50 miles wide, was a hardwood tract, and to the north of it lay a belt of mixed hardwoods and conifers. Most of the stands of conifers were concentrated along the headwaters of the Wolf, Menominee, Wisconsin, Chippewa, Black and St. Croix rivers.

The basis of Wisconsin's logging industry was the white pine and, to a much lesser extent, red pine and hemlock. Because pine was the most valuable species the Northwoods came to be called "the pinery." Loggers divided the watersheds of the Northwoods into pineries designated by the names of watersheds: the rivers flowing into Lake Michigan, the rivers discharging into Lake Superior and the tributaries of the Mississippi. The Chippewa pinery supported the great-

est amount: one-sixth of the white pine in the United States and about 43-billion board feet of coniferous timber.

Surface water was important. Lakes provided facilities for holding and sorting logs. Before railroads were built into the forest after the Civil War, the rivers furnished transportation. In the spring, reinforced by snow melt and April rains, the rivers provided transport energy. They supplied water-power sites for sawmills. In addition, they flowed toward the Great Lakes and the Mississippi River which connected the lumber districts with the markets of the East and West.

Lumber production in Wisconsin boomed after 1842. Less than 200-million board feet were cut in 1853, increasing 1-1/4 billion in 1873 and more than 4-billion in 1892.

As the lumbering industry grew, small communities evolved to supply the lumber camps with goods and services. Sawmill towns developed in proximity to the pineries where abundant water power was available and where booming and sorting devices could be constructed. The larger

Northern Wisconsin Indians began trading furs with the French in the 16th century. Beaver were the main commodity. Woodcut courtesy of the Sigurd Olson Environmental Institute.



towns included St. Croix Falls, Rice Lake, Chippewa Falls, Eau Claire, Wausau, Stevens Point, Rhineland and Marinette. Lumber towns, such as Eau Claire, were highly segregated in class and space. They were characterized by low density housing with a sprinkling of substantial lumber baron homes, a few high density areas of rooming houses where the workers lived, and a section for saloons and stores in the downtown.

By the turn of the century, the white pine era ended. Some lumber companies found new homes in the fir forests of the Pacific Northwest. Others moved into the hardwood and yellow pine regions of the South. The migration of the lumber industry left behind a major economic problem for the Northwoods. Attempts to convert the cutover into productive farms generally failed. Eventually much of the region, especially the northern counties, became tree farms or recreational land.

With the decline of lumbering in northern Wisconsin, cities and villages dependent on the indus-



Ingolf Vogeler



Anthony R. de Souza

try faced decay and abandonment.

Until late in the nineteenth century, the westward movement of agricultural settlement bypassed the densely timbered region of northern Wisconsin.

As the lumber era faded, sawmill towns became service centers for agricultural communities. As railroads criss-crossed northern Wisconsin opening new territory, they created a market for agricultural land. Speculators began to redeem cutover land forfeited for taxes by logging companies or to purchase cutover land from lumber barons directly.

Colonization companies lured farmers to the Northwoods with "cheap" land prices (\$70 per acre), "free" stump pulling services, and "at cost" agricultural supplies.

Colonization efforts paid off for speculators. In thirty years, the new North had gained 341,000 people, for a total of 703,000 in 1920. Rural population increases were especially impressive: from 1900 to 1920 northern Wisconsin was the only section of the state that had an increase in rural population!

The word "North" is associated with the region's ego. North of Highway 29 the word appears more and more frequently in commercial telephone listings. The lines show the percentage of occurrences.



Despite claims of land speculators and state agencies and dreams of farm families, the cutover was unsuitable for widespread agricultural development. Unable to make a living from farming, settlers relied on public relief. In the 1930s about 25% of all inhabitants in the Northwoods were receiving some sort of public assistance in contrast to 10% elsewhere in the state.

Settlers were also unable to pay their property taxes. In 1936, the highest rates (56% and over) of tax delinquency were in the northernmost counties of the Northwoods. The cutover became synonymous with tax delinquent land.

The collapse of the farming frontier gave rise to the state and county forest systems. Tax delinquent land reverted to local units of government.

The Northwoods has long been a playground of the urban rich. In the first half of the century, the area was dotted with vast hunting preserves and expensive private lodges. Numerous exclusive resort hotels provided a cool haven for the rich during summer. After World War II, personal incomes and automobile ownership rose dramatically. The summer vacation became a middle-class necessity and the auto made it possible for urban families to "Escape To Wisconsin" in increasing numbers.

There is a direct association between the number of visitors to the Northwoods and the amount of water. Two concentrations are in the major lake districts, one adjacent to Hayward and the other just north of Rhinelander. A third is in Door County jutting into Lake Michigan.

The Northwoods is distinctive. Locals and outsiders — whether Indians, fur traders, lumberjacks, lumber barons, dirt farmers, land speculators, resort owners or big-city vacationers — have always perceived its special qualities. The current diversity of inhabitants reflects the four major stages of human occupancy in the region. Understanding its geography and history confirms that the Northwoods occupies a special place in the past, present and future of Wisconsin.



TIMBER, TOURISM, AND RETIREES



GEORGE W.
GALLEPP, JR.,
UW-Extension,
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Journalism

If resort owner Rip Van Winkle had fallen asleep beneath a white pine in Wisconsin's northwoods in 1960, he might have awakened in 1980 to find that his wife had sold the family business to folks from Milwaukee, Chicago and Minneapolis for second homes.

Mr. Van Winkle probably would have been more than a little surprised by the way the business climate and the population structure of the Northwoods had changed in 20 years.

Partly because these recent changes have been so dramatic and partly because uncertainties cloud the future, experts forecast what the Northwoods will look like later this century only reluctantly. But if the past is an indication, social trends and economics will dictate how the North fares in the future.

The major recent change in northern Wisconsin was the unprecedented immigration of city dwellers, says University of Wisconsin demogra-

pher Paul Voss. Northern counties — like Burnett, Florence, Forest, Sawyer and Vilas — that lost population in the 1950s and for years before, began gaining population in the 1960s. Although, the state as a whole grew at a rate of 6.5% in the 1970s, Burnett, Florence and Sawyer Counties grew faster than 25%. And Vilas County's growth exceeded 50% — the fastest in the state.

Voss says the immigration into northern Wisconsin was part of a larger national trend inspired by anti-city feelings. Faced with increasing taxes, housing costs and crime rates, many people found the peace, safety, and beauty of rural America too attractive to resist.

During the decades when Wisconsin's Northwoods population was on the decline, people usually left to find work in the cities. Often they left reluctantly. When people moved into the Northwoods during the 1970s, jobs weren't essential — retirees made up much of the incoming

tide. Voss characterizes many of these elderly immigrants as "modestly affluent."

Another factor that eased their transition was a familiarity with the North and the people who lived there. Twenty-five percent of those who moved north were returning to a county where they or their spouse once lived, says Voss. Fifty percent owned land or a house in the area for at least a year before they migrated. And 75% had vacationed in the area to which they moved.

What emerges then is a picture of retirees moving to previous vacation areas, drawn by the physical and social environment. However, Voss says this major trend obscures another important reason for the North's growth — the tendency for more young people to stay in the North rather than move south to the cities. Voss believes that along with the predominantly older group moving north in the 1960s were a minority of younger people who wanted to work and raise their families in the North. He is convinced that some of these people started businesses that allowed more youths from the North to remain there in the 1970s.

In many Northwoods counties, tourism jobs and revenues far exceed those from manufacturing and agriculture. Forest-based business is the other major source of income and employment. Although most hospitality-recreation-tourism dollars are dropped in Milwaukee, Dane, Waukesha, Brown and Racine Counties, these counties have other income sources that far exceed tourism. Not so in the North where tourism dominates the economy in rural areas especially in Vilas, Florence, Iron, Sawyer and Door Counties.

While tourism's future in northern Wisconsin is secure, the industry has problems. In the 1970s, northeastern counties lost 21% of their lodging establishments and over 20% of their rooms — the most severe such loss in the state.

Kay Plantes, chief economist and administrator of policy development for the Wisconsin Department of Development (DOD), says the room loss is slowing while occupancy rates — the percentage of rooms actually occupied — is increasing.

However, a DOD study on tourism revealed that about a third of northern resort owners plan to sell all or some of their resort or convert to condominiums, in the next three years. Of the resort owners who plan to sell, nearly half cited either retirement or poor profits as their reason.

Plantes says Wisconsin resorts have tended to underprice themselves compared with resorts in other states. Room rates in Wisconsin have not kept pace with inflation. Although the comparatively low room rates have helped keep occupancy fairly high, nonetheless, inflation and higher taxes have squeezed profit margins. The DOD tourism study found that 80% of resort owners paid property taxes above the national average.

Ironically, the appeal of the Northwoods — which originally brought tourists into the area — contributed to the reduction in the numbers of resorts and rooms.



The Mansion at Bayfield preserves the Victorian elegance of tourism at the turn of the century. Wisconsin Division of Tourism photo.

Like the businessman in the TV commercial who claims he liked a shaver so much that he bought the company, city dwellers liked the Northwoods so much they bought their vacation cabin — or in some cases the whole resort.

In the 1960s and 1970s, real estate became literally a land-office business. Towns with main streets no longer than a football field had five or six real estate offices, more than the combined number of bars and sport shops in some towns. Everybody wanted a piece of the Northwoods, preferably a piece with lake frontage.

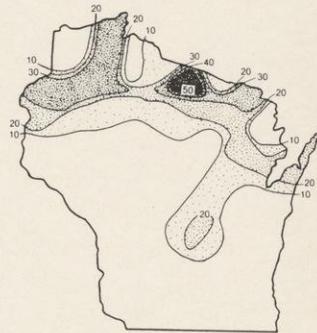
The effect of this land rush was an increase in property values — especially the value of lake frontage where most resorts were located. Next came an accompanying increase in taxes on property owners including resort owners. Steadily, during the 1960s and 1970s, one resort owner after another decided not to spend every Saturday morning during the summer swabbing down cabins and cleaning toilets. They subdivided their resorts and sold them to eager second home buyers. Twenty-five percent of the second home property in Vilas County was once part of a resort and 74% of the second home owners had stayed at a cottage or resort in the area before buying their home.

The overwhelming majority of northern Wisconsin resorts were small, family-owned facilities that offered water-related activities, says UW Recreation Resources Economist Ayse Somersan. When the opportunity came through retirement, many owners of the smaller, older resorts chose to sell the business. Often the value of the property as a resort was less than the value if subdivided and sold for second homes.

Somersan believes individual resort owners should get the best deal they can. To offset this room loss, she would like to see investment in newer, larger facilities. But, in the North, this hasn't happened, she says.

Demand by second home buyers wasn't tourism's only problem. The numbers and types of tourists began to change. While experts are predicting a major worldwide expansion in the tourism industry, tourism in the US and northern Wisconsin continues to change.

Somersan says the factors that fed the growth of tourism were more leisure time, increased income, a larger middle class, improved transportation systems and a need to escape the stress of cities. But things changed. Although income from the hospitality-recreation-tourism industry continued to grow 14% per year even in the late



Seasonal homes in the North as a percent of total housing units. A typical second home owner is 50 to 59 years old and has an income of \$40,000 per year.

1970s, the number masked some bad news.

High energy prices and inflation lowered the real income of many working class families who had made up the majority of tourists in the North. In the 1970s, more of their income went for food, medicine, transportation and housing, says Somersan. With less to spend on vacations, and uncertain gasoline supplies in northern Wisconsin, many stayed close to home, or didn't travel at all.

Wealthier tourists who still had money to travel tended to have different tastes than blue collar tourists. The affluent ones wanted more luxury and were willing to pay for it. But owners of many family resorts in northern Wisconsin were already living on small margins. Improving and diversifying their facilities meant borrowing big money at a time when inflation was driving up interest rates. Faced with a choice between going into debt or selling, many resort owners found the latter alternative much more attractive.

Although resort owners who sold property may have profited by liquidating their assets, retail businesses in local communities suffered. A tourist in a cottage spends five times more money per day on a visit to northern Wisconsin than does a second home owner, according to Somersan. This loss in income has been costly to resort communities.

The DOD tourism study found the typical second home owner to be 50 to 59 years old with a family of two and an income of more than \$40,000 per year. A quarter of these people were retired, and another 40% planned to retire to their second home. While the growing numbers of second home owners and retirees in some northern Wisconsin communities may have contributed to the loss of resort space, those who move north permanently do have a positive influence on the local economy.

In some counties social security and pension checks along with payments for rural poverty are the fastest growing sources of income. It is an unusual case in which economic growth is occurring without the expansion of manufacturing. Most new jobs are in support and service industries used by the new residents. For northern Wisconsin communities long dependent on the seasonal flow of tourist dollars and the periodic loss of those dollars during recessions, the income of retirees and second home owners adds a desirable stability.

The other major northern Wisconsin industry — forest products — will have a split personality in the 1980s, according to business researcher Bill Strang, author of *Wisconsin's Economy in 1990* and Director of the Bureau of Business Research at UW-Madison.

Wisconsin's big paper and pulp industry will add new jobs to its payroll at an annual rate of 0.5% per year in the next decade. Strang says this will be the second slowest growth rate among Wisconsin's major manufacturing industries.

On the other hand, employment in the smaller lumber and wood products industry, especially in mill work and prefabricated wood buildings, is

expected to increase at an annual rate of 2.7% per year, says Strang. This would be the second fastest growth in employment among major Wisconsin industries. Only rubber and plastics manufacturing, expected to add workers at a rate of 5.7% during the 1980s, will grow faster, Strang predicts.

Considering the expansion of manufacturing and the addition of new enterprises, Strang says: "In the 1980s, northern Wisconsin may be in a little stronger position than it has been before compared with the rest of the state." He sees more positives than negatives, and sees trends in manufacturing that improve the North's position.

The major existing industries and businesses in the North are based on resources located there. Forestry, agriculture, mining and even tourism are resource based industries, and as such are relatively safe industries, says Strang. Jobs related to cutting the forests, cultivating the fields, extracting the ore and enjoying the scenery cannot be done in the sunbelt or Taiwan, says Strang. If people want to use those resources, they must come to Wisconsin. In addition, because the cost of transporting raw materials like timber and ore are high, it is usually cheaper for industries to process the raw materials close to their source.

Another factor in favor of the North is the rapid growth in manufacturing that took place outside southeastern Wisconsin during the 1970s, says Strang. Manufacturers moved to small cities and towns to expand, and Strang expects the trend to continue.

Because the quality of labor in the North is good and relatively inexpensive, and because small scale manufacturing will grow fastest in the 1980s, Strang sees lots of potential for the North.

Other factors that favor new businesses in the North are the same ones that make the North attractive to second home owners — beautiful scenery, low housing costs in small towns and the absence of urban ills.

Nevertheless, the North does pose problems for manufacturers. A traditional one is the distance from large markets and it remains a major drawback. But advances in technology allow some industries, such as insurance, to use telecommunications to remain "close" to their customers.

Weak educational facilities in some communities also may be a disincentive. Strang thinks workers with children in school will be reluctant to relocate to an area with a poor school system. He says it is critical for the North and the state to strike a reasonable balance between the desire to cut taxes and retain solid transportation and education systems.

Other problems for the North include the availability of capital to finance new businesses and a small supply of skilled workers with which to staff large new businesses. As a business researcher, one of Strang's major questions is whether people aged 18 to 35 will stay in the North and whether more young people that age can be recruited from the cities to increase the labor force.



1 Annual growth in forest products employment in the next decade is forecast at .5% for the pulp and paper industry and 2.7% for lumber and smaller wood products manufacturing. Mining is not expected to start until the 1990's.
Photo by Eleanor Jones

2 About 25% of the second home owners in the North are retired and 40% plan to retire there. In some counties, Social Security and pension checks are the fastest growing sources of income.
Photo by Eleanor Jones

3 The Apple Festival at Bayfield in October is a prime tourist attraction. Income from the hospitality/recreation industry dominates the economy in most northern counties.
Photo by Eleanor Jones

Population expert Paul Voss says the results of surveys indicate people still say they want to move out of cities. He says the desire to move to rural areas is not restricted to older citizens but is shared by the young.

Voss questions how much longer the migration out of the cities can go on before prime rural areas lose their appeal after becoming too crowded and expensive.

The other experts, like Voss, foresee most of the current trends continuing.

Strang sees a stable, slowly growing forest products industry, with the chance of additional small scale businesses, depending on the decisions of individual entrepreneurs.

Mining is the only single enterprise that might employ as many as 2,000 workers, says Strang. But he feels copper and zinc mining may not even begin until the 1990s.

Somersan says outdoor activities that are currently increasing at the fastest rate are boating,

bicycling, hiking, hunting, fishing and camping in that order. Great Lakes boating is especially popular. Summer recreation will remain the mainstay of the North, but winter recreation will be a focal point for growth.

Somersan predicts that the trend towards fewer, richer tourists will continue. They will be looking for "quality and variety in travel and recreational services." She predicts that in 1990 we will see larger, self-contained, multi-activity facilities for travelers. She expects fewer, large lodging establishments with many of them located close to urban areas. This could mean even more competition for the North from southern Wisconsin. Because of the high cost of building large establishments, Somersan expects to see more public investment by county, city and town government in local recreation facilities and marketing of travel services. And in the year 1990, she still expects tourism to be suffering from uncertain gasoline supplies.

Water is the primary recreational attraction in the North.

Photo by Chris Mattison



THE RECREATION DESTINATION

HERMAN SMITH,
*Recreation Industries
Expert, UW-Extension
District Agent -
Retired*

Water, woods, wildlife and weather are the components of our natural resources which help make the Northwoods a viable recreation destination. The resort industry is not new to the Northwoods. It is an outgrowth of the old logging days following the harvesting of giant white pine and hardwood. Many of the old logging camps were headquartered on some of the fine lakes and after the logging boom was over, individuals remained at the headquarters and started what was then known as "fishing camps." Some of the better known ones which are still in existence as American Plan resorts are Froelich's Sayner Lodge at Plum Lake, Hazen's Long Lake Resort at Phelps, and Dillman's Sand Lake Lodge at Lac du Flambeau. During the 1920s, recreation centered entirely around the fishing camps. Wealthy sportsmen from Chicago and St. Louis returned to the North for five or six weeks in the summertime to fish. Their wants were entirely taken care of at the so-called camp itself, thus the name American Plan Resort was born.

Early tourists came to the Northwoods by train. It was not until the late 1920s that a highway of any quality was built to serve Vilas County. Trains continued to be the means of transportation for most tourists until the 1940s. The Flambeau Special, Chicago 400 and numerous fishermen specials were package vacation plans promoted in the metropolitan areas. Usually the vacationer was a man, or, on rare occasions, husband and wife. Resort operators would meet the vacationer at the depot and provide transportation to the resort where the entire stay was spent.

Soon the Northwoods was recognized as a family vacation area. It provided activities for the entire family: swimming, fishing, boating, hunting and eventually golf courses. Gambling which had been prevalent in the late 1930s and early 40s was dying out and many of the well-known establishments converted to fancy supper clubs catering to vacationers at housekeeping resorts. Summer homes were built on the lake shores. Airports



catered to the man of the family who flew up to his summer home where his wife and children resided. Special youth camps were established for children from the more affluent metropolitan families.

This huge influx of people in the summertime made it apparent that more rules and regulations were needed to protect the North's natural resources. A combined effort by county boards, the old Wisconsin Conservation Department and the University of Wisconsin Extension resulted in a stricter zoning law and an established water policy. At the same time, resort groups organized to promote vacationing. Some of the earlier ones still exist: Wisconsin Indianhead in the northwest and Wisconsin Northwoods Council in the northeast.

During the 1960s, recreational needs changed rapidly. People became more health conscious. Vacationers were looking for new types of recreation: hiking, jogging, tennis and water skiing. In the winter of 1963-64 the snowmobile was introduced to the North as a recreational vehicle. Winter could be funtime if somehow people could dress for it and find proper accommodations. Clothing manufacturers seized the opportunity and came out with not only warm but also fashionable clothing for men, women and children. The snowmobile worked as a social magnet to bring entire families together in the great outdoors. Area resort and motel operators modernized, restaurants remained open, communities sponsored derbies, rallies and family fun days and in a few short years recreation became a year around operation. Even the summer home owner insulated and invited friends to enjoy the local "White Gold." Soon snowmobile clubs and counties called upon DNR for help in providing trails and setting regulations. Today there are thousands of miles of well-marked, well-groomed trails in Northern Wisconsin.

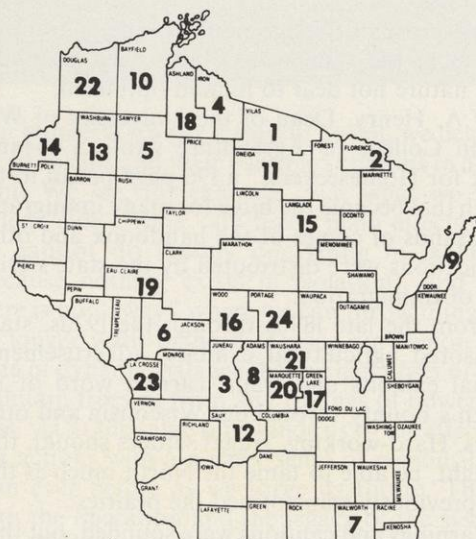
During the 70s the North had rapid changes in land and recreational use. Summer homes rapidly became permanent residences — small resorts were subdivided, land and water frontage prices soared. Lake property became more valuable if a residence were built on it than if it were operated as a cottage resort. Several of the larger resorts converted to condominiums, and time-sharing



was talked about. Cross country skiing as a family vacation helped to supplement the winter economy along with the snowmobile. Ice fishing became more popular. Family units were smaller. Soon vacationers were taking three and four trips to the North rather than one. The country prospered in spite of the gasoline scare and high gasoline prices.

Transportation has and always will be of great concern. North country recreation was opened to the public by use of the railroad. The rails are now gone. Highways are crowded and in need of repair. Air fare is too expensive. Bus transportation is sporadic. The automobile appears to be the only practical means of transportation. Good roads will remain important.

The future of the North as a recreation area will depend on close communication and cooperation of all federal, state and county agencies to protect the natural resources and to use each resource in the best way. In my opinion, there will always be a need for recreation, a place for humans to visit, relax, rest and enjoy the outdoors. This need will be met by having clean, up-to-date accommodations staffed by friendly people. Accommodations and services should be compatible with the surroundings whether they serve water-oriented sports fans or winter snow enthusiasts.

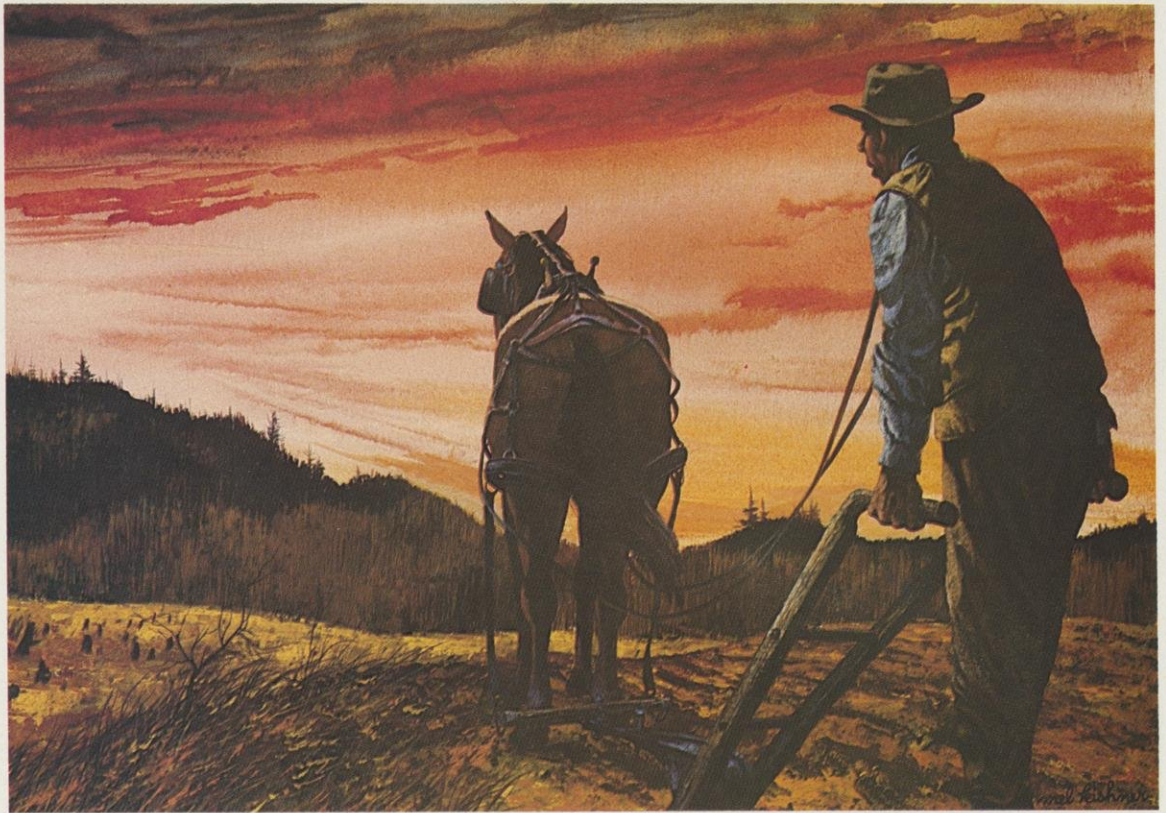




II HISTORY AND FOLKLORE

Farmers tried to make the plow follow the axe but the land did not cooperate. Fire was an ally in land clearing unless it threatened life. By 1941 more than three million acres in the cutover had gone back to county ownership for tax delinquency.

Painting by Artist Mel Kishner,
7300 N. Artesiano Rd., Tucson, AZ
85704



THEY SOWED IN OPTIMISM

UW-Madison Department of Agricultural Journalism

There is needed only the intelligent effort of earnest and ambitious settlers to convert thousands of undeveloped tracts in upper Wisconsin into profit-producing farms.

From "First Aid to the Settler" produced by the Agricultural Experiment Station of the University of Wisconsin in 1915.

Wisconsin's effort to encourage agricultural settlement in the cut-over region around the turn of the century kindled the aspirations of thousands.

The prose of the agricultural experts and promoters of the time would have been prophetic were nature not deaf to human optimism.

W.A. Henry, Dean of the University of Wisconsin College of Agriculture wrote a "Handbook for Homeseekers," a 196-page paean to the North that became the bible for many immigrants. Thousands of copies of the handbook and other publications were distributed by the state's Division of Immigration.

From the late 1890s through the 1920s, state-sponsored agricultural exhibits, advertisements, special exhibits and trains carried word of the North's bounty throughout Wisconsin and other states. Hard-working, frugal settlers should, they thought, be able to tame the North much as they had previously transformed the prairies.

Warnings and cautions were sounded, but they

were overwhelmed by the laudatory prose. The vision of those who thought agriculture could succeed nearly everywhere in the cut-over region was flawed, not because they were deliberately deceptive, but because the North was unlike most previously settled regions.

Dean Henry's assertion that whatever crops grew in the southern part of the state could also be grown in the North was supported by carefully selected photographs of lush crops, healthy livestock, simple homesteads on the verge of prosperity and bustling northern communities.

In 1922, some university agricultural experts still claimed that 100,000 farms of 80 acres each were waiting for farmers in upper Wisconsin, an area which they said had good soil, abundant rainfall, was close to railroads and had access to large markets.

The number of settlers fell short of expectations but it was just as well. Most failed.

For example, in 1920, there were 1,557 farms in Douglas County, 1,935 in Price County, and 2,531 in Marinette County. Sixty years later, there were 340, 760, and 910 farms in these counties, respectively.

From 1910 to '21, an average of 50,000 acres was cleared annually in upper Wisconsin. More than 12,000 new farms were settled during the decade, a growth which promoters noted was greater than in the prairie states during the land boom.

Even though more than six-million pounds of explosives were distributed during one two-year period and a Land Clearing Special train traveled the region to demonstrate land-clearing techniques, stumps and brush were not the only obstacles. Many settlers found the land and climate would still not yield all that had been promised.

For settlers then, as farmers now, the hope of independence and a farm of one's own sometimes transcended purely economic considerations. The Division of Immigration reflected those emotions with the poems it printed in its biennial reports during the early 1920s.

*Away from the city's grime and strife,
Away from the care of its daily life,
Away from the vice it's sure to breed,
Away from its growing grasping greed.*

*Some day I'm going to have a farm,
With cozy cottage and little barn,
With pigs, chickens and a cow or two,
With just enough work that one can do.
Where water's pure and the air is free,
Where wild flowers grow, the wild bird sings,
Where hope eternal in the bosom springs.*

During 1917-18, the Division of Immigration reported that 2,346 new settlers came, most from the Chicago and Minneapolis areas; 3,688 families located in 1919-20; 2,369 during 1921-22. But the 1923-24 report had a different tone. The director noted that 1,038 families were cautioned against "locating on soils of doubtful value."

The director noted:

"Yet thousands of uninformed men have wasted a lifetime each trying to find the right place to live and farm and raise their families. As many more have located on soil where farming is a sorry and disappointing struggle to make a decent living. Disappointing to the man, to his wife, to their disheartened boys — who left and cursed the land."

The poetry was gone. A grim transition for agriculture in the North had begun.

In 1929, University of Wisconsin agricultural economists said that "the sale of land with poor agricultural possibilities to men who have had little or no farming experience, and the policy of locating these settlers in widely scattered areas are two of the primary causes of abandonment." Counties were saddled with land that yielded no tax revenue.

From 1940 to '44, populations of most northern counties decreased by 15 to 20%. And by 1941, more than 3,100,000 acres of land in the cut-over area had gone back to county ownership.

In 17 northern counties, 40% of the people lived on farms in 1940. That declined to 31% in 1950 and to 20% by 1960. The number of farmers in Iron, Oneida and Douglas counties declined by about 45% between 1945-1964.

The decrease in the number of farms and increase in size reflected trends that occurred elsewhere, although the transition left deeper and longer lasting scars in the North.

In the 17 northern counties, average value of

land and buildings on northern farms almost doubled between 1950 and 1959. The value in 1964 was almost triple the 1950 value. Average size of farms increased from 127 acres in 1945 to 202 acres in 1964 and 210 acres in 1980. Even so, many northern farm operators did not enjoy as high a standard of living as farmers in the rest of the state.

The real future of agriculture in the North was written not by those who ignored the limitations of the region, but by those who studied them. Agricultural Experiment Stations were established in the early 1900s in several areas of the North. Research continues at the University of Wisconsin and at the Experiment Stations at Spooner, Ashland and Rhinelander.

The language of these futurists was less flowery, their view less global, their findings less likely to command widespread attention. Crop varieties, soil surveys, economic analyses, and management techniques are not fodder for the popular imagination. Painstaking scientific inquiry and field trials could transform effort into profit, not everywhere, but where the land and the climate allowed.

Farms would not follow all forests, but they would follow some. Dean Henry's support of scientific inquiry may not have paid dividends for many whom he touched with his vision of an agricultural North, but it has rewarded those farmers who remain.

Agriculture has never been easy in the North with its "islands" or pockets of good agricultural soil, short growing season, distant markets, poor transportation routes and widely scattered suppliers of fertilizers, fuels, and pesticides.

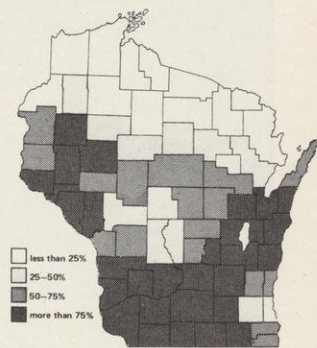
During 1980, agricultural production from 24,180 farms containing nearly five million acres in 24 northern counties was worth almost \$1-billion.

