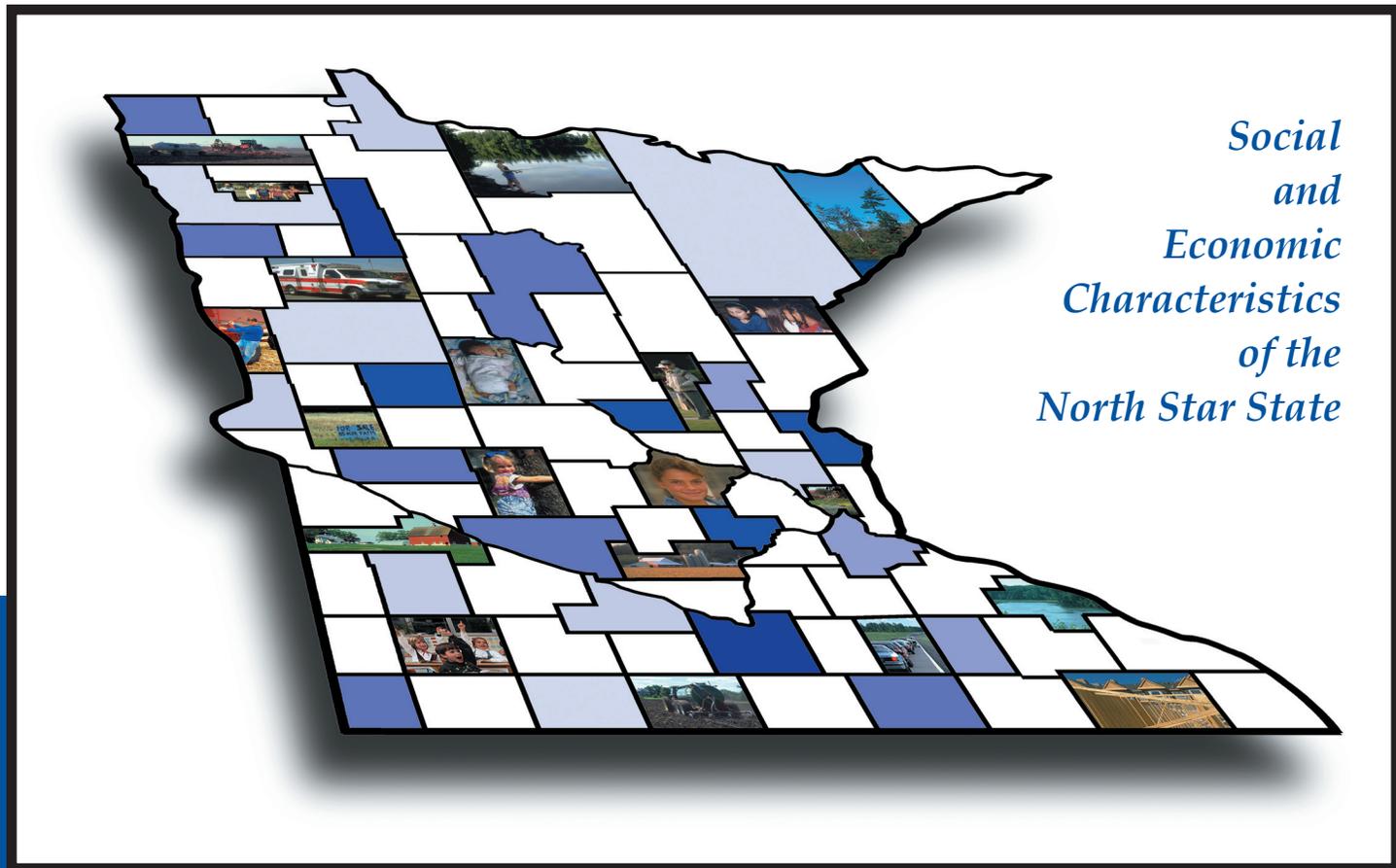


Atlas of Minnesota

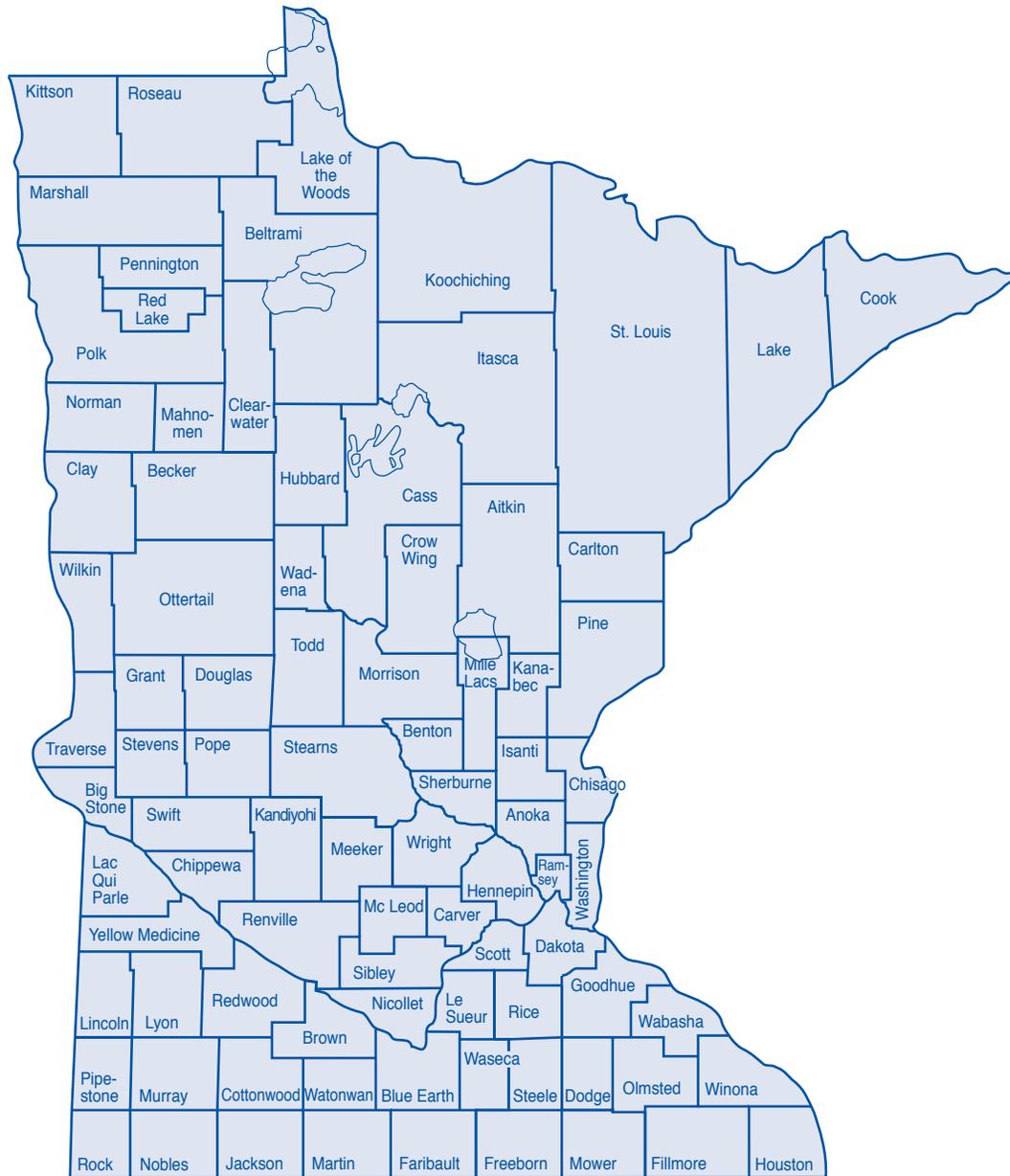
2nd edition



*Social
and
Economic
Characteristics
of the
North Star State*

A joint project of the **CENTER FOR RURAL POLICY AND DEVELOPMENT**,
BLANDIN FOUNDATION, and **UNIVERSITY OF MINNESOTA EXTENSION SERVICE**

Atlas of Minnesota



Social and Economic Characteristics of the North Star State

A joint project:

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BLANDIN FOUNDATION
UNIVERSITY OF MINNESOTA EXTENSION SERVICE

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NOTE:

Please note that in this *Atlas of Minnesota* we used the following conventions. We chose to avoid the use of gray for negative numbers so that, should the color maps be printed from the CD on a black and white printer, the distinction between shades would remain clear. Also, we standardized the look of the maps by using lighter shades to indicate smaller attribute values (including negative values) and darker shades for larger attribute values.

Foreword

Building on the success of the first Atlas of Minnesota released in April 2000, the Center for Rural Policy and Development, the Blandin Foundation and University of Minnesota Extension Service have joined in partnership to create the Second Edition. It was a partnership destined to succeed. The three organizations share many core values: a commitment to rural Minnesota; a concern for the economic vitality of our state; and a belief in people and outreach education.

The real value of our organizational partnership was the unique skills, talents and perspectives that each organization contributed. Blandin Foundation's history and skills in leadership development ensured that the information analyzed in the Atlas would have value and meaning to Minnesota's community leaders. Its capacity to bring community leaders into focus groups to discuss the content and organization of the Atlas was invaluable.

The University of Minnesota Extension Service, with its technology, cartography specialists, and production capacity made the entire production process work. Equally important was the input and feedback from Extension Educators throughout Minnesota that ensured that the information would enhance community development and vitality.

And the Center for Rural Policy and Development, the original creators of the Atlas of Minnesota in 2000, built upon their past success and spotted pitfalls to avoid in this new venture. Their capacity to work with more than a dozen state agencies to acquire and sort through volumes of data was critical to the project.

We learned from the release of the first Atlas that a resource document is often used by more people in many more ways than anyone first anticipated. We were able to use the synergy of our collaboration to discuss and target new audiences for the Atlas that individually we never could have. That synergy reminded us that the total is greater than the sum of its parts.

We also are proud that our partnership allowed us to create an atlas that is larger than the first and has enhanced features. This 2nd Edition of the Atlas has expanded from its original 90 maps to more than 150. Commentary from experts across the state was added to provide meaningful interpretation to the analysis of individual maps and whole chapters. And we have included an interactive CD version that contains all the maps and underlying data of the Atlas. So now you are not limited to our analysis—you can make your own maps and explore your own geographies. These data include information for “minor civil divisions” (cities and townships) that are not included in the print version of the Atlas.

Ultimately, the value of any resource document is its ability to provide information to drive or support decisions. People used the Atlas in ways that we never imagined, so we hope that this 2nd Edition, with its expanded capacity, will find even more uses among public officials, community and state leaders, nonprofit agencies and organizations, teachers, students and the general public. If the Atlas highlights anything, it is our diversity—the diversity of our people, economy, natural resources, culture and scenery. And it is that wonderful social, cultural and economic mosaic that makes up the “North Star State.”

As always, we welcome your comments and thoughts on this 2nd Edition of the *Atlas of Minnesota*.



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The following people and their associates contributed valuable time to ensure that every map in the *Atlas* was reviewed. Barbara Weisman and her co-workers at the Department of Agriculture were particularly industrious and helpful.

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Department of Economic Security	Minnesota State Arts Board
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Department of Revenue	USDA Rural Development
Department of Trade & Economic Development	
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Minnesota in Regional Context

Minnesota is a very diverse state, reflecting from east to west and north to south the diversity of the North Central region of the United States. The eastern part of the state is very similar to those states east of the Mississippi River—Wisconsin, Illinois, Indiana, Ohio, and Michigan. The western part of the state resembles the western part of the region, which includes North and South Dakota, Nebraska, Kansas, Missouri, and Iowa. The important trends Minnesota is facing can be seen in a regional light. Population distribution, increasing diversity, income distribution, unemployment and aging are all significant to Minnesota and to some, but not all, of its regional neighbors.

Population Distribution

Throughout the region's major metropolitan centers, areas of high levels of amenities and Indian reservations are areas of high population growth. Modest growth occurred in the rest of the region, where a sharp population decline occurred primarily in counties on the agricultural plains. Population change outside of urban areas in the region is related to the low level of natural amenities. The North Central region, as a whole, is notable for a lack of natural amenities. The Arrowhead Region of Minnesota is a relatively high-amenity area, as are other areas in the region around the Great Lakes, which has had an impact on population growth in that area.

Compared to the eastern part of the North Central region, Minnesota has relatively few metropolitan areas. The metropolitan areas in the region have younger populations than rural areas. Areas of population growth that are attractive to young people exhibit the advantages and disadvantages that come from a younger population—higher levels of school age population, high birthrates, lower percentages of older people, higher rates of single-parent households and higher levels of childhood poverty.

Like the western part of the region, Minnesota has a number of counties that are non-adjacent to any metropolitan area and do not have a city of over 10,000 people. The southern and western parts of the state mirror the part of the region west of the Missouri River where there are non-adjacent counties with no city population greater than 2,500 people. These are the areas that have, unfortunately, continued to have population decline and as noted later, an aging population.

Diversity and Migration

Like the entire region, Minnesota grew more diverse between 1990 and 2000. Minnesota's rural areas have increased in diversity more rapidly than urban areas, as is true of all the other non-metropolitan counties in the region. Minnesota has a higher proportion of Asian minorities than the surrounding states, particularly in the metropolitan and adjacent counties. Minnesota's Latino population increased by over 160%, growing faster than in any other state in the region between 1990 and 2000.

Income

As in the rest of the region, Minnesota experienced a large increase in income between 1989 (the year data were collected for the 1990 census) and 1999, a boom year, and the one in which data were collected for the 2000 census. The poverty data therefore are pegged on the best year, although the poverty rates have increased throughout Minnesota and the region since 1999.

Minnesota had the highest per capita income in the region, but also showed one of the greatest income spreads in the region. Minnesota's median income is very similar to the national median income. It is higher around the Twin Cities and lower in the western part of the state. Minnesota's per capita income is higher than in the states of the region west of the Mississippi and about equal with median household incomes in the region east of the Mississippi. The rural-urban income differential mirrors the region, where low levels of median household income are in southeastern Missouri, areas of the Great Plains and a few places in upper Michigan.

Unemployment

The region as a whole has relatively low unemployment rates, which is in part because workers without jobs tend to migrate. There are only a few places where the unemployment rate is greater than that of the United States as a whole. Unfortunately, these areas tend to be related to Native American reservations. Areas in the region with large Native American populations are also areas of high poverty and younger populations. Minnesota's unemployment rate in 2002 was below the national average, higher than that of South Dakota and Nebraska, but lower than the unemployment rate in Kansas, Missouri, Illinois, Wisconsin, Michigan, Indiana and Ohio.

Aging Population

Like much of the region, Minnesota's population is aging in place. The places in the region that have many amenities are becoming popular counties for retirees. In general the relatively high proportion of those 65 and over in Minnesota reflects the age distribution for the region. That there are few metropolitan areas throughout Minnesota which draw young people from rural Minnesota (as well as other areas), contributes to the rising average age in many areas of Minnesota.

Minnesota faces a number of challenges and opportunities in the 21st century. While its neighbors share in some of these challenges, globalization, technology and related changes in demographics and the economy have left a unique imprint upon Minnesota and its future. Its position as a leader in the region in terms of high quality services is challenged by the fiscal crisis of state, federal, and local governments. Its solid population base of relatively highly educated and healthy people can be a bridge over difficult times, and a beacon for other states in the region facing similar challenges.

*Dr. Cornelia Butler Flora
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People

The expression “Change is accelerating” is heard everywhere today, especially in reference to technology, where change occurs at a lightning pace. Demographic change, on the other hand, often happens at a glacial pace. In general, that slow but steady pace is especially true of aging, which affects most communities around the nation, where each year gray hair becomes a bit more common and children less common.

During the past decade, however, some rural communities experienced rapid change, while others, often their neighbors, did not. In the new growth communities, what had been steady or declining population began to grow, new languages and cultures were added, more children enrolled in schools, more babies were born, new industries and jobs were added, new houses built and old houses reoccupied.

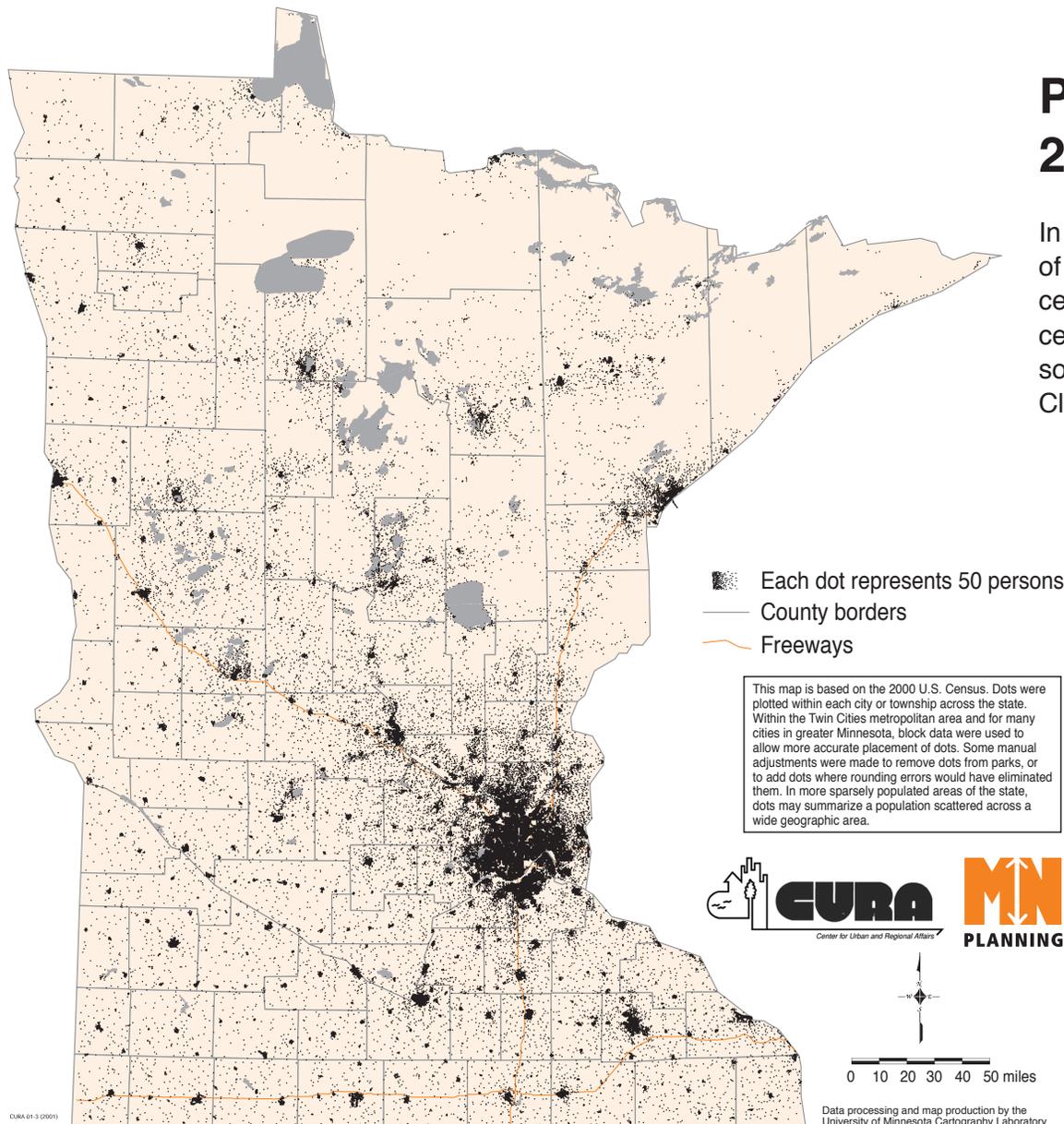
The economic and social impact of these changes has been complex and profound. The past decade was a time of new residents, new jobs, labor shortages, higher incomes, and lower poverty. Job growth and the tight labor market contributed to many of the changes, and the fundamentals underlying the tight labor market still exist. This decade and the next promise to be times of continued growth. These are exciting times in the demographics of rural Minnesota and Minnesota as a whole.

Tom Gillaspy
State Demographer



Population Density in 2000

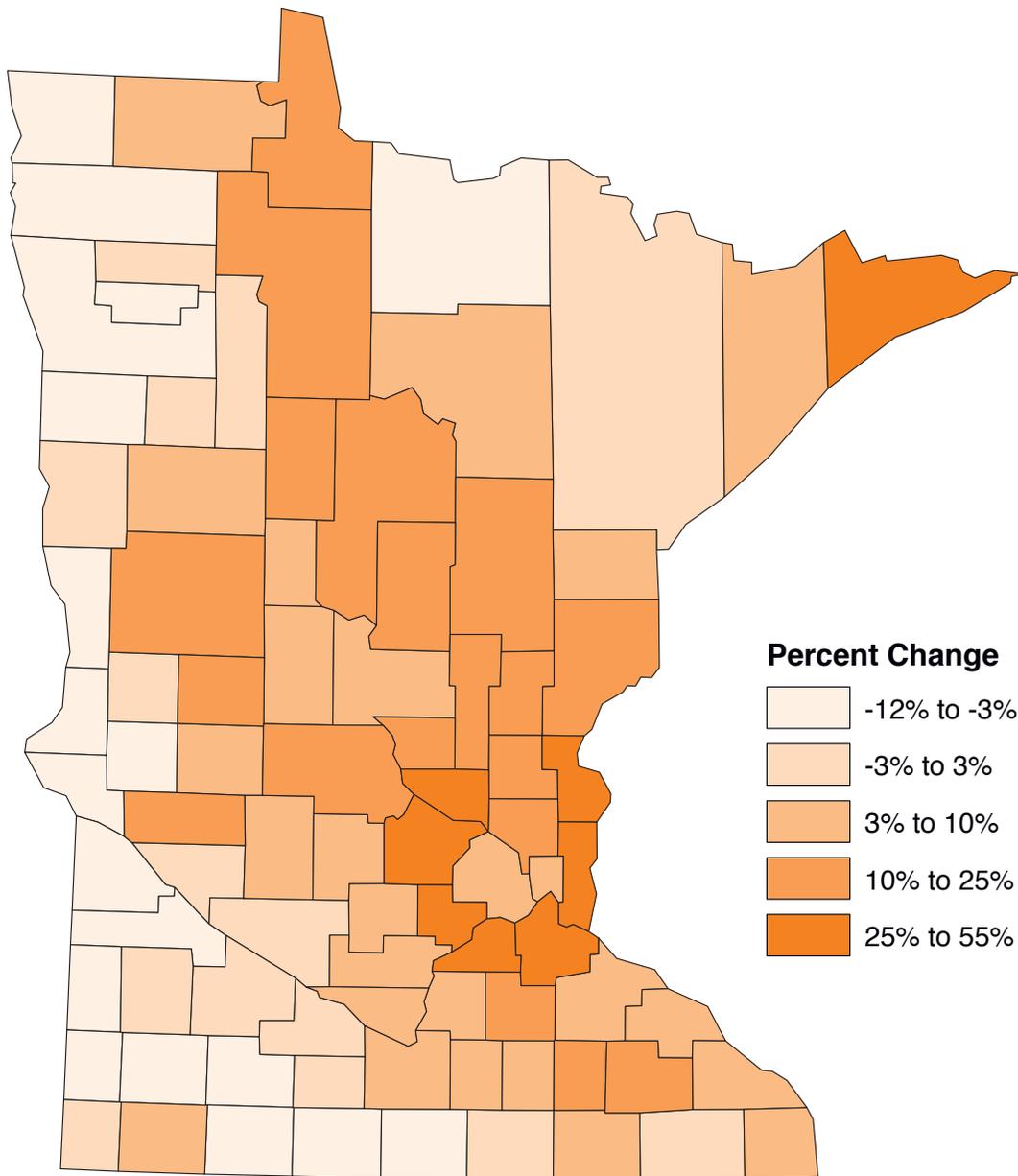
In the 1990s, more than ever before, the population of Minnesota moved increasingly toward regional centers. The state's population is especially concentrated in a band stretching from the Twin Cities southeast to Rochester and northwest through St. Cloud and up into the central lakes region.



Source: U.S. Census, 2000

Population Change, 1990–2000

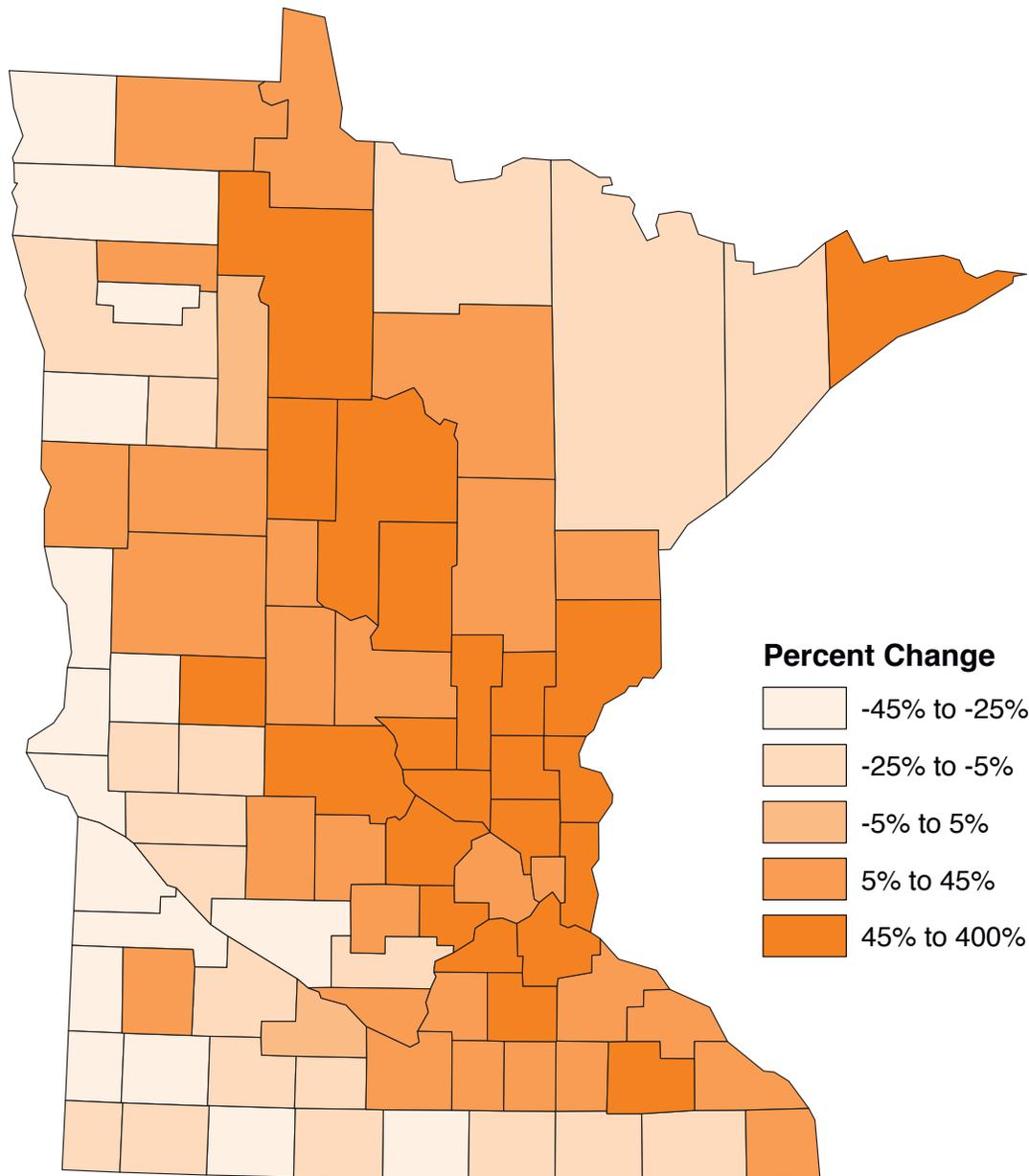
During the 1990s, the population of the state grew by approximately 500,000 residents, from 4.4 million to 4.9 million, but that growth was not evenly spread throughout the state. Counties within 50 to 75 miles of the Twin Cities showed dramatic growth, especially Sherburne, Carver and Scott counties, and the swath continued up into the high-amenity lakes region. Meanwhile, the far western and southern counties continued to lose population.



Source: U.S. Census, 2000

Population Change, 1960–2000

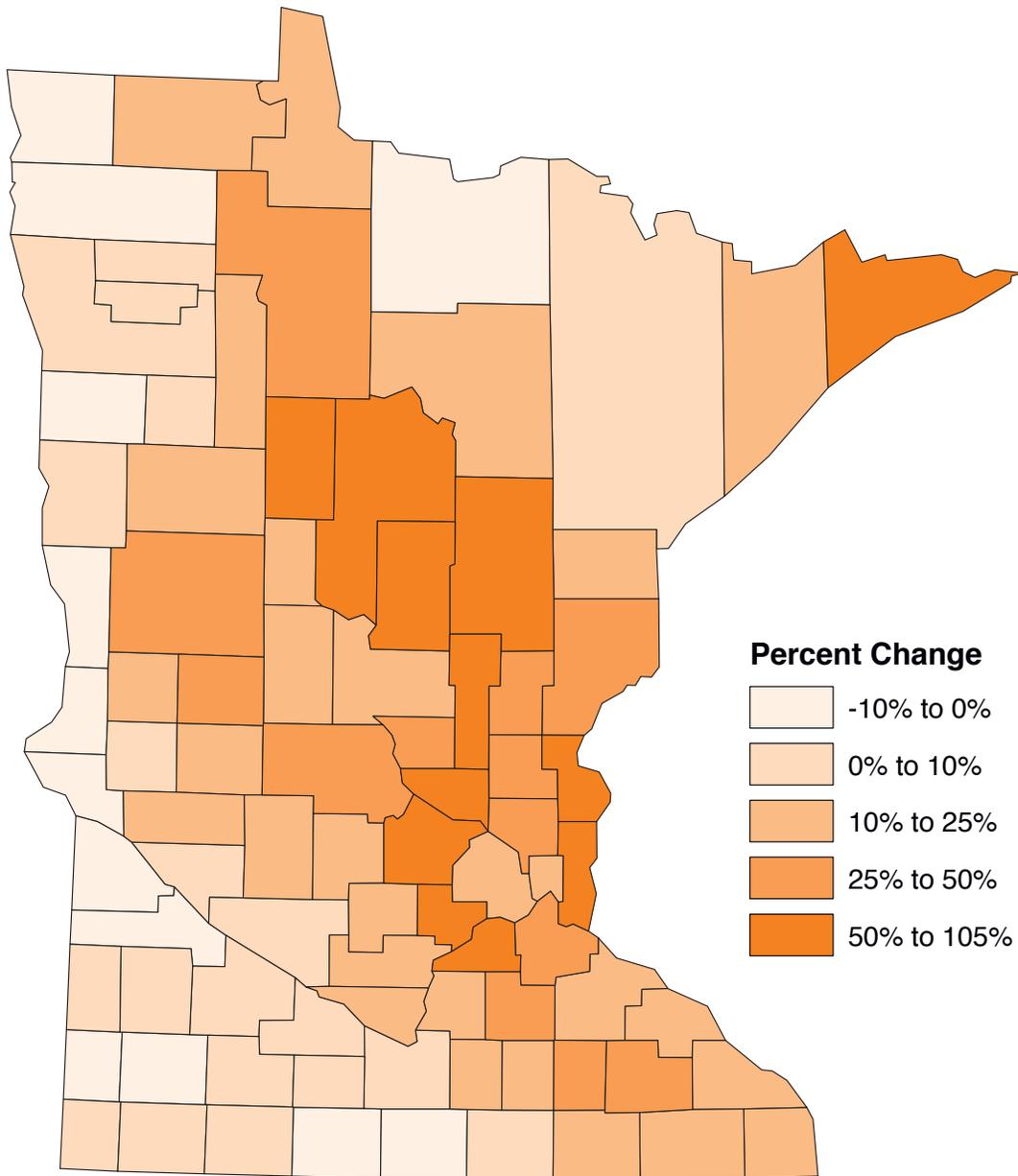
The population patterns of the 1990s are only a continuation of trends over the last forty years. Population shifted to the metropolitan areas of the Twin Cities, St. Cloud and Rochester, and at an only slightly lesser rate up through central Minnesota, while people left the mostly agricultural counties of the west and south. One exception is Lyon County, in southwestern Minnesota, which grew 12% since 1960, due in part to the presence of a university and a large immigrant population.



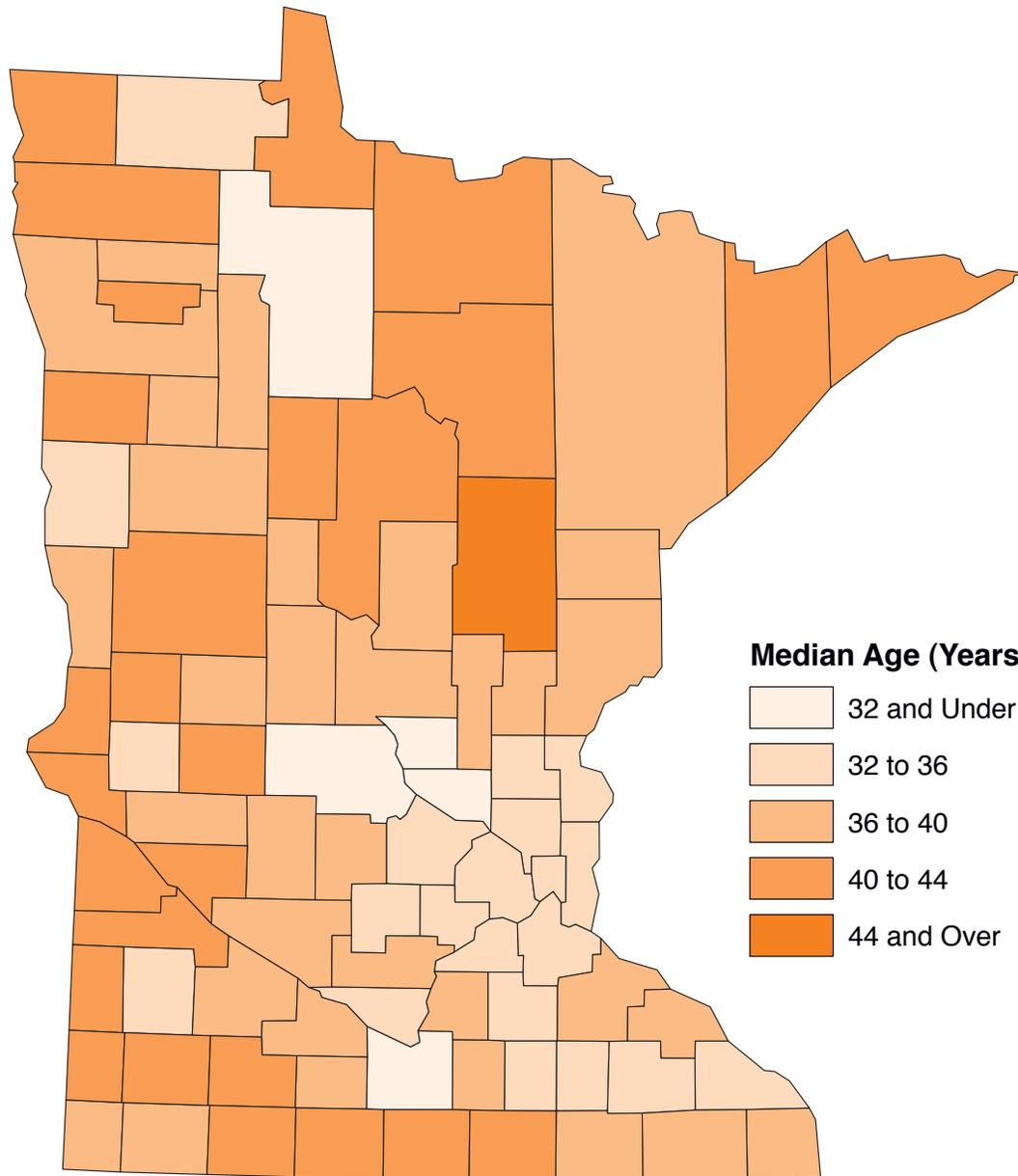
Source: U.S. Census, 2000

Projected Population Change, 2000–2030

Minnesota’s State Demographic Center projects that the population trends will continue much as they have: the western and southern counties will lose population, while growth will continue to radiate out from the Twin Cities and north into the central lakes region. The state’s total population is projected to increase by 27% in the next 30 years, but that population will also be aging, perhaps explaining some of the growth in the lakes and resort counties.



Source: Minnesota Planning, State Demographic Center



Median Age of Population, 2000

Median age (the age at which half the population is older and half the population is younger) gives an indication of the overall age of the population. In general, fast-growing suburban areas with young families (Sherburne, Wright and Scott), counties with higher education institutions (Lyon, Winona, Stearns and Blue Earth) and counties with large minority populations (Blue Earth, Clay and Beltrami) tend to have a lower median age. On the other hand, counties that have seen a steady emigration have a higher median age as the older generation stays in place.

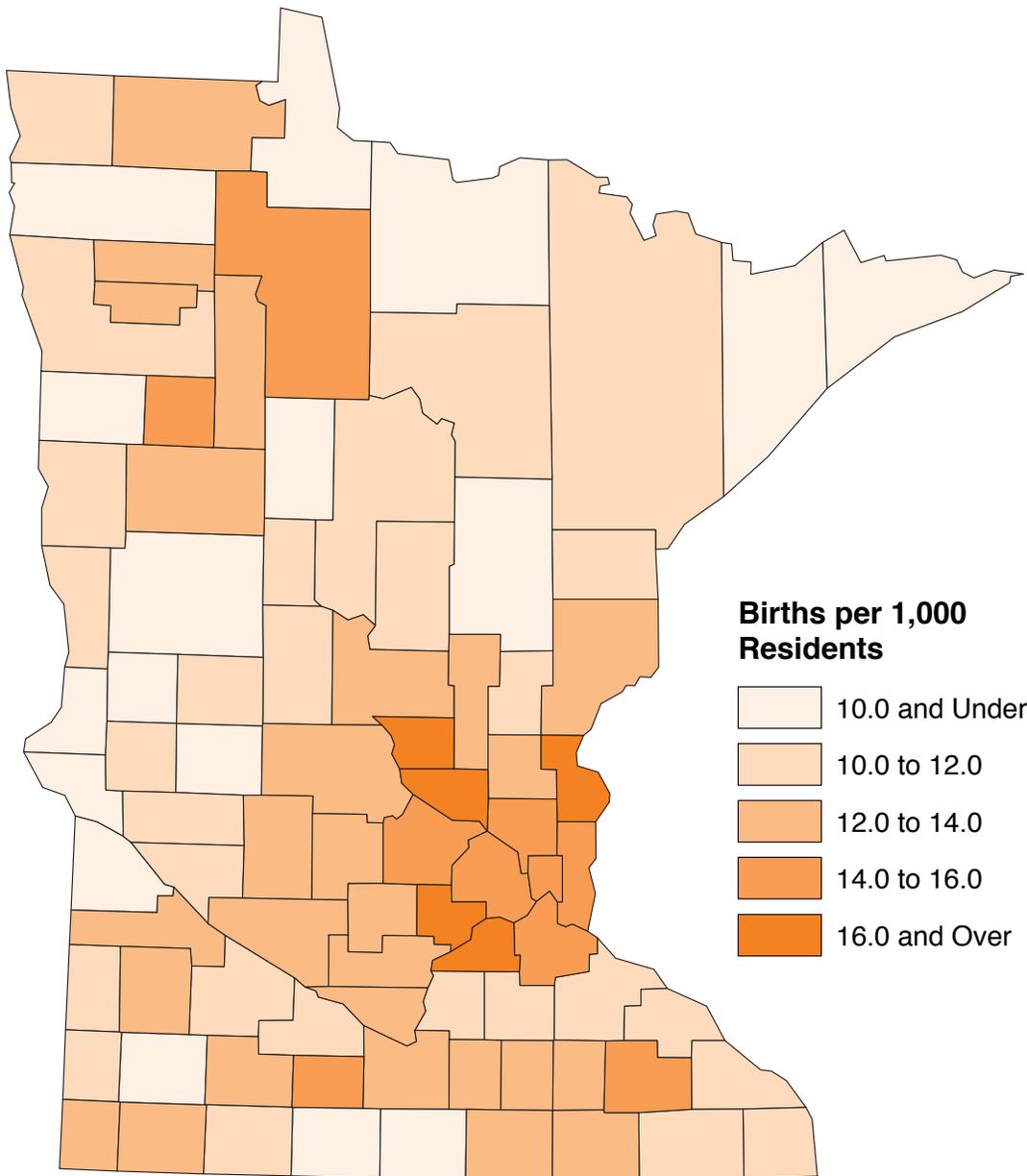
Median Age (Years)

- 32 and Under
- 32 to 36
- 36 to 40
- 40 to 44
- 44 and Over

Source: U.S. Census, 2000

Birth Rates, 2000

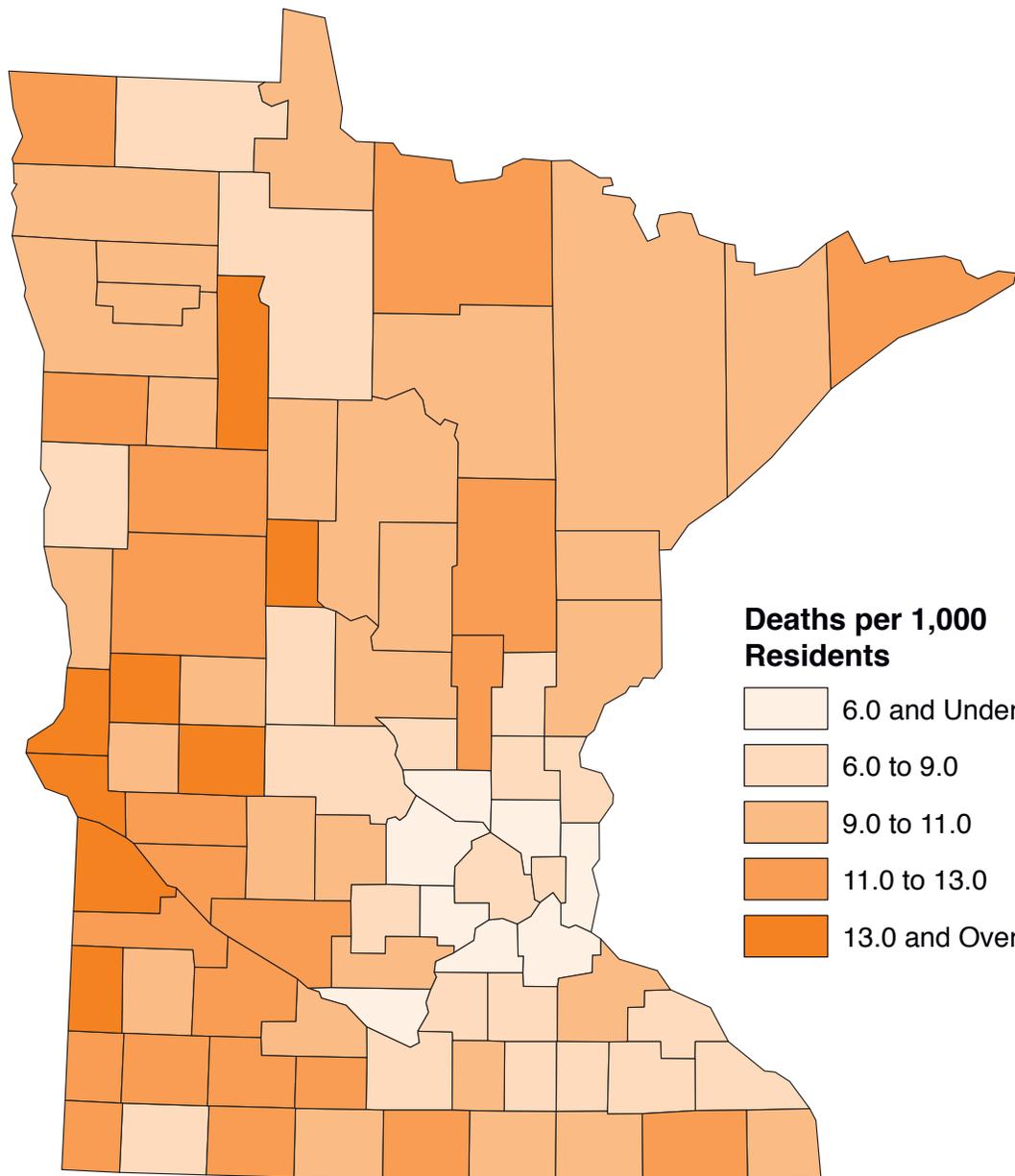
The birth rate was especially high in the ring counties of the Twin Cities and St. Cloud, with their large population of young families. Higher birth rates can also be seen in the northern counties with large Native American populations and in the southern counties, where young families of immigrants and ethnic minorities, who tend to have larger families, are settling.



Source: Minnesota Planning, State Demographic Center

Death Rates, 2000

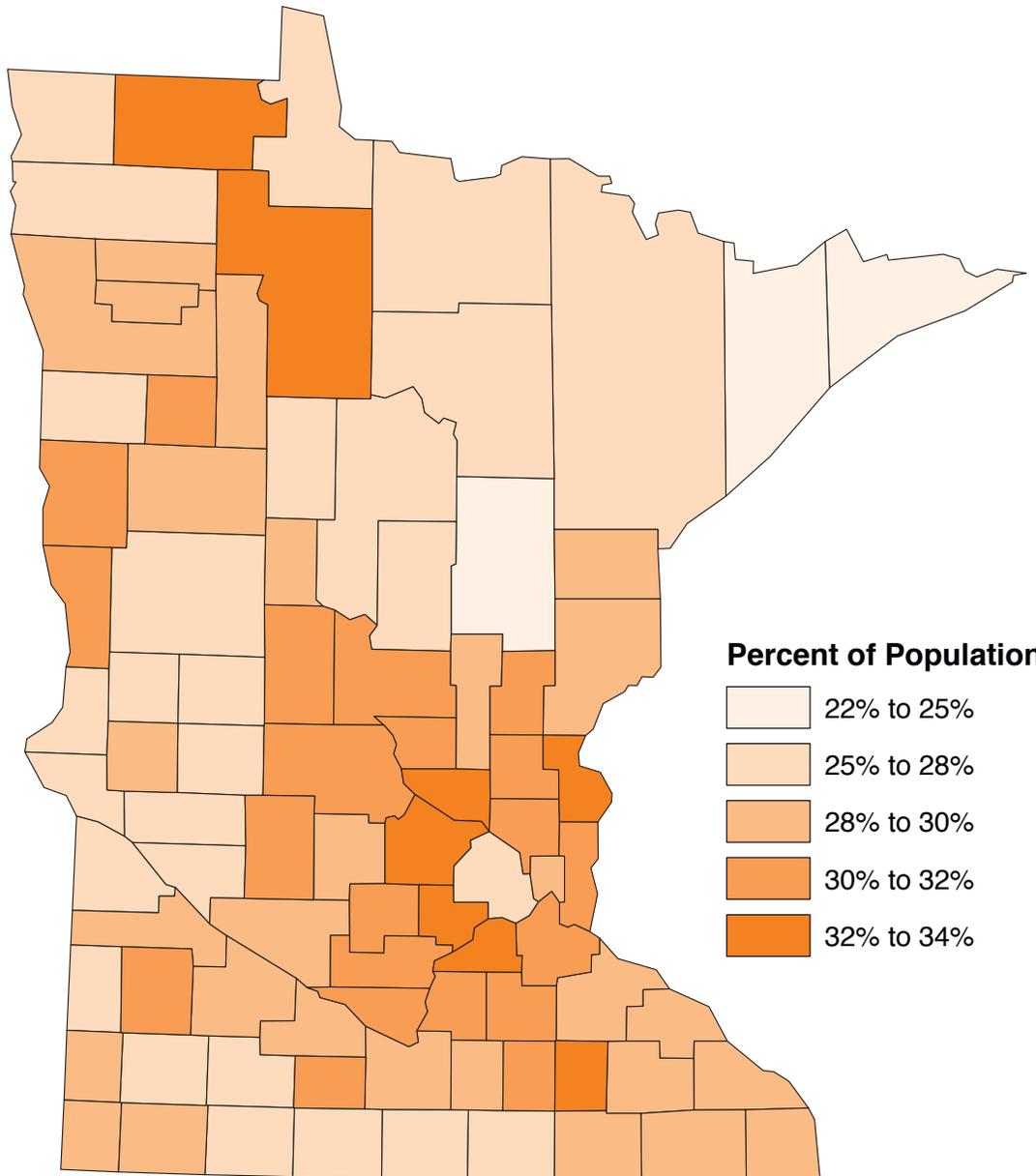
Death rates are higher in areas where there are proportionally more elderly residents. The younger population concentrates around the Twin Cities, St. Cloud and Rochester. The older population is clustered in the western and southern counties, where elderly residents have stayed in place, and in the northern counties, where many people have moved during their retirement.



Source: Minnesota Planning, State Demographic Center

Population Age 19 and Under, 2000

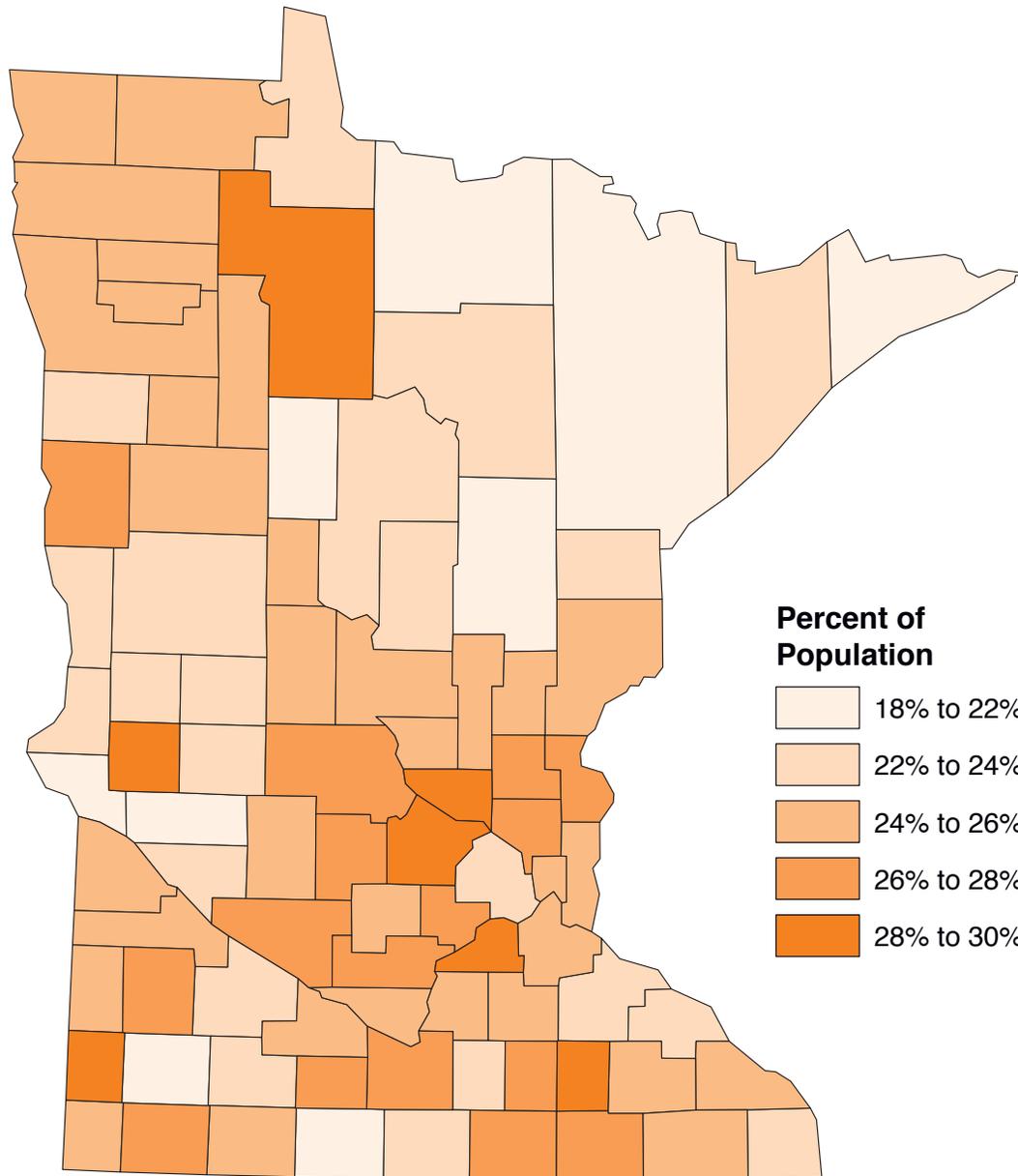
The high percentage of people age 19 and under shows the concentration of young families in the Twin Cities suburbs and St. Cloud. It also indicates the higher birth rate among non-white populations in northern and southern Minnesota.



Source: U.S. Census, 2000

Projected Population Age 19 and Under, 2030

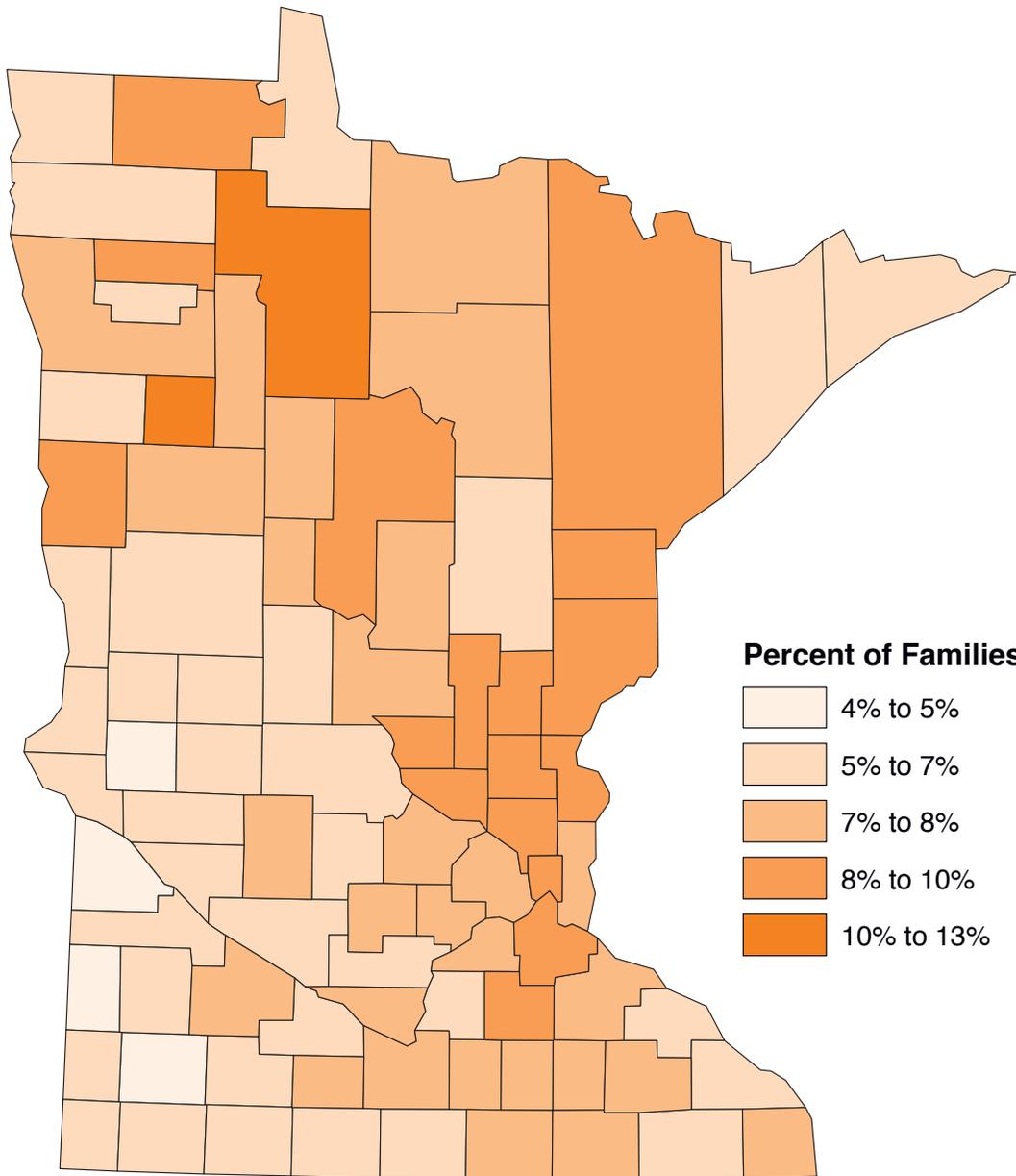
The under-19 population is projected to stay large in the Twin Cities suburbs. Likewise, in many rural counties the population of children is projected to increase, perhaps based on the growing ethnic diversity in these counties. Non-white families tend to be larger, giving a boost to many rural counties and school districts with sagging populations.



Source: Minnesota Planning, State Demographic Center

Single-parent Families, 2000

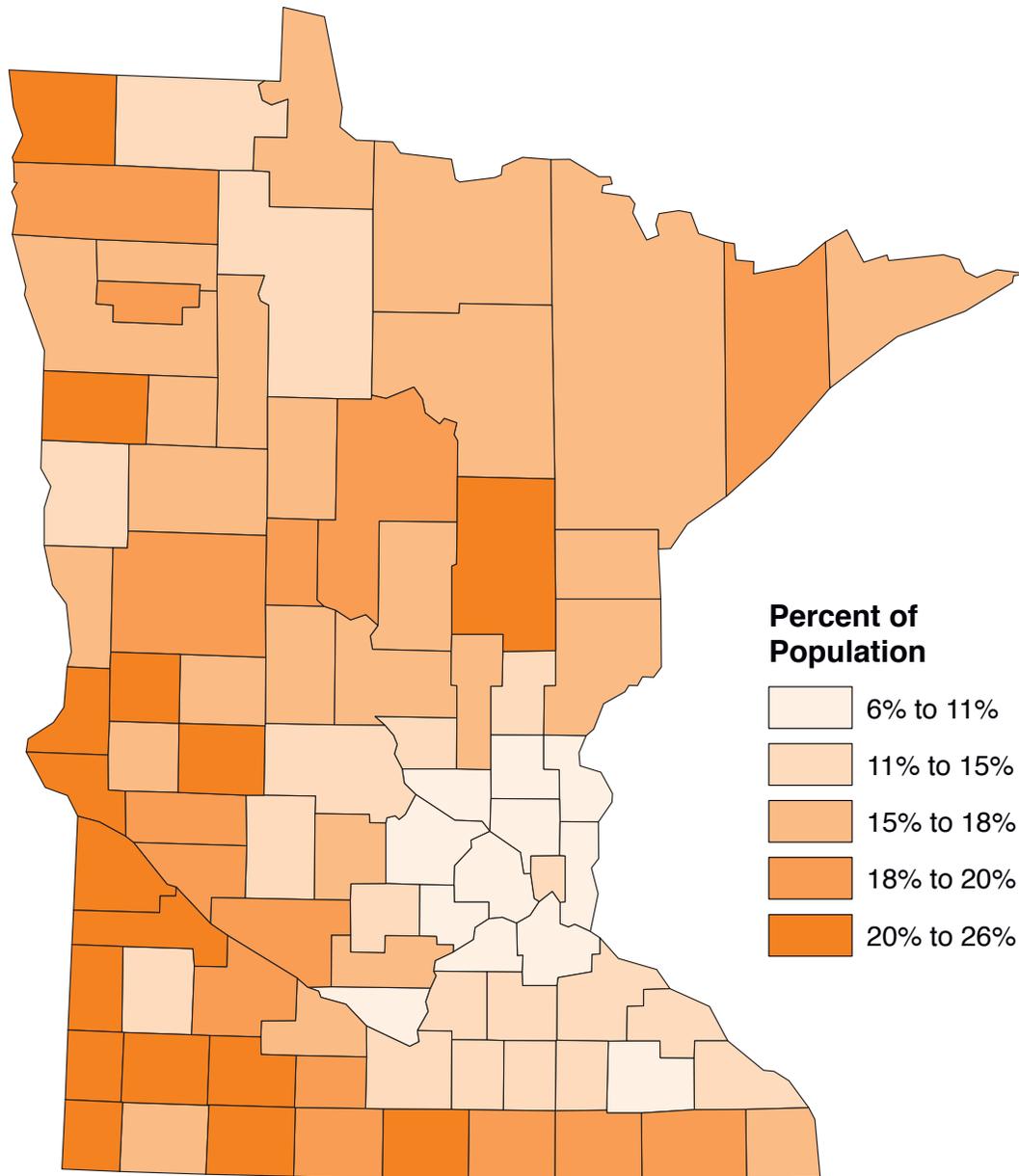
Census data show a distinct swath from the Twin Cities north through St. Louis County and northwest through north central Minnesota, indicating a demand in these areas for services such as affordable child care.



Source: U.S. Census, 2000

Population Age 65 and Over, 2000

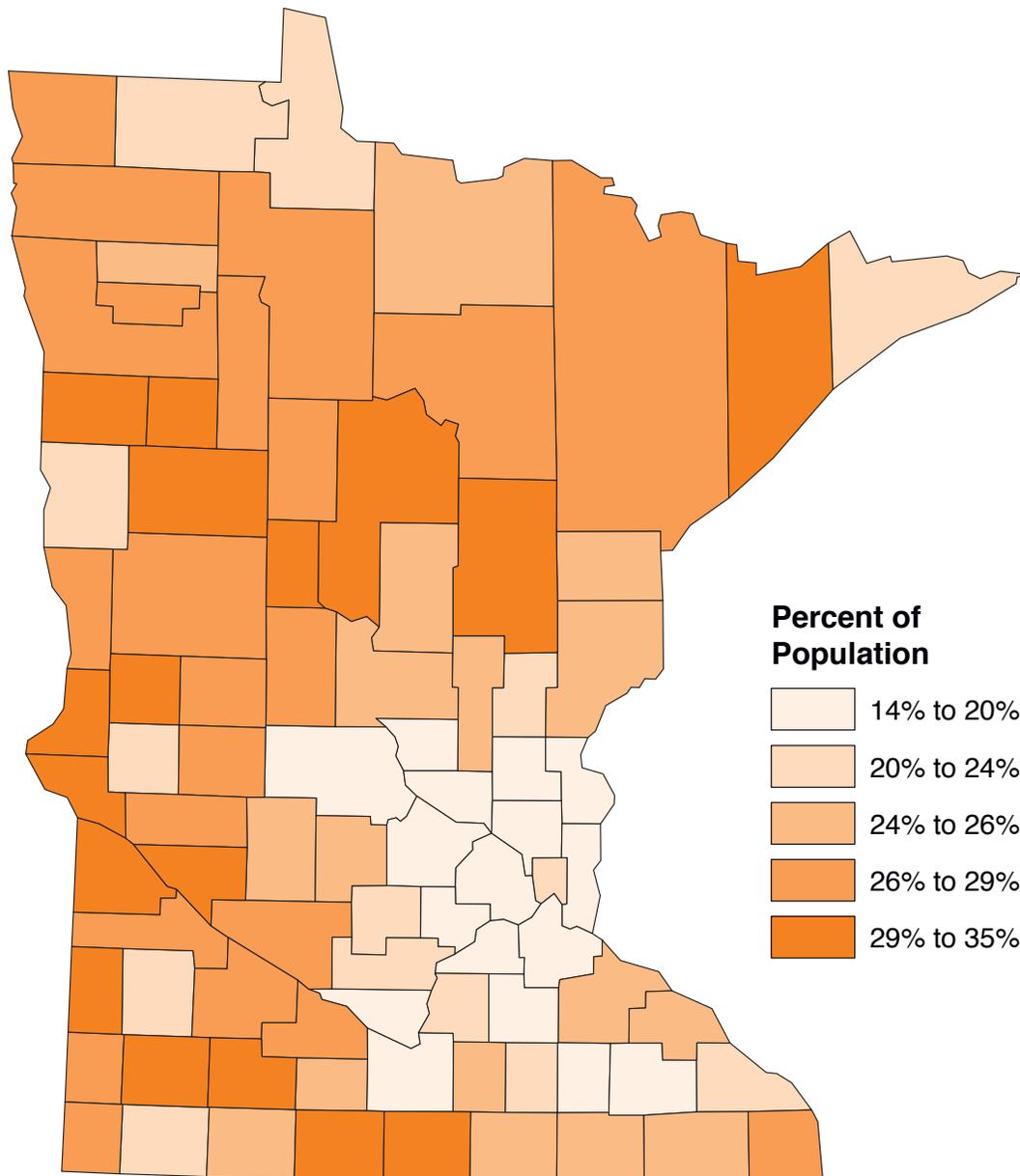
The shift of younger people from rural counties into the urban and suburban counties is apparent. The higher percentage of seniors remaining in rural counties has many implications such as a demand for increased levels of service to those living on low- and fixed-incomes.



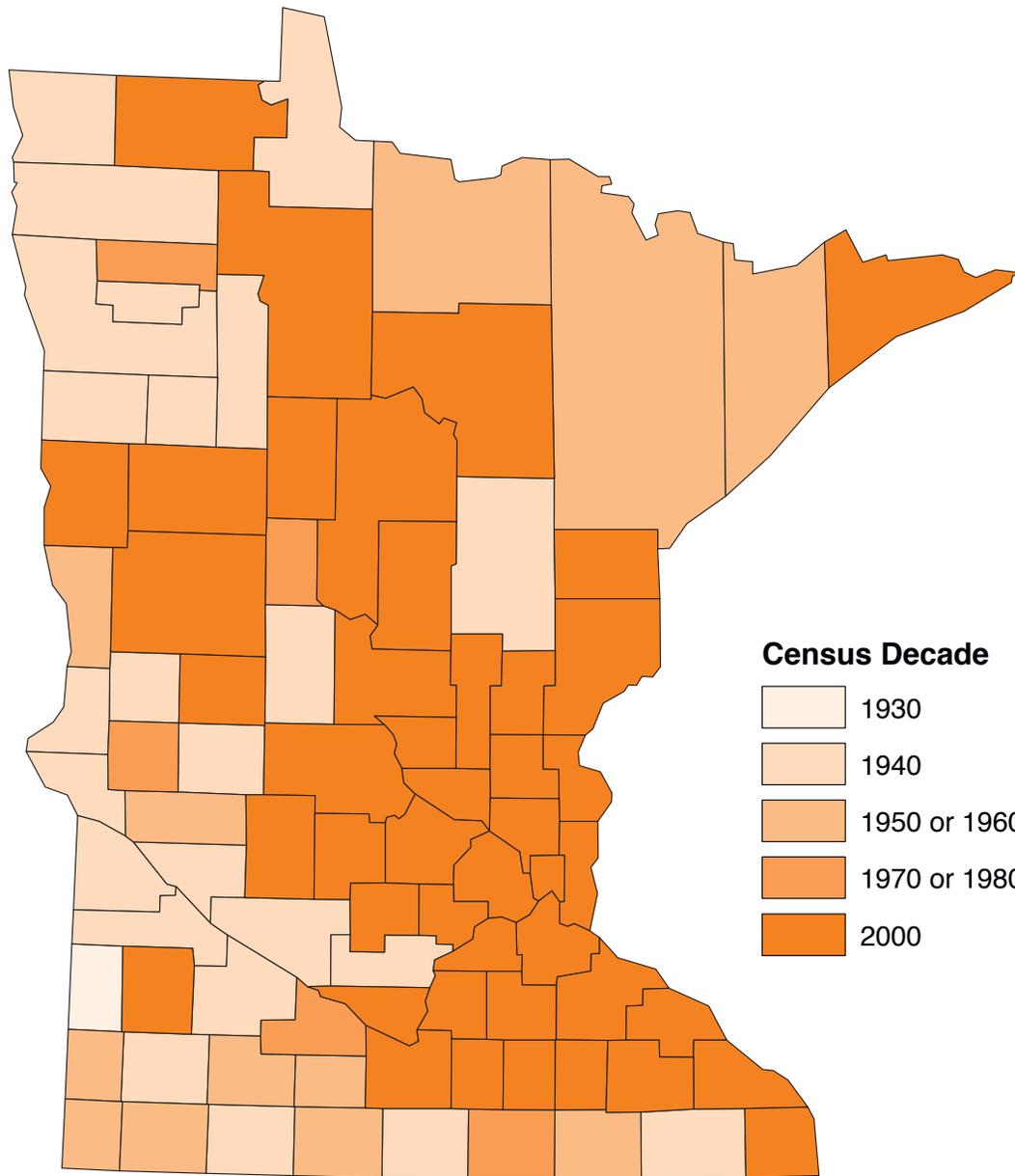
Source: U.S. Census, 2000

Projected Population Age 65 and Over, 2030

Minnesota's overall median age is projected to increase from 35.4 years in 2000 to 40.2 in 2030. The trend in aging is expected to continue along the same course as it has in rural Minnesota and even increase in counties attracting retirees. The trend, however, appears to be offset in some southern and western counties, like Blue Earth, Lyon, Clay and Nobles.



Source: Minnesota Planning, State Demographic Center



Decade of Peak Population

Another indication of the population shift occurring in Minnesota, “decade of peak population” shows the census year when a county reported its highest population. While the population of many western and southern counties peaked in 1940 or earlier, about half the counties reported peak population in the 2000 Census.

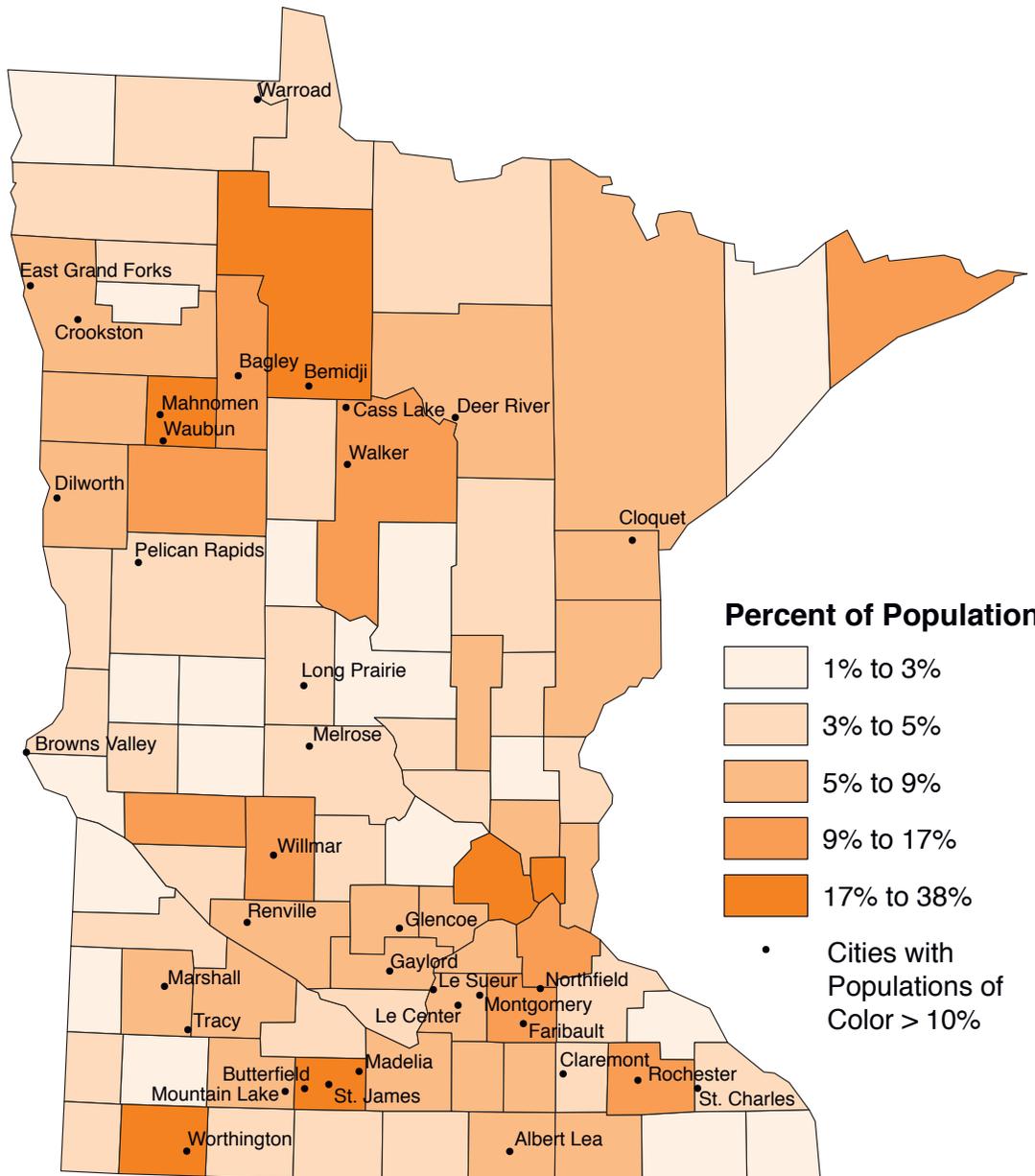
Census Decade

- 1930
- 1940
- 1950 or 1960
- 1970 or 1980
- 2000

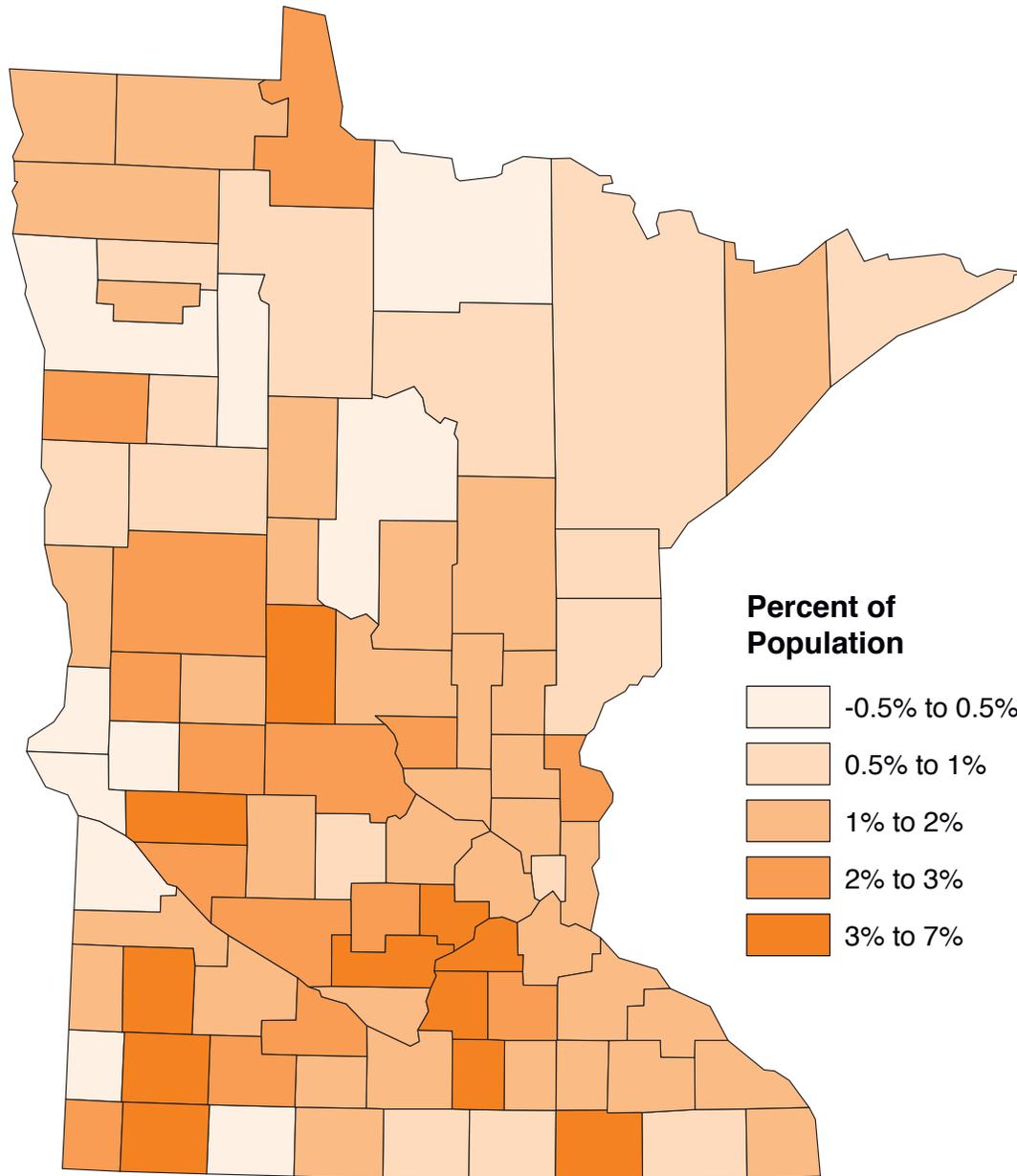
Source: U.S. Census, 1930–2000

Distribution of People of Color, 2000

While the vast majority of Minnesota's population is still Caucasian, the state's population of color has nearly doubled since the 1990 census, going from 6.5% of the population to 12.5% in 2002. While the core urban cities of Minneapolis and St. Paul have always had the most diverse population, many rural cities have also seen their minority populations grow. Cities in the north tend to have large Native American populations, while Latinos make up the largest ethnic groups in western and southern Minnesota.



Source: U.S. Census, 2000



Percent of Population

- 0.5% to 0.5%
- 0.5% to 1%
- 1% to 2%
- 2% to 3%
- 3% to 7%

Source: U.S. Census, 2000

Change in Distribution of People of Color, 1990–2000

Even though the state’s overall populations of color nearly doubled during the 1990s, much of that growth happened in specific areas. Northern counties saw little change as their Native American populations remained stable, but many western and southern counties saw dramatic growth in populations of color with the in-migration of Latinos, Laotians, Somalis, Sudanese, Hmong and other groups. Counties with large agricultural processing facilities like Lyon, Nobles, Rice, Le Sueur, Todd and Sibley saw especially high growth.

Housing

Quality housing is essential for the well-being of individuals, families, and communities. Critical housing issues can be found all across Minnesota, and affordability and availability top the list.

When the suburbs of the Twin Cities metropolitan area saw both economic expansion and rapid population growth during the 1990s, the intense demand for housing resulted in a housing crisis. New housing construction rarely kept pace with increased housing demands, and wages didn't often keep up with increasing housing prices.

Around the state, regional centers as well as many smaller towns face similar housing problems. New and expanding industry attracts new workers and results in a shortage of affordable housing. Many people are forced to commute longer distances, live in substandard overcrowded conditions or accept housing they can't afford.

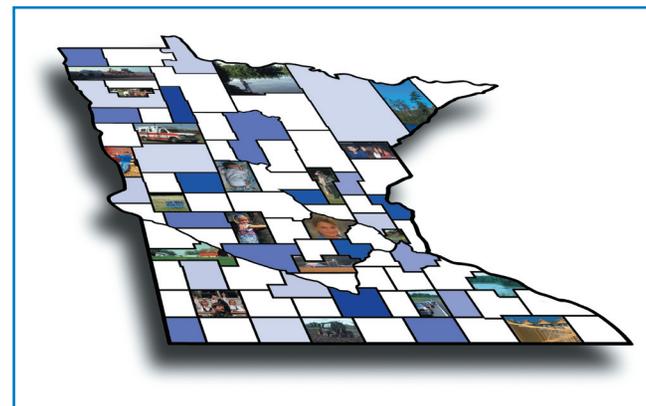
Conversely, some communities are dealing with economic stagnation or decline, declining population and an oversupply of housing. Here, elderly residents are often locked into older homes that become a burden to manage and maintain. Without alternative housing and difficulty in selling their existing homes, these homeowners struggle to maintain independent lifestyles.

Other housing concerns include evidence of predatory lending, leaving borrowers with unaffordable mortgages, financial risk and falsely inflated home values. Statewide, incidences of housing discrimination result in individuals and families denied access to housing—either rental or homeownership—because of their race, religion, color, disabilities, family status or number of children. New immigrants, seasonal migrant workers and others have particular difficulty obtaining adequate affordable housing.

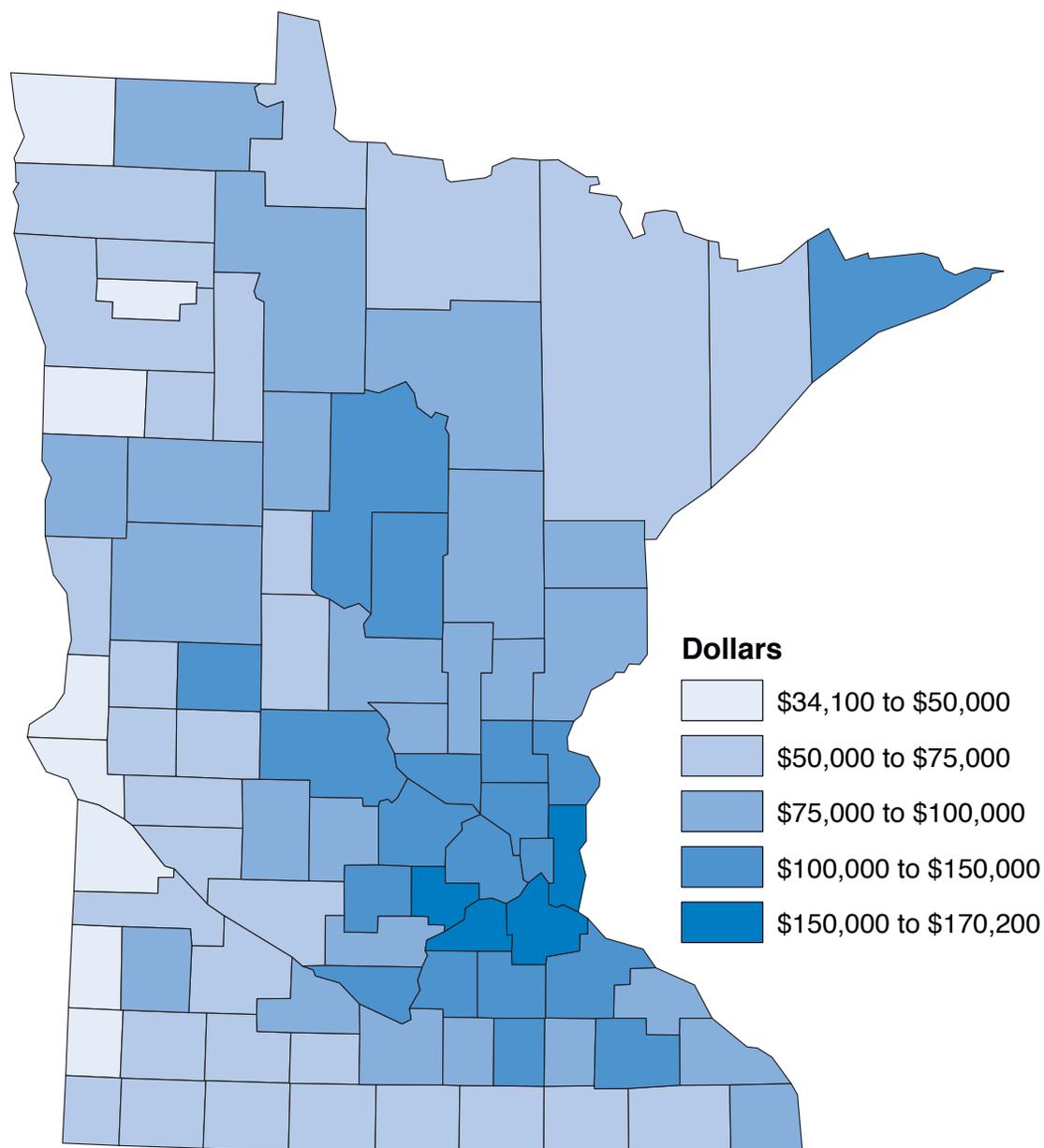
Minnesota communities, however, are addressing housing problems in new creative ways. They are making housing an integral part of their economic development plans. Innovative housing technology and design along with alternative financing sources are providing new and more affordable housing options. Homeownership opportunities are increasing through cooperative ownership and first-time mortgage assistance programs. Local regulations are being reviewed to facilitate housing developments that offer more affordable homes for families across the life-cycle.

There are many ways to resolve the housing challenges facing Minnesota today. Finding solutions to these problems is one more step toward keeping Minnesota's cities and towns vital and welcoming places to live and work.

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Median Home Value, 2000



Source: U.S. Census, 2000

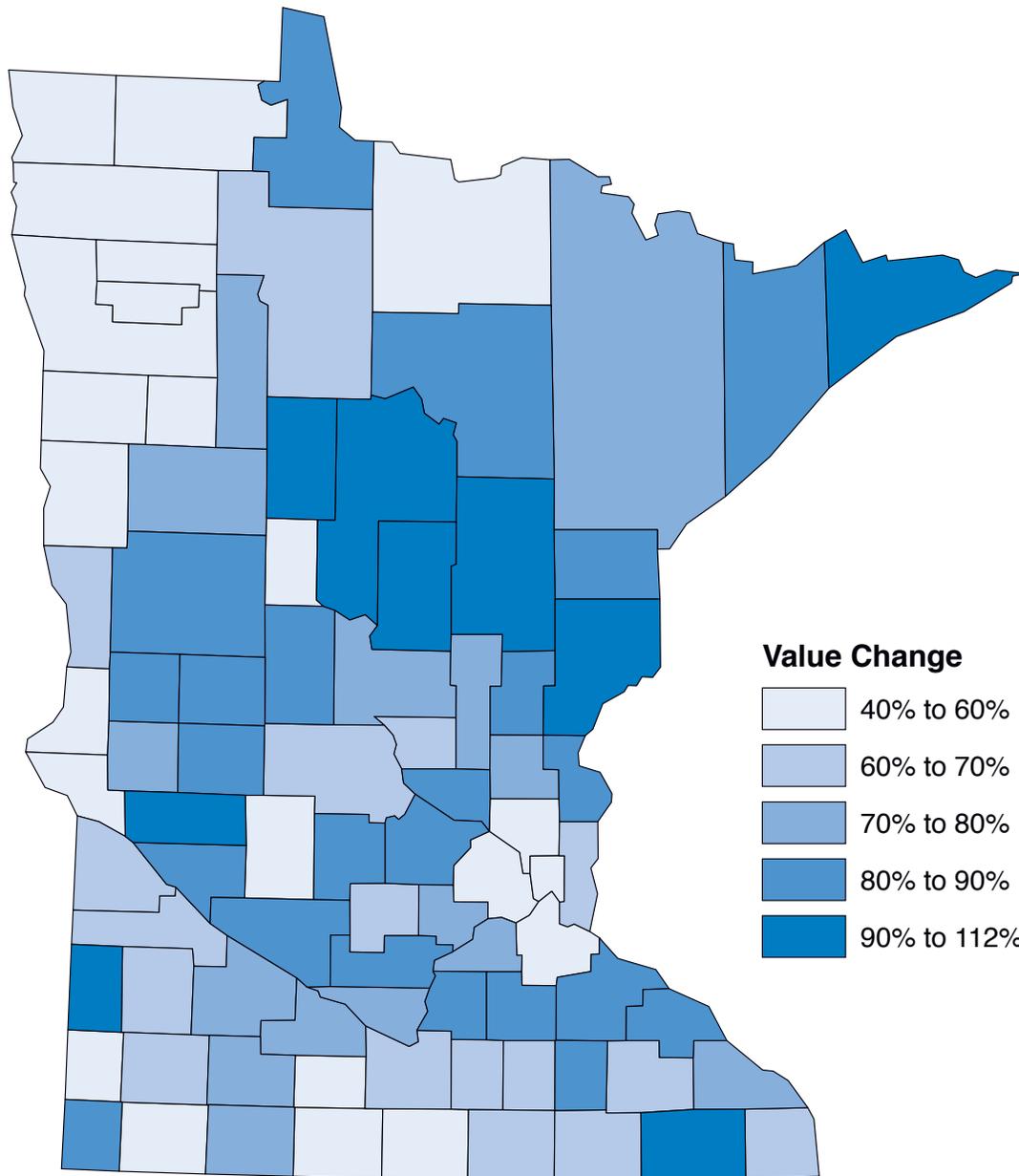
The greatest concentration of high home values is in the Twin Cities and its surrounding suburbs, but high home values also extend south to Rochester and Mankato and north into the lakes region of the state, which are all areas of growing economic activity. The lowest home values are seen in the western and southern agricultural counties. Values in counties with a large percentage of newer homes should be fairly accurate, but counties with older homes may appear undervalued in the census data, because the median value is derived from the respondent's own estimate of the value of both the home and lot. Since the value is based on the homeowner's own estimate rather than an assessment, and longtime homeowners in older homes may have a tendency to underestimate their home's value, the actual value may be higher.

Higher median-value homes indicate the need for a higher income to purchase a home, but increases in home prices and increases in incomes are not generally connected. The 1990s saw an unprecedented squeeze on affordable housing, because housing supply tends to lag behind the job market: as the job market expands, the demand for housing increases but the supply only catches up later.

Change in the Median Home Value, 1990–2000

The change in home value during the 1990s is apparent in the suburban ring counties of the Twin Cities, where population growth has been the highest in the state. But because home values were already high in those counties, the change in value was not as pronounced compared to areas such as north central Minnesota where demand has also been high.

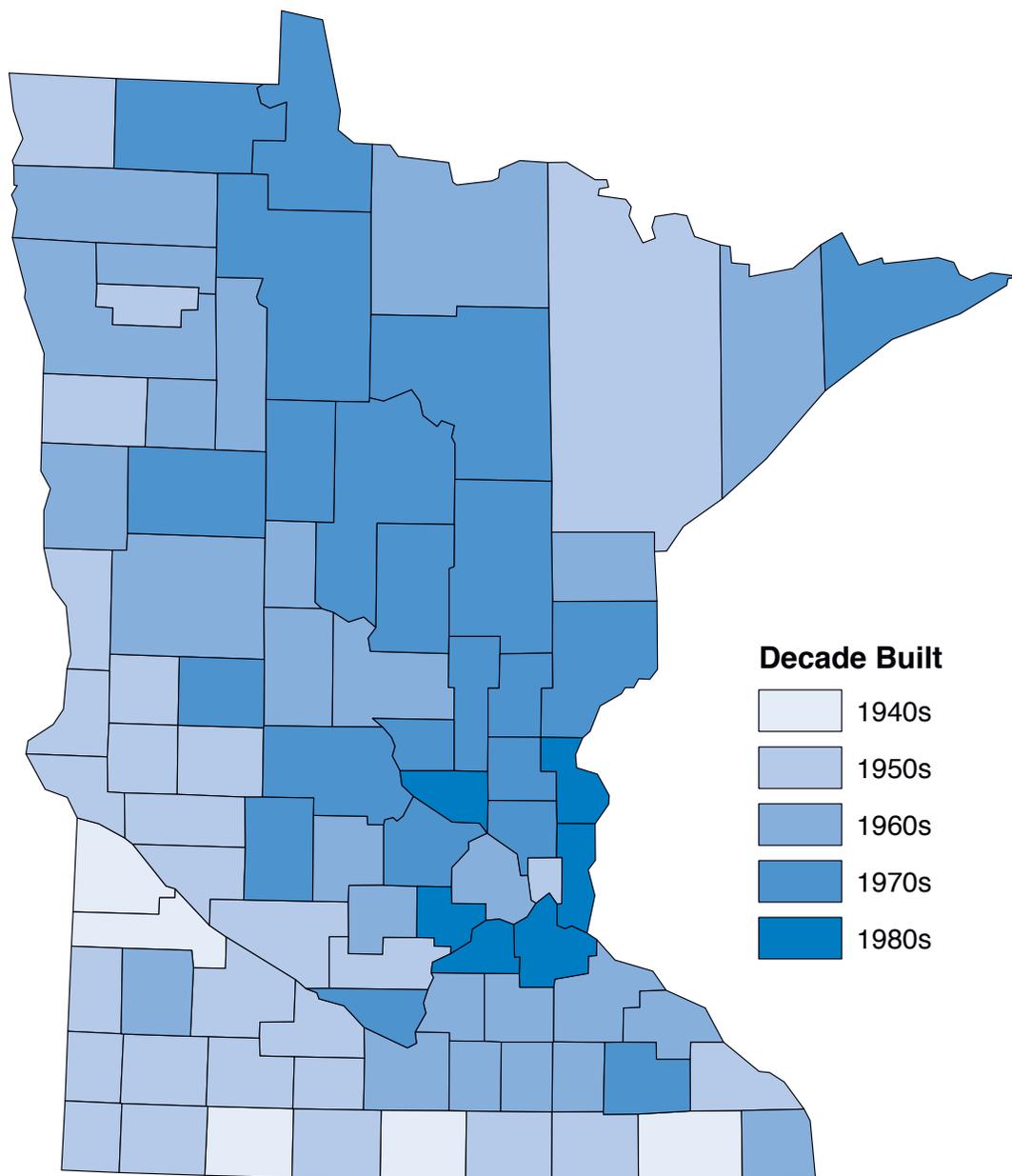
Two factors aside from demand could also be at work in counties like Lake of the Woods, Swift, Fillmore, Lincoln and Rock, where the median home value seemed to jump: in some of the more sparsely populated counties, the construction of a few high-value homes (including retirement homes) could skew the median value upward for the entire county. Also, conversion of cabins to year-round homes raises the value of the home substantially.



Source: U.S. Census, 1990 & 2000

Median Year Built, 2000

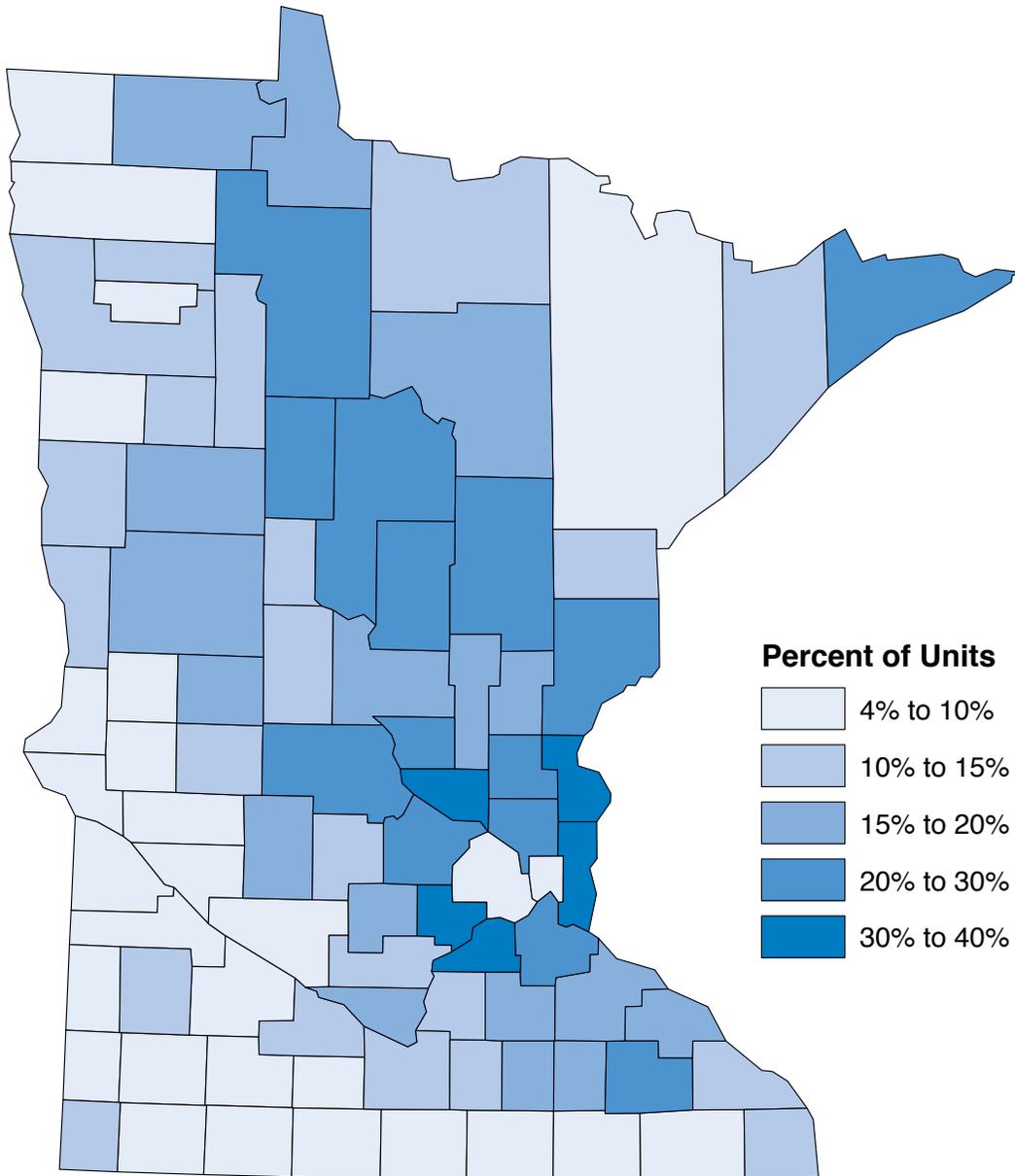
Intensive homebuilding can be seen in the Twin Cities suburban ring, where the “median year built” is sometime in the 1980s. Newer housing is also evident north through central Minnesota’s high-amenity lakes region, where population has also been growing. The “median year built” for Lyon County, an exception to many rules in southwestern Minnesota, is 1963, relatively recent compared to surrounding counties with median years in the 1940s.



Source: U.S. Census, 2000

Housing Built Since 1990

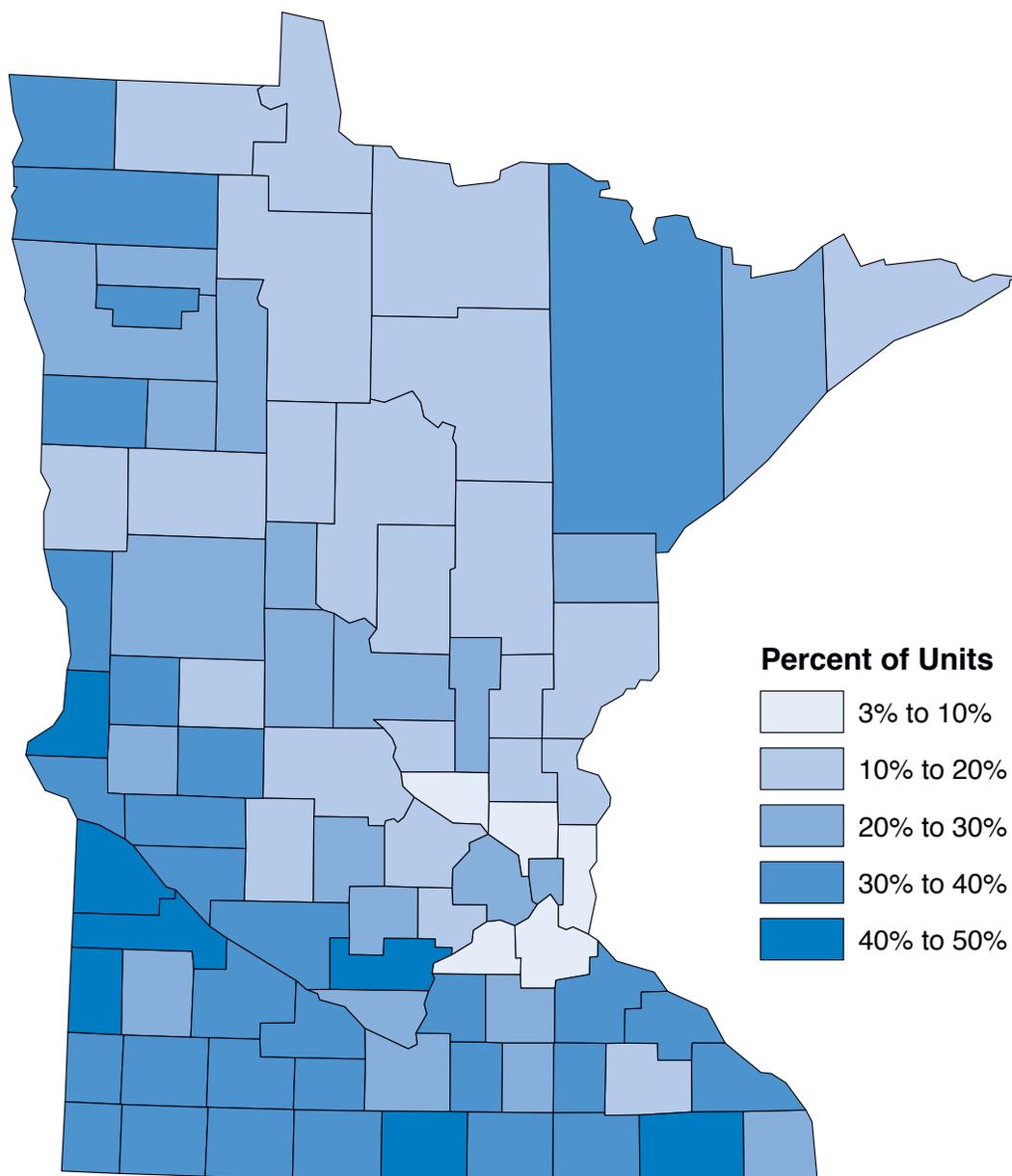
The suburban boom of the 1990s is apparent in the counties surrounding the Twin Cities metro area. In counties like Scott and Carver, nearly 40% of their housing was built after 1990. The lakes region in north central Minnesota has also seen rapid growth in homebuilding in the last ten years.



Source: U.S. Census, 2000

Housing Built Before 1940

Older housing predominates in counties where declining populations, lower incomes and slower economic activity results in less demand for new housing. The percent of housing built before 1940 is one factor used in calculating the state's local government aid to cities and counties. In many counties in western and southwestern Minnesota, upwards of half the housing stock was built before 1940.

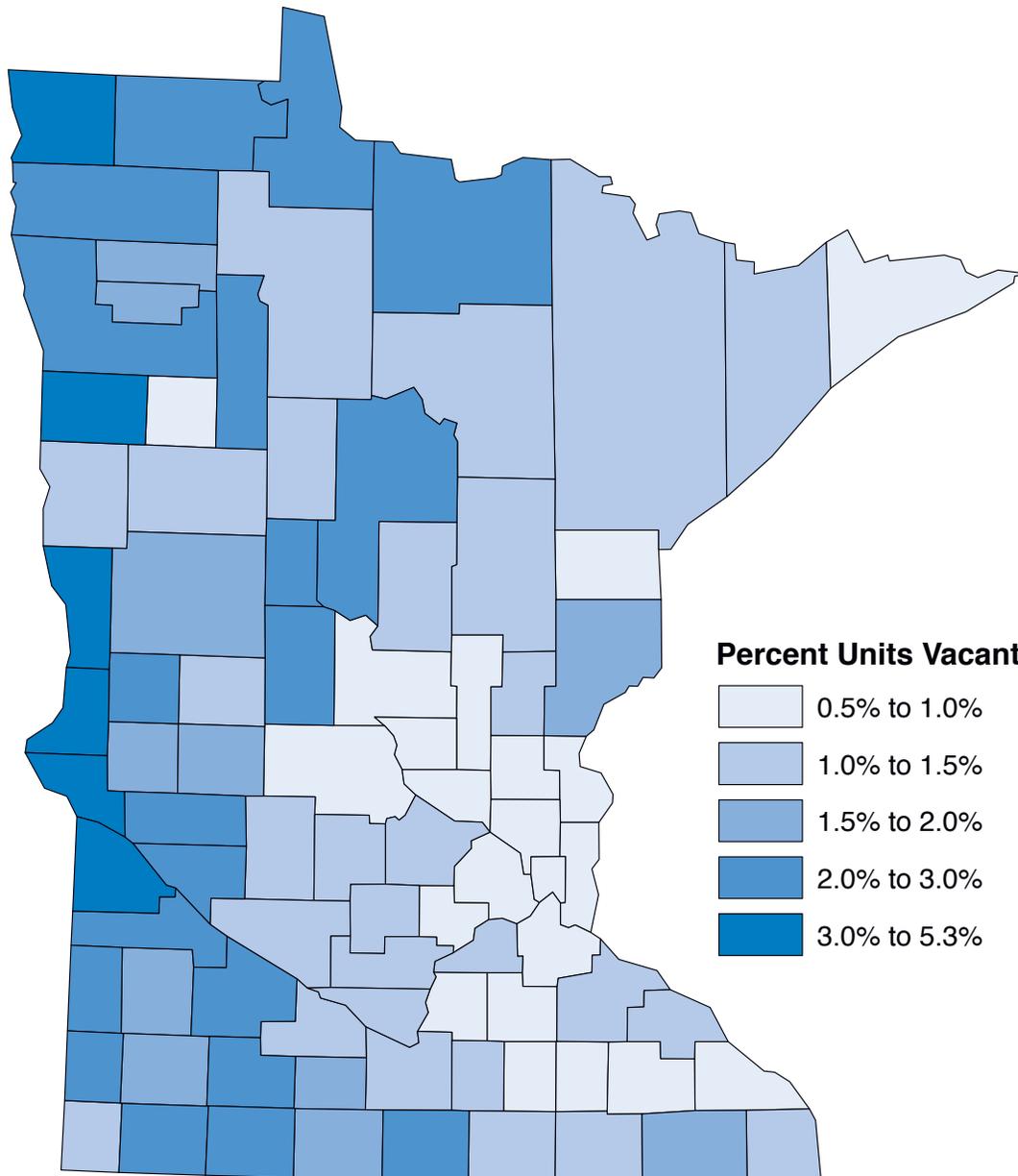


Source: U.S. Census, 2000

Home Vacancy Rates, 2000

Vacancy rates for owner-occupied houses and rental housing are one of the best examples of supply and demand at work. Housing experts consider a vacancy rate of 1% to 5% a good balance. Strong population growth from the Twin Cities up to St. Cloud, combined with low interest rates on mortgages, has created intense demand for homes and consequently very low vacancy rates. Housing prices tend to be above the state median (see “Median Home Value”), regardless of whether incomes are increasing or not. Fully one quarter of Minnesota’s counties have housing vacancy rates of 1% or less.

On the other hand, declining population and a poor economy does not necessarily lead to high housing vacancy rates. Only one county, Big Stone, has a vacancy rate above 5%. But in counties where population growth is steady or declining, in this case, northern and western counties, residents tend to be long-time home owners with little turnover and little new building.

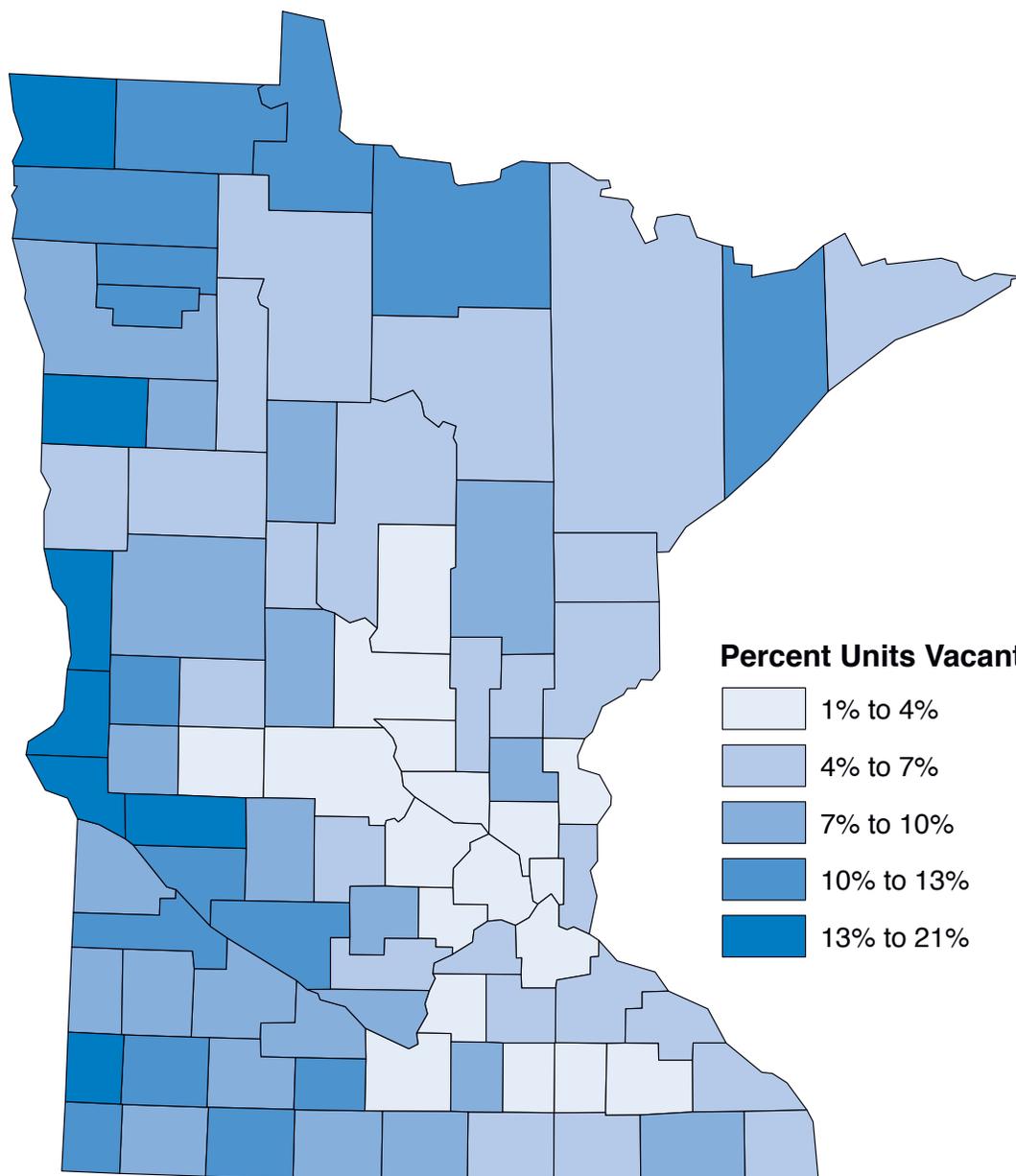


Percent Units Vacant

- 0.5% to 1.0%
- 1.0% to 1.5%
- 1.5% to 2.0%
- 2.0% to 3.0%
- 3.0% to 5.3%

Source: Minnesota Planning, State Demographic Center

Rental Vacancy Rates, 2000



Percent Units Vacant

- 1% to 4%
- 4% to 7%
- 7% to 10%
- 10% to 13%
- 13% to 21%

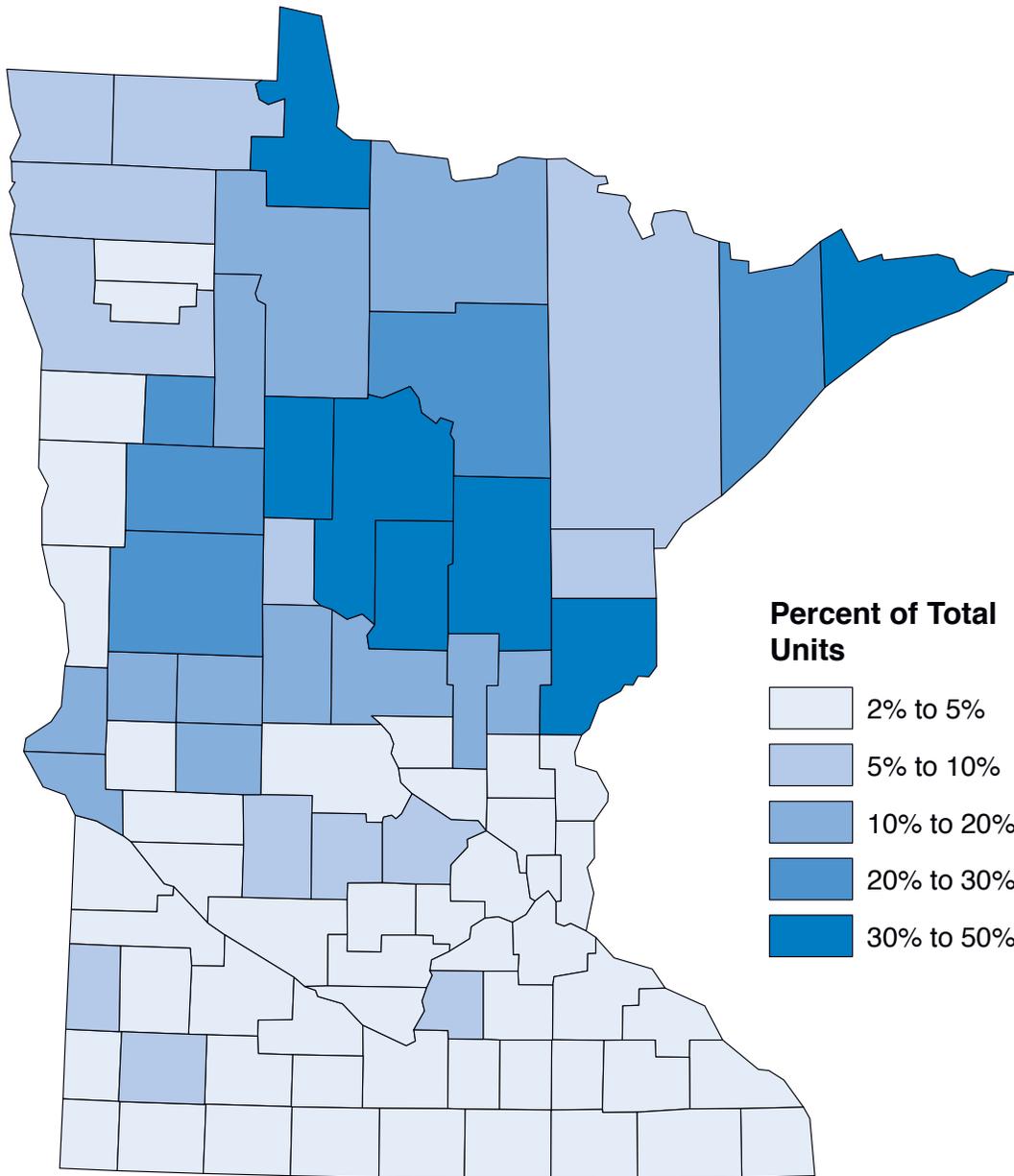
Low vacancy rates can be seen in an arc from Rochester up through the Twin Cities and St. Cloud and north into the lakes region. Some of the lowest vacancy rates are in suburban counties, but rural counties like Steele, Blue Earth and Douglas are also experiencing some of the lowest vacancy rates in the state, possibly due to an influx of immigrants and other new residents in the 1990s. The balance point for rental vacancy rate is 7%. Below that point the market is considered tight and rents go up. Above that and the market is considered soft and rates become competitive.

In western and northern Minnesota, vacancy rates are much higher, as high as 20%. The large difference between the owner-occupied home vacancy rate and the rental vacancy rate could indicate people taking advantage of affordable home prices and low interest rates to move out of rentals into houses. Where the population is declining, it could also indicate that younger people are leaving while older, long-time homeowners are staying in place, leaving fewer people in need of rental housing.

Source: Minnesota Planning, State Demographic Center

Seasonal and Recreational Housing, 2000

As can be expected, Minnesota's seasonal housing is concentrated largely in the lakes region of north central and northeastern Minnesota. ("Seasonal housing" does not include seasonal or migrant worker housing, which the census puts in a separate category.) Close to 50% of the housing units in Aitkin, Cook and Cass counties are designated seasonal or recreational. High rates of seasonal housing can be a boon to local economies, bringing in much-needed revenue, but it can also raise insider-outsider issues such as responsible lakeside development, wastewater treatment, tax treatment of cabins and the level of decision-making power of lakeside residents in the community at large.



Source: U.S. Census, 2000

Income and Poverty

Compared to other states, Minnesota looks quite healthy economically. This was particularly true in the late 1990s, when the economy was booming. More people were working, incomes were up, and poverty decreased. With the current economic downturn, however, many statistics from that time no longer reflect the current reality. Although economic cycles come and go, the basic needs of individuals and families do not change. People still need to obtain enough income to meet their basic needs for food, shelter, medical care, transportation and the other essentials of life.

Minnesota varies widely in the wealth of our various communities. Median household income, per capita income measures and government payment levels are different in urban, suburban and rural areas. We have areas in our state where most residents are wealthy, and others where many are poor. Other disparities also exist aside from those based on geography. For example, African-American and American Indian family households in Minnesota are more likely to be poor, and have a wider gap with white households than in most other states. Also, children are the age group most likely to live in poverty, with youngest children the most likely to be poor.

Many effective anti-poverty programs exist. Assistance with health care enables people to stay employed. The Earned Income Tax Credit and Minnesota Working Family Credit helps thousands of low-income workers increase their earnings. Education and job training help improve workforce skills and encourage the development of higher-skilled (and better paying) jobs. Affordable housing for individuals, families and seniors builds community stability along with helping stretch individual budgets. Programs that support the development of financial assets such as home ownership, savings and the opportunity to build credit are crucial to help people develop long-term financial stability.

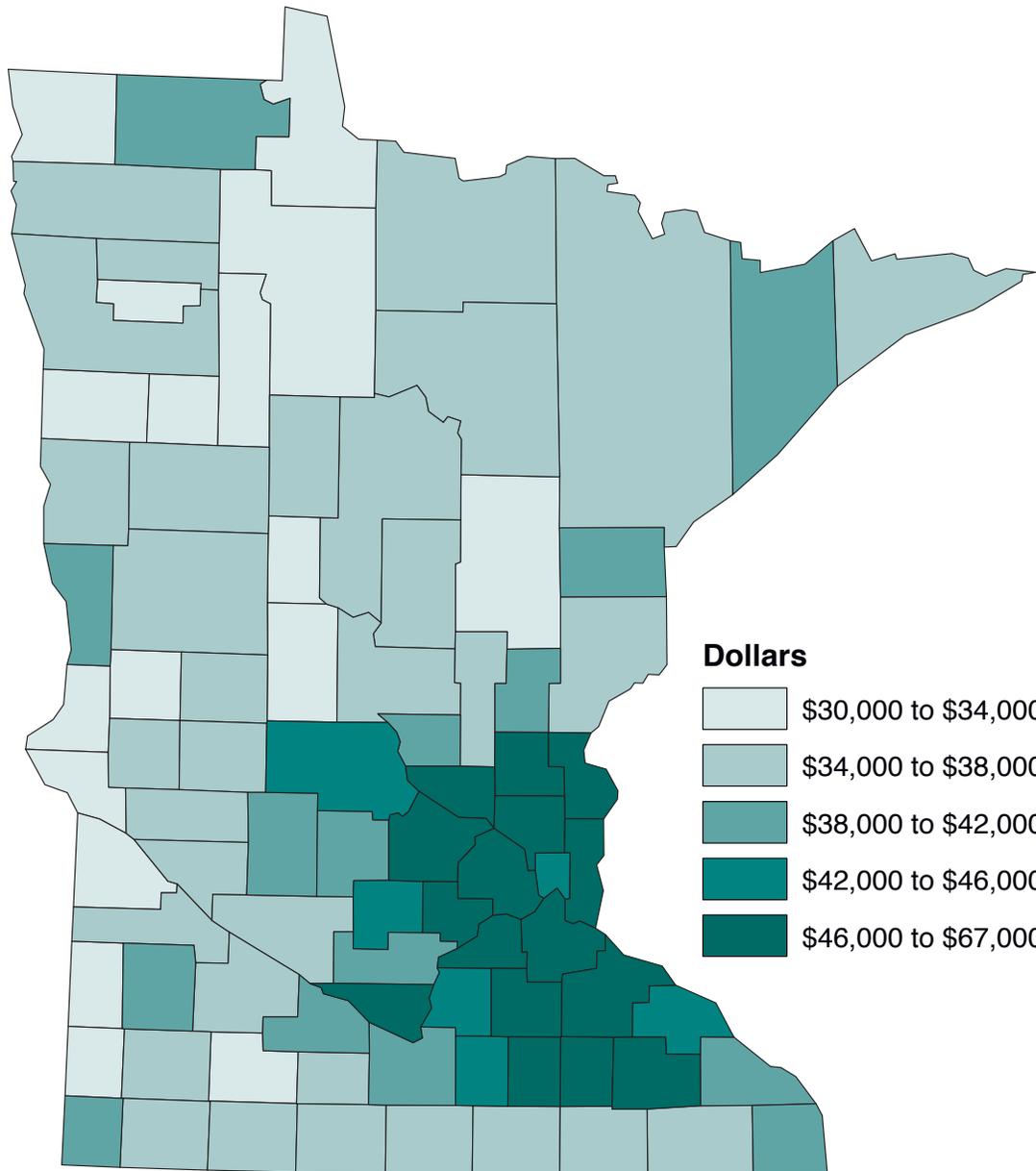
Diane Benjamin
KIDS COUNT Director
Children's Defense Fund Minnesota



Median Household Income, 1999

Minnesota ranked 11th among the fifty states for median household income in 1999 at \$47,111. Median household income is a frequently used measure showing the point at which half the households of a given geography have a higher income and half have a lower income.

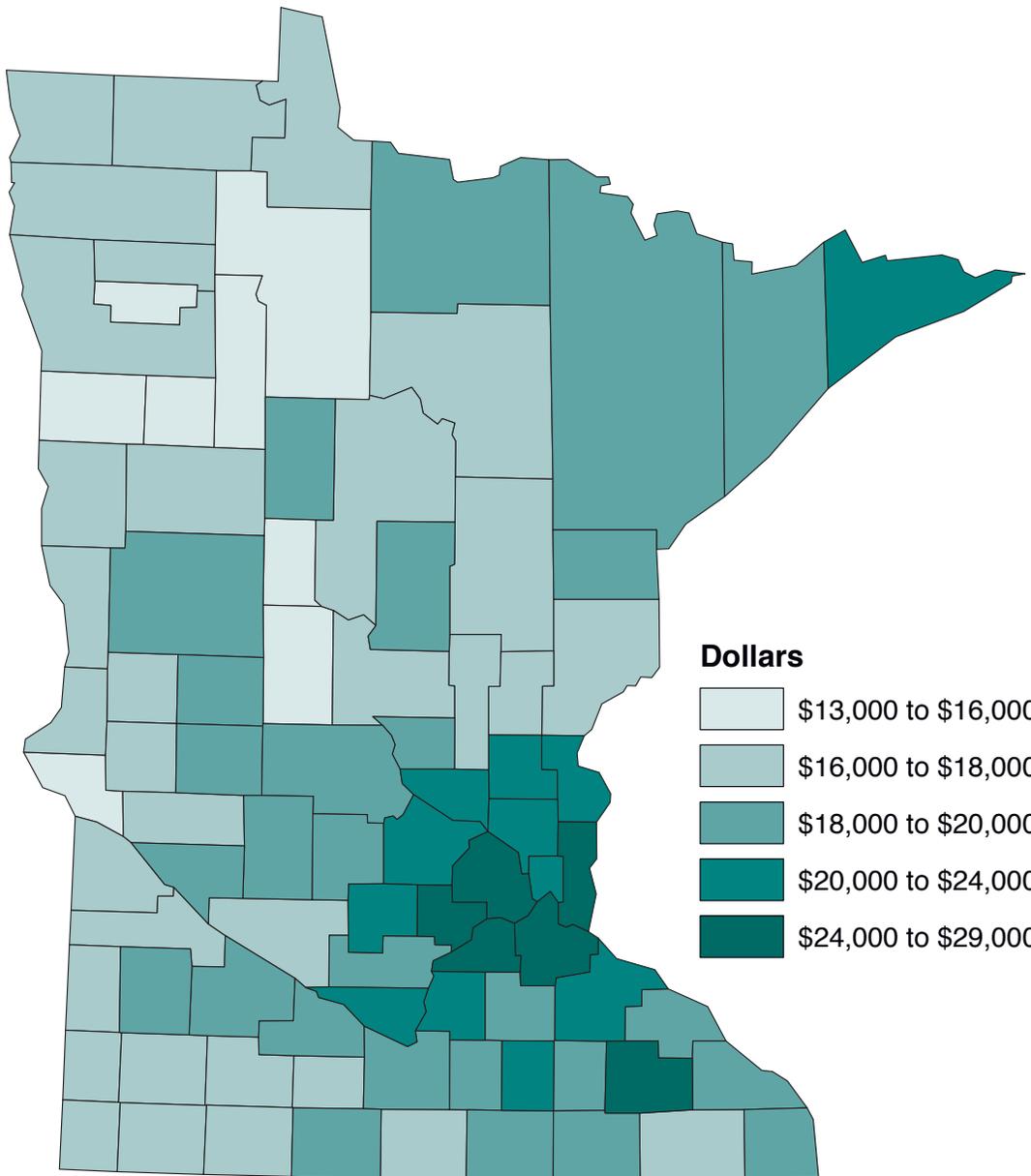
In Minnesota, incomes are highest around the Twin Cities metro area, especially in the more affluent suburban counties that ring the core cities. Scott County had the highest median household income, at \$66,612, while Mahanomen County had the lowest, at \$30,053. The ring of highest incomes around the Twin Cities indicates the prevalence of the higher-paying professional jobs found in the metropolitan area, while counties depending more on agriculture and service jobs, or with high unemployment, show the lowest incomes. Due to comparatively higher wages, manufacturing jobs gave a boost to many rural counties.



Source: U.S. Census, 2000

Per Capita Total Personal Income, 1999

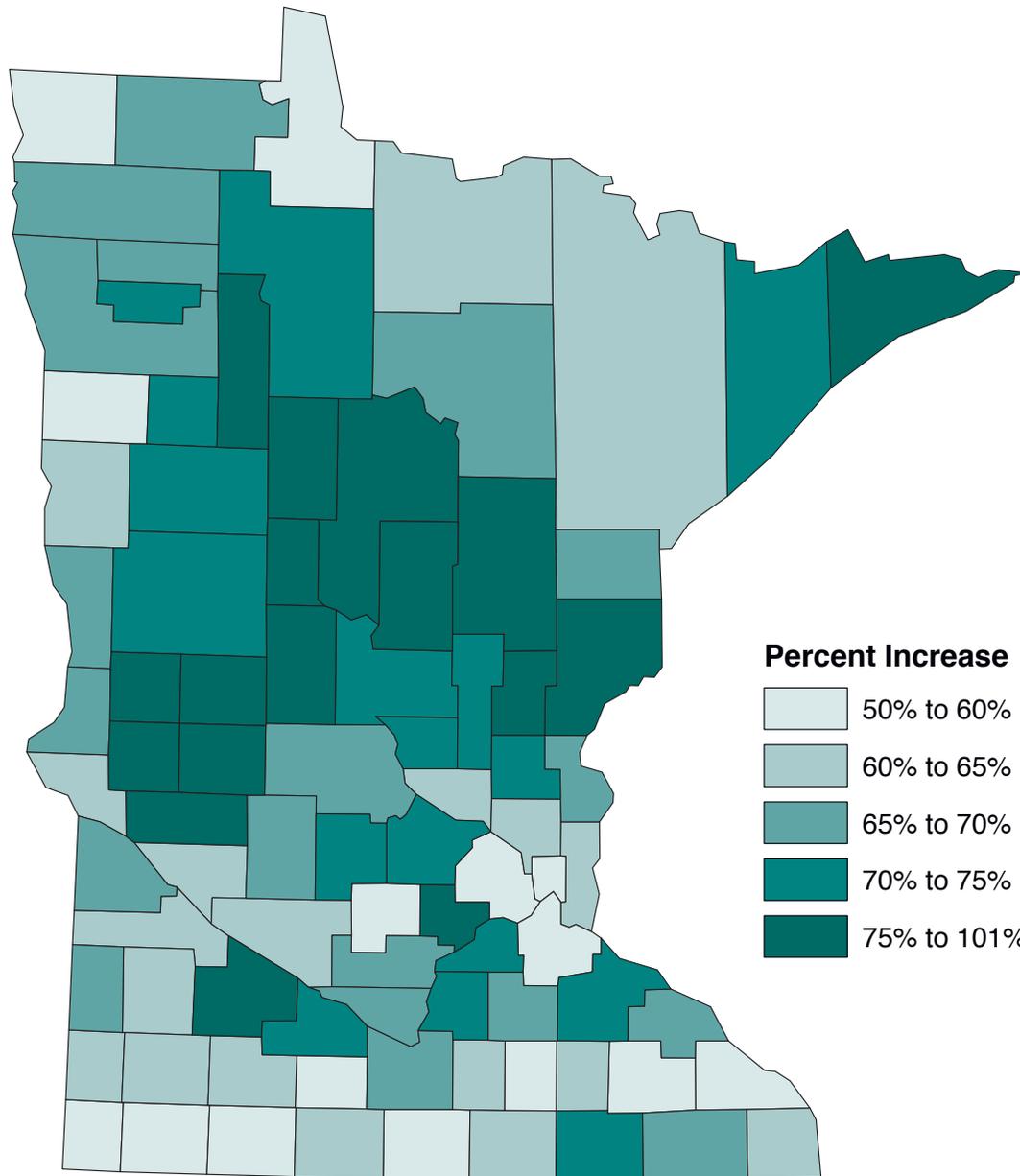
Personal income is determined by adding three figures: income earned from wages or salaries; income derived from interest, dividends and rental property; and government payments such as public assistance and Social Security. The highest personal income is clustered around the Twin Cities metropolitan area as well as Olmsted, St. Louis and Cook counties. The north central counties, while experiencing strong population growth, show some of the lowest per capita personal incomes.



Source: U.S. Census, 2000

Change in Per Capita Total Personal Income, 1989–1999

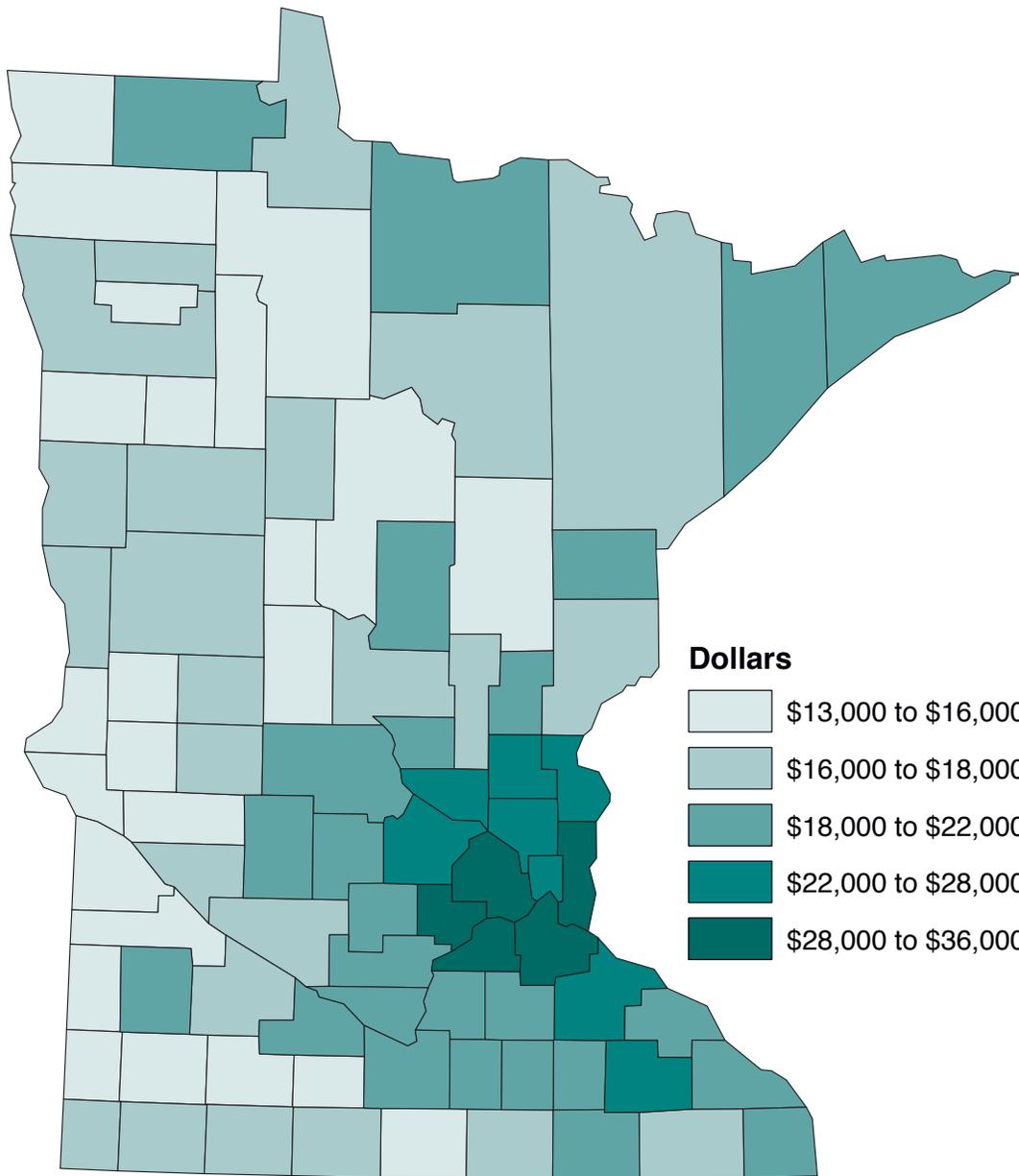
Across the decade personal income in all counties grew. The strongest growth in personal income appears in the trade centers of the state, including the Twin Cities metropolitan area, Blue Earth and Nicollet counties (Mankato-North Mankato), and Lyon County (Marshall). Some counties with low per capita personal income saw percentage growth over the decade. It may be that incomes were low enough in 1989 to make even modest growth appear as a large increase or significant economic development activities have taken place.



Source: U.S. Census, 1990 & 2000

Per Capita Earned Income, 1999

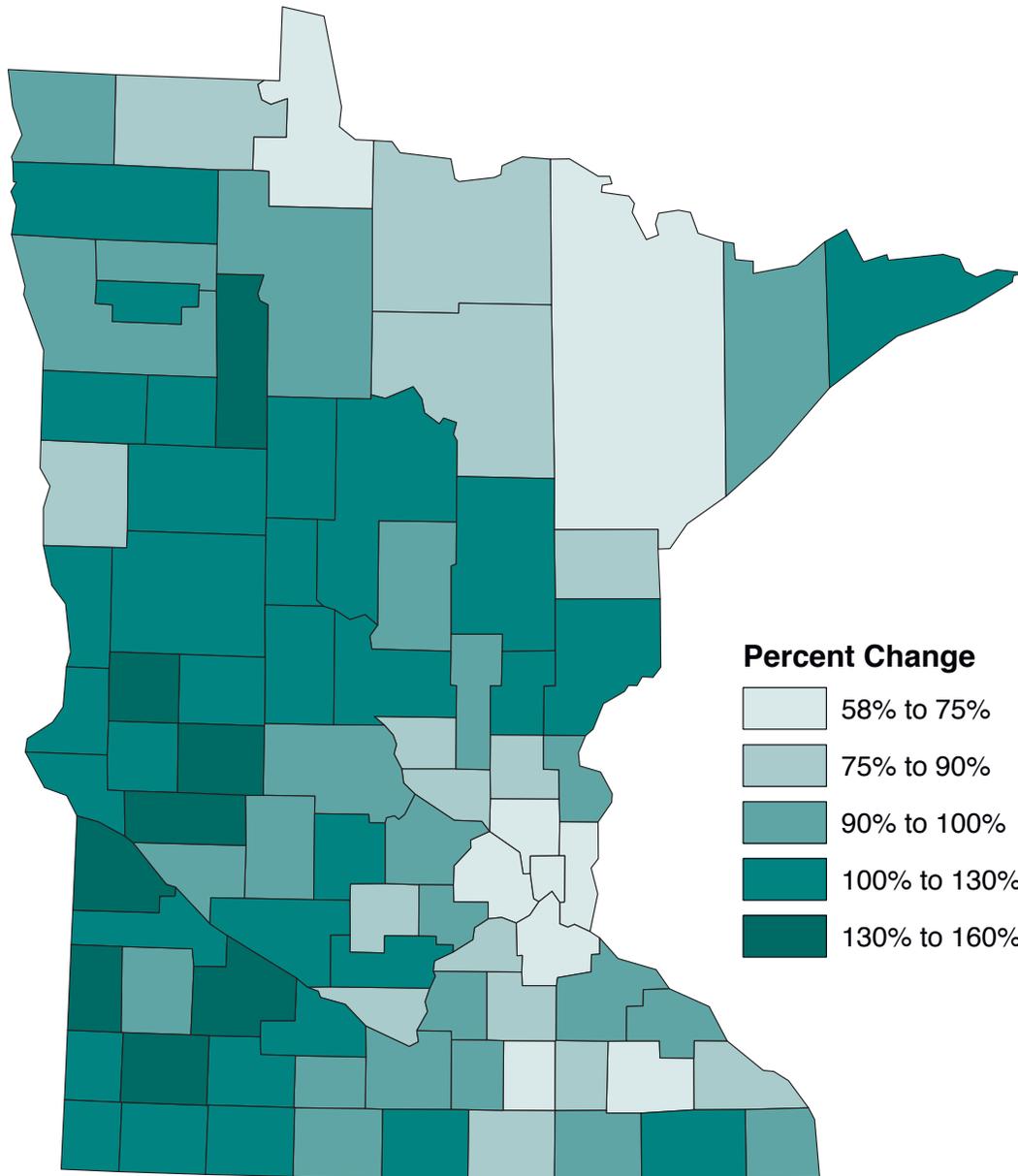
As the term implies, earned income is income derived from earned wages or salaries. Counties with the highest per capita earned income are found in the Twin Cities metropolitan area and in Olmsted County, while some pockets of higher income exist in rural areas. The lowest incomes are found in counties where the economy is dominated by low-paying service, agricultural and other natural-resource related jobs.



Source: U.S. Census, 2000

Per Capita Earned Income, 1989–1999

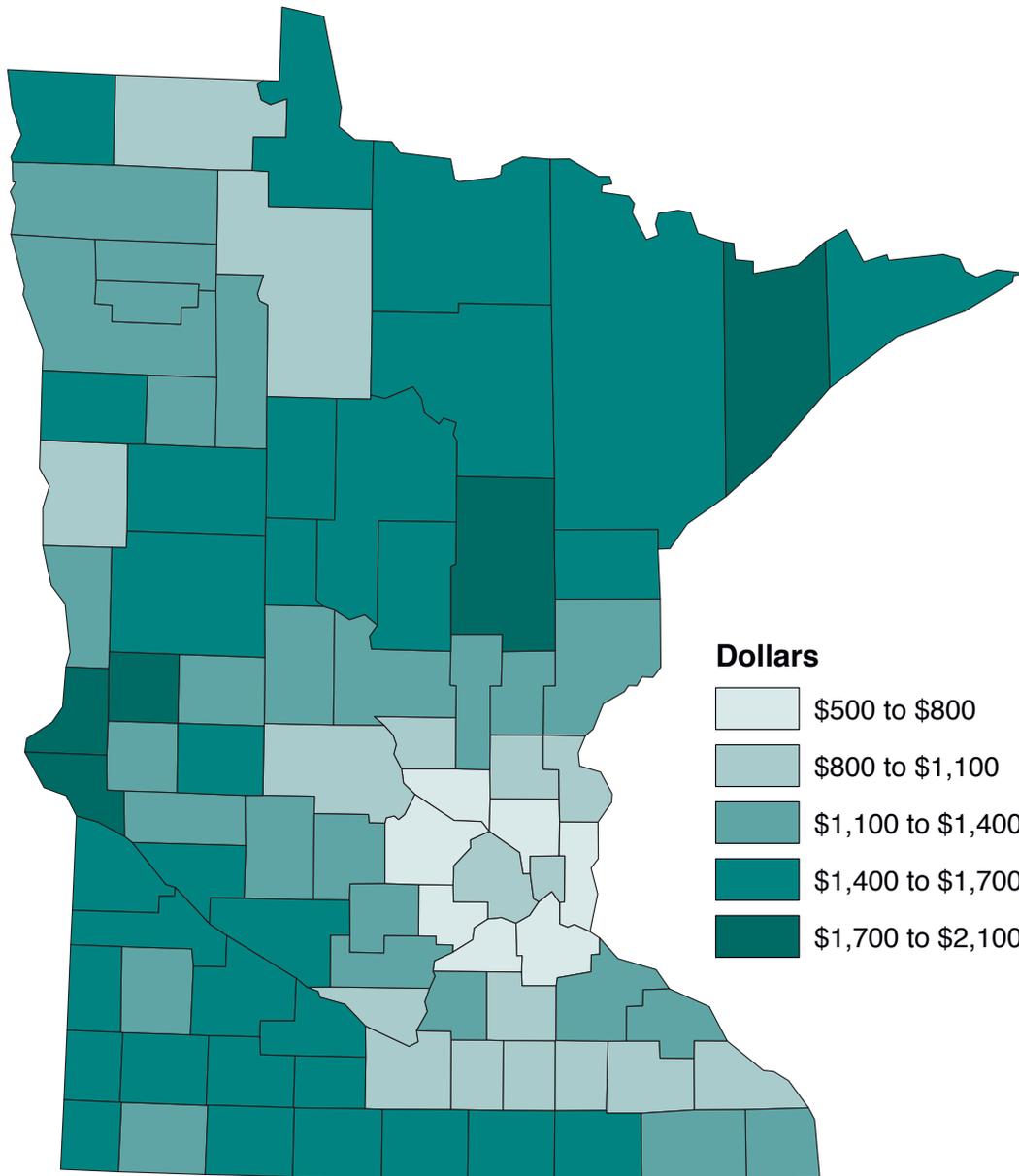
As with personal income, the high increase of earned income in many rural counties may be explained by depressed earnings in 1989. The counties that fall in the swath from Blue Earth County up through Pine County, however, have likely experienced genuine wage growth.



Source: U.S. Census, 1990 & 2000

Social Security Payments Per Capita, 1999

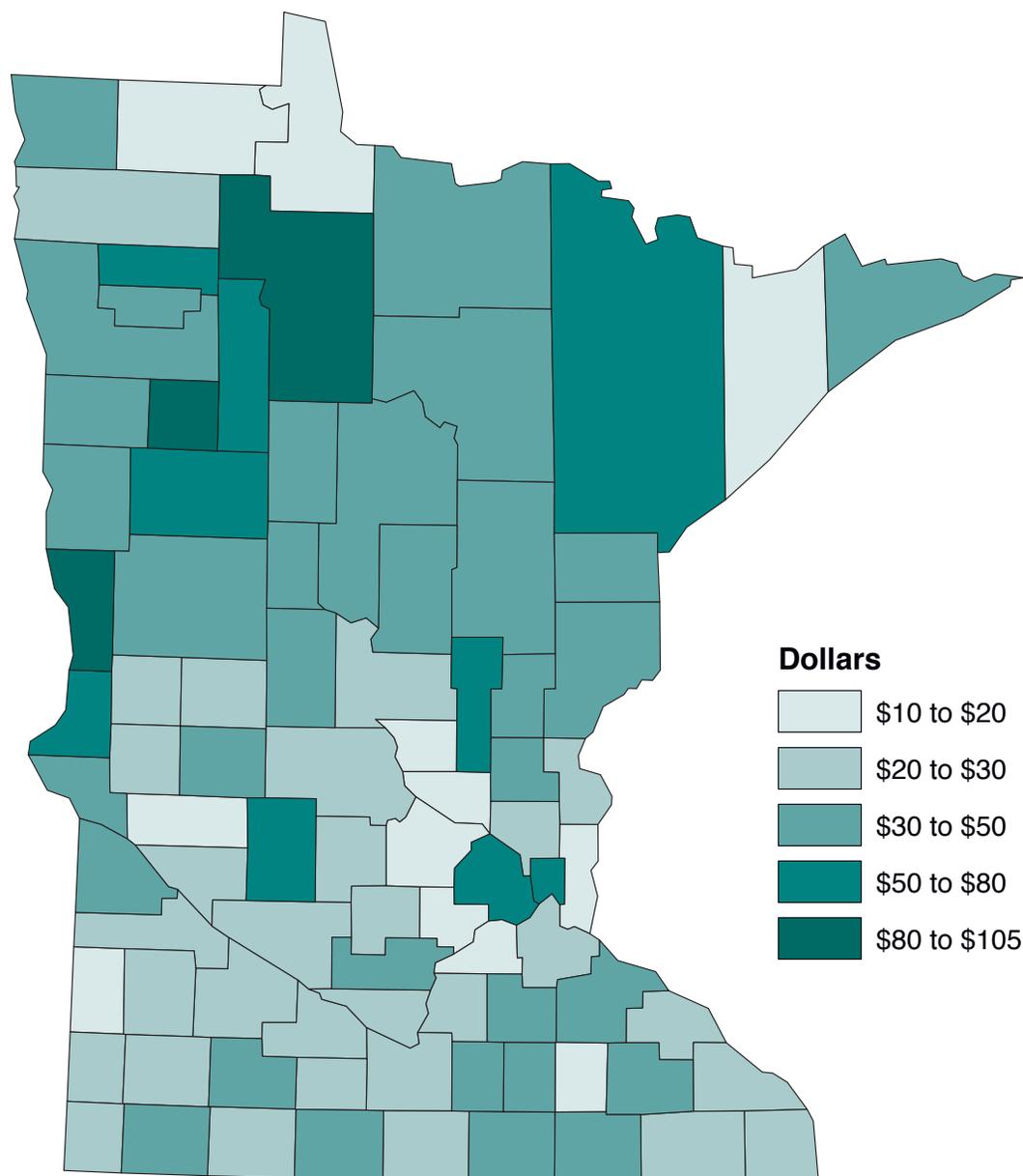
Social Security income includes Social Security pensions, survivor's benefits, permanent disability insurance payments, and railroad retirement checks from the federal government. Medical reimbursements, however, are not included. The distribution of per capita Social Security payments in Minnesota in 1999 is largely a reflection of the distribution of senior citizens. The highest per capita numbers are found in counties where seniors have stayed in place: predominantly agricultural counties and counties popular with retirees in central and northern Minnesota. Counties with the lowest per capita payments are high-growth trade center counties, which tend to have younger populations.



Source: U.S. Census, 2000

Public Assistance Payments Per Capita, 1999

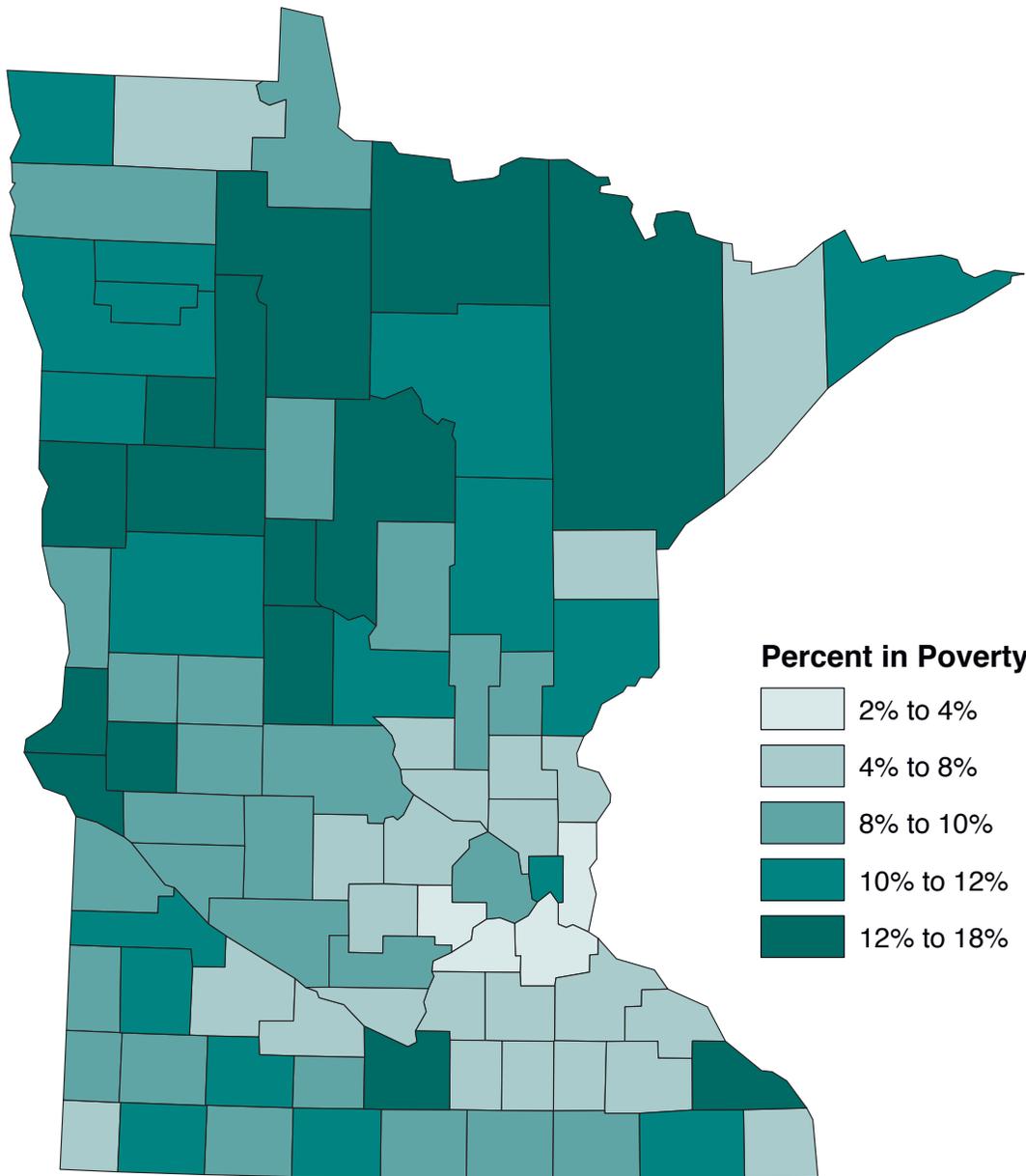
Public assistance payments include general assistance and Temporary Assistance to Needy Families. Payments for hospital and other medical care as well as farm program payments are not included. The highest rates of per capita public assistance payments in 1999 can be found in Hennepin and Ramsey counties and also in northern and western counties.