Forage and livestock probably are the key to future agricultural growth in the region. Dairying, which already accounts for nearly two-thirds of farm income, is likely to remain a bulwark of the agricultural economy. Farm size and production per cow will increase. Numbers of beef and sheep are also likely to increase to utilize forage and pastures not suited to crops.

The region is still likely to attract newcomers seeking a simpler lifestyle as subsistence farmers. The recent reverse migration may open new employment opportunities to some farmers and their families. However, rural residents lack many of the skills needed to provide services to the newcomers — medical attention for example.

There are opportunities in fruit and vegetable production, although marketing must be considered since it's not certain whether tourists will stop at pick-your-own operations or prefer to eat at restaurants.

Agriculture in the North will always be unique. In the future, tenacity will still be a necessary virtue but so will capital and solid managerial skills. Tempered by realism and backed by science, success will be more likely than it was 80 years ago. ☐



Percentage of farmland in northern counties.

ETHNIC SETTLEMENT



GRETA E. SWENSON,
Northland College

The South Shore of Lake Superior in northwestern Wisconsin is rich in cultural diversity. In addition to the several Ojibwe tribes populating this “North Country” of forests, lakes, streams, marshes and bogs, a microcosm United Nations of European ethnic groups has settled there. They have established families, communities and churches, creating a distinctive regional identity. This regional identity combines some of the Old World traditions with traditions which have developed around the local climate and economy. Settlers were drawn for reasons of health, fishing, shipping on the “Big Lake,” to dig brown metal out of the ground or brownstone out of the quarries. They also came to cut down the virgin pine, to blast pine stumps and create farms, or establish businesses to service local industry and recreation activities. The South Shore identity only began at the turn of the century and is a fledgling compared to most of the state.

European presence along the South Shore began with voyageurs and missionaries as early as 1659. Settlement of the land and towns, however, did not occur until about 1860 to 1920, during the second large wave of immigration from northern and southern Europe. People migrated to northwestern Wisconsin because of the need for labor and raw materials to support the nation’s rapid industrial expansion.

When Michigan Copper Country mines opened in the 1850s and 60s, experienced Finnish miners working in Norway were recruited and imported along with “professional” Cornish miners. Immigration to the mines increased rapidly. When the railroad was built for shipment of ore, labor migration into the mining areas boomed. Immigrants wrote so-called “America letters” to family and friends describing the rich opportunities and providing an address to which to come.

The Cornish and Finns were followed by Scandinavians, Italians, Slavs from the Austro-Hungarian Empire, Germans and several other groups. Many had already migrated to North America and were working elsewhere. Some of the Croatians who settled south of Ashland, for instance, had been working the silver mines of Arizona, or the smelters of Montana. Some of the early migrants were American-born. Bayfield, specifically, was settled in part by a group of “Yankees” from the northeast.

When the Gogebic Iron Range mines on the Wisconsin-Upper Peninsula border opened up 20 years after the copper rush, new groups came in. In 1884 those mines were beginning full production, and the railroad was completed to the Ashland docks, bringing a boom to Chequamegon Bay.

At the same time, lumber companies were cutting the white pine forests to supply building material for the mining operations and the rest of the rapidly-expanding young nation. In the 1890s, brownstone quarries opened along the South Shore. Work was abundant; the region boomed. Ashland, in 1900, had a population of 13,000. Its waterfront included approximately 11 ore docks,



1 Slovaks, Poles, Hungarians, Croats, Germans, Russians and other ethnics tried to work the cutover stump farms.
Photo courtesy of the Wisconsin State Historical Society

2 Wisconsin logging camps were a virtual United Nations.
Photo courtesy of the Wisconsin State Historical Society

13 to 18 sawmills, a pulp mill, and a blast furnace.

By World War I, the timber had been “cut over” — nothing but stump acreage remained of the giant white pine forests. Agricultural settlement was then actively encouraged by several agencies, including lumber companies, state government, and private land investors.

Then new migrants came to work the land. Advertisements were published in ethnic language newspapers printed in the United States. Moquah, for instance, was settled through newspaper advertisements published in Czech and widely circulated throughout the United States. Slovaks and Czech-speaking Bohemians who were working the coal mines in Oklahoma or slaughterhouses in Iowa saw an opportunity to own their own land and headed north. Others did the same: advertisements were also circulated in Polish, Hungarian, Croatian, and other languages.

The boom continued. After strikes in the Minnesota and Michigan iron mines of 1907, 1913 and 1917, Finns, Croatians and others left. They moved out to the stump acreage to clear the rubble left by the lumber companies and establish small family dairy farms.

A sign from one of Ashland’s early banks reflects the rich ethnic diversity of those early years: “We can send money to the Old Country” it proclaims in Swedish, Finnish, Polish, Czech, German, Hungarian and Russian. These multicultural settlers brought with them their diverse languages, religions, foods and customs. People bonded together for mutual support, mingling with their neighbors.

Ethnic societies were formed. Most groups of the same language and culture soon established a church. In Ashland, for instance, Norwegian, Danish, Finnish, Swede-Finnish, and English Lutheran churches were formed.



Several ethnic language newspapers were also published providing contact with others of the same origin throughout the world. People settled in enclaves for the same reason, forming communities like the township of Oulu populated by Finns, and "The Flats" between Hurley and Ironwood, Michigan, settled by Italians.

The cultural diversity of the region's settlement days contributed to a rich lore of entertainment. Members of the Ashland Swedish Glee Club celebrated Midsummer's Day with a picnic while Moquah residents formed a Slovak dance group, and members of the Croatian Fraternal Union played tamburitza music in Sanborn.

Musicians in the various communities traded tunes and instruments. Folklorist James Leary once described the life of one musician as "How a Pole learned a German tune from a Norwegian accordionist while playing an Italian instrument at a Swede's tavern."

Some very public indicators of the current ethnic life in northwestern Wisconsin are visible as you drive through the region. Last names on storefronts and mailboxes proclaim origins. Churches remain as landmarks to the ethnic neighborhoods, and some ethnic halls and societies are still active.

Musicians, older and younger, still play Finnish polkas on Saturday night. In the Bohemian and Slovak settlement of Moquah, entertainment at an annual hunters' ball is provided by a local band, the Polka-Teers. Members of this band are of Slovak, Croatian and Polish descent. Record stores carry current ethnic artists, and local jukeboxes may feature Croatian, Finnish, or Italian numbers.

If you walk into a grocery store in Washburn or Hurley just before Christmas, you will be greeted with rows of a white jello-like fish. Holidays are a special time for many ethnic groups,

and no Swede, Norwegian, or Finn would be caught celebrating Christmas Eve without lutefisk. In the grocery Swedish headcheese, or sylta, may be next to the bologna. In Hurley, shelves are lined with pasta, and a second-generation grocer caters to the special needs of Italian families.

Community events nearly always involve some sort of ethnic expression. Croatian cabbage rolls at a wedding, or Swedish meatballs at a church supper. The Swedish Lutheran Church in Ashland celebrates St. Lucia Day before Christmas, and Finnish communities stage Annual Johannus, or Midsummer's, celebrations.

However, while the visible landmarks and customs tell about an active ethnic life, it is inside people's homes — in their kitchens, attics and daily rituals — that the ethnicity of the region is most expressed.

If we peek into the kitchens of Moquah, we will likely find special sweet breads and kolache to serve at coffeetime. The Croatians around Sanborn or Benoit are likely to pull something different out of the freezer when visitors stop in: strudel made from a distinctive stretch dough. A Slovenian at Benoit may serve a rolled walnut bread called "potica," while an Italian in Hurley will serve a cardamom cookie.

Scandinavian-Americans in Iron River, Bayfield, or Washburn may prepare krumkake, while Polish-Americans on Ashland's East End spend a great deal of time and effort making pierogi for special occasions.

Food, however, isn't the only private form of expressing one's ethnic heritage. In addition to special kitchen utensils or distinctive spices, we may find hand embroidery, woodcarving, lace work, weaving, or items of ethnic humor. In the South Shore area especially, we may find Finnish identities hidden away in the basement or the woods: the ever-present sauna.

Ethnic life in the region stems from the settlers' rich, diverse cultural heritages which have mingled together and adapted to local characteristics. The result gives Wisconsin's North Country its distinctive regional identity. □

Early miners came from Cornwall and Finland.

They were followed by Italians, Slavs, Germans and others.

Photo courtesy of the Sigurd Olson Environmental Institute

Ever take a mailbox tour?



It's amazing what those miniature silver barns can tell you. Mailboxes in the South Shore region, for instance, serve as boundary markers for the various ethnic enclaves. Drive a bit southwest of Ashland and you'll move through rows of names ending in "-ich." Further to the west they drop the Croatian "-ich" in favor of a Slovakian "-ik" or "-is." If you head due west out of Ashland, you'll enter a forest of Maki's interspersed with a few of those Scandinavian sons: Johnsons, Swanson, Erickson, or the "-stroms" or "-lunds." On Ashland's East End, "-ski" reigns, but alters to "-sky" when you step from the Polish blocks to settlement around the Bohemian Hall. You'll even find some "Yankee" names and a few Italians spilling over from Hurley. And, of course, Madeline Island postmen must read French to deliver their mail. It's the European world in a nutshell. So keep track of those mailboxes when you're traveling — they can tell you a lot about the places you visit.

ASHLAND, A PERSPECTIVE



JOHN CHAPPLE, Former Editor, Ashland Daily Press

Ashland, called "The Garland City of the Inland Sea" in the early days, has had a fascinating, romantic and virile history.

The first touch of the Christian faith came to the north central part of the United States through the bay at Ashland in 1665 where the first "little chapel of bark" was built.

Fur trading with the Indians produced the area's first millionaires. The Lewis and Clark and John Jacob Astor fur trading posts were active here.

The city itself has lived through five economic cycles. The lumber boom caused the first. A dozen sawmills lined the bay and Ashland was known as "the white pine capital of the world." It was said there was so much white pine it could never be cut down, but it was gone in 50 years.

The brownstone boom followed in the 1890s. The Milwaukee County courthouse and countless structures were built from the area's brownstone.

Shipping of iron ore from four Ashland ore docks was carried on with sometimes ten oreboats a day carrying ore to eastern smelters. Taconite from low grade ore ended underground mining in Iron County, Wisconsin, and Gogebic County, Michigan, the sources of the ore shipped through Ashland. Minnesota handled the taconite.

Discovery of the finest high quality black granite in the Mellen, central Ashland County area, developed another boom. This beautiful stone is used on the grave of President John F. Kennedy, and in Radio City, New York as well as on several Chicago banks and elsewhere. The American Black Granite Company was active at Ashland for many years, but development of black granite facing and other construction changes destroyed the market.

Prior to granite development, the Ashland Iron and Steel Company was a principal local industry, its charcoal iron being of top quality. But when the Bessemer steel process came in, it ended the superiority of the Ashland product and the plant eventually closed.

A flurry of copper mining and exploration took place at the turn of the century. Although nothing of substantial importance developed, copper mining remains a strong possibility for the future because of the strata of copper ores stretching from the White Pine copper mine in Michigan across Wisconsin into northern Minnesota.

Agriculture has been the one substantial growth without a fatal economic reaction. In the early 1900s, the Ashland branch Experiment Station helped immigrant and native farmers develop substantial dairy farms.

The two prominent employers of labor at Ashland today are the James River Paper Company, producing a product with worldwide use, and the Louisiana Pacific Corporation, producing rough lumber bolts.

There is strong sentiment for substantial reforestation to provide raw material for woodworking plants. A broad program of reforestation such as was carried on by the CCC camps in the 1930s

Photo courtesy of the Sigurd Olson Environmental Institute



is looked upon as a worthwhile activity in Ashland's future.

Further tourism development will be a substantial factor in growth of the Ashland area. There are now four large functioning marinas, one at Washburn, one at Port Superior between Washburn and Bayfield, one at Bayfield and one on Madeline Island. A large marina at Ashland is in prospect.

The economic foundation of Ashland right now is based on agriculture, tourism, paper products and wood products.

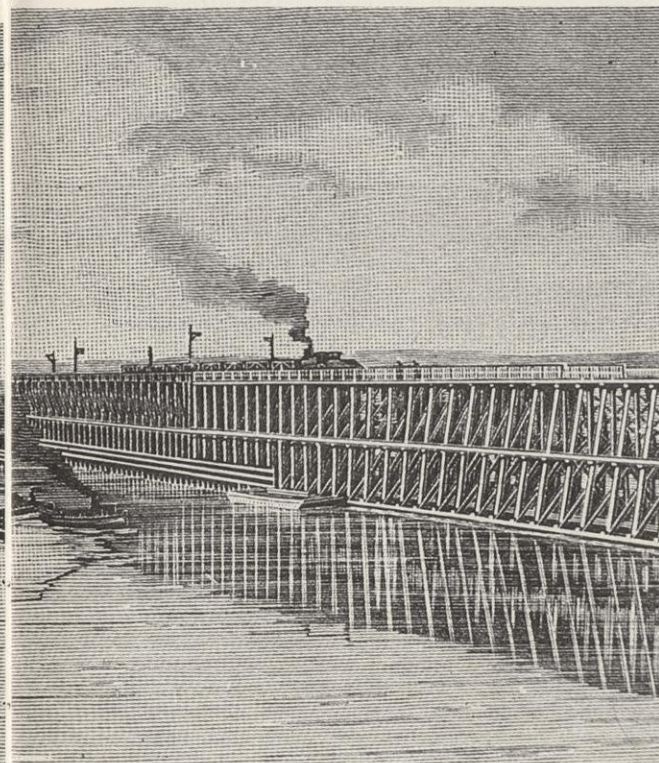
The early history and folklore is unique. At one time it was hoped to dig a ship canal from Fish Creek at Ashland to the Namekagon and St. Croix Rivers to the Mississippi, making Ashland the hub of foreign traffic into the heart of America. Buffalo Bill presided here in the 1890s at a historic get together of the Chippewa and Sioux Indians. President Calvin Coolidge made an extended visit to the region in the 1920s, viewing the Apostle Islands which are now a national lakeshore.

The late President John F. Kennedy flew here and endorsed making the Apostle Islands a national lakeshore, giving one of the last speeches

of his lifetime at the Ashland airport, which is named the John F. Kennedy airport in honor of his memory.

We would venture that the solid economic future of the Ashland region in the years ahead will be based on a quadrangle of activities: agriculture including fruit and berry farming, tourism including the sport of lake trout fishing, reforestation and wood products manufacture, and copper and taconite mining.

The human stock of this area is basically Scan-



The folklore of Northern Wisconsin is doubtless a vast and under-researched subject. Folklore is always related to the people, or the folk, who live or have lived in a particular place or section. In the case of Northern Wisconsin such people include the Indians who made the trails and established their own kinds of lore, agriculture and trade; the landlookers (or timber cruisers) who estimated the stands of white pine for the advent of the lumbermen with their many lumber camps; the settlers who came to inhabit the cut-over and slashed lands left by the removal of the white pine; the miners and the commercial fishermen.

Lumberjacks left their own flavor of folklore and now their tales and songs are still being collected. The ancient Indian lore still exists in the many roads which follow the old Indian trails, and in the existing customs still practiced to an extent by the Indians who live in the North. Also, the people who settled the cut-over and turned some of such land into productive farm fields were sturdy folk who came from Europe, from other parts of Wisconsin, and from the Middle West and eastern parts of America. They kept many customs and traditions of the places from

dinavian and central European, with substantial elements from other European nations. The lifestyle is strongly church centered and rests upon solid family values.

It is our opinion that this area of Northern Wisconsin represents the strength and virtues of the American way of life at its very best. Countless folks who grew up here come back to spend their retirement years and countless others who never knew the exhilaration of our area now come to reside here permanently.

1 Sometimes as many as 10 boats a day were loaded at the Ashland ore docks. The last iron was shipped in 1960.

Courtesy of the Sigurd Olson Environmental Institute

2 President Calvin Coolidge at the Bayfield dock. He visited the region in the 1920s.

Photo courtesy of the Sigurd Olson Environmental Institute



FOLKLORE



ROBERT E. GARD

which they came. The Finns, for example, who settled in the south shore area have kept alive their old traditions of song, story and habits of life. One group has established the National Finnish American Festival which presents at Kimball, near Hurley, songs, tales and dances typical of the old country...mingled with their memories of the new land.

Also remaining is a flavor of the Kentucky folk who drifted into the North during the timbering days and who stayed to become permanent settlers in parts of the white pine country: the songs and tales brought with them, are still collectible, and add a savor of which, in melody at least, is somewhat like a breath of Elizabethan England.

Many Norwegians, Swedes and down-east Yankees from Maine and other eastern states came to help with the lumbering and stayed to make homes in the North. I would think that all these people with strong ethnic origins and folk tradition are part of the heart of Northern Wisconsin folklore.

Doubtless, the best known and still living Northern Wisconsin folk tradition stems from the lumberjack era. Most of the tales have something to do with the progress of logging. Itinerant sing-



Paul Bunyan's camp was on the Onion River about 40 miles from Rhinelander. Stories about Paul, his blue ox, and crew of lumberjacks can still be collected in the North.

ers made their way from lumber camp to lumber camp, often creating original songs about the work of the pinery boy and the raftsmen. Such a ballad as "The Little Brown Bulls" created by a traveling singer for camp entertainment, recited a great log-skidding contest between Bull Gordon, the Yank from Maine, who drove a team of "little Brown Bulls," and Bob McClusky, burley Scot, and his "White Spotted Steers." It is difficult to forget a ballad so indigenous and so descriptive of the work patterns of the men in the lumber camps. Log-skidding (moving the cut log to the edge of the stream) was hard work indeed, for man and beast, and the ultimate victory of the small, sturdy "Brown Bulls" over the great "White Spotted Steers" made admirable story telling as well as singing.

Patterns of camp entertainment after the work was done — Saturday nights and Sunday, after personal needs were cleaned up — were vigorous indeed. Entertainment, always homemade, with the exception of the itinerant singer who might drop in, included songs popular in the day, an occasional ballad such as the "Little Brown Bulls" or "The Pinery Boy," rough games and dances which included sometimes selected lumberjacks taking the role of women to furnish dancing partners, and a "Deacon's Seat" (split log to make a bench where the men sat to spin stories). Music was a mouth-organ, a fiddle, or a concertina. Language was rough and ready and the lumberjack sometimes described himself as being chiefly interested only in three things: grub, liquid which came in a bottle, and those fascinating persons enclosed in corsets.

The life of the lumberjack was rugged in the extreme. Body lice plagued him. Bedbugs dropped down upon him from the bunk above. The working hours were long, from earliest dawn when the "Gabriel" (a long tin horn or a triangle of iron struck with a log-stamping hammer) woke him, or the cry of "Daylight in the Swamp!" blasted him awake. He slept in a bunkhouse which was extremely odorous at night with aromas from wet socks and clothing drying on rafters or pegs wafting around him.

Sundays lumberjacks boiled clothing or blankets to get rid of lice. Bunks were made to be entered either from the end (called muzzle-load-

ers) or from the side. A tick of straw or just boughs laid on bare poles was his bed.

Food in the camp was excellent, plentiful, hearty and tasty. It was essential that the camp cooks be able to turn out meals rapidly that the men enjoyed. Food was the hub of a successful lumbering operation. Tea was preferred to coffee because strong tea was said to be a more heartening drink for the extremely cold weather. The camp cooks made vast numbers of pies, and always doughnuts. Noon meals were very often brought to the men where they were working on sleighs to save time.

The lumberjack had a language all his own. It was a man's language because only men were involved in the timber work. L. G. Sorden, authority on lumberjack words, said that he believed the lumberjacks were the ones who made the four-letter word popular. While the men in the camps were of many nationalities, they became a group with characteristics different from any other working group in America.

Traditionally, the exploits of Paul Bunyan were much related in Wisconsin lumber camps. Bunyan (a true mythical folklore character brought to Wisconsin by workers from Maine, Canada and Michigan) was a mighty giant who performed unbelievable feats of strength and humor. Bunyan stories may still be collected in parts of the North, though the lure of such a character devoted to marvelous inventions and rapid timber cutting has faded with the industry. Gene Shepard of Rhinelander, a timber cruiser and landlooker, claimed to have invented Paul Bunyan and said that he knew where Paul's camp was located...on the Onion River, about "40 miles" from Rhinelander. Shepard himself added much to Northern folklore with his practical jokes and his creation of "The Hodag," fabulous horned animal of the deep woods.

Most of the Bunyan exploits took place at Round River. There, Bunyan and his spectacular crew labored all one winter to clear the pine from a single forty. It was a most peculiar forty, shaped like a pyramid, with heavy timber growth on all sides. One of the lumberjacks with a short leg allegedly got his abbreviated limb from working all winter on one side of the pyramid. This earned him the name of "Rockin' Horse." From this single forty Paul harvested one hundred million feet of pine, and in the spring they started it downriver. It wasn't until they had passed their old camp several times that they realized the river was round and had no outlet.

Bunyan's crew was divided into three groups. One gang was always going to work, one was coming from work and one was at work. Seven lumberjacks with wheelbarrows were kept mighty busy hauling prune stones away from camp. Prunes were known as "Logging Berries."

All in all, Northern Wisconsin has a marvelous folklore and some of the best of it sprung from cutting the greatest stands of white pine timber in America. Paul Bunyan will live as long as there are trees.



The Hodag is a hairy monster seven-feet long and thirty-inches tall. It was captured by Gene Shepard who put it to sleep with a chloroform-soaked sponge tied to the end of a thirty-foot long bamboo pole.



VOICE OF THE PEOPLE III

As a kid I was a member of an elite group in my industrial community along the Lake Michigan shore. My dad was from "up North." Years later I came to realize my father had fled a failed economy for these greener industrial pastures, but it was too late. A mystique had taken hold of me. "Up North" meant lumber woods, trappers, deer hunters—endless forests, streams roaring with white water, blue ranges of hills. There were bears there, and rumors of wolves. My grandmother, a little girl out of Montreal in the 70's spoke of bands of Indians with their goods packed on ponies. What a contrast to my smokestack society where men clumped stolidly across mill bridge each morning and faded into the factory . . . day in and day out.

Mystique and reality—one might say both are real enough. Waters still roar white in the North, and Thunder Mountain will always silhouette the sky. There are now more deer than ever, and bears, and once again there are rumors of wolves. Above all, there are more people. The mystique remains but the reality is—we are killing the North.

Consider this. Lakes ringed with cottages, lakes that in summer become carnivals of careening, racing motor boats; still winter nights shattered by snowmobiles; woods roads torn and tortured by Four Wheel Drives that can go just about anywhere, including that marsh up ahead; quiet woodland trails, suddenly a course for begoggled youngsters tearing along on dirt bikes. Watch the TV ads if you would see how you too can tear up a landscape.

Wilderness! The very word has a sense of mystery to it, and its definition has become the subject of bitter controversy. But, we all agree—northern Wisconsin is more wild than the south, a fact sunk deep into our Badger psyche. Or perhaps it's better if we face modern reality—it was more wild. Our need, our desire, our sheer love for the North is such that it is vanishing, fading, perhaps, forever. Those lovely little sandroads are being blacktopped—speedways where cars flash through the forest at the limit. Scrub oak forests, once without economic value are laced with lines of mobile homes and trailers. Freezeout ponds, that no one thought of developing are now getting their quota of cottages. And so it goes.

Watch the caravans of cars towing trailers loaded with every possible vehicle, headed North for the one spot where they can drive around, free, without thought of anything. It's an industry and it's fun, and we all must live and make a living, right?

I can't argue, but for years there's been something nagging me. I once remarked to a county agent about the splendid landscape North of Madison, the fine fields and buildings, and neat little woodlots. He reflected on my remarks and said—"The people living there always cared for it." Fair enough, and obviously true. But the corollary is obvious, and like I said, it bothers me:

Who cares for the North? ☐

WHO CARES FOR THE NORTH?



LEROY LINTEREUR

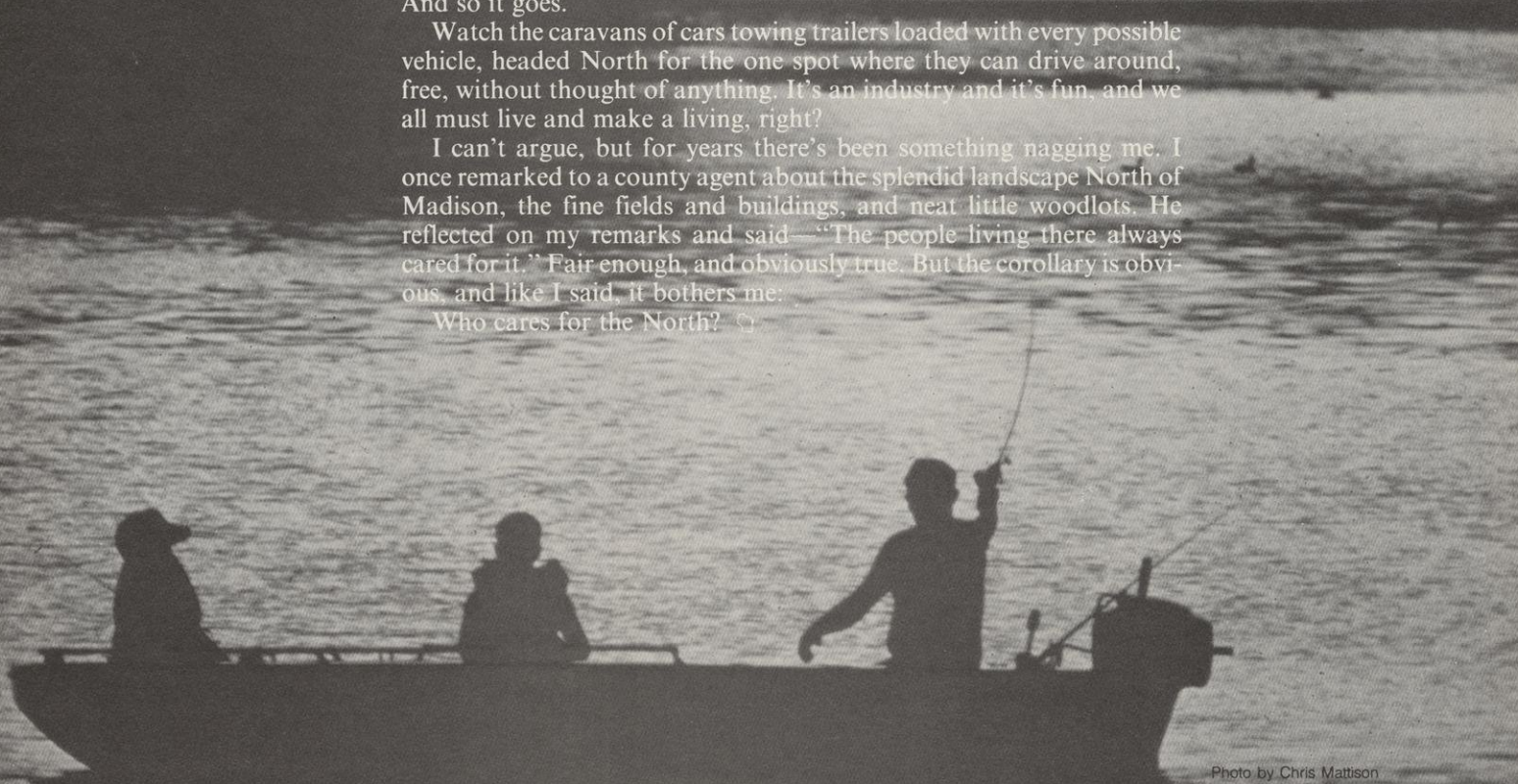


Photo by Chris Mattison

THE NORTH ENDURES



*RICHARD KIENITZ,
Retired Milwaukee
Journal
Environmental
Reporter*

Back in the 1920s at Chetek, we hitched our rides to school on the runners of bobsleds and rural mail carriers replaced the front wheels of their new-fangled Model A's with skis to negotiate unplowed gravel roads before the true snowmobile came along to revolutionize wintertime travel in open spaces.

Time has resolutely altered the mechanics of living in the 10-million acres of Wisconsin fondly known as The North.

Not the spirit, though!

There still exists an image of relaxed, independent lifestyle at the "edge of wilderness" that prompts Robert Gard to notice that "something happens to me when I go into northern Wisconsin."

Hurley, catering now to fishermen and skiers, is far from the sin city Edna Ferber incorporated into her lusty novel of lumber baron years, "Come and Get It."

Nearby Saxon is little altered from 20 years ago when it was chosen as a movie location because it still retained its 1920s visage.

However, motels, supermarkets and fast food

dispensaries guide the way into cities like Rhineland, Marinette or Rice Lake that have grown out of the woods to become thriving trade centers. Overall, more people earn their livelihood providing retail and other services than at manufacturing jobs.

The North is vast in midwestern open space terms. It amounts to better than 20 acres of elbow room for each of its natives, though they are often roundly outnumbered by summering transients — in some places, wintering ones, too — in pursuit of space to relax.

Everyone in North America could comfortably lay down on Oneida County's 700,000 acres without getting wet in its 75,000 acres of water.

Most people live in the predominantly rural North by choice, although for many it means being relatively poor by big city standards. Mixing jobs to subsist is not uncommon.

Savagely reaped in a few turn-of-the-century decades to build the nation's cities, then left with millions of smouldering cutover acres, mostly inhospitable to farming, the forests, now on their third and fourth regrowths, have been a mainstay of an environmental economy.



There are more trees now than there ever were. DNR is working on a larch hybrid, high in cellulose. Photo by Ken Wardius

There are more trees now than there ever were.

After the fires died out in the 1930s, planting seedlings became part of the gospel of keeping Wisconsin green after a halting start. Mully Taylor recalls having to bribe lumberjacks with barrels of beer to join the Trees for Tomorrow effort they thought to be a silly waste of time.

Even a forest mantle changes.

White pine is largely 1890 to 1910 history. Aspen, jackpine and easily planted red pine took its place. While the Menominee Indians and the Goodman and Conner companies have conserved classic stands of hardwoods, the wave of the future may be larch and fast growing hybrids.

Department of Natural Resources nurseries have developed a crossbreed of European and Japanese larch to begin transplanting next spring. Larch has needles like pine, but sheds them, avoiding the threat of fast-spreading crown fires. More important, it is high in cellulose fiber that produces the top quality paper for which Wisconsin mills are famed.

Wisconsin's share of the rich iron ores was first found in 1872 in the Penokee Gap of the Gogebic highlands that jut into Michigan. But for years it has been deemed no longer economic to extract. Other mines closed near Florence.

A fresher economic opportunity is visualized in sulfides of zinc and copper in Forest and Rusk Counties. Mining, even if environmental arguments are resolved, is at least a decade away.

But the potential is tempting. The 70-million tons of zinc-copper ore estimated in the Crandon deposit are only a fraction less than the total tonnage dug from all the Gogebic and Florence iron mines from 1886 until the last one closed in the 1960s.

The North has many faces and voices.

"Life in Rhinelander is different from life in Superior," one observer points out. "Not everything that is true about Mellen happens in Laona."

The North is not all trees and tourists or saw mills and paper plants.

Commercial fishing is recovering from the invasion of the sea lamprey that depleted Lake Superior and Green Bay trout. Superior appears to have a bright future transshipping coal, grain and taconite from western mines and fields. Cranberry culture is expanding in bogs from Eagle River to Hayward.

Even with a short growing season, farming is significant. Iron County may have less than 100 farmers and Vilas not many more, but some of the finest potatoes and vegetables are grown around Spooner and Antigo. Irrigation can be expected to improve them. One of the state's largest milk processing plants is on the river at Jim Falls. And Barron turkeys are widely known.