Source: U.S. Census, 2000

Population in Poverty, All Ages, 1999

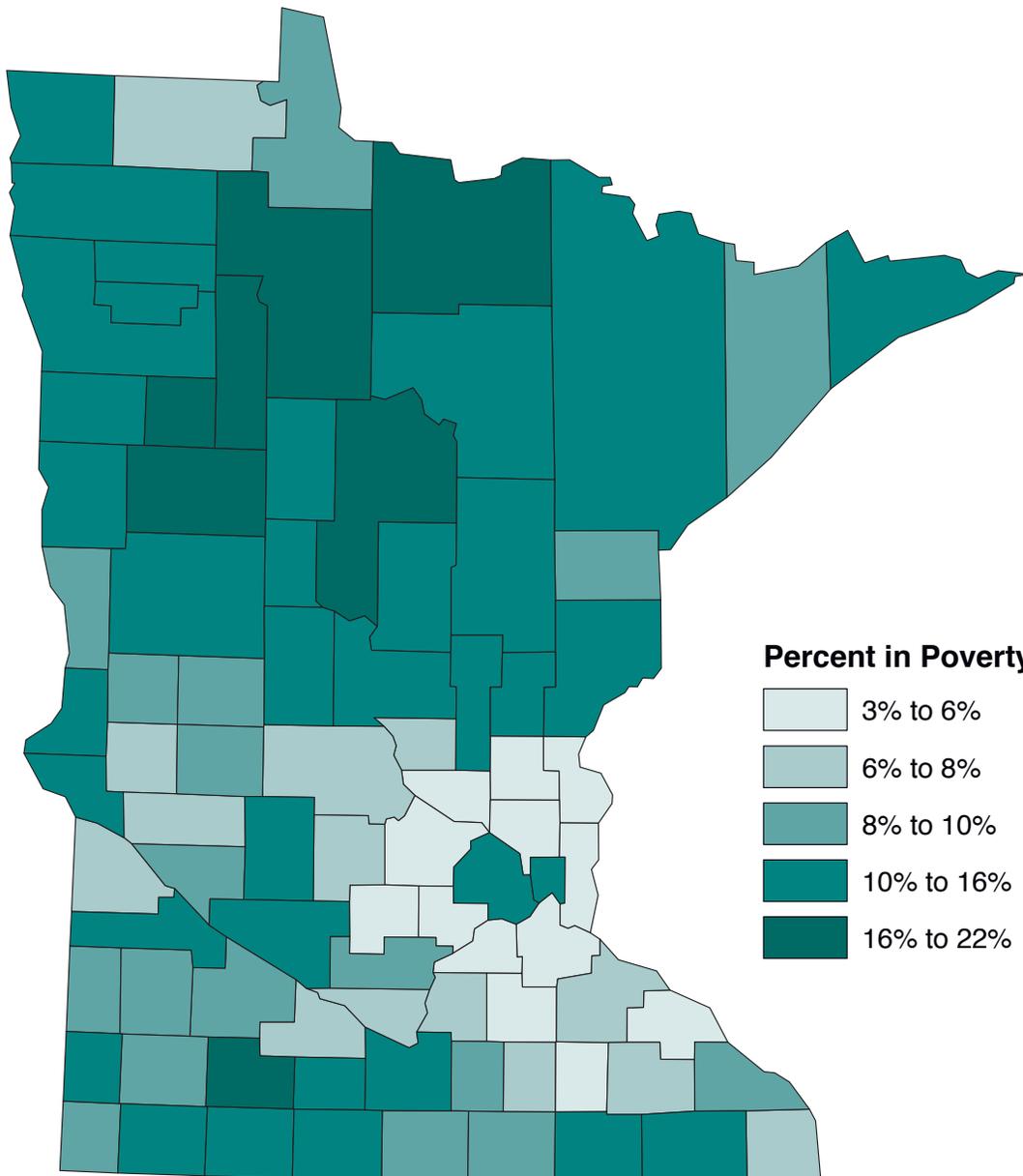
Census data show the percentage of people in the county whose household income falls below the poverty guidelines. Poverty rates are lowest in the suburban counties ringing the core counties of the Twin Cities metropolitan area, while pockets of higher rates can be found in counties with large Native American populations such as Beltrami, Clearwater and Mahnommen. The rate is also higher in counties with larger cities, like St. Louis and Clay, but a significant number of southwestern counties also have high rates, possibly due to consistently lower-paying jobs, often held by people of color. High college and university student populations may be another factor for the high rates in counties such as Blue Earth, Clay, St. Louis and Lyon.



Source: U.S. Census, 2000

Children in Poverty, 1999

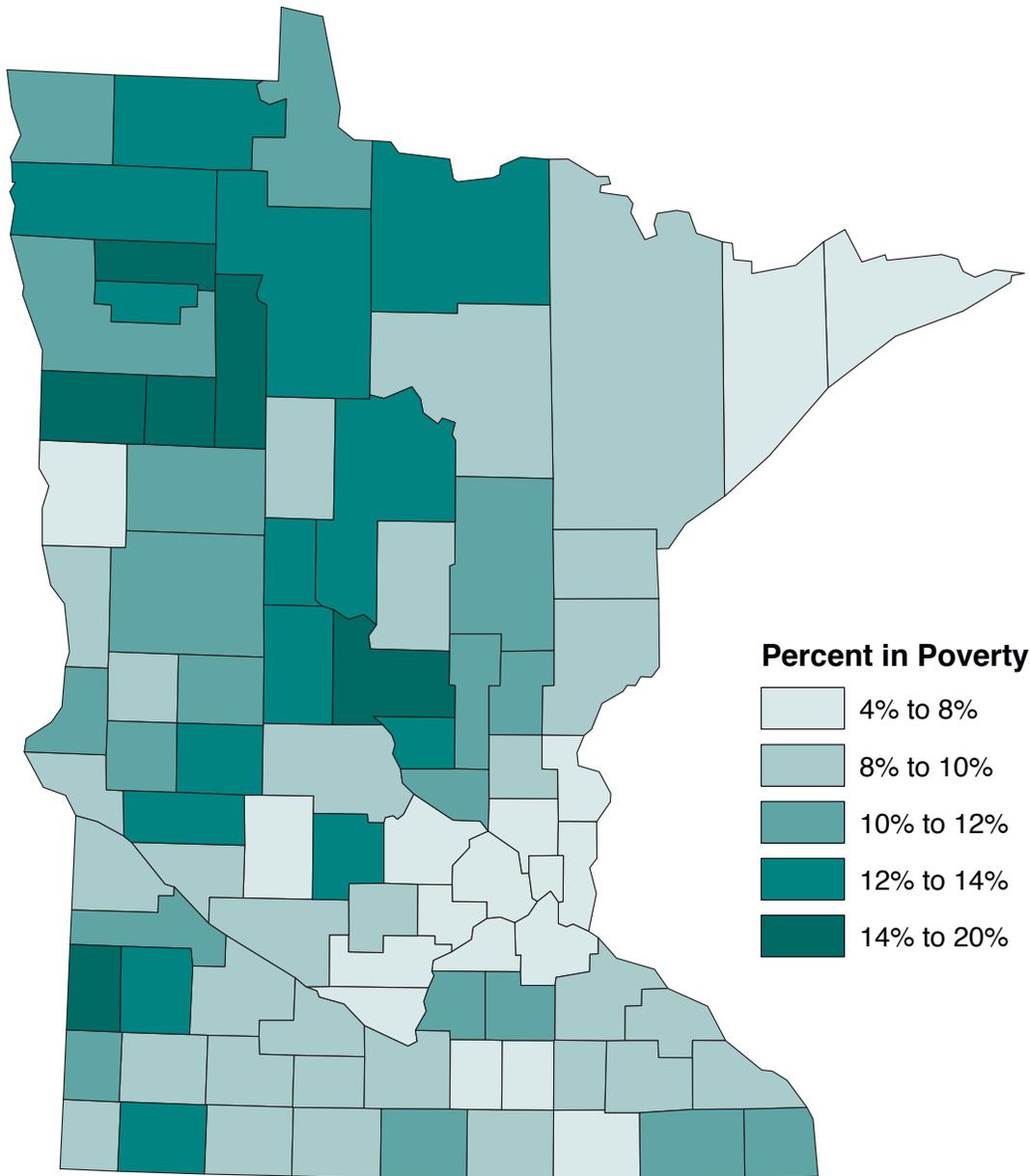
In the census definition of poverty, the income threshold is raised for each additional child, and, therefore, families with many children can raise the poverty rate. In some counties, more than 20% of children live in poverty. The core counties of Hennepin and Ramsey rank high, as well as some rural counties such as Cottonwood, Big Stone and Traverse. The prevalence of low-paying jobs and the volatile farm economy are factors as is family size. However, those counties with the highest poverty rates do not necessarily correspond to those with the highest rates of public assistance.



Source: U.S. Census, 2000

Elderly in Poverty, 1999

The aging of Minnesota's population, especially outside the Twin Cities, is reflected in this map. While poverty rates among the elderly are not quite as high as among children, high rates in both groups are common in many of the same counties, with implications for the costs of services in these regions.



Source: U.S. Census, 2000

Economic Vitality

Economic vitality is measured by the health and energy of the economy. The state has been following global and national trends over the last two decades, many of which can be seen in the maps in this chapter. These trends include 1) a shift in the economic base from manufacturing to the service sector, 2) more women entering the workforce, 3) young people continuing to leave rural areas to find better job opportunities in the cities, and 4) local governments struggling to maintain services with declining tax revenue. Demographic indicators show a continuing “graying” of rural populations, which shows up in a growing dependence on transfer payments such as retirement benefits in rural economies.



Planning for sustainable economic development challenges both urban and rural parts of the state. Another cornerstone of sustainable economic development is a good workforce with growing or stable earnings. Service sector jobs have become more important to the Minnesota economy as manufacturing jobs are moved overseas or out of the state. As many have noted, with the current economic downturn, previous labor shortages in parts of Minnesota have turned to labor surplus, or unemployment. There is also a strong trend of women joining the workforce. The state has lowered tax rates to lessen the burden on the Minnesota taxpayer, but rural government has been especially hard hit by the effect of eroding tax revenue. Property taxes are the primary tax source for county and local municipalities and are likely to increase.

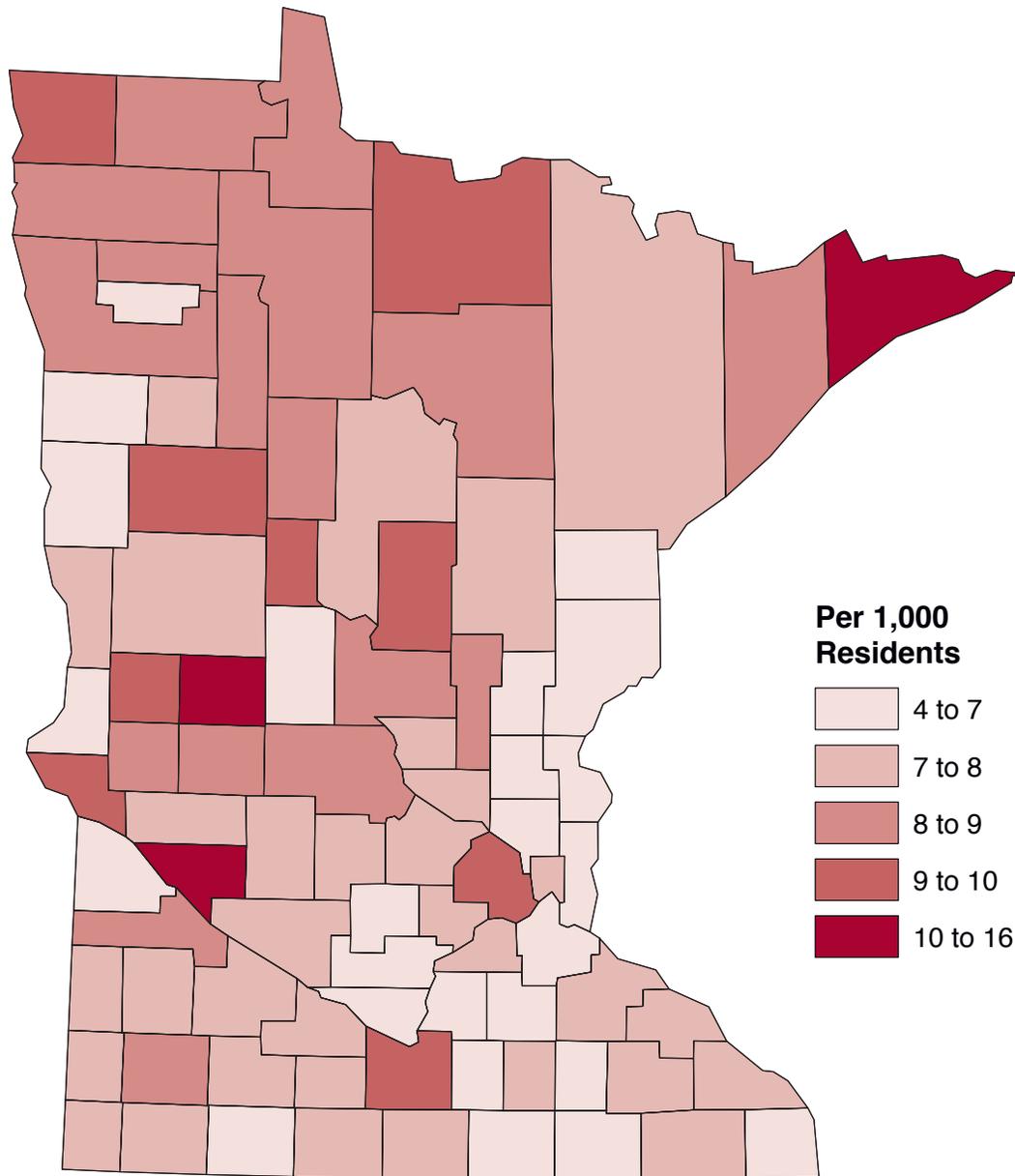
Overall, though, the future economic vitality of Minnesota is good. Minnesota has always been a world leader in product innovation and technology development. The question is how rural and urban areas of the state will share in future economic growth. Rural Minnesota will need to overcome a competitive disadvantage by using new technology whenever possible, and take advantage of the strong work ethic of its workforce.

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Editor, Bureau of Business and Economic Research
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Business Startups and Expansions, 2000

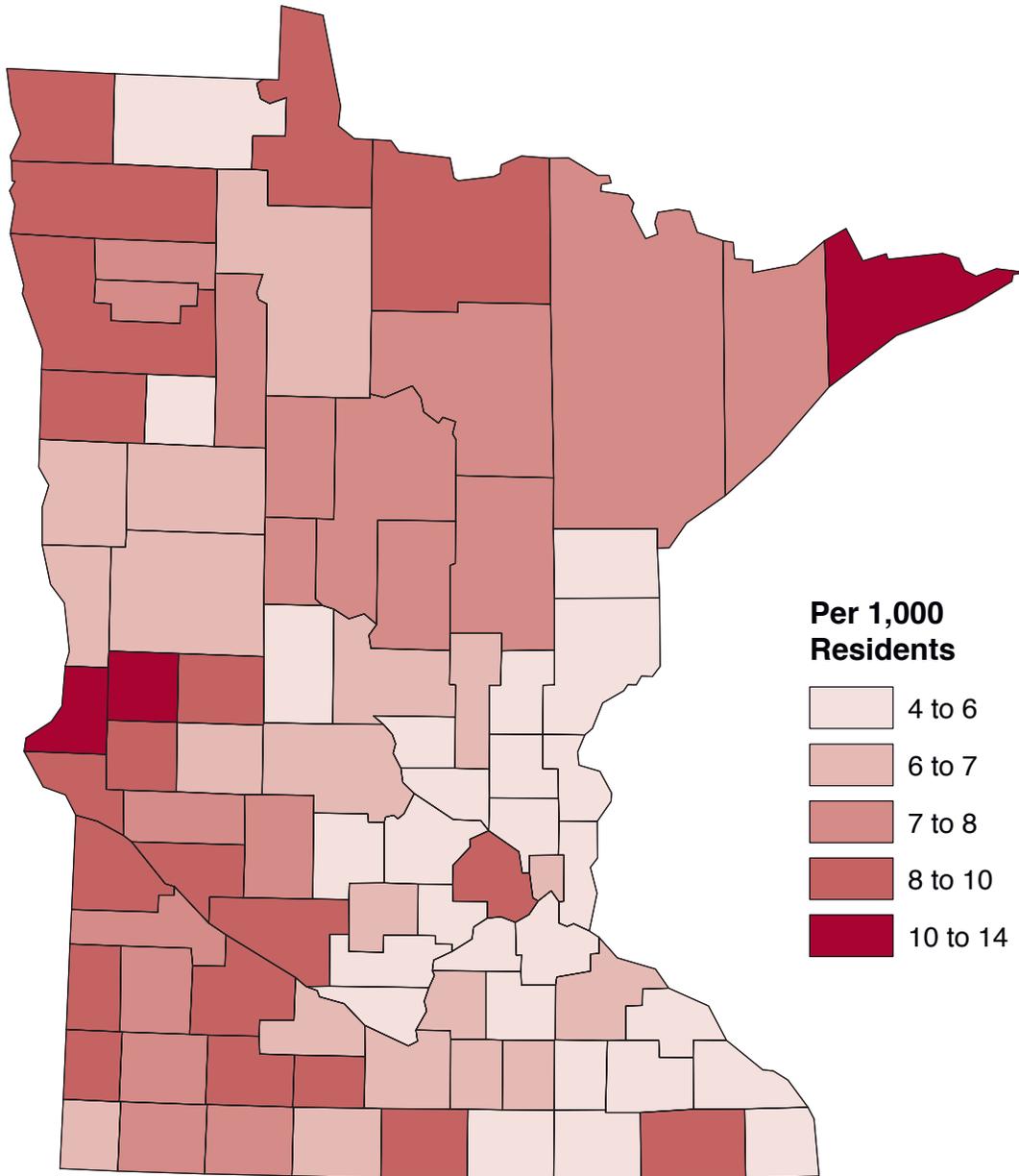
Comparing business startups and expansions to business dissolutions and contractions can be a good indicator of the health of business and job growth in a state. The Minnesota Department of Trade and Economic Development tracks the number of businesses starting up and shutting down each year, to measure the business activity in the state. In 2000, with the exception of Hennepin County, business startups and expansions appear fairly quiet. Farther north and west, however, counties appear to be experiencing higher rates of business startups and expansions.



Source: Minnesota Department of Trade and Economic Development

Business Dissolutions and Contractions, 2000

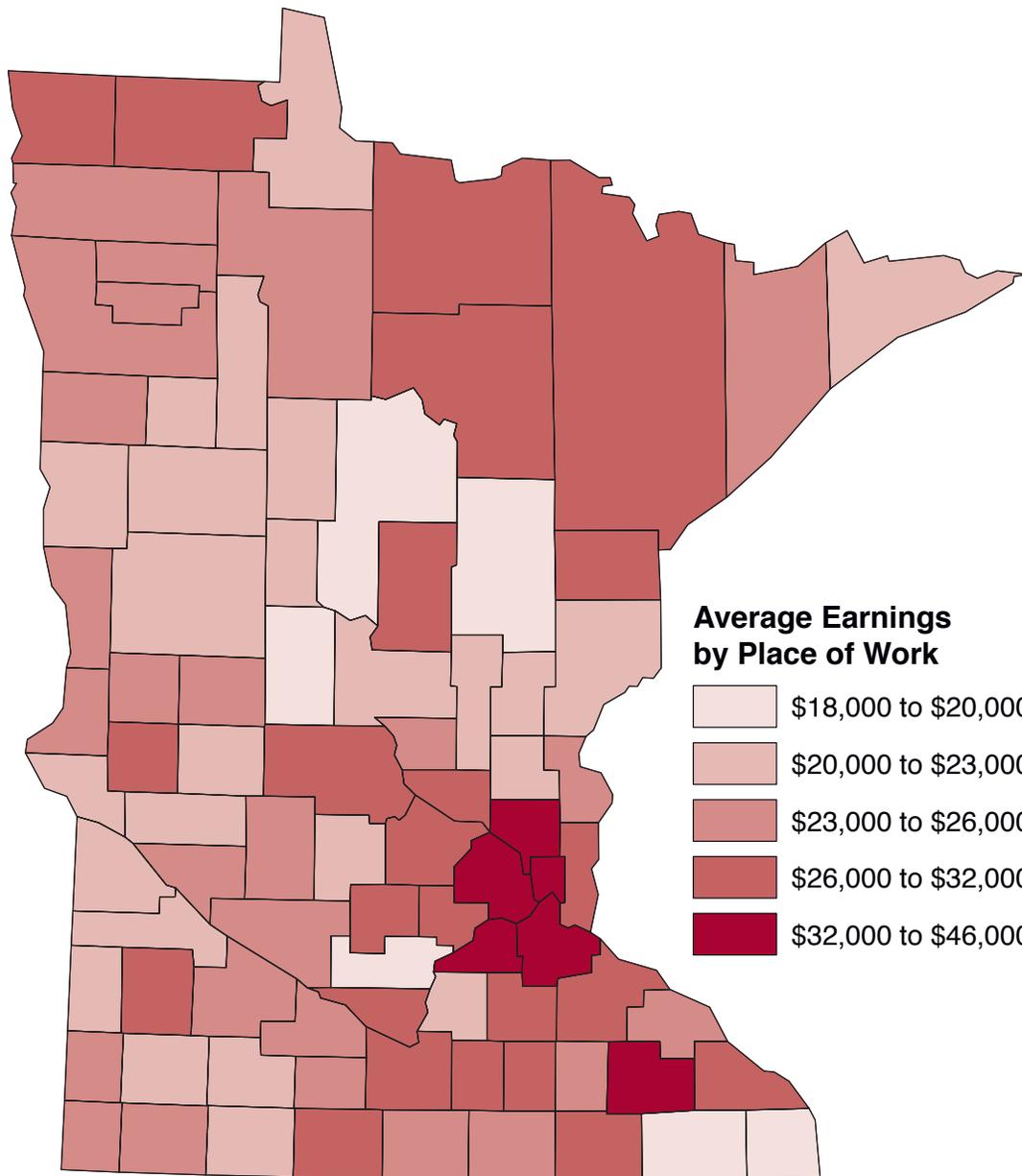
The map of business dissolutions and contractions indicates a quiet environment in a swath from Duluth down through the Twin Cities and to Rochester, with the exception of Hennepin County. Likewise, there were more dissolutions farther to the north and west, indicating more volatility in the business climate.



Source: Minnesota Department of Trade and Economic Development

Average Earnings, 2000

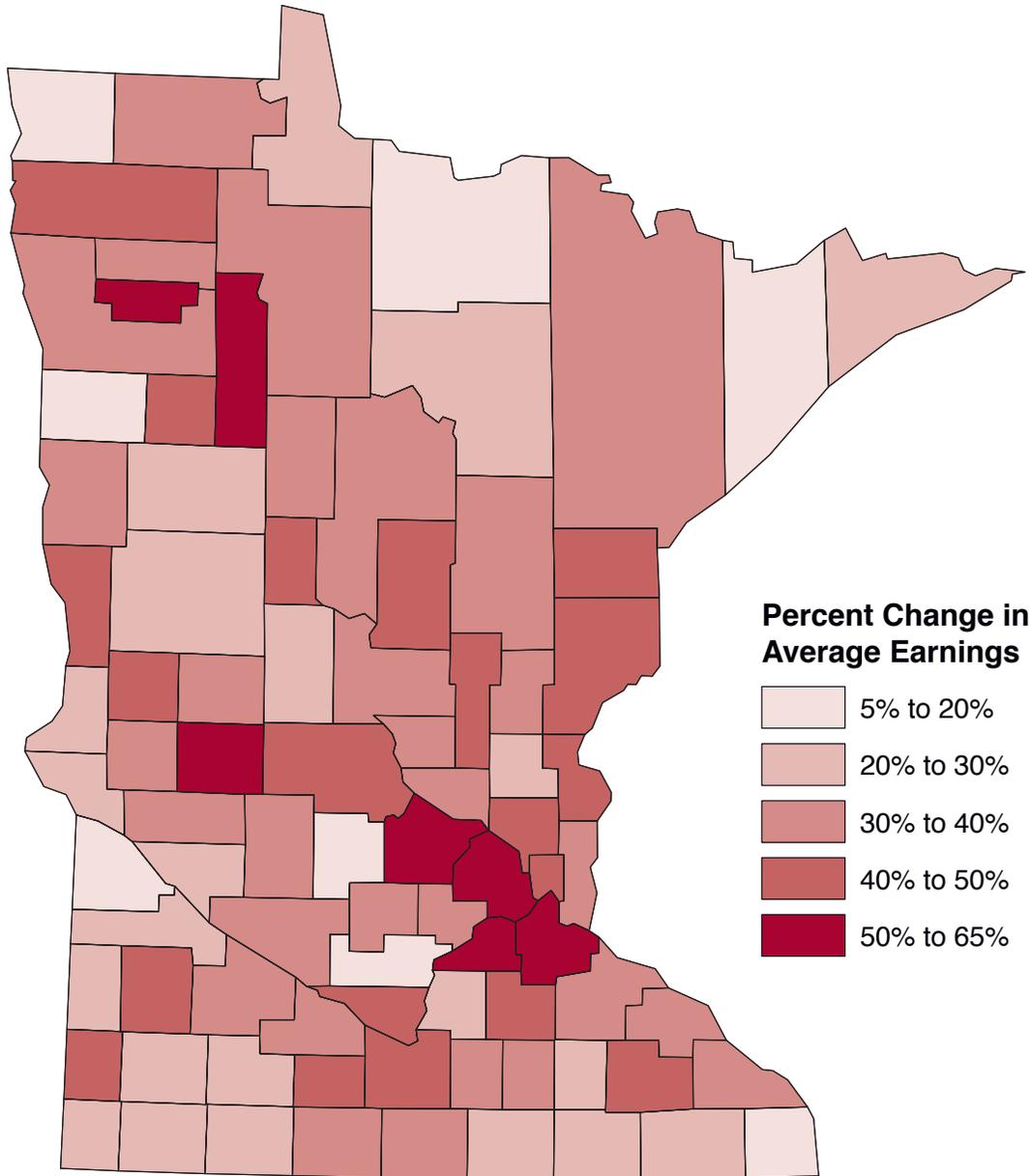
Average earnings by place of work show the wages workers make, as opposed to income, which includes both earned income, such as wages, and unearned income, such as interest and dividends. In Minnesota, the highest earnings are concentrated in the Twin Cities and Rochester areas, and to a lesser extent in other regional centers, like St. Cloud, Mankato and Duluth (the state average was \$34,836). The timber industry in the northeast and manufacturing in the northwest contribute to higher earnings there, while universities in Stevens and Lyon counties raise earnings as well. While lower average earnings may be a result of generally lower paying jobs, it may also indicate counties where many residents commute to a larger employment center in a neighboring county.



Source: U.S. Department of Commerce, Bureau of Economic Analysis

Change in Average Earnings, 1990–2000

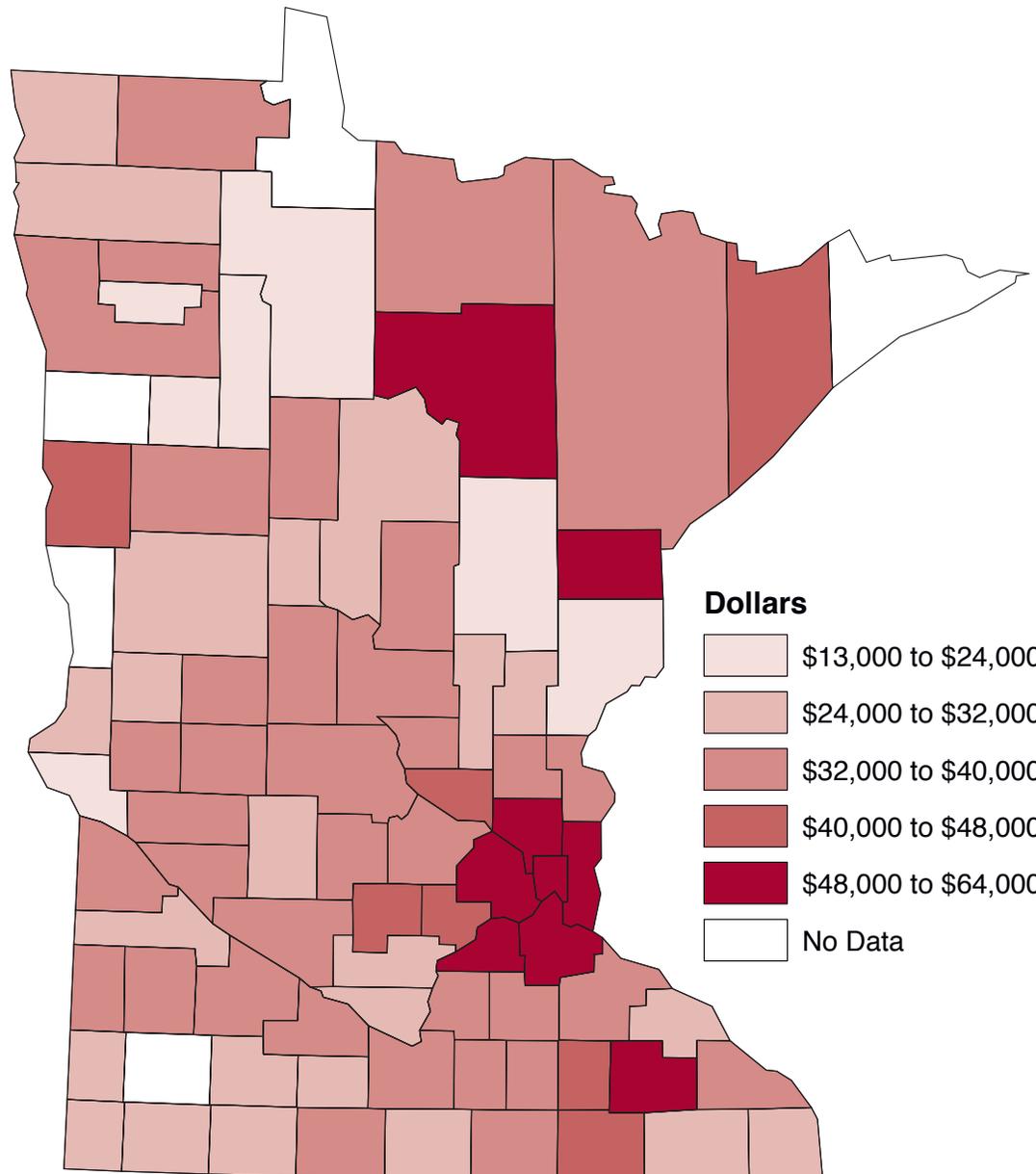
During the 1990s, average earnings in Minnesota rose by 46.8% for the state as a whole. The highest growth in average earnings could be found in the western Twin Cities area, as well as Douglas, Clearwater and Red Lake counties. Rural counties far to the west and north had some of the lowest average earnings in 1990, but several counties saw considerable growth in earnings during the decade.



Source: U.S. Department of Commerce, Bureau of Economic Analysis

Average Earnings in the Manufacturing Sector, 2000

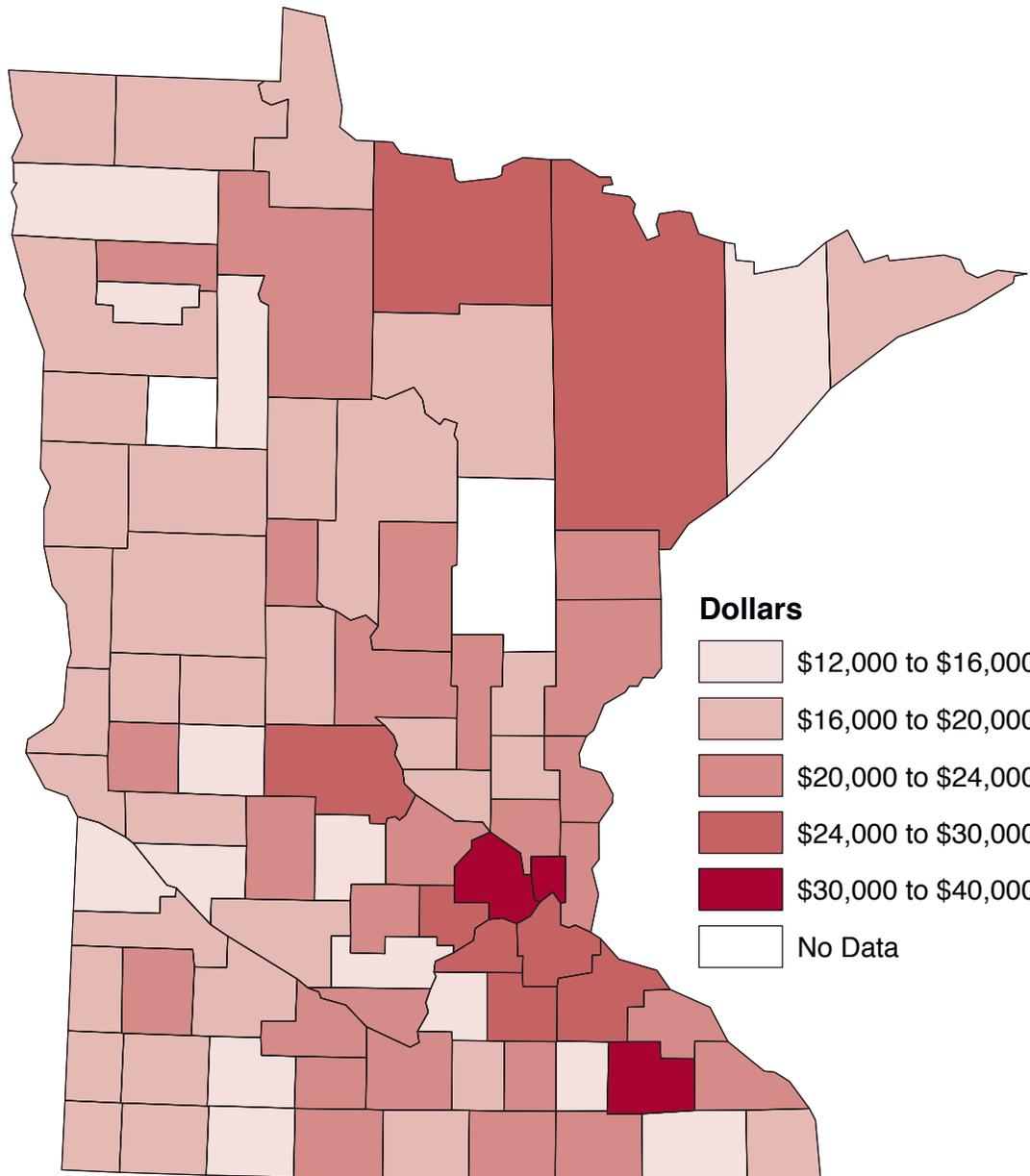
Typically, the manufacturing sector in Minnesota generates higher average earnings compared to overall average earnings. The state average for manufacturing jobs was almost \$49,000 in 2000, while the average earnings across all jobs was \$34,800. The highest average manufacturing earnings can be seen in the Twin Cities metropolitan area, in Olmsted County with its high-tech manufacturing, and in Carlton and Itasca counties, home to major paper mills.



Source: U.S. Department of Commerce, Bureau of Economic Analysis

Average Earnings in the Service Sector, 2000

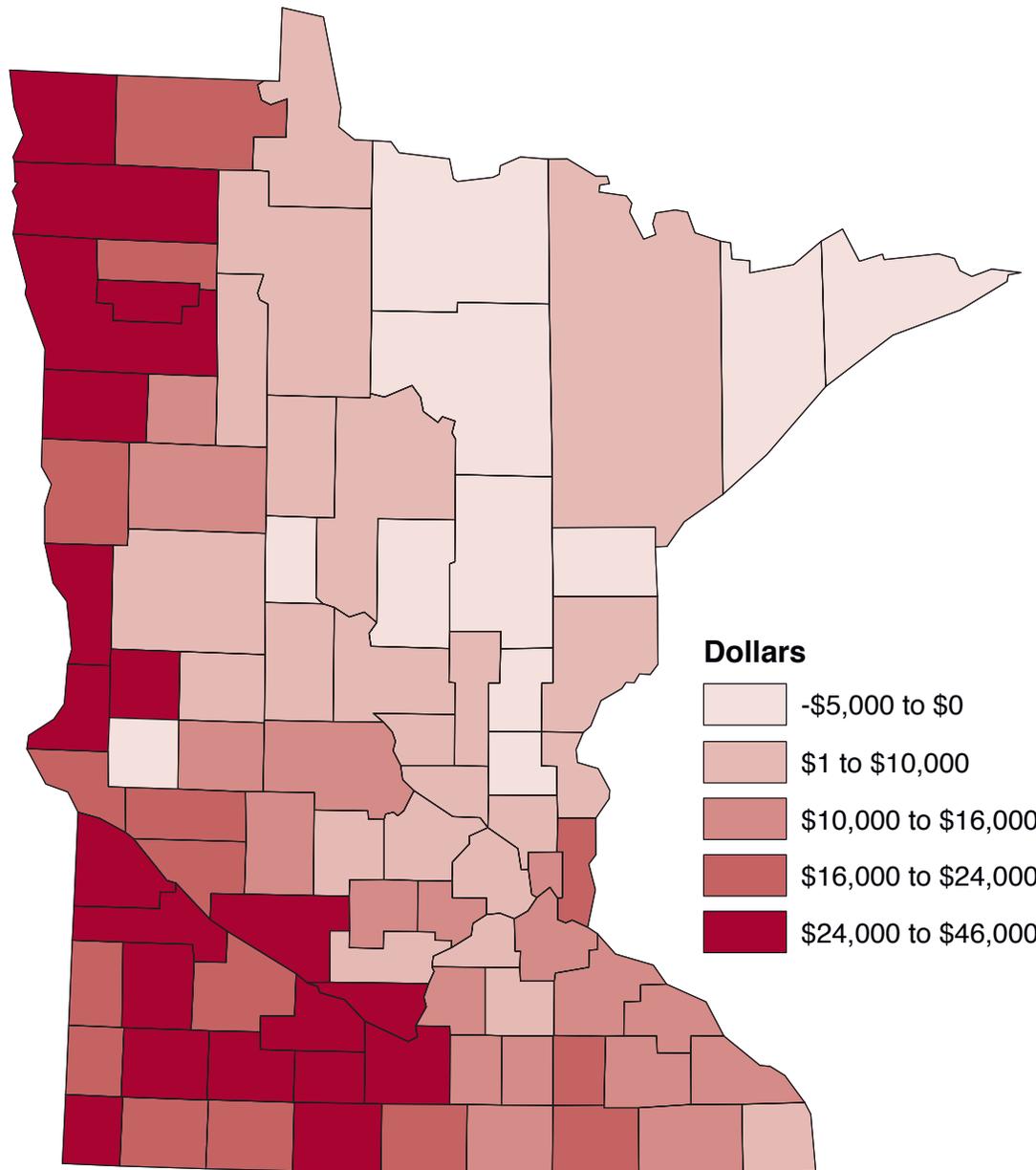
The service sector includes many types of jobs from information technology to fast-food. While the service sector is the fastest growing industrial sector, it also tends to have the lowest paying jobs with many jobs being seasonal. The average wage in the service sector for the entire state is \$30,500, more than \$4,000 below the state average across all jobs. Competition for workers raises earnings in the Twin Cities, Duluth and Rochester, but in half the counties in the state, the average earnings in the service sector fall below \$20,000 a year.



Source: U.S. Department of Commerce, Bureau of Economic Analysis

Average Earnings from Farming, 2000

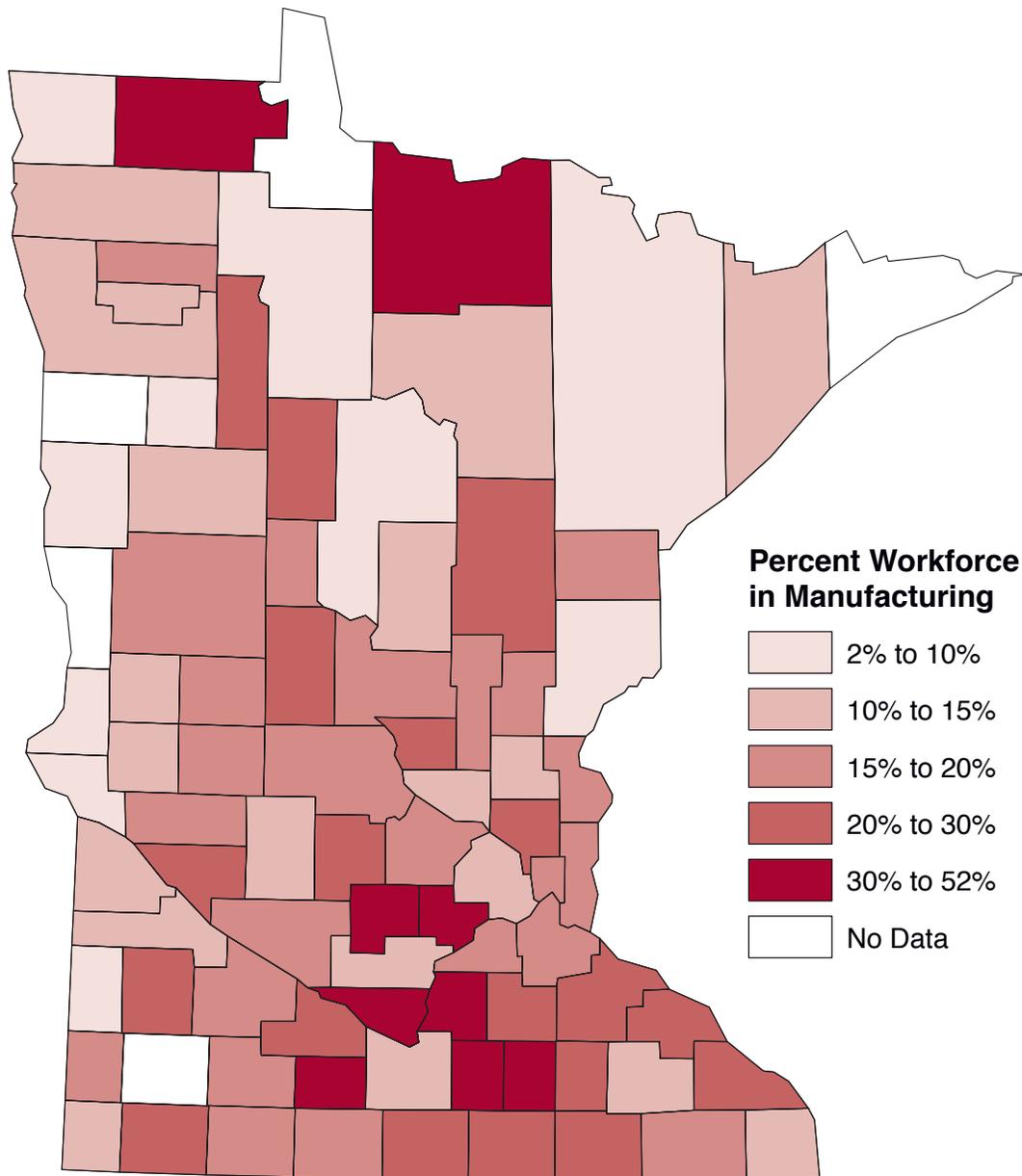
Farming is generally considered a low income occupation, and indeed, average earnings for farming in Minnesota in 2000 were barely above \$15,000. But in the very productive counties in western and southern Minnesota, where farms tend to be large and mechanized, average earnings can exceed the state average of \$34,800 for all jobs. In these regions, government payments as a percentage of farm income are higher as well.



Source: U.S. Department of Commerce, Bureau of Economic Analysis

Workforce in the Manufacturing Sector, 2000

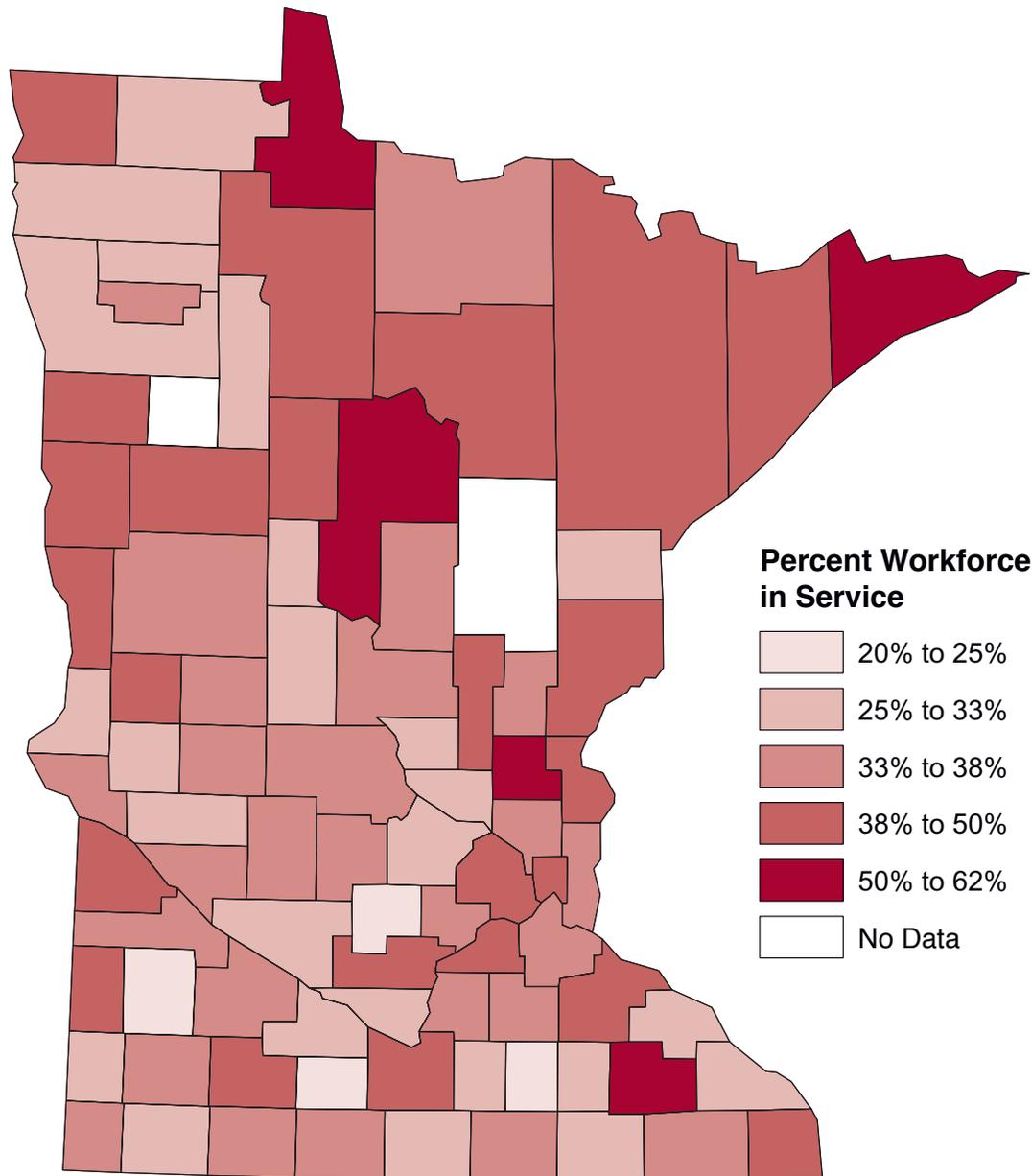
Manufacturing grew quickly during the 1990s, especially in rural Minnesota. In many of the counties with a high percentage of jobs in manufacturing, the jobs are attributable to one industry within manufacturing or even one employer. But because of the time lag involved in collecting and publishing economic data, this map probably presents the manufacturing sector at its peak in Minnesota. From the third quarter of 2000 to the same quarter of 2002, the state lost over 41,000 manufacturing jobs.



Source: U.S. Department of Commerce, Bureau of Economic Analysis

Workforce in the Service Sector, 2000

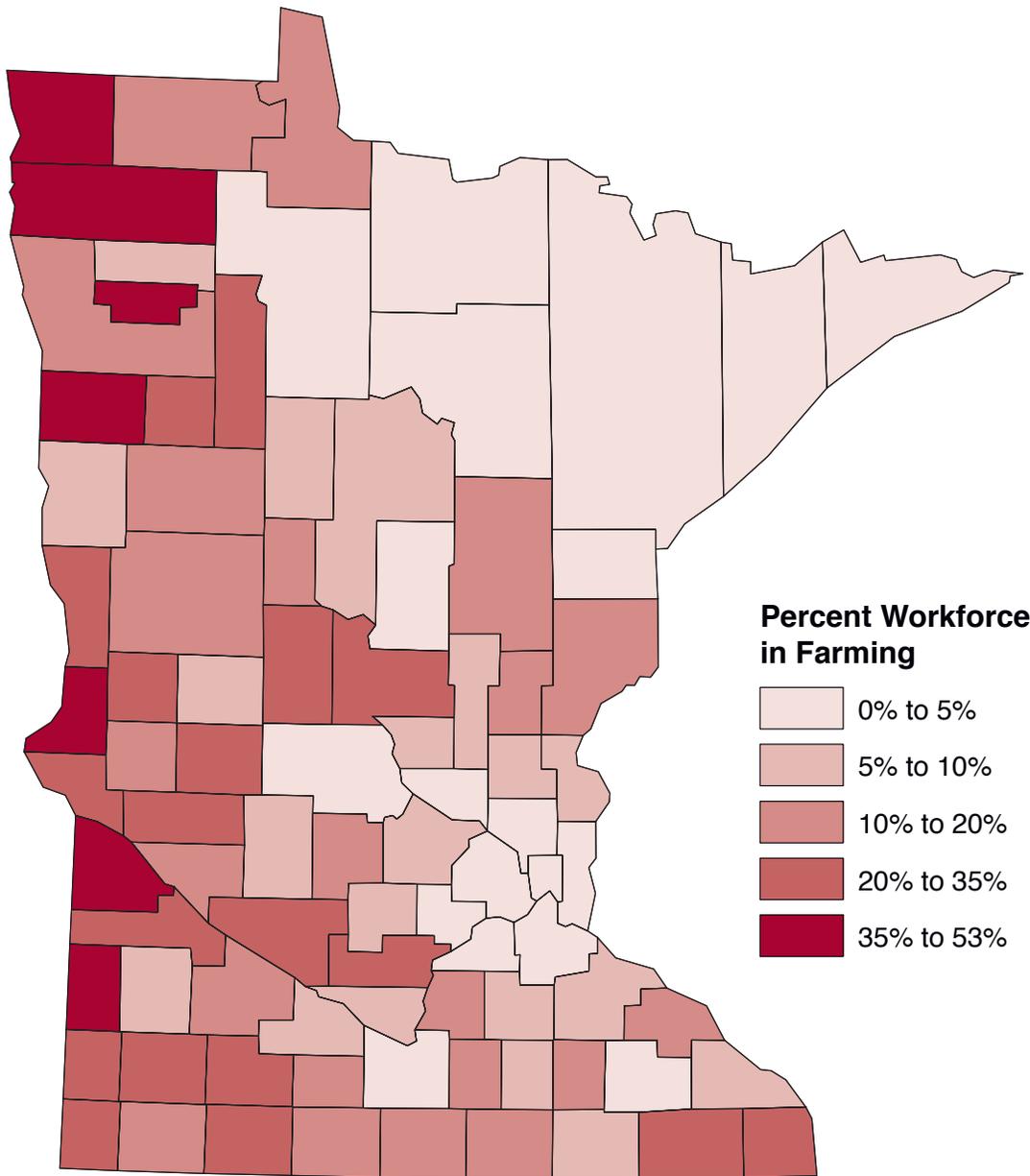
Counties with low employment in the manufacturing sector tend to have a high percentage of workers in the service sector. The service sector is the fastest growing sector in the state, especially in the area of personal services. Northern Minnesota is dominated particularly by resorts and the tourism industry, while Olmsted County has a large number of workers in the medical services. Note, though, that the Twin Cities area does not seem to be dominant in either manufacturing or services, a sign of a diversified economy.



Source: U.S. Department of Commerce, Bureau of Economic Analysis

Workforce in Farming, 2000

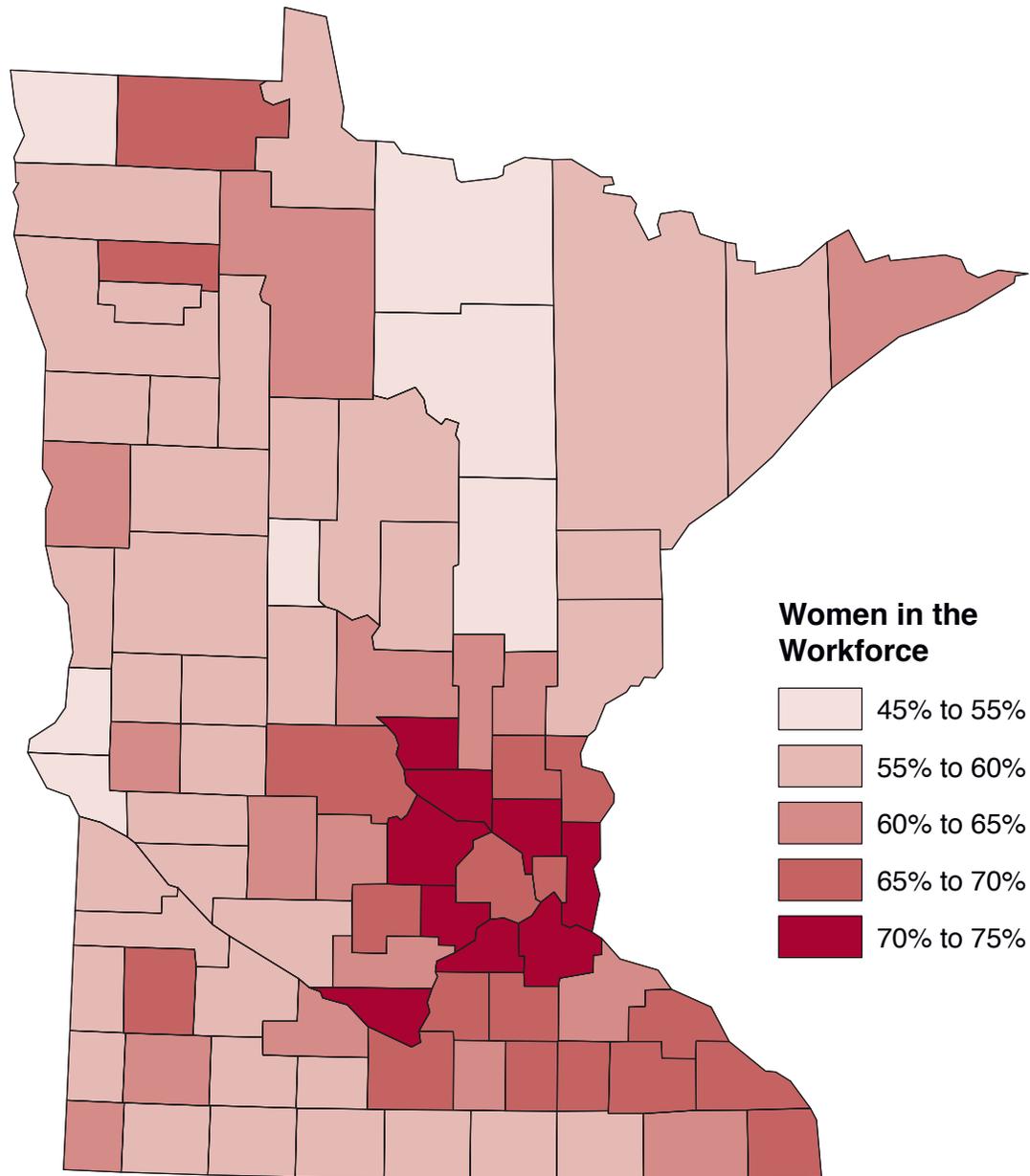
Farming is a significant source of employment in the western and southern counties. These counties tend to have the most land in farming and are the most productive, but they also tend to have fewer other employment opportunities. Only 4% of Minnesota's workforce as a whole is employed through farming, but 26 western and southern counties had at least 20% of their workforce in farming in 2000.



Source: U.S. Department of Commerce, Bureau of Economic Analysis

Women in the Workforce, 2000

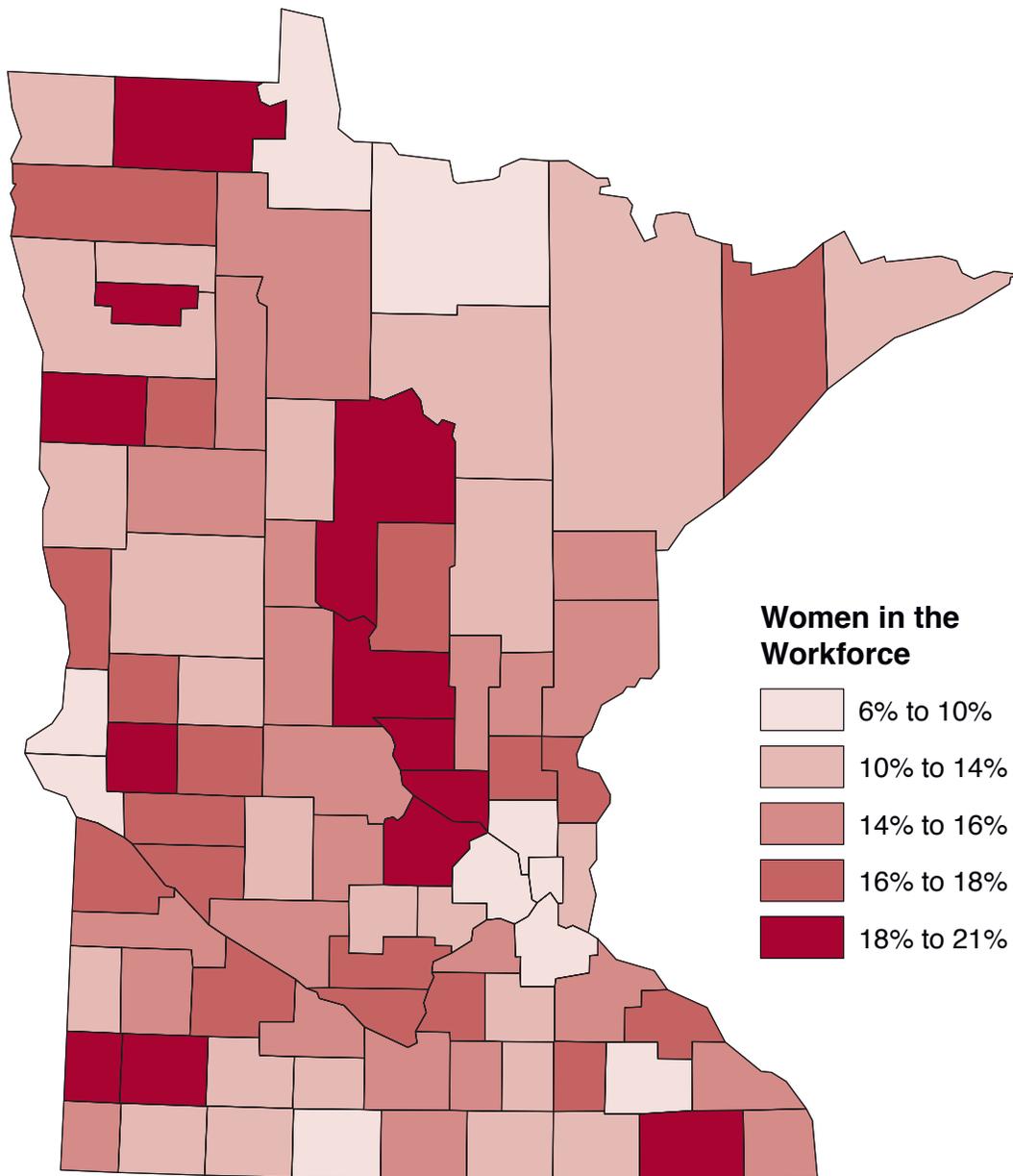
Minnesota has the highest rate of women in the workforce in the nation, with 66% of women 16 years of age and older participating in the labor force. This is well over the U.S. average of 57.5%. Within the state the highest rate of women in the workforce can be seen in the counties surrounding the core counties of Hennepin and Ramsey, but high percentages also appear in counties with large manufacturing centers like Nicollet, Olmsted and Roseau.



Source: U.S. Census, 2000

Women in the Workforce, 1980–2000

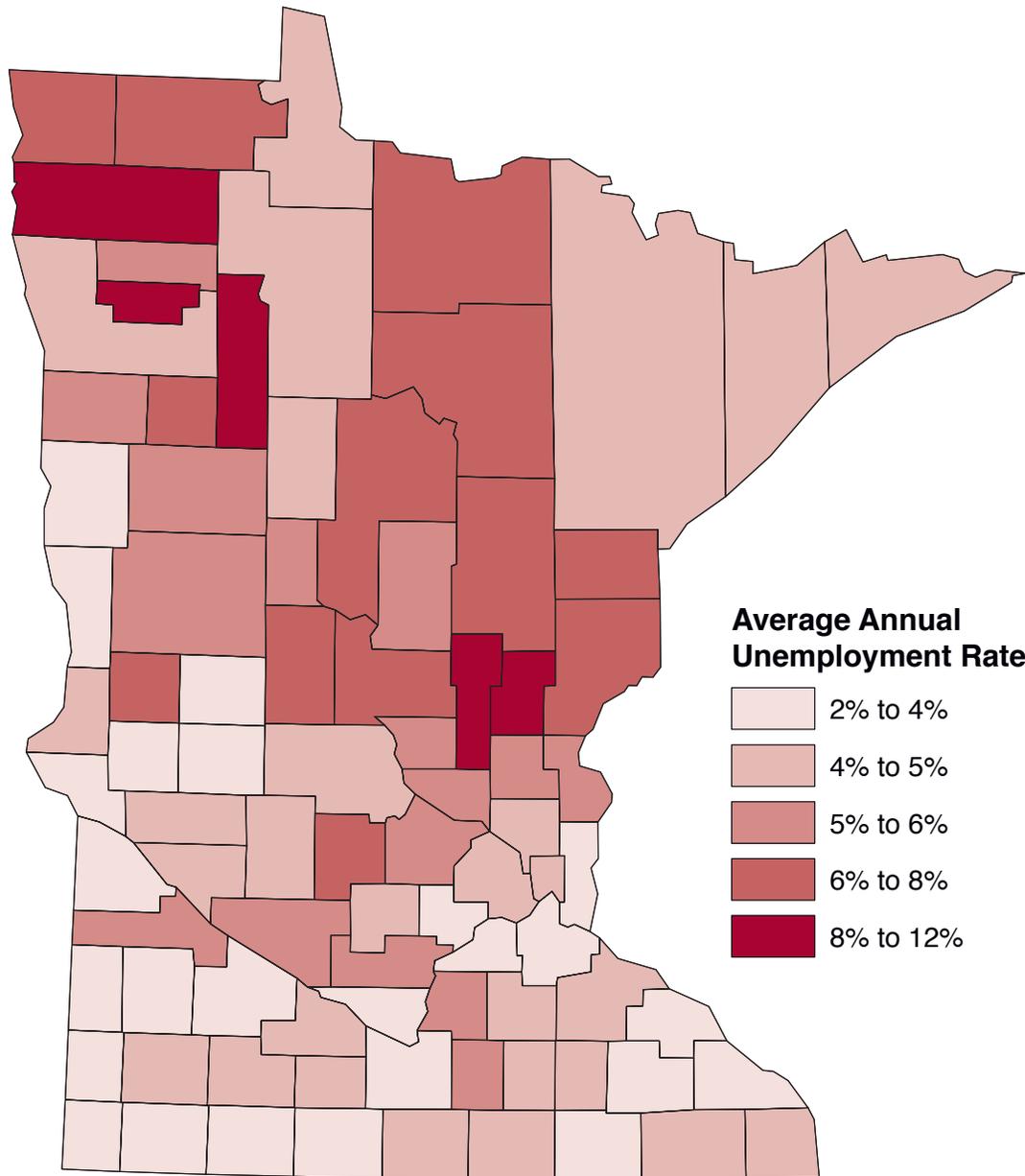
Since 1980, there has been a significant increase in the number of women working outside the home. Counties in the Twin Cities core—Hennepin, Ramsey, Anoka, Dakota—and Olmsted County saw little change over twenty years because a significant number of women were in the workforce in 1980. The counties with the largest change, however, can be found in central Minnesota, which saw rapid population growth in the 1980s and 1990s, and also in counties with low percentages in 1980.



Source: U.S. Census, 2000

Average Annual Unemployment Rate, 2002

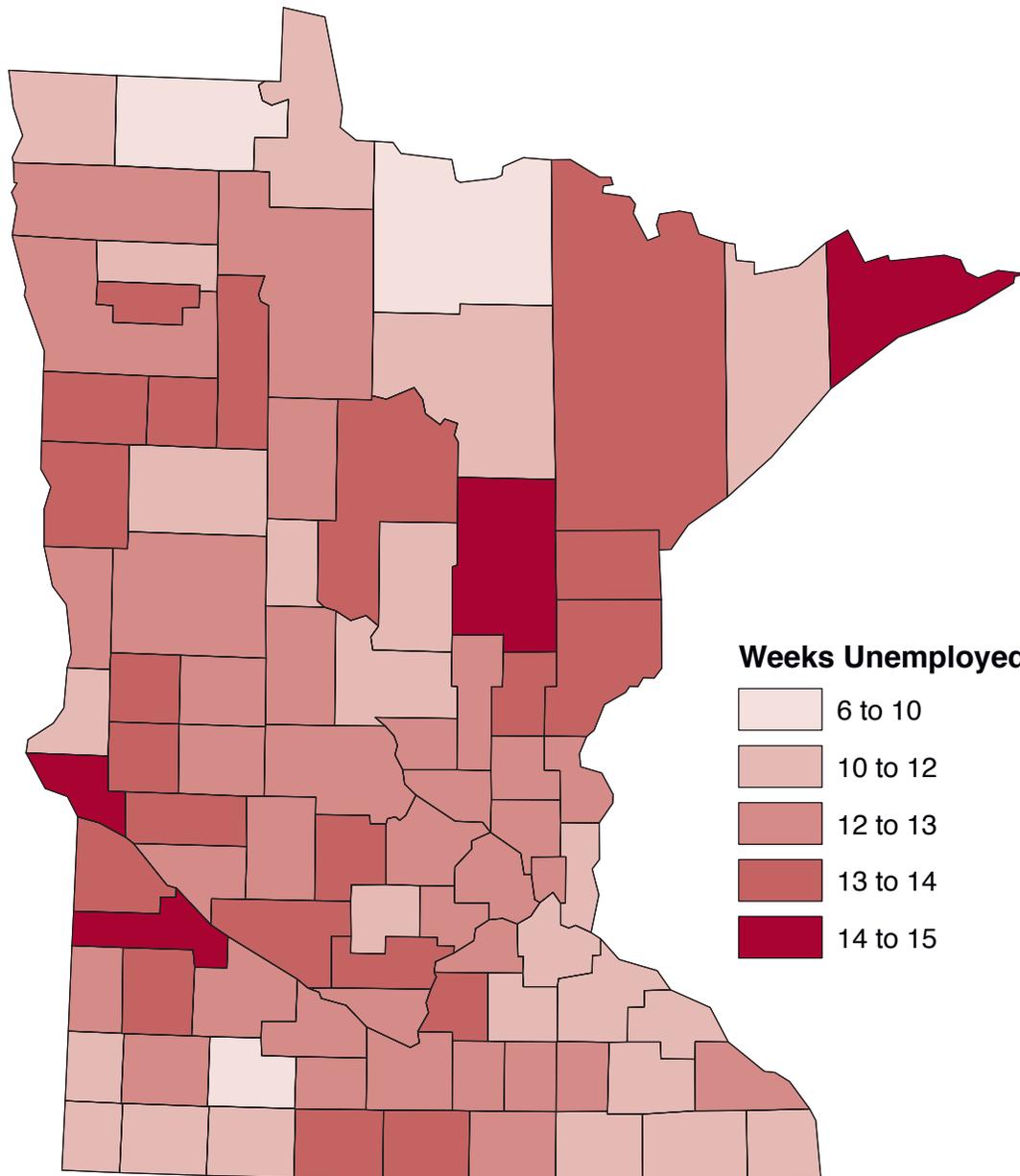
Historically, Minnesota traditionally has had a low unemployment rate compared to the nation as a whole (the annual average was 4.4% in Minnesota in 2002, compared to 5.8% for the U.S.). Within the state, though, the average annual rate can vary considerably. Rates are generally the lowest in southern Minnesota and higher in the northern counties. There are notable exceptions throughout the state. Northern counties tend to be more dependent on seasonal tourism jobs and saw some large plant closings in 2002.



Source: Minnesota Department of Economic Security

Average Duration of Unemployment, 2001

Counties with higher durations of unemployment tend to be more reliant on agriculture and other seasonal work. This is a snapshot of 2001 and could reflect the downturn in the economy that year during which there were some large plant closings around the state. Cottonwood and Roseau counties had the shortest average durations of unemployment which could have been indicating a labor shortage in those counties. Note that these data are from 2001 and as a very volatile indicator has likely changed with the recent economic downturn.

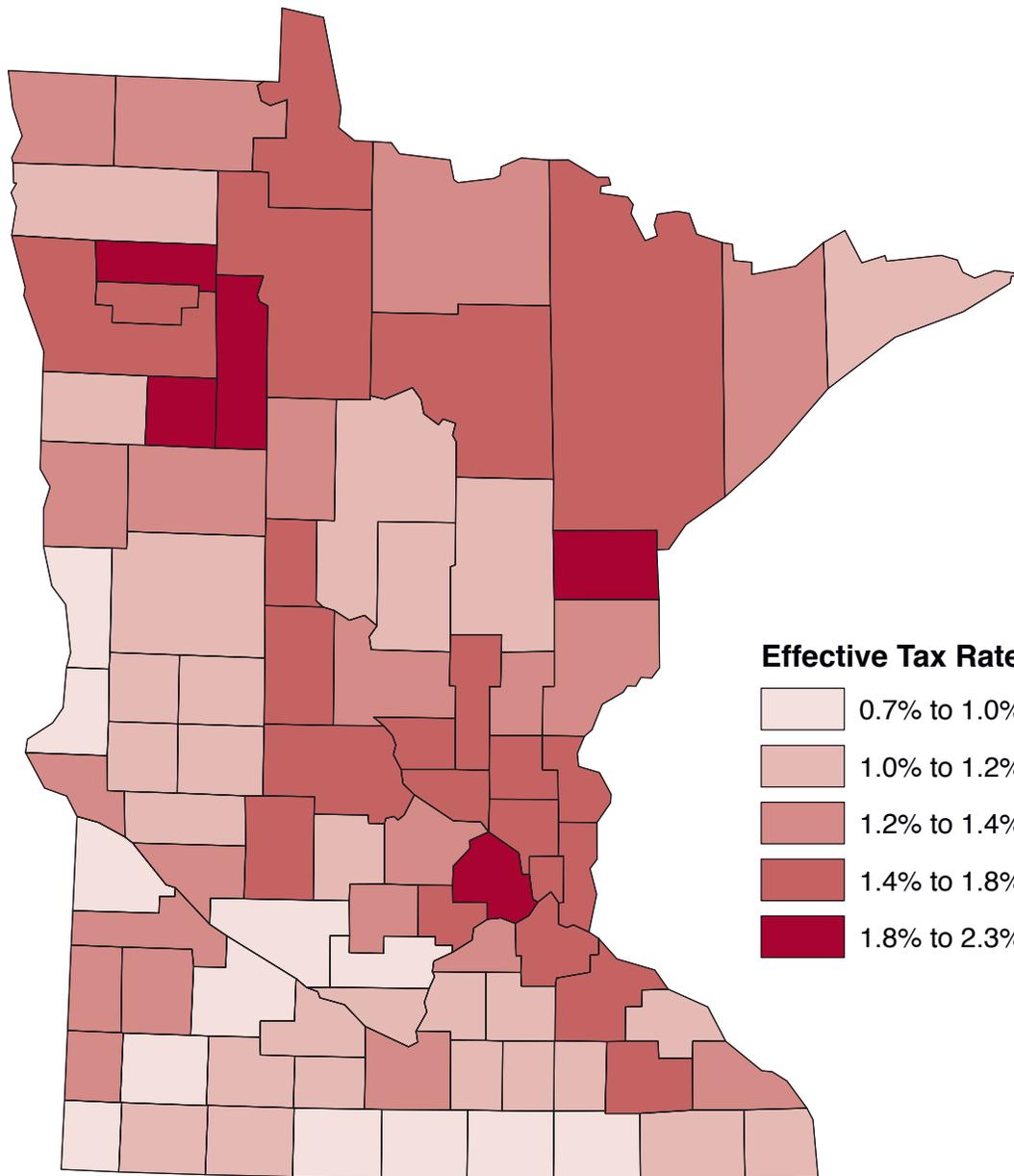


Source: Minnesota Department of Economic Security

Effective Property Tax Rate, 2002

Effective tax rate is calculated by dividing the total property taxes payable (residential and commercial) by the taxable market value of all property. The result is the tax rate per dollar of market value. Different taxing authorities exist within each county, so variances occur from place to place.

The property tax on a particular parcel of property is primarily based on its market value, property class, the total value of all property within the taxing area, and the budget requirements of all local governmental units located within the taxing area. Property tax is the major source of revenue for local governmental units in the state of Minnesota.



Source: Minnesota Department of Revenue

Infrastructure

Minnesota is served by several transportation modes, all of which receive government support. Growing economies need safe and efficient transportation systems. The strength of this connection is demonstrated by the fact that one of the greatest transportation problems, traffic congestion, is generally a problem only in prosperous places: the economy has grown faster than the infrastructure can be constructed to meet its needs.

Minnesota has the fifth largest highway system in the United States. The Minnesota Department of Transportation (Mn/DOT) is directly responsible for the 11,933 miles of the trunk highway system and its 20,107 bridges. These highways make up only about 9% of the total statewide system mileage, but they carry about 61% of the annual vehicle miles. The remaining 123,557 miles of road are under the jurisdiction of local governments.

Minnesota does offer other modes of transportation. There are 160 publicly and privately owned airports and seaplane bases. Minnesota has two principal commercial waterways, the Great Lakes/St. Lawrence Seaway system and the Mississippi River (including its tributaries, the Minnesota and St. Croix Rivers), on which Minnesota's agricultural and mining economies heavily depend. In addition, there are 26 rail carriers that operate on 4,544 miles of track.

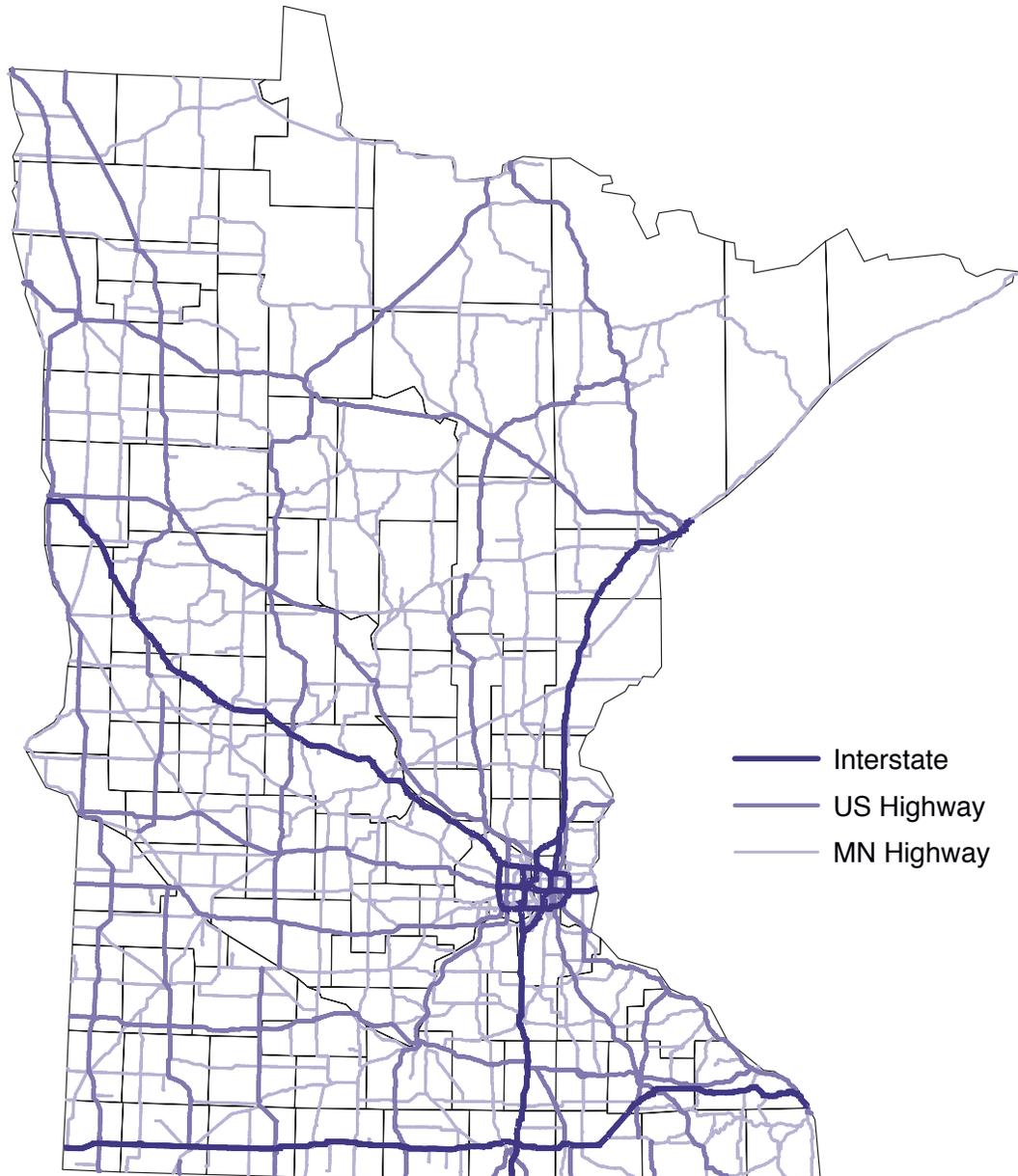
The primary means of transporting people and goods within Minnesota, however, is by highway. Highways have become the vascular system of the state's economy, and remain crucial to that economy. The limitations of depending so heavily upon one mode are becoming apparent, however, as booming growth in the Twin Cities area puts unbearable pressure on the urban highway system. At the same time, Greater Minnesota counties have increasingly scarce resources for maintaining the safety and utility of the existing network, as that population concentrates into regional trade centers. Further, the state's population is aging, which will lead increasing numbers of people to rely on modes other than their own automobiles to get around. Fortunately, technological innovations are coming that can improve the safety and efficiency of all transportation modes. Minnesota will be well served to explore these options as it invests in a multi-modal system that will support our economic health well into the future.

*Frank Douma
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State and Local Policy Program
Hubert H. Humphrey Institute of Public Affairs
University of Minnesota*



Minnesota's Major Roadways, 2003

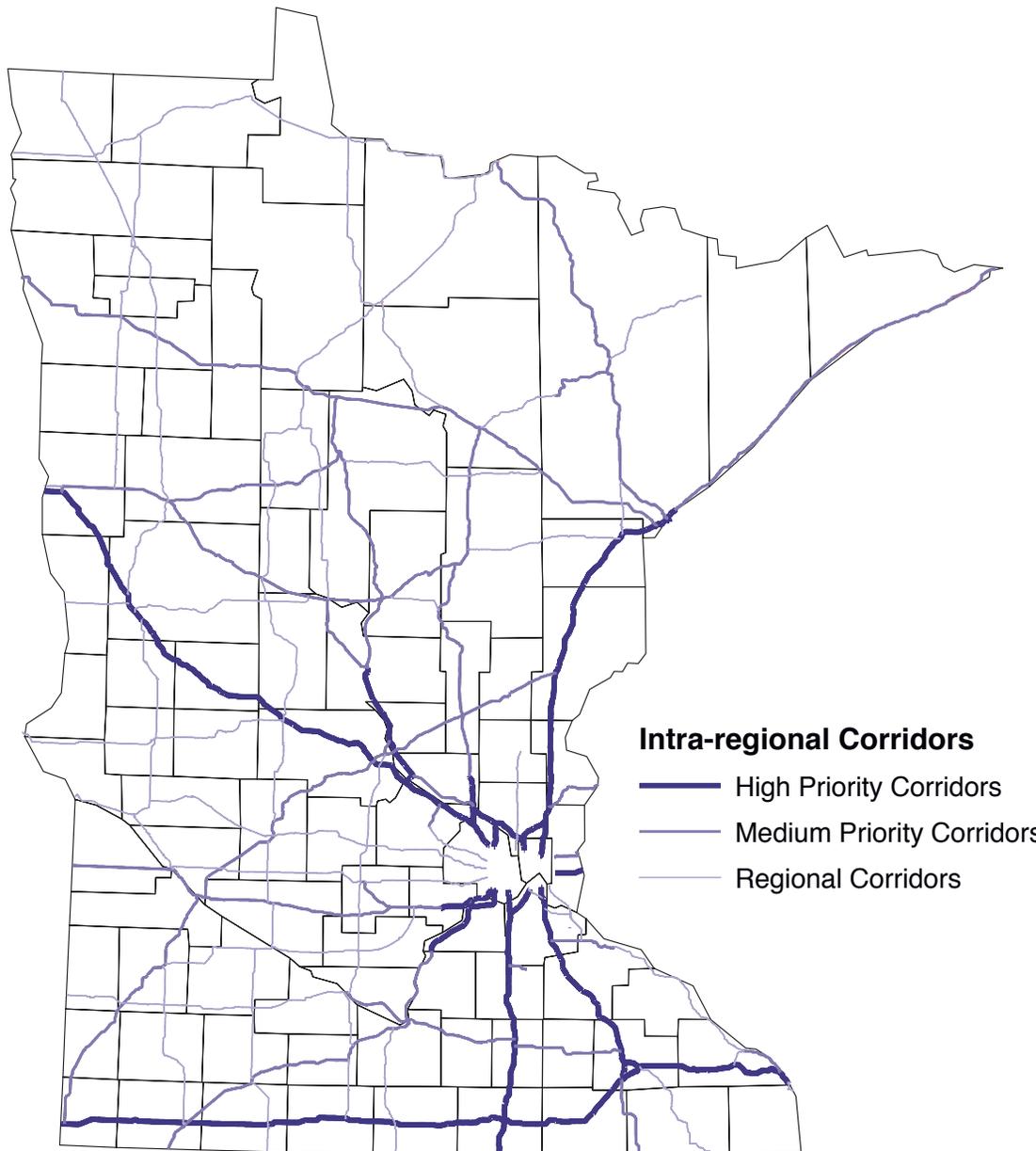
This map shows the major roadways in the state. The distinctions primarily relate to federal funding designations, although interstate and U.S. highways also have more stringent design specifications (such as being at least a four-lane divided highway). Interstates and U.S. highways that are primarily federally funded are part of the National Highway System and obviously do not change designation as they cross state borders. Minnesota highways are more likely to receive their primary funding and routing from the state, and link intra-state destinations. They may or may not continue across the state border, and if they do, they usually take on a new number. The Minnesota Department of Transportation has the responsibility for repairing and maintaining all roads shown here.



Source: Minnesota Department of Transportation

Intra-regional Corridors, 2003

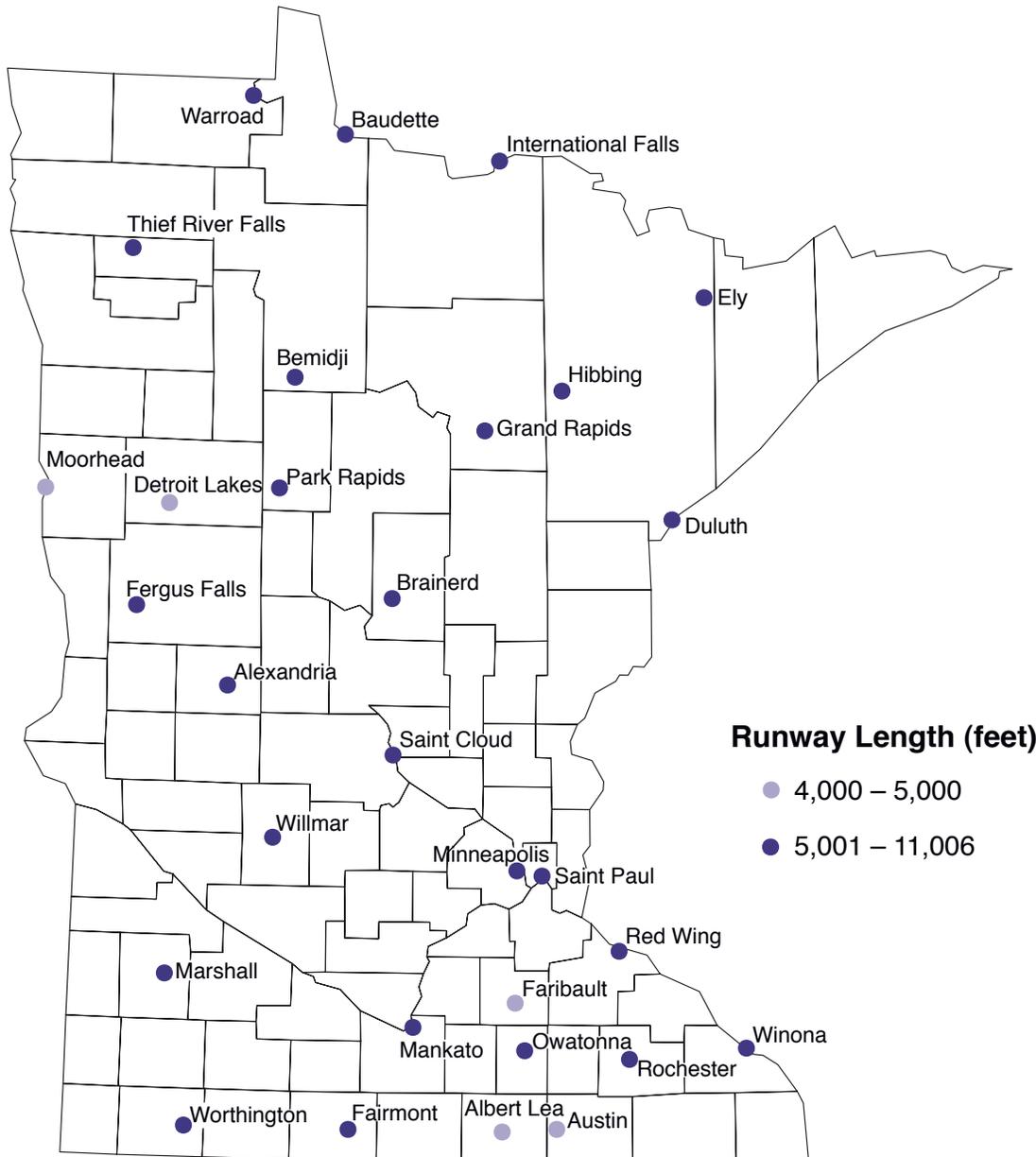
This map reflects the priority of transportation corridors outside of the Twin Cities metropolitan area as designated by the Minnesota Department of Transportation. As a result of a Mn/DOT study completed in 2000, these designations reflect the importance of each corridor to the movement of people and goods throughout the state. Higher-priority intra-regional corridors tend to connect major regional trade centers, while regional corridors connect areas with a lower amount of economic activity. This relative importance is indicated in the design specifications of the corridor (e.g., high-priority intra-regional corridors are expected to maintain a higher average speed than regional corridors), as well as the level and intensity of improvement and maintenance along the corridor. The designation also suggests an appropriate level of roadside development.



Source: Minnesota Department of Transportation

Commercial Air Service, 2003

There are numerous airports and airstrips distributed throughout the state, but this map depicts airports that meet the standards required to accommodate commercial aircraft. Larger airplanes, especially commercial airliners, typically require longer runways (for instance, an airport's runway must be at least 5,000 feet to handle cargo), and thus the length of a runway typically is a good indicator of whether the airport is served by a commercial airline, or primarily intended for general aviation use. For many of these communities, having an airport that can handle commercial traffic is an important part of their economic structure.



Source: Minnesota Department of Transportation

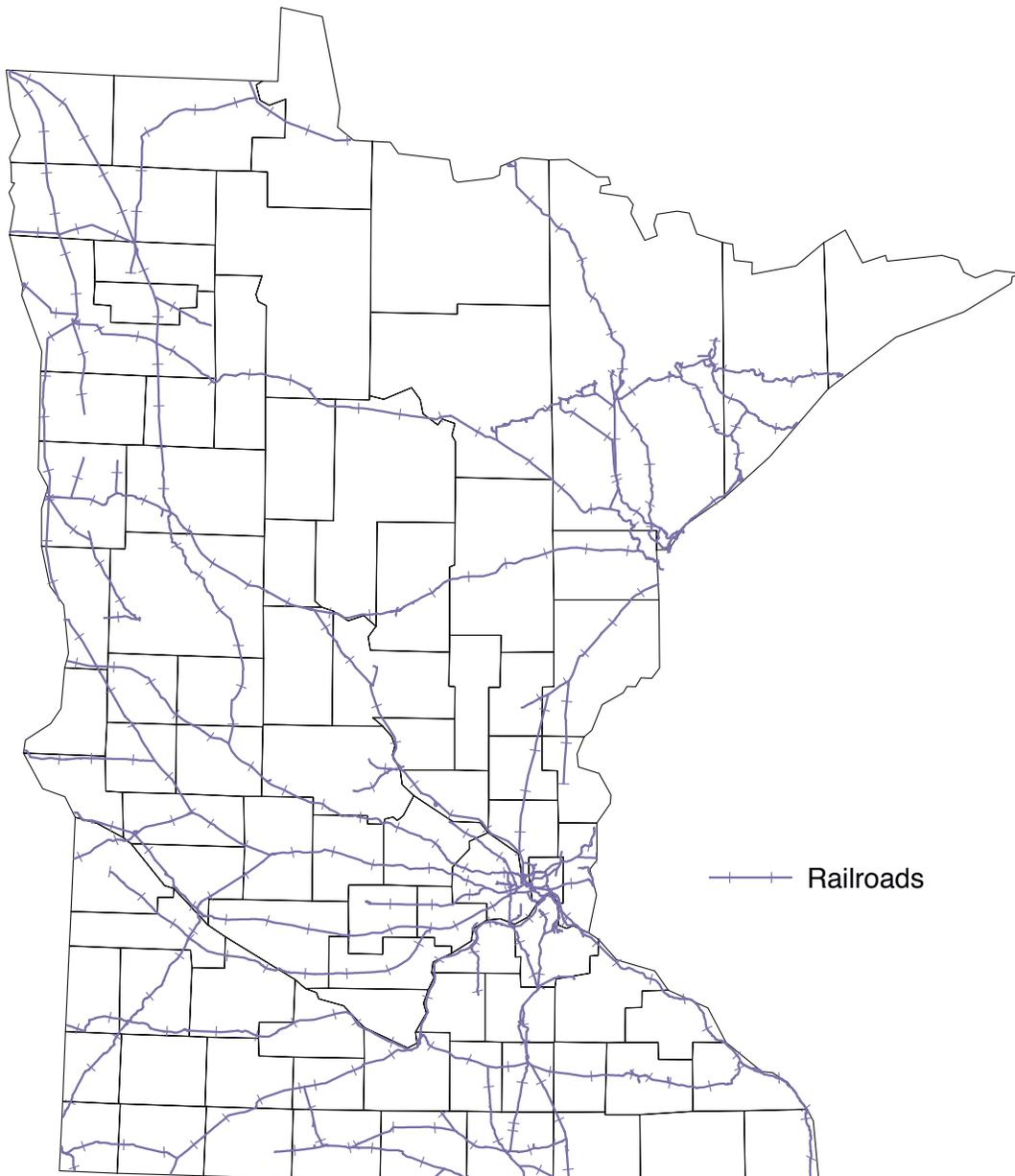
Railroads, 2003

As of 2002, Minnesota had a total of 26 railroads operating on 4,544 miles of rail line, including three private lines that do not provide commercial freight service. The number of miles in the state's rail system peaked in 1930 at 9,362 miles. Over the years, many rail lines have been abandoned in favor of other modes of transportation. An increasing number of unused rail beds, however, have found a new existence as paved biking trails.

The freight system divides carriers into three classes. Class I railroads have annual gross operating revenues in excess of \$256.4 million and run on over half the lines in Minnesota. Class I carriers operate transcontinental systems and primarily serve the customers in and between the largest trade centers. Amtrak operates two daily transcontinental passenger trains (one eastbound and one west bound) between Chicago and the Pacific Northwest on Class I lines running through St. Paul.

Class II railroads operate on 856 miles of track in Minnesota, primarily serving other upper mid-western states and bordering Canadian provinces. These railroads have annual gross operating revenues between \$20.5 and \$256.4 million. Class III railroads have annual gross operating revenues under \$20.5 million, usually do not extend beyond state boundaries and, in some cases, serve only small geographic areas (e.g., an industrial park).

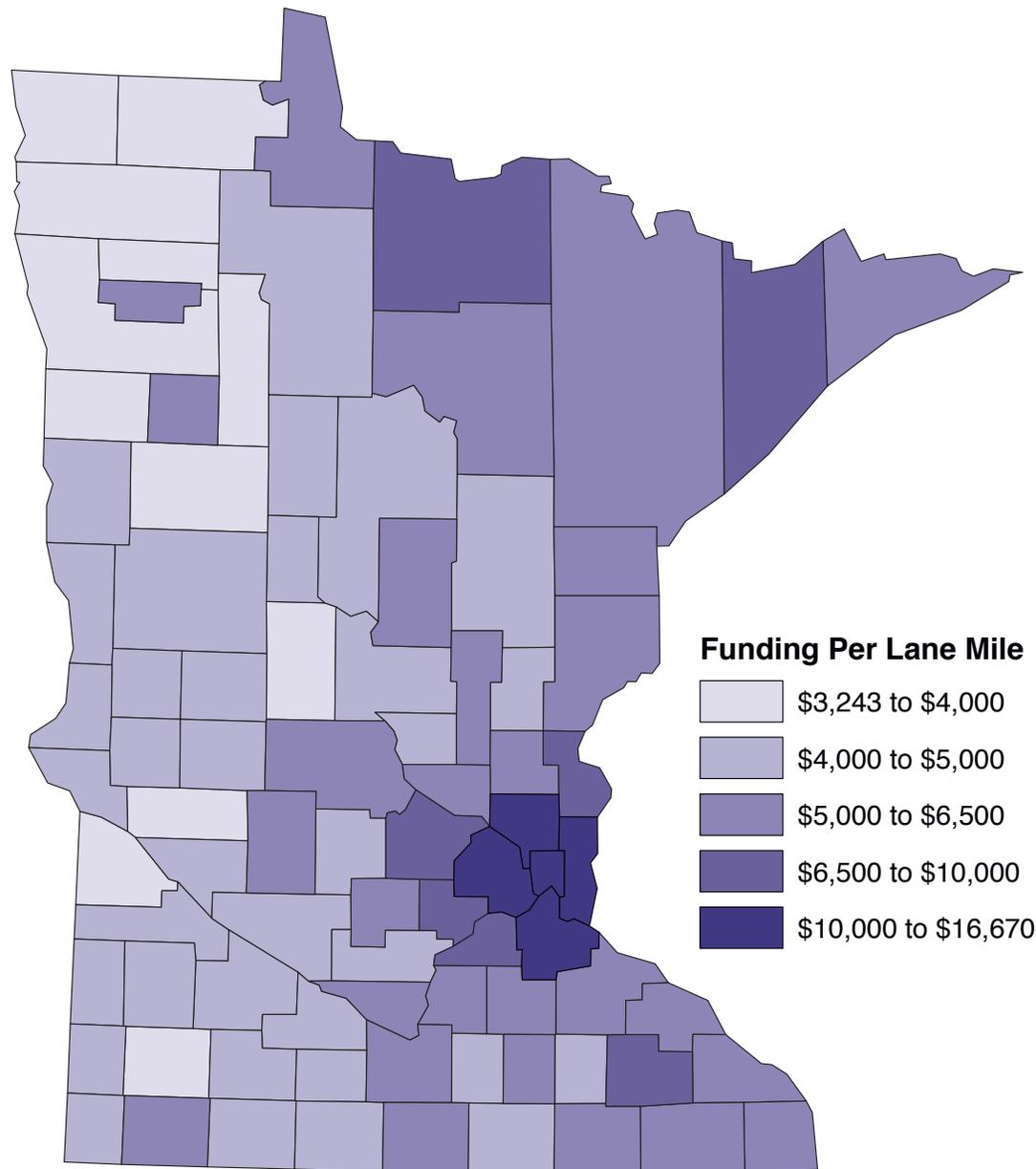
These carriers, Class II and Class III, often operate lines that were originally operated by Class I carriers and haul largely bulk items such as grain and coal. They also, however, transport finished products like industrial goods and forest products.



Source: Minnesota Department of Transportation

County State Aid Highways (CSAH), 2003

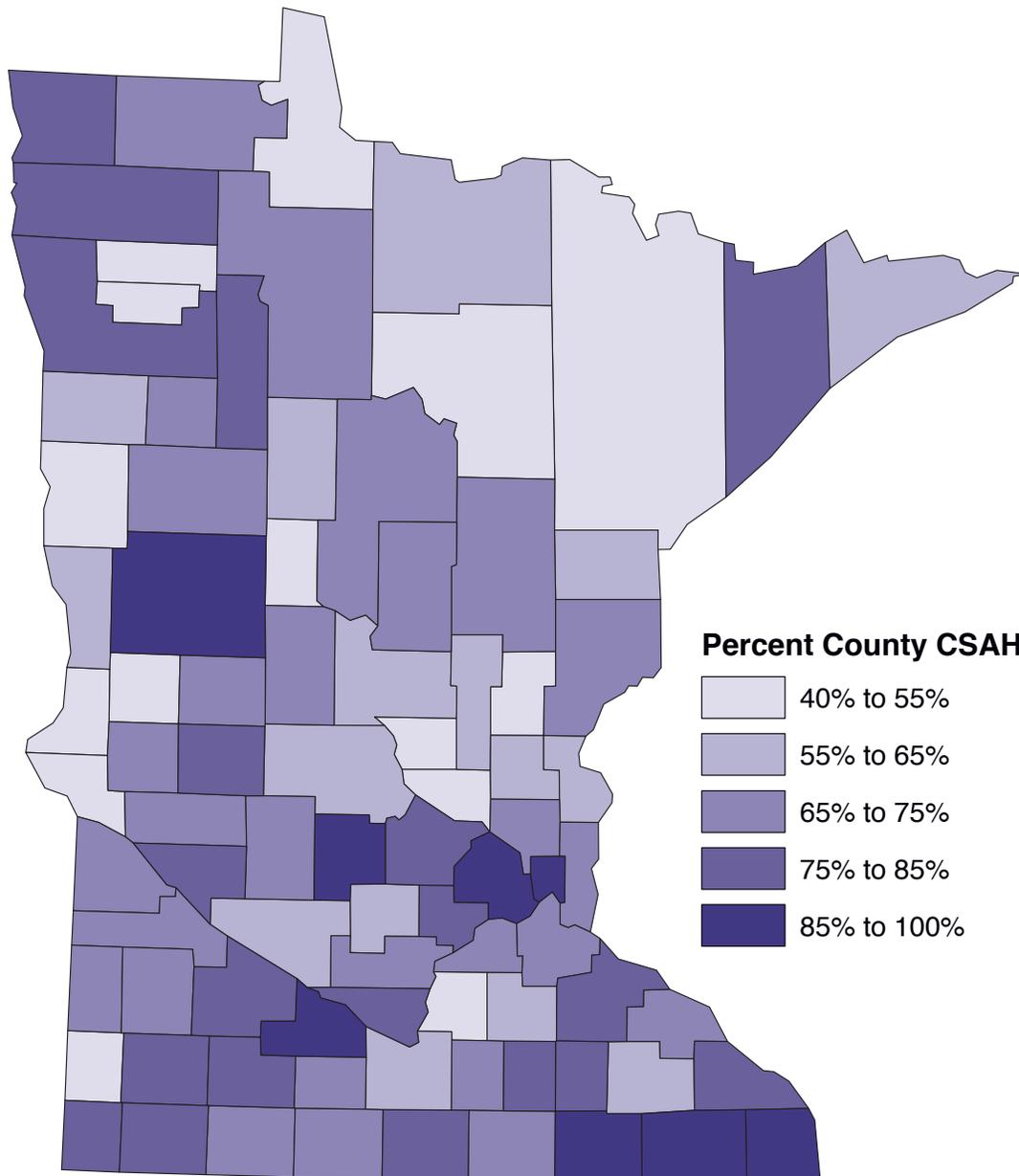
This map shows the funding per lane mile of County State-Aid Highways (CSAH) in each county. Depicting lane miles of road rather than simple miles of road reflects the greater concentration of lane miles in the more populous counties where 4-lane and 6-lane highways are more common. Lane miles also reflect the differences in the construction and maintenance needs in each county. These roads are supported by state dollars but are maintained by county departments of transportation. The amount of state funds per county is based on a formula that includes several variables. Some of the key variables are the number of CSAH lane miles and vehicle registrations per county, along with other factors (e.g., financial needs of the CSAH system in that county). Sixty percent of the apportionment is used for construction and forty percent for maintenance.



Source: Minnesota Department of Transportation

Percent of County Roads Designated as County State Aid Highways, 2003

This map shows the percent of county-operated and maintained highways that receive CSAH dollars. These roads are supported by state dollars but are maintained by county departments of transportation. The amount of state funds per county is based on a formula that includes several variables. Some of the key variables are the number of CSAH lane miles and vehicle registrations per county, along with other factors (e.g., financial needs of the CSAH system in that county). Sixty percent of the apportionment is used for construction and forty percent for maintenance.

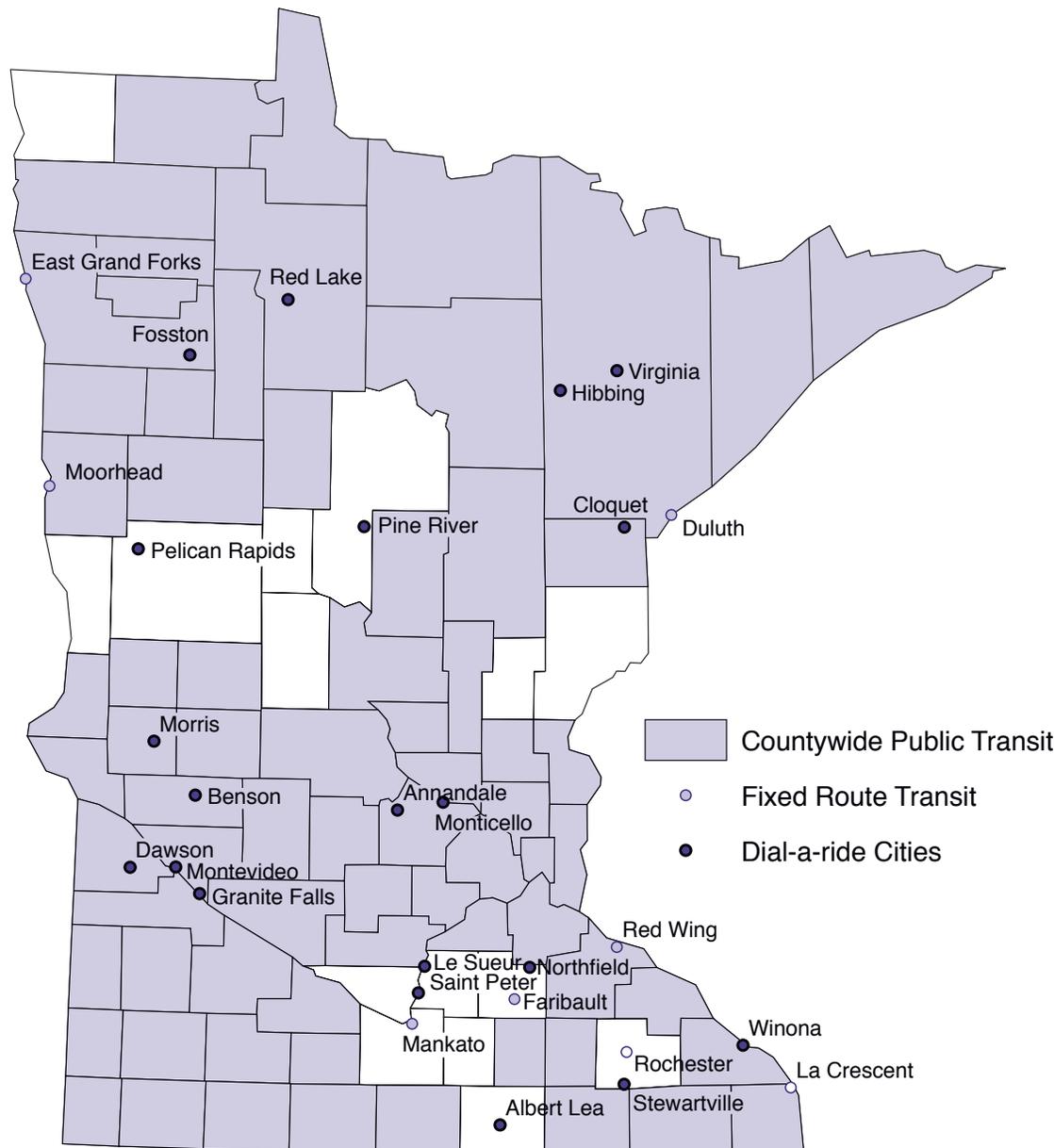


Source: Minnesota Department of Transportation

Public Transit, 2002

Local public transit throughout Minnesota operates through a financial partnership that includes local, state and federal participation. Mn/DOT's Office of Transit provides both financial and technical assistance to public transit systems in 66 of 80 Greater Minnesota counties. Fixed route systems serve larger cities, while some counties and small cities operate a "dial-a-ride" system offering point-to-point transportation serving primarily elderly and disabled populations. Smaller systems often operate county-wide, as the map indicates.

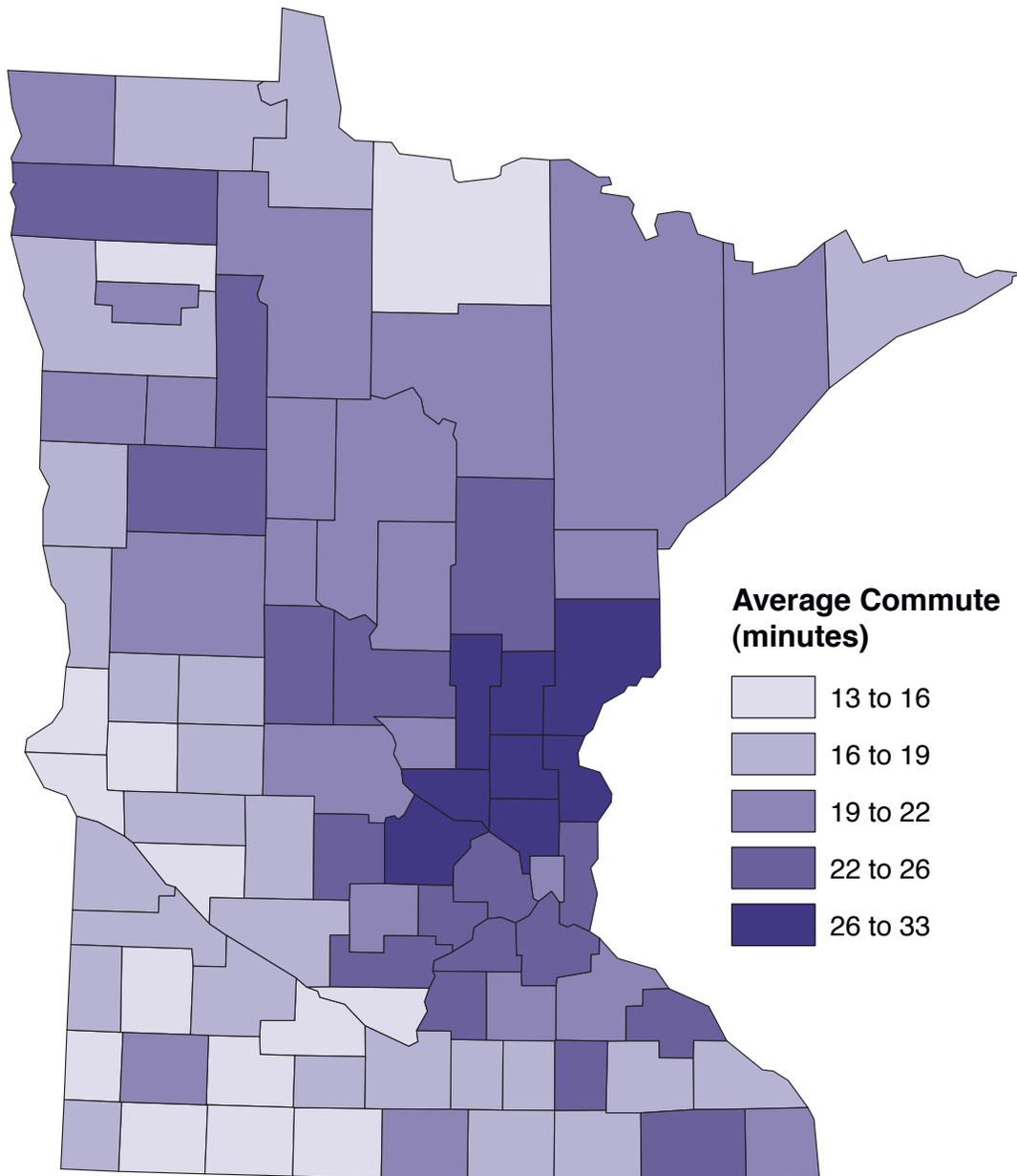
The Twin Cities metropolitan area is served by a number of fixed route systems and dial-a-ride systems, most of which operate at a city or county level. The largest fixed route system in the state is MetroTransit, serving most of the Twin Cities seven-county metropolitan area. MetroTransit and Metro Mobility, the Twin Cities largest dial-a-ride system, are operated by the Metropolitan Council, a regional body charged with transportation planning and transit operations in the seven-county metropolitan area.



Source: Minnesota Department of Transportation, 2002 Annual Transit Report

Average Commuting Times, 2000

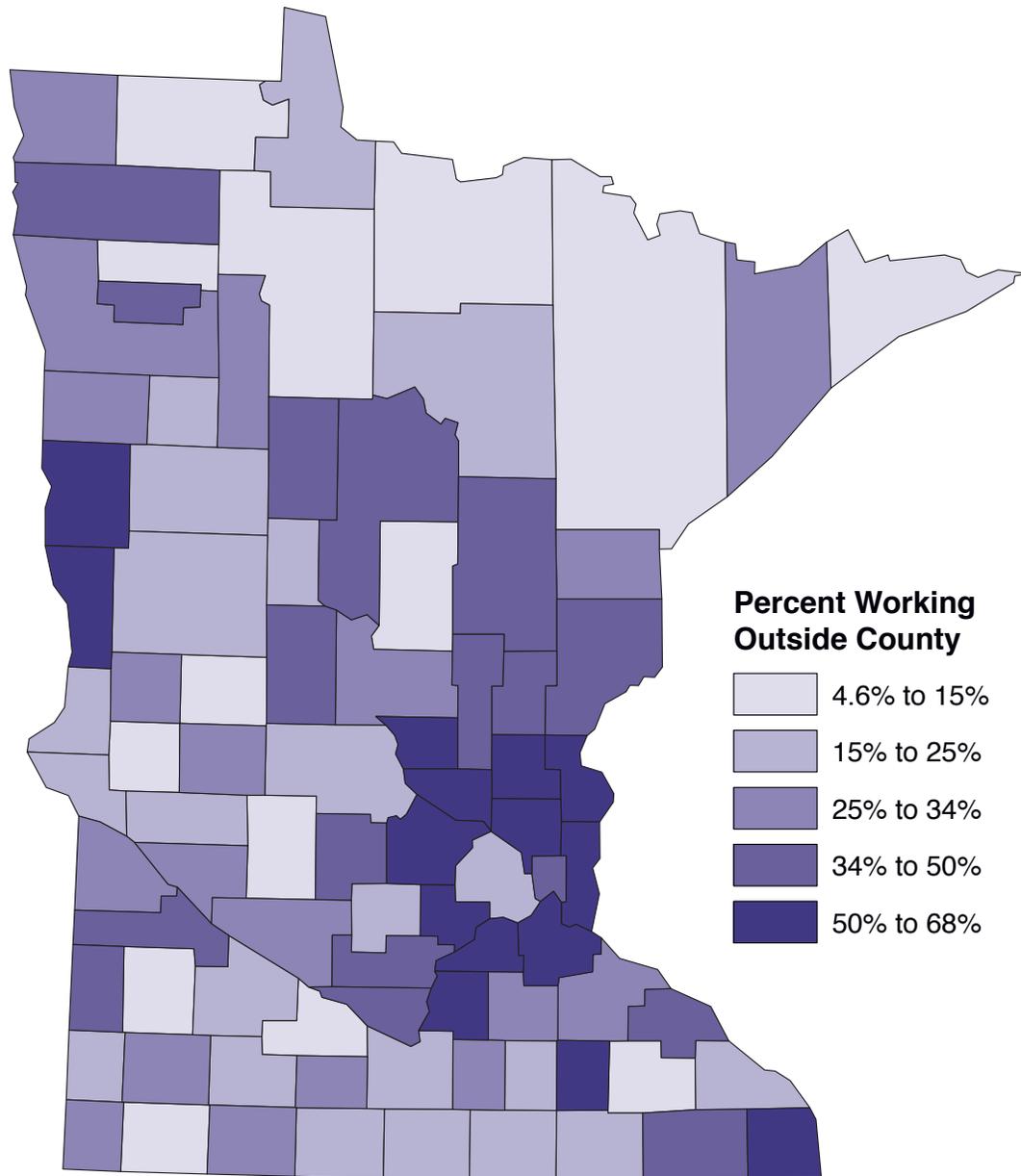
This map shows the average commute time to work in minutes for each county in 2000 (the statewide average was 21.9 minutes). The average commute time is for all modes (car, bus, non-motorized, etc.). The spread of suburbanization, combined with the influence of employment sites in Minneapolis and St. Paul, is indicated by the longer commute times in the surrounding counties, especially to the north. Longer commute times also show up in counties around Rochester and in rural counties with large distances between towns.



Source: U.S. Census 2000

Working Outside County of Residence, 2000

This map helps explain the commuting patterns of the previous map, showing the large number of people who reside in one county and work in another. The phenomenon is particularly strong in the counties surrounding Hennepin and Ramsey and in the west near Fargo, ND. The state average was 33.7% of county residents working in another county.



Source: U.S. Census 2000

Agriculture

It's hard to talk about Minnesota without discussing agriculture. After all, the industry is responsible for nearly one fifth of the state's total economic activity. Agriculture and its related industries employ one out of every four workers statewide, and in rural Minnesota, the number is closer to one out of every three workers.

Our fertile soil, abundant rain, strong agricultural education system, and world-class transportation system provide a solid foundation for our nearly 80 thousand farms and 29 million acres of farmland. As a result, Minnesota is one of the United States' leading producers of food. Among all fifty states, Minnesota is in the top five in the production of sweet corn, peas, potatoes, turkeys, milk, soybeans, spring wheat, oats, barley, sunflowers, sugar beets, canola, wild rice, hogs, cheese and butter. Most likely, if there's something you want, Minnesota can provide it.

It is no secret that the agricultural sector is going through a period of upheaval. Innovations such as the Internet, global positioning satellites and biotechnology have combined with the economic trends of consolidation and globalization to radically alter the farming industry. Today, a Minnesota farmer is not just competing with growers across the county or in the next state. He or she is competing with growers on the other side of the world. This means that the way farmers do business is changing.

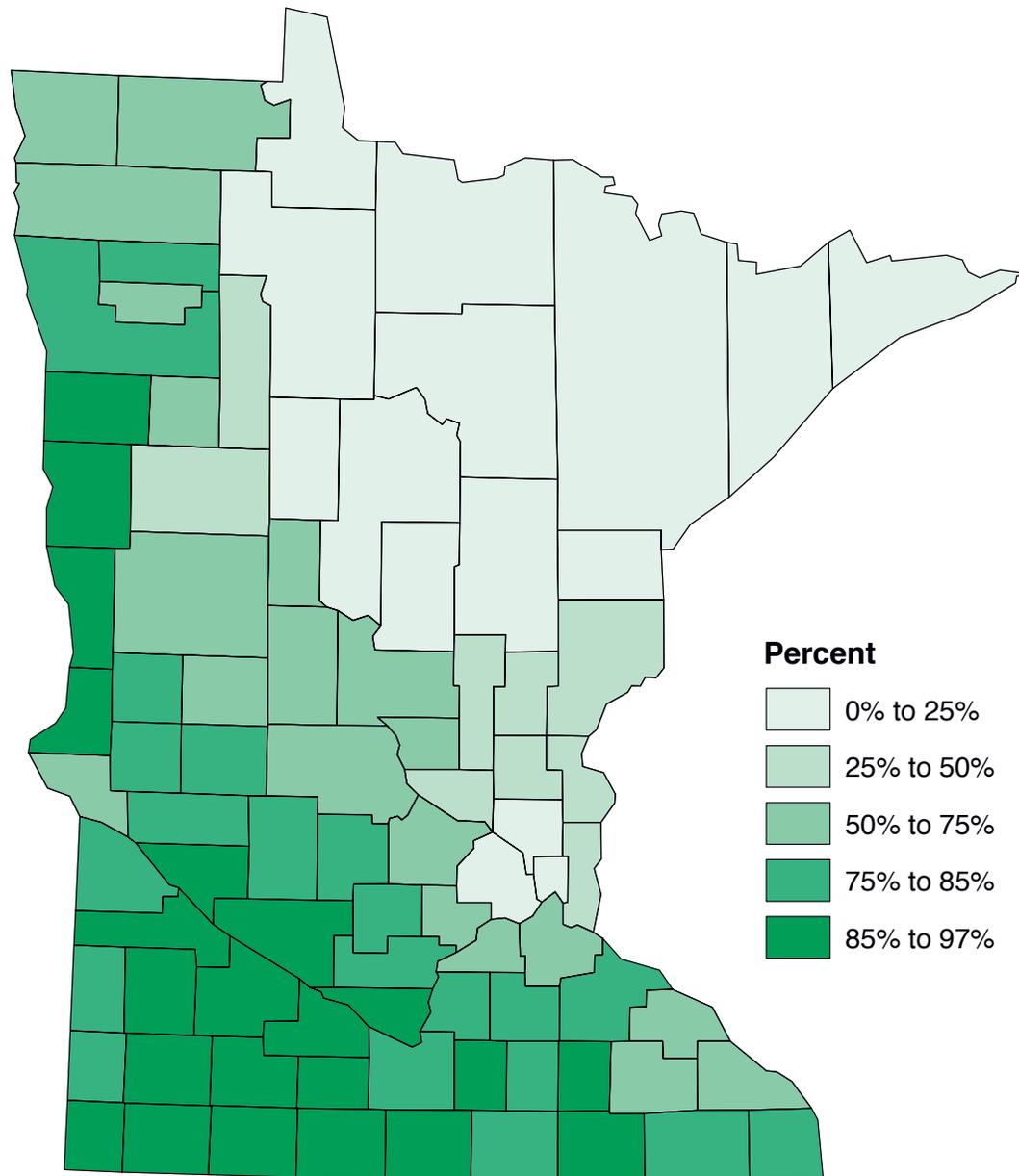
As we head into the future, the long-term success of Minnesota's agricultural sector will depend on the ability of the public and private sectors to work together to identify opportunities and challenges, and then adjust accordingly.

Gene Huguson, Commissioner, Minnesota Department of Agriculture



Percent of Land in Farms, 1997

Statewide, slightly more than one half of Minnesota's total acreage was in farmland as of 1997, including over 75% of the land in 43 counties. Ren-ville County was the highest at 96.8%.

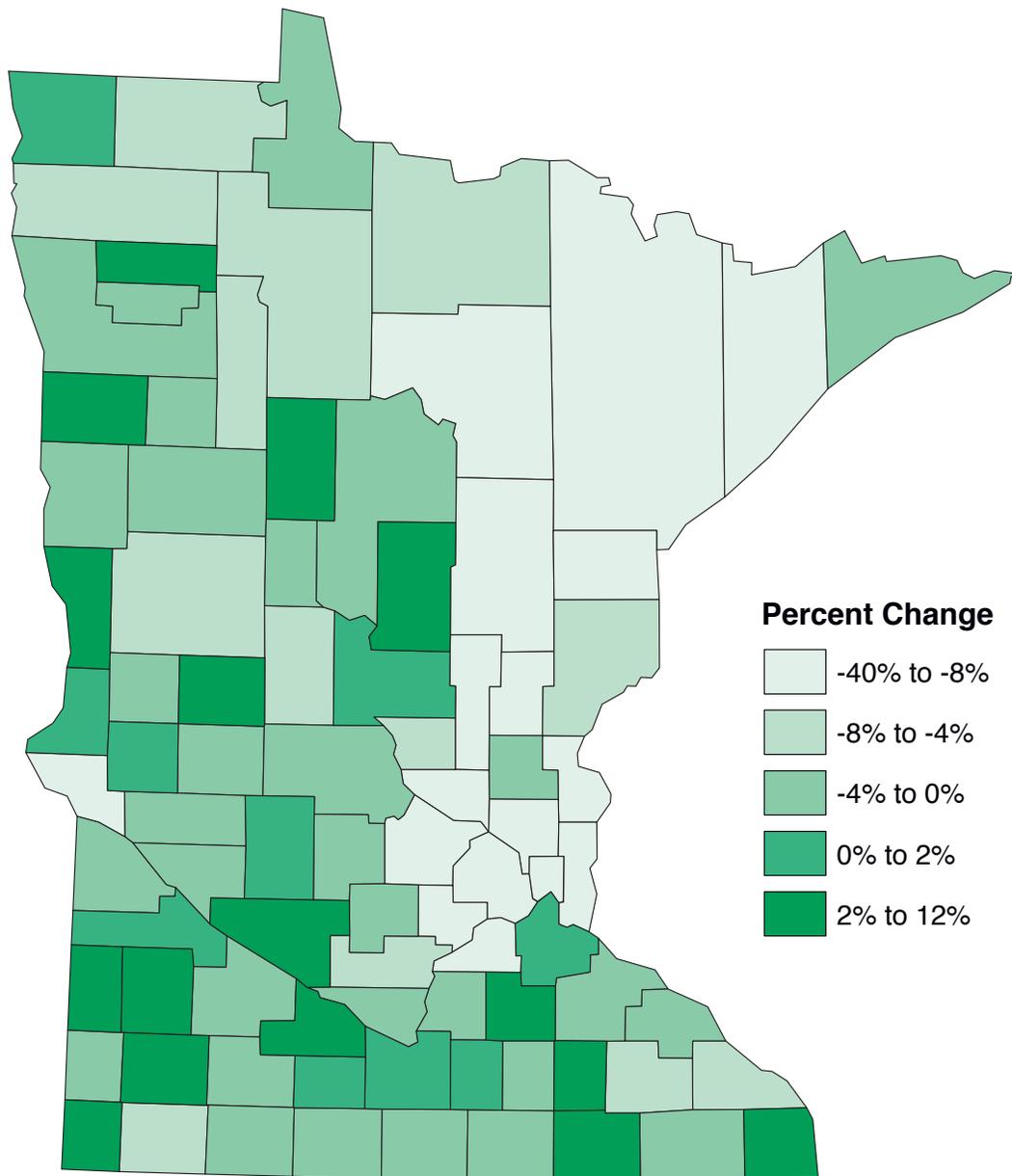


Source: USDA National Agricultural Statistics Service, 1997 Census of Agriculture

Change in Land in Farms, 1987–1997

Between 1982 and 1997, the amount of land developed due to urbanization and rural transportation in Minnesota increased 27% (by 465,600 acres). Statewide, more than one-third of this development (37%) occurred on prime farmland, and in the Twin Cities metropolitan area, the percentage of development on prime farmland was even higher. In Dakota County, for example, more than half the acres developed during this period were prime farmland.

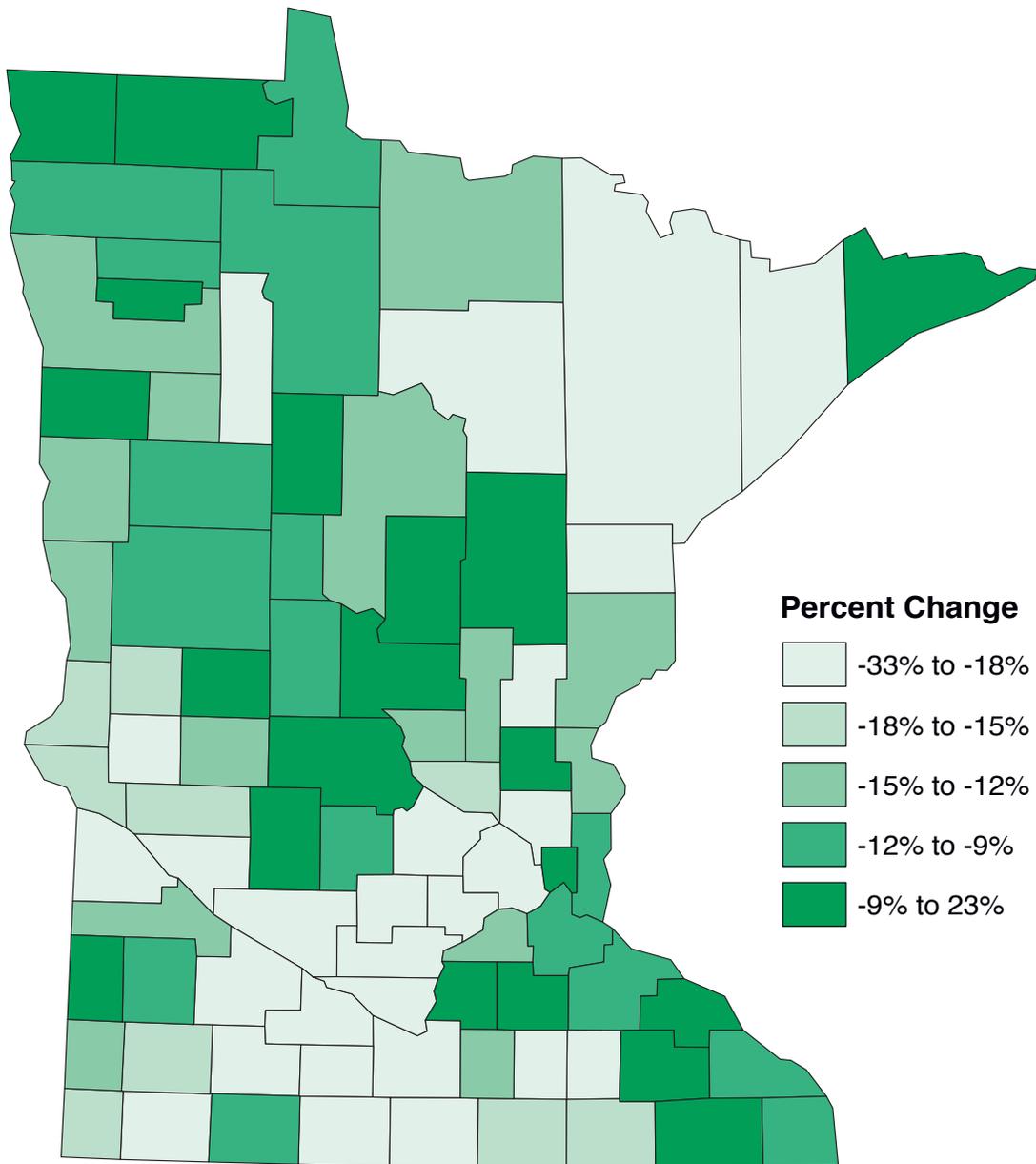
In November 2002, Dakota County voters approved a new Purchase of Development Rights (PDR) program. A primary goal of this voluntary program is to help prevent loss of high-priority agricultural lands to development. PDR programs have proven successful at preserving farmland in several other states. Dakota County recently received funds to help implement their local program from the USDA's Farmland Protection Program.



Source: USDA National Resources Inventory, Natural RCS, 1997

Change in Number of Farms, 1987–1997

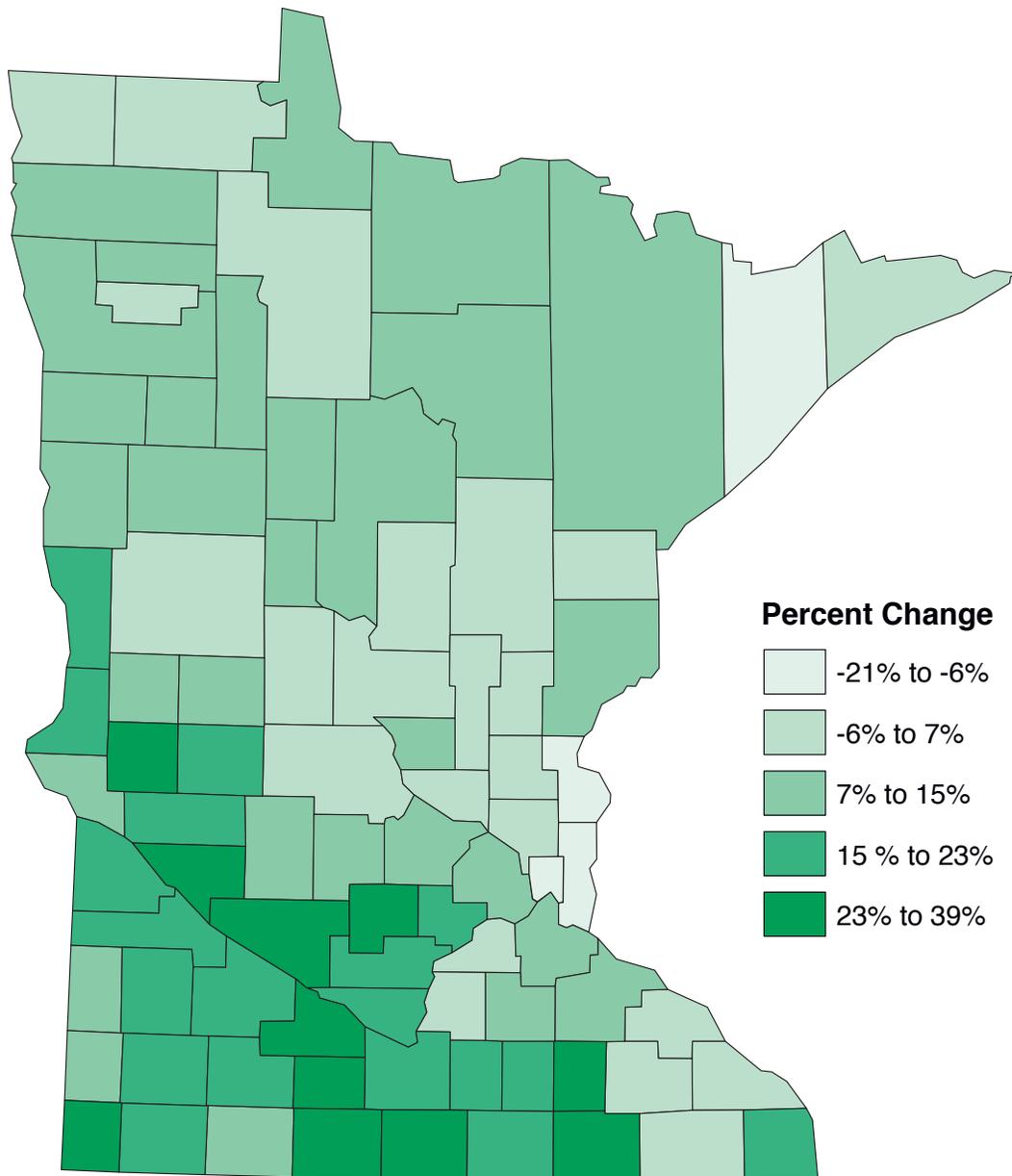
Between 1987 and 1997, the number of farms in Minnesota decreased 14%, from just over 85,000 in 1987 to 73,367 in 1997, due mostly to retirement, deaths and urbanization. Yet during those same years, the number of acres in farming decreased only 2.2%, and actually increased slightly between 1992 and 1997.



Source: USDA National Agricultural Statistics Service,
1997 Census of Agriculture

Change in Average Farm Size, 1987–1997

Consolidation has been the dominant trend in farming during the 1990s. Average farm sizes have increased in rural counties often due to retired farmers' land being divided and purchased by neighboring farmers who want to increase their crop acreage. Average farm sizes have increased the most in southwestern and south central counties, which have also experienced the largest decline in the number of farms.



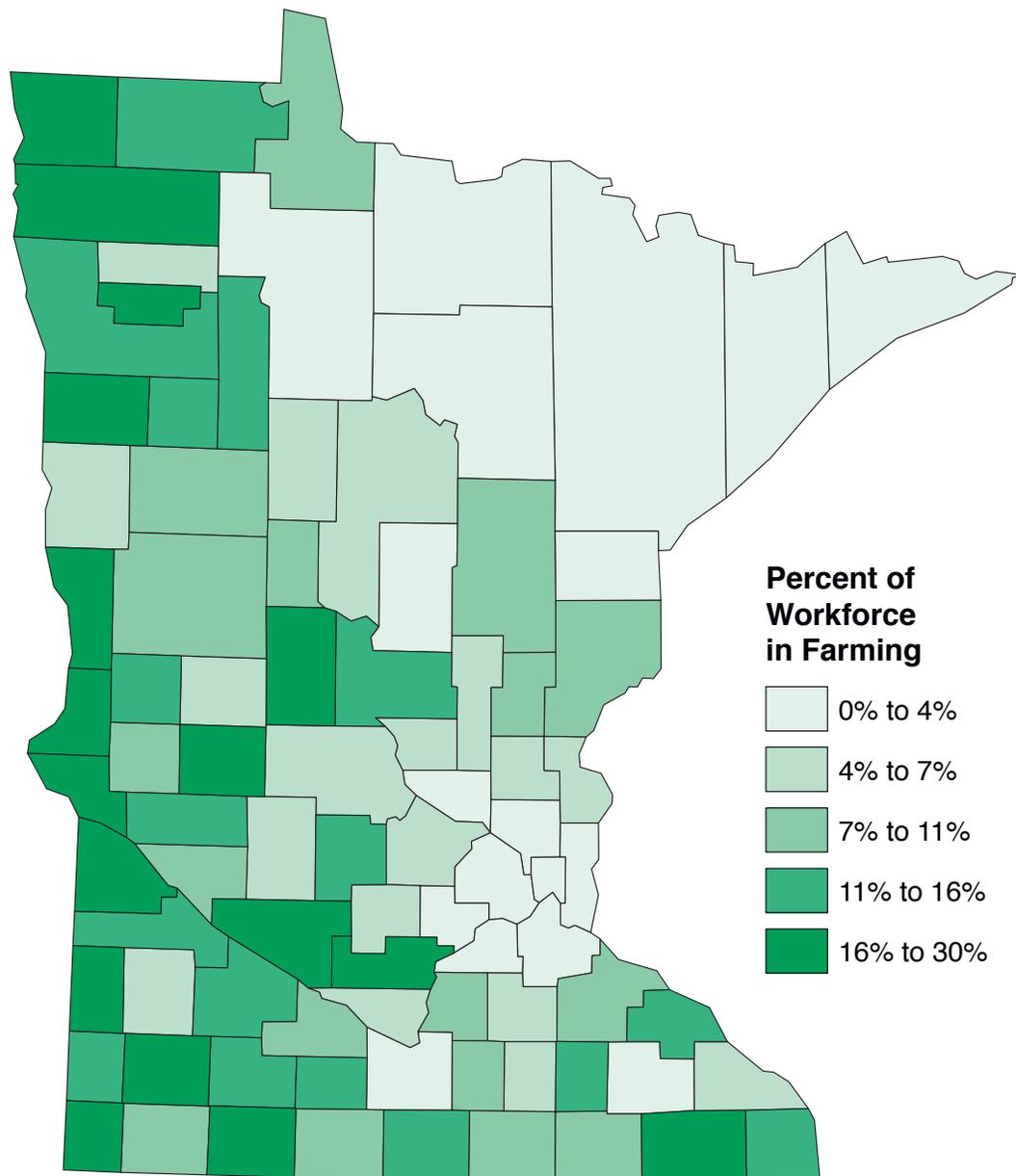
Percent Change

- 21% to -6%
- 6% to 7%
- 7% to 15%
- 15% to 23%
- 23% to 39%

Source: USDA National Agricultural Statistics Service, 1997 Census of Agriculture

Farm Employment, 2000

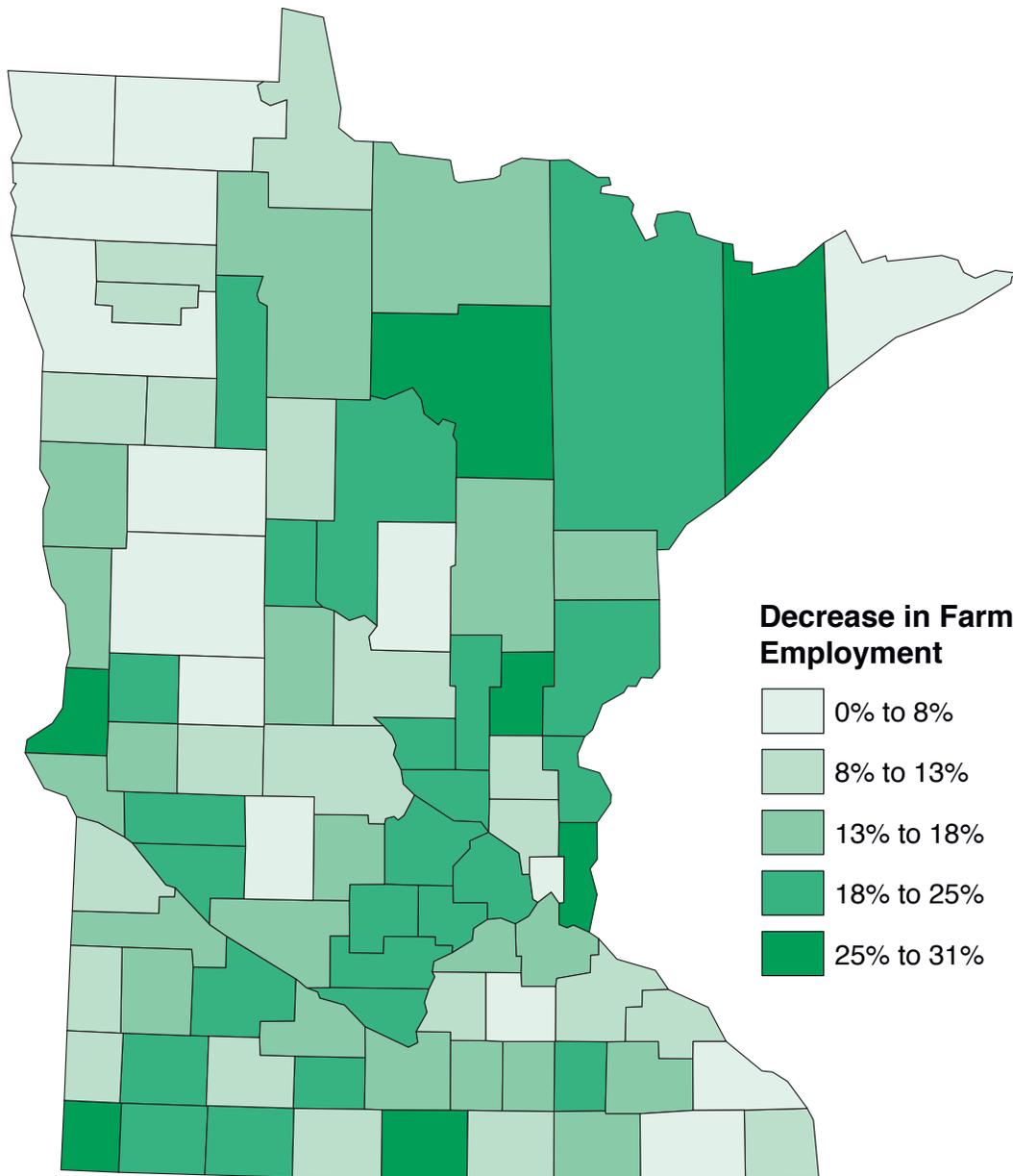
The percentage of the workforce engaged in farming is highest in counties where agriculture plays the largest role in the economy. (This map shows only those working on farms, not in food processing or transportation.) Since farm work tends to be low paying, counties that have the largest proportion of their workforce employed on farms also tend to have the lowest per capita earned income, driving the current interest in diversifying rural economies.



Source: U.S. Department of Commerce, Bureau of Economic Analysis

Change in Farm Employment, 1990–2000

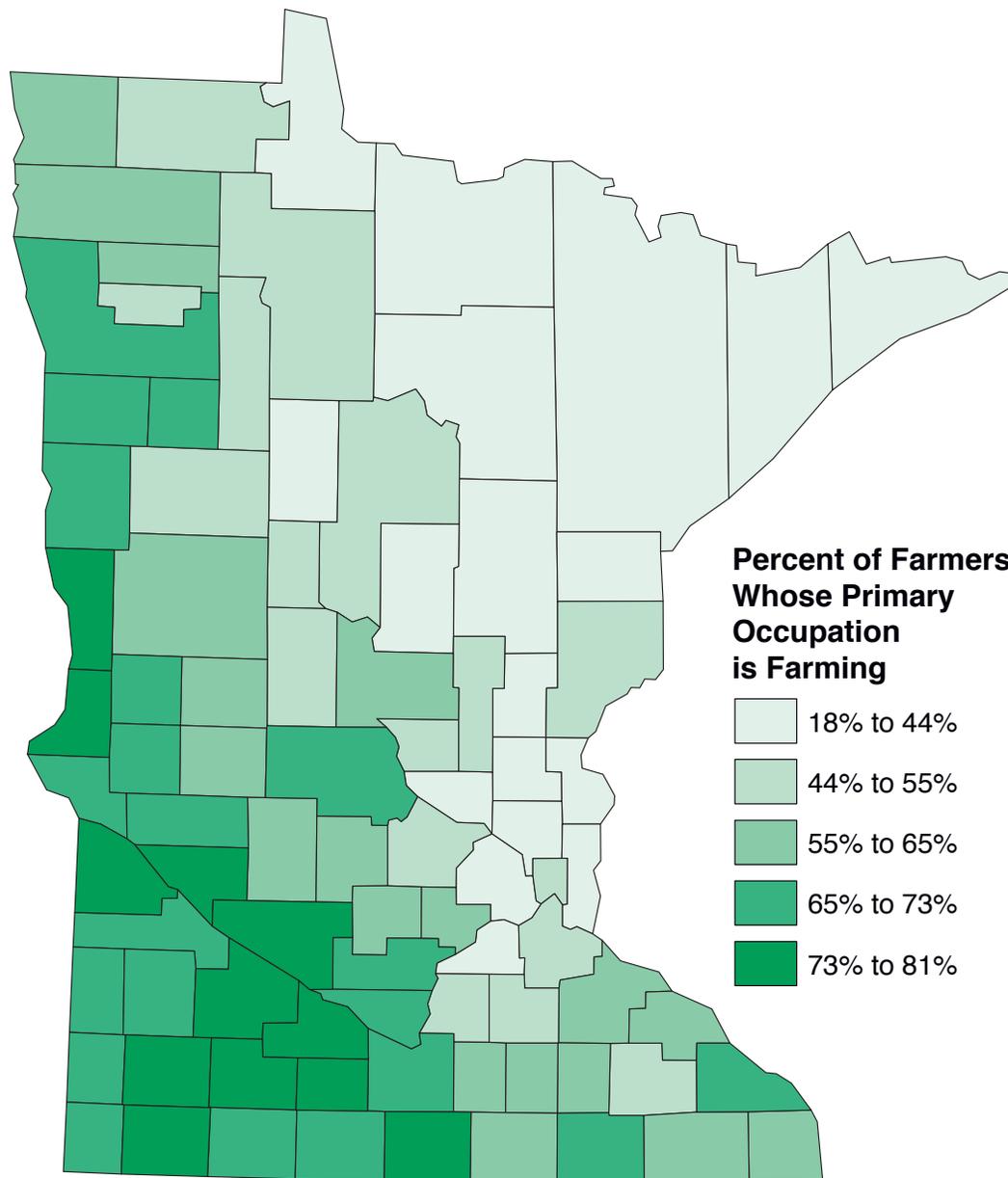
Along with a decrease in the number of farms over the last ten years, the number of people working on farms has declined as well. From 1990 to 2000 farm employment has dropped as much as 31% in some counties. The decline has been especially sharp in parts of the southwest, northeast and in certain counties near the Twin Cities metropolitan area.



Source: U.S. Department of Commerce, Bureau of Economic Analysis

Farming as a Primary Occupation, 1997

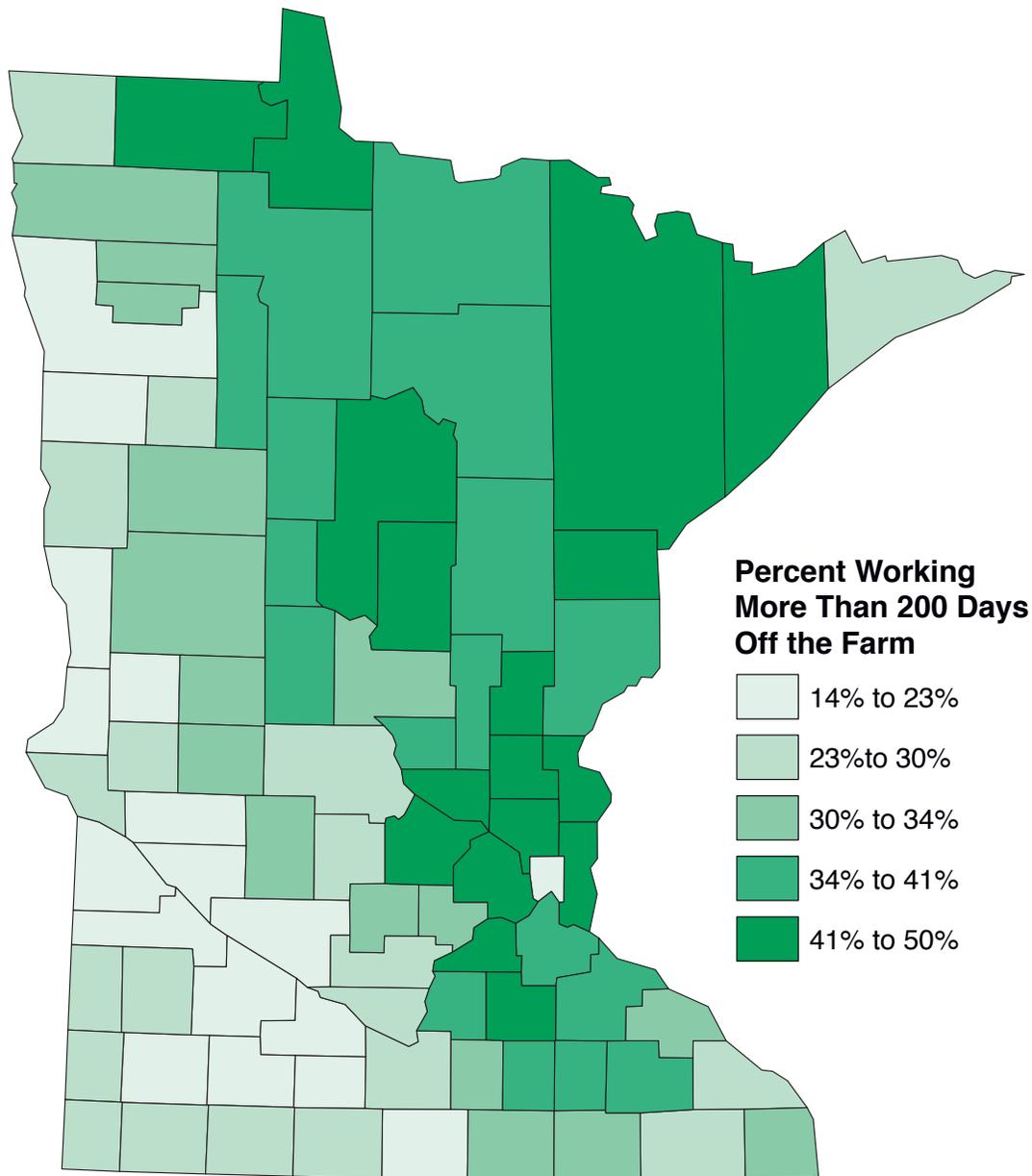
Producers whose primary occupation is farming devote more than half of their time to it. A larger percentage of producers in southern and western Minnesota than farmers in other regions consider farming their primary occupation.