At the headwaters of prestigious rivers — Brule, St. Croix, Wisconsin, Wolf, Oconto, Peshigo — it is not surprising that major industries include the manufacture of boats, fishing rods and flies and mobile homes.

Back when the North was at its lowest ebb, with acre upon acre of cutover, burned-over and poorly farmed land on delinquent tax rolls, the need to fashion a new future was obvious.

In 1933, Oneida County took the initiative and adopted the first rural zoning ordinance in the United States.

The North has always been remote from major markets for its goods and by-passed by major railroads and highways.

When President John F. Kennedy paid a visit in the 1960s, he found it still economically distressed and laid the groundwork for a federal-state-local partnership to do something about it.



Through what later evolved into the Upper Great Lakes Regional Commission, federal agencies funneled several hundred assistance grants. These improved airports and roads, provided sewer and water for industrial parks, trained workers for new occupations, pointed out ways to farm at the forest edge and promoted tourism. Unfortunately, the Reagan administration has seen fit to drop the program.

"In spite of abuses," says Harold C. Jordahl, regional planning specialist at the University of Wisconsin Extension, "the renewable resources have shown a remarkable ability to recover."

Jordahl sees two advantages for the future — total growth will be slow, giving time to plan — and resources are diverse so the North need not depend solely on mining, forestry, farming or fishing. Fortunately also, new laws today protect the environment against boom and bust as well as pollution.

So the optimism of the North is well founded. It has many distinct resources to help its people. Indians, fur traders, lumberjacks, their baron bosses, farmers, speculators, miners, hunters, anglers, cottagers, resort owners and tourists all testify that the North will endure. It is a good country and will get better. ☐

In the 1960s, President John F. Kennedy visited the Apostle Islands. In a speech, he said, "Our goal is the full employment of both the natural and human resources which this area still possesses in abundance."

A PERSONAL ACCOUNT

FRANK B. NIEDNER,
Waterfront
Homeowners Assn.,
Three Lakes

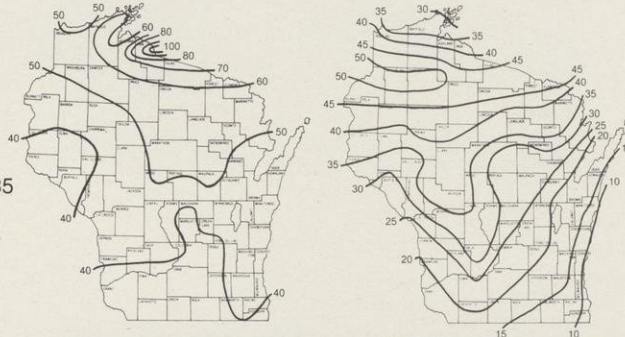
For people in business, the area's natural qualities are as much a part of their capital as the improvements in their shops.
UW-Extension photo

A very special and necessary reason for our residence in northern Wisconsin is the fact that my wife, as long as I can remember, has wanted to live there. Not just "there" but specifically in the vicinity of Three Lakes in Oneida County.

My wife and I are natives of St. Louis — "born and bred" as the saying goes. She has had the advantage of spending all her summers here since infancy, as the daughter of the founder-directors of a camp for girls established in 1921. My introduction to the area came some 30-odd years later. We became permanent residents in 1978, and dismissed from our minds the St. Louis flower garden and all those leaves. Since then we have learned that what we arranged was the swap of a riding mower and an assortment of rakes and other garden tools for a snow-blower and a couple of pairs of snow-shoes. It has also become apparent that savings in the cost of air-conditioning just about cover the increase in the cost of heat.

The "script" for our emigration to northern Wisconsin was written years ago. Many couples performed it long before we did. In recent years their numbers have been growing. All indications are that they will continue to do so.

The absorption of significant numbers of such "immigrants" presents problems in the form of



The average annual snowfall in the North ranges from 50 to 100 inches.

Every winter there are 35 to 50 days in which the temperature up North is below 0°.



We swapped a riding mower for a snowblower.
Photo by Ken Wardius

increased quantities of waste, pressure for better roads, and for utility services to which the newcomers are accustomed. None of these contribute to the longevity of the qualities which drew these people here in the first place.

At the same time, recreational visitors, drawn by promotional efforts of the Division of Tourism, Chamber of Commerce and others, also bring problems which must be recognized. There is no such thing as a "free" lunch. A recent state-sponsored survey shows that the woods, water and wildlife in this area continue to be, by far, the most important attractions for vacationers. Unrestrained promotions involving activities which are foreign to the natural qualities of the region, and probably of short economic life, are suspect. The visitors who come primarily because of this type of recreation have shown the order of their priorities, and it is not the same as that of the majority.



The proprietor of a tourist-based business and the home owner who resides here by choice, as well as the owner of property used for personal recreation, all have a stake in the preservation of the natural qualities of the area. For the businessman those qualities are as much a part of his capital as the physical improvements on his business premises. For the homeowner, and owner of recreational property, they were a major consideration in his decision to invest here, and are therefore part of his "capital" as well. Each should be concerned with the long-range outlook for those qualities. Their preservation cannot be achieved without effort, and in this instance, most certainly will not be achieved without serious cooperation among all the parties concerned.

There will be differences of opinion within any group of people on almost any issue of common concern. It is also a fact that "where everyone thinks alike, no one thinks very much." What is at stake here requires the best possible thought from all those who are involved. Our best efforts may not be adequate. Few will argue that the woods, water and wildlife of the region are what they were 60 years ago, and that is a time well within the memory of many. Nevertheless, what they are now is all we have. There is no guarantee that efforts to preserve them will succeed, but if we do not commit ourselves to the effort, we can be certain they will disappear for good. No one has yet been able to reproduce "real-estate" like this. Think about it.

Government copes with problems like most of the rest of us. It does the best it can and tries very hard to avoid unpopular reactions.

In my experience of 3½ decades I have found government in northern Wisconsin is for the most part, nonpartisan. The simple fact is that we can't afford to be partisan in the North because we don't have the numbers behind us. Therefore we try to avoid conflict and try to reach compromise with our southern neighbors. I believe this approach applies to counties and local governments as well. We try to do things by consensus in the North and work our problems out with a minimum of hard feelings and bitterness.

On the question of taxes I think the major problem the North faces is the problem of a false impression. Our southern neighbors have misconceptions that high property values equal personal wealth. As a result of this, the state funding formula has been "triggered" to reduce state aid payments to high property value areas. Property values in the north are high, but they mask the fact that many of the people who live on them are poor or elderly with fixed incomes.

We in the North feel this acutely in the school aid formula and to a lesser but still serious extent, in the transportation and shared revenue formula.

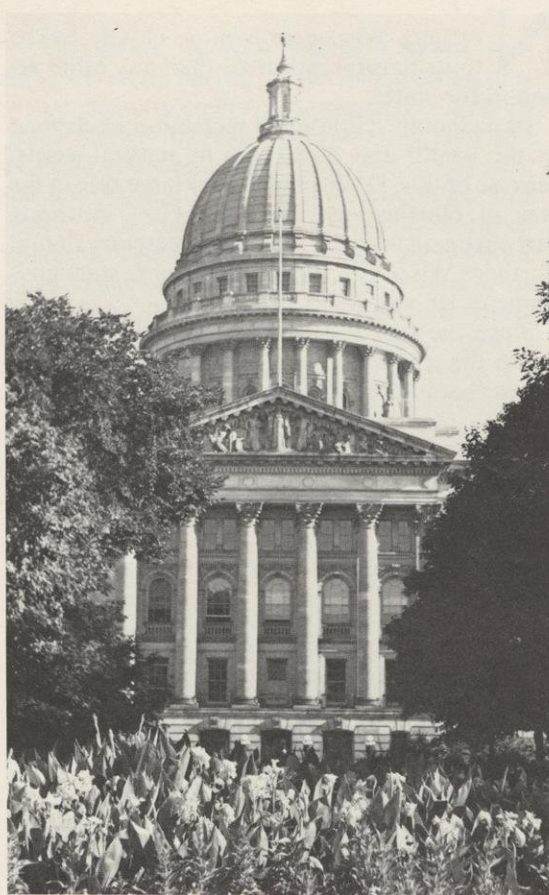
Another problem in the tax area is that large areas of the North are not available to local governments because the land is tax exempt. Both state and national forests make up the largest of these properties. While both state and federal governments have tried to reimburse us for this lost tax base, the reimbursements have not kept pace with inflation and the demand for more services.

Another problem facing government, one it shares with the rest of society, is a reluctance to plan for the long term. The preoccupation of elected officials with winning reelection has the same impact that the preoccupation most managers have with showing a quick profit. We look only for the immediate benefits and shy away from the long term investments that pay dividends in the distant future.

Another obstacle to long term planning is that we have a decentralized economy involving many small businesses and decision makers. This makes it difficult to agree on what should be the best course of action. The process of negotiating and obtaining agreement from so many participants sometimes makes hard decisions even harder to make.

In terms of who makes decisions in government these days, I think there are two trends worth noting. The first is in a steady and uninterrupted concentration of power in the executive branch of government. The heads of the large state agencies have more and more authority to make policies we must live with. They also are able to command the resources of vast tax dollars to run the bureaucracies and to guide public opinion.

The second trend is the growing importance of counties in administering programs usually asso-



GOVERNMENT



CLIFFORD "TINY" KRUEGER, Retired State Senator

ciated with the local level of government. In recent years counties have been the focal point in dealing with the mentally ill and the developmentally disabled, social service programs, transportation planning, and most recently solid waste disposal. I expect both of these trends to continue in the foreseeable future.

These trends do not guarantee, however, that government absolutely decides issues. Sometimes government actually fails to lead until a crisis forces a response. The recent legislation on Unemployment Compensation is a good example of this. The state got involved very reluctantly after labor and business representatives could not reach an agreement. Even then the state acted only with the threat of federal preemption hanging over its head. The result is a revision of the unemployment laws that will probably serve the state until another crisis comes up.

In conclusion, I think it is fair to say that government in the North will be effective, and will face the same social and political realities as government in the rest of the state. In most cases it will respond in a way similar to our southern neighbors. It will, however, retain a style that is less partisan and less centralized in its decision making than that found in urban areas. I also remain confident that the government of the future will be as effective in meeting our needs and remaining faithful to our progressive tradition as it has been in the past.

TIME IS OUR ALLY



ROCKY BARKER,
Managing Editor,
Rhinelander
Daily News

Northern Wisconsin is more closely linked to its natural resources than any other region in the state.

Its economy, culture and recreation all depend on the health and bounty of its natural assets. Because of this, DNR plays a very large role in the lives of Northwoods residents. Gov. Anthony Earl once said when he was DNR secretary that in Northern Wisconsin the Department *is* state government. He wasn't far off.

Since the future of the region will be closely tied to the resource base, DNR will play a major role in shaping that future whether it wants to or not.

Today the Northern Wisconsin economy revolves around agriculture, tourism and the wood industry. Add mining, fish farming and other lake-related activities such as water diversion to these and you have the probable major industries of the future.

Native Americans, particularly Chippewas, have shaped the past and will also alter the future. Since the early 70s when Indians began asserting the rights handed down by treaties, tribes have taken more responsibility over the lands and waters of the North.

The 1972 State Supreme Court decision in the Wisconsin vs. Richard Gurnoe case, which reaffirmed the rights of Chippewa to fish throughout Lake Superior was the first step. The most recent and potentially far-reaching is the State vs. Lac Court Oreilles case in which a U.S. appeals court ruled that Chippewa have the right to hunt, fish and gather wild rice on public lands throughout northern Wisconsin.

While this case remains in litigation, DNR has already begun sitting down with Chippewa leaders to negotiate on natural resource decisions. An agreement reached between Chippewas, sportsmen and the state over fishing on Lake Superior keeps hopes alive that a state-tribal relationship which recognizes tribal sovereignty can protect the resources so important to both groups.

Nonsport fish will be the mainstay of the commercial fishery.

Photo by B. W. Hoffman



Mining will be the major sector of economic growth in the region during the next 50 years. Whether it begins during the 1980s or later it can be expected to add many jobs and raise many questions about its impact on the environment.

The immediate questions revolve around the direct impact of base metal mining on ecosystems. DNR, environmentalists, local officials and Indian tribes negotiated with industry representatives during the last five years to develop the present regulatory scheme but it remains controversial. Residents fear the dangers of groundwater pollution from tailings ponds and surface water pollution from diversion. They also worry about air and noise pollution.

Moreover, the Sokoagon Chippewa Community has discovered a major copper-zinc deposit on its 1,000 acre reservation at Mole lake. Its members have expressed a desire to leave the resource in the ground which amplifies the feelings of most Northwoods residents. They lean to environmental quality over economic prosperity when they have a choice.

The areas mentioned are not the only places where there will be mines in the future. Geologists say that smaller deposits usually outnumber the big ore bodies and many firms are exploring the region for both base metals and uranium. The future may see many smaller mines.

Northwoods residents are concerned about the long-term social and economic impacts of mining. Older residents remember the iron mining days of Hurley and Mellen when the mines quickly opened and closed.

In Iron and Ashland counties only abandoned ore docks and mine shafts were left to tell that prosperity had once reigned, fueled by hemlock and wood. This boomtown effect is very much on the minds of residents today who fear that for a few short-term benefits they will lose control over their lives and face new pressures.

Fortunately, growth so far has been relatively slow giving the region time to plan for the influx of new residents, new money and what to do when the ore peters out. How well it carries out the plans will tell how well the region survives.

The effort to meet international demand for forest products already has become controversial in the North. Conversion from less economic species such as aspen to higher value species such as red pine has raised fears about the loss of habitat diversity. Chemical spraying necessary for this effort is unpopular.

Foresters must balance the desire for aesthetic beauty to the need for productivity. Clear cutting, a practice considered important for aspen in particular has been criticized by environmentalists as unwise and unattractive.

Tourism, an important part of the region's economy, depends on untrammelled natural qualities to attract visitors. Its proponents are among the North's strongest defenders of environmental quality. Tourism's success has also led to increased second home development. This has had and will continue to have a major impact on the region.



Mining, tourism and the wood industry are sure to bring increased development.
Photo by Eleanor Jones

The increasing number of people who use the state's resources is causing conflicts between boaters, fishermen and landowners. This has been very apparent on the Brule River in Douglas County where fishermen, landowners and canoeists have been pitted against tubers over use of a classic Northwoods stream. Water skiers and fishermen also clash on many Northern Lakes as numbers of both increase.

Commercial fishing remains important on Lake Superior even though it has dropped from its peak in the 1940s. The catch of sport fish has brought conflict with sports anglers who worry about the impact on fish stocks. Commercial fishing, however, will certainly continue in its present form through the Indian fishery which is guaranteed by treaty rights. The state licensed commercial fishery, however, will move more into utilization of non-sport fish such as smelt, sucker and other species that can still provide a tasty and bountiful meal.

The most important resource of Northern Wisconsin is its people and their numbers are growing. The trend since the 1920s had been a gradual drop in population until the 1970s. At that time the rural exodus turned the trend around. This growth will continue into the future as the region's natural beauty and attractive lifestyle lure new residents.

Fortunately those lured to the region by its natural attributes share the love of nature and the desire for its protection with long-term residents. Together old and new are lucky that growth in the region takes time because of its remoteness, and distance from major economic centers. This extra time will give residents a chance to plan so that the resources they and the North depend on remain safe for their children and grandchildren.



Tourism depends on untrammelled natural qualities to attract visitors.
Wisconsin Division of Tourism photo



JEFF KNUDSEN

A question I've spent a lot of time pondering, is why had I recently moved to northern Wisconsin, after having lived eight of the past 10 years in the west (Utah, Idaho and Wyoming)? The reasons seem to be variations around one central theme — the lure of the Northwoods is truly special.

In trying to remember when and how my fascination with the forests of northern Wisconsin began, my childhood comes to mind. I have fond memories of our once-a-year early-morning departures from Madison as our annual one week vacation to northern Wisconsin began.

That first evening, when, after the excitement of moving into the cabin or setting-up camp had subsided, we finally had time to allow our senses to soak in the essence of the North. The cool night air, heavy with the fragrance of pine, the distant drone of a motorboat, or perhaps the quavering call of a loon assured our senses that we really were "up north."

I find winter in the North to be a particularly exciting time of year for this is the time of year land forms are most obvious. One cannot travel anywhere up here without seeing the handiwork of glaciers. It is most interesting to try to picture how various glacial features were formed and to imagine what it must have been like during those icy times. Perhaps the most obvious, certainly the most used features in northern Wisconsin, are the thousands of lakes. Their sheer numbers, shapes and wildness are major factors responsible for the character of this North country.

In addition to the north's natural features and diverse flora and fauna, the lure of this land's history is strong. Without a doubt the finest time to be on the waters of a lake in a canoe is during those quiet moments at twilight. Perhaps a layer of smoke hangs over a distant shoreline campsite. As your canoe glides closer, the sight of forms huddled close around the fire confirms the chill of night descending. These moments are treasured links with the past. Certainly such shoreline fires of days-gone-by warmed bands of Indians or parties of fur trappers. There will be other fires to warm the future.

Later, I am warmed by my own fire and the white pine stump I've leaned my fishing rods on brings to mind yet another time and breed of men. It means a great deal to feel this kinship with the

past and future, for I am neither the first nor the last person to have the good fortune of spending time in the Northwoods.

When I take a moment to look around, every single item I see has come from the earth — without exception. Looking at my physical self I am reminded that I, too, am directly tied to this earth through the food I eat and the water I drink. I feel fortunate to be, quite literally, so much a part of the North.

I cherish few things more than a day in the outdoors. The mixture of natural features, animals, plants and history make a day in northern Wisconsin special. Its solitude offers the much-needed opportunity to be alone with myself. I think I must have moved back here to accept the challenge of rediscovery. After a lifetime of observing and exploring, perhaps I can once again see the magic of the Northwoods as last seen through the eyes of a child. ☐

“Where the North Begins.” So says the rustic sign by Highway 51 on the south side of Portage. Yes, Portage. The sign looks right but Portage is just 35 miles from Madison.

According to local historian Walter Van Epps, Portage had no sinister motive. The sign went up as part of the Work Progress Administration (WPA) Project back in the early 1930s. It was a harmless Chamber of Commerce slogan. But maybe there’s some truth there.

Back in the 30s, Portage probably had a great northern feel. Even in the late 50s, the area had a lot of what many define as the northern experience—solitude (hardly anyone was on the river then), good fishing, tremendous wildlife populations and a distinctly slow pace of life. That was before the I-90 highway, before Columbia I and II power plants, before the area was discovered by Chicagoians looking for a touch of wild within a few hours drive.

The Portage sign raises a fundamental question: Where is North anyway? After talking to about two dozen North country residents, I’m certain UP NORTH is a state of mind rather than a geographic delineation. Martin Hanson, who lives deep in the Chequamegon National Forest near Mellen, believes the North really does start somewhere near Portage. He views the central sand counties with their high deer populations and high percentages of forested area as the start of northern Wisconsin. For Dan Satran of Eagle River, publisher of the Vilas County News Review, the North means large expanses of undeveloped lands. His North starts around Three Lakes on the east and Hayward on the west.

Perhaps the North is best defined by what’s missing rather than what’s there. I’ve always felt the North starts where the corn stops. It starts in my book where the public lands—the county forest systems, as well as the national forest holdings—begin. Around the Blue Hills I get a good feeling. Rice Lake, Prentice and Tomahawk constitute a personal boundary.

Something else missing up North is fast food franchises. After leaving Ashland you can drive through Hurley, head south on 51 and drive all the way to Woodruff (maybe a 100 miles total) and not see a single Golden Arch or Hardee’s. Another test of North is when you have to look for car washes or movie theaters.

Clearly it’s the natural resources that attract and hold many northerners. Dan Satran noted that the natural resources are the only “special reason” for living up North. Art Long, a wildlife artist in Woodruff, thinks the North is “fabulous” and “wouldn’t think of living anywhere else.” He even likes the cold winters (definitely a minority opinion). For Ed Wagner, Mayor of Ashland, the natural beauty is “overwhelming.” (Of course he moved from Gary, Indiana in 1975 so we can excuse his enthusiasm.) Wagner also notes the solitude of the North as an important feature. That quality really appeals to Peter Maller, a freelance writer, living on 80 beautiful acres near Copper Falls State Park. He needs

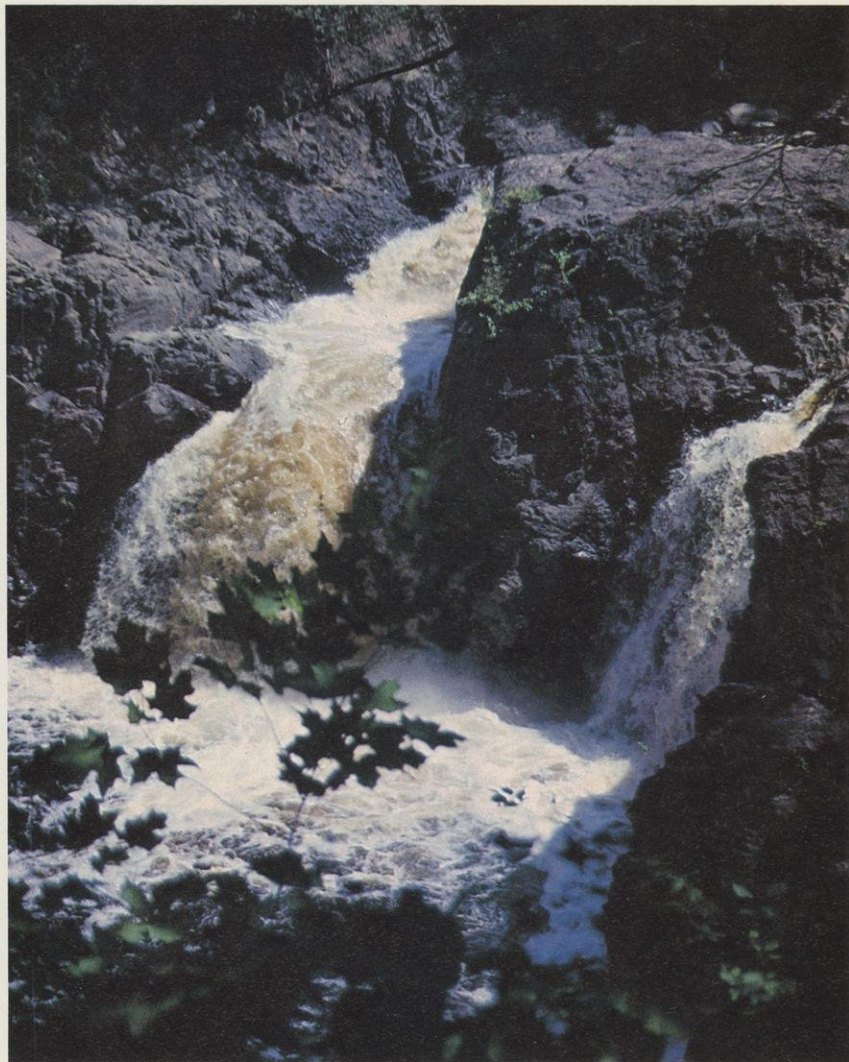


Sign at Portage.
Photo by Bob Wallen

LIVING HERE: A NONSCIENTIFIC SURVEY



THOMAS J. KLEIN,
Director, Sigurd Olson
Environmental Institute



the North: “I have a tremendous need for the tranquility this area has to offer. The sense of isolation is important to my writing.”

There are a lot of empty spaces up North where population densities in many counties are less than 15 persons per square mile. In fact, Iron County, with its population of 6,730, has a density of only 8.5 persons per square mile. Price County, with two “real” cities (Park Falls and Phillips) has 15,788 people spread over 1,268 square miles, for a density of 12.5 persons per square mile. Populations in nearly all northern counties are low: Bayfield 13,822; Lincoln 26,555;

The North is more than waterfalls, vast tracts of pine and postcard sunsets.
Wisconsin Division of Tourism
photo

Vilas 16,535; Forest 9,044. Lots of space up here.

Most people in the north recognize just how special all that extra room is. John Podlesny works for Northern States Power Company in Ashland. He appreciates the clear air and clean water and remarked that you don't know "how lucky we have it" until you travel around. John can find good fishing within five minutes, he says, and that's important to him.

To John Saemann, a retired forester living in Florence County, the land is everything. He enjoys working in the woods, "Just the feeling of being there." He picks mushrooms, taps maple trees to make syrup and makes his own charcoal. He likes not having neighbors.

But the North is more than waterfalls, vast tracts of pine and postcard sunsets. It's home to a lot of interesting and diverse people. A realtor in Radisson (near Winter), Chet Bonclear, feels that an unspoken trust exists among people in the North. When he lived in Minneapolis he "felt like a cow—milked and sent home." Most people in his area have a "feeling that they are important—not just a number." He sees a lot of positive thinking where money just is not as important as it is in urban areas.

However, even up North, people need to think about money and jobs. Generally, incomes are

lower (about 25% less than the state average) and the economy is on people's minds. Harry and Liz Smith live near Mellen and love the North. They view it as an "ideal place to raise our kids." They feel it's a part of the world where people are "in tune" with their lives. As a logger, though, he sees a need for better roads and better prices for his timber. He feels the pulp buyers are not paying anywhere near the price they should. He would like to see "quality" industries locate in the North.

The state of economy is very much on the mind of Edgar Granberg, the Price County Chairman who lives near Prentice. He sees tourism as an area of positive growth for the North. Assuming the national economy ever "returns to normal," he predicts an increase in tourism. He sees the snowmobile trail system helping the boom in winter tourism. Granberg also thinks the timber industry is coming back.

Most feel tourism is important to the north. Dan Shefchik of Washburn feels the North is committed to tourism. The area's remote yet central location is an asset. In his view, the north offers many opportunities for small industries and businesses. The North's hard working, dependable citizens offer promise for the region's future, he believes. Tom Poss of Hayward also sees a

More marinas are expected to be built on Lake Superior.
Wisconsin Division of Tourism photo



bright future. Within five to 10 years, the population will "take off like a bullet."

A man who is famous for positive thinking, Tony Wise, owner of Telemark in Cable, sees no end in sight for northern tourism. The man who created the "Birke"—an annual 55 kilometer cross-country ski race, which may draw 10,000 skiers next February—is convinced that cross-country skiing will continue to grow. He thinks new and better recreation facilities will be needed as many of the older, smaller resorts close. Just down the road from Telemark is Lakewoods Resort, where Kathy Rasmussen has seen a steady increase in winter business. She likes the North the "way it is," feeling it's an ideal situation to have the beauty of the natural environment yet be close enough to cities like Minneapolis, St. Paul or Duluth to enjoy cultural activities.

But there are worries. Harry Smith doesn't think the fishing is as good as it used to be. Jane Thimke, a baker from Washburn, notes that while the old timers didn't have to worry about resources running out, the present generation does. She observes, though, a growing awareness of the need to protect the North's natural resources.

Mrs. Kay Winton of Hayward moved from St. Paul in 1977 to enjoy the "sense of freedom" of the big woods. She is concerned about Project ELF, the possibility of a nuclear waste dump and about the potential sale of national forests. Martin Hanson thinks there could be big changes in the North. The vast water resources of the state could lead to tremendous future growth which could put pressures on the North, eventually creating, he fears, "one big suburb." Unknown effects of air pollution and waste dumps could have negative implications for our lakes and groundwater, he added. Hanson sees the need for careful resource management on both private and public lands.

Acid rain bothers a lot of people. In an opinion survey conducted by the Sigurd Olson Environmental Institute of Northland College, 64% of a random sample of people in Lake Superior coastal cities in Wisconsin, Minnesota and Michigan, felt that acid rain is a "serious problem." Only 7% thought it to be "no problem." Also, 73% thought acid rain hurt tourism.

The survey, taken in late 1982, indicates that northerners value their natural environment. Even in a region with economic problems, 71% of the sample agreed with the statement, "My right to a clean environment is as important as someone else's right to employment." Even though 92% of the sample wanted to encourage tourism, 61% disagreed with the statement "What the North needs is a large tourist park like Disney World." It's true that the North has never been known as a hotbed of environmentalism, but 55% "strongly approve of what has been termed the environmental movement," and 73% are "willing to pay a higher price for ecologically safer (non-polluting) products."



One thing most people agree about is the pace of life. Edith Merila, a Washburn reporter and former Mayor of that city, thinks people in the North actually take "pride in not moving fast." In her 14 years of reporting, she has covered and recovered the same stories; only a few facts change. She has heard often in her work that Madison ignores the North or that people in the north get the short end. But she asks rhetorically, "What are people up here doing for themselves?"

Just a few miles south of Washburn on Chequamegon Bay, Ed Wagner in Ashland, believes Madison does recognize the North. He notes Governor Anthony Earl's frequent campaign stops and Lieutenant Governor Flynn's spring visit to Washburn. Wagner is excited about the prospects for his city. He sees a new marina, industrial expansion and even some high tech possibilities. Preserving the "good things" while facing certain change will be his challenge.

Wherever it begins or ends, the North is a diverse place not the static, if romantic, image of lumberjacks in red and black checkered jackets. Dan Satran, for one, is concerned that "the north" keeps getting further North every year. Having lived in the North for 10 years now, I savor its special character, even if that includes a few too many abandoned cars, run down shacks and less than desirable job opportunities.

Maybe there are enough Big Mac's in Madison, Milwaukee or Racine to meet the state's quota. I sort of like those "EAT" signs anyway. And if you want your car washed, you can always wait for rain.

The "Birke" at Telemark may draw 10,000 skiers next February.
Photo by Jim Hicks

IV FISH AND WILDLIFE



THE GOLDEN AGE OF WILDLIFE MANAGEMENT



ROBERT E. DREIS,
*Regional Director, The
Ruffed Grouse Society*

Many, many years ago, before humans had their ways with land and vegetation, northern Wisconsin was a place of big trees. While towering pines and hemlocks dominated, there were islands of "barrens," which maintained a unique habitat through the action of lightning-caused fires and (we theorize) through fires set deliberately by Native Americans. In these pre-settlement days, wildlife was not and could not have been plentiful! The food chain, of course, was there and at the apex were the predators; man, cougar, wolf, lynx, fox, bobcat, hawks, owls and all the rest, down to the tiny least weasel. But, based upon the habitat as we know it existed then, deer (and moose) numbers must have been very low. Deer numbers probably averaged five per square mile.

Then came the era of logging and by the 1920's northern Wisconsin was known as the "cut-over." Wildfires gave the north the aspect of a ravaged region—not every single acre, of course, and not all at the same time, but in the aggregate, not many sizable tracts were spared.

Late in the 1920's wildfire was controlled and nature began to restore the north. Young hardwood forests of mixed species, but mostly aspen-birch, and pioneer stands of jack pine became the mantle of the earth. Wildlife of the early emerging forests then responded, aided to some extent by scattered stump farms. These early farming attempts provided many much-needed openings for wildlife, a thing the original forest cover probably lacked. Because of this ideal habitat, the wildlife of the early forest stages and of the edge must have flourished in unbelievable numbers! We know of the tremendous deer herds, of the relatively short reign of the sharp-tailed grouse (between the end of the fires and the establishment of the forest), and of the plentiful ruffed grouse which existed during this period.

What we do not like to think of when we reminisce about those days is the grim and gruesome starvation losses of deer during the hard, cold winter months. In a frigid, snowy winter of long duration, the deer yards were places where the deer went to die. They died by the hundreds of thousands!