Source: USDA National Agricultural Statistics Service, 1997 Census of Agriculture

Off-farm Employment, 1997

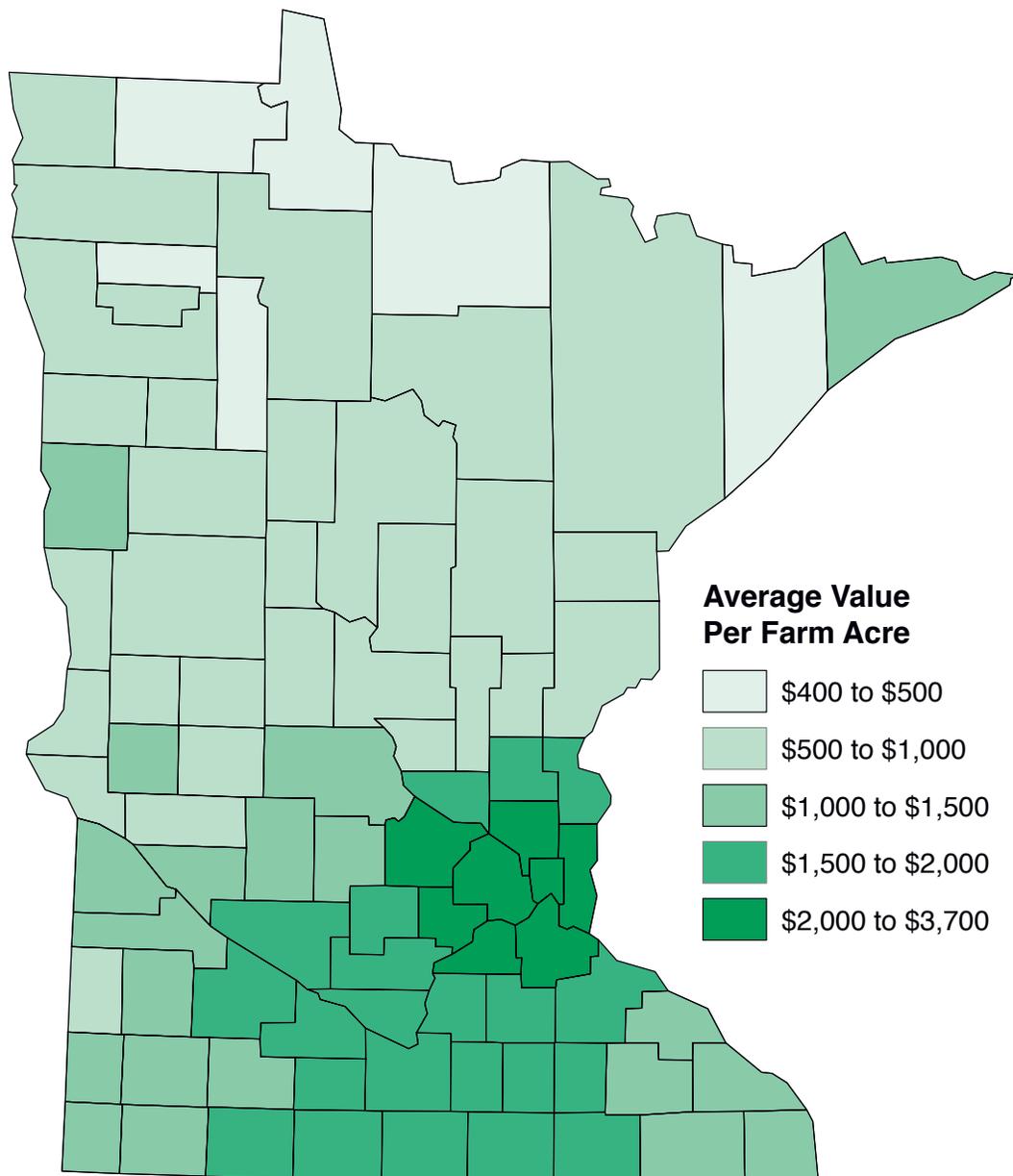
Over the years, farmers working off the farm have become increasingly the norm in agriculture. The National Agricultural Statistics Service publishes *The Census of Agriculture* every five years, which tracks the number of farmers who work more than 200 days off the farm. In Minnesota, the percentage of farmers who work off the farm more than 200 days per year is lower in southern and western counties—home to most of the state’s animal agriculture and major crop production—than in north central and northeastern counties.



Source: USDA National Agricultural Statistics Service, 1997 Census of Agriculture

Estimated Value of Farmland, 1997

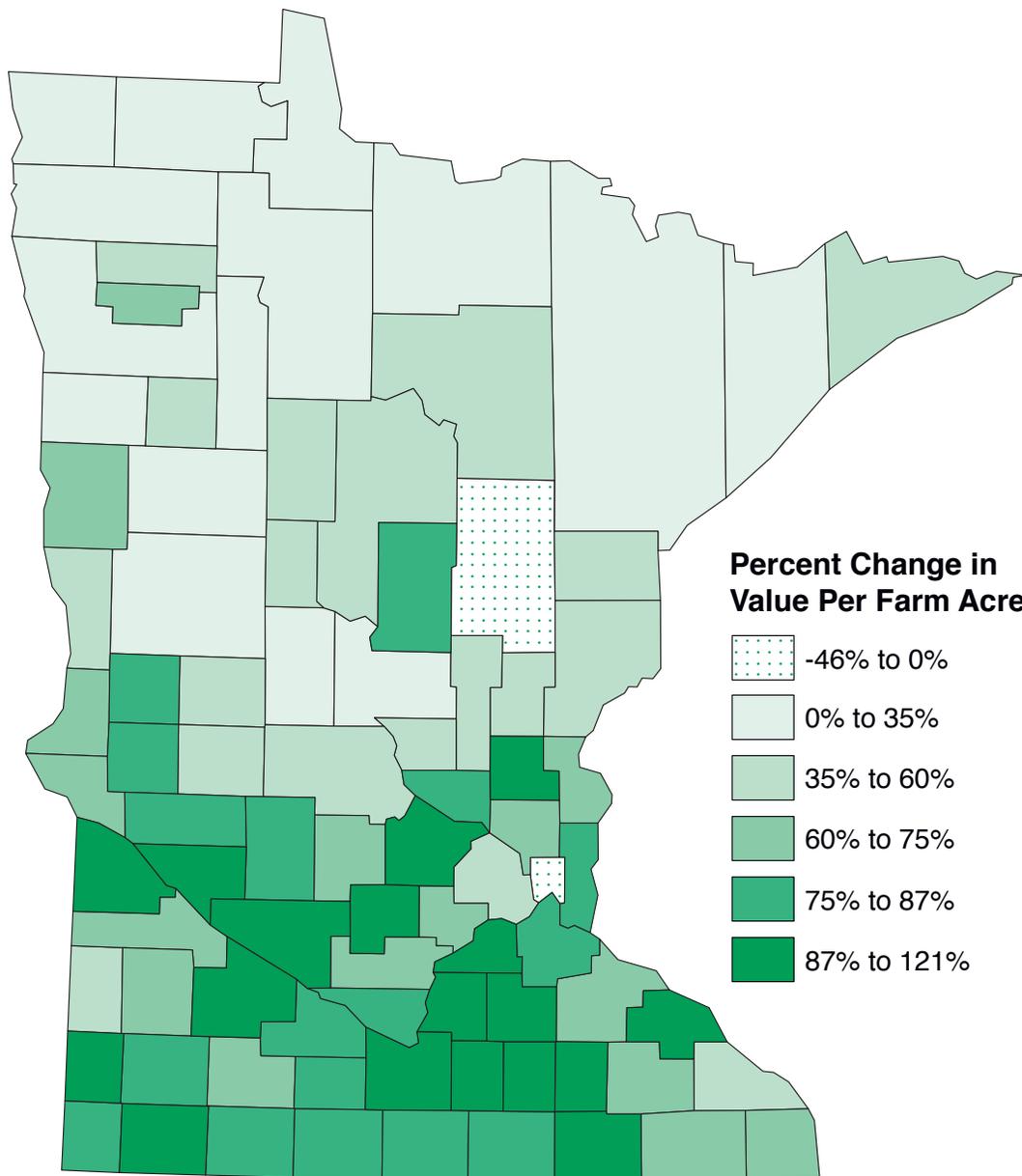
These self-reported values by landowners reflect in part expected returns from agriculture. Farmers in urban counties reported some of the highest estimated market values for their farmland, reflecting how the demand for land for residential uses increases agricultural values, especially in counties experiencing rapid population growth. For more data on land values, see the University of Minnesota, Department of Applied Economics web site: www.cfm.umn.edu/landeconomics/landdata/



Source: USDA National Agricultural Statistics Service, 1997 Census of Agriculture

Change in Value of Farmland, 1987–1997

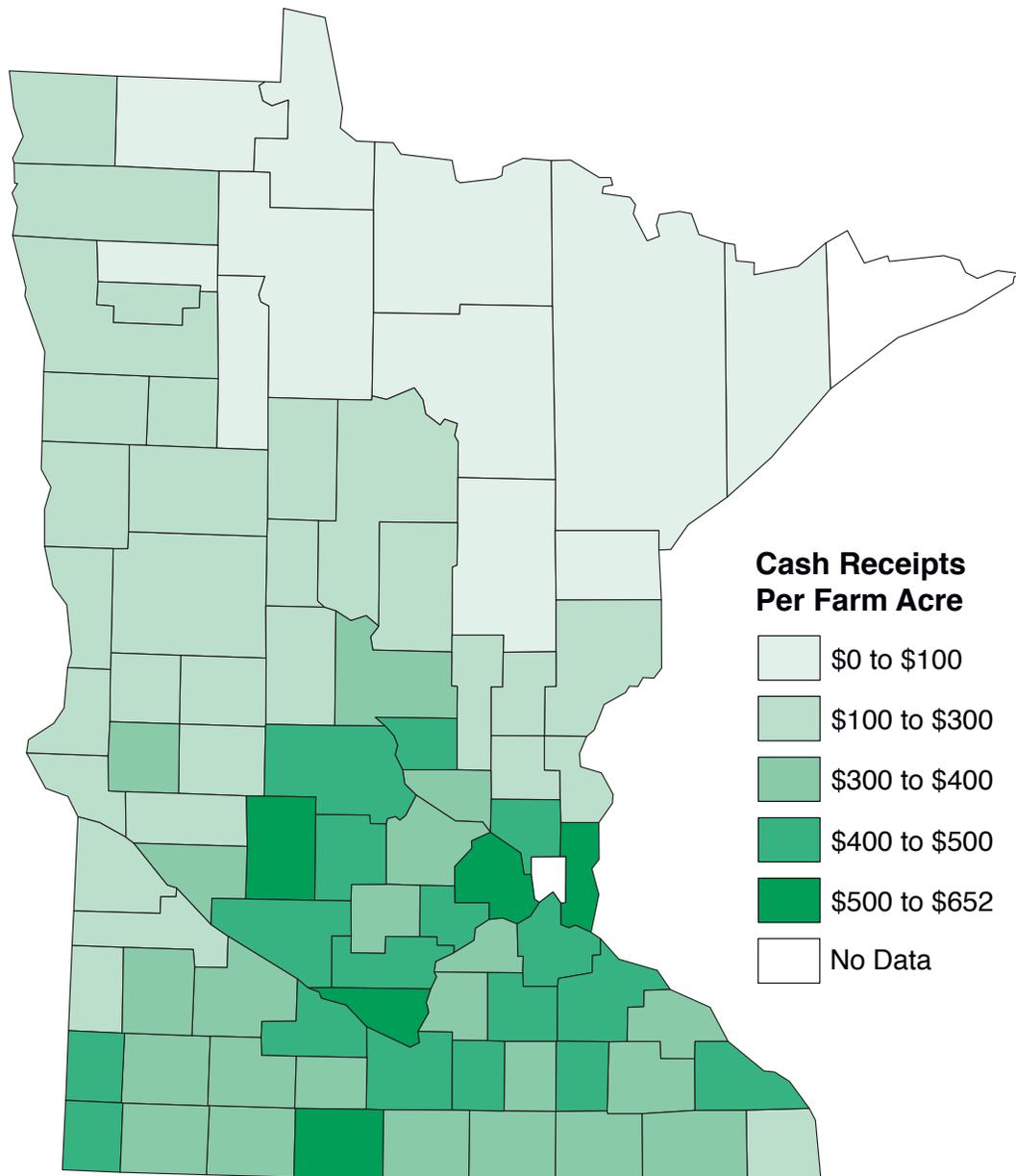
With the exception of two counties, the value of farmland has generally risen all across Minnesota. The increased values, however, are most dramatic in the southern regions where the most productive soils are and the highest cash rent can be derived. Significant increases in farmland values can also be seen in the counties adjacent to metropolitan areas, where demand for farmland is in competition with land for residential and commercial development.



Source: USDA National Agricultural Statistics Service, 1997 Census of Agriculture

Average Annual Cash Receipts from Marketings, 1997–2001

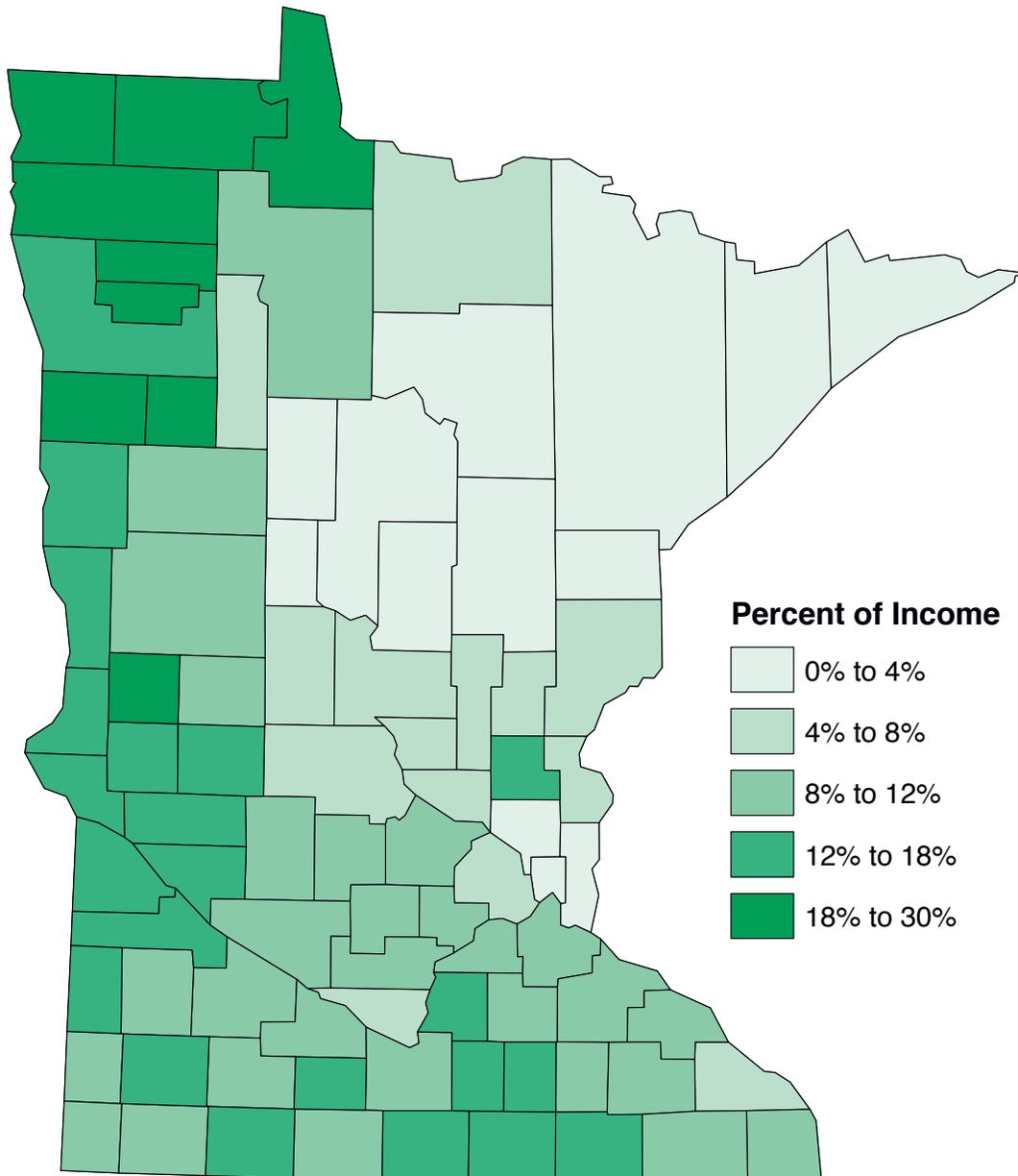
Cash receipts from marketings encompasses the value of gross revenues from the sale of agricultural commodities, both livestock and crops.



Source: U.S. Department of Commerce, Bureau of Economic Analysis

Government Payments as a Percent of Annual Farm Income, 1997–2001

The government payments referred to in this map are federal farm payments. Statewide, for the five-year period indicated, the bulk of these payments (65%) are attributable to agricultural commodity programs. The other 35% is attributable to agricultural emergency/disaster programs (27%), such as flood-related crop loss assistance, and conservation programs (8%), including primarily the Conservation Reserve Program.

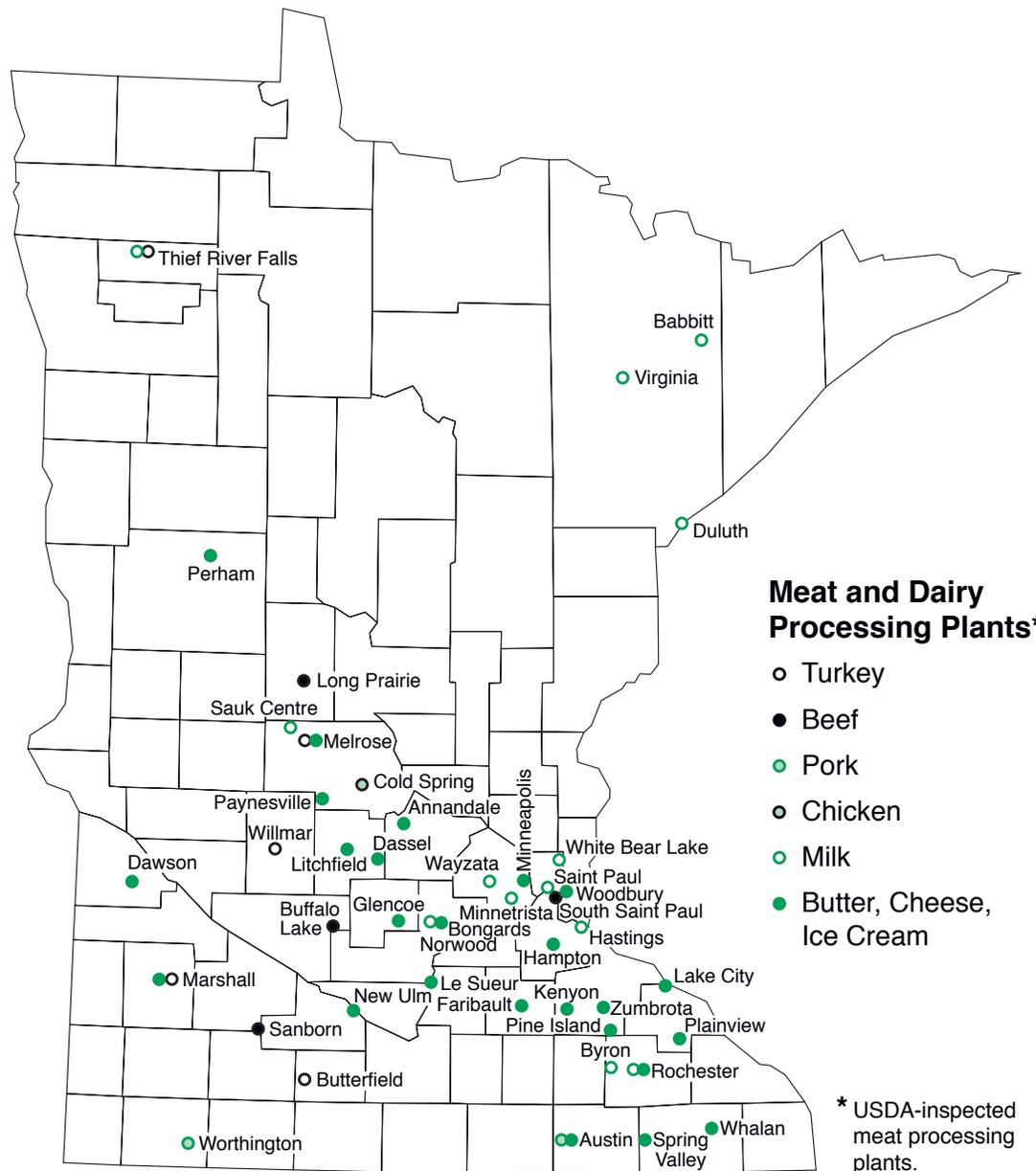


Source: U.S. Department of Commerce, Bureau of Economic Analysis

Meat and Dairy Processing, 2001

Minnesota has long been a leading state in animal agriculture. In 2001, Minnesota ranked first nationally in turkey production, third in swine production, and among the top ten in dairy and red meat production. In addition to the USDA-inspected meat plants shown here, Minnesota has some 300 smaller meat processing facilities vital to the state's animal agriculture industry. About 65 of these smaller facilities participate in a State Meat Inspection Program begun in 1999. The state program maximizes food safety while enabling producers to receive more individualized service from smaller processors, retain ownership of the meat, and more easily market it directly to consumers under a family brand name.

Between 1991 and 2001, the number of Minnesota dairy farms licensed to sell milk to plants declined steadily each year to about 7,700 farms in 2001, a 50% drop over the ten years. Yet during the same period, the state's share of national milk production remained steady at about 5% to 6%.



Meat and Dairy Processing Plants*

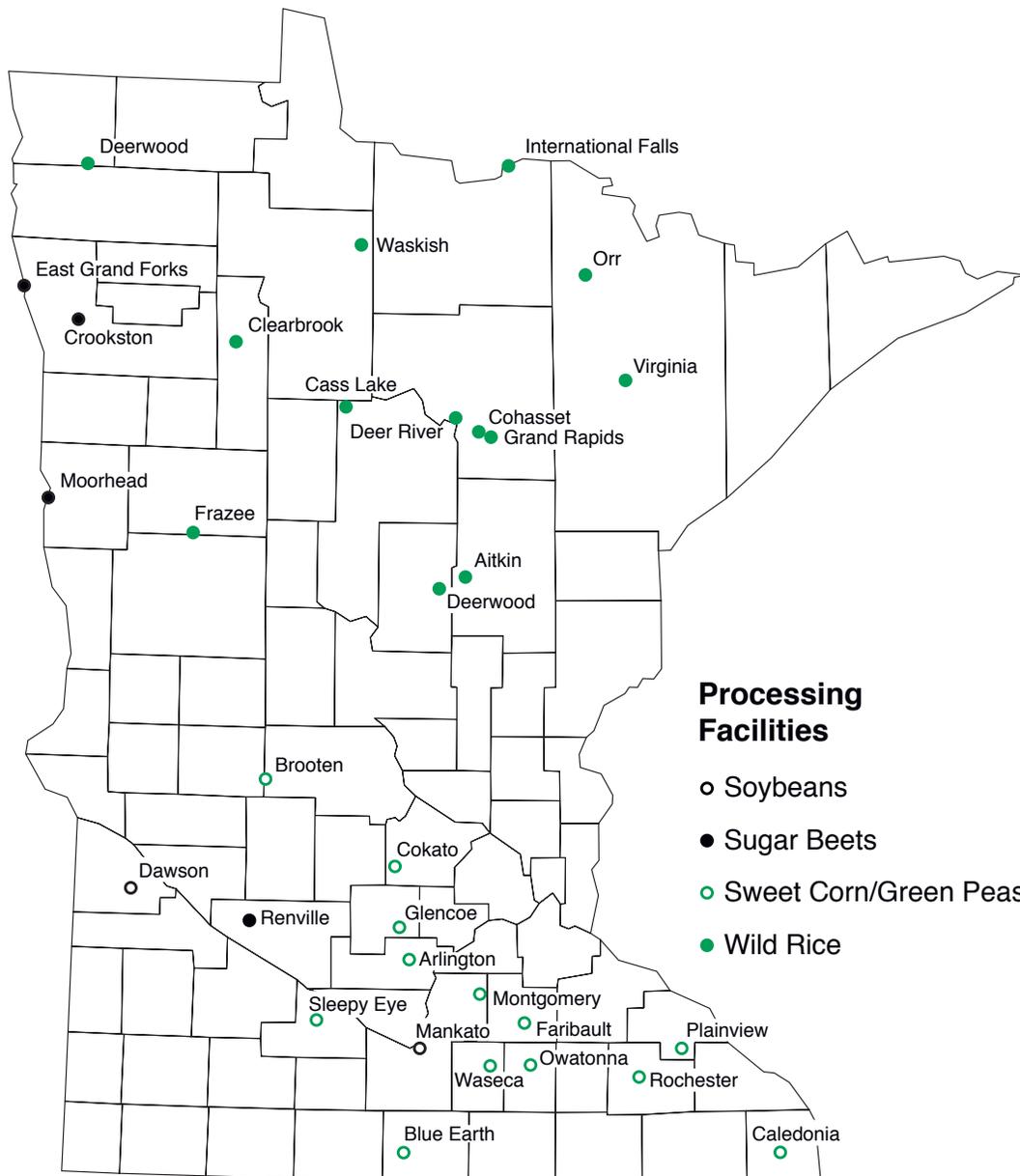
- Turkey
- Beef
- Pork
- Chicken
- Milk
- Butter, Cheese, Ice Cream

* USDA-inspected meat processing plants.

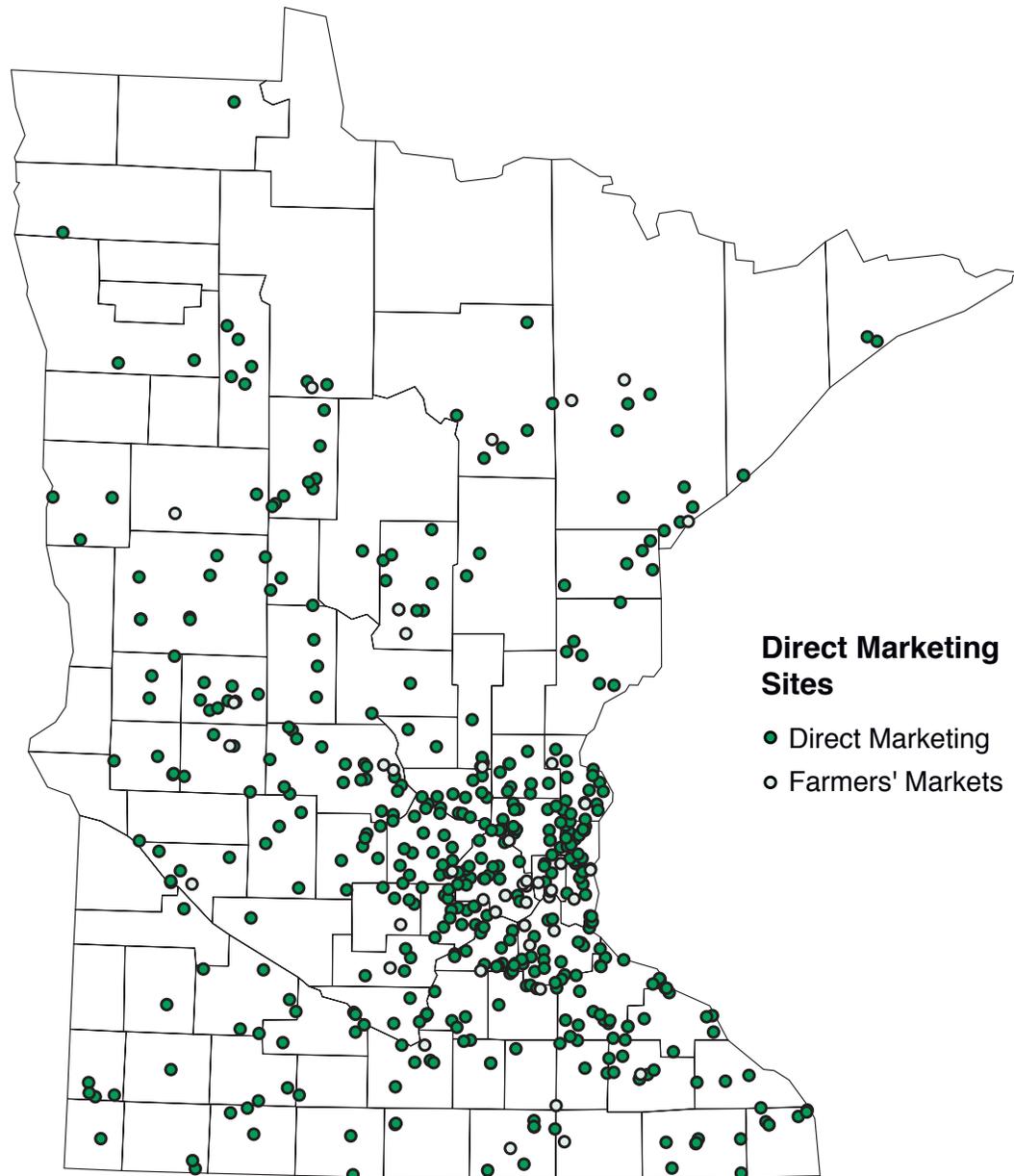
Source: Minnesota Agriculture in the Classroom

Processing of Selected Crops, 2001

Crop processing is an important part of the state's agricultural industry. In 2001, Minnesota ranked first nationally in the production of sugar beets and processed green peas, second in the production of cultivated wild rice and processed sweet corn, and fourth in soybean production. Sugar beets are processed into several types of food-grade sugar and molasses, as well as beet pulp for livestock feed. All of the sugar beets grown in Minnesota are processed by farmer-owned cooperatives. Wild rice, an aquatic plant and Minnesota's official state grain, has been important in Ojibwe life for thousands of years in a region that today comprises much of northern Minnesota. Most wild rice is now cultivated. Commercial-scale wild rice production requires large flooded areas that double as waterfowl habitat. Soybeans are processed for animal feed, human food products, and oil for soy ink, diesel and other uses. Interest in renewable energy is expected to boost soy biodiesel production in the near future.



Source: Minnesota Agriculture in the Classroom



Source: Minnesota Department of Agriculture

Direct Marketing and Farmers' Markets, 2003

Direct marketing of farm products is an important sales outlet for small- to medium-sized farms. The growing direct-marketing trend includes pick-your-own operations, roadside stands, and subscription farming or community-supported agriculture. Hundreds of Minnesota producers direct-market produce, meat, Christmas trees and other farm products, many bearing the *Minnesota Grown* label. The *Minnesota Grown Directory* includes more than 500 direct marketing farms. The directory can be found online at www.mda.state.mn.us/mngrown

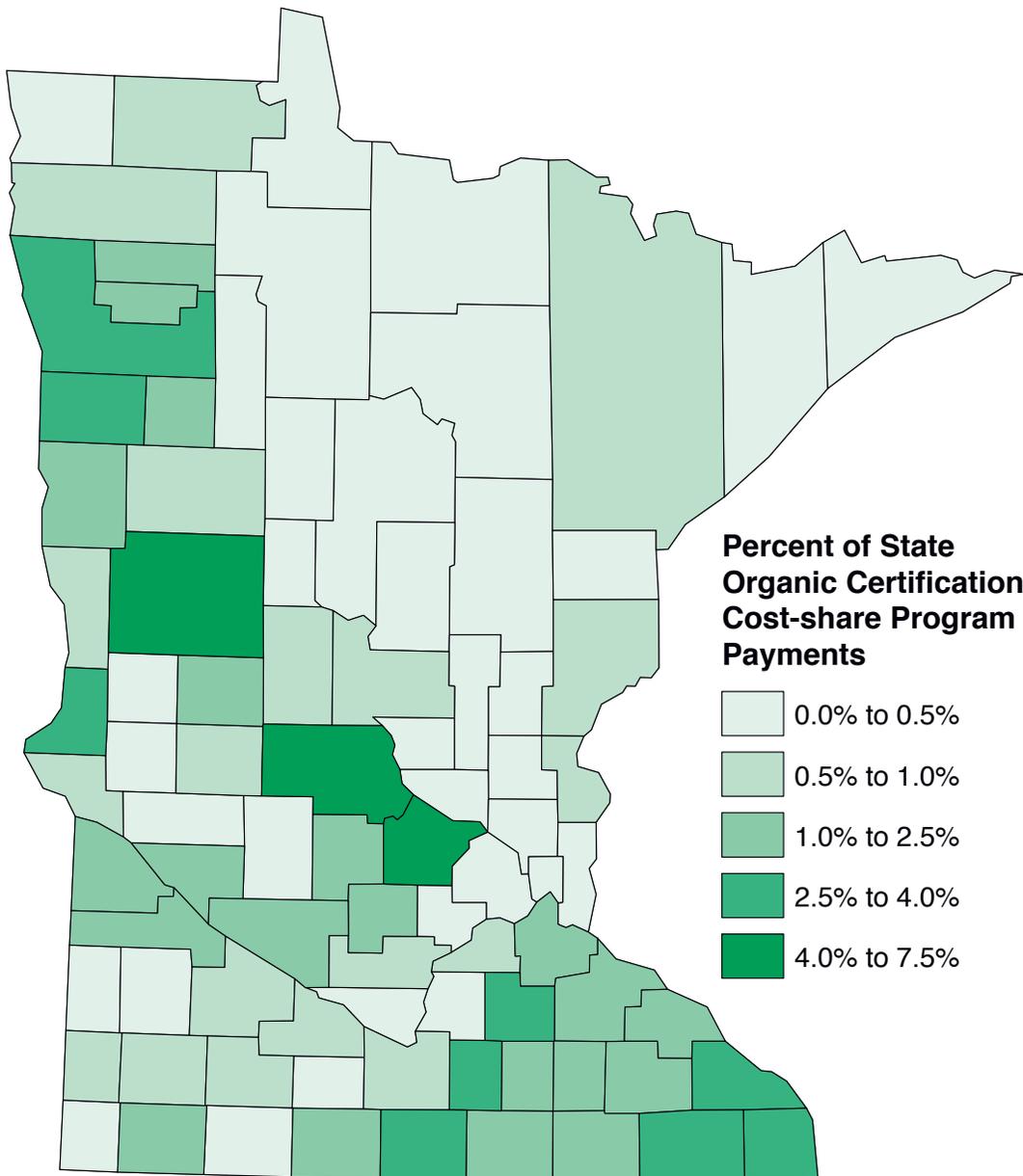
The number of market outlets in Minnesota has increased rapidly due to growing consumer interest in fresh, locally grown food. Nationwide, the number of farmers' markets increased 79% from 1994 to 2002, with about 3,100 farmers' markets in 2002. In Minnesota, farmers' markets are held at more than 50 sites, typically in cities and suburbs, allowing urban and suburban consumers to interact with producers.

Certified Organic Agriculture, 2003

Minnesota's organic agriculture sector is growing rapidly. Between 1997 and 2001, certified organic acreage in Minnesota grew to about 103,000 acres—the sixth highest of any state. In 2001, Minnesota had 421 certified organic farms, with many others transitioning to certified organic or uncertified but using organic practices. Minnesota is the top U.S. producer of organic corn, soybeans, and rye, and second in organic buckwheat. Organic production provides identity-preserved, value-added processing opportunities.

The market for organic products is also growing rapidly and consistently. Recent federal guidelines that standardize organic labeling are expected to fuel even greater consumer interest and confidence in organic foods.

The Minnesota Department of Agriculture estimates there are 80 to 100 certified organic food processors in the state. In 2001, about half of all certified organic farms in Minnesota participated in a state cost-share program that helps pay certification fees. This map shows how those payments were distributed by county 2001.

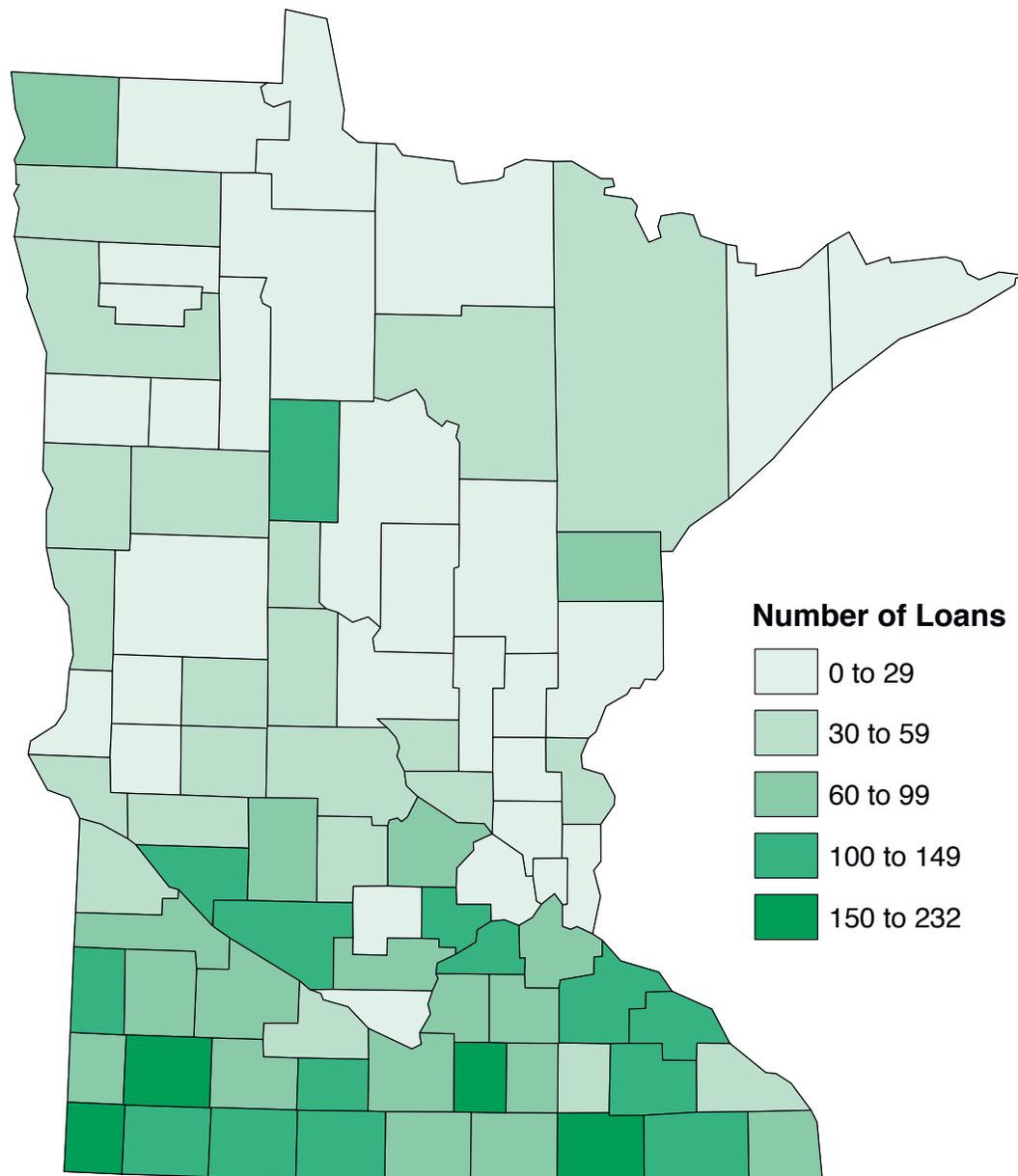


Source: Minnesota Department of Agriculture

Agricultural Best Management Practices, 1995–2003

Minnesota’s Agricultural Best Management Practices Loan program was created to help local governments implement the agricultural components of their local comprehensive water plans. With funds from the program, local governments provide low-interest loans to farmers, agriculture supply businesses and rural landowners to implement best management practices that are a priority in the local water plan. As loans are repaid, the money is used to fund new loans.

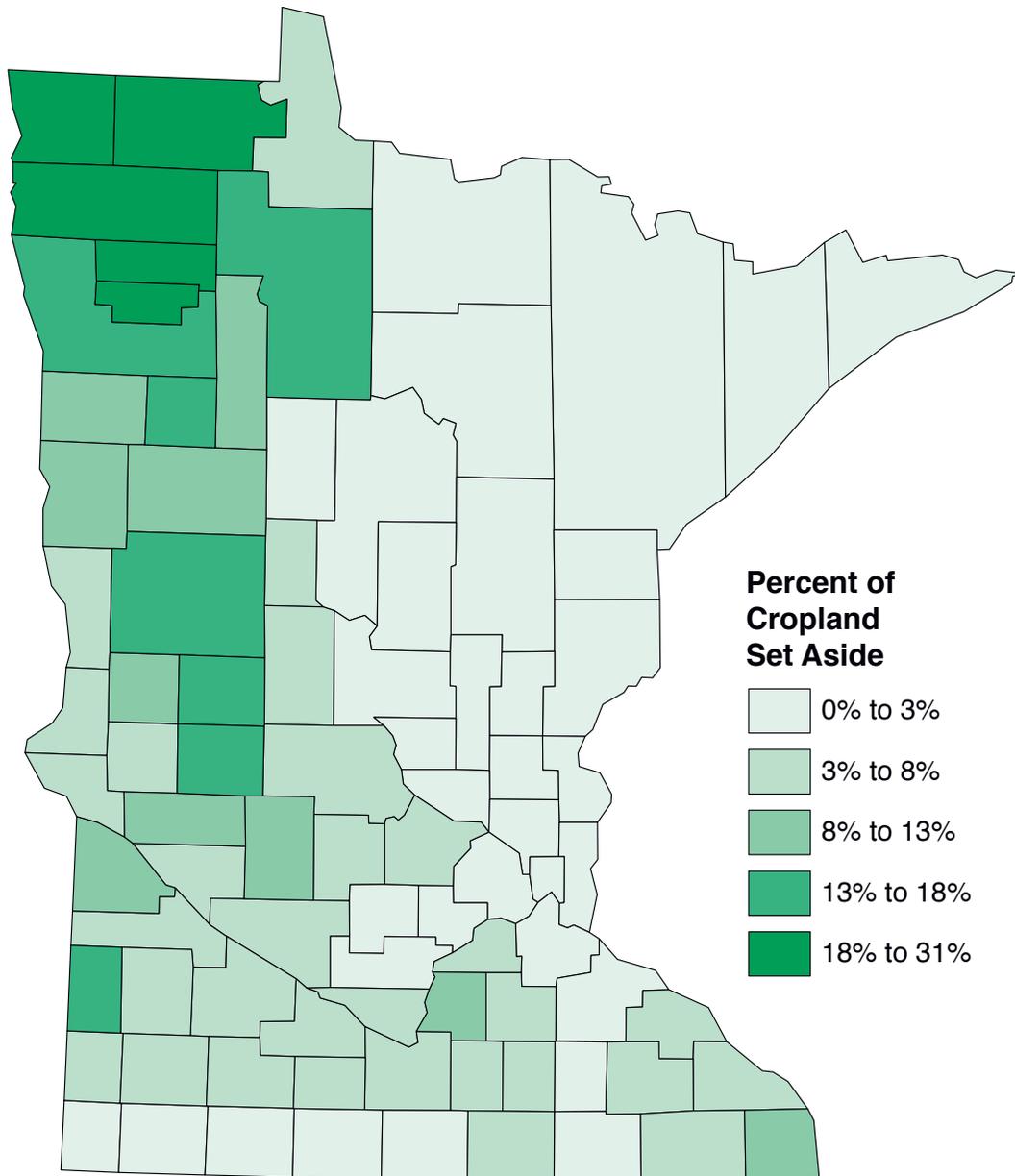
Best practices include feedlot and manure management upgrades, structural erosion control, conservation tillage, septic system upgrades and other agricultural water quality practices. These “working lands” practices play a critical role in achieving water quality goals. Since 1995, the program has received \$49 million from state and federal sources and provided more than \$60 million in financing to over 5,100 projects throughout the state. For more information, see www.mda.state.mn.us/agbmp/moreinfo.html



Source: Minnesota Department of Agriculture

Agricultural Conservation Land, 2003

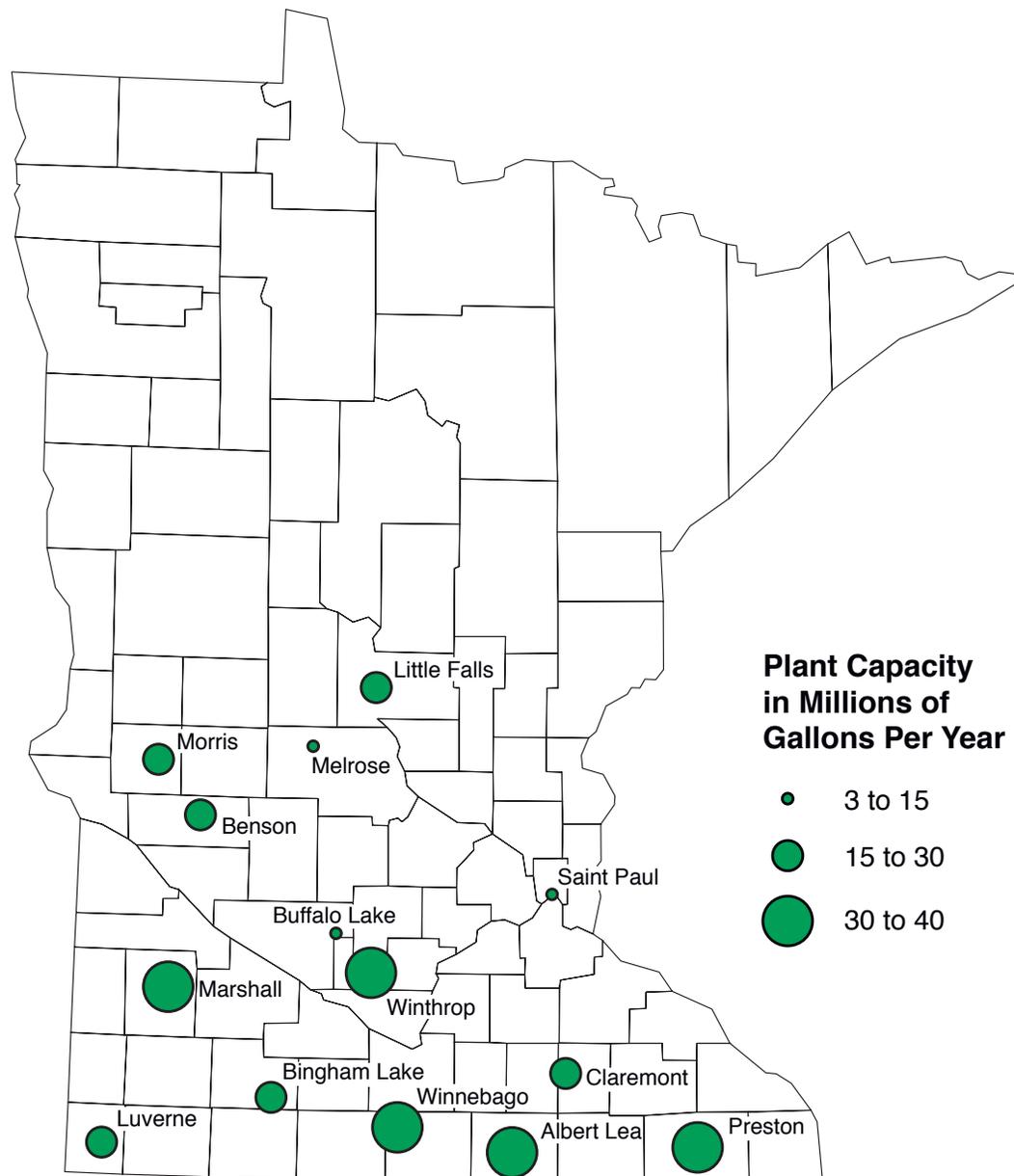
Today, 1.86 million acres, or around 8% of all cropland in Minnesota, are under long-term conservation contracts or easements—about 52,000 contracts and easements altogether. This is equivalent to two contracts for every three farms in the state. The majority of these lands, about 89%, are enrolled in the federal Conservation Reserve Program. Nearly all of the rest are under perpetual easements in the federal Wetland Reserve Program or the state's ReInvest in Minnesota program, including the federal-state Minnesota River Basin Conservation Reserve Enhancement Program.



Sources: USDA Farm Service Agency, USDA Natural Resources Conservation Service, Minnesota Board of Water and Soil Resources

Ethanol Production, 2003

In 1986 Minnesota had a few small plants that produced about a million gallons of ethanol. Today there are 14 ethanol plants with an annual production capacity of over 360 million gallons—enough to replace 10% of the state’s gasoline and export 100 million gallons. The state’s corn milling industry grinds over 150 million bushels for use in ethanol production, doubling the value of 15% of the state’s largest crop. For more information, see www.mda.state.mn.us/ethanol/about.htm



Source: Minnesota Department of Agriculture

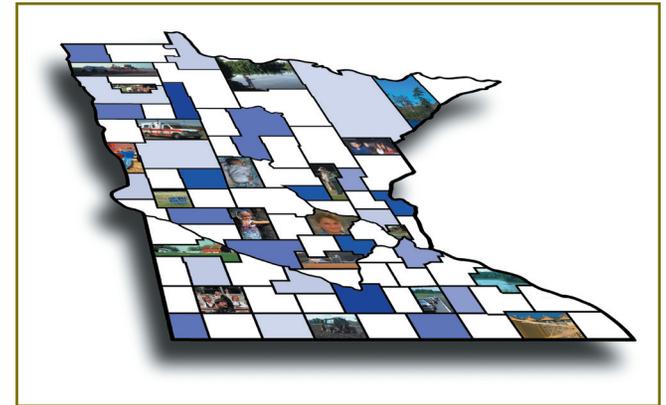
Environment and Natural Resources

Minnesota has abundant and diverse natural resources. It is located in the confluence of three major biomes: the temperate deciduous forest biome in the east and southeast; the prairie-grassland biome in the west and southwest; and the boreal forest biome in the north and northeast. These biomes, the soil and rock formations that support them, and the major waterways of the state form the basis for our geography and our natural resource economy.

This natural resource economy is primarily based on agriculture, mining, forestry, tourism and transportation. The rich soil of the prairies and grasslands support our large agricultural sector. The vast iron ore deposits of northern Minnesota support our substantial mining sector. Our climate and glacially created topography support a high diversity of tree species and our equally diverse forest industry. The varied landscape comprised of a mosaic of beautiful lakes, old and young forests, wetlands, native prairies, Lake Superior, thousands of miles of flowing water, and our culturally mixed population centers support our vast tourism industry. Our waters, including Lake Superior and the Mississippi, the Minnesota and Red Rivers, are the gateway to the rest of the United States and the world, supporting our national transportation networks. It is no coincidence that our population centers are located near these waterways, which have always supported the fast delivery of our manufactured products.

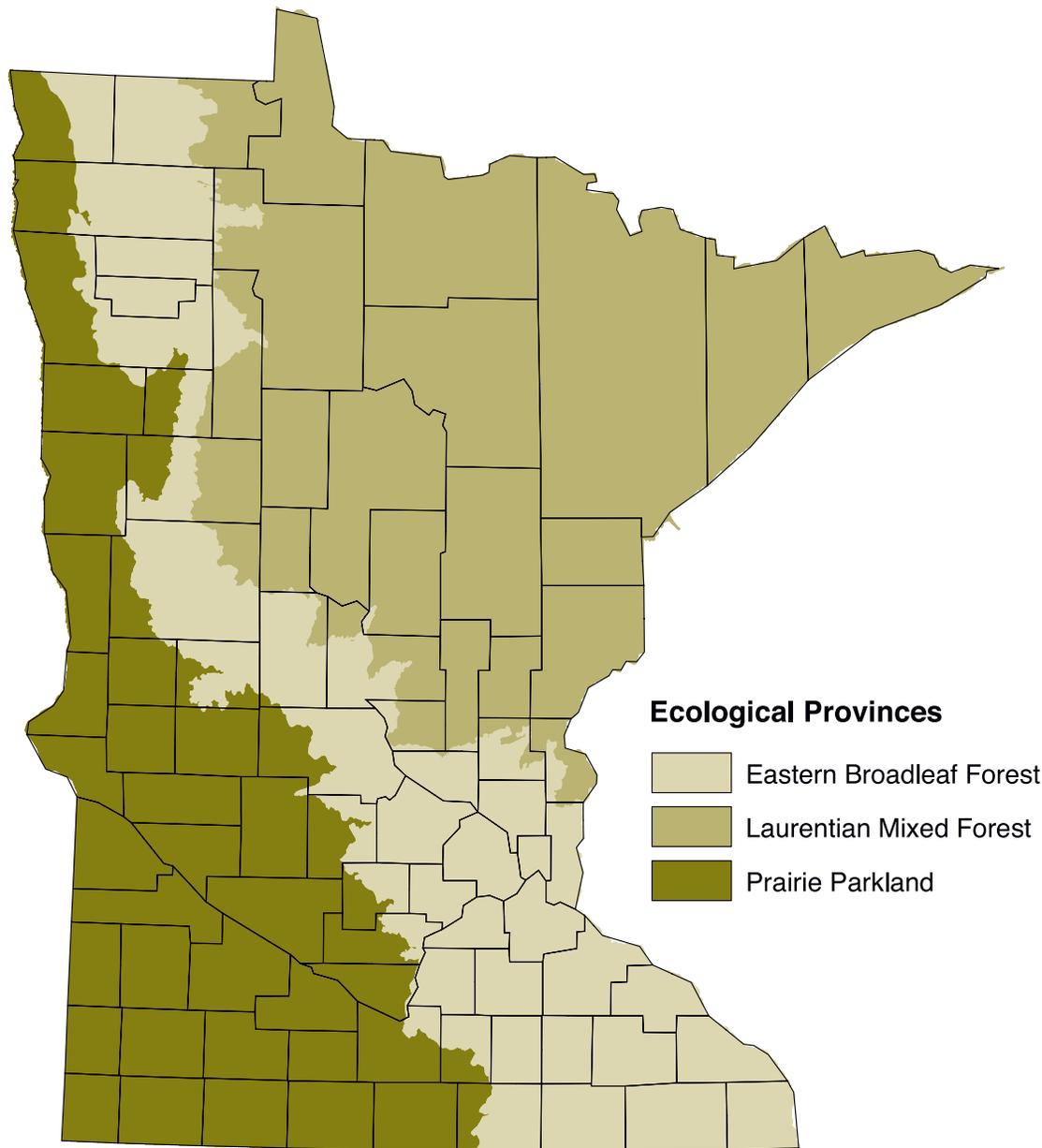
The future of our natural resource-based economy is dependent on information. Information on the geographic distribution of our resources, the health of our resources and the sustainability of those resources. The *Atlas of Minnesota* is one of the pieces of information essential for making wise decisions on the use and conservation of our resources. These decisions are complex and not only require integration from a vast information base, but also perspectives from varied social and cultural settings. We should use the information intelligently to ensure that we maintain our natural resource base in a way that balances the needs of our economy and our environment for current and future generations.

Gerald J. Niemi
Director, Center for Water and the Environment, Natural Resources Research Institute
Professor, Department of Biology
University of Minnesota, Duluth



Minnesota's Ecological Provinces

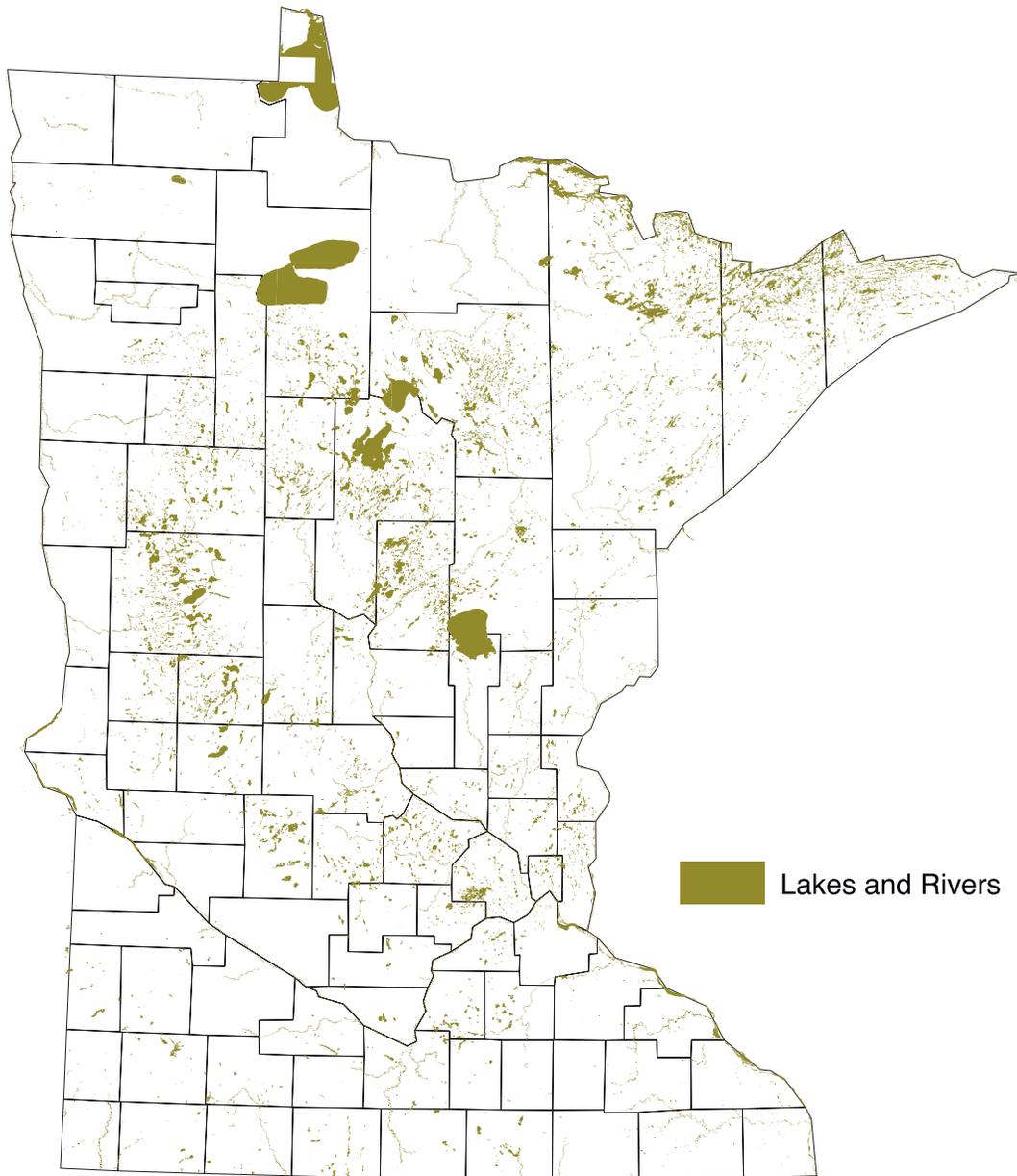
The North American landscape is divided into numerous ecological provinces describing the climate, plants, soils, and terrain of the area. According to the Department of Natural Resources, Minnesota's ecological diversity results from the convergence of three provinces within the state: the prairie parkland, a gently rolling area covered with tallgrass prairie before the arrival of settlers; the Laurentian mixed forest province, an area formed by glaciers and characterized by dense conifer and hardwood forests and extensive peat bogs; and the eastern broadleaf forest, a transition zone of deciduous trees between the prairie and the deep forest.



Source: Minnesota Department of Natural Resources

Lakes and Rivers

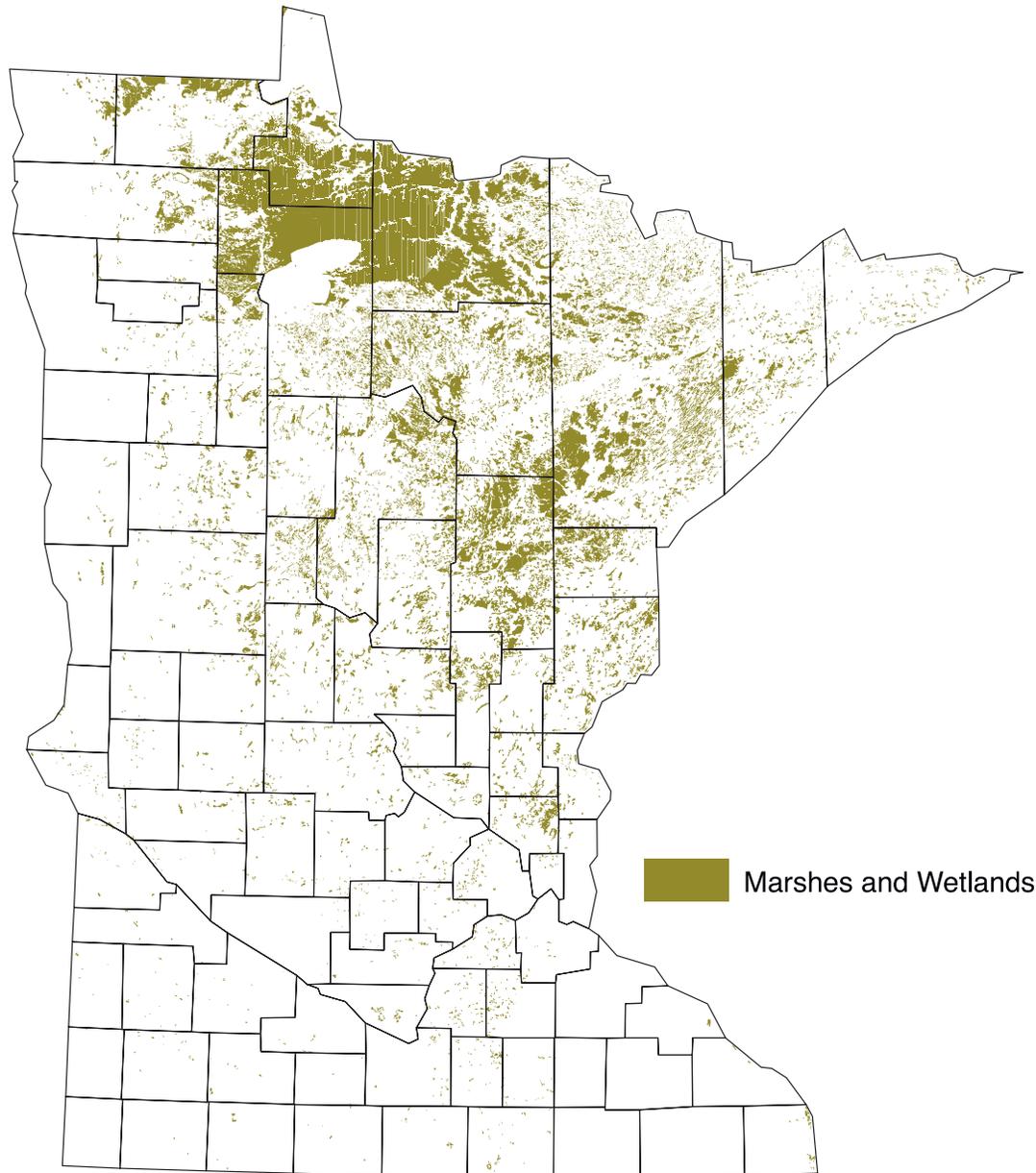
Minnesotans are proud to point out that half the length of the mighty Mississippi River and over 14,000 lakes are within our borders. And we use them—Minnesotans love to spend time on or near water. But heavy use may be harming the water we so love. Unprecedented high rates of lakeshore development are threatening the habitat quality and pristine nature of many of our lakes.



Source: Minnesota Department of Natural Resources

Marshes and Wetlands

Marshes and wetlands include a broad range of ecosystem types—sloughs, swamps, marshes, pot-holes, bogs, and more. Many wetlands in Minnesota have been drained for conversion to agricultural uses. However, their unique value, sensitivity, and place in Minnesota’s diverse ecosystems have led to intense study and increased protection in recent decades.

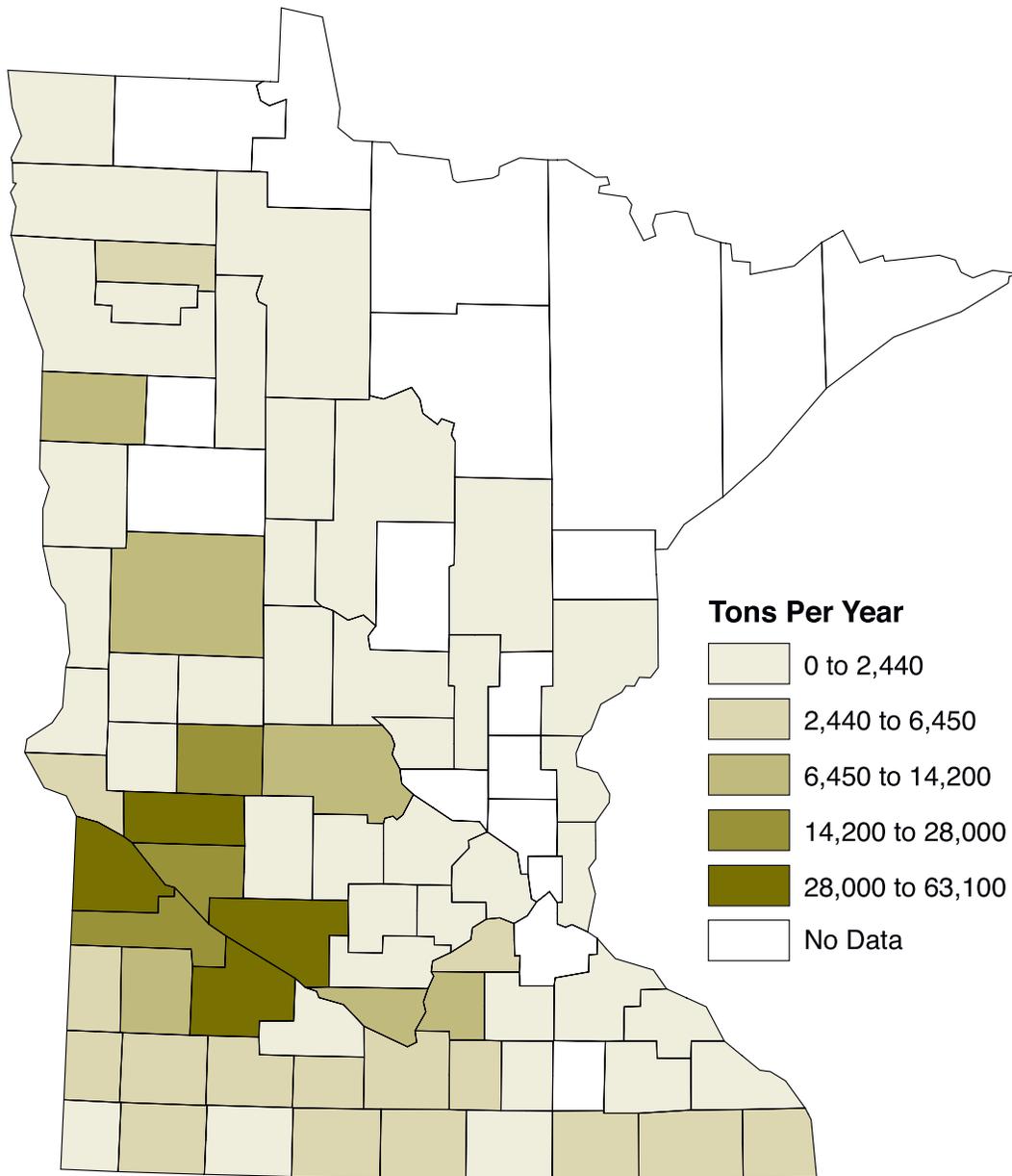


Source: Minnesota Department of Natural Resources

Soil Loss Reduction, 1997–2001

Among the many conservation projects in Minnesota, easements prevent thousands of tons of soil, sediment and other pollutants from leaving the fields and flowing into surface water. Soil erosion means not only the loss of valuable top soil, productivity and higher fertilizer requirements, but also damage to surface water in the form of silt that fills in and chokes off rivers and lakes.

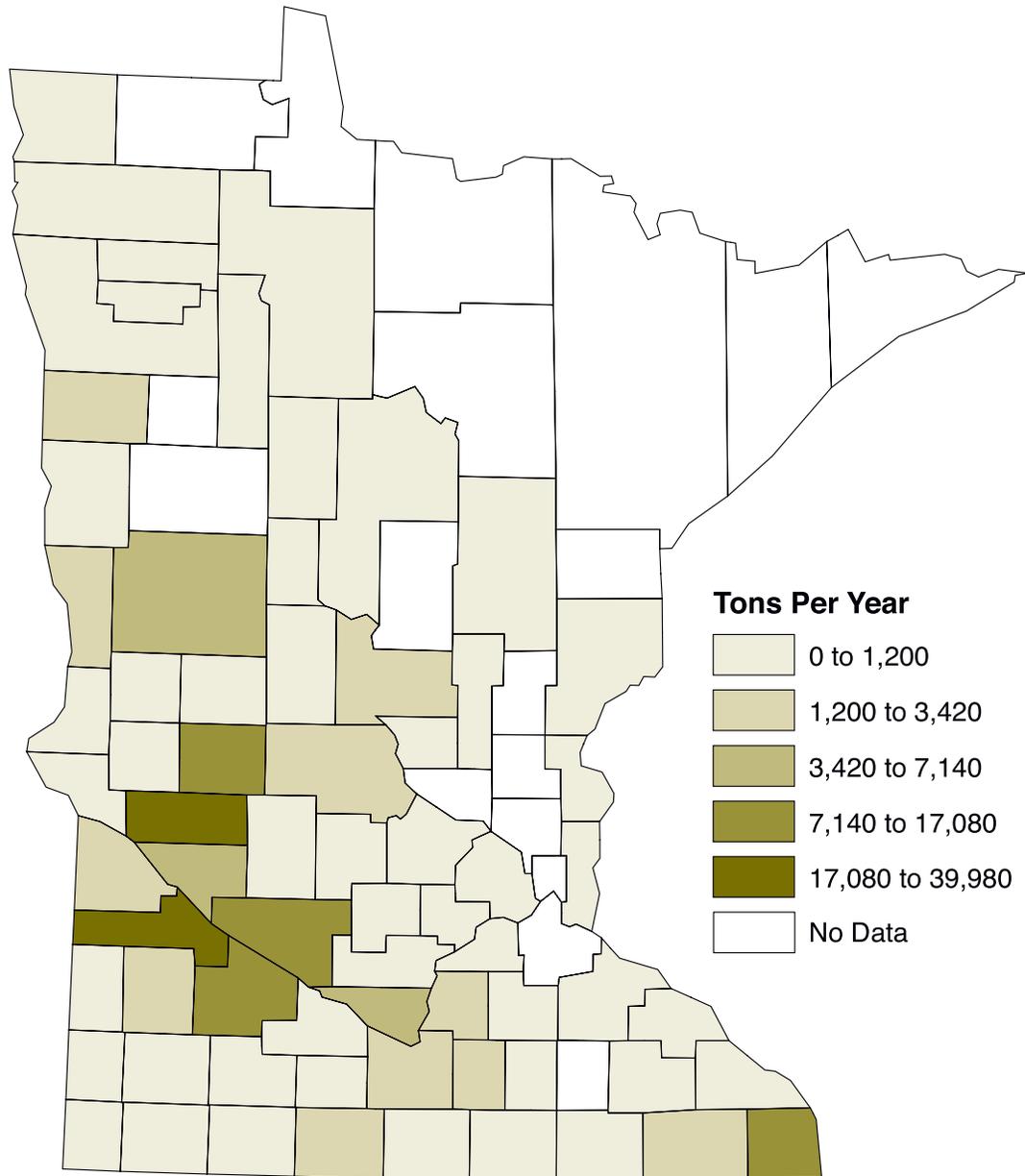
This soil loss reduction estimate is based on the state Board of Water and Soil Resources' easement projects for 1997-2001, which comprised more than 3,000 easements on nearly 200,000 acres. These easements are just one example, however, of several conservation projects being conducted around the state. Some of the most common means of slowing erosion are by establishing cover crops, filter strips and windbreaks. This map depicts the amount of soil that BWSR estimates was kept in place by conservation practices on these easements.



Source: Minnesota Board of Water and Soil Resources

Sediment Reduction, 1997–2001

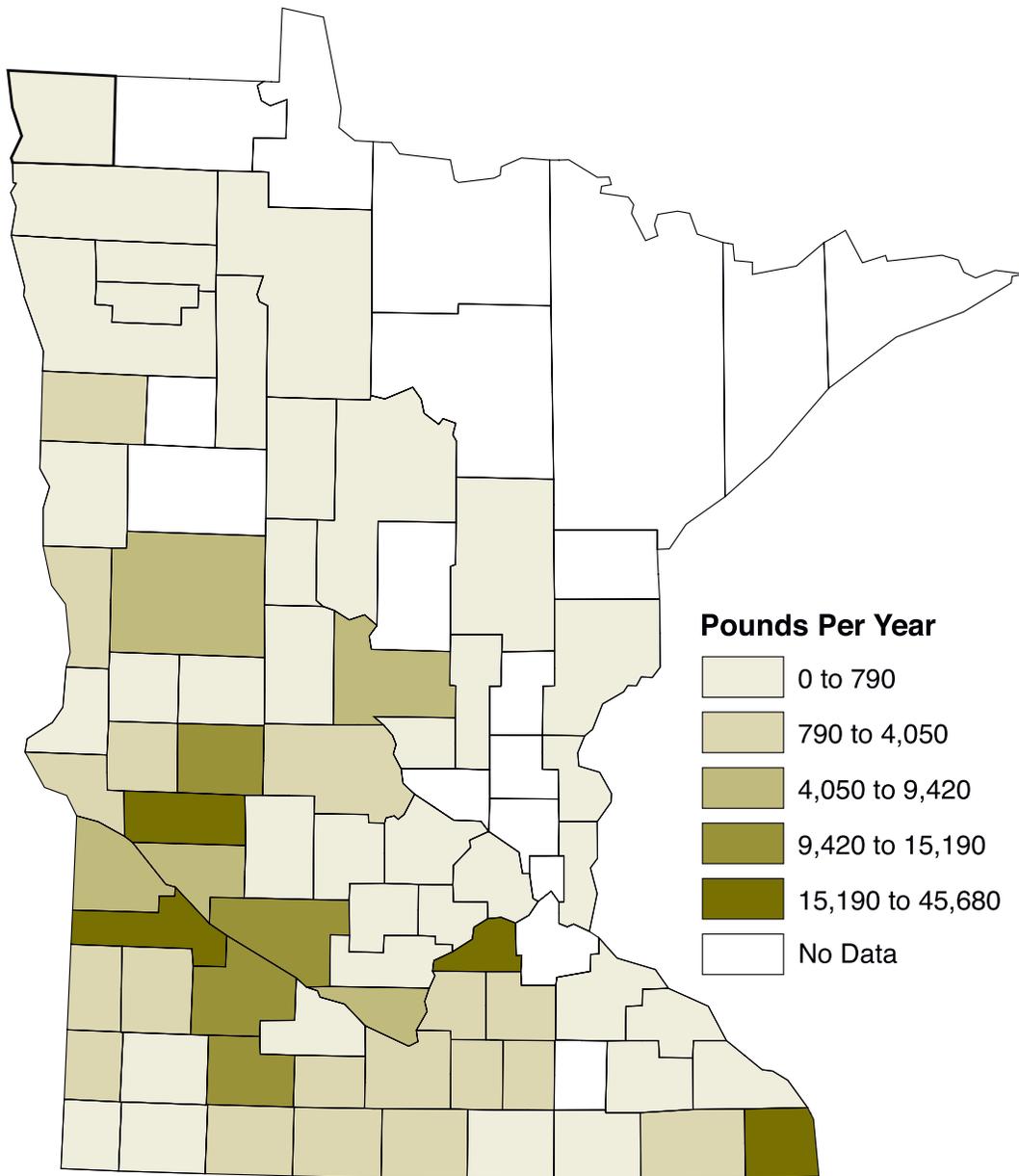
Sediment is the eroding soil that ultimately makes it to a stream or lake. Sediment flowing into rivers, lakes and wetlands eventually fills them in, increasing flood hazard and often damaging the habitat of birds and animals that depend on these watery environments to live and reproduce. The sediment reduction figure is an estimation of the amount of soil that would have made it into surface water if these conservation practices had not been in place.



Minnesota Board of Water and Soil Resources

Phosphorus Reduction, 1997–2001

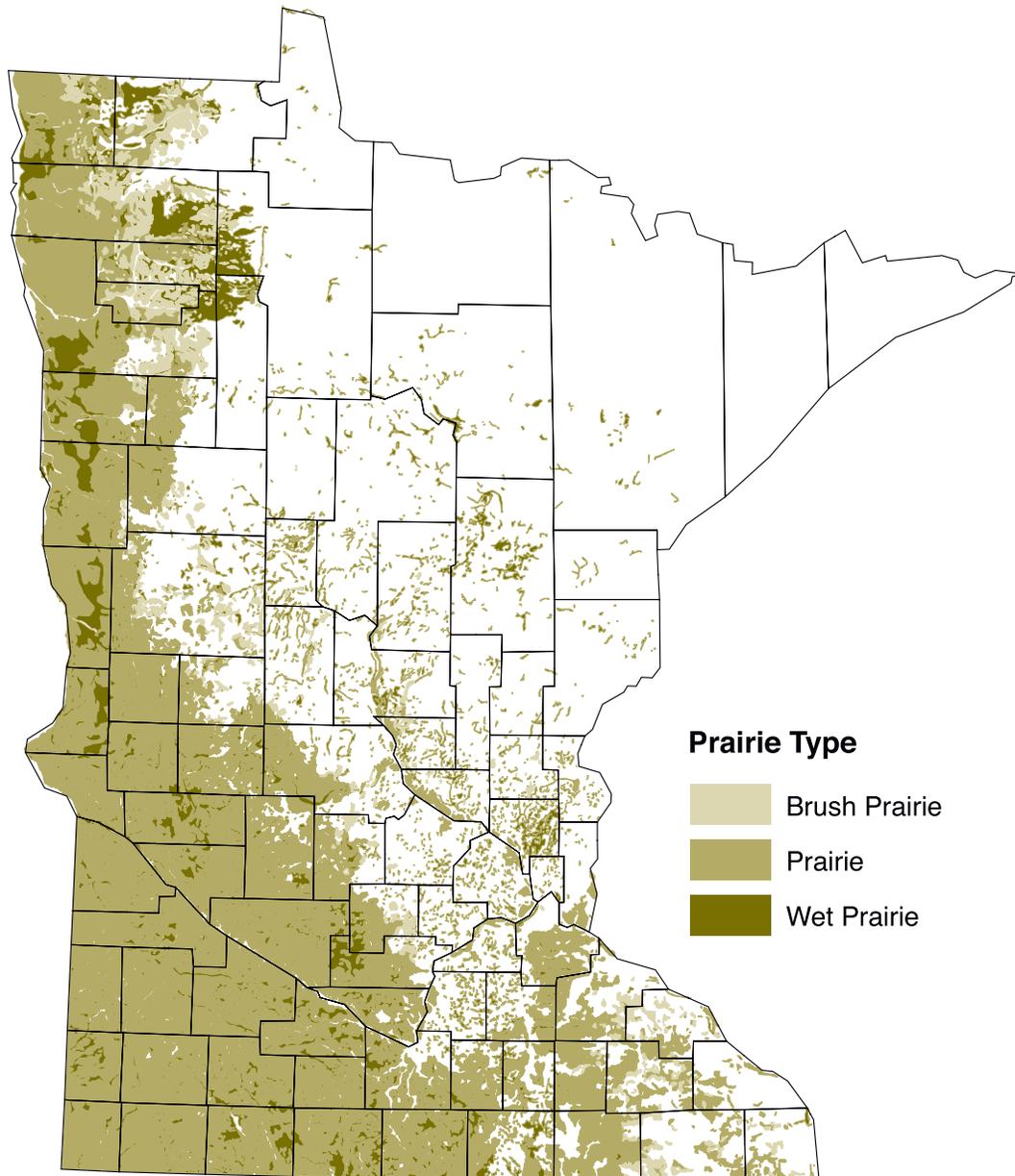
Sediment is still the largest pollutant of surface waters, not only because of the silting problems it causes, but also because of the chemicals attached to the sediment that are carried into the water. One of these chemicals is phosphorus, a common element of fertilizer, which in water creates several problems, including algae bloom. This proliferation of algae and other aquatic vegetation eats oxygen from the water, suffocating fish, discouraging wildlife and making the lakes and waterways unsuitable for recreational use. The phosphorus reduction figure is an estimation of the amount of phosphorus attached to sediment that would have made it to surface water if conservation practices had not been in place.



Source: Minnesota Board of Water and Soil Resources

Pre-settlement Prairie

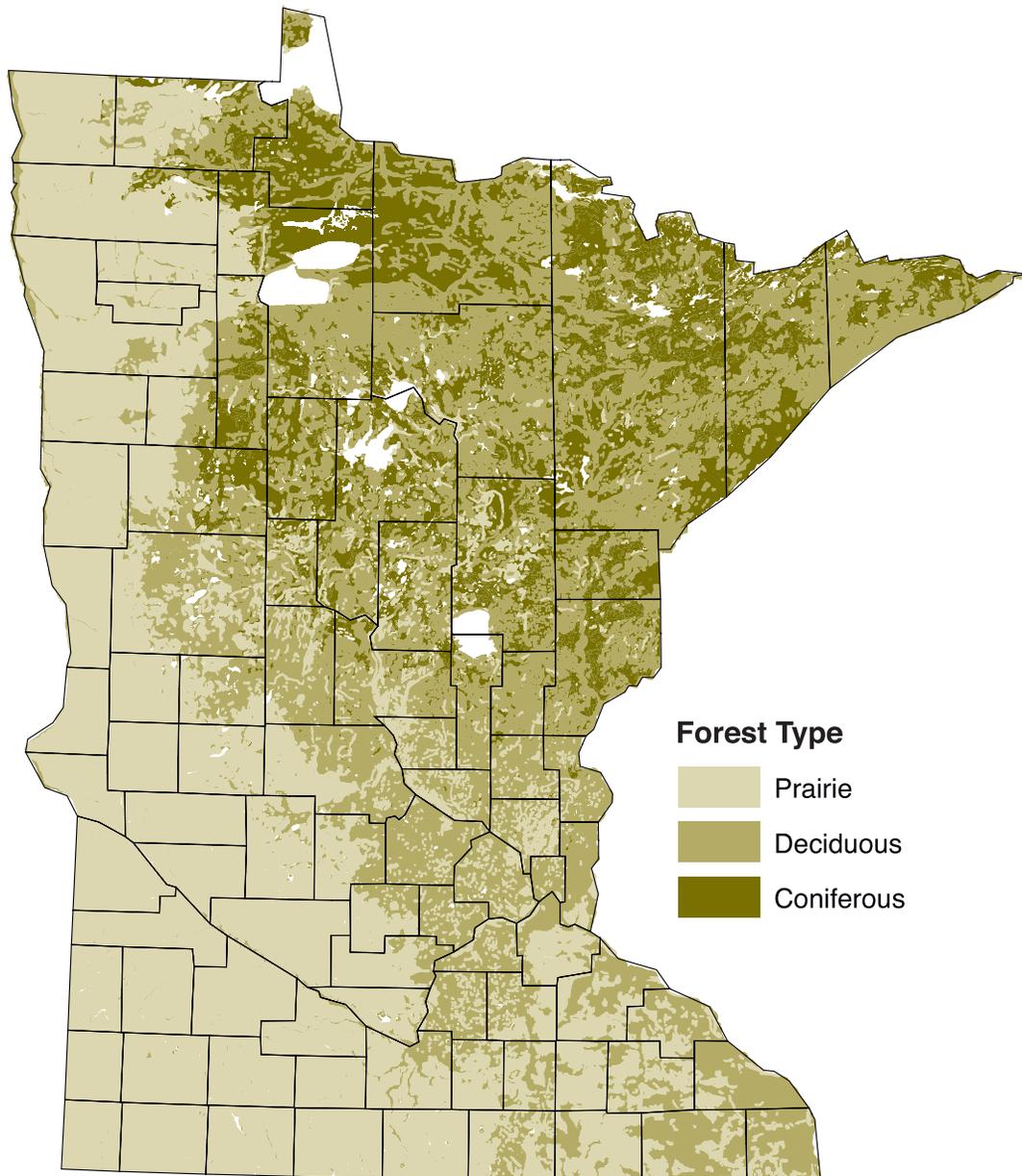
Before European settlement, almost 20 million acres of tallgrass prairie existed in Minnesota. Now, less than 1% remains. Prairie ecosystems are incredibly diverse: over 900 plant species were recently found in intact southwestern Minnesota prairies. Incredibly, some prairie plants can send roots over 8 feet deep into the soil to capture scarce water to support their growth.



Source: Minnesota Department of Natural Resources

Minnesota's Pre-settlement Forests

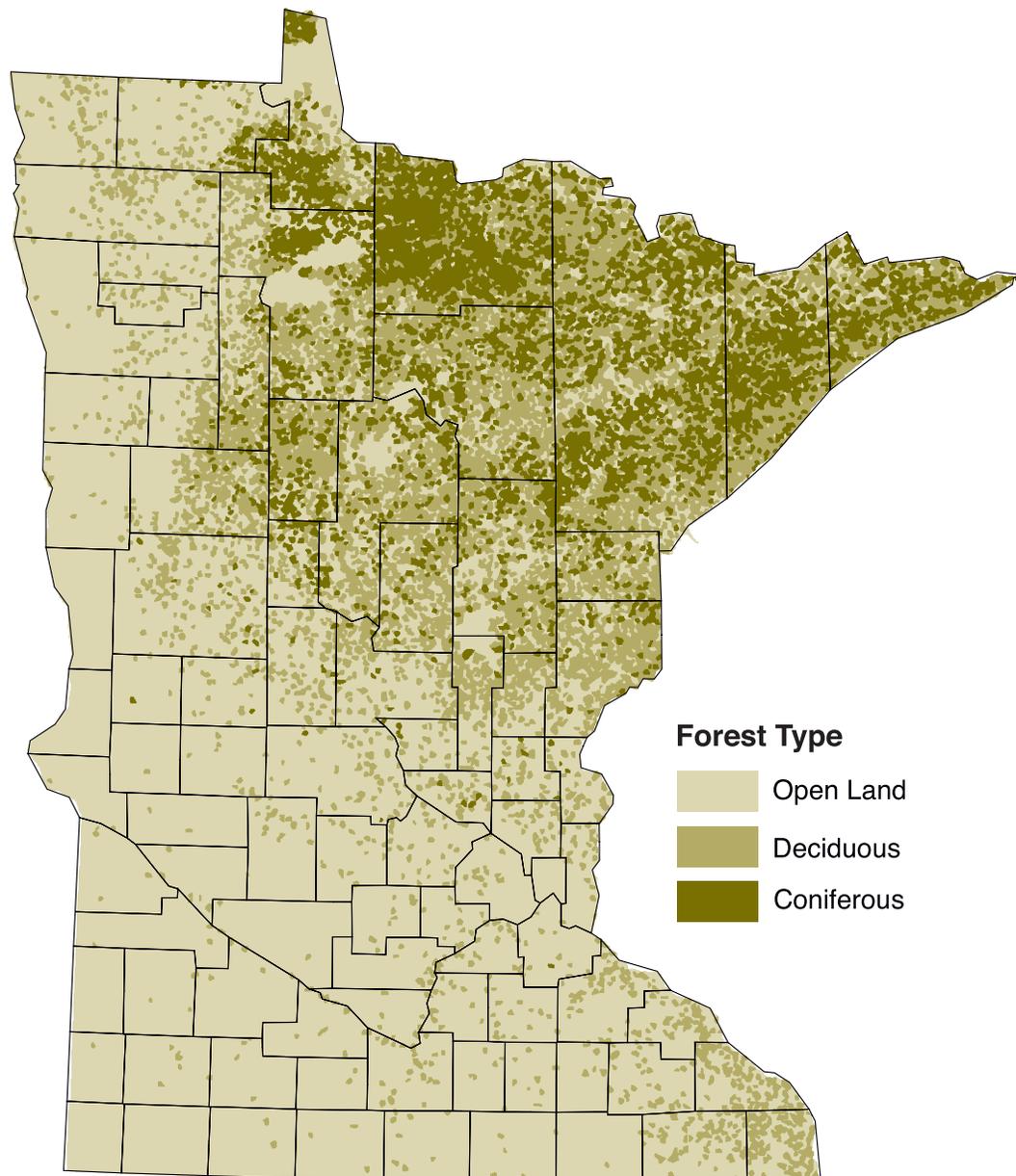
Prior to settlement by Europeans in the mid- and late-1800s, forests dominated the northern and eastern parts of what we now know as Minnesota. As is true today, pine, spruce and fir (the most common conifers) were largely restricted to the north, where they grew with birch, aspen and maple. Species including white pine and tamarack were much more common in pre-settlement forests than they are today. Oak, elm, maple, ash, aspen, hickory and ironwood (deciduous trees) grew in the west and south, often extending into the prairie along rivers and streams where they were protected from fire.



Source: Minnesota Department of Natural Resources

Minnesota's Forests, 1990

The distribution of forests in Minnesota in 1990 is similar to that seen on the pre-settlement landscape; conifer forests are found in the north, with deciduous forests in the south and west. The forests of today, however, differ in many respects from those of a century ago. Large areas of forested land have been converted to other uses (primarily agriculture), especially in the central and southern portions of the state. Harvesting has increased the amount of aspen in Minnesota, while decreasing the abundance of white pine. Today's forests are also much more fragmented than the forests of the past—only in the northeast do large, uninterrupted tracts of forest still remain.

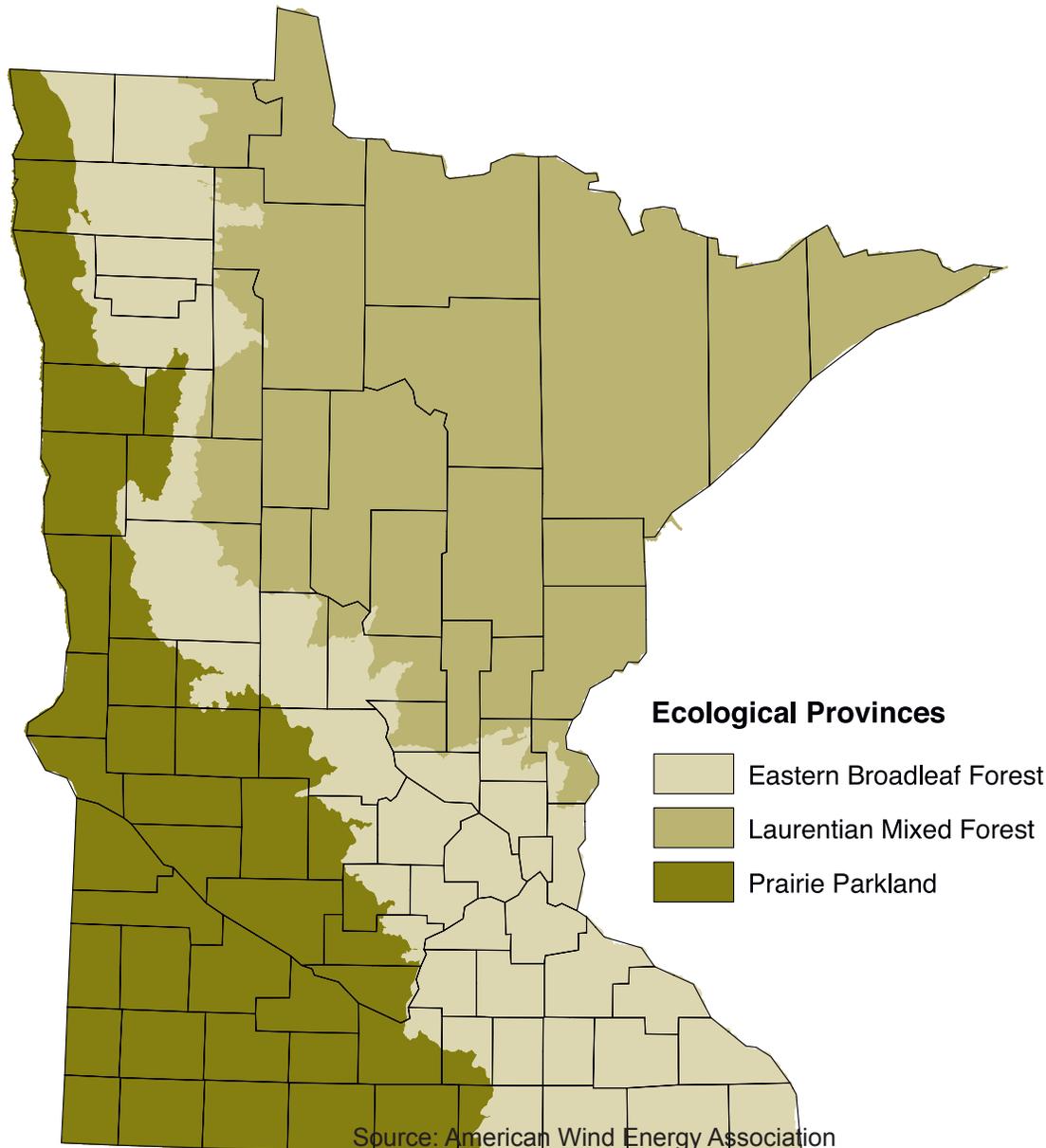


Source: USDA Forest Service, North Central Research Station

Wind Energy, 2003

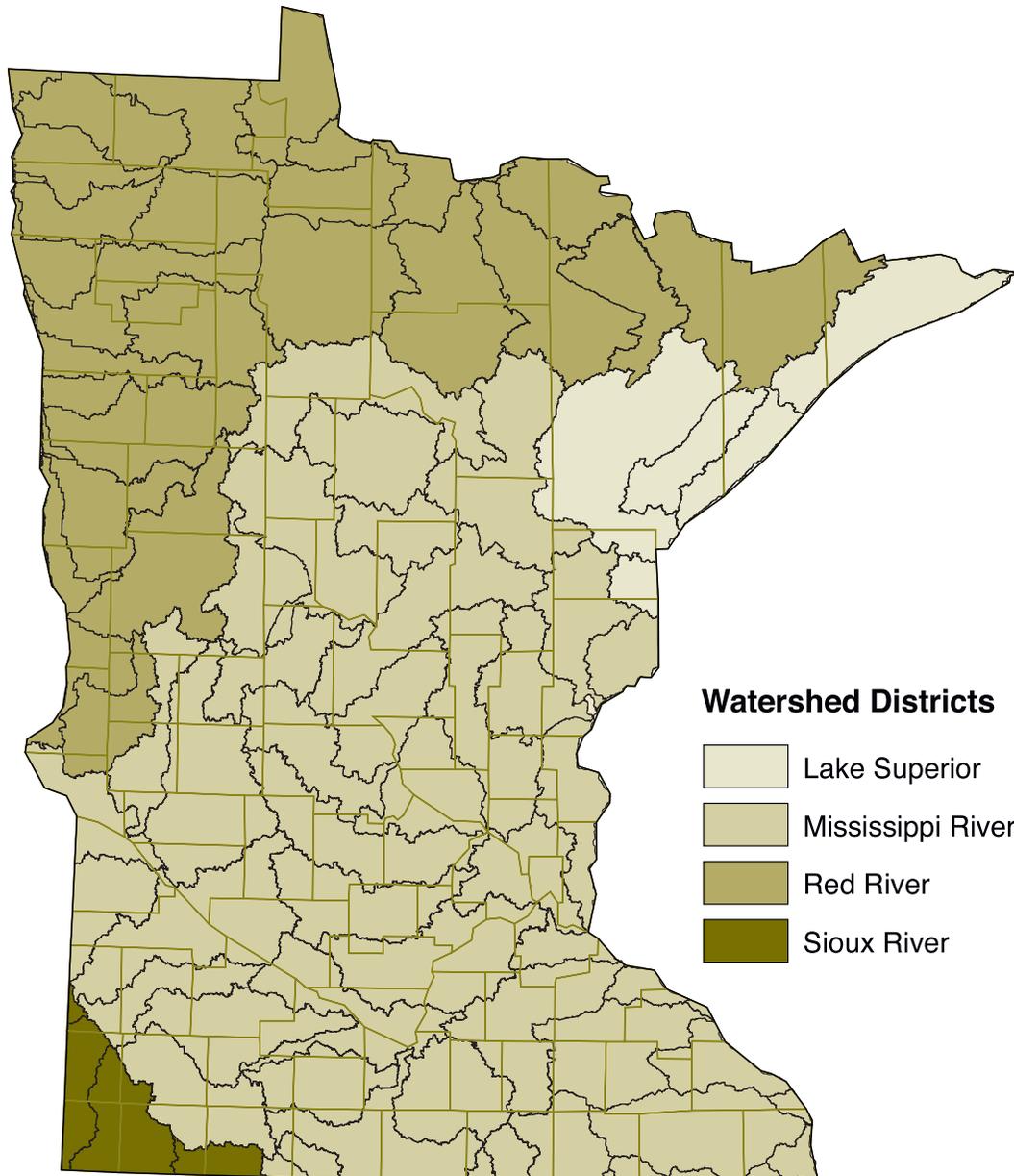
Minnesota is a national leader in developing wind energy, the fastest growing energy source nationally and globally. The ninth windiest state, Minnesota currently ranks fourth nationwide in installed wind power capacity and is the only state with farmer-owned commercial-scale wind projects. Many experts credit early 1990s projects on southwestern Minnesota's Buffalo Ridge with launching the modern wind industry. The past several years have seen record growth in new wind development in Minnesota and the U.S. in response to government incentives and falling costs as turbines become increasingly efficient. Minnesota's commercial-scale wind power capacity will soon exceed 514 Megawatts (MW), ranging from a single 225-kilowatt (kW) turbine that powers a school building to a 107-MW wind farm that was the largest in the world when built. In addition, landowners throughout Minnesota have installed at least 120 residential-sized (under 100 kW) wind turbines.

Significant expansion of Minnesota's wind industry is expected in the next several years due to new and upgraded power lines that will bring southwestern Minnesota wind power to the Twin Cities. For more information, see www.commerce.state.mn.us and www.awea.org/projects/index.html and www.windustry.org



Watershed Districts

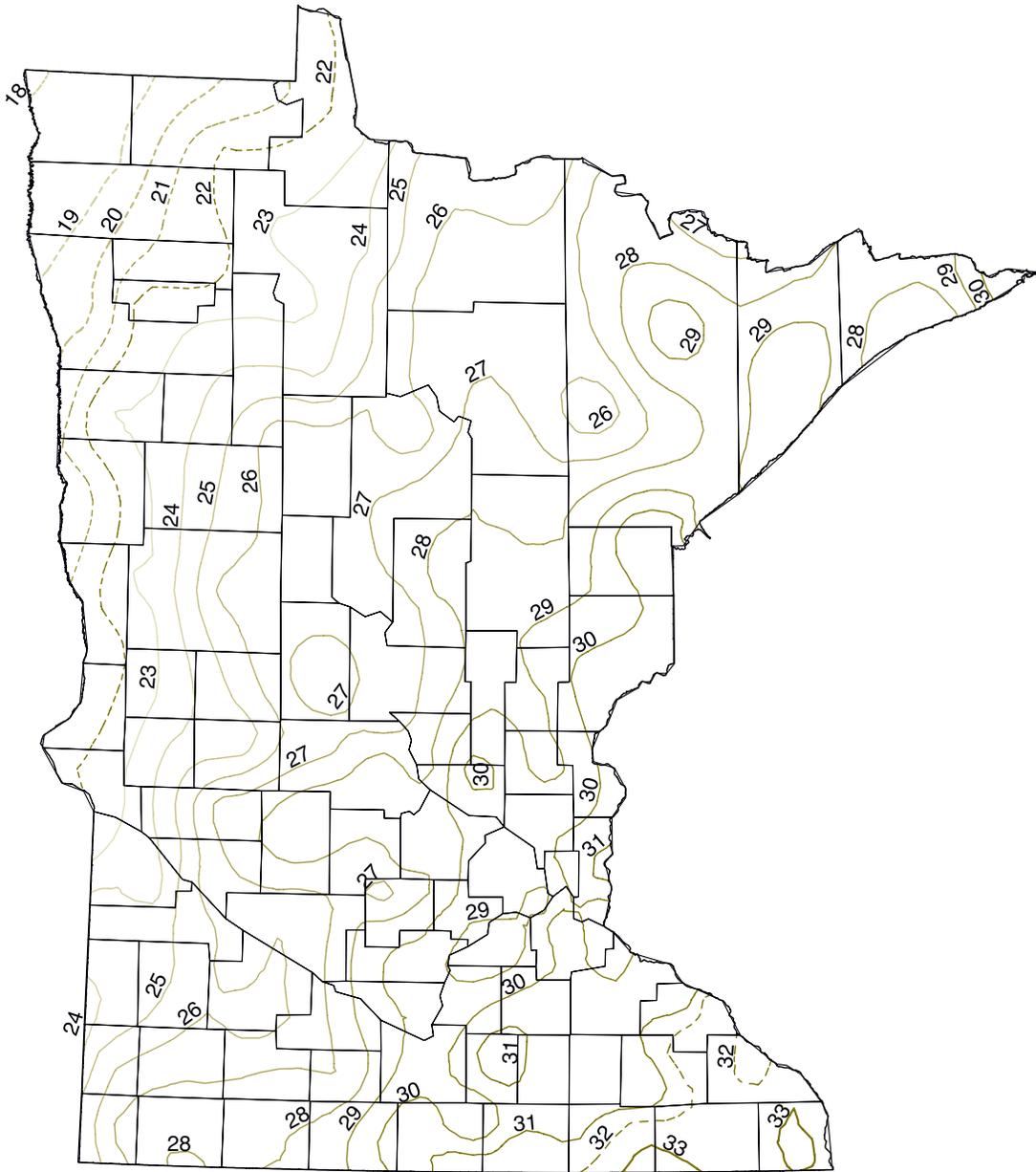
The term “watershed” describes an area of land that drains downslope to the lowest point. The water moves through a network of drainage pathways, which converge into streams and rivers. Watersheds can be large or small, and Minnesota’s largest watersheds each tell an interesting story. We may not have the Rockies, but Minnesota’s continental divides send water in three directions. For example, north of the Laurentian divide, water flows northward into Hudson Bay. South of the divide, it flows either through Lake Superior to the Atlantic Ocean, or south through the Mississippi River to the Gulf of Mexico.



Source: Minnesota Department of Natural Resources

Average Annual Precipitation in Inches

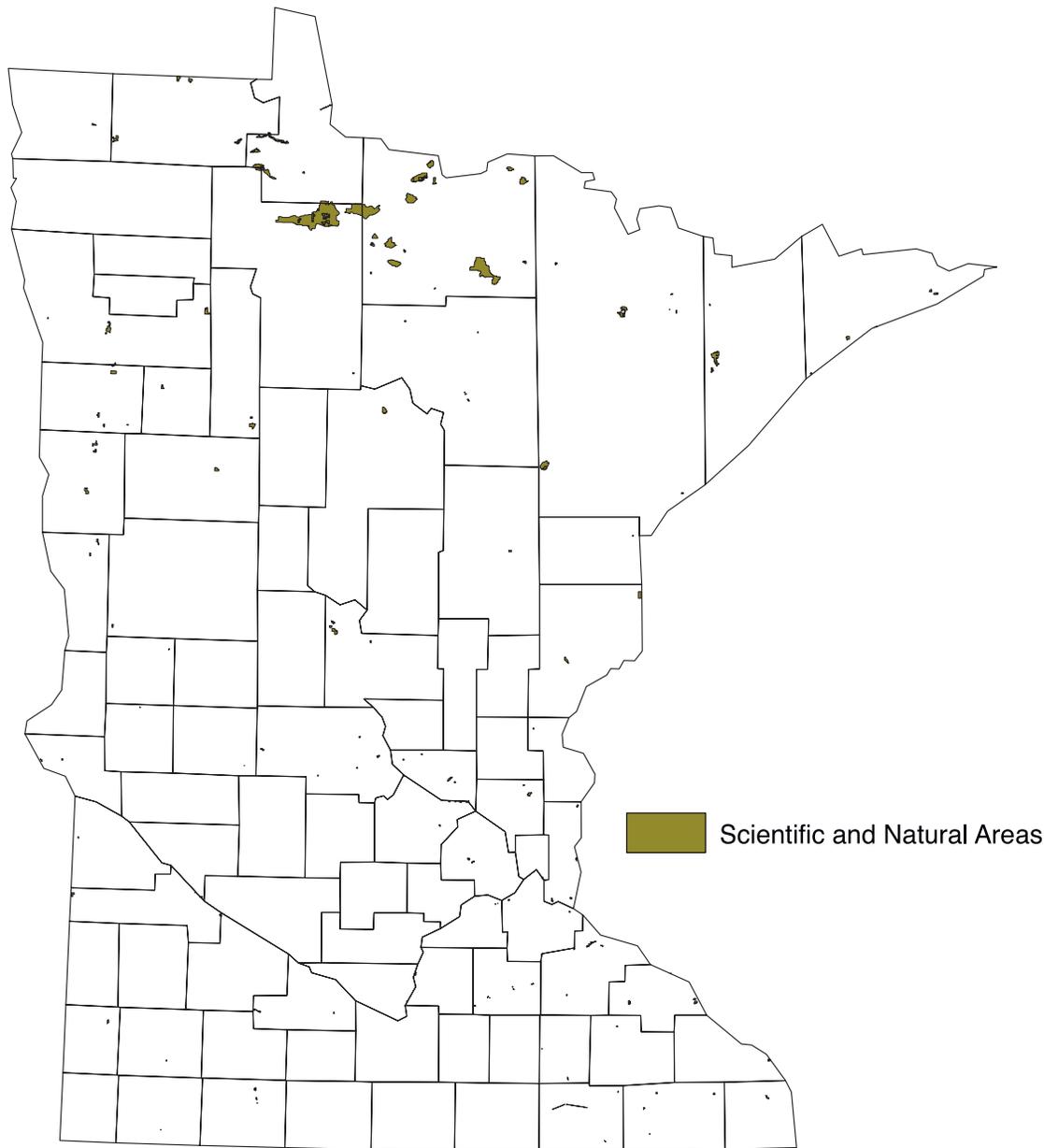
Precipitation in Minnesota, in the form of rain and melted snow ranges from 18 inches in the northwest corner to 33 inches in the southeast. According to the Department of Natural Resources, precipitation amounts for most of the eastern United States, including Minnesota, are determined by proximity to the Gulf of Mexico, the major source of warm, wet air.



Source: Minnesota Department of Natural Resources

Scientific and Natural Areas

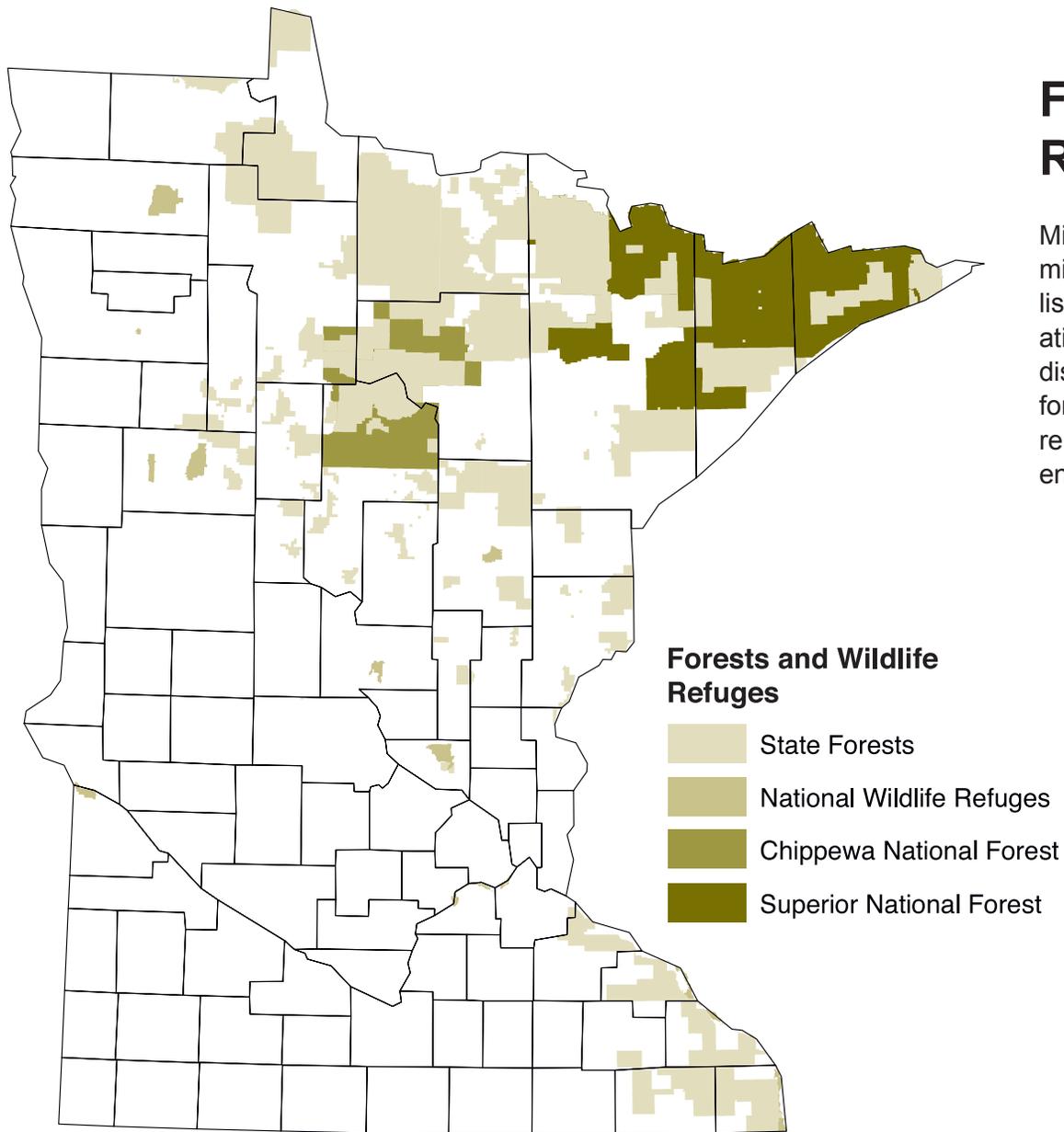
Minnesota's living museum of Scientific and Natural Areas (SNAs) has a thousand stories to tell—of Minnesota's lands and waters, plants and animals, past and future. The SNA program preserves natural features and rare resources of exceptional scientific and educational value. Although SNAs are open to the public for nature observation and education, they are not meant for intensive recreational activities.



Source: Minnesota Department of Natural Resources

Forests and Wildlife Refuges

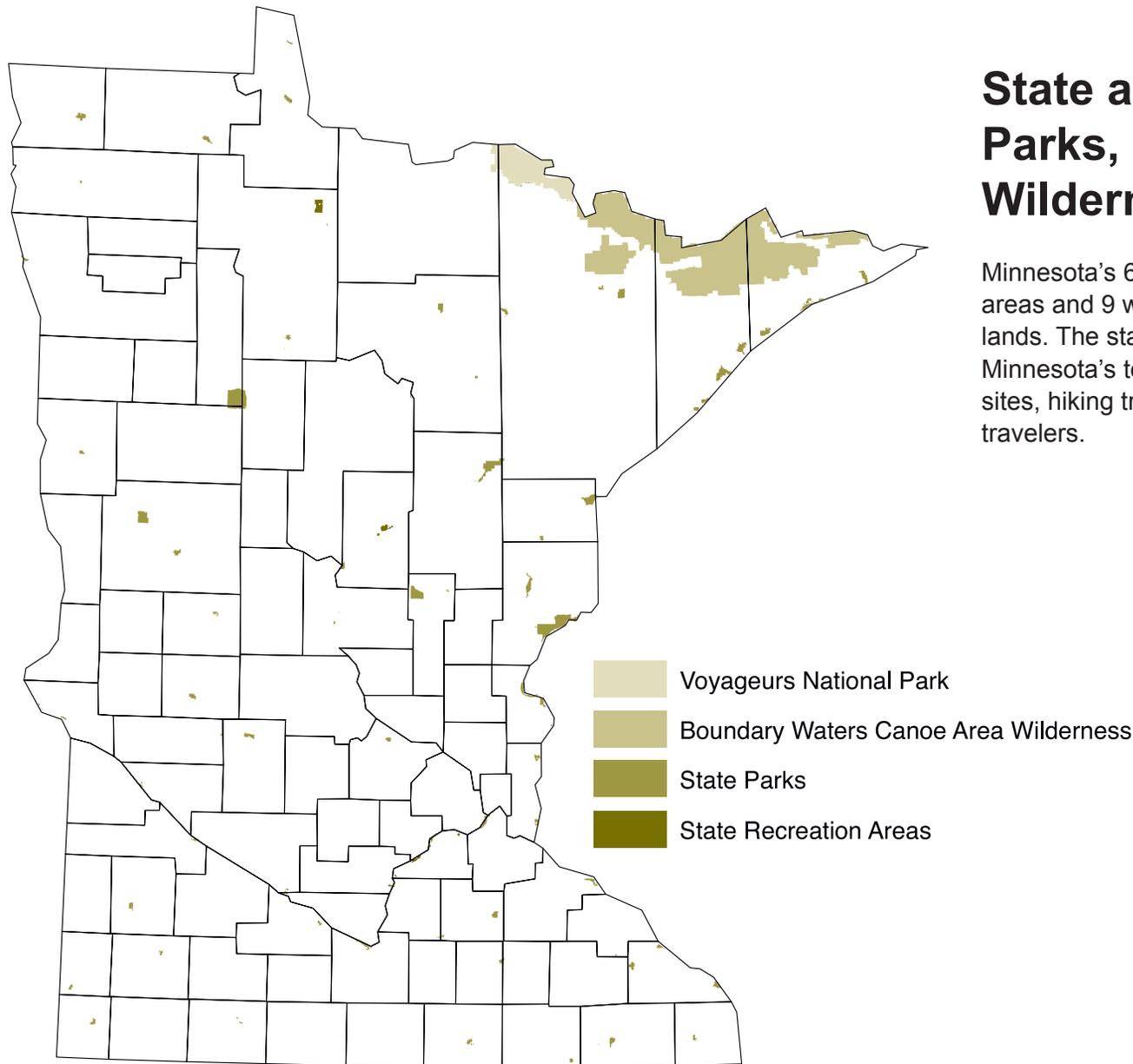
Minnesota's 58 state forests encompass nearly 4 million acres. The state forest system was established to produce timber, provide outdoor recreation, protect watersheds and perpetuate rare and distinctive species of native flora and fauna. State forests are managed sustainably to ensure they remain healthy, vital, and productive for the present and future generations.



Source: Minnesota Department of Natural Resources

State and National Parks, Recreation and Wilderness Areas

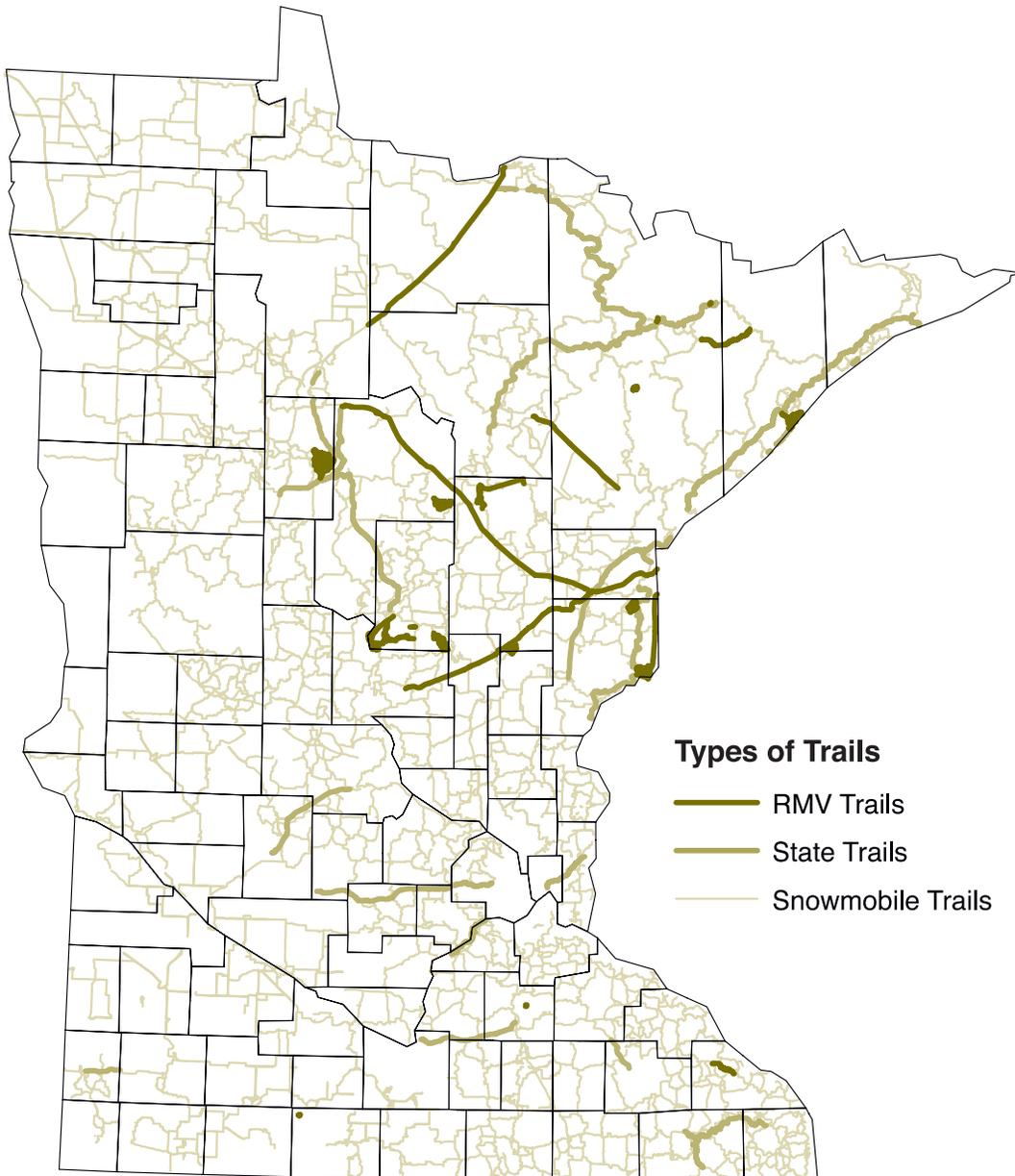
Minnesota's 66 state parks, 4 state recreation areas and 9 waysides are some of its most scenic lands. The state park system is a cornerstone of Minnesota's tourism economy, providing campsites, hiking trails and recreational opportunity for travelers.



Source: Minnesota Department of Natural Resources

State Trails

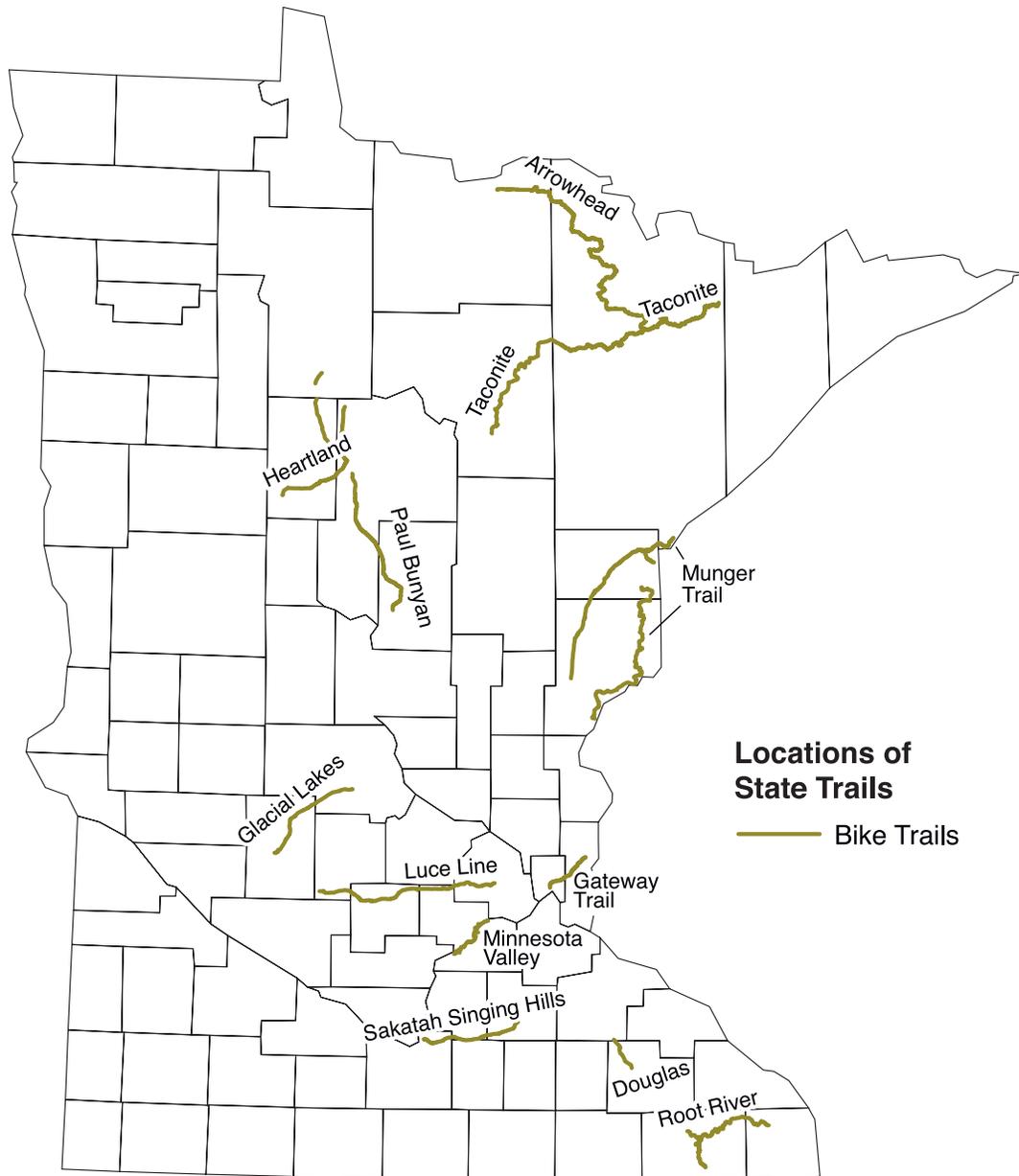
Minnesota has an extensive trail system where people can hike, bike, snowmobile and ski. Some state trails log more than 100,000 user hours each summer (and this map does not include the hundreds of miles of local trails). The state's major trail systems fall into three categories. First, the more than 1,000 miles of designated state trails that are maintained by the state and are generally long-haul trails (the longest is the Taconite State Trail at 163 miles). Hikers and bikers use these trails in the summer, while in the winter some of them double as cross-country ski trails and snowmobile trails. Second, the 1,000 miles of recreational motor vehicle (RMV) trails (for all-terrain vehicles, motorcycles and off-road vehicles) and third, 20,000 miles of snowmobile trails which give enthusiasts safe places to enjoy riding.



Source: Minnesota Department of Natural Resources

State Bicycle Trails

Bike trails allow for safe, quiet recreation. In spring, summer, and fall, cyclists use trails like the north-east Minnesota's Munger Trail and St. Paul's Gateway Trail every day. These trails provide commuters, recreational riders, and families with a way to enjoy Minnesota's scenery and to get where they want to go. Many of these trails double as snowmobile trails in winter.

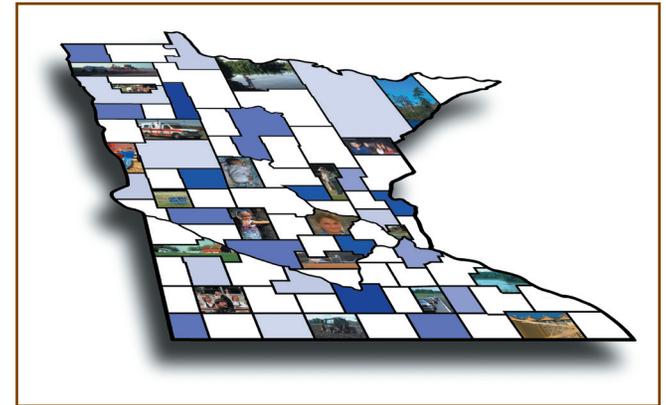


Source: Minnesota Department of Transportation

Education

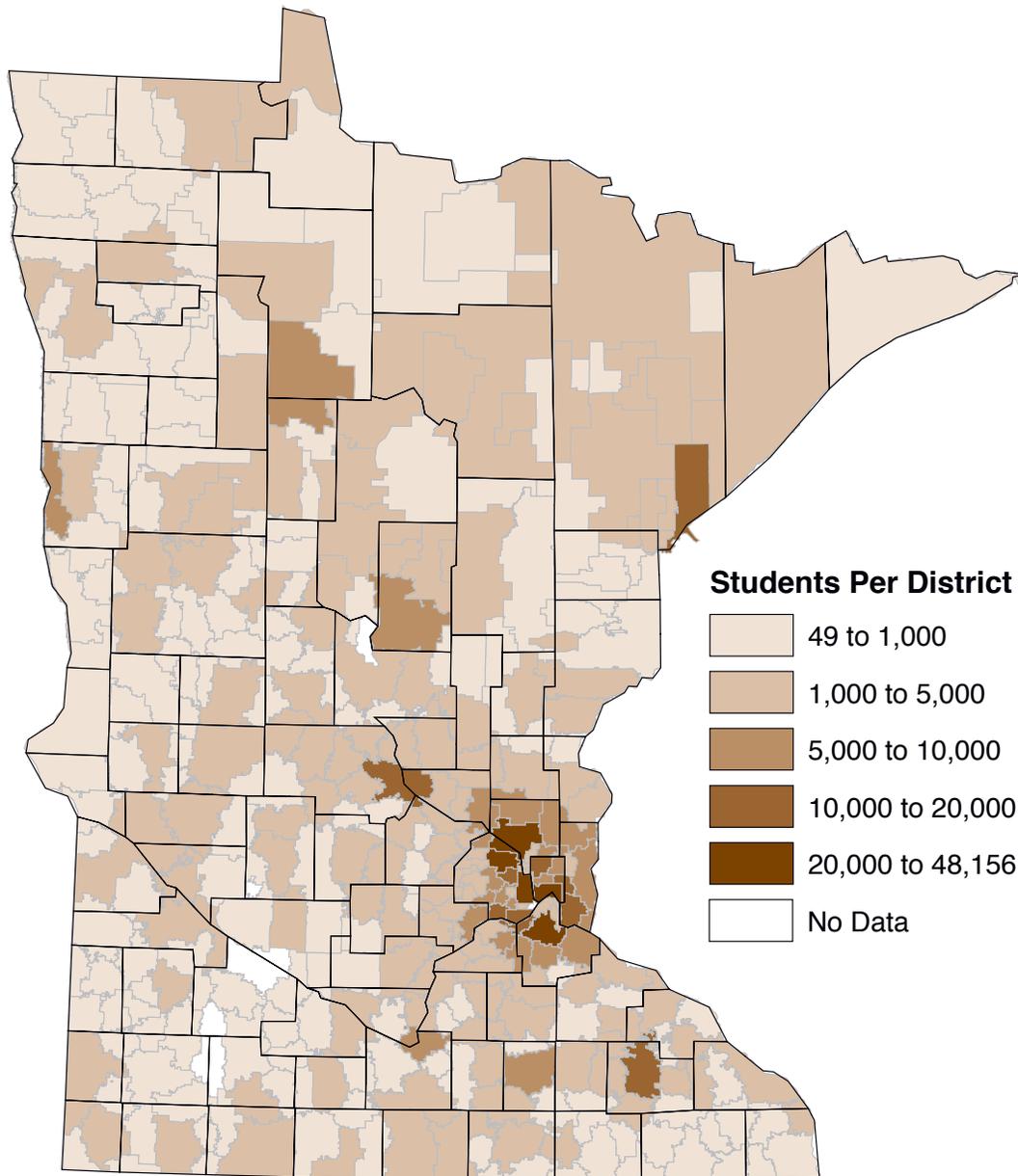
Minnesota's face is changing and its 353 school districts create a patchwork of education differences. Historically, Minnesota has been a state which believes in local control but new demographics, community expectations, and federal education policy all require that we narrow our differences in the future. As the maps point out, Minnesota faces a number of challenges if it is to retain its historic high rank nationally in education performance.

*Vernae Hasbargen
Minnesota Rural Education Association*



Total Enrollment, 2001–2002

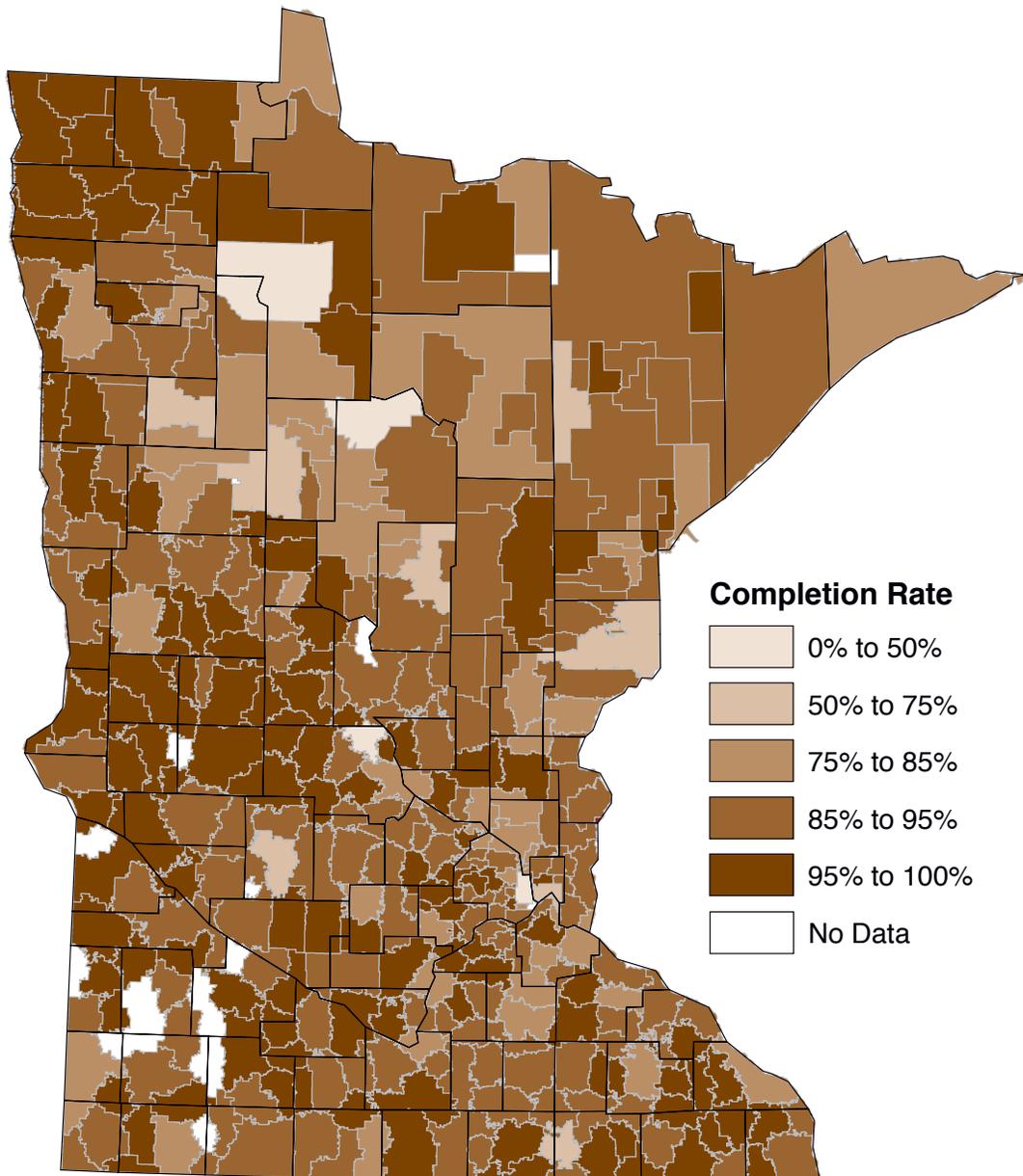
Since the early nineties, enrollment has declined in many rural districts while the metropolitan corridor has rapidly grown, putting pressure on existing schools and forcing larger class sizes.



Source: Minnesota Department of Education

Graduation Rates, 2001

Minnesota's Department of Education tracks students from ninth grade to 12th grade to derive a continuous stream of data on students in areas such as graduation and dropouts. By following the same student as he or she progresses through high school, completion studies do more than show how many students graduated in a given year. They account for student mobility and alternative education settings, showing how the district is doing with individual students. The statewide graduation rate was 78.1%. Consolidation and school closures have skewed the graduation rates for some districts, making them extremely low.

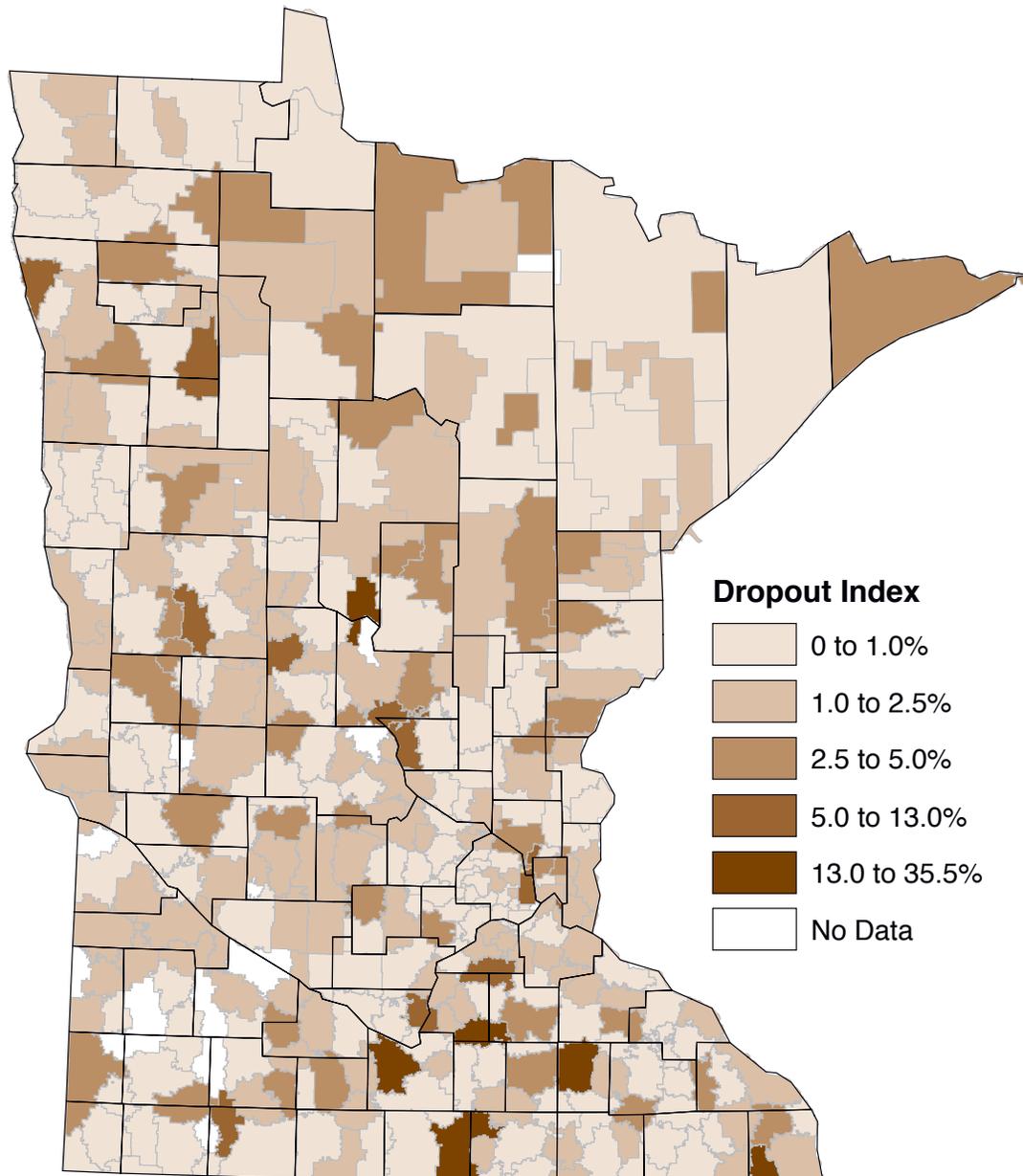


Source: U.S. Census, 2000

High School Dropout Rates, 2001

Dropout rates are important information for school districts, families and the community in general. Areas with the highest populations of color also tend to have the highest dropout rates, although many districts are working hard to change this.

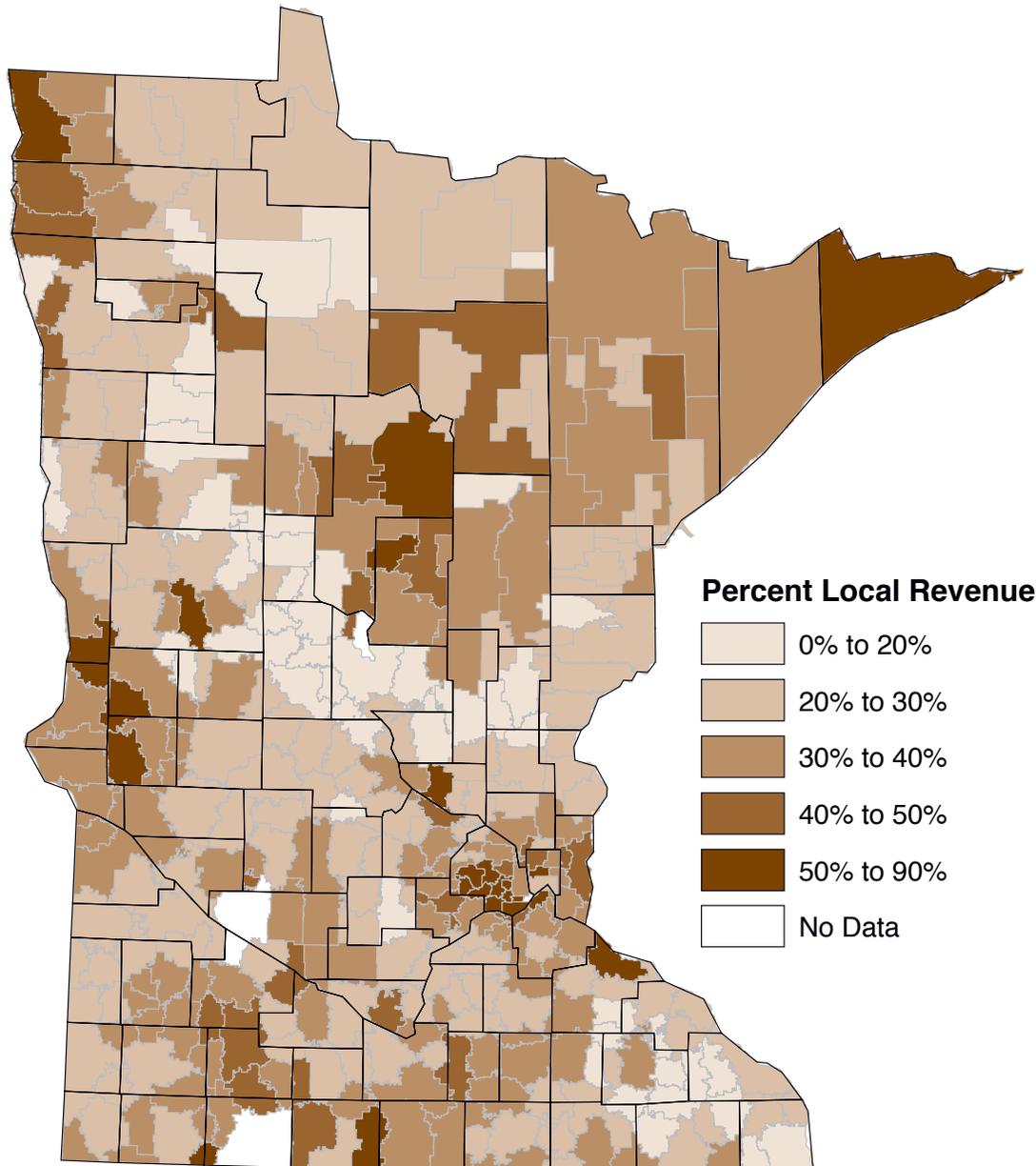
The dropout index is calculated by the Department of Education as the total number of dropouts for the school year divided by the grades 7–12 enrollment as of October 1 of that school year (and multiplied by 100 to give a percentage).



Source: Minnesota Department of Education

Revenues Generated Locally, 1999–2000

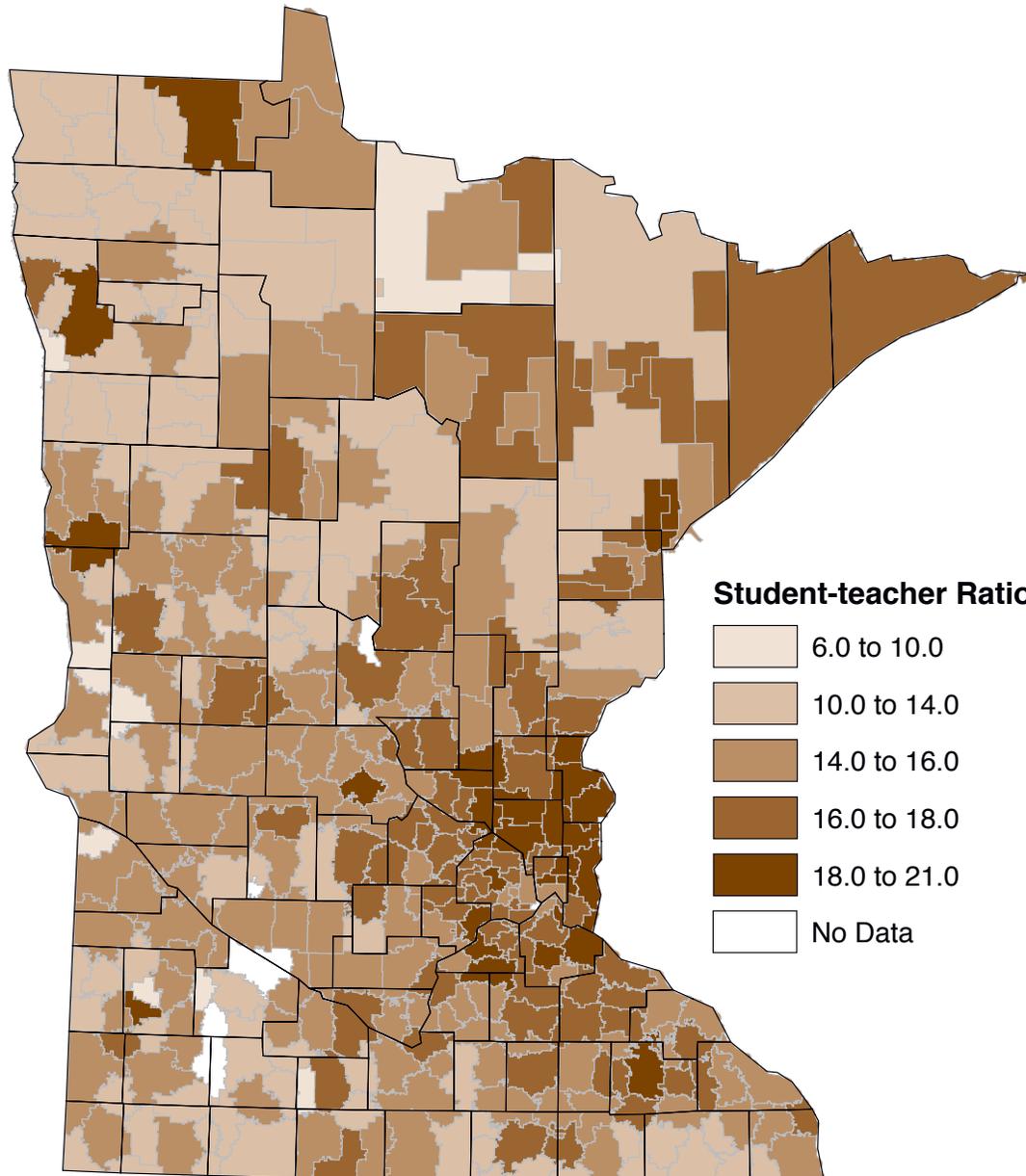
The 1999-2000 school year is the last year that local funding for education exceeded state funding. Minnesota's 2001 tax reform resulted in the state paying the entire cost of basic education, leaving local taxpayers to provide additional revenue should they wish. The driving forces in this change were metropolitan schools that were funded to a great degree by local property taxes. This change took school funding off the property tax, affording local taxpayers a degree of tax relief. At the same time the state removed agricultural land and seasonal cabins from the tax bases of school districts so that even more than before, rural Minnesota is property poor and must rely mostly on the state for basic funding.



Source: Minnesota Department of Education

Student-teacher Ratio, 2001–2002

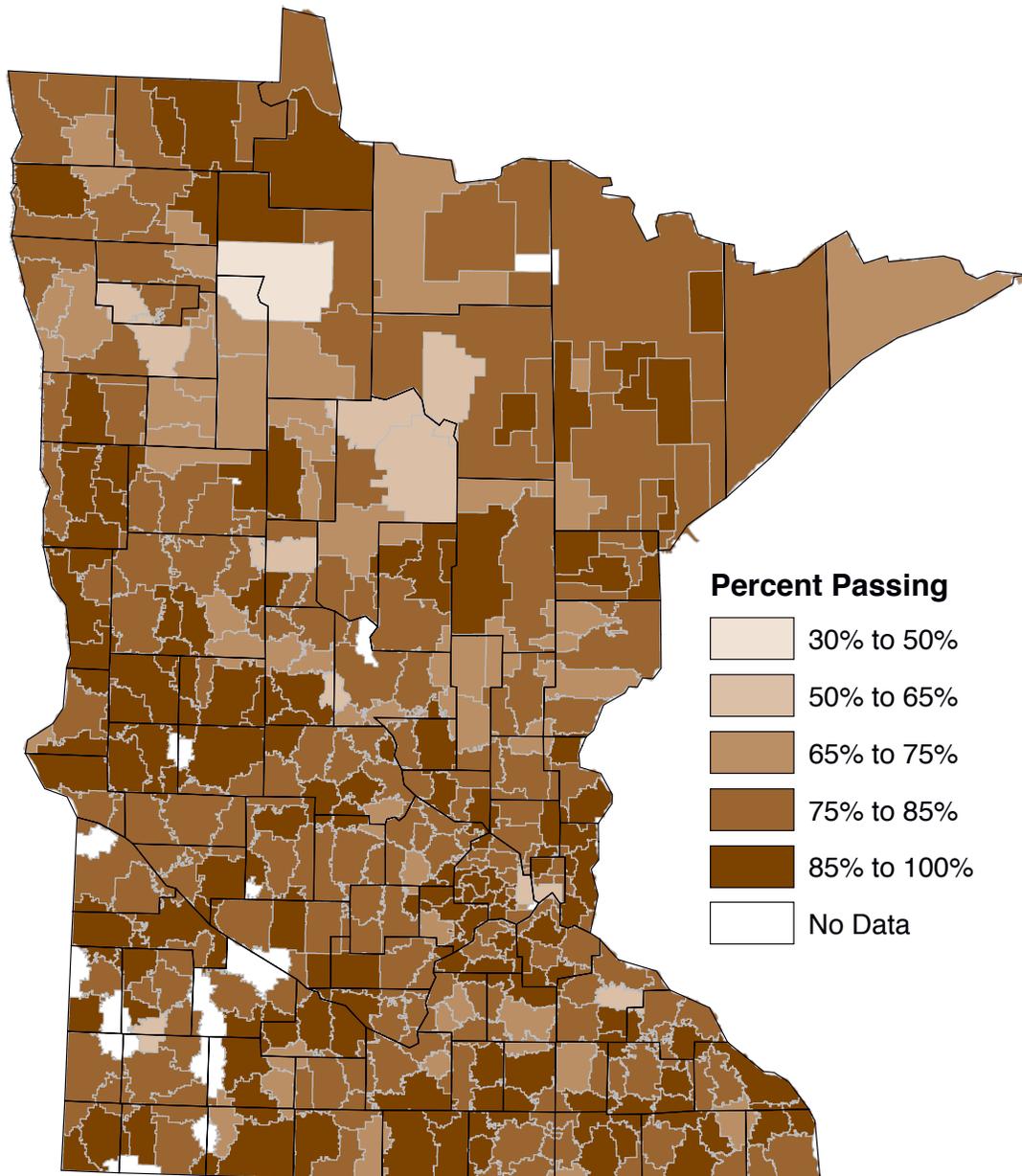
The ratio of students to teachers (based on full-time equivalents) varies considerably throughout the state, although they tend to be higher in many suburban districts. The student-to-teacher ratio is often used as an indicator of class size and an indicator of a district's ability to fund teachers. Related factors may be the rapid growth in districts in Rochester and the Twin Cities suburbs as well as declining populations and pockets of population growth in rural Minnesota.



Source: Minnesota Department of Education

Eighth-grade Basic Skills: Reading, 2002

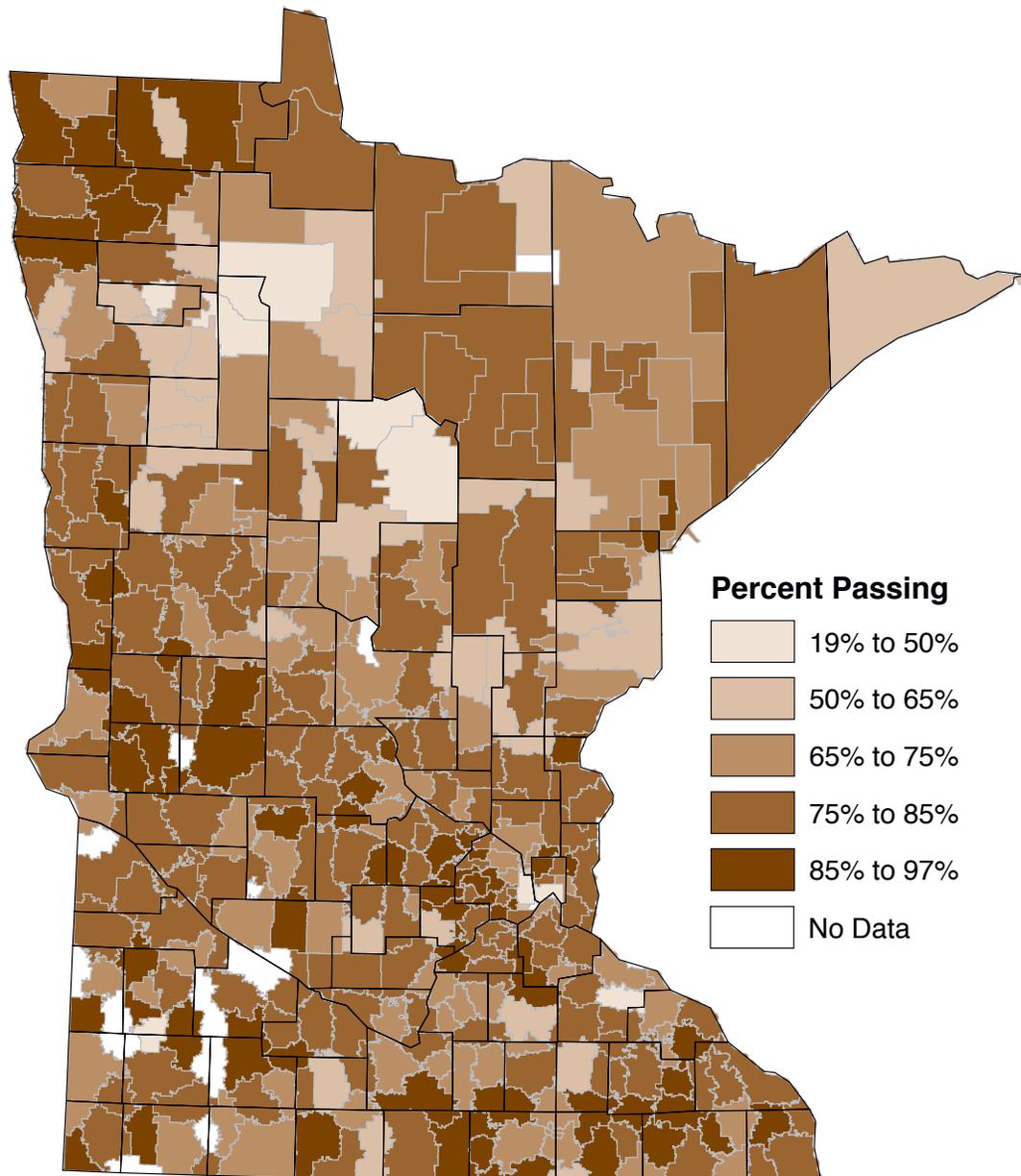
The eighth-grade basic skills tests were designed to measure the progress of students in the core subjects of reading and math, identify where more work is needed and ensure that students leave high school with the skills necessary to function productively. The patchwork of test results shows that success in educating students varies across the state. Under the federal government's recently passed No Child Left Behind Act, yearly testing in math and reading is required in the third through eighth grades. The basic reading skills test measures reading comprehension and writing skills.