The record is not all that clear when we discuss other wildlife — the nongame — simply because at that period we were more concerned with deer, bear, waterfowl, partridge, and furbearers. But numbers of songbirds of the forest edge must have been phenomenal! We know that the majority of our songbirds are birds of young, disturbed forests. Ornithologists have recognized about 115 different species that favor such habitat.

During this time, though, some wildlife populations must have suffered badly. I refer to the "cavity nesters," both primary and secondary. We know that the larger ones, such as the pileated

woodpecker, became scarce. By and large, no one paid much attention to the birds of the deep and mature forest.

Then came the era of the 1940s to the 80s during a good share of which I have lived and worked. It was the time of the birth of the wildlife profession; of dedicated young persons fighting a battle against other well-meaning people for biological control of the wildlife populations, especially of deer herds. What a shame we did not all join forces earlier because our goals were the same. We attempted to manage for wildlife populations capable of sustained annual kills via sport hunting. (Today we say "harvest" because to say "kill" has nasty overtones.) But killing is one of nature's ways; it is an everyday occurrence in nature and always will be.

At present we are in a period of what I like to call the "golden age" of wildlife management. The wildlife professionals have demonstrated that they can produce wildlife via land management and harvest seasons. They are, by and large, now accepted and respected by large segments of the hunting public. These wildlife professionals should remember, as they take their bows, that without the help and cooperation of the hunters they would have been weak, little voices squeaking away with no one listening and with no results.

I can feel, as I write this, the ire of the anti-hunter and perhaps of some of the nonhunters. These are people who consider themselves defenders, protectors and lovers of wildlife. What is protection and love of wildlife? In the past it has been the hunter who has demonstrated true love and protection. This may sound illogical and contradictory to many readers. However, it has been my experience in over 31 years as a professional wildlifer, that when real compassion for a wildlife species and/or a wildlife population was needed, it has been the hunter who has responded with energy, money, time and interest. Hunters love the game they hunt, and this can only be explained as a deep felt carry-over from primitive ancestors. After all, humans have been on this planet for millions of years and have become "civilized" for only several hundred. Is it then inconceivable that the primitive feelings toward wildlife and hunting persist today? We know that respect and love of the animal killed is part of our Native Americans' way and belief, so why not for those of us who are non-Indian?

While we are now in the golden age of wildlife management, we are certainly not without problems. Some are of wildlife's own making, some are sociological and some are just a fact of forest succession.

Most professional wildlife people are game or hunting oriented, myself included. We are this way for a variety of reasons but mostly, I think,

The views of wildlife management and the perspective of history in this article are those of the author and do not necessarily reflect any thinking or policy of any public or private organization, agency, or quasi-official group.

The author has recently retired from the Wisconsin Department of Natural Resources after serving for 31 years, most of which was spent in the wildlife profession. He is now the Regional Director for the Ruffed Grouse Society in Wisconsin and Minnesota. He is on the Board of Directors of the Cable Natural History Museum, and is on the Advisory Board of the Sigurd Olson Environmental Institute of Northland College, Ashland, WI.

He is a hunter, a backpacker, canoeist, and part-time free lance writer, in that order.

because we were trained this way and because most agency wildlife programs have been funded in the past by hunters' money. He who pays the piper calls the tune. But the land manager sometimes earns the ire of the bird watcher or the wilderness hiker who is appalled to find his favorite bit of undisturbed land looking very much disturbed indeed! Fortunately the bright young people entering the profession today are recognizing the importance of all wildlife species of the forest and now are beginning to consider them in management decisions. They must do so, since a large segment of Wisconsin's citizens demand it.

How about the "emerging young hardwood forest" of yesteryear? It has emerged! More so, it has become mature. In many instances it is on the verge of converting from aspen-birch to a forest composed of species less desirable to most wildlife. In other cases it is composed of pole-sized stems with very little understory. All of this translates into a poorer home for wildlife.

If we are to maintain wildlife in the North in its present abundance, and increase some popular species such as deer and ruffed grouse, we must manipulate significant portions of mature and converting aspen stands back to early stages. This will perpetuate the various age classes. The only way that this can be done practically is through commercial logging, where timber furnishes a profit to industry.

Battle lines are apparently being drawn. On one side are the wildlife professionals, the timber producing industry and (I hope) the hunters. On the other side are those who perceive an untouched forest as a thing of beauty, brimming with wildlife. They also perceive the forest as perpetual, as a primeval entity which, if left undisturbed, will last forever. I wish we all could compromise a little and perhaps discover a middle ground.

It is very evident here in the North that in this day and age, those who hunt, those who do not hunt and those who are opposed to hunting are becoming involved, both with their time and with their money. The magnet is the vast acreage of public forest land in the north. Not only are they becoming involved but they are organizing. The wildlife professional of the future must take them into consideration just as was done with the militant hunters of not so long ago. The wildlifer must be an educator, a public relations specialist, and above all the manager of an ecosystem. Today's professional is no longer a deer manager or a waterfowl manager, rather he/she is a manager of the emerging forest ecosystem. Or, this person is a total wetlands manager. As such, some "snags" are left in the clear-cut; the borders are left irregular for more edge effect and to lessen the visual impact upon aesthetics.

The professionals will be increasingly helped in these endeavors by enlightened private, nonprofit wildlife-oriented societies made up largely of non-adversary, dedicated hunters. Such organizations at the present time include Ducks Unlimited, The Ruffed Grouse Society and Whitetails Unlimited. These societies will become more important in the



A weak deer is carried out of the Flag yard in Bayfield County. In the long, frigid, snowy winters they died by the hundreds of thousands.
Photo by Staber Reese

immediate future to assist both monetarily and educationally. Such societies are the direct allies of the wildlife manager and it behooves them to work in a coordinated fashion.

My sons tell me (very discreetly) that I am getting old and must guard against looking back to the "good old days," which were really not all that good. They call it "negative thinking." So I will end with a few predictions for the future in what I hope is a positive attitude.

1. The timber industry will continue to thrive and harvest the hardwoods as they mature. This will furnish jobs, money and will return the forest to an early emerging stage. Through proper silviculture this should be able to go on indefinitely. The resulting habitat will maintain abundant populations of most wildlife species, but especially deer and ruffed grouse, which greatly interest us hunters.

2. Private, nonprofit organizations will become important as allies of the professional. Each will do work to complement the other.

3. Deer populations and kills in the north will continue to climb. We will see sustained kills, statewide, of 250,000 animals.

4. Hunting will continue as a respected sport and tool of wildlife management. Hunters, however, will out of necessity become much more regulated. The sooner they realize that this is imperative in our crowded world of the future, and stop trying to be frontiersmen, the better off they will be. The hunter of the future will be much more appreciative of the non-killing aspects of the hunt.

5. Present day anti-hunting groups will modify their direct opposition and act more like their rational Canadian cousins to work with hunters in removing as many of the unsavory aspects of hunting as possible.

6. Wildlife areas and the public northern forests will receive increasing use by recreationalists which may curtail some of the present uses by hunters. Wildlife managers and hunters do not like to hear this, but it is coming.

7. Pete, Phil and Paul, how's that for positive thinking?

RAPIDLY CHANGING AND STANDING STILL

RONALD G.
ECKSTEIN, DNR
Wildlife Manager,
Rhinelander

"Up North" is an 80 mile wide band of extensive forest stretching across the top of Wisconsin. It is 15,000 square miles of deer range and 3,913 named lakes. It has an economy oriented toward wood products and recreation. There are places where one can drive for miles and not see another car and there are places that resemble suburban Milwaukee. There are quiet lakes with few boats or cabins and busy lakes circled twice by vacation or retirement homes. Small relic stands of old growth white pine and hemlock contrast with intensively managed forest plantations. "Up North" is at once rapidly changing and standing still. Whether this is good or bad depends on your perspective.

When viewing the northern forest, the untrained eye can make two mistakes. One is to conclude that all forests are similar and, therefore, all are capable of sustaining diverse wildlife populations. The other is to see forests as unchanging year after year. Forests are not all the same and they do change. Ecological succession and foresters see to that.

Different forest habitats support widely different wildlife species. The sharp-tailed grouse, Savannah sparrow and marsh hawk require open brushland while spruce grouse, black-throated green warblers and red squirrels require conifers. The largest populations of snowshoe hare, woodcock, and chestnut-sided warblers occur in young aspen forests while fishers, Blackburnian warblers and flying squirrels do best in mature, mixed conifer hardwoods. The next time you drive through the extensive forest try and look past the trees and through the forest so you can "see" the variety of habitats as you move past. "See" the grove of hemlock, the oak stand, the den tree, the dense hazel brush, the dying balsam fir, the aspen sprouts, the white cedar swamp and think of the particular wildlife species that depend on them.

In the past, the primary forces affecting northern forests were climate, ecological succession, fire, windstorm, or insect and disease epidemics. Today, land managers are the agents of change since about 50% of the northern forest is in public or industrial ownership. Direct manipulation of the forest through such things as timber sales, pine plantation development or road building can have both positive and negative impacts on wildlife depending on the particular species. For example, maintenance of the aspen forest community through clearcutting benefits forest game such as deer, bear, ruffed grouse, woodcock and snowshoe hare while the extensive conversion of aspen forests to red pine plantations or northern hardwoods reduces the populations of these same species. The development of new forest road systems may facilitate timber and wildlife management, but it can also break up "big country." This "big country" is required by animals such as timber wolves and to some extent bear, fisher, eagles, bobcat and the rare northwestern Wisconsin moose.

A management policy with no direct manipulation may permit ecological succession to change

habitats and reduce those wildlife populations dependent on young forests. On the other hand, protecting mature stands of hemlock and white cedar will benefit wintering deer and support nesting parula warblers. Those scattered old growth white pines may be just what an eagle needs for nesting. A cull yellow birch may be home to a fisher, a barred owl, or a brown bat.

As a whole, wildlife populations in the extensive forest areas of counties such as Florence, Douglas, Iron and Langlade will remain, for the most part, secure. Broad changes in forest habitats may reduce some populations, but management through planning and multiple use forestry can insure habitat and species diversity.

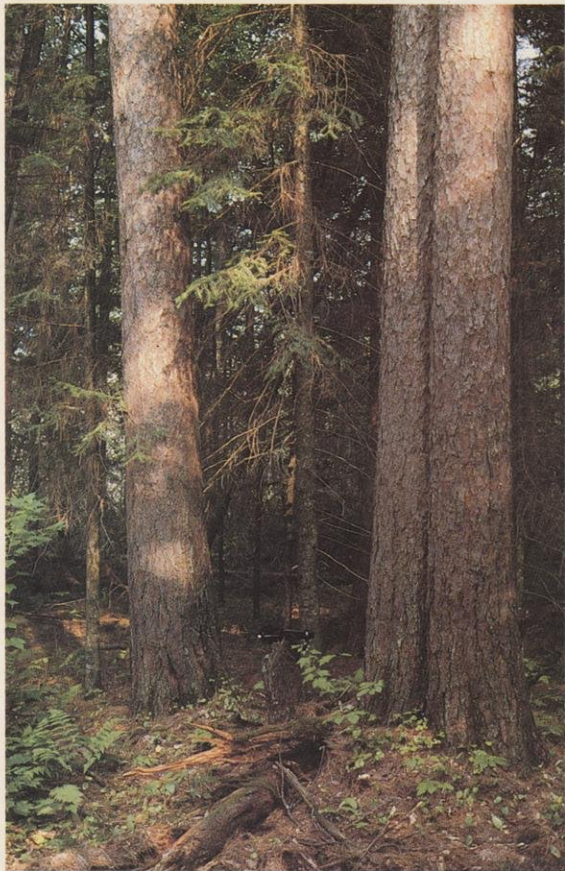
The human population in counties such as Vilas, Oneida, Burnett and Washburn has increased dramatically. For example, Vilas County rose 51% in the last decade while Oneida rose 28%. The reason: lakes. The northern forest has many lakes, but there are also many people and more coming each year. The lakes provide habitat for sensitive water birds such as loons, eagles, great blue herons, black terns and ospreys. Both waterbirds and humans use the same lake; the birds to live and the people to play. Naturally, conflicts occur. The carrying capacity for people and wildlife on northern lakes is not clear, but in general, wildlife has declined.

Humans affect sensitive water birds by direct persecution through illegal shooting or harassment and through unintentional activities. Most people respect wildlife and would not intentionally cause disturbance. However, loons, eagles and other waterbirds can withstand only so many unintentional disturbances by anglers, canoeists, water skiers and photographers before nests are abandoned and populations decline. It is the secondary effects of rapidly increasing human populations that cause the greatest impact to wildlife. In many areas the lakeland landscape is being loved to death.

"Up North," however, does have a buffer that cushions the impact of change and tends to keep the northwoods on the wild side. The cushion is the public lands. They are Wisconsin's crown jewels. Every day, resource specialists from state, national and county agencies work to manage these lands. They manage them for everything from intensive silviculture to undisturbed natural areas, from growing deer and grouse to ospreys and pine martens. These public lands, together with lands managed by the forest industry and water power companies provide the room needed for recreation, forestry and wildlife.

The conservation of wildlife depends on public attitudes which support conservation regulations, habitat protection, environmental standards and wildlife management. The future holds many possibilities. Mining, lake acidification, nuclear waste, national defense systems and other new and as yet unthought-of developments will challenge and change the North. To sustain the North's character as a place set apart from mainstream America by a line of forest will take a far-sighted approach. ☐

Fishers, Blackburnian warblers and flying squirrels do best in mature, mixed conifer hardwoods.
Photo by Robert H. Read



Maintaining aspen through clearcutting benefits deer.
Photo by Chris Mattison

Lakes provide habitat for osprey and other birds such as loons and eagles, but there is a conflict with people.
Photo by Ken Wardius

EARLY JANUARY . . .

Ruffed grouse roost in fluffy, eight inches or more of snow.

Downhill skiing.

MIDDLE JANUARY . . .

Red fox mating.

Deer "yard-up" when snow depth exceeds 18 inches.

LATE JANUARY . . .

Wisconsin's earliest nester, the horned owl begins egg laying.

A North Country Journal

CED VIG, Author
Wisconsin Woodsmoke



Horned owl Photo by Steve Lang



Photo by Ken Wardius

January

If we had no winter, the spring
would not be so pleasant.

Ann Bradstreet

Temp. 10

Precip. 1.04

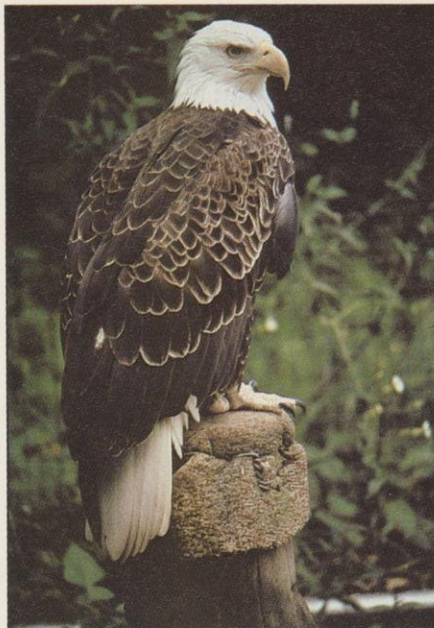
**Mean temperatures and precipitation are listed.
Exact dates vary from year to year. In the spring, they may
vary as much as two weeks.*

EARLY FEBRUARY . . .

Birth of one-quarter pound bear cubs
while mother sleeps.

Ground Hog Day.

Wintering bald eagles feed on fish left
by ice fishermen.



Bald eagle.

Photo by Ben Goldstein

MIDDLE FEBRUARY

Mating season for coyotes and bobcats.

Erratic migration of Bohemian waxwings.

Beaver and muskrat fur becomes prime.

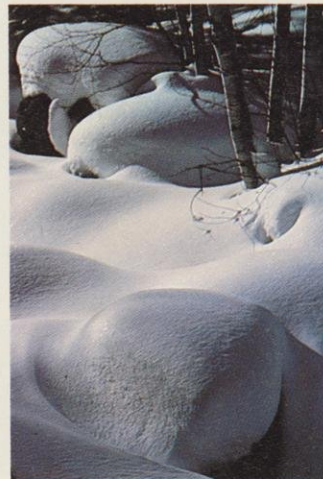


Photo by Chris Mattison



Starling.

Photo by Gordon Kratzat

February

Valentine's Day is February's
love song to a winter-weary
world.

Hal Borland

Temp. 15

Precip. .98

EARLY MARCH . . .

Return of the crows.

Pine grosbeaks, pine siskins, red polls, goldfinches and evening grosbeaks populate bird feeders.

Ravens engage in courtship flights.

Snow fleas make their appearance

Horned owl's complement of two to three eggs have been laid.



Evening grosbeak.

Photo by Gordon Kratzat

Mean temp. 26

Precip. 1.48

MIDDLE MARCH . . .

Horned larks arrive in the fields.

First pussywillows.



Pussywillows.
Photo by Ruth Hine

Force tamarack and red maple twigs.

Mallards move in pairs on Wisconsin River.

Large numbers of goldeneye ducks in river.

Chipmunks mate.

March

A little madness in the spring is wholesome even for the king.

Emily Dickinson

LATE MARCH . . .

Maple sap starts running.

Return of male redwing blackbirds.

First killdeer are seen.

Blue herons arrive at rookery.



Redwing blackbird.

Photo by Steve Lang

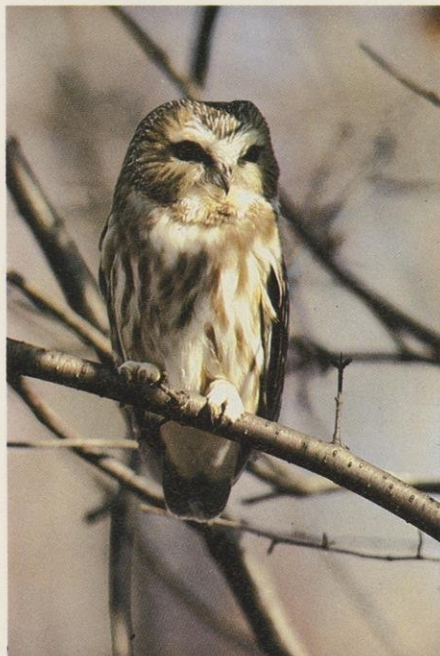
EARLY APRIL . . .

Marsh hawks return to fields and lowlands.

Woodcock and saw whet owls arrive.

Male woodcock engage in courtship flights.

Male goldfinches begin molting.



Saw whet owl.

Photo by Ken Wardius

MIDDLE APRIL . . .

Male and female purple finches arrive.

First purple martin scouts seen.

Large flocks of migrating juncos.

Migration of sandhill cranes.

Sapsuckers and fox sparrows migrate thru area.

Tree swallows arrive, eager to nest.

Muskrats born—four to nine to a litter.

Coyotes and bobcats give birth.

Blue herons are nest-building and incubating eggs.

Maple sap run ends.

Temp. 42

Precip. 2.31



Bloodroot.
Photo by Dean Tvedt

April

And April's in the west wind,
and daffodils.

John Masfield

LATE APRIL . . .



White throated sparrow.
Photo by Steve Lang

White throated sparrows pass through.

Bluebird pairs arrive.

Wood frogs start calling, followed by chorus frogs and spring peepers.

Water temperature 44 degrees.

Myrtle and yellow-rumped warblers seen.

Wild geese fly over in family groups.

Male deer begin growing new antlers.

Ruffed grouse drumming reaches "peak."

Mallards begin nesting.

Ospreys are nest building.

First wildflowers—hepaticas, bloodroots and trailing arbutus.

Bear cubs and mother leave winter den.

Spawning of walleyes and muskellunge.

Suckers and redhorse "running."

EARLY MAY . . .

General fishing season opens.

Red maples in blossom.

Robins start egg laying.

Warbler month—"Butterflies of the bird world."

Loons arrive at lakes from Atlantic seaboard.



Morel.
Photo by Charles Fonaas

Morel mushroom time—"when bracken fern is cuddled up like a fiddlehead".

Woodticks hook rides on trout fishermen.

Mosquitoes plague opening day fishermen.

Ruby-throated hummingbirds arrive from Central America.

Orioles, rose-breasted grosbeaks and indigo buntings at bird feeders.

Scarlet tanagers reported.

Violets and marsh marigolds along the trout streams.

MIDDLE MAY . . .

First clutch of robin eggs hatch.

Ruffed grouse incubating a dozen eggs.

Blue heron eggs have hatched.

Baby woodcocks in woodlands.

Loons incubating eggs, usually two.

Wrens in the backyard—whippoorwills in the woodlands.

Whirring trills of American toad.

Nighthawks arrive.



Photo by Steve Lang

May
When lilacs last in the
dooryard bloomed . . .

Walt Whitman

Trilliums in peak bloom.

Wild cherry trees in blossom.

Lilacs in full blossom.

Mallard and killdeer eggs hatch.

Pink and yellow ladyslippers in blossom.



Pink ladyslipper.

Photo by Richard Jerofke

Mosquito population high.

Temp. 54

Beavers are born.

Precip. 3.32

EARLY JUNE . . .

Fireflies light their lanterns.



Left to right,
swamp laurel,
Labrador tea and
bog rosemary.

Art by Jim McEvoy, 5227 Harbor Court, Madison, WI 53705

Spruce bogs in blossom—swamp laurel, bog rosemary and Labrador tea.

Swallowtail butterflies and green darners abundant.

Skunks give birth to five to 10.

Osprey eggs hatch.

Fawns are born, weighing seven pounds.

Gaywings, yellow clintonias and columbines in blossom.

Female porcupines, porcupettes roaming the countryside.

MIDDLE JUNE . . .

Wild strawberries ripening.

Large night-flying moths—cecropia, polythemus and luna.

Skunks and raccoons feast on turtle eggs.

Last frogs to mate—bullfrogs.

Blackberry and raspberry bushes in blossom.

White and red clover perfume the countryside.



Photo by Dale Lang

June
And what is so rare as a day
in June
then if ever, come perfect days.

James Russell Lowell

LATE JUNE

Abandoned fields, roadsides carpeted with white daisies, yellow and orange hawkweeds.

Temp. 64

Wild roses in bloom.



Wildrose.

Nighthawks brooding young on roof tops.

Baby raccoons appear in backyard.

Days are shortening.

Precip. 4.52

EARLY JULY . . .

Mating season for black bear.
Redwing blackbirds hatch.
Song sparrows feeding baby cowbirds.
Cottontail second litters.
Breeding season for weasels.
Robins have second brood.
Hawk eggs hatch.

Temp. 65

Precip. 3.85



MIDDLE JULY . . .

Fireweed and black-eyed Susans in blossom along roadsides.
Cedar waxwings nesting.
Young woodfrogs hopping about.
Eaglets leave nest—begin traveling in all directions.
"Queen of the North"—white water lilies in blossom.



Cedar waxwing

Photo by Steve Lang

July

Did you ever watch the campfire when the wood has fallen low and the ashes start to whiten round the embers' crimson glow?

From the fireplace of a Minoqua girl's camp

LATE JULY . . .

Blueberry picking at height.
Goldfinches begin nesting—last species to do so.
Monarch butterflies laying eggs on the milkweed.
Bees are buzzin' the basswood tree flowers.
Appearance of baby toads.
Pitcher and sundew plants in blossom.



Goldfinch.

Photo by Steve Lang

EARLY AUGUST . . .

Purple knapweed along the highways.
Indian pipes in blossom.
Gray squirrels have second litter.
Hazelnuts ripening.
Height of raspberry-picking season.
Berry patch loaded with biting deer flies.
Mushroom harvest begins.
Morning dew on spider webs.
Purple martins leave for Brazil.

Temp. 66

Precip. 4.09



Wisconsin Division of Tourism photo

MIDDLE AUGUST . . .

Young snakes emerge from female's body.

Ring billed gull



Photo by Steve Lang

Ring-billed gulls and shorebirds migrating south.

Young ospreys leave the nest.

Early frosts not unusual.

Joe Pye weed, wild cucumbers, sneezeweed, turtle heads, sunflowers in blossom.

Cliff swallows leave.

August

In the first drowsy heat of August moon comes the plumed goldenrod with flaunting train, and lifts her yellow head along the way.

Abbie Frances Judd

LATE AUGUST . . .

Chokecherries and blackberries are ripe.
Goldenrods and purple asters along roadsides.

Deer antlers are in velvet.



Photo by Richard Jerofke

Wild rice harvest begins.

Hornet colonies dispersing—paper nests are huge.

First colored leaves—sumac and red maple.



Photo by Dale Lang

EARLY SEPTEMBER . . .

Mountain ash berries ripen—robins get "tipsy".
Bottle gentians in blossom.
Hummingbirds leave for Central America.
Coots migrate into wild rice fields.



Teal.

Photo by Steve Lang

Flickers—brown-backed woodpeckers migrating.

Temp. 57

Precip. 4.09

MIDDLE SEPTEMBER . . .

Deer getting winter coats.
Bear cubs weigh 40 to 50 pounds.
Blue-winged teal leaving.
Hawk migration in Duluth area.

LATE SEPTEMBER . . .

Ruffed grouse families breaking up.
Monarch butterfly flocks head toward Mexico.
Geese flying south.
Height of the fall colors.

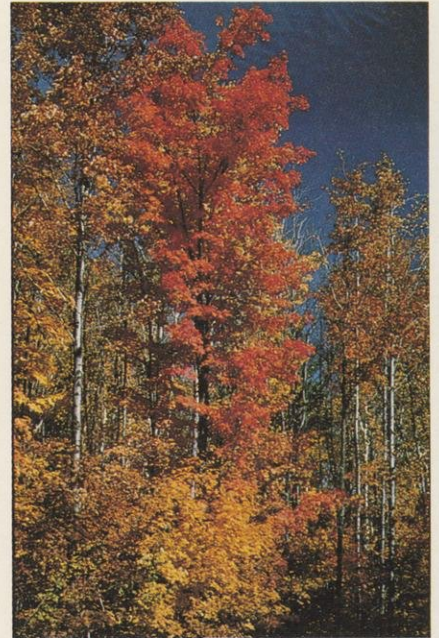


Photo by Dale Lang

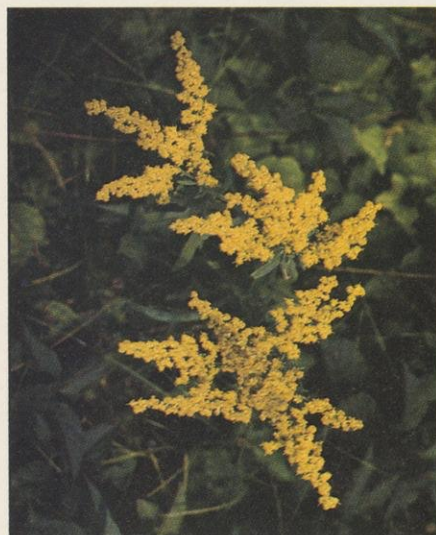
September

The tints of autumn—a mighty
flower garden blossoming
under the
spell of enchanter—frost.

John Greenleaf Whittier

EARLY OCTOBER . . .

Goldenrod month—21 species.
Grouse and duck hunting.
Country garbed in aspen gold.
Muskrats house building.
Beavers repair dam and fill food pantries.
Wild cranberries ripe.
Osprey leave for South America.



Goldenrod.

Photo by Dale Lang

MIDDLE OCTOBER . . .

Tamaracks lose golden needles.
Brook trout on spawning beds.
Hog-fat, woodchucks go into hibernation.
Huge flocks of blackbirds in wild rice fields.



October

O suns and skies and clouds
of June
And flowers of June together
Ye cannot rival for one hour
October's bright blue weather.

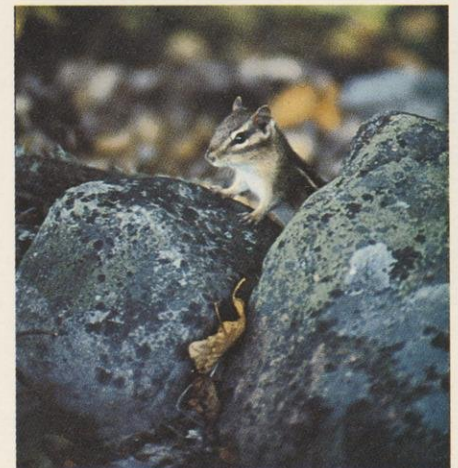
Helen Hunt Jackson

LATE OCTOBER . . .

Blue herons leave.
Frogs, turtles, toads and snakes hibernate.
Deer "scrapes" and "rubs" in woodlands.
Club mosses with golden spore cases.
Chipmunks retire to winter den.
Porcupines mate.
Snowfalls not uncommon.
Winter berries redden in wetlands.

Temp. 48

Precip. 2.32



Chipmunk.

Photo by Dale Lang

EARLY NOVEMBER . . .

Bats leave to roost in caves or fly south.
Backyard bird feeding season begins.
First evening grosbeaks arrive.
Red squirrels boast new winter coats.
Black bear denning.
Whistling swans stop enroute to winter grounds.

Temp. 33

Precip. 1.85



Photo by Ken Wardius

MIDDLE NOVEMBER . . .

Height of the deer rutting season.
Weasels get new white coats.
Snow buntings arrive.
Cross-country skiing on first snow.
90% of Christmas trees harvested.
Tree sparrows arrive.



Tree Sparrow.

Photo by Gordon Kratzat

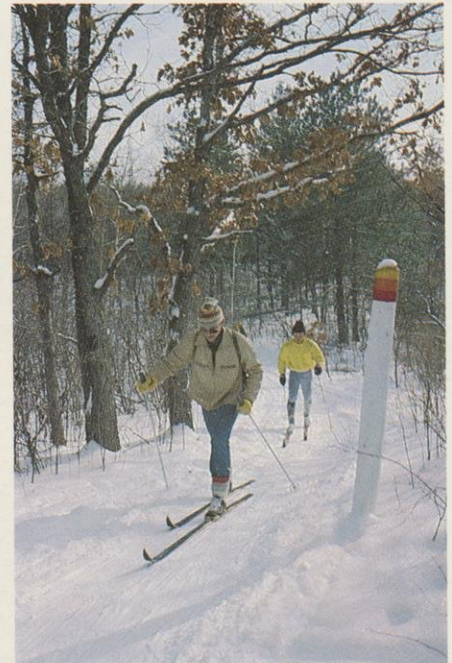
November

God grant the day shall never
be . . . when youth upon
November's shore . . . shall
see the mallards come no
more.

Author unknown

LATE NOVEMBER . . .

Nine day deer hunting season (gun).
Snowy owls arrive from Arctic tundra.
Skating on small lakes and ponds.
Flying squirrels come to bird feeders at 10 p.m.



EARLY DECEMBER . . .

Whitetail bucks begin to drop their antlers.
Snowshoe hares have new white coats.
Boreal chickadees in the balsams.
Ruffed grouse budding in the aspens.
Because of bird feeding, mourning doves remain in the area.

Temp. 18 Precip. 1.07 (12" of snow)



Pheasant.

Photo by Gordon Kratzat



Photo by Chris Mattison

December

The North Country is a siren.
Winter adds a regal touch with
gleaming diamonds in her hair
and ermine billowing from her
shoulders.

Grace Nute

LATE DECEMBER . . .

Shortest day of the year.
Northern shrikes arrive at feeding stations.
Otter dine on fish at water's edge.
Annual Audubon Christmas Bird Count.
Start the yule log in fireplace.



UP THE ANGLERS



ART OEHMCKE

Angling in Wisconsin is a 365 day sport.
Wisconsin Division of Tourism photo

Hindsight is the primary guide I use for my speculation about the future for angling in Wisconsin. The dynamic changes in all phases of outdoor recreation, including fishing, which we witnessed in the past 40 years have given us some clues to the future.