Source: Minnesota Department of Education

Eighth-grade Basic Skills: Math, 2002

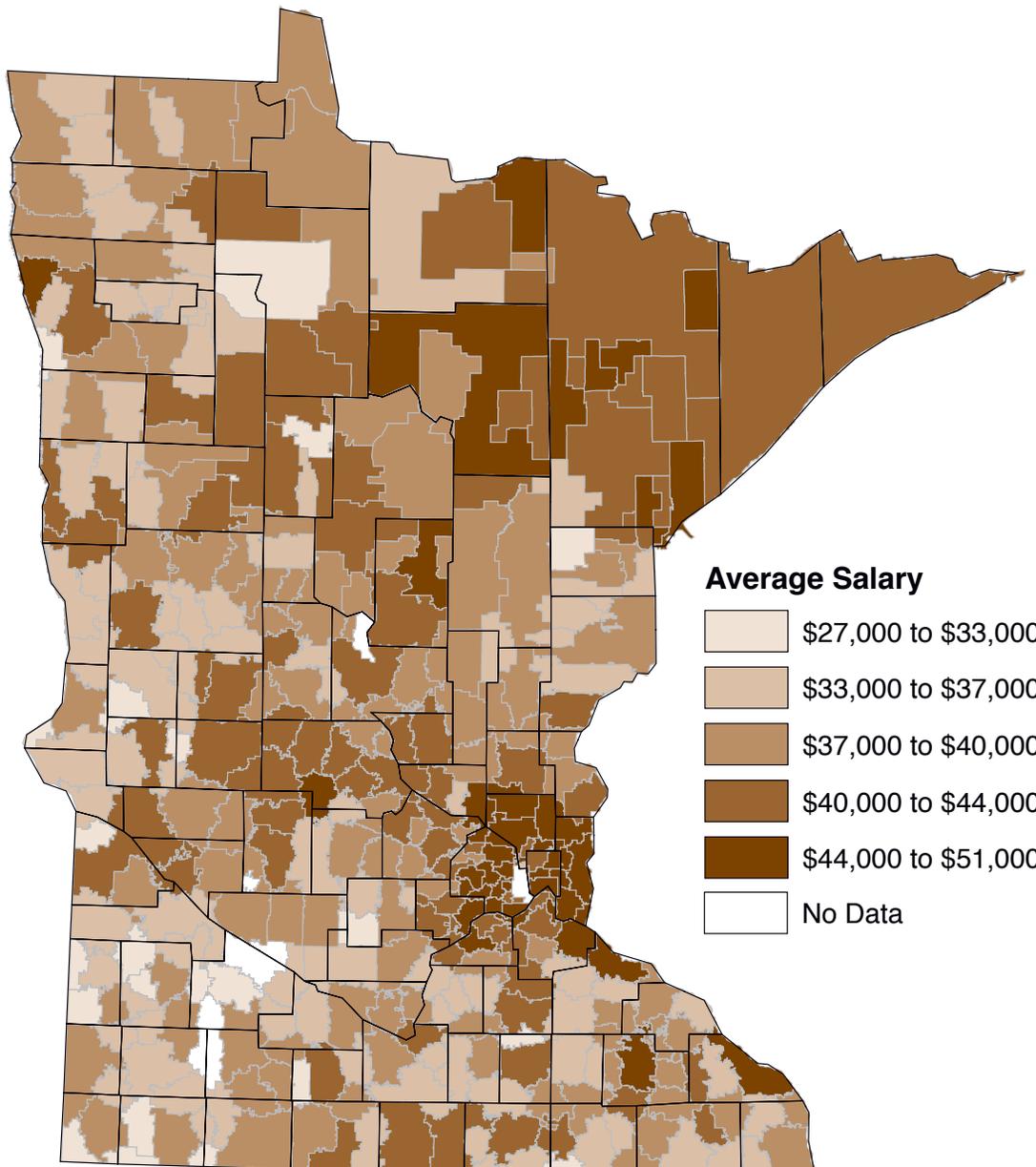
The eighth-grade math test measures whether a student has mastered the math skills considered necessary for adult life. A lack of basic math skills—or reading skills—is a problem not only for the individual, but also for family and future employers. The math and reading tests are controversial to some who believe that a single test cannot be used to adequately measure the progress of individual children. Others, however, see testing as a valuable means of identifying those who need extra help.



Source: Minnesota Department of Education

Average Teacher's Salary, 2001–2002

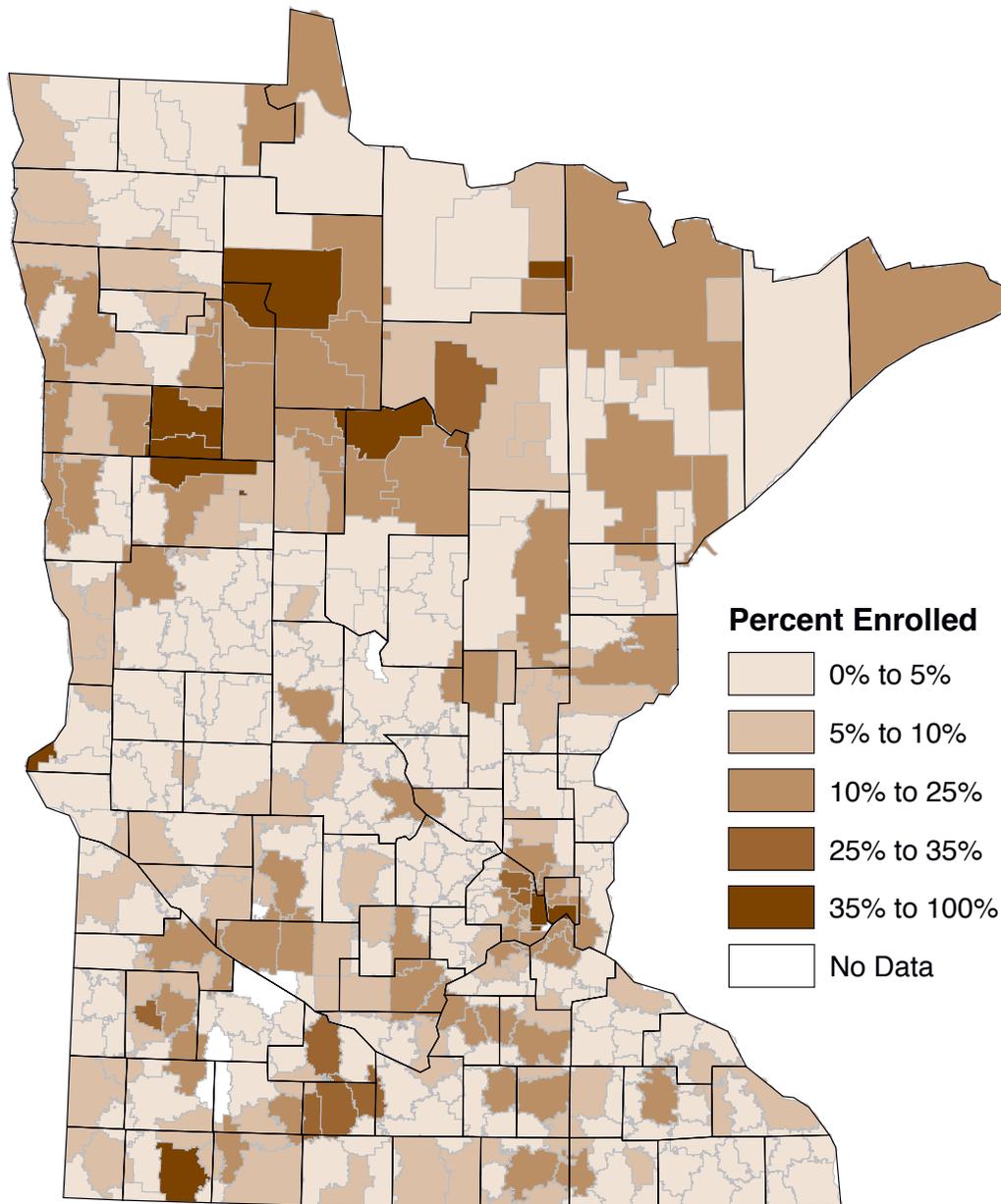
Many factors affect the differences in teachers' salaries around the state. In some areas of rural Minnesota, the higher salaries are the result of declining enrollment, which has forced districts to cut more recently hired lower-paid teachers, leaving a higher proportion of better paid teachers. In other places, higher salaries are the result of local factors, including the competition for teachers in an expanding job market that offers many other opportunities.



Source: Minnesota Department of Education

Students of Color, 2001–2002

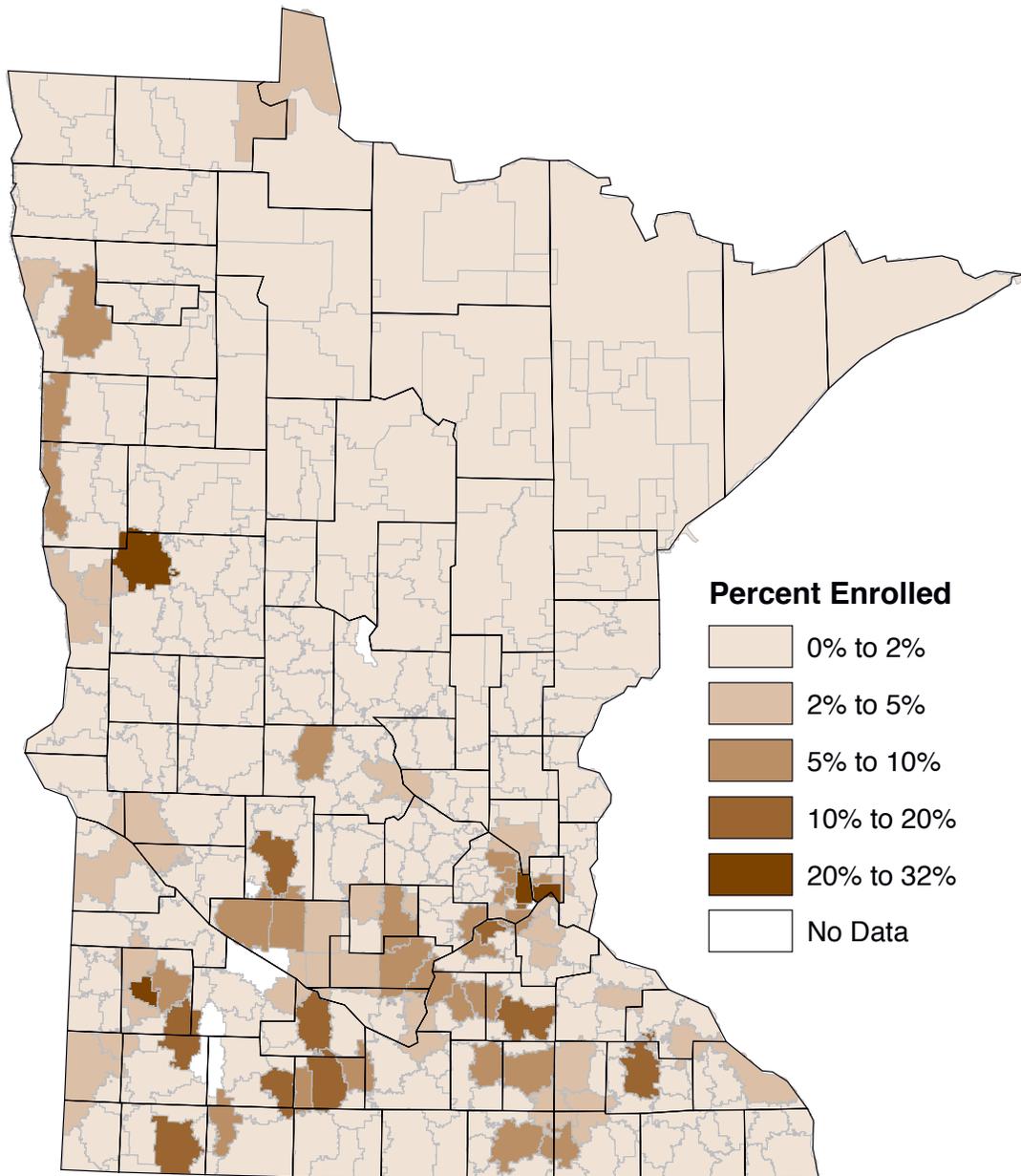
Minnesota's K-12 student base is changing as the proportion of students of color make up a bigger share of the state's enrollment. The diversity of students has continued to increase in the core Twin Cities districts, and is also rising in suburban districts. This change is not spread consistently across the state, however. High enrollments of students of color are concentrated in certain districts—in the north, there are high numbers of Native American students, but in the south there are minority students, largely Latino, whose families have come to Minnesota for agricultural jobs.



Source: Minnesota Department of Education

Limited English Proficiency, 2001–2002

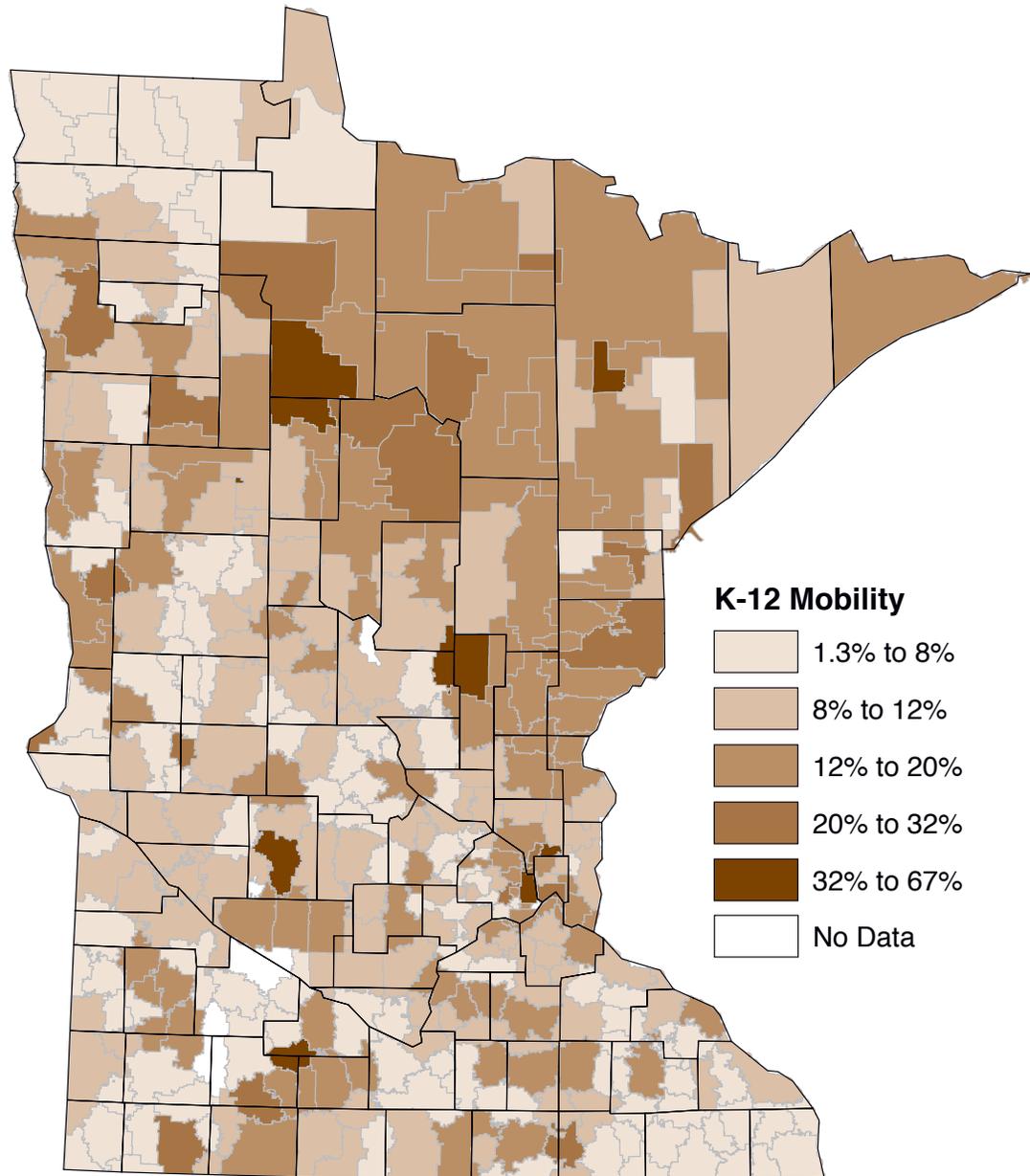
Limited English proficiency is a growing issue for many school districts around the state, and a relatively new one for others. Language barriers create many problems for people, including disqualifying them for jobs, making them less productive in the jobs they have, cutting them off from needed services (often because they just do not know about them), and isolating them from English-speakers in the community. The state has provided specific measurements for districts to determine whether a student needs extra assistance with English language skills. Rural districts with higher enrollments of students with limited proficiency in English tend to center around agricultural production facilities. Due to local labor shortages at these facilities, these areas have seen a recent influx of workers and families for whom English is not the first language. These new students have helped rural districts as state funding is based on the number of students per district. Since the extra expense of this special training can be a burden on districts, especially low-tax base districts with a higher number of students needing help, the state also provides special funding.



Source: Minnesota Department of Education

Student Mobility Index, 2001–2002

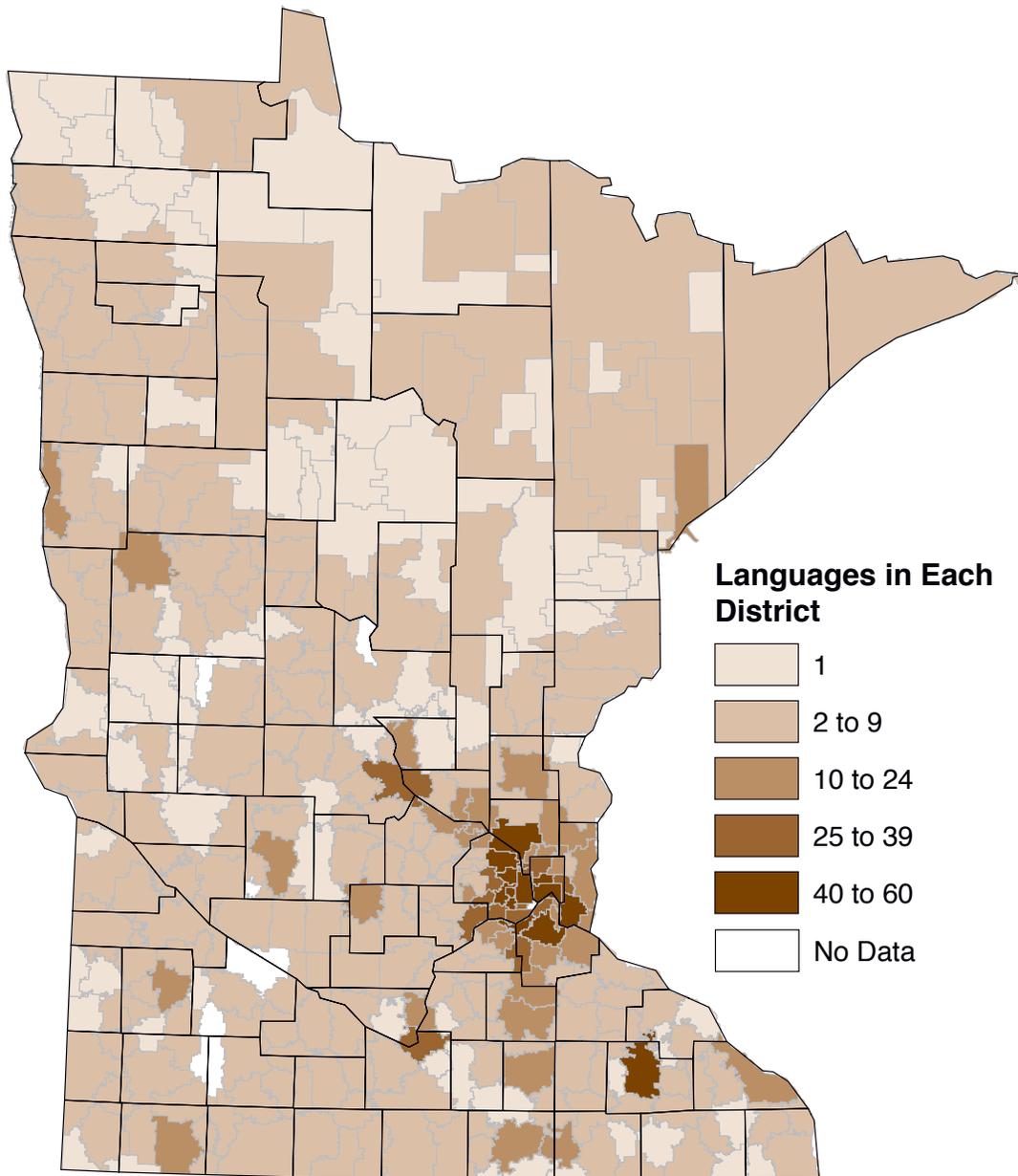
The student mobility index tracks how much students are moving within school districts and between school districts. The more a student moves, the more detrimental it is to that student's education. Continual interruptions from changing schools can limit a student's achievement and makes tracking progress difficult. Poverty, unemployment and unstable family life all are factors in student mobility.



Source: Minnesota Department of Education

Languages Spoken at Home, 2001–2002

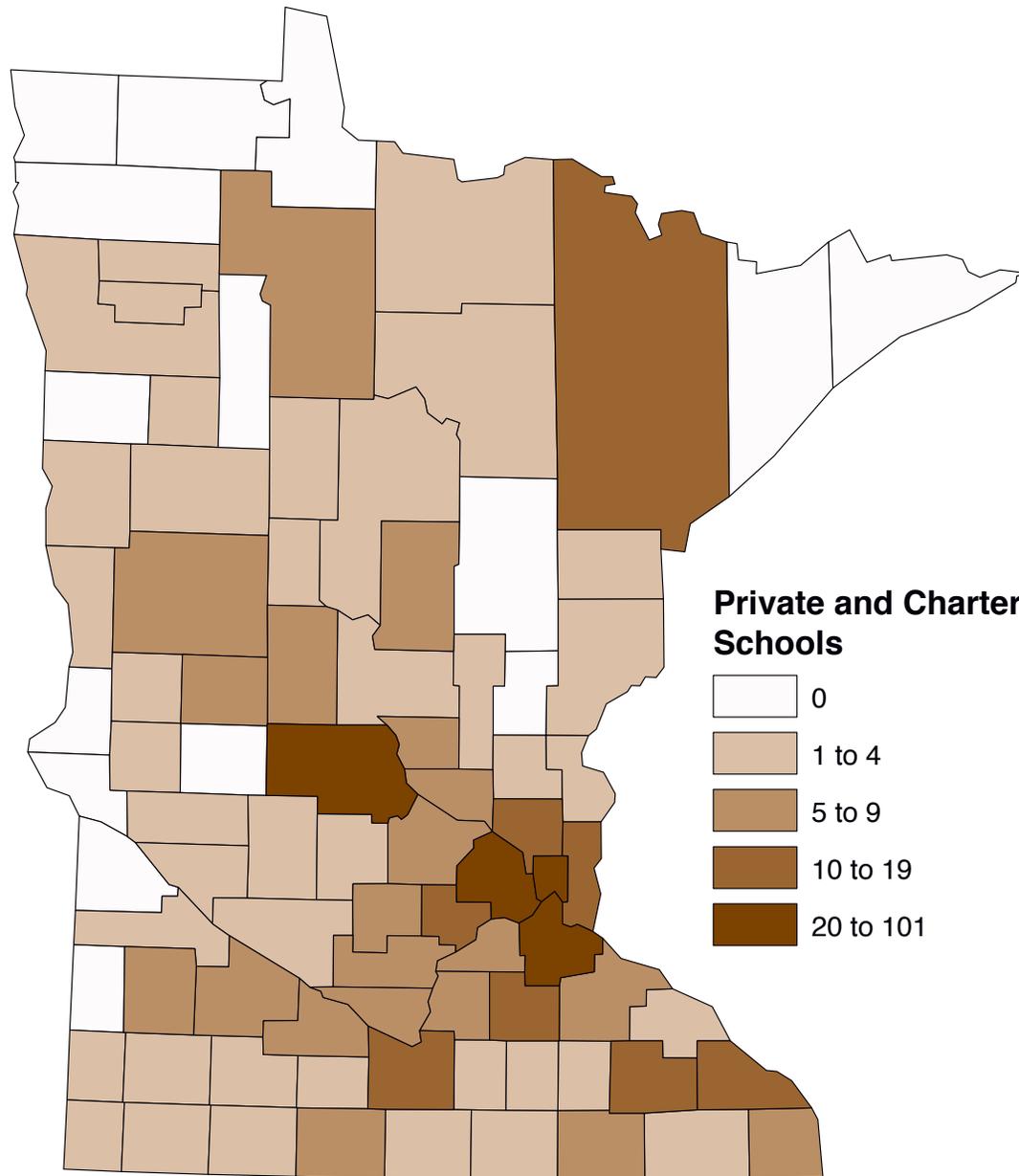
Many of Minnesota’s school districts have experienced an influx of children of new immigrants. As might be expected, the St. Paul school district has the largest variety of languages spoken at home (60), but the second and third highest are suburban districts, Rosemount-Apple Valley Eagan (56) and Anoka-Hennepin (53). Minneapolis and Rochester are next with 50 each. It is important to know how many different native languages are spoken by enrolled students to design an effective educational curriculum.



Source: Minnesota Department of Education

Private and Charter Schools, 2003

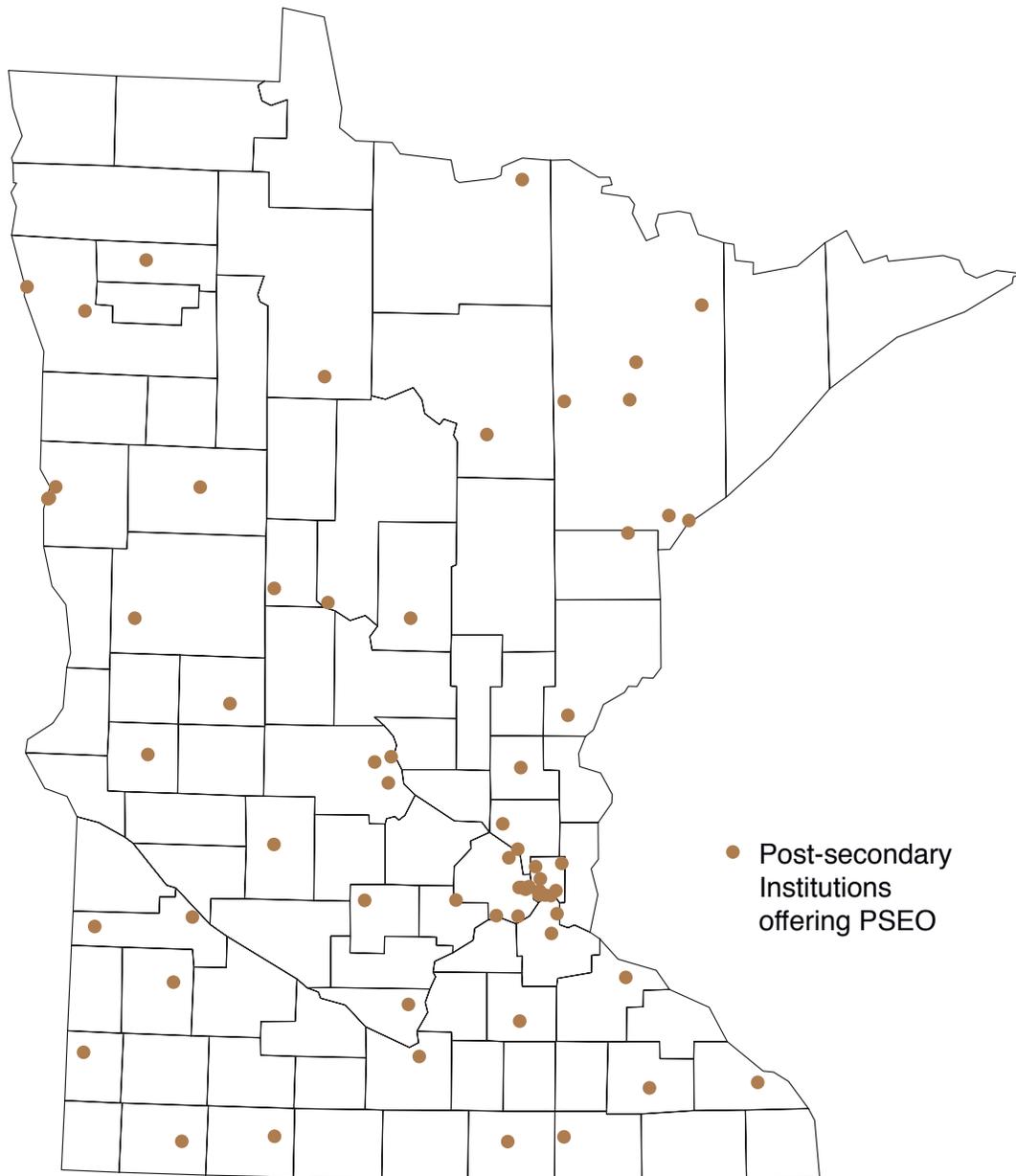
Minnesota has had a rich history of providing a variety of educational opportunities. Many communities across the state have parochial schools as well as schools based on particular pedagogy (e.g., Montessori). Minnesota was also the first state to allow the creation of charter schools and has encouraged open enrollment, post-secondary options and more recently, online learning.



Source: Minnesota Department of Education

Post-secondary Education Options Programs, 2003

Another form of alternative education for high school students is the post-secondary education options (PSEO) program offered at many colleges, universities and technical colleges around the state. This opportunity lets students attend college-level courses. This option can be especially valuable in districts that have limited resources. Residential colleges and universities have had to adapt some student services to meet the differing developmental needs of younger students living on campus.



Source: Minnesota Department of Education

Health

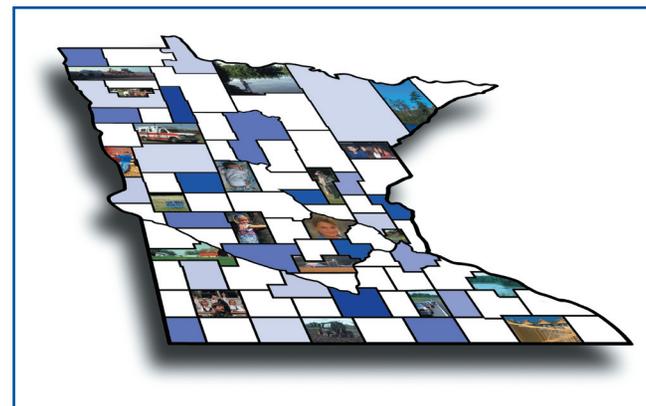
In Minnesota, the quality and availability of our health care is a source of great civic pride. We rightly take pride in our highly skilled and dedicated health care workforce, our up-to-date, efficiently run facilities, our relatively low uninsurance rate and our strong public commitment to maintaining an outstanding health care delivery system.

In addition to all of this, a new understanding of the connections between community and health seems to be taking root all over the state. We do know some things about community and health here in Minnesota. We know that people are healthiest when they feel safe, supported, and connected to others in their families, neighborhoods, workplaces and communities. We know that when people are healthy, they're better able to contribute to the vitality of their communities, through volunteer activities and other forms of civic participation. And we know that in many rural communities, the health care sector itself is the largest employer, often accounting for 15 to 20% of a rural county's jobs. In rural Minnesota, health care is critical not only to the health and well-being of our people, but also to the health and vitality of our communities.

As Minnesota ages, we will continue to face health care challenges—some similar to those we face today and some altogether new. Even with the soft economy, health worker shortages show no sign of easing anytime soon. Although many communities are addressing the health disparities adversely affecting our communities of color and our Native American population, those disparities won't go away overnight. Community-based long-term care options do exist, but when baby boomers start needing care in large numbers, our creativity and our resources in this area will be taxed anew.

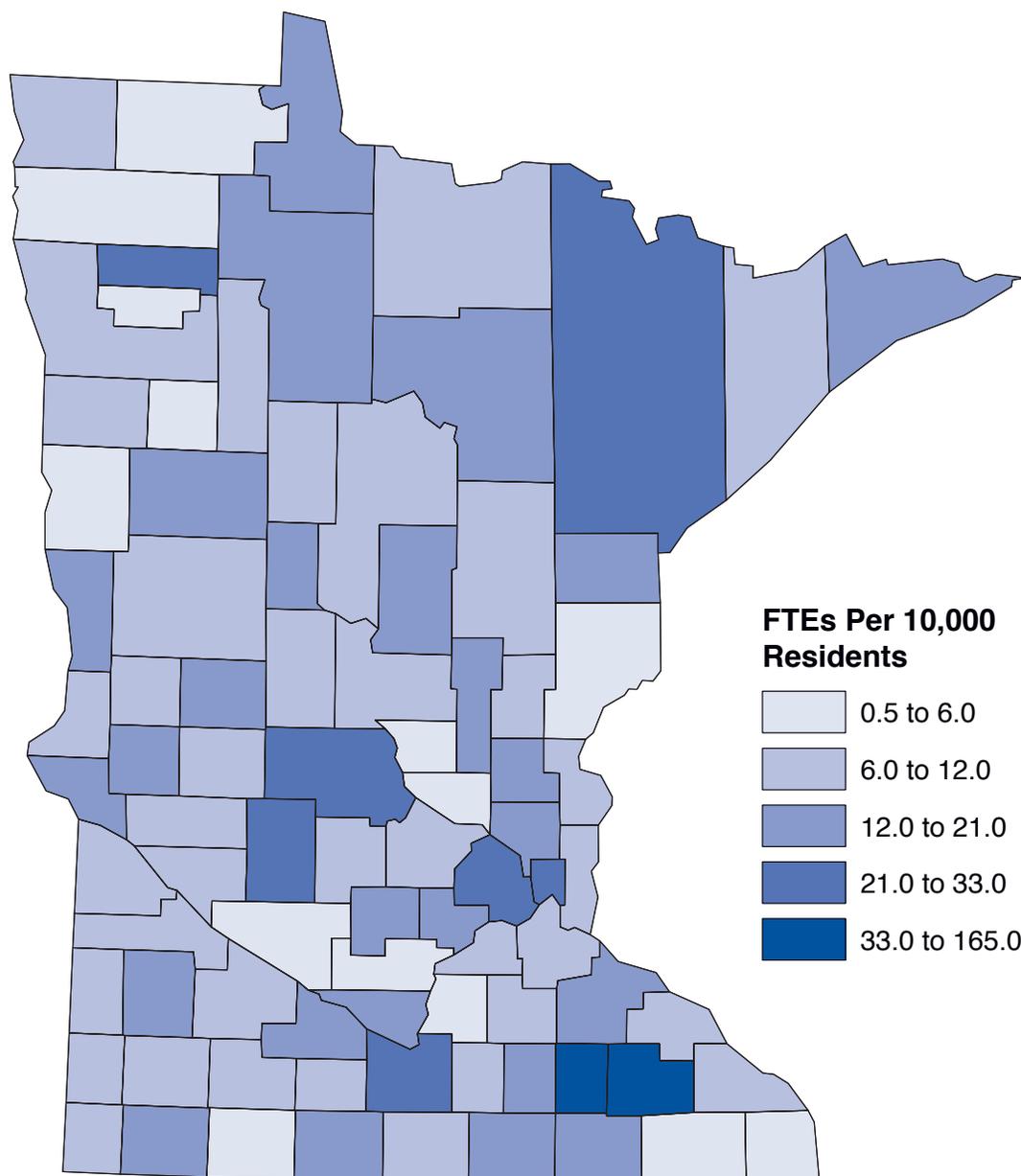
There's no shortage of health care challenges in Minnesota, and there never will be. But the good news is that there's also no shortage of what it takes to meet our challenges—good heads, good hearts and an unwavering commitment to good health.

*Estelle Brouwer, Director
Minnesota Department of Health
Office of Rural Health and Primary Care*



Physicians, 2002

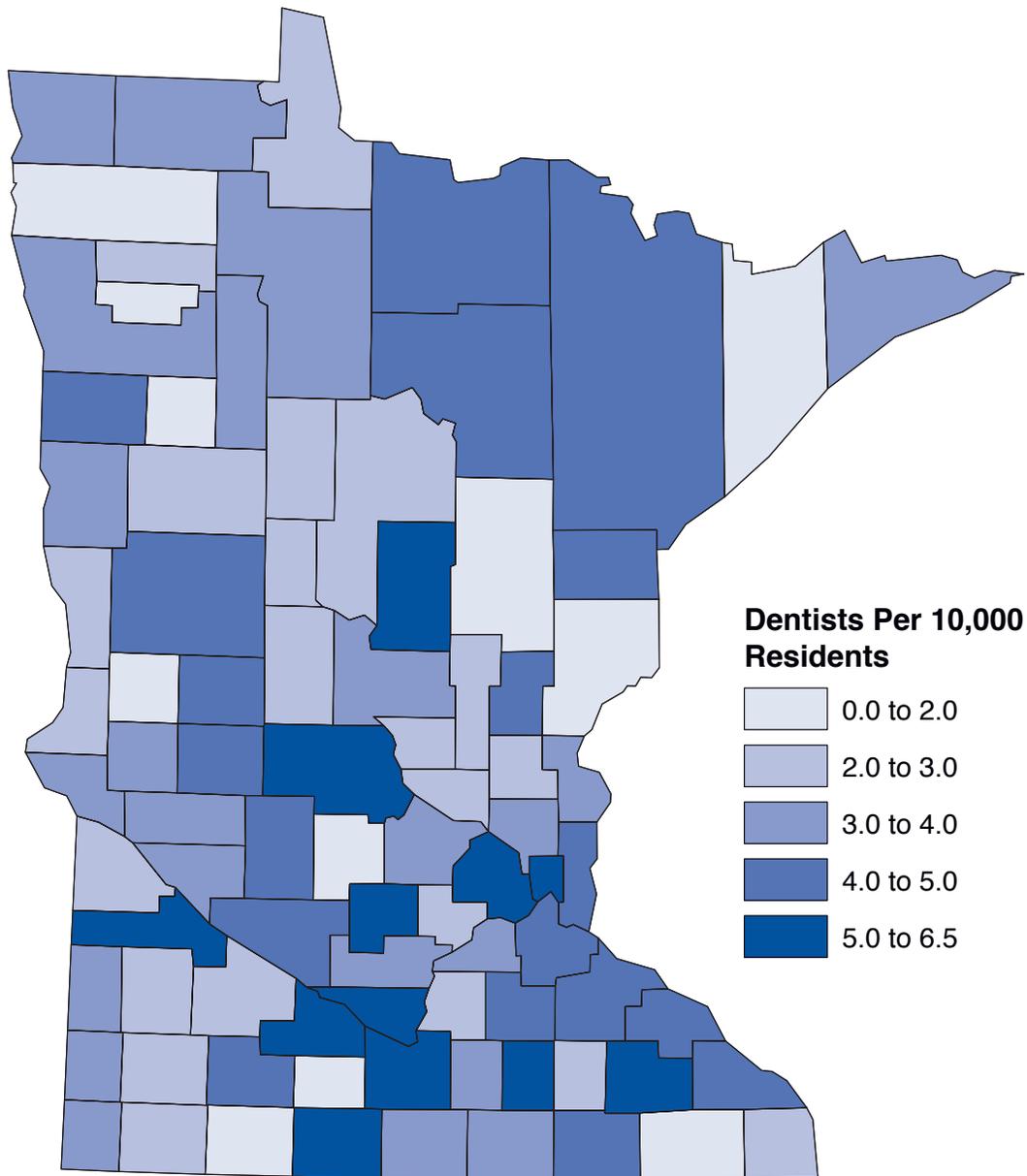
Aside from the distinct cluster of physicians around Rochester (165 full time equivalents [FTEs] in Olmsted and 163 FTEs in Dodge), physicians are concentrated in counties with large hospitals—but not necessarily large cities. The Twin Cities and Duluth rank high as well as Blue Earth (Mankato), Stearns (St. Cloud), Kandiyohi (Willmar) and Pennington County (Thief River Falls). On the other hand, a shortage of physicians is also apparent. Some are explainable: the very lowest numbers appear in counties that are adjacent to a county with a large facility, such as Sherburne and Benton County (St. Cloud), Fillmore County (Rochester), Houston County (La Crosse), and Clay County (Fargo). However, moving farther west and north there is a distinct drop-off in physicians in many rural counties. Most counties in western Minnesota reported physician FTEs well below the state average of 22.5.



Source: Minnesota Department of Health, Office of Rural Health and Primary Care, 2002 Survey of Physicians

Dentists, 2002

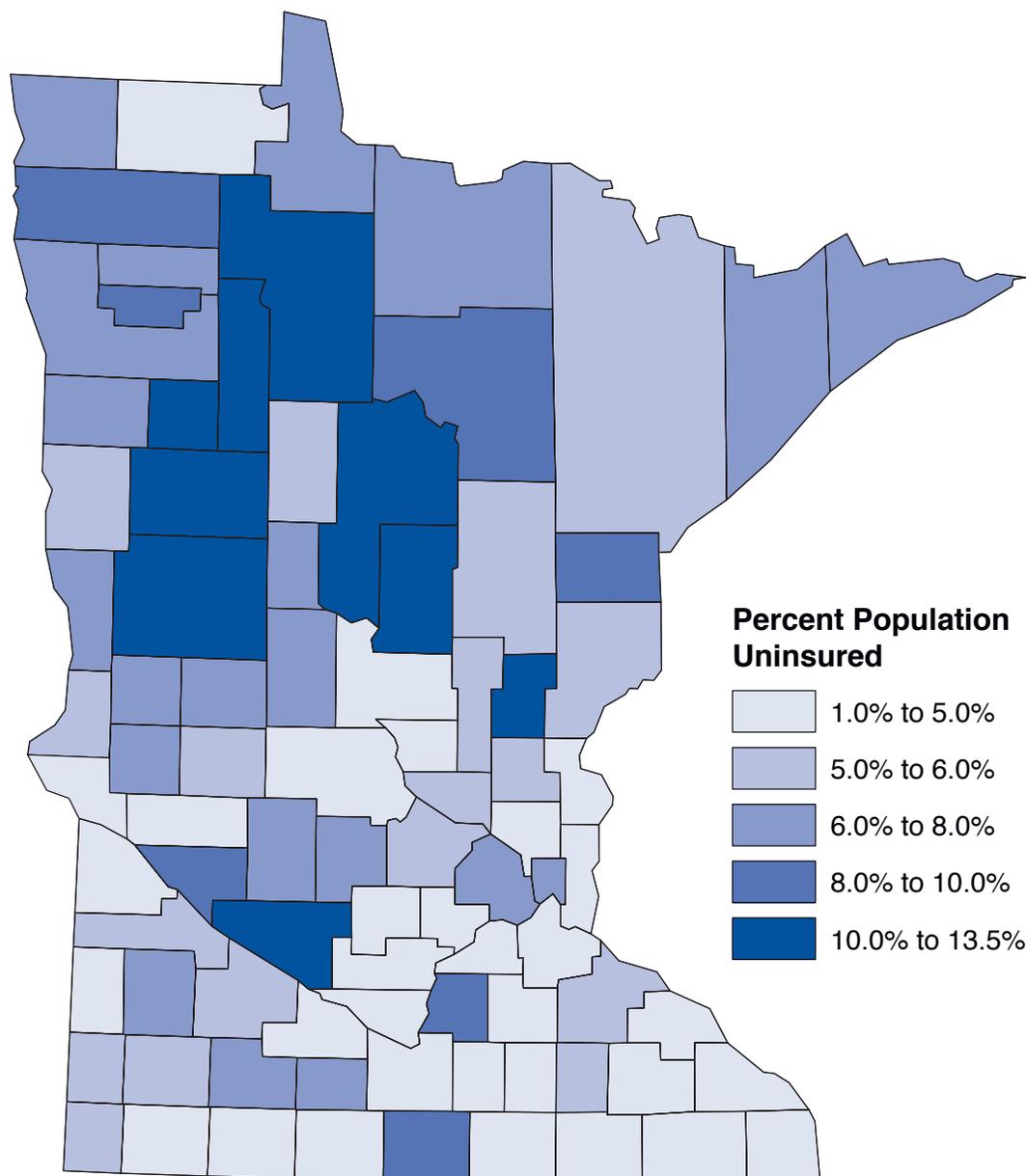
Dental health care is another significant but sometimes overlooked part of the total health care picture. As might be expected, a larger proportion of dentists tend to be found in populous areas.



Source: Minnesota Department of Health, Center for Health Statistics, 2002 Minnesota County Health Tables

The Uninsured Population, 2002

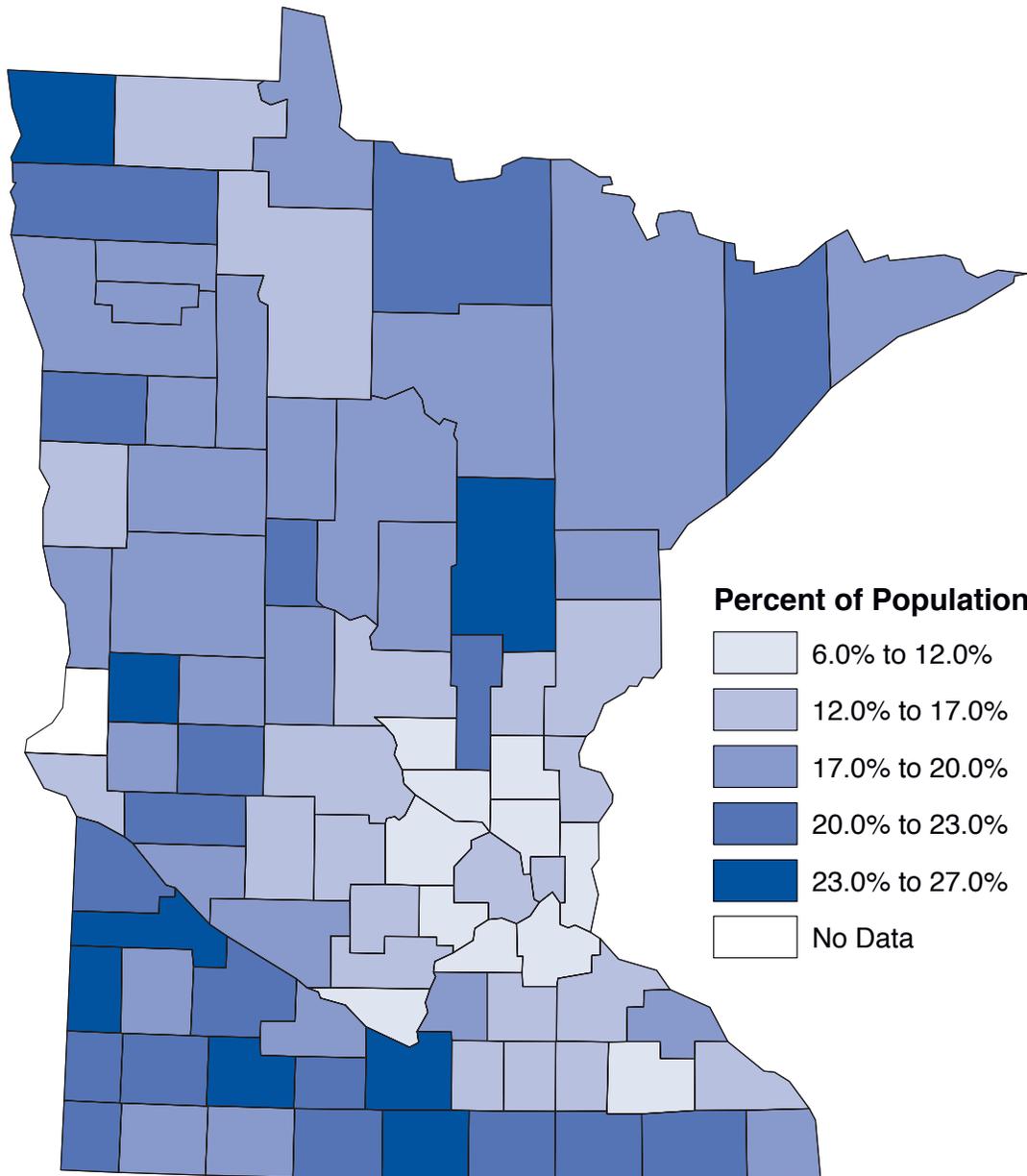
Access to health insurance is a significant issue in Minnesota, especially in rural areas. While employment is the primary means of accessing health insurance, health insurance can be unattainably high for small businesses. The Minnesota Department of Health completed a report in 2002 examining the extent of this problem and the causes. The findings show that in 2001, the highest rates of uninsured people can be found in northern and western Minnesota.



Source: Minnesota Department of Health, Health Economics Program, *2001 Health Insurance Coverage for Minnesota Counties*, December 2002

Population Insured through Medicare, 2001

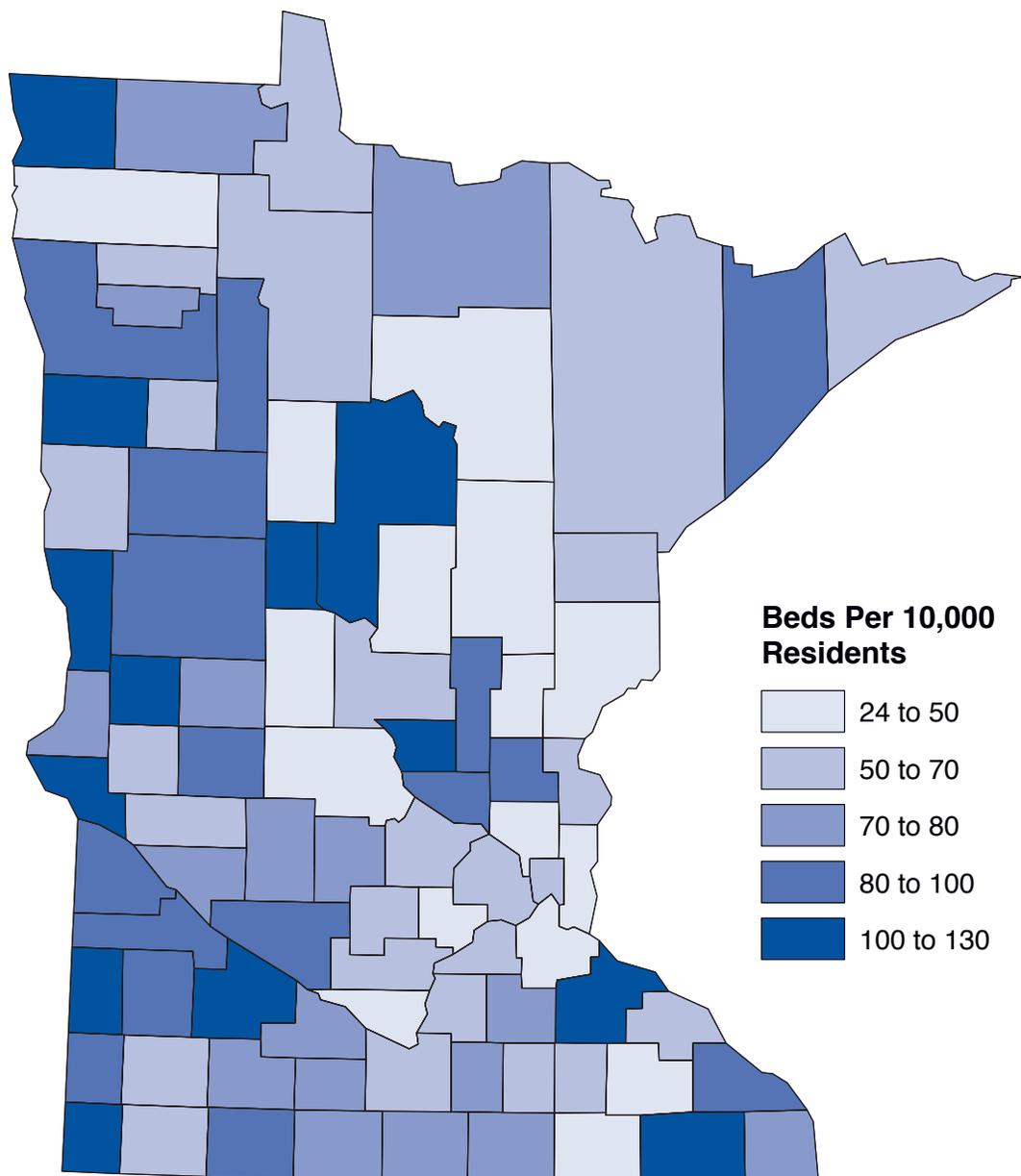
Minnesota's population is much younger around the urban and suburban core of the Twin Cities metropolitan area, but ages rapidly with distance. Counties in the north attracting retirees show a high rate of Medicare beneficiaries, but so do western and southwestern counties, where the population is disproportionately older.



Source: Minnesota Department of Health, Health Economics Program, 2001 Health Insurance Coverage for Minnesota Counties, December 2002

Nursing Homes, 2002

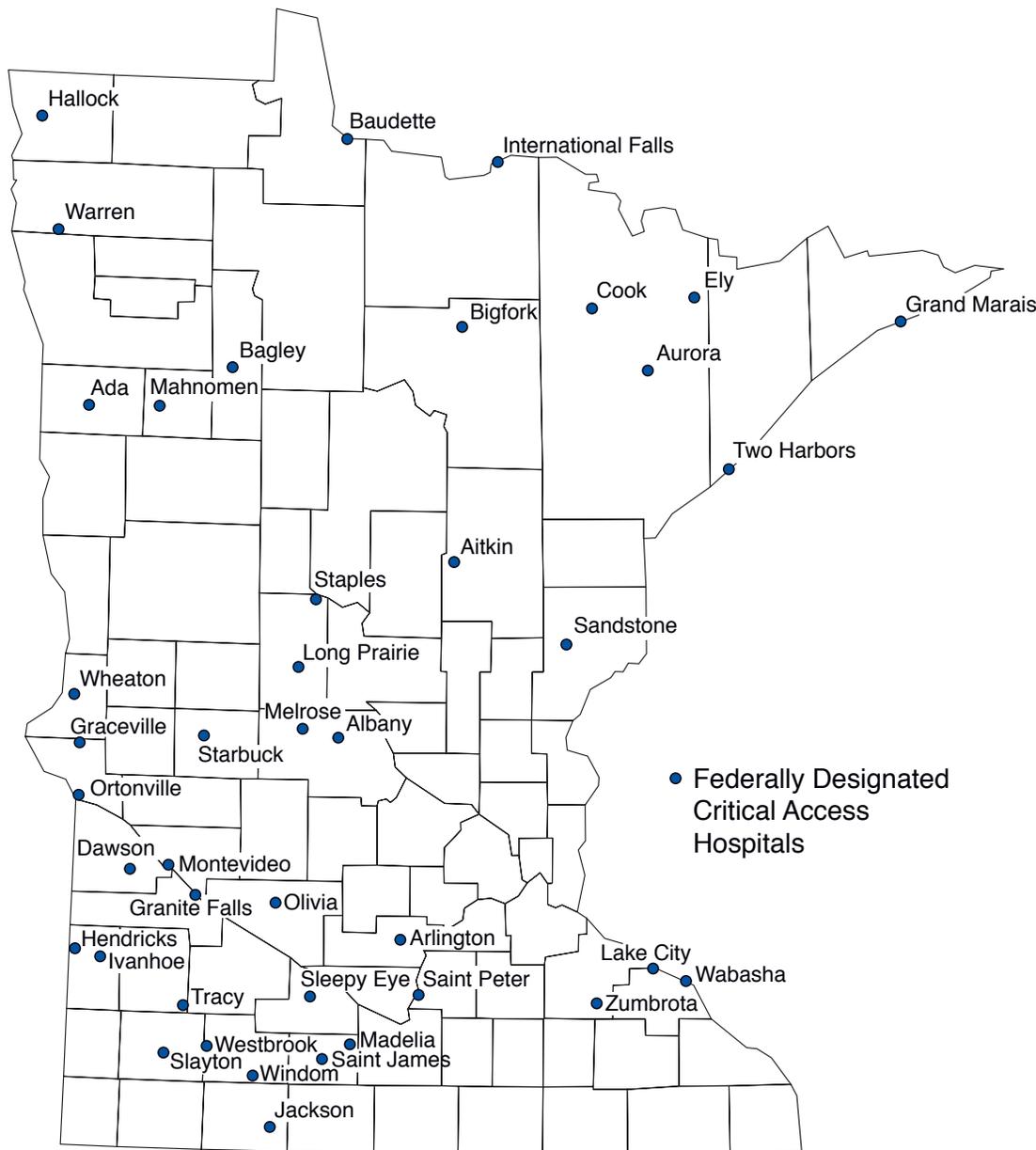
The shortage of nursing home beds is an ever-increasing issue in rural Minnesota, where the average age of the population is increasing much faster than in metropolitan Minnesota. There are over five times more nursing home beds per 10,000 residents over 65 in Big Stone County (the highest at 129.7) than in Anoka County (the lowest at 24.7). Declining population in some counties leads to a higher proportion of nursing home beds in those counties. As younger people leave rural areas, the demand for long-term care facilities for those remaining continues. As people leave the county, the nursing homes remain in place to care for those who stay.



Source: Minnesota Department of Health, Facility and Provider Compliance Division

Critical Access Hospitals, 2003

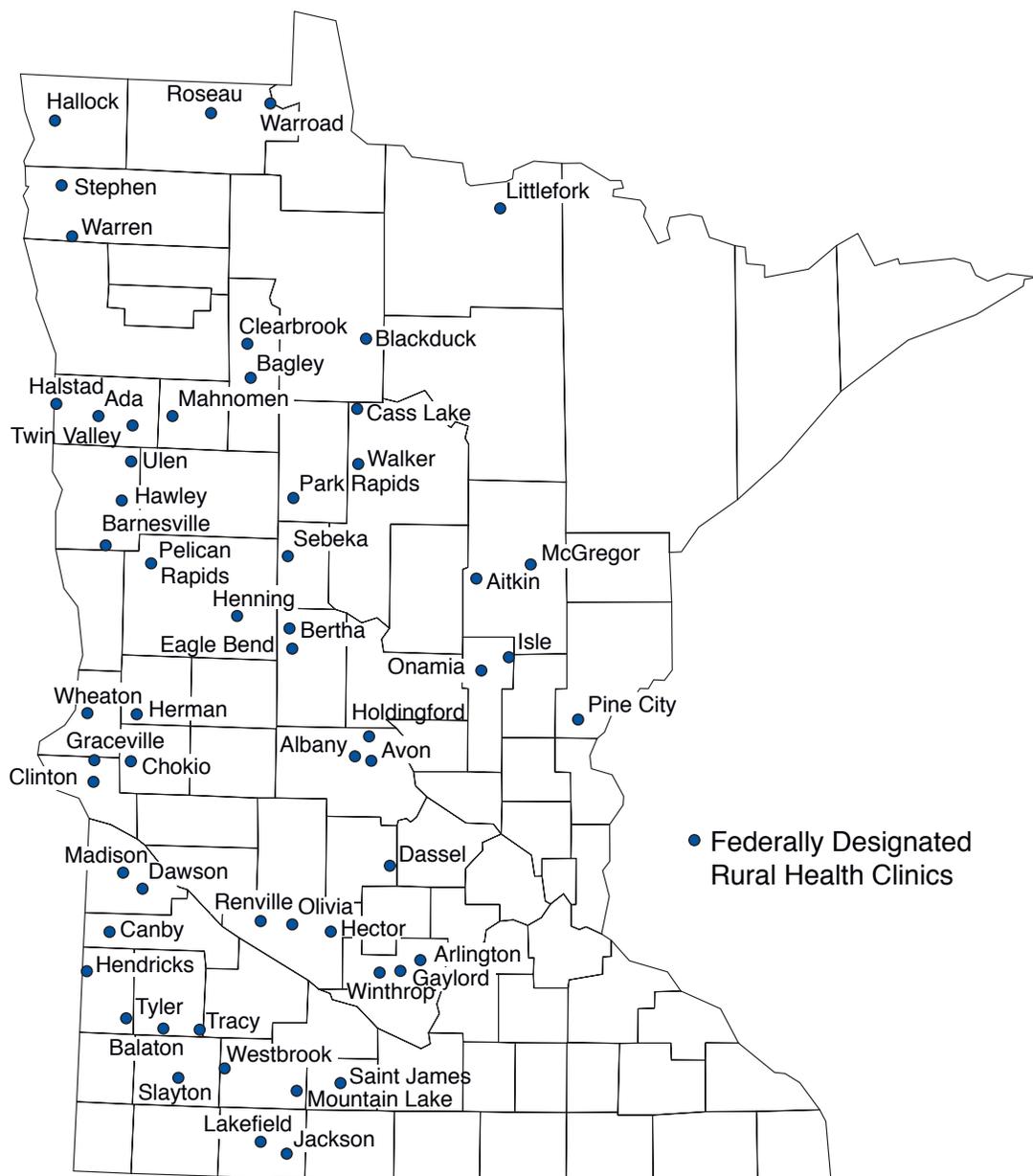
“Critical access hospital” is a federal designation given to hospitals in rural regions that serve a very low volume of patients. While government rules require hospitals to maintain certain levels of staffing and certain types of staff on hand, many remote hospitals with very low patient numbers cannot adhere to these requirements without serious financial loss. But in places where the next closest hospital may be 40 or 50 miles away, these facilities are crucial to health care access in the region. Being designated a critical access hospital helps these health care centers remain open by allowing them to operate under more flexible guidelines. While they cannot perform some procedures, they do provide many important services such as care for those who require hospitalization (but not necessarily intensive care) and stabilization for those who need transportation to a larger hospital.



Source: Minnesota Department of Health

Federally Designated Rural Health Clinics, 2003

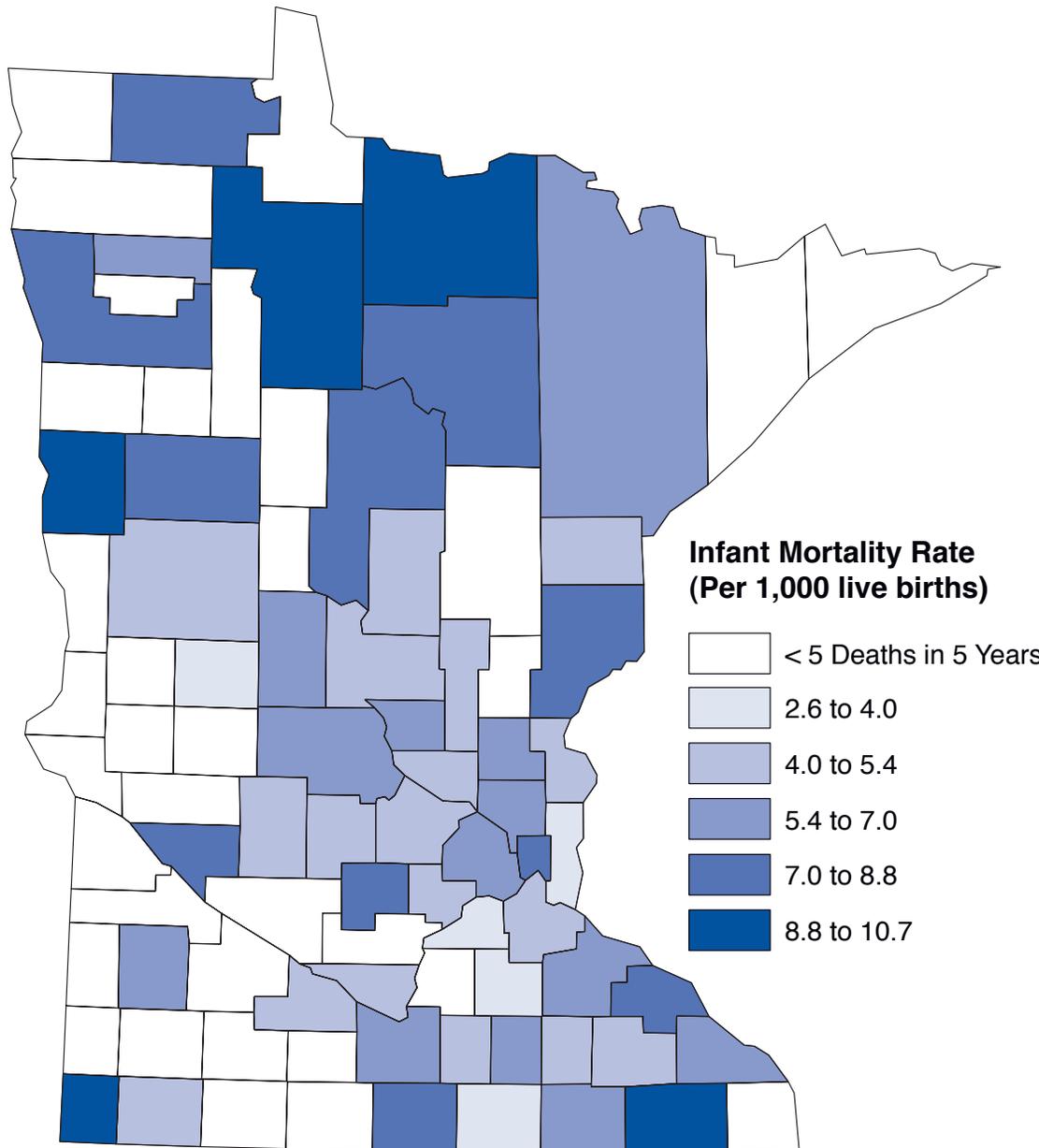
In rural areas, the shortage of health care providers is a serious issue. The federal government's rural health clinic designation is crucial to keeping clinics open in areas where the number of patients may be too low to make a regular clinic economically viable. Through more generous reimbursement rules, the federal government makes it financially possible to keep health care facilities open, serving area residents who would otherwise have to travel as much as 50 miles to another clinic. Access to such services is especially important to elderly and disabled residents, who may be limited in their mobility.



Source: Minnesota Department of Health

Infant Mortality Rate, 1996–2000

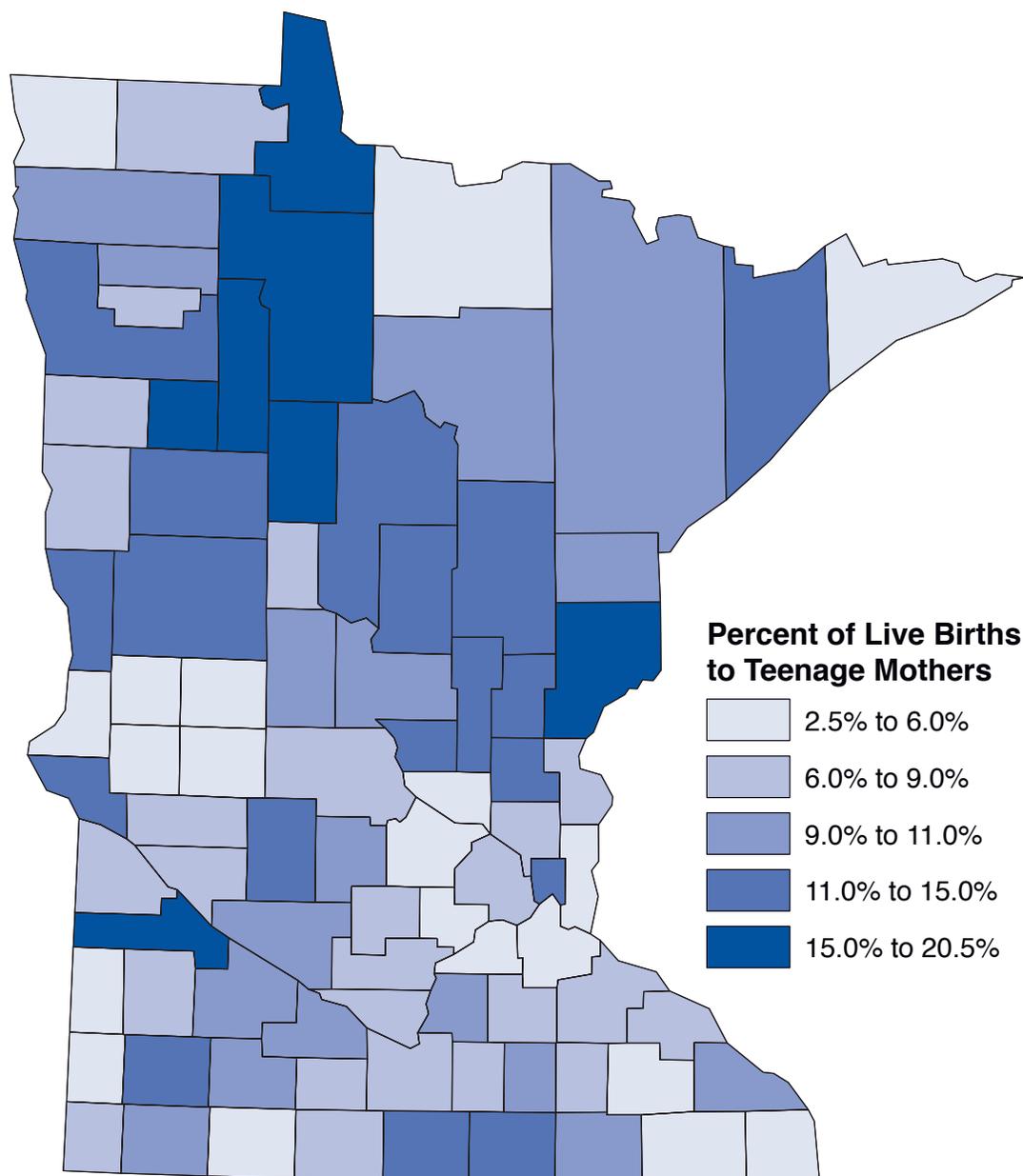
While the rate of infant mortality is very low in many of Minnesota’s counties (white designates counties where there were fewer than five deaths over the five years), the map documents pockets of high rates, especially in northern counties.



Source: Minnesota Department of Health, Center for Health Statistics, 2002 Minnesota County Health Tables

Births to Teen Mothers, 2000

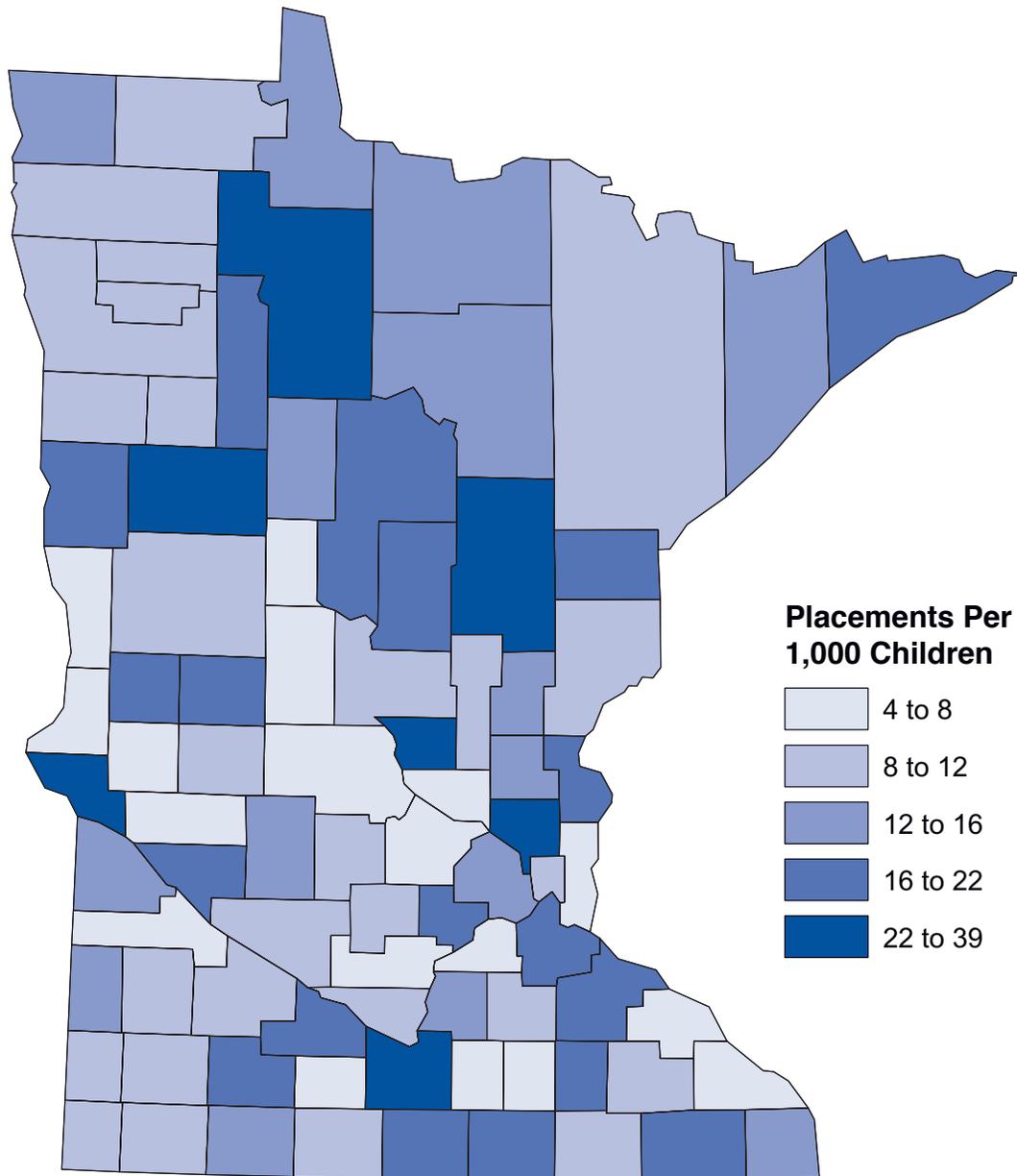
Many factors, including income, education and ethnicity, affect the rate of births to teenage mothers. The lowest rates of births to teenage mothers can be seen in the counties that include the Twin Cities suburbs and in some far western counties, while higher rates can be seen in counties in northern and southern Minnesota.