'The past is prologue' so let's take a look at the sport fishery picture 30 or 40 years ago and see how it evolved. Since 81% (12,067) of Wiscon-

sin's 14,904 inland lakes and streams are found in 23 northern counties, roughly north of Highway 29, my comments can be generally identified with that specific area.

The basic requirements for successful sport fishing are information, mobility, access to water and fish, reliable and effective equipment and expertise. The 1940 angler, whom we'll call Augie, would consider himself fortunate to have only a portion of the elements in two or three of these five requirements.

Even the pre-World War II fish manager lacked the inventory of all lakes and streams, and hydrographic maps which are available to all anglers today. Also, I'm fairly certain that Augie would have been mighty happy to have DNR's weekly "How's Fishing" report of conditions all over Wisconsin and the Great Lakes — not to mention all the bulletins naming and pinpointing locations of nearly 17,000 lakes and streams and the species of fish they contain. I wonder if Ernie, the 1983 angler, appreciates those individual lake maps DNR has prepared, showing depths, bottom types and contours, which were unavailable to Augie?

But Augie fared pretty well. He was in competition with only 368,000 other licensed anglers. Today there are 1,300,000. Augie couldn't get to the lakes so fast then either. Fewer paved roads and slower cars. Augie either rented his boats or fished from shore or pier until he bought his first heavy, leaky wood rowboat. In contrast, Ernie now has a balloon-tired, tilt-bed trailer to transport his 16-foot fiberglass boat and 50 horsepower outboard motor, all hauled by a pickup-camper. And these are only starters!

Consider today's 3,130 public boat landings that give access to 823,000 acres of Wisconsin's inland lakes. In 1940 over 65% of the state's lakes had no public access at all.

There's more water today too! The latest list shows 14,000 inland lakes with a total area of 959,474 acres. Quite a bit of this was created by impoundment after the turn of the century, some of which was not around for Augie's use in 1940. Ernie can now fish 33 flowages and reservoirs bigger than 1,000 acres in 17 counties. Eleven of these impoundments, about 42% of the total reservoir area in Wisconsin, were created after 1940. Over 15% (144,530 acres) of Wisconsin's present surface water area is man-made! Ernie spends a lot of his time on these artificial lakes. He knows that the reputation of the Chippewa and Flambeau Flowages for muskellunge fishing is legendary and the big 'fish factories' named Petenwell and Castle Rock have now reached their prime for walleyes and a few other species. The growing army of resident and out-of-state anglers needs this extra space!

Ernie has a greater variety of species to catch in different lakes than Augie had 40 years back. Augie never heard of splake, tiger trout, chinook, coho and Atlantic salmon that now abound in Ernie's inland and Great Lakes.

Augie's "clinker" style wooden rowboat and five horsepower outboard motor is now consid-

ered a collector's item along with his tubular steel casting rod and Bronson bass reel, Bassoreno and Skinner spoon. Ernie's graphite and boron rods, free spool-star drag reels, fish locators, downrigger and assortment of lures, would make Augie envious. But even *without* that sophisticated gear, Augie was a little more successful in getting his limit of walleyes and bass on live bait and fewer artificial lures. Ernie, almost out of necessity, has to have greater expertise to compete with four times as many licensed human predators. In comparison with Augie's day, the present catch record indicates that the total catch rate is down as a result of heavier fishing pressure.

So, what does the future hold?

Although we can't be too specific about any particular species, we can be more precise about aquatic habitat. The physical, chemical and biological changes that take place in lakes and streams in the next 20 years will largely regulate the abundance or deficiency of each species and hence, the quality of future angling.

Fish populations by themselves are fairly easy to manage if two major factors are favorable: *habitat* and *human population*. Practically all problems in managing lakes and streams for better fishing are *man-made*. The investigation of most 'poor fishing' complaints many times discloses that the original problem is the result of action by people who have misunderstood, and mistreated the resource. Most fish and game technicians know more about working out a solution to the current walleye or deer problem than they do about how to handle the causative agent — human beings.

Compared with the 1920s and 30s, the quality of fishing from an aesthetic standpoint, has definitely deteriorated. Its future will depend to a great degree on how the land surrounding a lake or bordering a stream is controlled and who has the final word in regulating activities on the water itself. We are all aware of the conflicts in recreational use of water. Sale of boats, canoes and outboard motors continue high. Water skiing remains popular. Snorkeling and scuba diving are gaining ground. And, last but not least, the sale of fishing licenses in Wisconsin, (more nonresidents fish here than anywhere else), attests to the massive use of our waters by anglers.

Fishing regulations are among the strongest allies of Wisconsin's big game fish. History tells us that other states failed to employ this tool of management and, consequently, lost some of their native fish species.

There is still a tendency to liberalize seasons, size limits, bag limits and methods of fishing (motor trolling, snagging) to make it easier for the angler. But to distribute a limited resource to a growing number of fishing license buyers we should consider becoming more restrictive. Some possibilities are:

New size and bag limits. We hear complaints about the complexity of present rules and regulations but with the continuous growth in the fishing fraternity, I foresee the necessity to apply special rules to specific lakes and geographic

regions. There is also the possibility of season bag limits.

Closed lakes and streams. This may improve the survival of a large number of game fish by eliminating and/or preventing hooking mortality during early stages of fish maturation. It could tend to promote longer term growth to trophy size along with a stockpiling effect on the remaining age groups. It would involve alternate opening and closing of such waters.

Prohibit detrimental fishing methods. If research can demonstrate that some techniques now in use, such as speed trolling, downriggers in inland lakes, gaff hooks and other methods are injurious to fish or habitat, restrictions on them are logical.

Mandatory reporting. I feel that there is an urgent need for more accurate harvest and exploitation information on big game fish. Wisconsin's successful deer management program is largely based on the results of compulsory registration. Currently there is no system in this state for fish managers to obtain data on regional fish harvest on which to base plans for management and stocking. Such a program would have to be limited to one or two problem species in any given period of time. Support from the numerous fishing clubs for this information should not be difficult to obtain. I would not want to see such over-regulation and complex rules that basic enjoyment of fishing is harmed. But if we are to have any baseline from which to measure improvement or decline in harvest, we need something better than sporadic surveys, voluntary creel census data and estimates.

Propagation and stocking of big game fish and trout. Natural reproduction is generally adequate to provide balanced supplies of predator and prey species in most waters. However, for varying reasons, habitat deterioration or angling mortality can impose an artificial condition that leads to depletion or over-exploitation of desirable game fish. At this point, or in cases of natural or controlled fish kills, stocking then becomes necessary. Probably one of the most enduring contributions to the future conservation of certain big game fish species is the hatchery. In the final analysis — when the last spawning area has been over-run by outboard motors, chemicals and landfills, the preservation of some fish species will depend on the accumulated knowledge and production expertise in hatcheries.

Here's a final thought I'd like to leave with everyone who fishes. Angling is now a 365 day sport in Wisconsin — compared to five or six months 40 years ago. *Whenever* you can get out on the water is the *best* time. Here is a sport that is so flexible and diversified that it invites constant daily participation 12 months of the year. Wisconsin fishing is available to you from bank, barge, pier and boat or through the ice. Don't wait for summer. There's always an open season for at least one or more species. To keep it this way, obey the rules and support DNR when greater restrictions appear necessary or license fee increases are required. □



Even under crowded conditions, anglers in the 1940s had less competition than today. Photo courtesy of the Sigurd Olson Environmental Institute

V THE ENVIRONMENT



ACID RAIN

WENDY WEISENSEL,
DNR Public Informa-
tion, Madison

A new study shows that acid rain is falling not only in northern Wisconsin, but throughout the state. The study, which details information collected during the first year of a two year research program, also shows that about 2,000 lakes in the northern third of the state could be damaged by acid rain.

"We have learned a great deal about acid rain in Wisconsin in the last year, and what we are finding is not encouraging," said Tom Sheffy, director of DNR's acid rain research program. "We have confirmed not only that precipitation is more acidic than expected, but that it occurs statewide, with the heaviest doses falling in the southeastern part of the state."

The research program on Wisconsin Acid Deposition will cost \$1.6 million and is being jointly conducted by DNR, the Public Service Commission, eight Wisconsin utilities, the University of Wisconsin, the US Geological Survey and the US Environmental Protection Agency.

It consists of seven projects designed to assess the extent and source of acid rain falling in Wisconsin and define the susceptibility of the state's lakes to damage. DNR is overseeing quality control of the projects to assure data validity.

According to the report, precipitation samples collected in 1982 at 11 sites scattered across Wisconsin showed that the pH of rain and snow ranged from 4.06 up to 5.13. Unpolluted rain usually has a pH near 5.6. The pH scale runs from zero (most acidic) to 14 (most alkaline), with 7

representing a neutral substance, such as distilled water.

The total accumulation of acidic compounds deposited annually, called the loading rate, was heaviest in Walworth County in southeastern Wisconsin. Lakes in the southern half of the state are least likely to experience acid rain damage over the short term because they are well buffered, Sheffy explained.

"Acid loading rates appear to be slightly lower in northern Wisconsin, where the most susceptible lakes are located," Sheffy said. "Although we have not seen damage to fish and other aquatic life in lakes there, it is reasonable to expect damage to occur in the future if the acid loading rate increases. It may be possible that the current loading rate would eventually prove to be excessive for some lakes. The question is how soon, and how severe the damage would be."

Acid rain forms when gaseous air pollutants, particularly sulfur dioxide, combine with water vapor to create acids. These can enter lakes in rain and snow or in runoff from surrounding land. Fish have been unable to survive in sensitive lakes damaged by acid rain in New York, Canada and Scandinavia.

The research report indicated that about 730,000 tons of sulfur dioxide were emitted by Wisconsin industries in 1980. More than 97 percent of it came from 43 individual sources. Coal-fired power plants and paper mills contributed the most.

The study also showed that:

- The 2,000 sensitive lakes in the northern third of the state contain only minute amounts of dissolved minerals (alkalinity) needed to neutralize acidity.

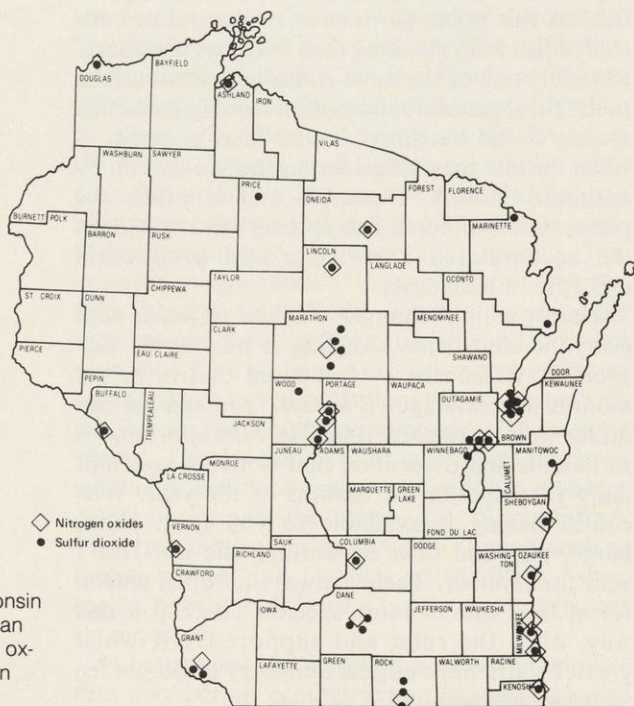
- Round Lake in Douglas County and East Eightmile Lake in Bayfield County where intensive studies were conducted had no acid rain damage.

- Declines in pH and alkalinity have occurred in a few small lakes in north central Wisconsin that were first tested between 1925 and 1941 and again in 1982. Further analysis of these declines is being made. Other northern lakes showed increases in pH and alkalinity, but these conditions have been attributed primarily to the effects of lakeshore development and use of road salt on water chemistry.

- No acid rain damage to aquatic life, including fish, plankton and vegetation, has been verified in Wisconsin lakes studied so far.

- Fish sampled from some low-pH lakes in northern Wisconsin contained high concentrations of the toxic metal mercury. Acidic water dissolves mercury and converts it into a form that aquatic organisms readily accumulate in their tissue.

The study will be completed by late 1984.



Point sources in Wisconsin which emitted more than 1,000 tons of nitrogen oxides or sulfur dioxide in 1980.

Wisconsin is one of 17 states currently being considered as a repository for high level nuclear waste.

The Department of Energy (DOE) is investigating Wisconsin because the granite rock under our Northwoods is famous for geologic stability, an imperative quality for a nuclear waste dump. Many people find the whole idea scary and are working hard to find alternatives. Even if they do, it may not matter. So far the Federal Department of Energy (DOE) has given no assurances that it will consider the unique features of the state or the needs of citizens in making its recommendations.

In 1978 Wisconsin was surprised when word leaked out that in an environmental impact statement DOE had picked Wisconsin as a candidate for the nuclear waste repository. The legislature reacted by establishing a Radioactive Waste Review Board to serve as an advocate in dealings with Washington and to make sure Wisconsin citizens participate in the search for a site.

At a Washington hearing of the House Interior Subcommittee on Energy and Environment last May, State Senator Joe Strohl (D-Racine), chairman of the Radioactive Waste Review Board, characterized Wisconsin's relationships with DOE as "generally confrontational." He told the subcommittee the Board opposes construction of a repository in Wisconsin because of "lack of a proven technology" for safe disposal of high level nuclear waste and because of public opposition. In a referendum last April, Wisconsin voters opposed a nuclear repository in the state by a nine to one margin.

Strohl criticized DOE for failure to provide the state with full and accurate information about its activities regarding Wisconsin; for unwillingness to negotiate a binding written agreement with the state prior to carrying out research here; for failure to respond satisfactorily to major technical deficiencies in DOE program documents and for failure to compensate Wisconsin fully for expenses caused by DOE.

Under current Board policy, DOE cannot ask for interpretation of data or consult with any state

official or employee until a written agreement has been signed. The Board is negotiating the agreement at this time but the fact that an agreement does not exist has not deterred the federal search. DOE will issue a "Final Regional Characterization Report" in October and by February, 1984 a decision will be made as to where to proceed with field work.

According to a DOE schedule, a site will be selected in 1989 and be ready to accept waste by the year 2000.

The repository will be like an underground mine, only larger. It could cover up to 10,000 acres above ground, 2,000 acres below, and be 2,500 to 3,000 feet deep. The state of Wisconsin can veto the site selection and a vote of both houses of Congress would be necessary to override the veto.

Statistically, Wisconsin's chances of being picked for a second repository are one in 17. However, in the long run, the chances may be much higher because Wisconsin meets many of DOE's siting guidelines. Some of the characteristics that make Wisconsin desirable according to DOE:

- Tectonic stability
- Low earthquake activity
- Low hydraulic gradients and low erosion
- Lack of substantial uplift or subsidence during the last one million years
- Low population densities
- Proximity to nuclear generating facilities
- Existence of large amounts of federal lands
- A shallow overburden
- And finally, granite deposits.

Key person appointed for the state's review of DOE studies is DuWayne Gebken, Chief of DNR's Environmental Analysis Section. Gebken is also chairman of the Technical Advisory Council of the Radioactive Waste Review Board.

In an eight hour meeting at Wausau early this year attended by some 600 persons, DOE said it intends to recommend a site for the nation's first repository by 1987. Candidates for this first

A NUCLEAR WASTE DUMP IN THE NORTH? MAYBE!

Genevieve F. Bancroft, DNR Public Information Specialist



In a meeting at Wausau attended by 600 persons most citizens opposed a nuclear waste repository in Wisconsin under any circumstances.
Photo by Bob Halstead

repository include Hanford, Washington; Yucca Mountain, Nevada and salt mines or domes in Louisiana, Texas, Mississippi or Utah. Three exploratory shafts have already been sunk in these locations.

A location in crystalline rock, which could possibly be in Wisconsin will be recommended by 1990. Meantime, a final location study report will be issued next February based on studies underway now.

Most citizens attending the meeting opposed a Wisconsin repository under any circumstances. Another viewpoint said cooperation should be withheld until DOE demonstrates a proven technology for safe geological disposal. A third proposal is that there be no cooperation until the federal government drastically reduces the amount of radioactive waste being generated by both nuclear power plants and nuclear weapons.

Concerns expressed included groundwater contamination, the potential impact on tourism and dairying, transportation accidents, possible flaws in technology for geological disposal, fear that a reprocessing plant for spent fuel might be located near the repository and a general distrust of DOE because of its responsibilities in promoting nuclear power and producing weapons while at the same time being responsible for nuclear waste disposal.

To give some idea of the extent of the problem, there are some 600 tons of spent nuclear fuel already in existence and 70 to 80-million gallons of radioactive military waste, all waiting for disposal. To date no permanent site has been found.

For more information, write or call Patrick Walsh-Executive Director, Radioactive Waste Review Board, 7th floor, GEF 2, 101 S. Webster, Madison, WI 53702. (608) 266-0597.

SOME WATERS WASH, SOME DON'T

DAN RYAN, DNR
Water Resources
Specialist, Spooner
PAT
SCHRAUFNAGEL,
Water Quality
Specialist, Madison

Early white visitors to Wisconsin found Indians using northern waters primarily for transportation and food gathering. Fish and wild rice provided a nutritious staple to these native peoples.

Large riverways ran clear like the small streams which fed them. But within 50 years many of these waterways would prove unfit for transportation let alone fish and rice.

As Europeans and other nationalities filled eastern cities, a demand for raw products for building and industry came with them. Sawmills sprang up along the major river systems. Other minor streams were dammed. Flowages created by the damming allowed water to flow when needed for sending logs downstream to the mills.

With the timber resource, industries and settlements were built. Everyone used the once pristine rivers as an open sewer. Pollution control laws were generally specific to problems, late in being enacted and loosely enforced.

The 1862 Slaughterhouse Law made it unlawful to deposit carcasses and offal "in or upon the bank of any such river, stream or creek which shall flow through any city or incorporated village in this state." Nearly 100 years lapsed until 1961 when the law was extended to include "in or on the bank of a watercourse." Apparently discharges on the downstream side of municipalities or into lakes were acceptable in the interim period.

Lumbering wastes were handled somewhat similarly. An 1880 law prohibited their discharge into the Wisconsin River and its tributaries but exempted some streams and also "sawdust and plane mill shavings." The lumber refuse ban combined with other deleterious substances and fish offal provisions are still present in tightened, revised form as Section 29.29(3) of the Statutes.

An 1885 law extended the waterborne waste ban to include offal from cleaning of fish. The law went on to add, "Any fisherman coming to the shore with fish in his boat, dressed, and having no offal in said boat, shall be deemed guilty of a prima facie violation of this section."

Enforcement, however, may not have been diligently pursued. Not too many years ago it was common to see gulls, following a fishing boat's wake, periodically swooping down to pick up floating solids from the water's surface.

From the beginning of the 20th century up to about 1965 some of northern Wisconsin's finest waterways were nearly destroyed.

-In 1925 an estimated 25 to 30 tons of fish died below the City of Park Falls on the Flambeau River. A sulfite paper mill was cited as the cause.

-Floating mats of semi-digested paper fibers literally covered the surface of the Wisconsin River above Hat Rapids. Periodically, trapped gases in the bottom sludges belched gobs of black gunk to the surface.

-Slime growths of filamentous fungi were profuse across shallow, rapid stream stretches below Hat Rapids Dam, on the Oconto River and upstream from the Machikanee Flowage.

-In the summer of 1926 the dissolved oxygen content of the Fox River hovered near 0.0 for six straight weeks.

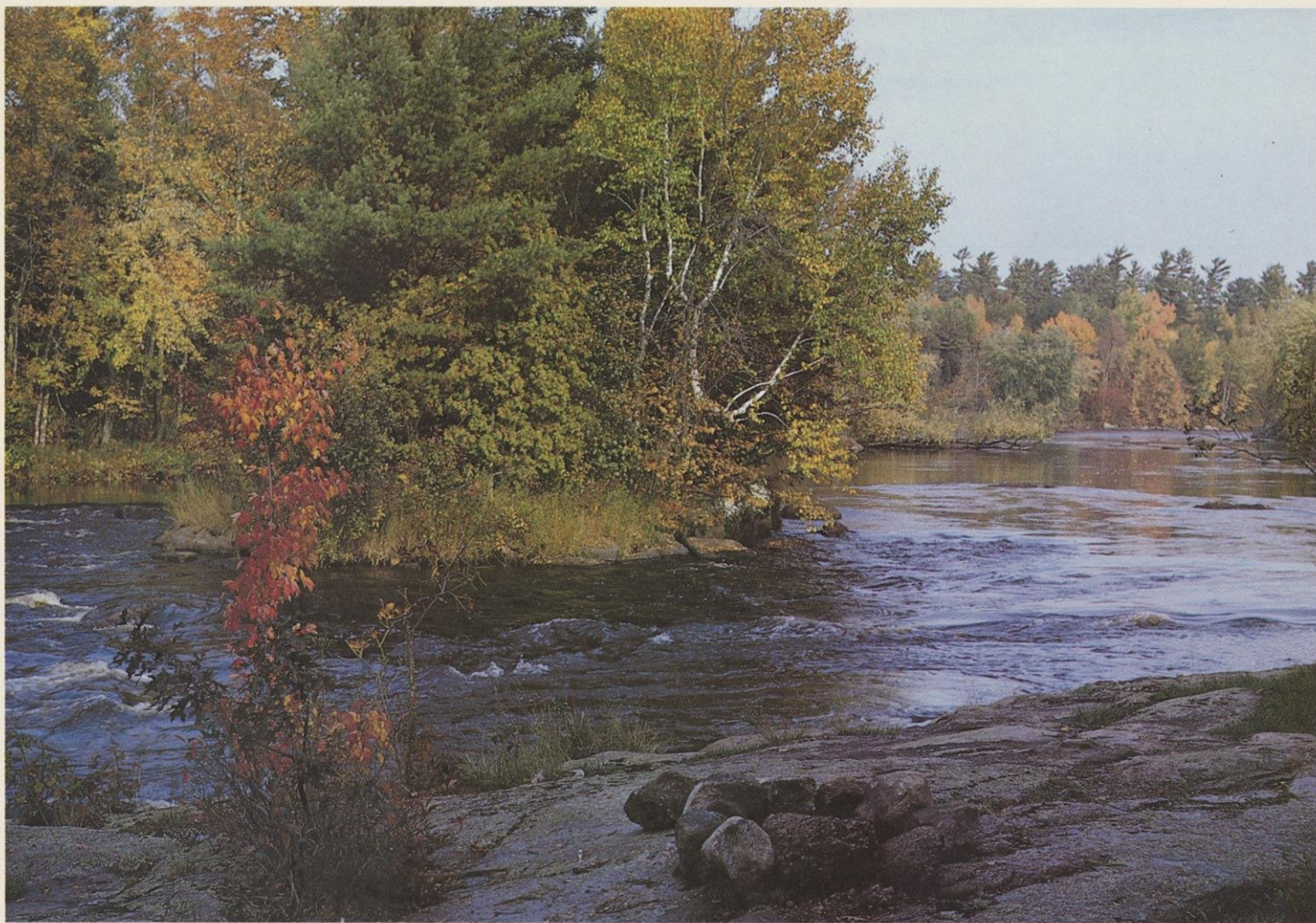
-As early as 1910 water had to be disinfected and filtered to prevent deaths from typhoid and enteritis along the major waterways.

-As late as 1964 a survey found zero dissolved oxygen at the Peavey dam near Ladysmith and at the former Port Arthur dam six miles downstream. This is about 80 miles downstream from the waste source at Park Falls.

-Even later, in 1976, critical dissolved oxygen levels were found under the ice in Superior Harbor.

Such abuse could not continue forever. Tough environmental laws of the '60s and '70s along with federal and state grant programs resulted in significant water quality success stories. Breakthroughs in pulp and paper wastewater technology beginning in the late 1950s have reduced mill loadings by up to 90%.

All of the major cities and industries now have primary, secondary and even tertiary wastewater treatment. Work on improving the systems continues and the fishery has responded.



"Fifteen years ago I'd never heard of walleyes in here," said George Hudson, Jr., "But, two years ago I got a 30-inch fish and we've been catching big ones ever since." Hudson has a recreation cabin 15 miles below Rhinelander on the Wisconsin River. He added that the taste of the fish is improving.

The St. Louis River and Superior Harbor area have also rebounded. Today it is a prime spawning ground for walleye and northern. Angling has revived to become one of the main recreational pursuits.

On the Flambeau, a state imposed water quality variance was recently lifted. The river is beginning to meet state and federal standards.

Last year the City of Superior won the "Best in State Award" presented by the Environmental Protection Agency. The award goes to a Wisconsin city with the finest wastewater treatment operation. In 1983 the award will go to Ashland.

While river systems were getting the raw end of the sewage deal, lakes were treated differently. Some were used as bark and log washing ponds by sawmills but fortunately few municipalities used them for waste discharges. However, a more subtle form of pollution has been working on the lakes. Described by a fancy term called "eutrophication," the process results in the gradual decline of water quality.

Nearly every medium to large size lake in northern Wisconsin has seasonal and residential homes and every homeowner has an impact on the lake. It may be through beach construction, a malfunctioning septic system, direct sewage discharge, home building and garden runoff, or herbicide and pesticide runoff.

Some lakes with fragile water quality respond quickly. Usually the first sign of problems are algae blooms followed by a reduction in clarity, fewer fish, odors and floating masses of decaying vegetation.

While rivers cleanse themselves when discharges are eliminated, lakes respond differently. For them, some effects of eutrophication or accumulation of nutrients are irreversible. Recognizing these problems, many lake property owners have formed organizations to preserve and protect water quality. Identifying the source of pollutants and implementing a management system to eliminate or control them is the prime concern of lake management.

Overall, the future of northern Wisconsin's water quality looks bright, but surveillance of its chemical and biological makeup must continue. Heavier use prompted by population increases will make surveillance all the more necessary to make certain that there can be a quick response when danger signals.

Overall, the future of northern Wisconsin's water quality looks bright. Surveillance and quick reaction when danger signals will keep it that way.



AIR

BILL SMITH, DNR Air Management Engineer, Spooner

Smog, photochemical oxidants, urban haze and air pollution alerts are just a few words that describe air pollution problems familiar to people living in highly developed urban areas. The clear blue sky and fresh air of northern Wisconsin make it difficult to relate air pollution to the "Northwoods." Actually blue sky and fresh air give an accurate impression, however, a detailed air quality analysis reveals a few isolated problems.

The "data" you receive through your eyes and nose is substantiated by sophisticated ambient air monitoring equipment. Pollution is made up of a number of individual contaminants. Sulfur dioxide, carbon monoxide, suspended particulate matter, nitrogen oxides and ozone are the more common "criteria" air pollutants for which Federal standards are established.

Throughout the North DNR air monitors record the level of these different pollutants. These are then measured against Federal standards established to protect human health, welfare and quality of life. In a few locations in northern Wisconsin, the "criteria" pollutants accumulate in concentrations that exceed allowable standards.

During the 1970's, air monitoring identified a few isolated areas affected by high levels of sulfur dioxide—Brokaw, Park Falls, and Rhinelander.

Sulfur dioxide is a heavy, colorless gas that combines readily with water to form corrosive and irritating liquids. It is produced by burning sulfur-containing fossil fuels such as coal or oil. Industrial processes in papermaking and crude oil refining also produce sulfur dioxide in northern Wisconsin. Air quality in these isolated pockets is gradually improved through emission controls at large sources.

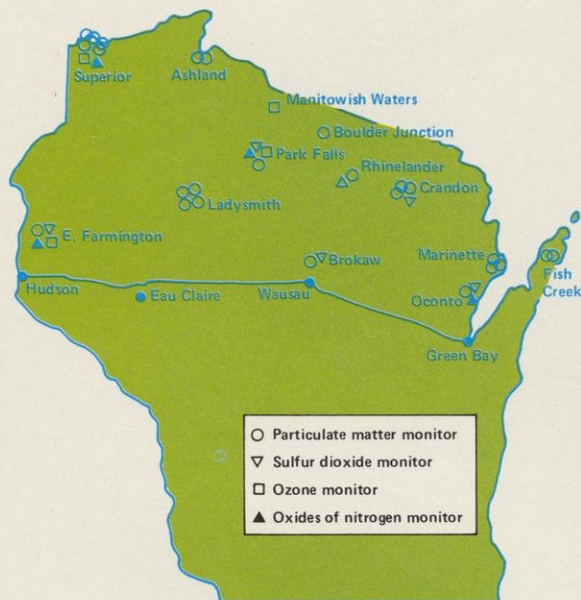
Park Falls is a case study of trends in reducing sulfur dioxide emissions near isolated sources in northern Wisconsin. Attracted by reports of vegetation damage in downtown Park Falls, air monitoring vans recorded excessive levels in 1979 and 1980. The pollution was traced to papermaking processes at the Flambeau Paper Corporation Mill. The corporation and DNR then negotiated a compliance program to reduce sulfur dioxide levels in Park Falls.

Flambeau converted from high sulfur coal and fuel oil to a greater use of wood residue and low sulfur coal/oil fuels, thereby reducing sulfur emissions. A sulfur dioxide scrubber has been installed in the sulfite pulping mill which reduced emissions by 90% and more.

Similar monitoring and cleanup programs are also underway in Brokaw and Rhinelander.

Excess levels of suspended particulate matter are also present in areas of the north. Particulates

Location of DNR air monitoring stations in the North.



are a collection of tiny airborne particles from natural sources (bacteria, fungi, pollens) and manmade emissions, including open burning, home heating, power generation, industrial processes and motor vehicles. Suspended particulates are monitored at several sites in northern Wisconsin.

Although most air monitors record very low levels, the Superior and Brokaw areas exceed acceptable Federal standards.

Bulk materials transfer and storage in the Superior harbor have regularly exceeded particulate standards set to protect human welfare. High levels have also been detected in Brokaw. Particulate deposits damage personal property, reduce visibility and otherwise effect the quality of life in these areas. To improve things in Superior, operations that involve grain shipping, taconite transfer, coal storage and cement distribution have installed pollution control devices and instituted programs to reduce particulate emissions. In Brokaw, rock processing sources are now controlled more effectively.

Particulate emissions in the north have been greatly reduced since the late 1960's. However, additional controls may be necessary in the future to keep suspended particulates at a level that protects the quality of life in the north.

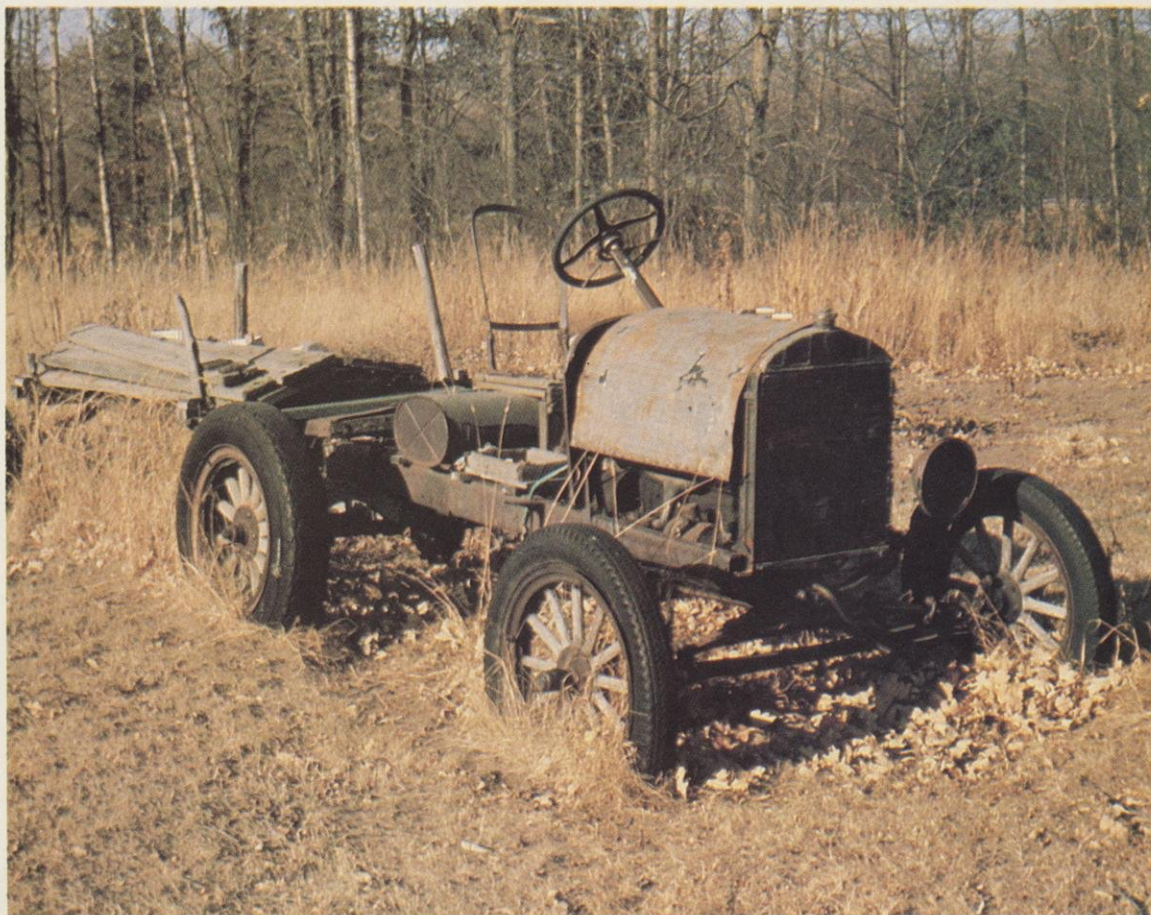
Carbon monoxide is a colorless, odorless, tasteless gas produced by incomplete combustion. High levels are usually found in congested traffic areas of large cities. Although individuals can be affected by very localized concentrations (heavy smoking or idling a car in a confined space), northern Wisconsin has no areas where carbon monoxide is a problem.

Oxides of nitrogen are not a significant air pollution problem in northern Wisconsin. They are produced by motor vehicles, power production and other high temperature fuel combustion. Nitrogen oxides are associated with highly developed urban areas.

Overall the North rates "excellent" in air quality. Where isolated pollution exists, air monitoring by DNR measures its extent and corrective action is taken.

There are no ozone problems in the Northwoods.
Photo by Dean Tvedt

Makeshift equipment was abandoned when settlers were relocated.
Photo by Eleanor Jones



RESETTLEMENT AND RURAL ZONING

Northern Wisconsin
1930-1940

MARC KENNEDY,
Bureau of Water
Regulation and
Zoning

During the 1930s, twenty-six north and central Wisconsin counties enacted rural zoning ordinances — the first comprehensive effort in the US to exclusively designate unincorporated land for agriculture, forestry or recreation. The state legislature allowed county boards to determine land use, and gave them power to enforce these ordinances. Counties could then prohibit certain activities deemed harmful to public interests within specifically-mapped areas, such as farming in a forest area, or logging in a recreational zone. This also included moving homesteaders from poor farmland to ground that offered them a better chance to succeed.

Many counties under the Northern Wisconsin Settler Relocation Project used federal funds from the Resettlement Administration to purchase land

from isolated farmers. The farmers had arrived years earlier and settled in areas subsequently zoned for either recreation or forestry. The project helped these families relocate on more fertile and populous land.

These scattered families faced hard times even before the agricultural depression began in 1920. They had made little headway on this cutover, submarginal ground — less suited for crops than for the timber which had stood in abundance until the lumberjacks came.

The counties were maintaining roads and rural schools, which they could scarcely afford. Isolated farms posed constant forest fire hazards that also drained public resources. Even if these folks could pay taxes, the money would not begin to cover the counties' expenses. But, this was a moot point — in some counties as many as 80% of the resettled families had been on public assistance.

Northern Wisconsin was rugged pioneer land where people traditionally fought efforts to regulate private initiative. But by 1940, two dozen county zoning boards prohibited future agricultural development on five million acres, with virtually unanimous local support.

Just before the turn of the century, many had envisioned northern Wisconsin as a vast new agricultural frontier once the loggers finished; some even dreamed of a "second dairy empire." Though this miniature Manifest Destiny was never realized, it was not from lack of effort. Lumber and land companies, county and state government and even University of Wisconsin

*A story of the early thirties featured a rag-clothed man sitting at the side of a highway. A by-passing tourist stopped his car and offered the man a lift. The fellow thanked him, but refused the ride, saying: "I ain't got no place to go, anyhow." The tourist felt compassion for the straggler, got out of his car and tried to console the unfortunate by reference to the better times around the corner. The man answered: "Oh, don't feel sorry for me. I'm not so bad off; at least I don't own any land around here. . . ."**

*Anecdote recounted by S.A. Wilde, emeritus professor of Soil Science and Forestry, in the University of Wisconsin-Extension publication "Woodlands of Wisconsin."

Extension foresaw the “plow following the ax” in the northern counties, and did their utmost to fulfill their own prophecy.

The state also wanted to attract settlers, and sought to dispel rumors of barren land with bad soil, plagued by rampant forest fires. In 1895, the UW School of Agriculture was directed to produce a “homeseekers handbook” to induce settlers to farm northern Wisconsin. This handbook reflected the optimism concerning the northern counties’ agricultural potential and, at one point, pronounced “there is little land in Wisconsin wholly unfit for cultivation.”

A special forest agent who surveyed 17 northern counties in 1897, however, told a different story. He found 40% of this area’s soil unsuited for agriculture: several million acres were partially forested, and three million more totally denuded due to overharvesting timber followed by recurrent fires. The agent regarded 80% of the latter as unproductive wasteland that would remain so for quite some time.

As the timber disappeared, so did the mills and camps and, in turn, the markets and jobs the advertisements promised. Despite the state, county and land companies’ continued efforts to colonize the North, immigrant numbers dwindled, and then about 1910, stopped. The conversion from cutover to farmland, however, did continue.

By 1925, over 40 years of logging had left 17 northern counties with only 1.5 million acres of timber. Yet, though colonization was promoted almost as long, settlers had farmed only six percent of the total area. At this rate, it would take 400 years to cultivate all the land. Clearly, colonization was not the answer.

By the time the stock market crashed in 1929, northern Wisconsin citizens had already begun to seek alternatives to improve their bleak economic

situation.

County board members began to realize comprehensive rural zoning could help rectify past land-use mistakes and help manage land and public funds better. They found regulating land and preventing non-conforming activities could save taxpayers money and conserve resources. For example, since secluded homesteaders scattered throughout timberland were often blamed for starting forest fires, the counties zoned these areas exclusively as forests and restricted agriculture. This action indeed helped eradicate the fire threat.

But resettling these 500 or so homesteads did more than prevent fires. Buying out and relocating them cost less than the amount counties spent *each year* to maintain roads, schools, emergency, medical and other public services these people required. Barns and houses were demolished to ensure no one would occupy them later. This sometimes yielded sufficient salvage material to cover resettlement costs.

The resettlement and zoning ordinances were accepted because they offered practical alternatives to wasteful and costly methods, and because local citizens helped create them. County zoning officials repeatedly held meetings to iron out differences, debate problems and assess community opinion.

Onieda County adopted the first rural zoning ordinance in 1933. During one of the preliminary meetings, town of Lynne Chairman Frank Saari spoke of a man who had settled a remote area of the county several years back. After two years, Saari explained, the newcomer persuaded the county board to build a road to his property, which cost \$1,200. The man used the new road once — to move out of the county.

Saari spoke for many when he told his county board, “Your program is OK except for one thing — it is 25 years too late!”



Isolated stump farms that were agricultural failures brought little income to pay for services. This economic bind helped pass rural zoning ordinances.

Photo courtesy of the Wisconsin State Historical Society

VI TREES



WISCONSIN'S CHANGING FORESTS



*RALPH MORTIER,
Retired DNR Forester,
Spooner*



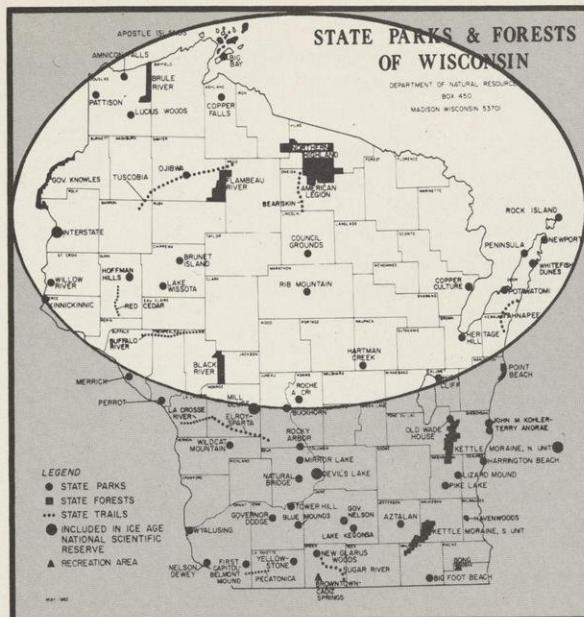
In the early 1800s white pine like this covered about 18-million acres in the northern two-thirds of Wisconsin. This forest was never static or predictable but loggers compressed 1,000 years of natural catastrophes into a 100 year time span.

There is a popular romantic misconception that prior to the intrusion of the white man, the forests of Northern Wisconsin were an elemental part of the topography of the earth.

One of the features of this misconception is the belief that the encroachment of civilization destroyed the forests. This idea holds that without logging, without the penetration of the railroads, land clearing and settlement activities that began slightly before the beginning of the last century,

the forests would have remained as they are now perceived to have been then. Solid stands of large trees, this misconception says, would still cover the entire North, with individual trees gradually and imperceptibly dying of old age to be miraculously replaced by new trees of equal size. In other words, human intervention has been the only cause for change.

This view is not consistent with knowledge of the factors that influence the complex community



Northern state parks and forests

Wisconsin's first park was established in 1878. Called the "State Park," it contained 50,000 acres in Iron and Vilas Counties and was held intact until 1897 when the Legislature sold portions to various lumber companies. This area was later repurchased as a forest reserve and is now part of the Northern Highland and American Legion State Forests.

In 1895, a law authorized purchase of 250 acres in the St. Croix River region. Minnesota set aside a contiguous area on the opposite side of the river and these became Interstate Park. This marked the beginning of Wisconsin's "modern" park program.

It has evolved into one of the nation's broadest and most intricate park and forest systems. Today there are 70 state parks, forests, trails and recreation areas. Thirty of them are in the North.

of very small to very large plants and animals that make up a forest. It does not consider the effect of such things as the physical and chemical properties of the soil, climate, the periodic occurrence of natural catastrophes such as forest fires, devastating winds and the depredations of destructive insects and diseases. The forests of the North were not static and predictable.

Natural forestation begins with natural catastrophe. The particular communities of trees and lesser plants and animals that ultimately develop on catastrophically deforested sites are broadly regulated by the soil.

A given acre of a denuded site is initially occupied by "pioneer" species suited to the soil and to the fully exposed conditions of the site. These pioneers characteristically cannot reproduce and grow in their own shade and are soon replaced by species having these abilities, which in turn are replaced by others even better suited to the constantly changing environment. This process of succession continues until another catastrophe occurs or until a theoretically permanent but factually tenuous, self-perpetuating community known as a "climax forest" results.

The pre-settlement forest represented many stages in this cyclical process.

Certainly its dominant feature was white pine. This species in the early 1800s is estimated to have occurred on 18-million acres in roughly the Northern two-thirds of the state.

There were also many acres of mixed hardwood and hemlock stands of large saw timber size.

The virgin forest did not, however, consist entirely of old growth pine, hardwood and hemlock. The original government land survey was conducted mainly in the 1850s. The surveyors in addition to establishing the survey corners made notes concerning the forest cover. These notes contain occasional references to "dense young aspen" and "hazel and alder brush" as the main forest cover and refer to "aspen," "hardwood" or "brush" understory even where the overstory is described as "dense pine." The three dry sandy

Name	Acres	Dominant Features
Amnicon Falls	825	Scenic waterfall
Big Bay	2,204	Sandy beach, rugged shoreline
Brunet Island	1,032	River island park
Copper Culture	42	Indian burial grounds
Copper Falls	2,394	Rivers, canyons, waterfalls
Council Grounds	322	River scenery
Heritage Hill	40	Living history museum
Interstate	1,325	River gorge
Kinnickinnic	1,034	River scenery
Lake Wissota	1,044	Lake scenery
Lucius Woods	41	Large pine timber, lake scenery
Newport	2,186	Lake scenery
Ojibwa	366	River scenery
Pattison	1,370	Highest waterfall in state
Peninsula	3,763	Lake scenery, bluffs
Potawatomi	1,126	Limestone bluffs
Rib Mountain	860	Scenic overlooks, ski hill
Rock Island	783	Island scenery
Whitefish Dunes	766	Lake scenery
Willow River	2,600	River scenes, 3 dams
Hoffman Hills Recreation Area	366	Rolling woodlands
Brule River State Forest	38,726	Fishing and canoeing
Flambeau River State Forest	87,744	Outstanding canoeing river
Governor Knowles State Forest	15,286	River scenery
No. Highland-American Leg. St. For.	215,282	Scenic forests and lakes
Ahnapee Trail	208	Farmlands
Bearskin Trail	463	Lakes and woods
Buffalo River Trail	502	Buffalo River and farms
Red Cedar Trail	436	Red Cedar River
Tuscobia Trail	835	Forests and streams

soil areas: one in the Northwest, one in the North Central and one in the Northeastern extremities of the state are described as "pine barrens" and the trees most frequently used to witness the survey corners are "black pine" (jackpine) and "yellow pine" (red or norway pine).

This was the forest on "the day before yesterday," dynamic, not static, destined for change, with or without human intervention.

The prevailing public expectation of the time was that the settlement of Northern Wisconsin would follow the pattern established by the westward move of civilization. This consisted of logging, land clearing and the establishment of communities based on an agricultural economy.

The forests were viewed variously as an impediment to this progress and as an inexhaustible resource to be mined as soon as possible.

The history of the events that followed is well documented and warrants no detailed repetition.

The end result was that by 1930 over one hundred billion board feet of pine had gone down the rivers to build the cities of the Midwest. Additional billions of board feet of hardwoods were later railroad logged to furnish them.

As a general rule, fire of deliberate, accidental or natural origin followed logging. The "master plan" for a northern agricultural mecca required land clearing. Since fire consumed the residual left after logging it was viewed as a blessing to be stopped only if or when it threatened the life or

property of the settlers or the towns that grew and for a short time prospered as a result of the logging. Fire in the pre-logging era burned slowly (at least at times) through the existing pine stands, top-killing invading hardwoods and providing an ideal seed bed for pine seed released in the fall. Fire was thus an important factor in maintaining the white pine and Norway pine that ultimately fell to Paul Bunyan's axe.

The post-logging fires, fueled by heavy accumulations of slash, were very hot. They destroyed existing pine and hardwood reproduction and most of the second growth white and Norway pine that could have provided seed for future crops.

Much of the second growth hardwood was killed or so badly fire-scarred that its future quality was destroyed.

The impact of man had been to intensify and compress a thousand years of natural catastrophes into a 100 year time span.

Today's forests are a mirror reflection of the development of public and private awareness of the multiple values that forests provide and the evolution of current forest land policy.

Although organized forest fire protection began around 1905, fire continued to be a dominant influence through the first half of the 1930's. From 1930 to 1936 approximately two million acres of forest land burned. The aftermath of this series of fire years was the reproduction of a vast acreage of pioneer tree species (aspen and jackpine) which are currently 46 to 53 years old and approaching the time at which they must be harvested. State forest nurseries began producing planting stock in 1910, beginning the effort to restore trees to lands denuded by fires and ill advised land clearing.

The peak planting period on public lands occurred in the late 1930s and early 1940s. Much of this early planting was jackpine which is now 45 to 50 years old and approaching the time at which it will be ready for harvest.

The peak planting period on private lands occurred in the 1950s. It was mainly a result of federal cost sharing in an effort to further convert submarginal or surplus agricultural lands to soil conserving forestry uses. Most of this was red pine which is at an age at which it should be thinned to speed its development into valuable saw timber.

Much of the hardwood of saw timber size still is of poor quality because of previous fires. A very large acreage of hardwood stands of pole size show excellent potential for sustained annual harvest of high quality forest products.

The forests of today are still recovering from the abuses of yesterday and will not reach their full productive potential for many years. But people now at least have the knowledge from experience and research to make and keep them productive. They know that forests are good not only for wood products but also for water protection, for wildlife habitat and for a wide variety of recreational and cultural uses. Hopefully the conviction about these values will continue a long time.

From 1930 until 1936 two million acres of forest land burned. The aftermath was a vast acreage of pioneer aspen and jackpine which is currently about 50 years old and ready for harvest.
Photo by Dean Tvedt



The Forest Crop Law

Wisconsin's Forest Crop Law was enacted in 1927 to encourage landowners to grow timber as a continuing crop. The regular taxation system which taxed land and timber annually encouraged premature cutting and discouraged long term investment in forestry. The Forest Crop Law places an annual tax, or acreage share on the land, while the value of the timber is taxed once when it is harvested. In effect it defers the taxes on the timber crop until there is an income to the owner. Currently there are over 1.3 million acres in 67 counties enrolled in the program.

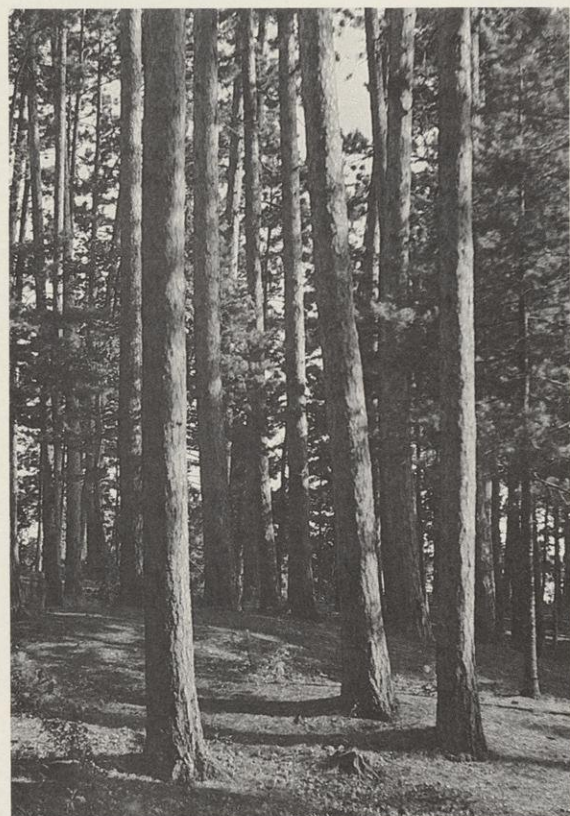


1 Timber sales amounted to \$4.7 million on county forests in 1980.

UW-Madison Ag-Journalism photo

2 Pine plantations like this grew from reforestation on public lands which reached its peak in the late 1930s.

Photo by Staber Reese



Wisconsin's county forests

Under Wisconsin's County Forest Program, counties and the state cooperate administratively to manage just over 2-1/4 million acres.

This acreage accounts for over one-half of all the publicly owned land in the state. It is located in 28 northern and central counties. The largest forest belongs to Douglas County with 265,000 acres.

Acquisition came largely from tax deeds taken by the counties in the 1920s and 1930s.

Under this "partnership" counties provide local administration through County Board Forestry Committees and Administrators. DNR provides management assistance.

Emphasis is on maximum public benefit through multiple use management.

The state pays 10¢ per acre annually to the counties in the program for forestry working capital as a noninterest bearing loan and another 20¢ per acre annually to the towns involved as a grant in lieu of taxes. Counties make additional appropriations from local sources for development and management of their forest.

Counties share revenue from timber sales. Ten percent goes to towns and 20% to the state as reimbursement for the 10¢ per acre loan. In 1980, timber sales amounted to about \$4.7 million.

There are about 100 major developed recreational areas on county forests.

In addition 145 boat landings and almost 100 other formally developed outdoor areas including scenic vistas, waysides, and hunter parking lots are provided. Also, 2,647 miles of trails are maintained for public use including 1,691 miles of snowmobile trail, 467 miles of hunter walking trails and 491 miles of multiple use trails.



The Hemlock Cathedral at Butternut Lake on the Nicolet National Forest. The two US forests in northern Wisconsin, Chequamegon and Nicolet, tallied 1.8 million visitor days last year. Foresters say the potential is high for more great stands of trees like these. US Forest Service photo

NATIONAL FORESTS: BLOSSOM FROM BLIGHT



LARRY VAN GOETHEM, *Free Lance Writer*
White Lake, WI

Wisconsin's two national forests, the Nicolet and the Chequamegon, are celebrating 50 year anniversaries in 1983.

In a basement office of the Nicolet's Rhinelander headquarters, Forest Service biologists, engineers, economists and foresters sit for hours at a plain table, peering at computer readouts.

They're looking at 200 years of national forest — the 50 years since 1933 and the next 150. Working in their third year under mandate from the federal Resource Planning Act, the staffers have locked the Nicolet's 655,000 federally-owned acres into a data base. All those acres sprawling across six counties are so many backyards and neighborhoods — known down to the age and quality of trees and species, location of picnic tables and nesting sites of eagles and osprey.

Out of such information the Forest Service will project a future of the Nicolet. The first planning "horizon" is 1986 to '95, then 2005, and ultimately 150 years, or 15 generations.

The two national forests take a big bite out of Wisconsin. The Nicolet's 652,001 acres and the Chequamegon's 839,565 acres add up to 4.3% of Wisconsin's 34,858,000 acres. But the forests represent 9.1% of the state's 14.9 million forested acres.

Forest Service planners expect the forests to approach the break-even point in about 1996 as

40 to 50 year old hardwood trees reach maturity.

None of the forest staffers are holding their ears to the trees, listening like Iowa farmers to hear July corn grow, but they're proudly measuring about 5 1/2% annual growth. That's an explosive potential for timber production. The Nicolet already contains an estimated billion cubic feet.

Unlike the western forests which were created out of vast wilderness public domain, the 50 eastern forests evolved after the Weeks Act of 1911 put the federal government into land rehabilitation in a big way. The eastern forests include 24-million acres in 23 states obtained under the Forest Reserve Law that permitted purchase of cut-over, burned and farmed out land.

This wasn't just a forestry act. With the advent in 1933 of the New Deal's Civilian Conservation Corps and efforts to prop up local economies, the forests became social programs. It was no accident that the Wisconsin forests were established in the depth of the depression.

As a 1937 report written by John R. Camp of the Division of Land Planning, makes clear, "three waves of economic exploitation" had left the region in a state of near collapse. Camp said mining, logging and failed farming "all have produced unemployment and emigration, stranded and decadent communities, high relief rates and attempts at farming by loggers and mill workers."

"All of this," said Camp in a survey of the human side of the national forest, "resulting in widespread farm abandonment by those who are able to leave, subsistence living for those who stay, poaching and game law violation, isolation, bankrupt local governments, rural poverty."

A report on the Peshtigo District shows only six of some 1,940 residents on relief from 1900 to 1909; 31 out of a population of 5,311 from 1920 to 1929; and (suddenly) 1,450 of 5,551 persons on relief after 1930.

It was an unkind fate that made the loggers run out of big trees as the Great Depression struck.

Prospects for the mill towns were considered dismal; if they weren't dead they soon would be, said most observers. So desperate was the situation that the 112,000 acre Moquah Purchase Unit of the Chequamegon in Bayfield County had almost 20,000 acres of tax deed land. "County officers have reached the conclusion that there will be practically no further revenue obtained from attempts to tax this land," said the 1928 purchase report.

Conditions in other northern counties were similar, if not worse.

The first three areas submitted for purchasing approval were 148,480 acres called the Oneida Purchase Unit in Forest, Oneida and Vilas counties; the Flambeau unit in Price County with 165,000 acres, and the Moquah unit.

Herbert Hoover signed the proclamation designating the Nicolet on March 2nd. President Roosevelt designated the Chequamegon on November 13th. The Rhinelander office opened July 2nd.

Professional foresters trained to deal with trees suddenly found themselves faced with a program that desperate state legislatures and a national Congress had obviously enacted to rehabilitate not just exploited regions but also their residents.

The government got the land back for about what the loggers paid before the trees were cut — \$1.25 to \$1.75 an acre.

Not all lumber barons were part of the problem. Eldred Klauser, grandson of the redoubtable Anson Eldred, ruthless timber cutter in northeastern Wisconsin, was apparently instrumental in getting the forest reserves in Wisconsin. Klauser's conversion to sustained yield forestry, which he saw in Germany, was a factor in his efforts to get the Wisconsin Legislature to pass enabling legislation and win approval for the reserves in Washington.

Someone in the Forest Service, possibly A. G. Lindh, acting forest supervisor to whom a letter from Klauser was addressed, marked one passage with a hard pencil. "It seemed reasonable then, as it does now, that as we had brought a community into a virgin country and had used the resources, we should do something about making it possible for that community, which depended on us, to continue to exist. However, to get this idea established in the valley of the Oconto, where lumbering was continuing on the old principle of strip and abandon each area, meant that basic conceptions had to be replaced."

The CCC remembers

The Nicolet and Chequamegon national forests and the Civilian Conservation Corps both took root in Wisconsin in 1933. World War II marked the end of the CCC, Roosevelt's Tree Army, as it was called, but the forests continued.

Both forests and the CCC will be celebrating golden anniversaries this year, with the National Association of Civilian Conservation Corps Alumni (NACCCA) is holding its annual convention in Eagle River September 20th through 23rd.

There's some question whether many eastern forests would have justified their names without the work of the 2½ million young men who swarmed onto the landscape from camps around the nation, doing long neglected conservation work. "The CCC put the national forests on the map," said William Wolff, president of Wisconsin Chapter 23 of the NACCCA, host for the convention.

The CCC eventually ran about 125 camps in Wisconsin, with 75,242 state enrollees. The Tree Army spent much of its time fighting fires until the Forest Service and agencies that managed state forests got a handle on the problem.

Records indicate "the boys" planted 266 million trees in Wisconsin, built 4,390 miles of roads, and 483 bridges, put up 4,040 miles of telephone line, erected most of the state's fire towers, did much fish and wildlife rehabilitation and recreational work and developed several tree nurseries.

Indeed, the works of the CCC are around us whenever we drive, walk or play in Wisconsin, in the form of highway waysides, bridges or shelters at state parks, vast and growing pine plantations.

Over the years the CCC veterans started to look back with affection at their years in the camps and the NACCCA was formed with chapters in most states. The graybeards, as they call themselves, think their group a dying organization, but it's possible that Congress, if President Reagan approves, might enact a new program for the 80s, to rescue the lost young men of today.

The CCC vets look back with fondness and a curious nostalgia at those desperate 30s. They remember the good times, the hard work, the camaraderie — and lessons they carried into World War II and their careers. Many became interested in forestry or related fields and went on to college. They ended up with DNR, the Forest Service, Agriculture Department (which also ran camps for soil conservation projects) and other state agencies.

Some say membership in the Tree Army saved them. Certainly most responsible observers believe the CCC was one of the most successful New Deal programs — perhaps the best.

Wolff said about 1,200 men, many accompanied by their wives, are expected in Eagle River — just in time to enjoy the north country's lovely autumn. They're already reserving rooms at area resorts and motels. Many politicians have been invited to speak, and some top level national conservation leaders will be on hand.

The Forest Service, which is staging a rather quiet birthday fete of its own, is tying its 50-year observance into the big CCC bash. Eagle River will be awash in memories with tours planned of both forests to see the big trees the veterans planted. Some may say as one man did after seeing red pines he remembered planting: "Imagine. That tree! This big. I did that."

Most will visit the CCC museum at Rhinelander's Pioneer Park. The replica of an old CCC barracks was built by corpsmen of the Blackwell Job Corps Center. Motivation for the museum came from the many active NACCCA members in Wisconsin who donated time and energy to the project. The sparkplug for the museum was Ken Elliott, a self-professed "scrub forester" who began in CCC camps and rose to supervisory status in the Forest Service. Elliott died last year.



Lakes surrounded by public lands in the North have remained undeveloped for many years. They preserve a reservoir of wildness despite what happens on private land. US Forest Service photo

If the Germans and French wrote the book on sustained yield forestry they are envious when they tour America. Nowhere else on the planet does anything like this nation's vast concentration of second growth and, in the case of western tracts, virgin timber exist. The implications of "those trees out there," said Henry Haskell, executive secretary of Trees for Tomorrow Resource Center at Eagle River, is their future impact on the world economy.

Today the two forests are producing about 110 million board feet of wood a year. They could cut three times the pulpwood they do. This would improve income for the forests and the counties, which receive 25% of federal stumpage payments. That's a tiny percentage of the needs of the state's 49 paper mills, but it would be a boost for the northern sands, as some once called the region after its trees were gone.

When the forest begins to produce high quality maple, oak, yellow birch and other hardwoods, not forgetting white and red pine, the logging will be sustained yield. But Rick Prausa, a land management forester, said that the reserves will easily surpass cutting because the tree growth, being exponential, is becoming "tremendous."

Federal reforestation emphasized the restoration of watersheds so both forests are the source of wild and lovely rivers, making them increasingly popular fishing and recreational attractions. Although much land on the lakes and streams is privately owned, the 1,167 Nicolet and 524 Chequamegon lakes, along with hundreds of miles of pristine trout and warm water streams, will become infinitely more valuable in coming decades.

The reason? As tourism development degrades other shorelines the federal lakes will remain more natural — cleaner and more scenic.

"I can make a special case that if you add the nonmarket value of the forests, the amenities, the value of recreation, then we are paying our way already," said Jim Berlin, supervisor of the Nicolet.

Chequamegon totaled 863,000 visitor days last year. The Nicolet had well over one million.

Regardless of their promise, the North retains a long-term love-hate relationship with the federal forests. While grateful to Washington for restoring "The Lands Nobody Wanted," the title of a 1974 book on eastern reserves — local town and county supervisors more and more resent the loss of tax base, especially as the forests become more valuable to tourism. A wild forty sells for \$10,000 to \$25,000 in the region. Six counties shared \$323,242.45 and another \$121,995 in returned revenue from the Nicolet last year. But the debate over whether they're getting their money's worth is gradually becoming moot as the trees gain in value.

When you ask Forest Service officials what the forests are worth, they tell you there is no single answer. Planners say the net value in terms of potential resources discounted to 1983 is about \$230 million for the Nicolet — about the same for its sister forest.

"Very few people 50 years ago could have foreseen that we would be in the situation we have now," said Prausa. "We're seeing some fantastic stands of trees, some potential for great stands."

Suddenly and perhaps moroso in years to come, the true value of the forests may lie in how they are coveted.



THE FUTURE VII

Attempting to describe what the North will be like in 50 years is a bit like forecasting the weather for next weekend. To begin with, you compile the most accurate data you can find on current trends, then choose what appear to be dominant patterns, project those forward, and watch to see if they unfold as you imagined they would. Sometimes they do, though often they do not.

Forecasting a possible future for the North can give us an array of options. We may want to accept, modify or reject these options, but in so doing we are anticipating what the future of the North may be like. We are thus one step closer to active involvement in creating that future. A vision of the future is needed before we can begin to decide how to get there, even though we know that vision will change as it nears realization.

Our most basic assumption is that there will indeed be a future for the North in 50 years.

What kind of future can northern Wisconsin look forward to? Let's deal first with nuclear energy and nuclear waste. Reducing our current stockpile of nuclear arms will turn those weapons into nuclear waste, adding greatly to the already vast amounts of both high- and low-level radioactive waste awaiting disposal at various sites across the country. We doubt that a means of permanent, safe disposal of these wastes will be found within 50 years, but fervently hope the federal government will have the wisdom to place them in temporary, above-ground storage until a permanent solution can be found. Already considered as a possible site for "permanent" underground storage, northern Wisconsin may not have the political clout to bar becoming a temporary one. Citizens must do everything in their power to ensure that temporary storage sites do not become de facto permanent disposal sites. They must insure that they are located in the most environmentally safe places, not the most politically expedient.

Regardless of whether the Navy decides to reconsider its "need" to use northern Wisconsin's bedrock as an antenna to communicate with nuclear submarines, the subs themselves will most likely be obsolete within 50 years, and advances in communications technology will have reduced project Sanguine/Seafarer/ELF to a footnote in military and political history.

As for nuclear power plants, if there are any left in 50 years they are not likely to be in northern Wisconsin. Then as now, the North will be too far from major population centers to justify locating a nuclear plant here. Existing nuclear plants across the Midwest probably won't be replaced as alternative energy sources develop and conservation measures gain greater acceptance.

In another anticipated development local gov-

erning bodies, while retaining their jurisdictional autonomy, will form regional governmental councils. This will allow them to share information and to conduct more efficient law enforcement, purchasing, services delivery and regional planning on a variety of fronts. One result of such planning will be regional waste management programs. Whether or not we get nuclear wastes, other forms from industry and municipalities will have to be handled. Management goals include reducing the amount of waste generated, developing waste disposal facilities that consider long-term environmental and economic savings, and continually searching for alternatives to putting garbage in the ground.

Industries which produce solid and hazardous wastes will realize that what has been called "waste" is really a resource that until now has not been used.

Industries will see "waste" as too valuable to throw away. Further incentives will come from the scarcity of critical minerals and the increasing cost of producing virgin materials, plus rising transportation charges. Economic motives will thus complement environmental ones to create a climate for recycling, the production of refuse-derived fuel for burning in power plants and the collection of methane produced in landfills.

Northern Wisconsin could become energy-



independent within 50 years, but to do so would require both regional planning and individual commitment on a grand scale. This would require a move toward conservation technology, retrofitting of existing structures and design of new homes, businesses and perhaps entire communities to make the best use of passive and active solar energy, wood heat, wind energy and other alternative sources.

Acid rain will continue to present a major

50 YEARS FROM NOW

DAN SMALL, *Free Lance Writer and Humanities Division Head, Northland College* and MICHELE GESLIN SMALL, *Futurist and Associate Professor of English, Northland College*

Wood burning, solar and wind energy plus new construction technology could make the North energy-independent in 50 years, but it would take regional planning and individual commitment on a grand scale.

Photo by Dean Tvedt

threat to environmental quality if the total amount of air pollution being released into the nation's atmosphere now stays the same or rises. The eventual extent of acid rain's effects on the North is uncertain. Soil micro-organisms and a wide variety of plant and animal species living on land and in the water are almost sure to be harmed if current trends aren't reversed. The long-term detrimental effects of acidification would be most likely to show up in softwater lakes and aspen stands in areas where a thin, acidic layer of soil overlays granite bedrock. Some of these lakes in northern counties will no longer support game fish, causing a few communities to lose what economic stability their tourist industry provides. If acid rain severely stunts aspen growth, then of course a primary ripple effect will be felt in both the logging industry and wildlife populations. It will also be felt in the recreational and commercial industries that depend on aspen.

Unless regulations and land-use patterns change more drastically than we anticipate, the North should experience no shortage of pure groundwater 50 years from now. Leachates from abandoned landfills, leaking gasoline storage tanks, accidental spills and illegal dumping of hazardous materials pose the greatest threats to groundwater purity. However, since most groundwater stays within its watershed of origin, any contamination should be very localized.

Pyrite-bearing tailings from metallic mineral mining are a potential hazard to groundwater, since water percolating through them can produce sulfuric acid. Mining waste regulations must be stringent enough to prevent groundwater contamination during and after any mining operations in the North, where pyrite is present in most mineral deposits. Agricultural pesticide use is minimal, so the North is not likely to suffer from the sort of pollution caused by aldicarb in the Central Sands potato-growing region.

As groundwater in other regions becomes contaminated or depleted, ours will increase in value. The day may come when a thirst for pure water will drive industry, agriculture and even entire city populations north. However, it is the North's surface water reserves—particularly those of Lake Superior, which contains roughly 10% of the world's fresh surface water—that face the greatest potential threat. Western mining companies and shipping interests in the lower Great Lakes already have their eye on the greatest of the Great Lakes. At its current rate of depletion, the Ogalalla Aquifer, which irrigates virtually all agriculture in the High Plains states (where half the nation's beef cattle are fattened), will be sucked dry within 50 years. What will northern Wisconsin demand in trade for Lake Superior water? (Remember, we have no fossil fuel reserves!) Will we even have a choice in the matter, or will the High Plains agricultural lobby, backed by a beef-hungry nation and a grain-hungrier world simply force a pipeline down our throats? Such a pipeline would divert enough of Lake Superior's "surplus" water down the St. Croix (a national wild

and scenic river) to maintain a ship channel in the Mississippi, while the Missouri River is diverted to quench the thirst of parched croplands from South Dakota to Texas.

Make no mistake—we will have water when other wealthier and more populous regions no longer do, and we will have to face the issue of water diversion. The sooner the North develops a plan for the use of its water and a rationale for protecting it, the more reasonably we will be able to deal with requests or demands for a share of this resource and the more likely we will be to benefit from any exchange.

The North may not boast a booming economy in 50 years, but it can support a stable, self-sustaining one, based on tourism, agriculture, forest products and small, clean, hi-tech industries. Nationally, genetic engineering and robot manufacture are likely to be the two largest industries by the year 2000. Just what their impact on the North will be is uncertain. Effects will be felt both in industries in the larger communities, such as Superior, Ashland, Merrill and Chippewa Falls, and in forestry and agriculture. Business operations everywhere will be computerized. Service functions ranging from one-family cottage industries producing software for expanding markets to large developers of industrial computer component parts will find a welcome home in the North.

The North's colleges and technical schools will provide both the link to the academic world where high-tech industry develops and the training to prepare future workers. Any mining operations begun within the next decade, such as those proposed for copper and zinc in Forest County, will probably be winding down. They will bring new residents to fill openings for skilled jobs and give a temporary boost to the local economy, but gains will be short-lived. Both government and the private sector are more responsive to economic and social change today than during the boom-bust mining era that left its scars on the people and land of northern Wisconsin, Minnesota and Michigan. But mines eventually shut down and companies pull out. Local residents will have to contend with a system of inflated services, a crippled economy, and a natural environment that will never be the same, regardless of the amount and degree of reclamation performed by a well-meaning industry.

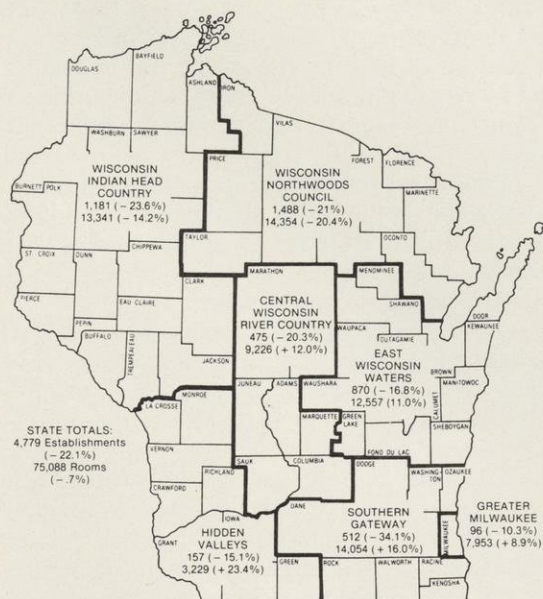
We anticipate a substantial increase in timber harvest, along with more intensive management, as the forest products industry finds new uses for cellulose, especially aspen pulp, to replace metals and petroleum-based plastics. Federal, state, county and private foresters will need to work closely with wildlife managers. They must plan timber sales in a way that balances efficient use of the wood resource with maintenance of optimum habitat for northern forest wildlife. Aspen of different ages managed in small blocks can provide a sustained pulp harvest, help stabilize populations of major game species, such as deer, ruffed grouse and snowshoe hares, and benefit predators and non-game species as well. Of course, a large-scale

commitment to conifers rather than aspen, or a move to more intensive monoculture would change this balanced picture. So would acid rain or the abandoning of management altogether.

The North will never be a major agricultural region. However, farmland here will certainly become more valuable. Its contribution to the nation's food basket could become more significant as water shortages and increased salinity in other areas cause a marked reduction in arable land nationally. Dairy products and forage crops will continue to dominate. More small-acreage operators will move into other cash crops and even aquaculture to supply regional markets as long-distance transportation costs increase. However, total agricultural acreage here may actually decline in the next 50 years since depressed prices for farm products will continue to drive some farmers to seek other employment, while former croplands continue to sprout residential developments.

The subtle but real effects of these two trends may transform the region's economy. The new resident who builds on 40 acres of former agricultural land displaces a certain amount of money that once circulated in the local economy to purchase equipment, fuel, feed, veterinary services and so forth. Regional and state-supported incentives, such as the Farmland Preservation Program, will be needed to ensure that adequate acreage remains in production.

The number of resorts and rooms declined from 1971 through 1980. Top figure is number of establishments and the bottom is the number of rooms.



Tourism and recreation will be perhaps THE major northwoods industries in 50 years. There will be greater demands placed on all resources as the North's four-season recreational opportunities attract more permanent residents. More second-home buyers, seeking an independent and slower-paced lifestyle in a high-quality environment may eventually retire here. There will be more and more city-based hunters, fishermen, boaters, skiers, snowmobilers, hikers and campers.

NORTHFOLK OF 2020

Who will inhabit the North in 50 years and what values will they hold? The trend toward smaller families and the general aging of the population means Golden Ponders will continue to outnumber the young. However, there is another apparent trend which we think will grow: more and more young people are choosing to stay or move to the North seeking independence and the challenge of self-reliance that has always attracted hardy souls.

These newcomers will likely be vocal and active. Coalitions and citizens' lobbies and networks will spring up as these newcomers discover ties both to the land and to a widely-scattered but like-minded community. Like most Americans of the high-tech age, northerners will have far more leisure time than today, thanks to shorter work weeks, longer vacations, increased opportunities for self-employment and portable electronic work stations that will allow formerly desk-bound employees to complete assignments at home. To fill their leisure hours, they will seek more educational opportunities, attend more cultural events and pursue outdoor recreational activities like never before.

Their values, along with those of longtime inhabitants, will shape the future of the North. But what will they value most, and will there be a consensus?

In 50 years, just as today, the attitudes toward the land expressed by northern Wisconsinites and other Americans will fall into three categories: exploitation, stewardship or preservation. Some will see land as a vehicle for economic gain—a place to build a shopping center or an industrial complex. Others will be caretakers with an active concern for nature's well-being, but with the view that nature is at its best when it fulfills people's needs. Examples are parks, agriculture, game and forest management.

Still others will seek to preserve parts of the North as wilderness, arguing that wild lands show us what America once was, that wilderness has recreational value which offers a radical contrast with everyday life, that it is a living "laboratory" where scientists can learn and that its very existence has spiritual value even to those who may never visit it.

Most northerners will probably hold all three attitudes: they will support developing one parcel, "cooperate with" another and preserve in its natural state yet a third. All three views are prevalent across the North today, and present land-use patterns reveal a fair balance among them.

The question is, which attitude will dominate in 50 years? The land-use decisions we make today, both as individuals and as a region, will be with us and our descendants for some time to come. A clear understanding of what we value in the land and of why we favor one use over another will guide us toward decisions we can live with and which we can honestly justify to future generations. The way we use our land clearly expresses our values, whether we articulate them or not, and it will form the values of our children and their children, serving either as a model to emulate or as an example of misuse to be rectified. The North and its future inhabitants await our choice.



Historically, mining has been a boom and bust proposition. No matter how prosperous, mines eventually shut down and companies pull out. This etching shows men digging test shafts for copper near the Brule River in the mid-1800s. Little ore was found.
Etching courtesy of the Sigurd Olson Environmental Institute

To meet these demands, the integrity of the Chequamegon and Nicolet National Forests and Apostle Islands National Lakeshore, along with that of the many state and county parks and forests, must be preserved. User permits, advanced registration and quotas will regulate "traffic" in both impact-sensitive and wilderness areas. Some units will be sacrificed to high-use demands and others will be entirely off-limits, used for scientific study and as buffer zones for endangered and threatened species.

Private lands may be required to relieve some recreational pressure from public lands, and DNR will have to work with landowners to ensure that their concerns are met as well. Regional planning and zoning to encourage cluster development of commercial establishments will reflect a public interest in wise land and resource use. Lake Superior's South Shore will spawn several more marina and recreational complexes over the next 50 years, with condominiums and other facilities to cater both to a sophisticated summer boating crowd and to the varied tastes of winter sports enthusiasts. Fewer, but larger, four-season recreational developments, similar to Cable's Mount Telemark, will replace all but a handful of the small, Ma-and-Pa resorts already in sharp decline.

New fees and increases in existing fees will help pay for campgrounds, trails, access points and interpretive programs. They will support stepped-up fish stocking and more intensive management of all resources. The concept of "pay-as-you-go" will encompass both the traditional consumptive and so-called non-consumptive sports, as the burden of resource management shifts more and more to those who use the resource. This could mean more area entrance fees, like the campground fees we pay today. There might be statewide administration with regional distribution of funds based on population or level of use. Thus, "recreation permits" might replace hunting and fishing licenses, and outdoor enthusiasts might purchase birding, skiing, hiking and edible plant-gathering stamps. This would be in addition to fish and other game

Future prospects for fish and wildlife in the North hinge on two factors in addition to overall environmental quality: habitat management and

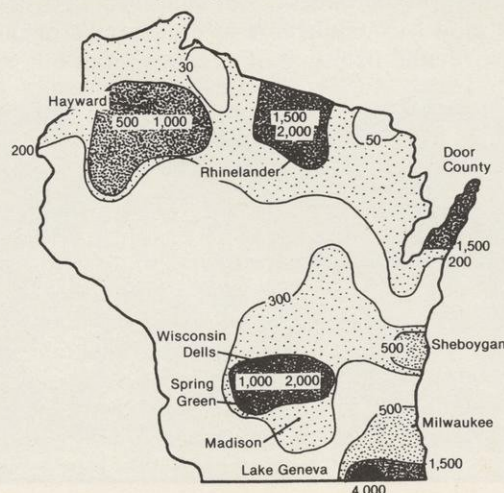
people management. We foresee two clear trends: human use of land and water will continue to reduce the carrying capacity of many habitats for certain fish and wildlife species, while at the same time the demand and competition for fish and wildlife recreation will increase. What impact will these trends have? Let's look at some examples. Fish and anglers will probably lose a few northern lakes to acid rain, rusty crayfish and perhaps other as yet unidentified causes. Other lakes will lose their muskellunge fishery, unless a substantial number of muskie anglers follow the catch-and-release lead of certain farsighted sportsmen's groups. Overall, most anglers will still find satisfaction with the North's warmwater fishery. A few northern rivers will continue to provide harvestable numbers of wild trout, but most top-notch streams will offer no-kill fishing only or other restrictive regulations to allow a finite resource to accommodate the growing demand for quality trout fishing. Lake Superior and its tributaries will still support a diversified trout and salmon sport fishery, thanks to a strong stocking and management program. Commercial fishing will be all but dead, having been replaced by intensive fish farming by about the turn of the century.

Deer will still be the most significant game species 50 years from now, and deer numbers will most likely rise in the North, due to increased logging and more intensive aspen management. The North will also see a great increase in the number of deer hunters because Northwoods counties will still offer the best opportunity in the state for a trophy. We would not be surprised to see bowhunters outnumber rifle hunters in 50 years, as traditional hunting camps die out and more and more urbanites discover the solitude, longer season and overall high quality experience bowhunting provides. Bear hunting will become more restrictive to maintain the animal's status as a big game trophy as hunter numbers increase. And the North's ruffed grouse and snowshoe hare populations will continue to support an ever greater demand for small game hunting.

America woke up late to the crying need to manage endangered and threatened species, and today Wisconsin and other states are making a valiant attempt to study and preserve the vanishing wild. Marginal wildlife species like sharp-tailed grouse, bobcats and timber wolves will hang on as long as public policy and funding allow for the maintenance of their very specialized habitat and for their careful management. But let them become a luxury or a pest and they will go the way of the wolverine and woodland caribou. There is little doubt that DNR will have a Division of Resource Management in 2030, but will it still have an Office of Endangered and Non-game Species? The answer to that question lies in the values of an unborn generation.

We are by no means suggesting that this forecast will come to pass in precisely the manner we have described, but offer it as a series of possible future outcomes projected from current trends. These are just a few of the many options before us

In 50 years the Northwoods will attract even more urban travelers. This map shows how popular Wisconsin is today. It depicts the daily average of Chicago recreation seekers in Wisconsin during June, July and August.





and the next generation of Wisconsinites as we plan our future. To help accomplish this task, we offer one more concept, one which underlies this entire article and in fact the entire edition of this magazine: the North Country is a complex set of interrelated systems. The set includes natural systems—for example food chains and hydrologic systems—and man-made systems, such as governments, transportation networks, educational districts, and so forth. The point is, these subsystems interact to form a functioning whole, and any change at one level will have eventual repercussions somewhere else. When we understand that all environmental impact is cumulative and that it affects the entire system in some way, whether

that impact is readily apparent or not, we begin to see problems and their possible solutions in a new light. We see, for example, that what we have called “side effects” are really main effects, that we cannot do merely one thing in isolation (because nothing exists in isolation), and that there is no “away” where we can throw things we no longer want or need. To see our region in a state of dynamic balance that we can upset or help maintain frees us from any feelings of powerlessness, yet at the same time binds us to the effects of our actions with a greater sense of responsibility than ever before as we forge its future. That is both the liberation and the legacy of the systems perspective. ☐

The future will bring greater demand on all of the North's recreational resources.
Photo courtesy of the Sigurd Olson Environmental Institute

POWER GAS 2049

DAVE CREHORE,
DNR Public
Information, Green
Bay

"Use your imagination," they said.

"This 'Northwoods' edition of the magazine is going to be full of sober, heavy stuff," they said.

"But it needs something lighter, wacky, funny if possible, and just short of libelous," they told me.

"Your task — should you chose to accept it — is to write us that sort of thing. So go forth, place your tongue firmly in your cheek, and leave it there until you come back with something about northern Wisconsin's future in 75 years or so."

"If you do well," they said, "we will print it." "If you fail, we will disclaim all knowledge of your mission. Good luck."

To our readers: The events depicted in the following two stories are strictly science fiction fantasies. Hopefully, they will never happen in Wisconsin's Northwoods and should not be confused with some of the speculation, projections and forecasts offered by various authors throughout this special edition. However, these two stories are included to stimulate thought and to emphasize that through awareness and planning, the people of the Northwoods can guide their own future away from adversity and toward a quality living experience. We hope you find this different and provocative writing style useful in the context of the entire Northwoods edition. If you have any comments I would be glad to receive them.

Jeff Smoller, Director, Information and Education

The place: Old Wisconsin Museum, Minocqua

As the scene opens, elderly John Lorax, curator of the museum, greets a family of visitors who have just entered. Both Lorax and the museum show obvious signs of age and neglect.

Lorax: "Well, hello there! Doggone it, you folks surprised me. Not often we get company in this part of the country any more.

"I'm John Lorax, your guide here at the

an O₂ bottle or a porta-scrubber. You could even run, if you wanted. Lots of people did.

"Don't repeat this, but back in the old days, this here power gas used to be known as sulfur dioxide. That's right. But then the Power Foundation talked the government into giving it a new name. Wanted to make it sound better.

"Enough of my rambling along — you folks are here to learn some Wisconsin history.

"Wisconsin? That's what this part of the country used to be called, years ago, before they formed the North Central Natural Resource and Defense Park. That's where you are now. You wouldn't believe it, but before the Park came a lot of this land around here used to be owned by the government. 'Course, that's illegal now. And there were all kinds of private places — little postage stamps with houses on them all over the place. Can you imagine that? Why, you couldn't mow your trees more than a mile or two in one direction before you'd run into a fence, or a cottage, or something.

"There used to be a lot more people up here than there are now.

"They used to come up here to retire, or fool around in the woods, or ride in boats. Some had lived here for years. Anyway, a lot of them were against all the things we have here now, everything that makes the Park what it is — the Nuclear Temple, Sanguine, the Peace Missiles, Copperland, the Nature Preserves — everything.

"It's hard to believe, but they really thought they could stop the Park. And they were just ordinary people! Yup, they were against it all — the coal pipelines, the Arizona project, the Chem-friends — the whole thing. Why, they were even against General Technology taking over for the Defense Department.

"Treason, you say? Well, there were those who would agree with you. I was around in those days — I was a kid in the 80s, when Amalgamated bought the national forests. It got mighty unpleasant around here for those who fought the Park.



Powergas.

Cartoon by Artist Virgil Beck, Box 66, Stevens Point, WI 54481

museum, which is a service of Amalgamated Cellulose, Inc. You folks come up here from Illinois? I thought so — I can tell from your car. Mercedes still goes over big down there, doesn't it?

"By the way, how's the power gas this afternoon? Pretty thick? Well, you'll have to be careful when you leave — it gets worse toward nightfall. Get right into your car and don't walk around out-of-doors without a porta-scrubber. Amalgamated would hate to have any of its guests get bronchial attacks on the grounds! Little joke, folks.

"You know, I can remember back before the power gas was not quite so bad, you could go outside and walk around all you wanted, without

"Well, I sure have been rattling on, haven't I? Let's start the tour, and you'll be able to see for yourself what things used to be like.

"First off, on your left here is a holographic reproduction of an old logging camp. Those big round things are logs. Yup, that's what a tree looks like before it goes into the plasma-chipper. 'Course, you don't see trees that big any more. Notice, too, that there wasn't any machinery to speak of. Just axes and hand tools and draft animals.

"What's that, sonny? No, that animal there isn't a cow, it's an ox. An ox is a bull that's had something done to it. No, not genetic recombination — it was simpler than that.

"Anyway, back in those days the trees grew anywhere they felt like, good trees and bad trees mixed up together. So those lumberjacks, as they used to call them, just roamed around up here, cutting down the biggest trees. They'd use horses and oxen to haul the logs down to the river banks, and then float the logs down the rivers! Can you imagine that? Nowadays, of course, the trees in the preserves get turned into cellulose slurry in the plasma-chippers, and get pumped directly to Green Bay.

"Sonny, you'd get a real kick out of the Preserves. Think of it — hundreds of miles of superpopples and clonepine, all growing in nice rows. And wait 'til you see Big James, the robot harvester. He can clear a strip 50 meters wide, going five clicks an hour. Maybe you can get a ride on him!

"Another thing you'll notice about the Preserves — they have 20 hours of daylight and only four hours of nighttime. That's right — Amalgamated orbited a lot of big mirrors, and they reflect the sun down here to make the days longer and

the trees grow faster.

"You see, they engineered the superpopples and clonepines to grow in 20 hours of sunlight, year 'round, and to resist the power gas. The way it worked out was really clever, let me tell you. See, the bad trees — the ones we don't want — need a longer nighttime, and they can't stand the gas, so they're pretty well done for. And that way the Chemfriends don't have to use nearly as much herbicide to protect the good trees.

"Well, let's move along. On your right is a projection of a fishing scene. The big flat surface is a lake, the thing with the two men in it is a fishing boat, and if you look close you can see a fish that they're trying to land.

"Yup, the lakes used to be big pools of water sitting in holes in the ground. That was before the Arizona project, of course — the water is all down there, now. Anyway, lots of fish used to live in the lakes, and people would go out in boats like this to try to catch them. We used to have thousands of lakes up here, and thousands of fishermen, too.

"Would you believe you used to have to buy a license to fish? I know it sounds crazy, but you did. And people used to complain about the cost of those licenses! Right up to where they weren't available any more.

"What happened to the fishing? Well, along about 2010 it got to where between the power gas and the Chemfriends, there weren't many fish left, and when you could catch one you couldn't eat him anyway. So fishing kind of petered out. Then when the Arizona project came along, people didn't mind pumping the water off down south. Yes sir, right outside this building, there's a big hole where a lake used to be.

"So, that about ends our tour. But before you go, don't forget that your ticket to Old Wisconsin

Big James.
Cartoon by Artist Virgil Beck, Box
66, Stevens Point, WI 54481



includes a shuttle ride to the Nuclear Temple. If you haven't seen it yet, you ought to go. Biggest collection of high-level nuclear wastes on the continent. No? OK — maybe I can give your shuttle pass to someone else.

"One other thing — not many people are interested anymore, but just through this door over here is what we call the Wilderness Experience. If you want to, you can take a walk through it.

"Just let me tell you a little bit about it first. You'll see a whole lot of different kinds of trees, and some of them are pretty big. Much bigger than the standard 10-centimeter diameter they grow them to nowadays. But don't worry — they won't fall on you.

"Another thing — there's a bird in there. Big sucker, called a pileated woodpecker. There used to be two, but the female died last year, so you'll

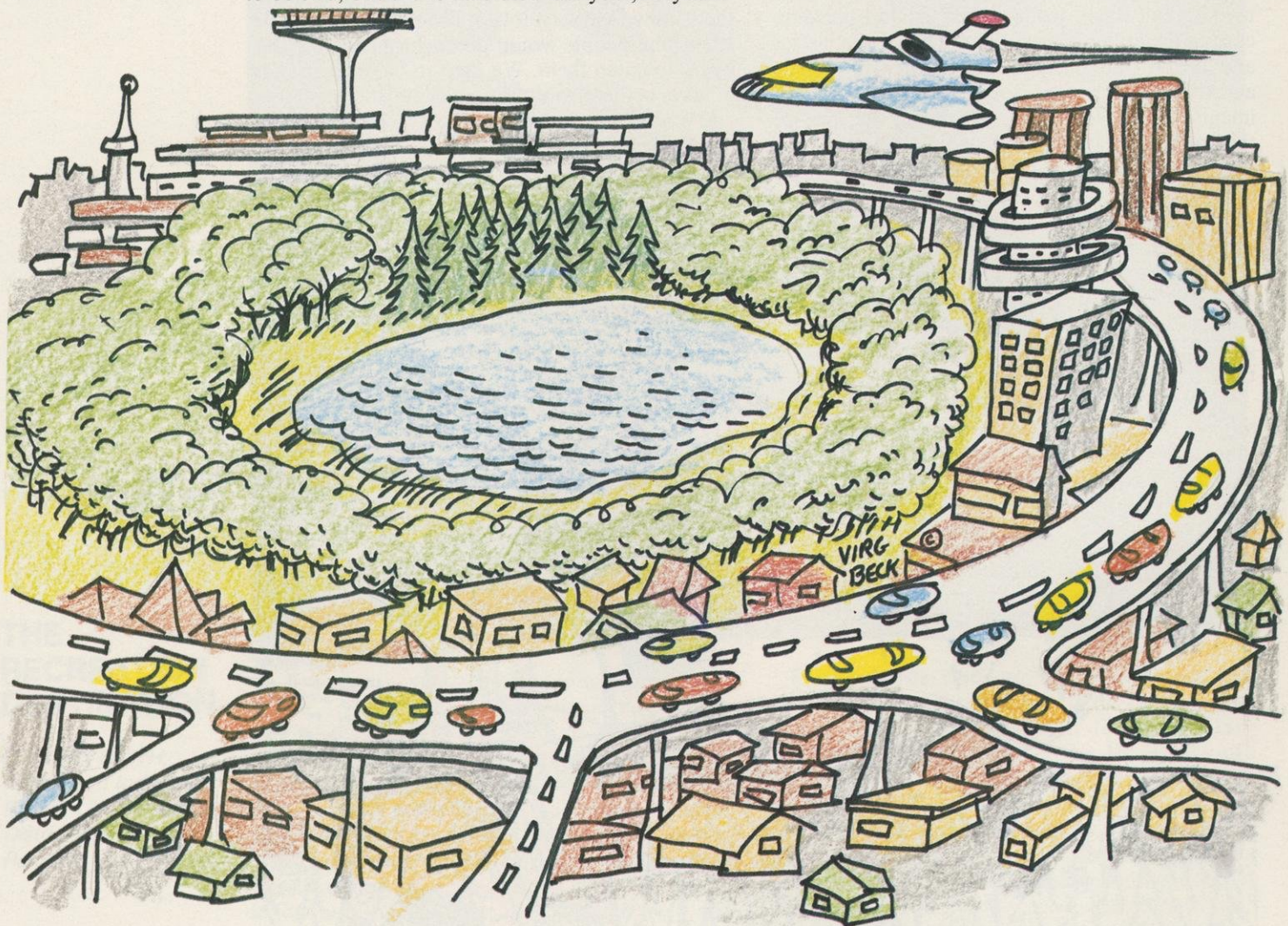
be looking at the last of them. He won't bother you, though — he's learned to give people a pretty wide berth. But watch out for the plastic dome around the Experience. A couple of people have walked into it and hurt themselves.

"Hey! Wait a minute, folks! It's starting to rain, so you'd better get your car under cover right away. With this south wind, the rain will take the shine off it just like that. Hard on the tires, too.

"Well, sorry you have to leave so soon. Too bad you missed the Wilderness. It does things to people. Always does for me, at least. So long — and hurry back to Old Wisconsin.

(Visitors exit. Lorax returns to seat behind desk, and begins to thumb through an old Wisconsin Natural Resources Magazine. Fade to black.) ☐

Cartoon by Artist Virgil Beck, Box 66, Stevens Point, WI 54481



THE UNNAMED LAKE

DAVE CREHORE,
DNR Public Informa-
tion, Green Bay

Note: The enclosed Department of Natural Resources correspondence file is provided under the terms of the Freedom of Information Act.

June 18, 2058

FROM: Larry Jordan, DNR, Rhinelander

TO: George Kruger, Bureau of Real Estate, DNR, Madison

SUBJECT: Proposed purchase of unnamed lake tract, Vilas County

Last month it came to my attention that the owner of a four-acre property in the Town of Presque Isle is interested in selling. As you know, properties that large are rarely available in Vilas County these days. I flew over the property early in May, and was surprised to find no houses, cottages or other buildings on it. You won't believe this, but there are no roads, either. The nearest private dwelling outside the property is a good 100 yards away. That makes the tract really

remote and desirable as a wild area for preservation.

The best part is that the property includes an unnamed lake .97 acres in size.

The satellite photos show that this little lake is the only remaining body of water in Vilas County without a building of some sort along the shoreline. That makes it a curiosity, and for that reason alone, I recommend that it be purchased by the State.

June 25, 2058

FROM: George Kruger, Madison
TO: Larry Jordan, Rhinelander
SUBJECT: Unnamed Lake Tract

I showed the maps and your letter to the powers-that-be, and their reaction was lukewarm. On one hand they wanted to buy because we haven't found any wild land in so long. On the other, they were reluctant because they wondered what good a four-acre wild tract would do in the middle of an urbanized area.

I haven't been up there in a while, but as I remember the county trunks around there are lined with homes and strip development, and the lakes have just about been taken over by those who can afford to live on them.

Why should we spend taxpayers' money on land in an essentially elite suburb. According to your own figures, land is going for more than \$75,000 an acre up there, and lake frontage has topped \$10,000 a foot.

Frankly, the boss can't see why we should buy a playland for people who could easily afford to buy it themselves. How would anyone ever get access to it, if it's surrounded by private land?

However, I'll stick my neck out. Go ahead and look the place over, and talk to the owner.

July 3, 2058

FROM: Larry Jordan, Rhinelander
TO: George Kruger, Madison
SUBJECT: Unnamed Lake Tract

I've just come back from talking with the owner. He only wants \$50,000 an acre! He could get more, but he actually wants the State to buy it.

I took a canoe in and paddled around. It's really beautiful. Most of the land is bog, with pitcher plants, wild flowers and a nice stand of black spruce. The lake is a little jewel. When you get on the lake you can't hear any cars or boats although they're not far away.

What you were saying about urbanization is true. The population went over 250,000 last year, and land prices are such that it's hard to buy anything. I've been here seven years, and I'm still renting.

I think we have a responsibility to pick up these little wild corners when we can get them for a measly \$200,000. This could be the last piece of land the state will ever buy in Vilas County!

I want to get out there and get an option. How about it?

July 29, 2058

FROM: George Kruger, Madison
TO: Larry Jordan, Rhinelander
SUBJECT: Unnamed Lake Tract

I'm afraid I have bad news. I tried to make a strong case for your unnamed lake, but I was overruled.

As you know, we're buying the last of the railroad rights-of-way in the State. At the same time, we're trying to pick up options on the national forest land that's up for sale this year. I was told that we simply don't have \$200,000 to spare.

You must realize that there are 7-million people in the southern half of the state who desperately need places to camp, ride bikes, and all the rest. With the state and national forest land just as desperately needed for timber production, your four acres are a luxury we can't afford.

August 13, 2058

FROM: Larry Jordan, Rhinelander
TO: George Kruger, Madison
SUBJECT: Unnamed Lake Property

I looked at the property again yesterday, and took my wife along. We've decided to try to buy it ourselves. If she goes back to work, we might be able to make the payments if anyone will give us a loan.

We'll never be able to build on it, because we couldn't afford to buy and build at the same time. Ironical. But at least we'll have the satisfaction of protecting it. I'll let you know what happens.

P.S. I hope both you and the boss keep in mind that this is the *last undeveloped lake in the whole state*. I've gone over the satellite maps and I'm positive.

November 25, 2058

FROM: Larry Jordan, Rhinelander
TO: George Kruger, Madison
SUBJECT: Unnamed Lake Property

I said I would let you know what happened. To make a long story short, we couldn't buy it because no one would lend us the money.

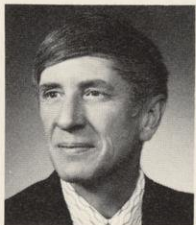
I went to the owner and tried to get him to sell on a land contract. He turned me down — he needs the money right away.

So the inevitable happened. The banker told a real estate agent in Woodruff about the property. The agent bought it for cash and has already sold it to some guy from down south.

Last week my wife and I went out to look at the lake one more time. You wouldn't believe it, but the guy found some loophole, and has filled in part of the bog and is building a condominium. He's also putting in a road. So goodbye unnamed lake.

P.S. It's not an unnamed lake any more. The owner is going to name it after his wife. It's Wanda Lake now. ☹

PLENTY OF MEDIA, PLENTY OF MESSAGES



HAROLD C.
JORDAHL, JR.,
*Professor, Urban and
Regional Planning,
UW-Extension*

Communications can provide a critical link in bringing people together to help guide and discuss the North's future.

Technology has made it possible for the region's rural residents to be as well informed as their counterparts in large cities. Information on how to deal with the problems and opportunities unique to the North is now readily available through radio, TV and the computer. New technologies will greatly increase information sources in the years ahead and may invite home-based businesses attuned to finance, commerce and communications. A strong University of Wisconsin Extension can provide citizens with an educational base upon which to make decisions.

Educational TV and radio now cover most of the north. Twenty-four-hour local weather reports, storm warnings and safety information are available through the National Weather Service.

UW-Extension and the Educational Television Network have developed "Infotext." A \$300 TV adapter gives access to a signal, set aside exclusively for transmission of textual information for farmers and the agri-business industry.

In the next few years, "Telotext" will allow viewers to select whatever information they wish to view on a TV screen. Commercial TV will also use this system.

Local newspapers list highlights for educational radio and TV. For detailed programming, a monthly radio and TV guide is available at a modest cost from the Wisconsin Educational Television Network, 732 North Midvale, Madison, WI 53705.

Cable TV is now available in most communities. Equivalent coverage will be available in the near future to homes which cable can't reach through a new system called Direct Broadcast Satellite (DBS). Rental rates are modest. For those willing to spend several thousand dollars the home satellite dish is another option. New opportunities will be available in rural communities with short range Low Power TV (LPTV) stations in much the same way local radio now covers the north.

The first LPTV license has been issued for Ladysmith. Hopefully, these new stations will have as strong a commitment to public service as to profits and will devote time to coverage of local issues.

University Extension offices located in each county maintain extensive inventories of publications with direct relevance to the North. Extension agents specializing in Resources, Community Development, Youth, Agriculture and Home Economics hold hundreds of educational meetings each year on issues affecting the North.

The nine UW campuses and centers in the North and the six vocational school districts with their 14 campuses annually provide thousands of students with educational opportunities. Northland College at Ashland focuses on northern environmental issues through its Sigurd Olson Environmental Institute.

In the last decade, electronic media have broadened Extension's capacity to reach people through teleconferencing. The system is now the largest in the world and each year more than 40,000 citizens enroll in its programs.

Do you need information on air pollution, acid rain, designing a new tourism facility which harmonizes with the landscape, the economics and politics of environmental regulation? A good place to begin is the local library. Although many of the libraries in the north are small they can suggest other sources. Wisconsin is divided into library systems with regional headquarters. In the North they include Green Bay, Wausau, Eau Claire and Superior. If the local library does not have what you want, your request is forwarded to the regional library, and if they can't help, the request is teletyped to the State Reference and Loan Library in Madison. (In March, 1983 they processed 10,000 requests.)

Computers have increased access to knowledge enormously. Terminals or home computers may cost anywhere from \$600 to more than \$4,000. They give access to information vendors who will let you search through more than 150 data bases dealing with topics in business, agriculture, natural resources, environment, medicine, government and current affairs. You will obtain a reference and sometimes an abstract. You may then order the documents from the information vendor and have the cost billed to your credit card. A less expensive but slower alternative is to obtain the cited documents you have located through the library system. Millions of pieces of information are now cataloged in these systems. For more information on subjects you can search, call toll free Dialog (800-227-1927) or Knowledge Index (800-528-6050). The latter specializes in serving microcomputer users and searching is done evenings and weekends at a price about two-thirds less than Dialog. Some companies such as the Source or Comp-U-Serve provide a popular selection of information and services; still others offer highly specialized subjects that may be just what you need. Your librarian can help you. Dialog also offers Selective Dissemination of Information (SDI) where a search will be run for you every time the data base is updated.

The computer now also permits you to read newspaper articles, financial reports and stock market quotes, and other material on a screen. With the right equipment, portions of the text can be printed out.

Not everyone can afford the initial investment in home computers along with the charges for searches, documents and, for example, a subscription to the New York Times or the Wall Street Journal. Access however can be provided to citizens at modest costs though computers which are now becoming commonplace in libraries, public schools, the county courthouse or city building, the Vocational Technical and Adult Education Centers and University Extension offices. In fact there is a splendid opportunity for these organizations to coordinate their efforts to ensure that local citizens develop an understanding of how

computers can be used to obtain knowledge as well as ensure such knowledge is available at reasonable costs. There also appears to be a potential for private investors to open firms using toll free numbers to cater to the specialized needs of the people in the north.

University Extension now has computers in all but one county. Under a project called "WISPLAN" 80 computer programs have been developed on subjects ranging from feeding programs for dairy cows, beef cattle, swine and horses to detailed advice on how to plant, fertilize and manage your home garden. Census data for 1980 that can aid communities in the North when they plan their futures are also now available on the system. Depending on the county, the service is either free or a modest charge is made.

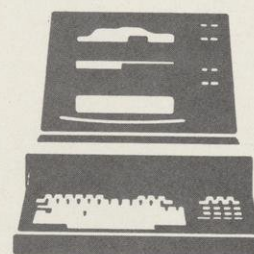
If you have a home computer it is possible to tie into WISPLAN with a \$50.00 application fee. The use of the WISPLAN then costs 20¢ per minute plus telephone costs. The number of programs will increase substantially in future years. For example, one Extension agent is working with DNR on a computer program which will identify the sensitivity of lakes to increased development. Another program will deal with urban forestry.

As additional programs are developed, it will be possible for citizens in the North to meet with their planning and zoning committee to computer

simulate various alternatives to growth with the objective of minimizing environmental harm before development permits are issued.

The numerous local, state and federal agencies are important sources of information. For example, DNR field offices can provide information on most resource and environmental matters, while local and regional planning agencies have a wealth of information on population, demographic trends and the economy.

Newspapers will continue to be an important source of information. Issues of major metropolitan papers are now available in many locations or through mail subscriptions. The local press has played and will continue to play an important role in reporting on issues unique to the north and in maintaining a sense of community identity. ☐



In a few decades people eager for profits gutted the North. Not many expressed concern for the future. They thought — and acted — like the woods and wilderness were endless. What the logging companies didn't take, forest fires did. Wetlands were drained. Attempts to farm in a harsh environment were aborted. Lives were crushed. Fifty years ago the North was bankrupt, financially and physically.

Through their governments, people working together began the long slow process of restoration and healing. Today the future holds promise. But how that promise will be fulfilled is not clear. The tragic experiences of the past provide lessons and insight, if we are willing to learn. Simply put, the lessons mean substituting short run gain for long run economic and environmental vitality.

But we need agreement on goals — for the next few years, the next decade and the next century.

Consensus on goals can be achieved through the political process with thoughtful analysis, exploration of alternatives, dialog, sometimes constructive conflict, debate, and then resolution. This must be followed by planning which has to have consistency in directing decisions toward the goals.

Here are several suggested goals which have special relevance for the north:

1. A quality of life with access to education, health care, affordable housing, safety and a measure of security.
2. Opportunities for meaningful jobs in safe working environments with a fair economic return to labor and managers and with high levels

of personal job satisfaction.

3. Access to cultural resources; the arts, theater, music and dance.

4. The maintenance, and where necessary the restoration of a quality environment; clean air, unpolluted waters, diversity in plants and animals, landscapes which are aesthetically pleasing and unspoiled lake and river shorelands.

5. Access to quality outdoor recreation; the opportunity to hunt in uncrowded forests, to canoe alone on a wild river, or to snowmobile or water ski at appropriate times and under safe conditions.

6. Reasonable governmental costs. This can be achieved by locating new growth — housing, industry, public facilities — in and around existing communities where governmental services can be provided at reasonable rates. Uncontrolled growth will not only increase taxes but substantially diminish the scenic quality of the landscape and frequently preclude other resource uses such as forestry, berry picking and hunting.

7. Maintenance of a safe, high quality physical and aesthetic environment. Renewal of existing development in cities and villages should be accomplished in a way that will minimize costs — through energy efficient buildings for example.

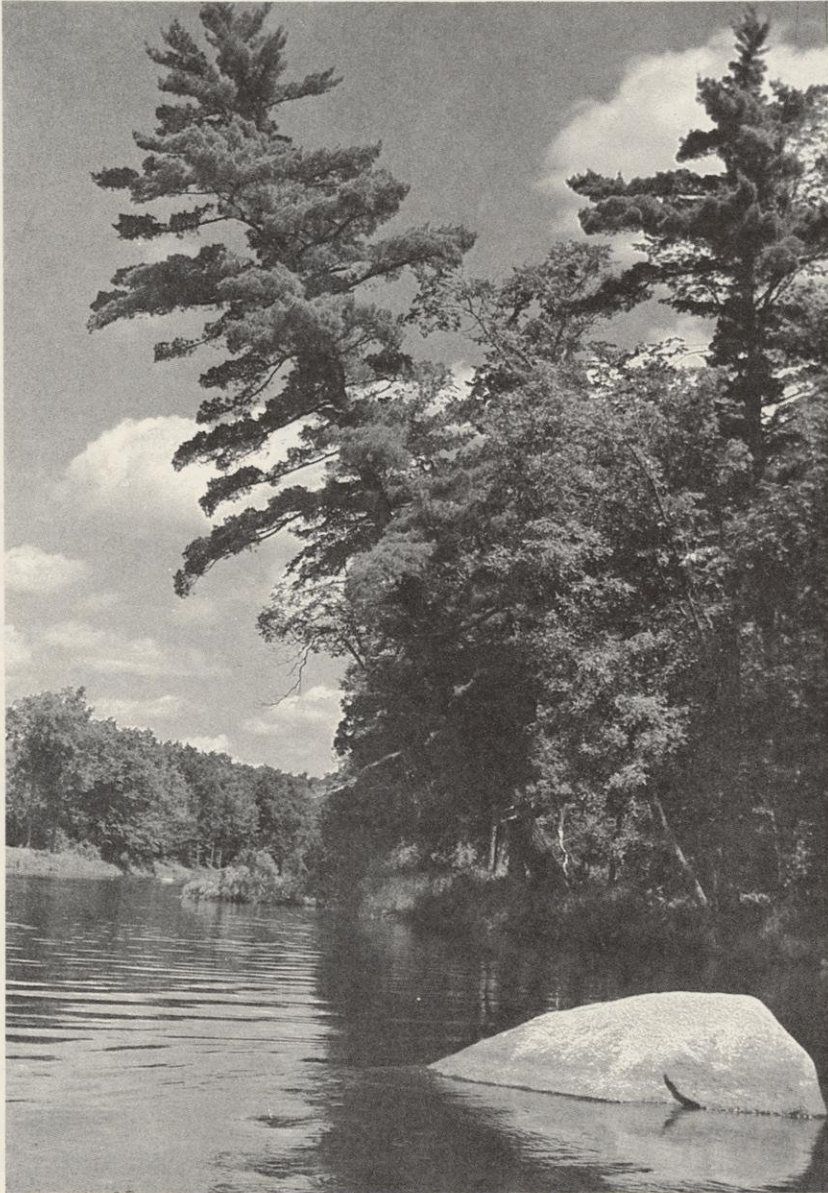
Regardless of the rate, growth in the North can generally be accommodated by the region's vast resources. But decisions on how and where that growth occurs will be crucial in the decades ahead. We can ring our lakes with two, three or even more tiers of cottages and second homes and essentially destroy the beauty and tranquility

MAKING YOUR OWN BED

HAROLD C. JORDAHL, JR.,
Professor, Urban and Regional Planning, UW-Madison and former co-chairman of the Upper Great Lakes Regional Commission

which first attracted us there. And although there are millions of acres of forest, is it prudent to subdivide this magnificent resource into small tracts, each with a hunting shack or weekend retreat?

The goals should focus on environmental quality and prudent use of natural resources. They can be accomplished by carefully weighing the impacts of decisions which are made daily by individuals, government agencies and private concerns.



Goals for the North should include not only a quality outdoor environment but also education, health care, jobs, culture and good government.

Photo by Bob Becker

The total of a lot of little hurts to the environment made by individuals and families can add up to serious environmental problems. For example:

- One failing septic system will not affect a lake. One hundred such failures could cause pollution, stimulate noxious algae and weed growth and make water unsafe for swimming.

- The removal of several trees on one lot to gain a "better" view of the river will not affect aesthetics. When every property owner does it, the beauty of the river is destroyed.

- The level of maintenance one practices on one's house and surroundings should reinforce and enhance the beauty of the neighborhood.

- Using lawn fertilizers at the wrong time and in unneeded amounts may result in runoff into surface waters and subsequent pollution.

- The use of wood for your home heater is laudatory energy conservation and can save money, but squirrels and raccoons and woodpeckers will have scant pickings if every last dead tree and downed log is removed from the back forty. Moreover, we need to be mindful of potential air pollution when burning wood.

Those are only a few examples, but the point is that individual daily decisions can materially help or hurt the environment.

There are hundreds of governmental units which significantly influence the North; town boards, sanitary districts, school districts, city councils, county boards and state and federal agencies. Some examples of their decisions which can affect quality of life in the North:

Towns

- adopt and support the county comprehensive land use plan.

- for other than the most critical winter conditions, use sand on the road and not salt.

- maintain flowering shrubs along town road rights-of-way.

- close the town dump, stop the burning of solid wastes and join with the county in a waste plan which emphasizes recycling, only burying residues which are safe in sanitary landfills.

- maintain town road rights-of-way so as to avoid unnecessary soil erosion and consequent siltation.

Counties

- enact land use plans which reinforce the goals for the North.

- enforce fairly the sanitary codes, floodplain and shoreland regulations and the land use ordinance.

- build new roads which minimize the impacts on soils, water, wetlands and forests and which maximize aesthetic values.

- manage the millions of acres of county forests not only for wood production but beauty, watershed protection, wildlife and wilderness values.

State

- maintain and as necessary adopt tax policies which reduce the reliance of local units of government on property taxes which will in turn reduce pressures for growth and new tax base.

- reflect in the formulae for sharing state and federal taxes with local units the fact that in the North per capita income will be lower and unemployment (also under employment) in the foreseeable future will be greater than in the state as a whole.

- work closely with local units of government on the adoption and enforcement of required state laws: air and water pollution, solid waste management, shoreland and floodplain zoning and groundwater protection.

- adopt policies which emphasize quality hunting and fishing opportunities.

- manage state lands to meet not only state-wide objectives but also the needs of the people of the North.

Federal

- join with the state and the counties throughout the US Forest Service in developing plans to capitalize on the multiple values of all public lands and to provide the maximum number of well paying, stable jobs in the wood products industries.

- diversify tree species and age classes so that small firms will have an opportunity to harvest and process wood products. Diversity also improves wildlife habitat, enhances scenic beauty and reduces the hazards of insect epidemics and forest fires.

- understand the deep concerns of the people of the North when considering the area for possible storage of nuclear waste and to involve them in a meaningful way in the process of planning for and dealing with this national problem.

- work cooperatively with state and local units of government in meeting national environmental objectives.

- assist the people with development policies which emphasize the region's economic advantages.

- insist that "acid rain" which originates from areas far removed from the north be controlled.

Historically, the number of jobless and underemployed people in the North has been higher than elsewhere. Per capita income and family income are lower. Many jobs are seasonal. Trends indicate that the creation of new jobs will be modest. The greatest opportunity lies in expansion of existing businesses. Mining may occur in limited areas. Although the number of farms will decline somewhat, agriculture appears to be stabilized. As forests mature, wood products harvesting and processing will expand.

In summary, new economic activity and growth will originate largely within the North but will be influenced to a great degree by outside forces; energy costs, interest rates, capital, and availability of state and federal funds. The fact that much of the growth will occur from within the area provides the citizens with a great opportunity to influence that growth. Private sector decisions made cooperatively with public agencies can insure that growth is compatible with sound land use planning. Examples of approaches which offer promise for both environmental quality and

Future of the bay

VICTORIA HARRIS, DNR Planner, Green Bay



Photo by Jean Meyer, courtesy of Linnea Probert, project assistant, Environmental Remote Sensing Center, Institute for Environmental Studies, UW-Madison

Green Bay is a prime example of the best and the worst of the Great Lakes. The bay's amenities and resources are heavily used by North-eastern Wisconsin residents and attract thousands of tourists every year. But the complex array of multiple uses and human development have led to serious water quality problems, particularly in the southern end of Green Bay.

In 1978 the Great Lakes Fishery Commission initiated a study of the technological, political and socio-economic feasibility of rehabilitating Great Lakes ecosystems. Green Bay was selected as one of two test sites because of the high level of ongoing management and research activities. The Green Bay study group identified the major stresses impacting the Green Bay ecosystem and proposed alternative management strategies for alleviating these stresses. Well over 100 local, state, federal and international agencies or units of government are involved in managing some aspect of Green Bay's resources. The challenge is to coordinate the policies, programs and resources of diverse and sometimes disparate groups in order to achieve common goals of sustained multiple uses and a quality environment.

At the local level, the challenge of consensus management of Green Bay has been taken up by government, resource agencies, universities and special interest groups coordinated by the Bay Lakes Regional Planning Commission. The collective group, known as "Future of the Bay," has spent the past two years dealing with sensitive issues like dredge spoil disposal, conflicts between commercial and sport fishermen, toxic contaminants and nonpoint source pollution. The primary objectives of "Future of the Bay" have been to explore resource use conflicts, develop acceptable alternatives, encourage inter-agency cooperation and planning, identify research needs, and inform affected citizens. Although full consensus is rarely achieved, "Future of the Bay" provides opportunity for the expression of diverse opinions, consideration of new ideas, and coordination of many resources for more holistic management of Green Bay.

improving the quality of life follow:

- increase existing wage levels.
- provide opportunities for jobs to young people.
- upgrade job skills.
- assist the small retail, service and tourism industries.
- help small business secure assistance from financial institutions and state and federal economic development agencies.
- help lending institutions find capital and operating funds for the special needs of the many small businesses.
- reduce the energy dollar drain by instituting vigorous energy conservation programs.
- insist that mining, where it occurs, be done under strict environmental controls; in some fragile areas it may be necessary to limit mining.
- maximize employment opportunities in the harvest of forest products.
- insure that existing and new tourism facilities be carefully designed and located so they do not adversely affect the environment. ☐

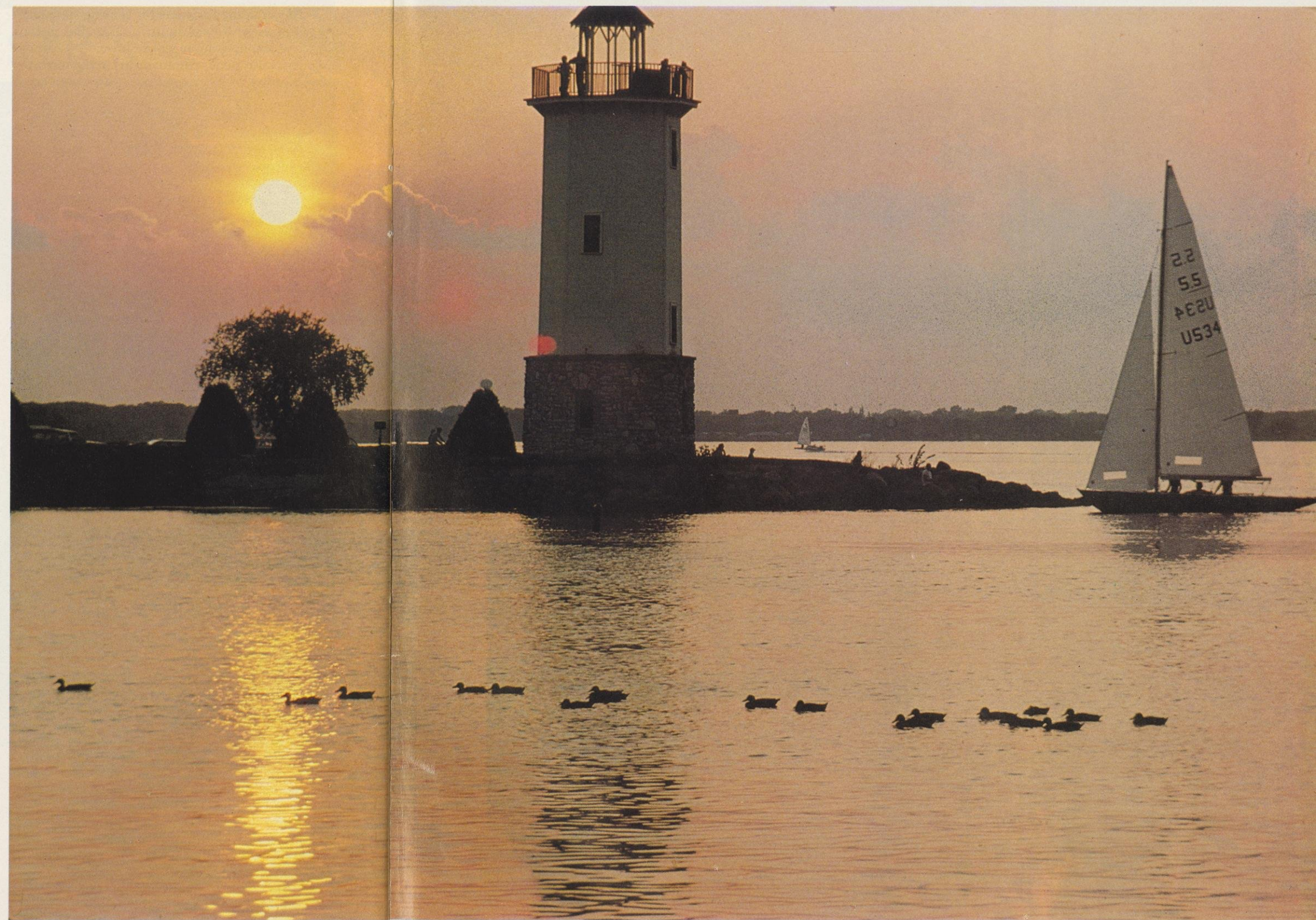
Chequamegon bay 2,000

A long range planning group charting the future of the Chequamegon Bay area has come up with a series of ideas designed to make that part of the North an even better place to live. Called Chequamegon Bay 2,000 (CB 2,000) the group will lay out a time schedule for accomplishing improvements proposed by several study committees.

Recommendations from committees include proposals for the future of recreation fisheries, the environment, area development, arts and culture, human relations, energy, tourism, agriculture, forestry and government relations. The public will have a chance to vote on final recommendations. CB 2,000 is sponsored by the Sigurd Olson Environmental Institute.

Proposals include a lakeshore trail, better access to the Apostle Islands National Lakeshore, a marina on Little Sand Bay, fish farming, easing of Indian-White fishing conflicts, improved woodlot management, year-round tourist promotion, farmland preservation, joint purchasing by governmental groups and cooperative solid waste management. CB 2,000 is also studying nuclear waste disposal and Project ELF.

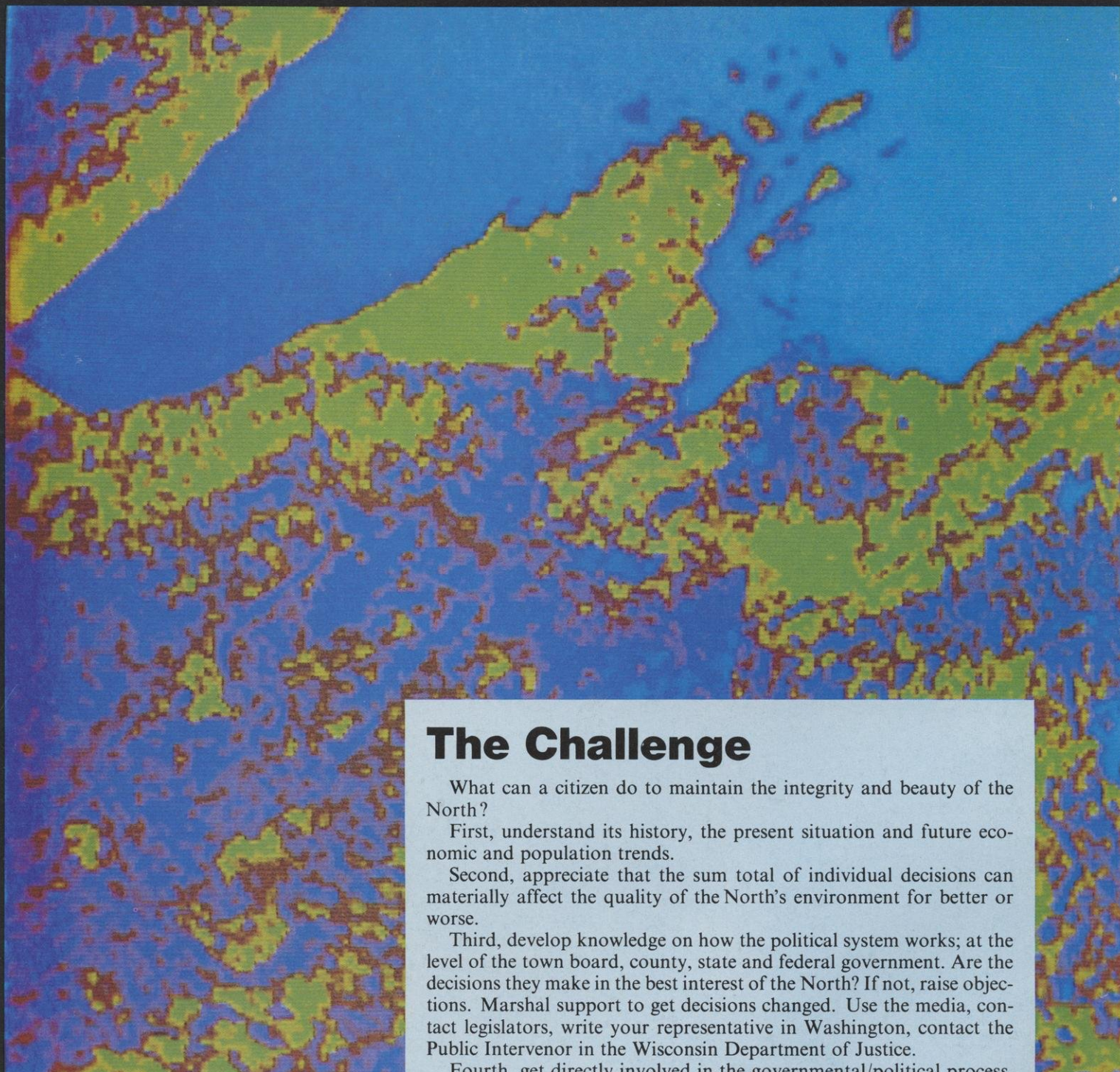
Planning, cooperation and commitment by individuals and government at all levels will give Northwoods residents a future they can live with.



Back Cover:

Crowning Wisconsin's Northwoods, Lake Superior points like a giant finger toward America's heartland.

Photo by Jean Meyer, courtesy of Linnea Probert, project assistant, Environmental Remote Sensing Center, Institute for Environmental Studies, UW-Madison



The Challenge

What can a citizen do to maintain the integrity and beauty of the North?

First, understand its history, the present situation and future economic and population trends.

Second, appreciate that the sum total of individual decisions can materially affect the quality of the North's environment for better or worse.

Third, develop knowledge on how the political system works; at the level of the town board, county, state and federal government. Are the decisions they make in the best interest of the North? If not, raise objections. Marshal support to get decisions changed. Use the media, contact legislators, write your representative in Washington, contact the Public Intervenor in the Wisconsin Department of Justice.

Fourth, get directly involved in the governmental/political process. Serve on advisory committees, and planning commissions or run for political office.

Fifth, insist that a dialog on the future of the North begin now. Encourage discussion and debate of problems and opportunities through radio and TV, the press, before governing bodies, in churches, schools and with local civic organizations. What kind of North do you want? The burden rests with each citizen. Don't be silent!

Lastly, get involved with public and private planning agencies; the town or county planning commission, the land conservation committee of the county board, the regional planning commission, with state planning agencies. The goals are enhancement of the North's quality of life and prudent management of its resources, environmental quality, scenic beauty and ecological diversity and integrity. Only through personal involvement and thoughtful and deliberate planning, both public and private, can they be achieved.

HAROLD C. JORDAHL, JR.