Source: Minnesota Department of Health, Center for Health Statistics, 2002

Out-of-home Placements, 2000

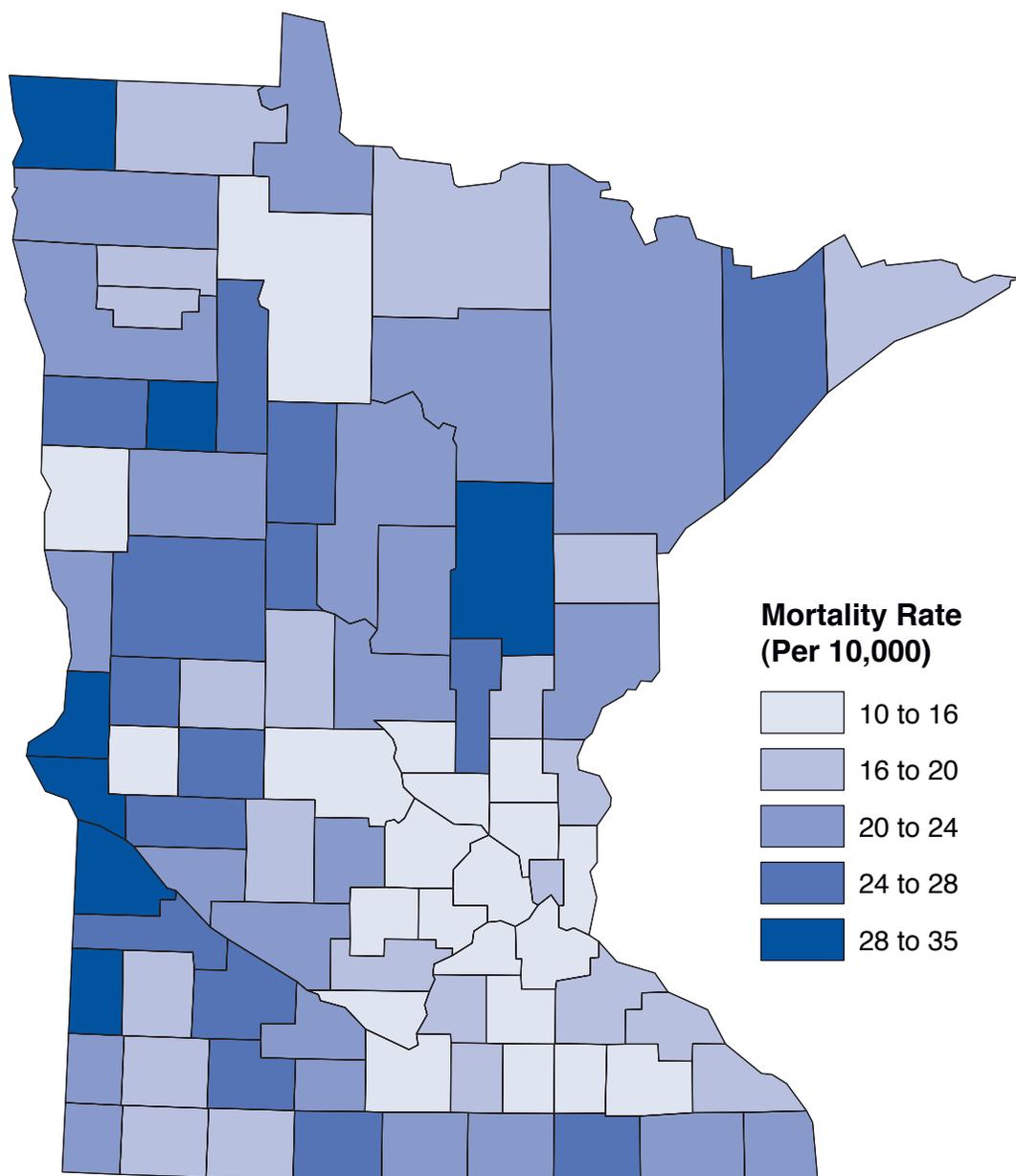
Of the more than 17,000 reports of child maltreatment in 2000, 1,141 children were removed from their homes for reasons ranging from neglect (the most common) to abuse, abandonment, parent incarceration, the child's behavior or substance abuse. Often children were removed on an emergency basis—they were at immediate risk of harm either from an adult or themselves. About one-third of children placed out of home were in care for less than a week, and over 80 percent of them were returned to their parent or guardian. (This map reflects unique children, where each child is counted once, irrespective of the number of placements for that child. Fewer than 10% of children were placed out of home more than once during the year.)



Source: Minnesota Department of Human Services, Children's Services, *Minnesota's Child Welfare Report for 2000*, April 2002

Deaths Due to Cancer, 1996–2000

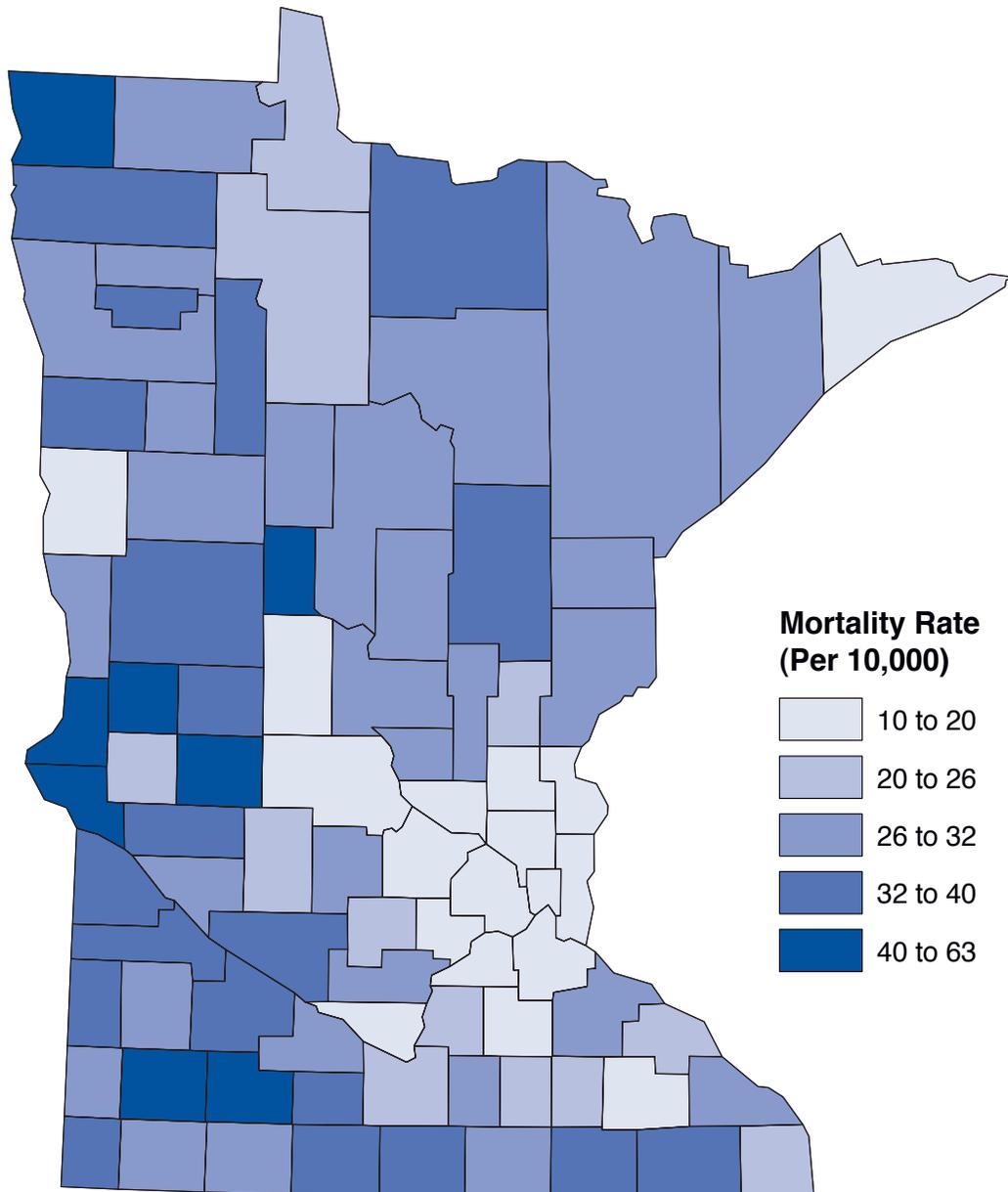
There is really no one disease called “cancer.” There are many different kinds of cancer, each with its own degree of severity and mortality and method of treatment. According to the Centers for Disease Control, Minnesota ranks near the bottom in cancer mortality rates among states (42nd in 2001). The cause of cancer still eludes researchers, but many factors contribute to its development including lifestyle and age. This map suggests a correlation between counties with the highest median ages and the highest mortality rate due to cancer.



Source: Minnesota Department of Health, Center for Health Statistics

Deaths Due to Heart Disease, 1996–2000

Like cancer, the map of the mortality rate from heart disease shows higher incidence in counties with higher median ages. The highest rates appear in the far western counties, while the lowest rates occur in the suburban counties with their younger populations. Unlike cancer, the factors that contribute to heart disease can be more clearly identified: diet, exercise and smoking.

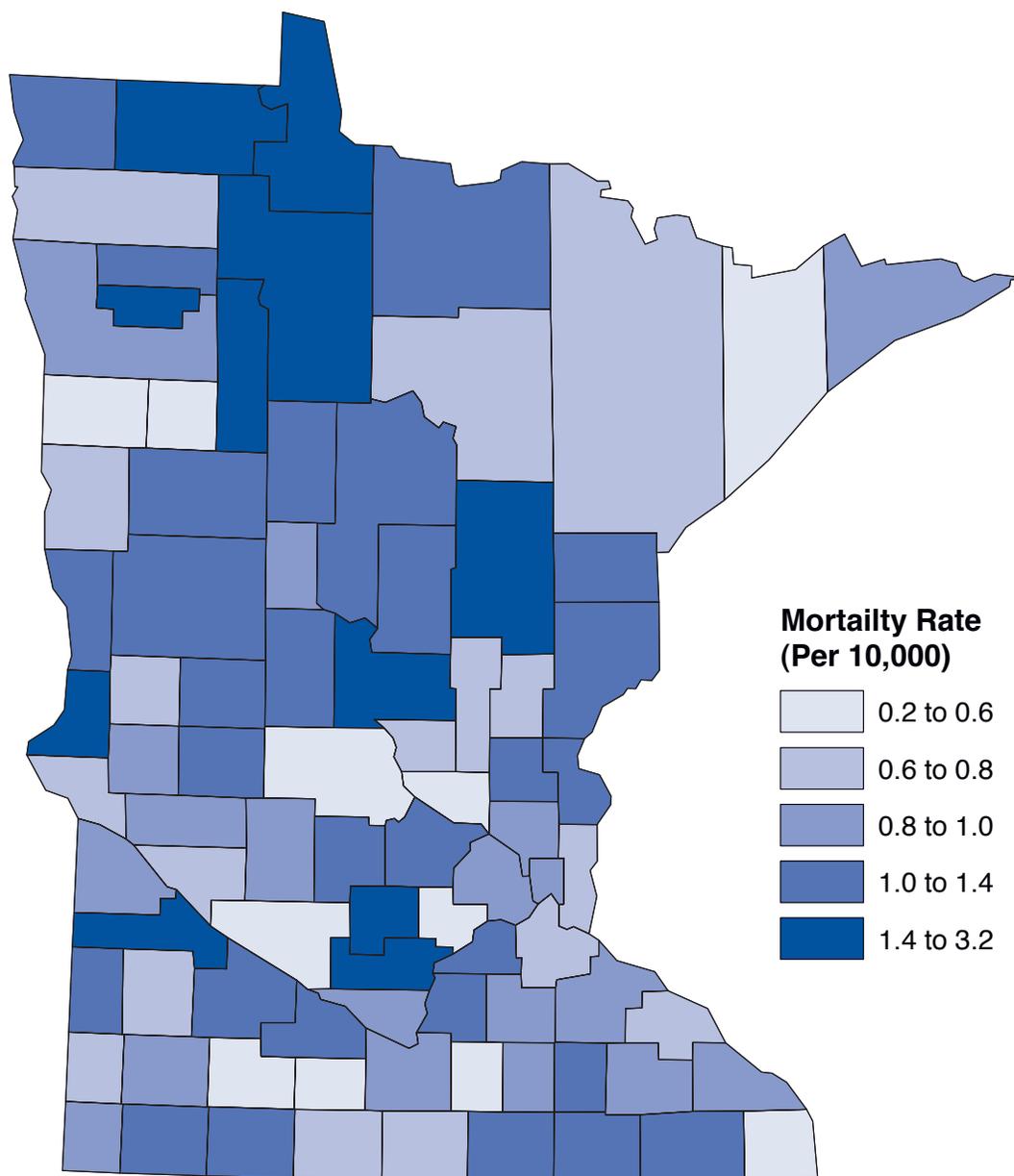


Source: Minnesota Department of Health, Center for Health Statistics

Deaths Due to Suicide, All Ages, 1996–2000

In Minnesota, the suicide rate per 100,000 people declined from 12.3 in 1990 to 8.9 in 2000. Suicide is the second-leading cause of death in Minnesota for people between ages 10 and 34, after accidental injury. It is the eighth-leading cause of death for all ages. Three times as many people in Minnesota die from suicide as from homicide.

Male suicide deaths account for approximately 80% of all suicide deaths in the state. The suicide rate for Native Americans is consistently higher than for any other ethnic group. Minnesotans 65 and older have the highest suicide rate of all age groups. Recent national research suggests that 20% of all suicides are committed by people over 65. The three leading methods of suicide in Minnesota are firearms, suffocation and poisoning.



Source: Minnesota Department of Health, Center for Health Statistics

Public Safety

Although the job of protecting citizens has changed considerably in recent times, public safety has always been a core function of government. The Minnesota Department of Public Safety oversees some of the most visible and dynamic agencies in the state, including the Minnesota State Patrol, Bureau of Criminal Apprehension and the Division of Emergency Management.

The September 11 attacks permanently altered the scope and responsibilities of public safety agencies and personnel. Although these horrific events occurred only two years ago, it is difficult to remember a time when the words “homeland” and “security” were not linked.

As in the past, local agencies provide the first response to incidents that affect public safety. But the emergence of new threats has made it necessary for agencies at all levels to share information, coordinate resources and work together to achieve strategic planning and preparedness.

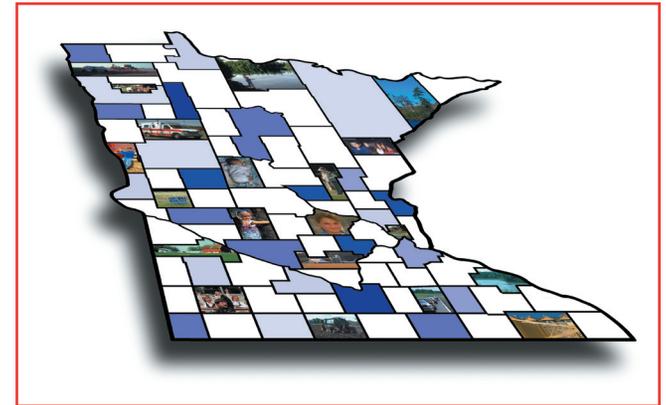
The roles of Minnesota public safety agencies in ensuring homeland security vary among geographic regions, but coordination is the backbone of these efforts. Obviously, not everyone has a Mall of America to contend with. But throughout the state, we have railroad bridges, pipelines, tank farms and water treatment facilities that must be protected. The Minnesota Office of Homeland Security, a division of the Department of Public Safety, was established to oversee and ensure this level of safety for the citizens of Minnesota. And, while we hope that the likelihood of a terrorist attack is negligible, we cannot afford to be complacent.

Longstanding functions, such as traffic safety and enforcement; collection and maintenance of criminal history information; and, emergency preparedness, remain the cornerstones of public safety in this state. But these responsibilities now play integral roles in broader security issues.

Keeping Minnesota safe does not require extreme measures. It requires that we continue to do our work well, using all available resources—including alert and concerned citizens—to ensure our state is protected and prepared.

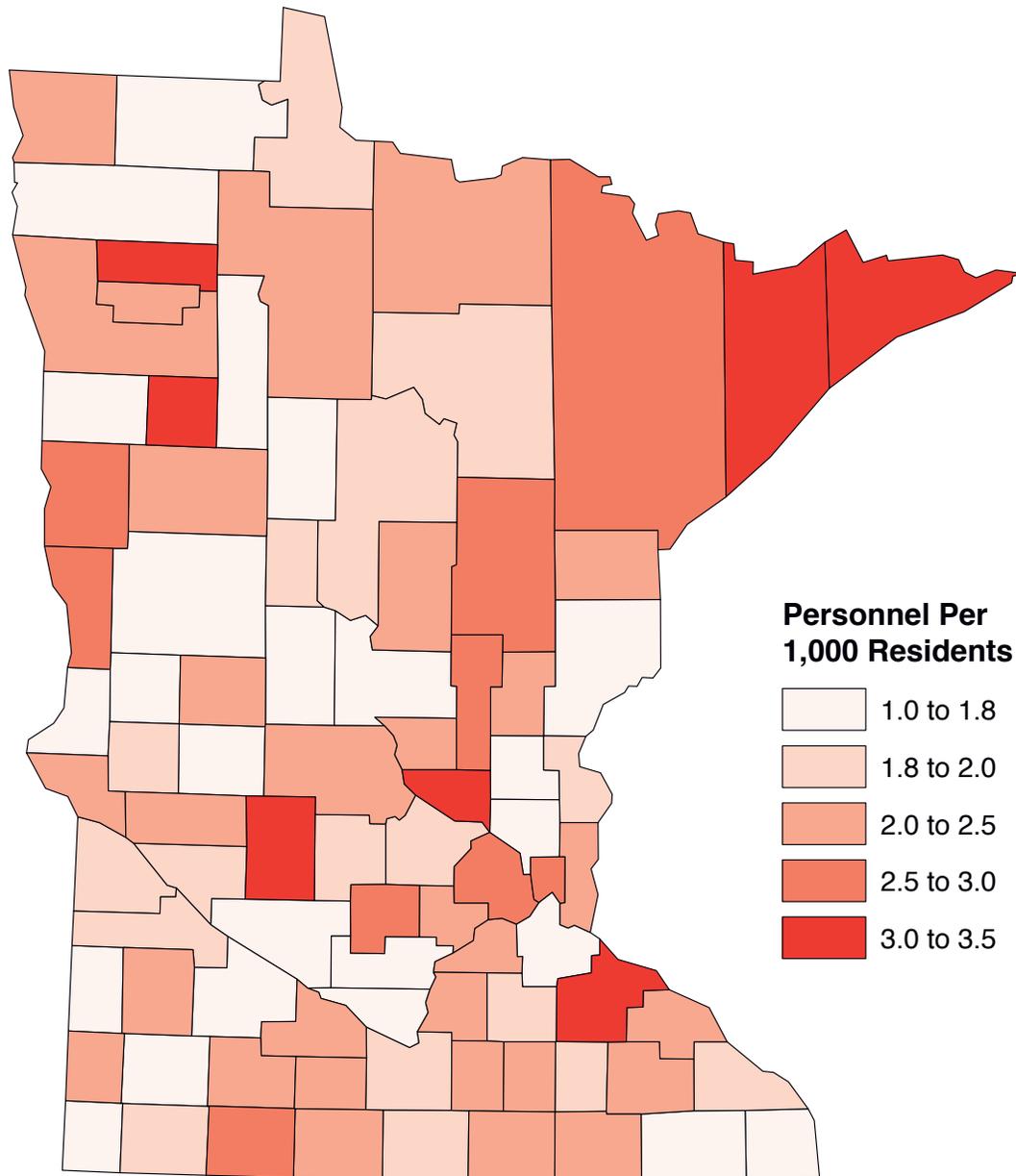
Rich Stanek

Commissioner, Minnesota Public Safety and Director, Office of Homeland Security



Public Safety Personnel, 2001

For the year 2001, there were 11,000 sworn and civilian employees comprising Minnesota's law enforcement personnel. Statewide, the ratio of all personnel (including State Patrol employees) was 2.5 per 1,000 residents, of which there were 1.6 sworn officers per 1,000. But while rural and urban counties tended to have about the same number of sworn personnel (1.6 versus 1.8 respectively), rural counties tended to have far more civilian employees per 1,000 residents (1.8 versus 0.4 in urban areas).

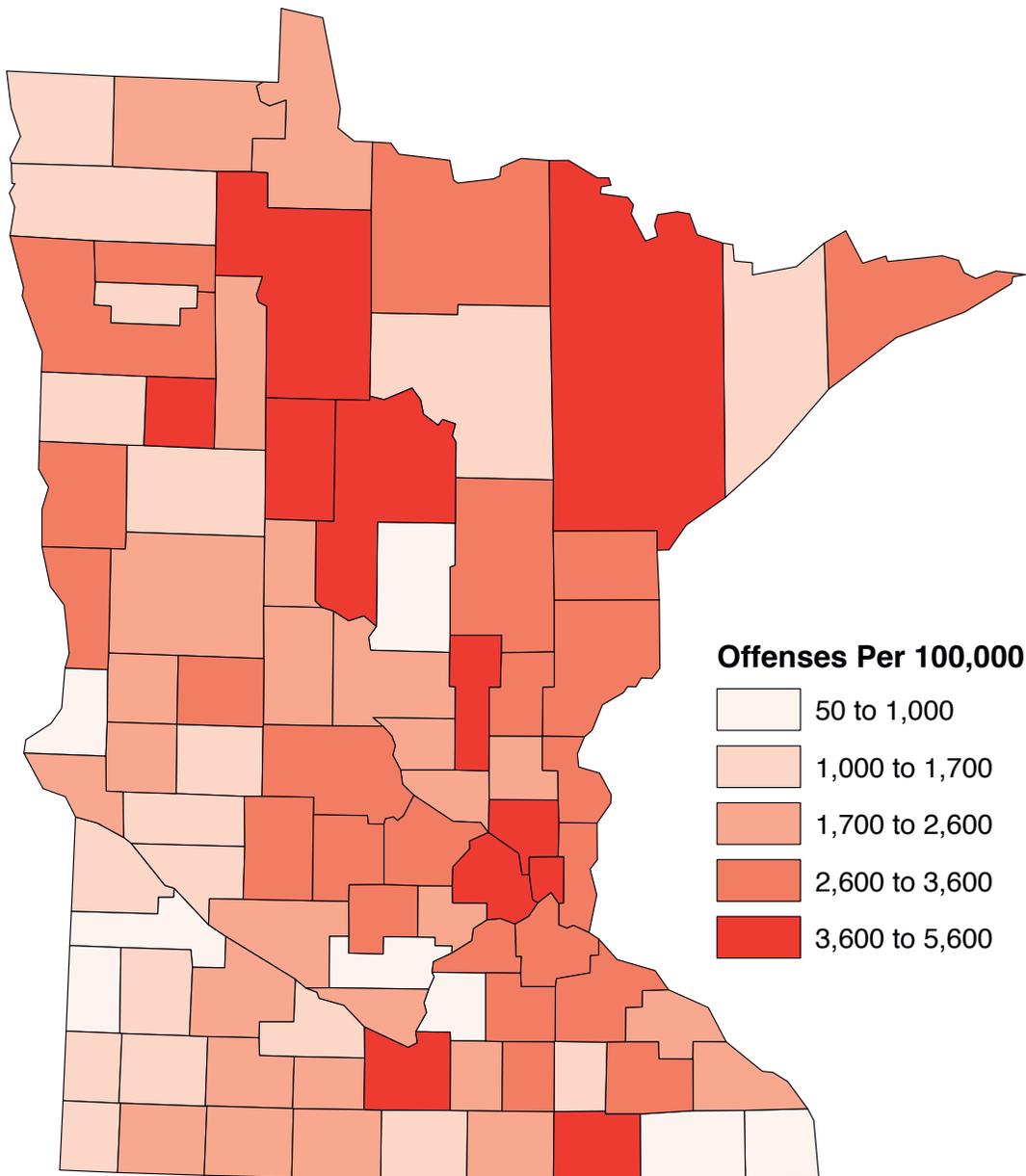


Source: Minnesota Bureau of Criminal Apprehension

Part 1 Offenses, 2001

Part 1 offenses are made up of the more serious criminal offenses: murder, rape, robbery, aggravated assault, burglary, larceny, motor vehicle theft and arson. Of this group, the majority of incidents are property crimes: burglary, larceny, motor vehicle theft and arson. This map appears to show that counties with larger cities have higher rates of Part 1 offenses, but higher rates also exist in some rural counties.

The ratio used for this map is the number of incidents per 100,000 residents. This ratio makes it possible to compare the crime rates in counties with very small populations to those of counties with very large populations. It should not, however, be confused with the actual number of incidents reported, which can be much smaller or much larger, depending on the population of the county.

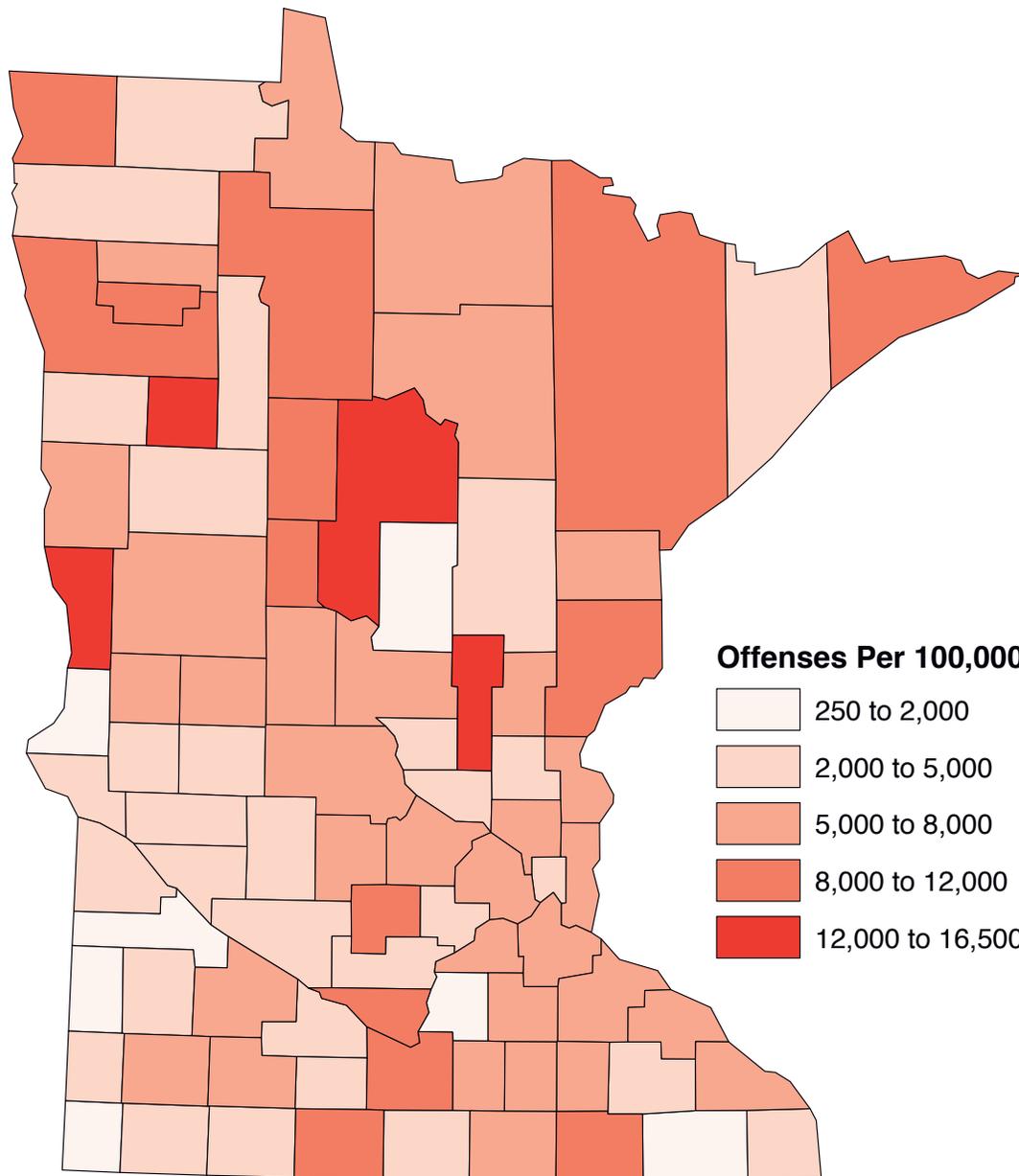


Source: Minnesota Bureau of Criminal Apprehension,
Criminal Justice Information Systems

Part 2 Offenses, 2001

Part 2 offenses include such crimes as assaults other than aggravated assault, forgery, fraud, narcotics, weapons violations, driving under the influence (DUI), vandalism and stolen property. Vandalism, disorderly conduct, assault and DUIs were the most frequently reported Part 2 offenses in the state in 2001.

The ratio used for this map is the number of incidents per 100,000 residents. This ratio makes it possible to compare the crime rates in counties with very small populations to those of counties with very large populations. It should not, however, be confused with the actual number of incidents reported, which can be much smaller or much larger, depending on the population of the county.



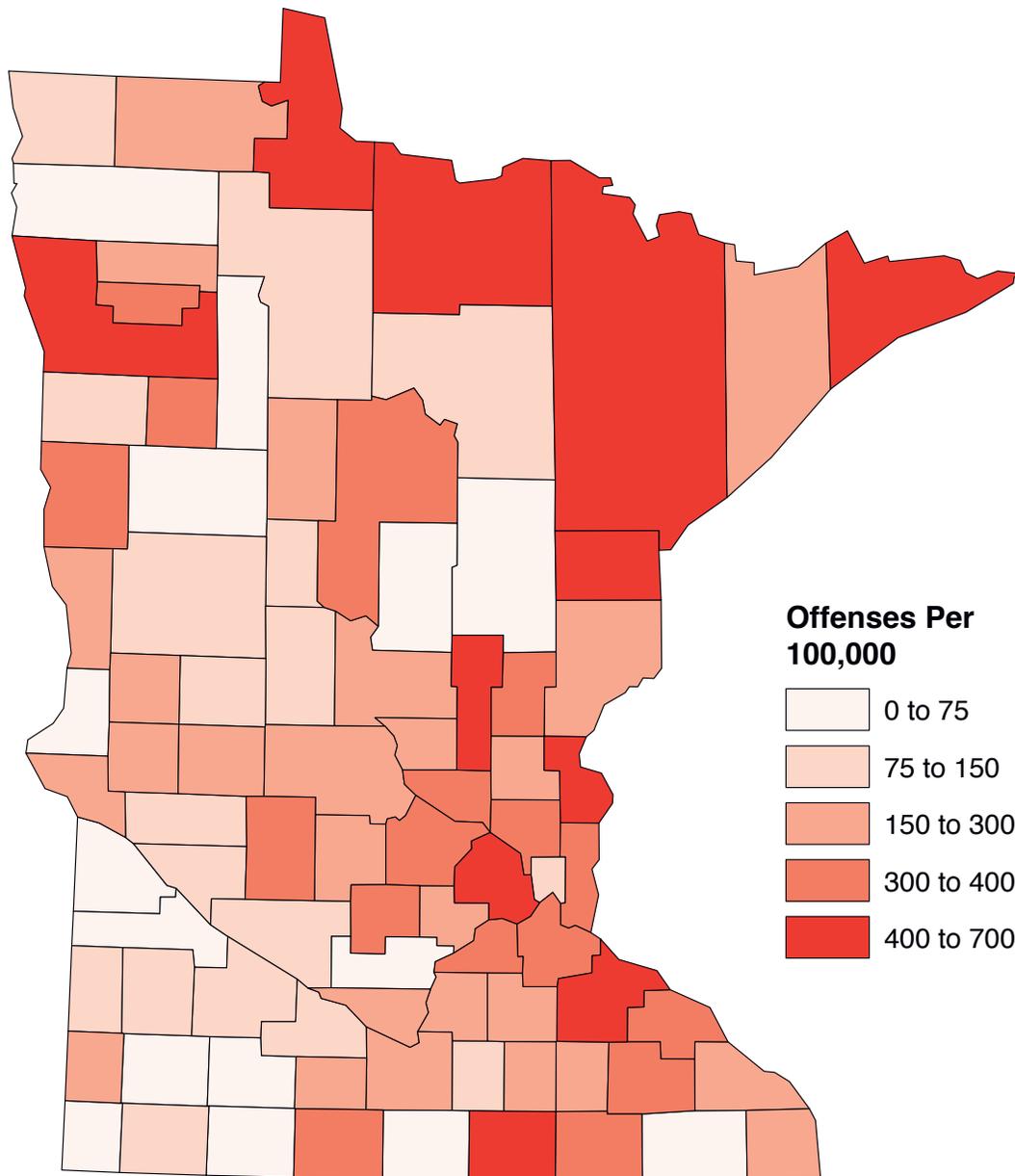
Source: Minnesota Bureau of Criminal Apprehension,
Criminal Justice Information Systems

Narcotics Offenses, 2001

In 2001, there were 17,994 arrests for narcotics offenses throughout Minnesota. Arrests related to the sale and possession of marijuana were by far the most frequent at just under 60%. About 20% of those arrested were under the age of 18, but the majority, 53%, were between 18 and 29 years of age. Just over 70% of all those arrested and 82% of all juveniles arrested were Caucasian. Male arrestees account for over 83% of all arrests.

Narcotics arrests dropped 25% between 2000 (a record year at 24,079 arrests) and 2001, but rose again by 5% between 2001 and 2002. Between 1992 and 2001, there has been a 233% increase in the number of arrests for the sale and possession of narcotics.

The ratio used for this map is the number of incidents per 100,000 residents. This ratio makes it possible to compare the crime rates in counties with very small populations to those of counties with very large populations. It should not, however, be confused with the actual number of incidents reported, which can be much smaller or much larger, depending on the population of the county.

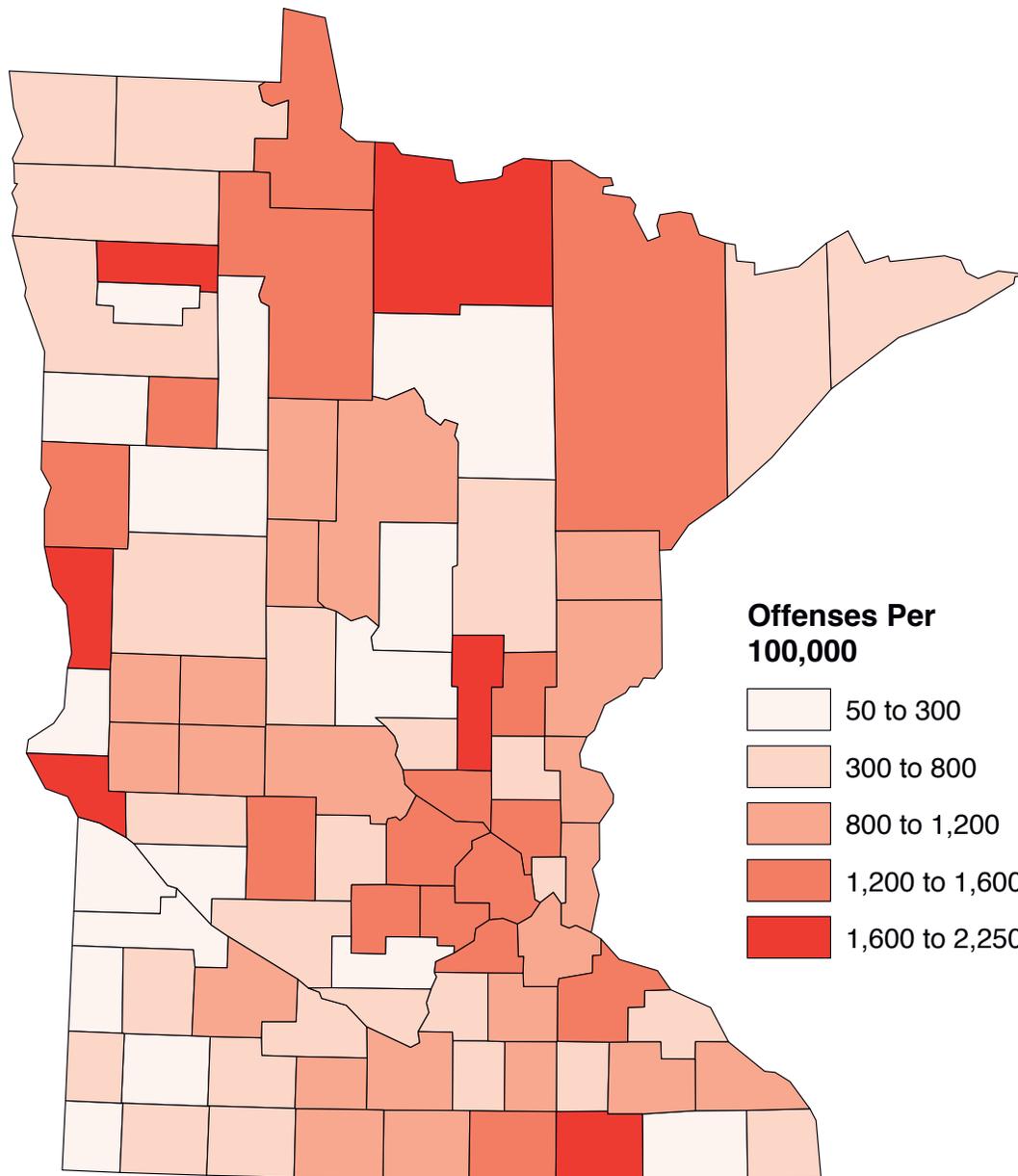


Source: Minnesota Bureau of Criminal Apprehension,
Criminal Justice Information Systems

Juvenile Arrests, 2001

The majority of juvenile arrests (76%) were for Part 2 offenses or other offenses such as running away. Only one in four arrests was for a Part 1 offense. Five of the counties with the highest rates of juvenile arrests were small rural counties with Part 2 offenses, accounting for a high rate of the juvenile offenses.

The ratio used for this map is the number of incidents per 100,000 residents. This ratio makes it possible to compare the crime rates in counties with very small populations to those of counties with very large populations. It should not, however, be confused with the actual number of incidents reported, which can be much smaller or much larger, depending on the population of the county.

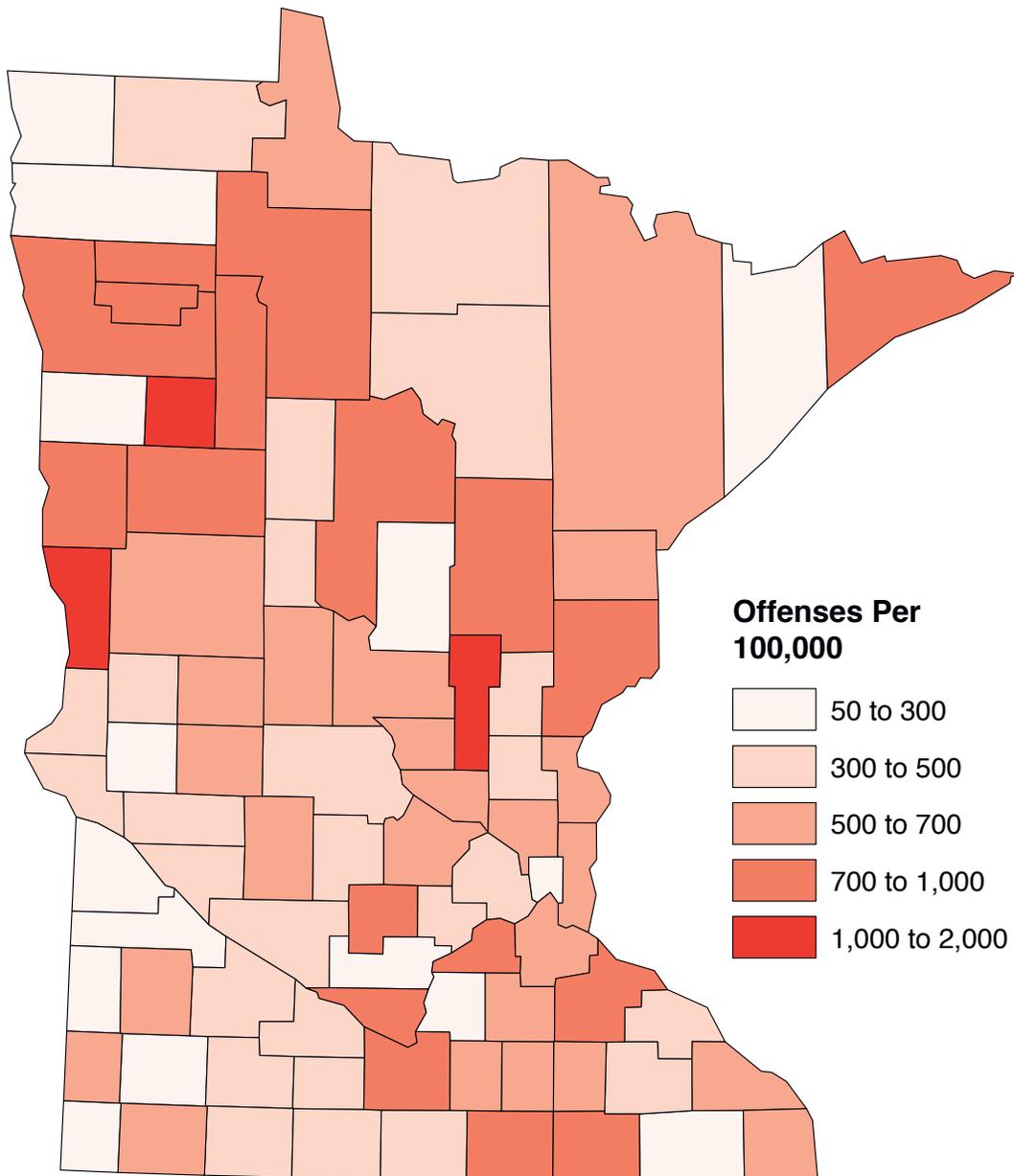


Source: Minnesota Bureau of Criminal Apprehension

DUI Arrests, 2001

Arrest rates for driving under the influence (DUI) in 2001 were higher in central and northern Minnesota, and to a lesser extent, in isolated counties in southern Minnesota. Looking at a single year, though, can be deceptive when it comes to DUI arrests. Several outside factors can affect where arrests are concentrated in any one year: the weather, traffic situations, law enforcement staffing in a particular county, one-time enforcement waves and even the economy can all affect how many DUI arrests are made in any given area in any one year. These external factors have made it difficult for law enforcement agencies to track trends over time.

The ratio used for this map is the number of incidents per 100,000 residents. This ratio makes it possible to compare the crime rates in counties with very small populations to those of counties with very large populations. It should not, however, be confused with the actual number of incidents reported, which can be much smaller or much larger, depending on the population of the county.

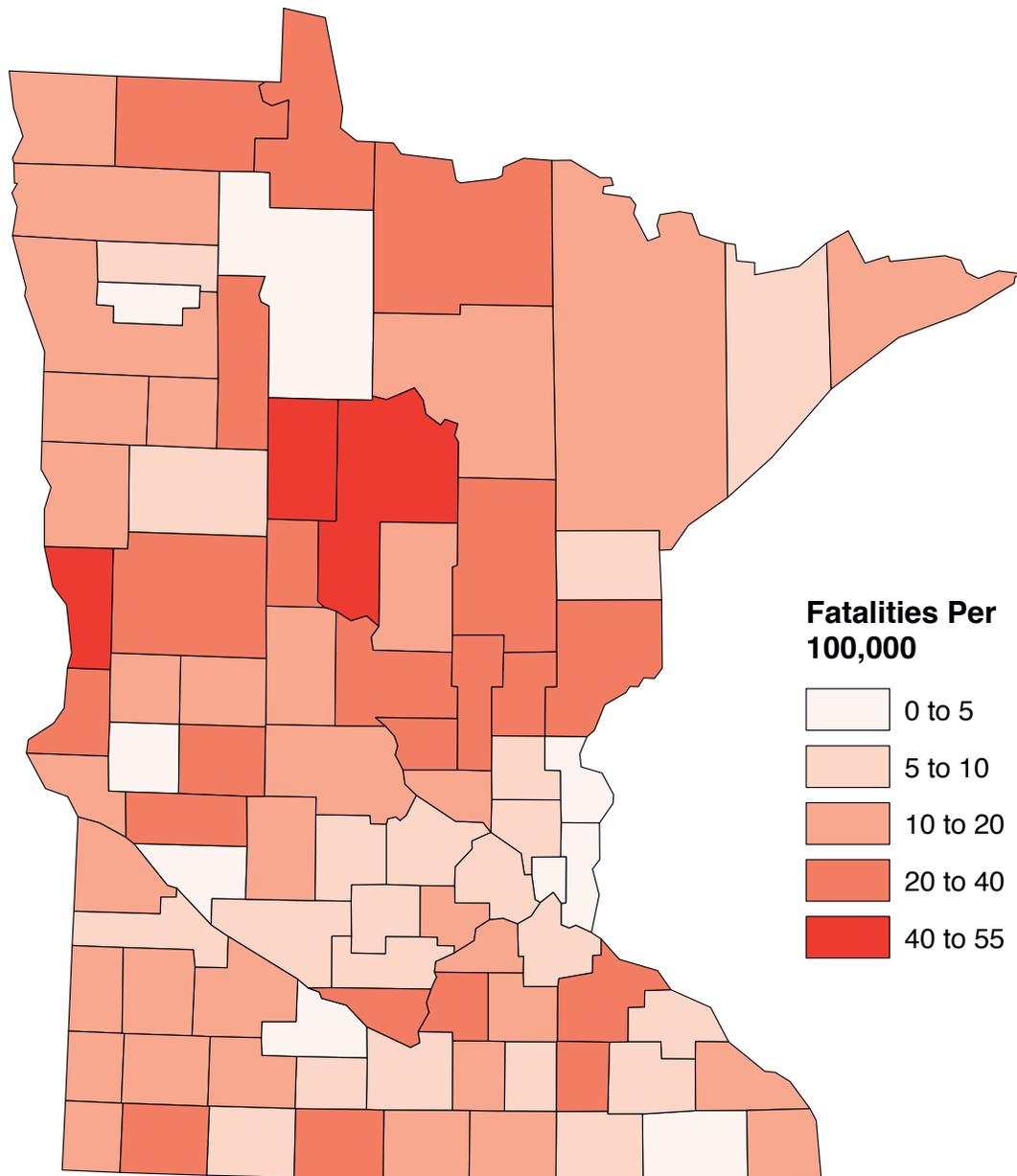


Source: Minnesota Bureau of Criminal Apprehension,
Criminal Justice Information Systems

Fatal Motor Vehicle Accidents, 2001

Rural areas have higher ratios of fatal crashes, where it is possible to drive at higher speeds on roads that do not have interstate-type safety designs. Injury and property damage crashes are more common in urban areas. In 2001, 68% of all fatal crashes occurred in rural areas (areas with a population of less than 5,000 people). While the seven-county metro area accounted for only 33% of the fatal crashes, 60% of all crashes occurred there.

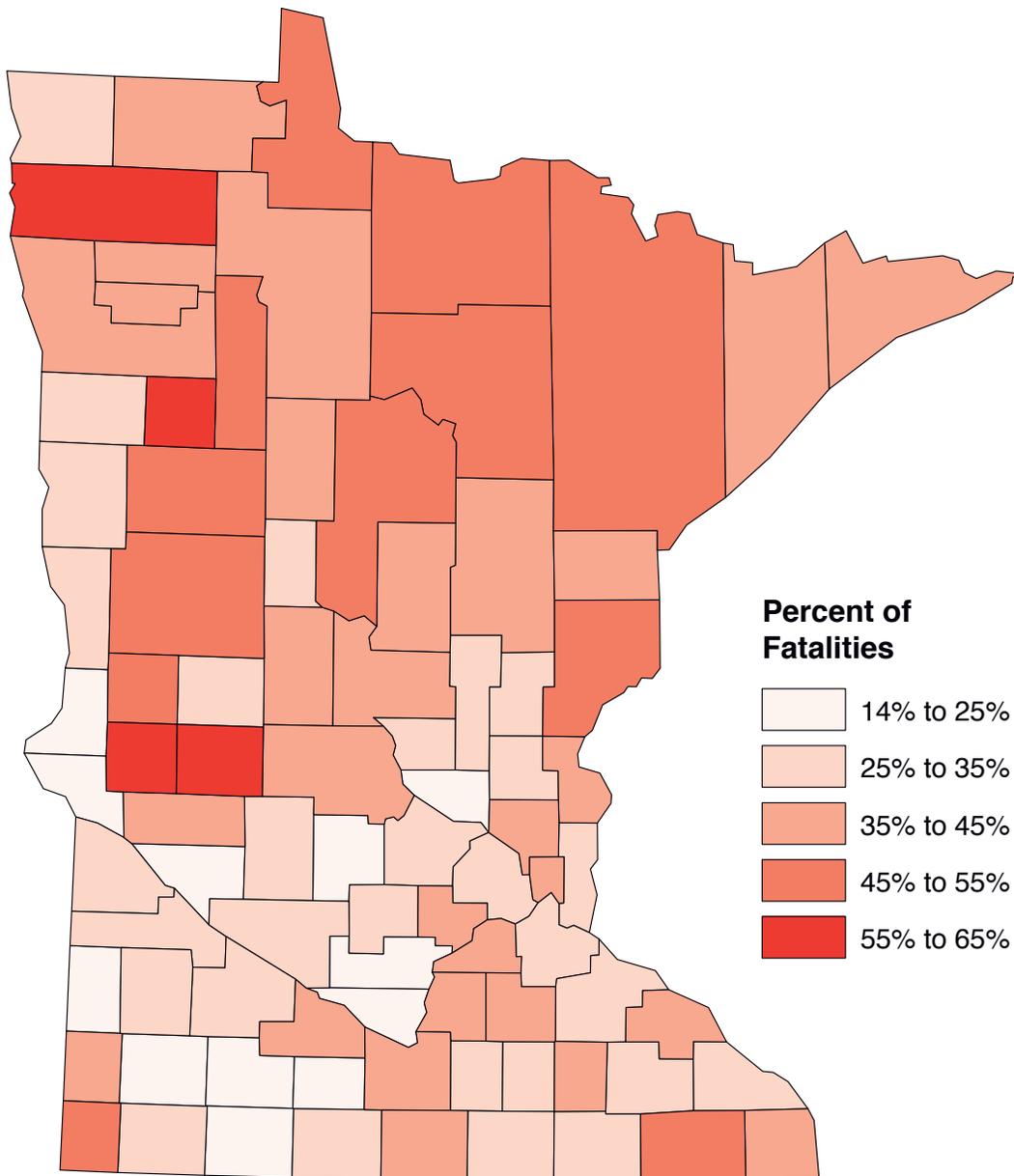
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Source: Minnesota Department of Public Safety, Office of Traffic Safety, 2001 County Crash Report

Fatal Motor Vehicle Accidents Involving Alcohol, 2001

As this map shows, fatal alcohol-related crashes were very much a rural problem in 2001, especially in northern Minnesota where, in many of the counties, more than 45% of motor vehicle fatalities involved alcohol. That year, 64% of alcohol-related accidents with fatalities occurred outside the seven-county metropolitan area. Furthermore, 63% of all alcohol-related motor vehicle fatalities occurred in cities with populations of less than 1,000.



Source: Minnesota Department of Public Safety, Office of Traffic Safety, 2001 County Crash Report

Civic Engagement and the Arts

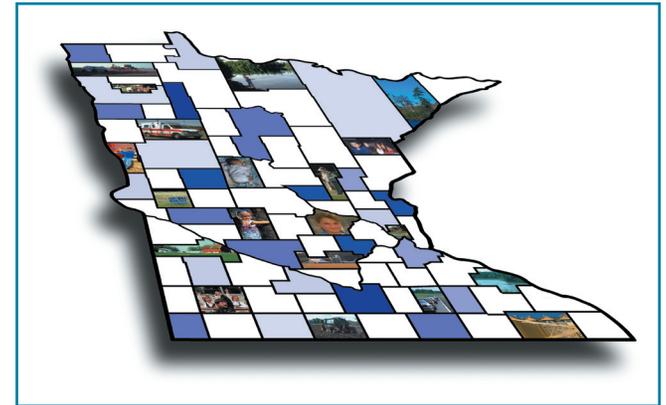
Minnesota has a reputation for having an actively engaged citizenry, based on being highest in the nation in voter participation (2000 and 2002 elections) and being at or near the top of every measure of charitable giving, volunteering and nonprofit activity. We also have the highest percentage of the workforce in the nonprofit sector in the entire nation.

Casual explanations for the contemporary Minnesota ethos give credit to native generosity as perhaps adopted values from Anishinabe tribes, a little bit of Norway and Sweden in the most Scandinavian of states or even the weather. Since the end of WWII, Minnesota's economic and educational attainment has surpassed the nation as a whole, at the same time the state has excelled at civic engagement.

This raises a chicken and egg question: Is Minnesota simply a high-income prosperous community—and as a result makes affordable the skills and habits of citizen involvement and association? Or have the knowledge of how to combine and work together created the climate needed for economic and educational success? Or, in fact, are these parallel and related developments and skills that pay off in a post-industrial and service-based economy?

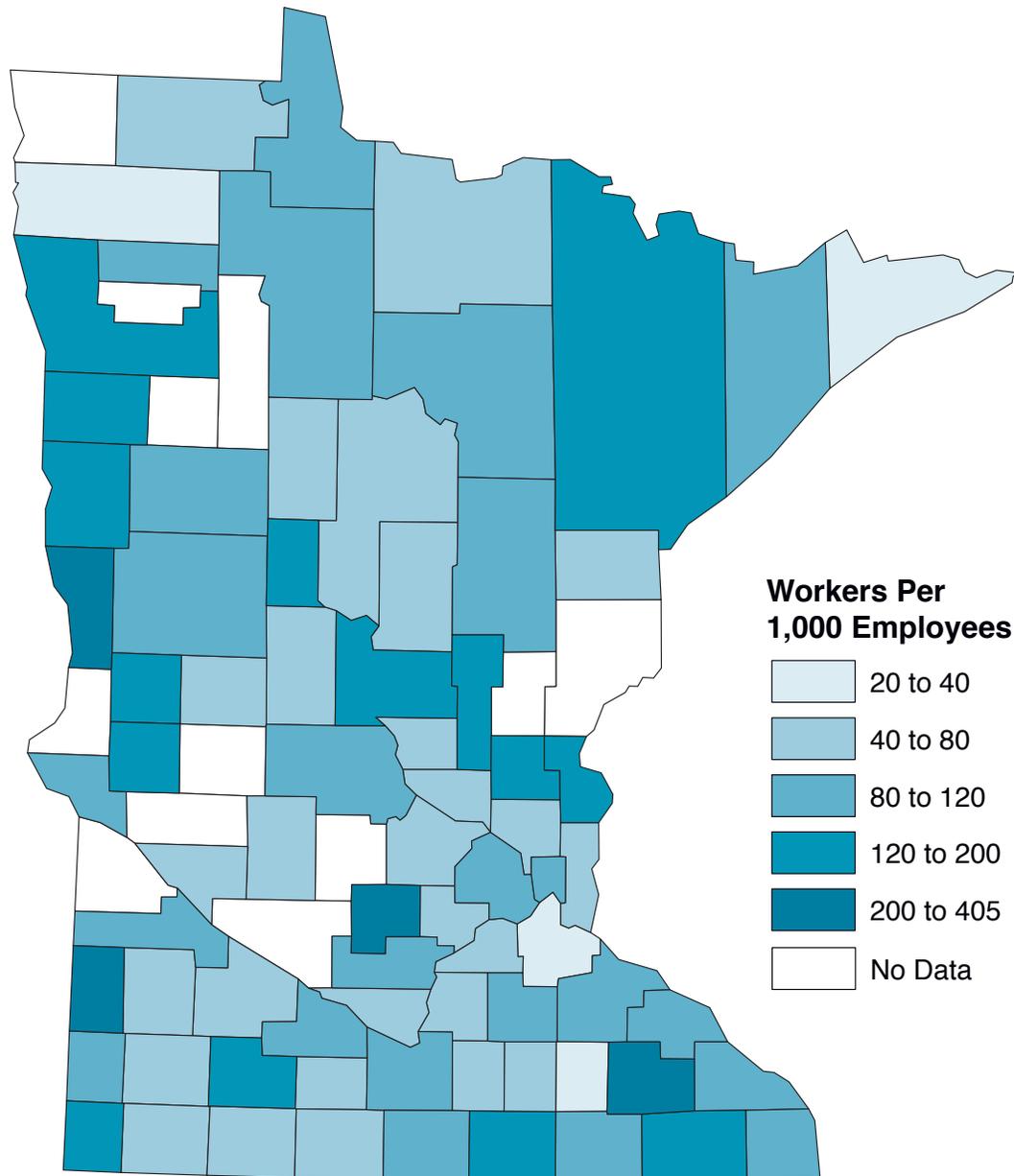
To the extent that civic engagement know-how sets the stage for economic and social success, communities would want to have an organized plan to encourage it, yet civic engagement and nonprofit enterprise is generally absent from economic development plans. For rural communities in Minnesota, where a higher percentage of the workforce is in the nonprofit sector than in the Twin Cities, this may offer a special opportunity.

Jon Pratt
Executive Director
Minnesota Council of Nonprofits



Workforce in the Nonprofit Sector, 2001

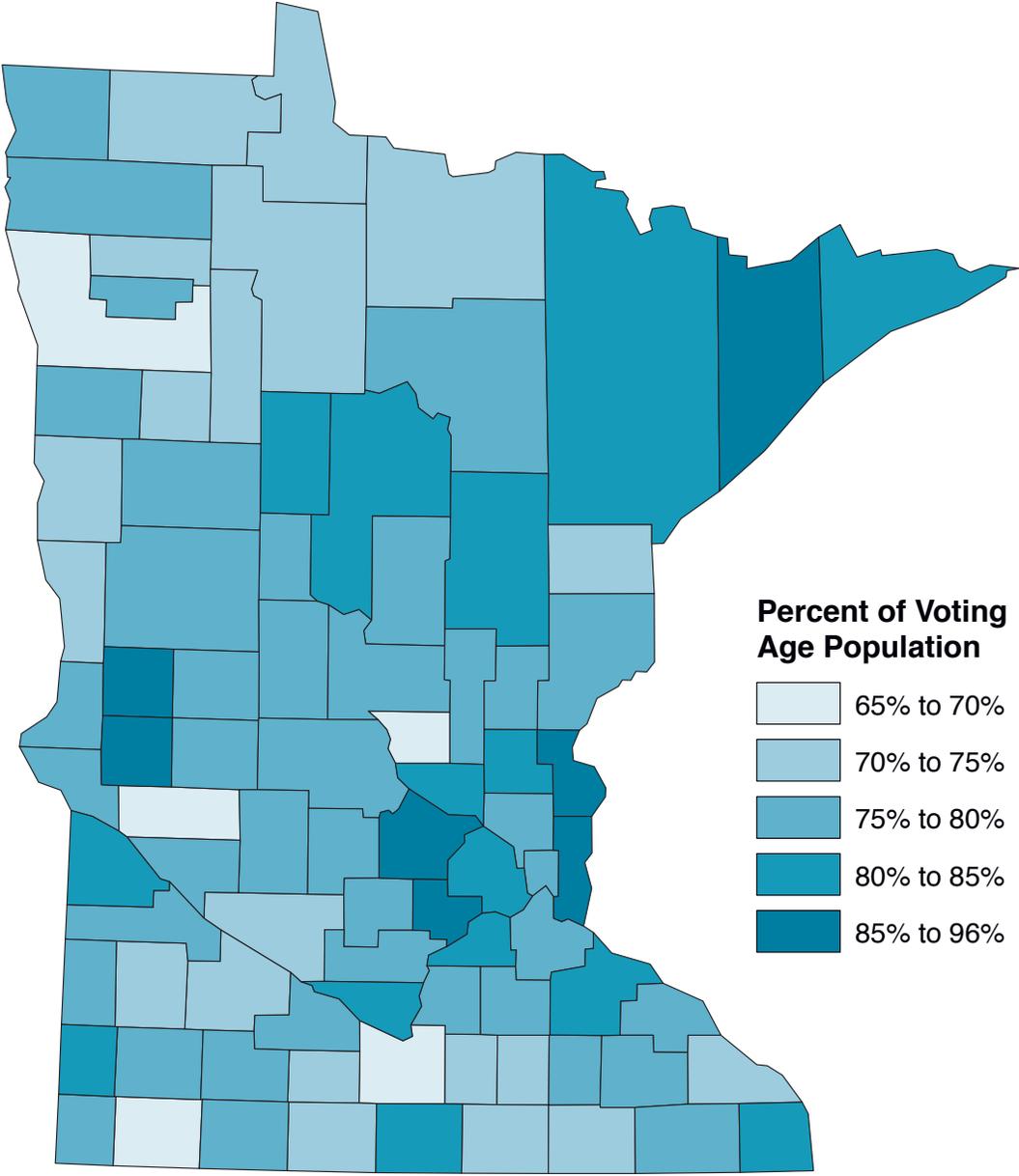
Nonprofits play an important role in the state's economy as employers, as well as providers of services and contributors to our quality of life. Statewide, nonprofit employees make up over 9% of the state's total workforce. In central Minnesota, southern Minnesota and the Twin Cities, nonprofit employment actually grew faster than total employment from 2000 to 2001. A heavy concentration of nonprofit employment, such as in St. Louis and Olmsted counties, is often the result of a large number of jobs in the health care industry or the presence of a large private college or university. Clearly, nonprofit employment constitutes an important component of the workforce throughout the state.



Source: Minnesota Department of Economic Security

Voter Registration, 2002

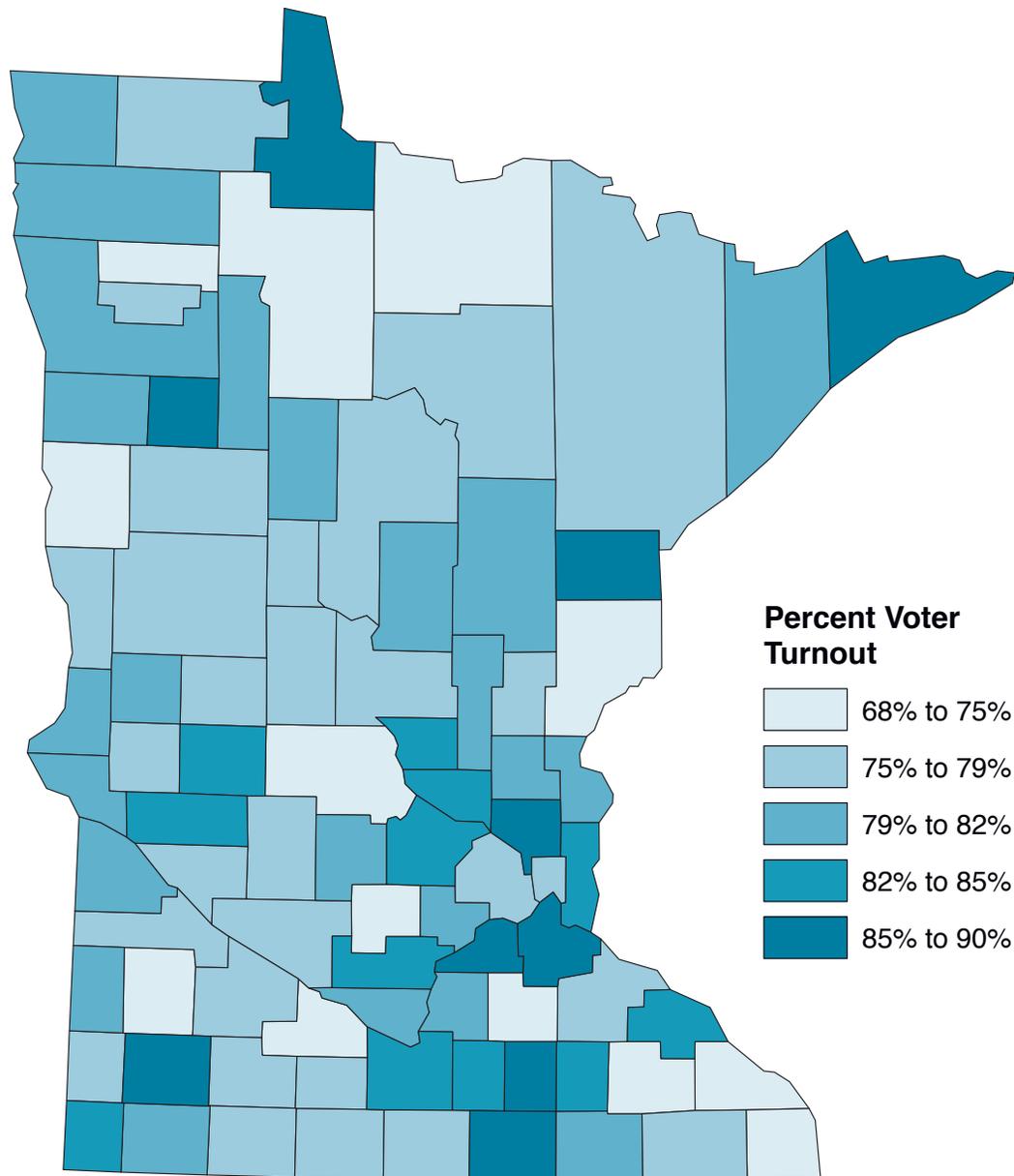
The map shows what is often understood, that voter registration is highest in urban areas. This is most likely due to a concentration of voter registration efforts in the populous city centers. Registration efforts in Greater Minnesota are often seen as more difficult: it can take more time to seek out and register a single voter in sparsely populated areas than in more densely populated areas.



Source: Minnesota Secretary of State's Office

Voter Turnout, 2002

Voter turnout presents an interesting contrast to voter registration and is measured as the number of ballots cast divided by the voting-age population. While the number of people registered to vote in Greater Minnesota is lower than in the urban areas, the people in Greater Minnesota show up to vote in higher percentages. So, while registering people in the rural parts of the state may seem more difficult, the payoff may be higher in the voting booth.

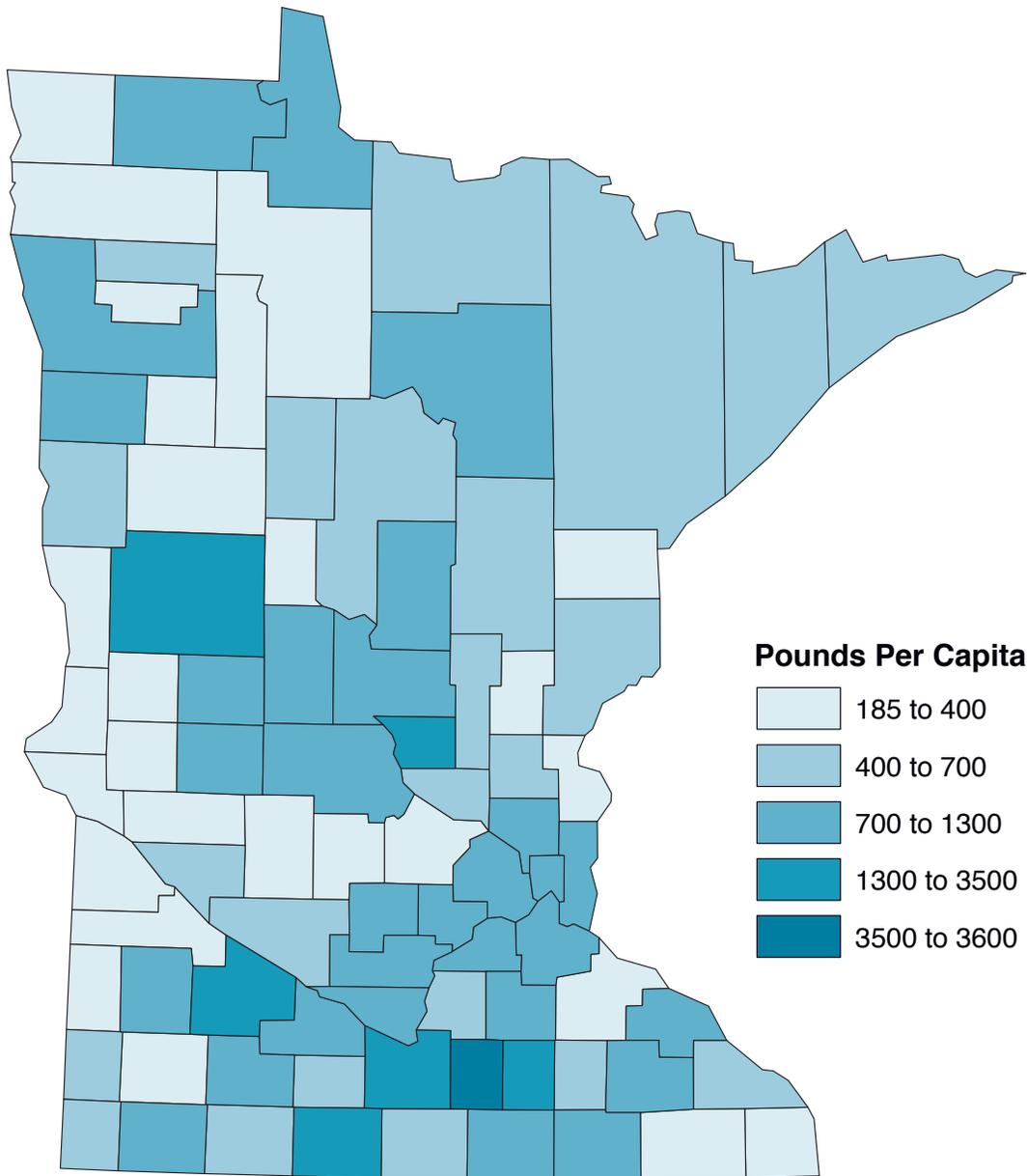


Source: Minnesota Secretary of State's Office

Recycling, 2001

Minnesota counties with the highest rates of per capita recycling collections share a common trait: they have a major regional center or larger city within the county. A certain amount of urbanized area is the case with the very best recyclers, Ottertail, Blue Earth and Steele. This is true of nearly all of the counties that recycle more than 1,000 pounds per capita each year. An important factor is the economies of scale: the sparser the population, the more difficult it is to collect recyclables, especially when it comes to curbside pickup. Other key factors can be the commitment of the recycling staff, how convenient the program is, and whether it employs convenient drop-off sites, curbside pickup, and public education. Partnerships with civic groups—for example, collecting cans for youth sports—can be especially effective.

Despite current successes, though, the amount of solid waste generated by each Minnesotan continues to increase along with the population, setting up difficult choices in the future about how to handle Minnesota's garbage.

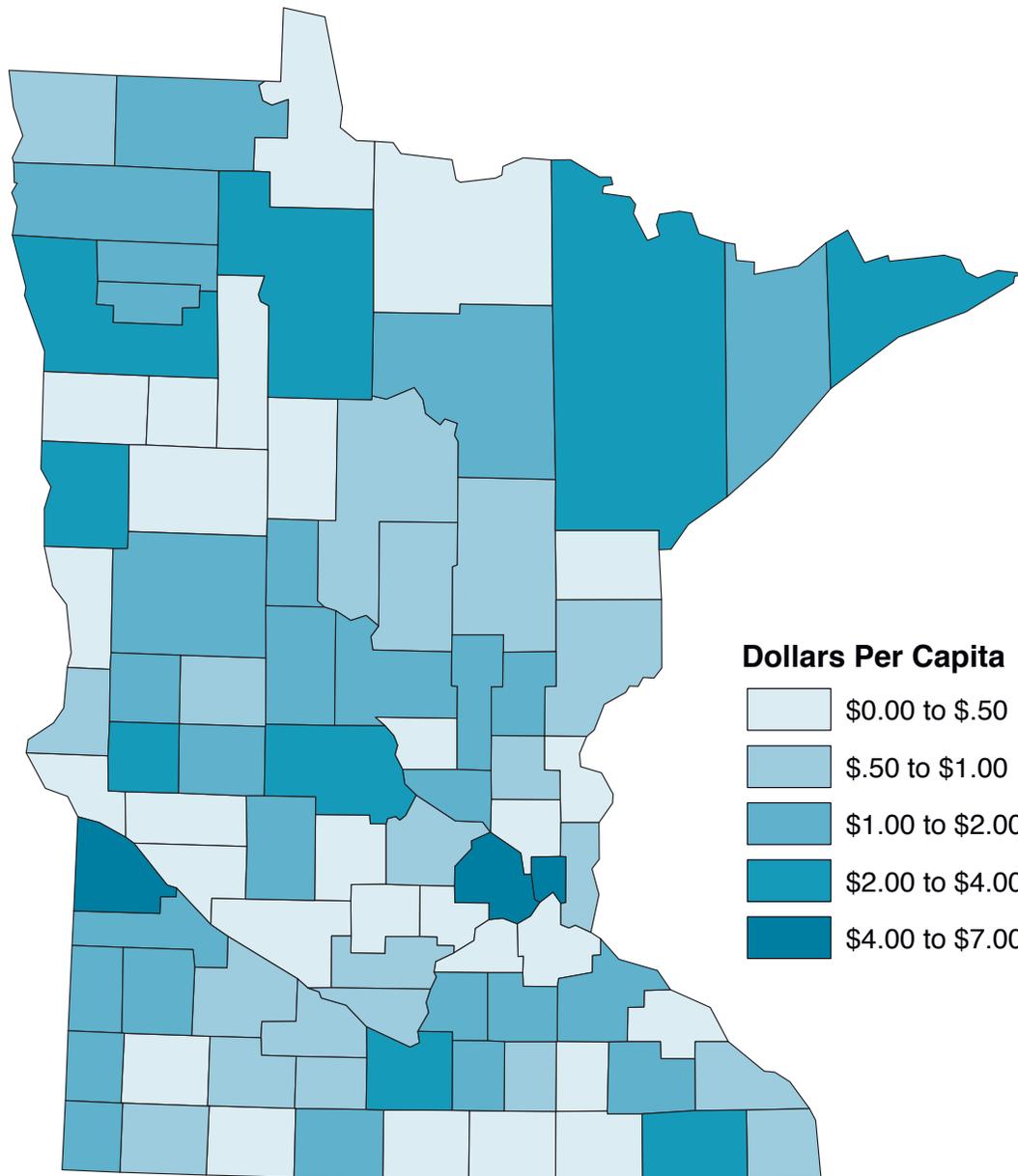


Source: Minnesota Office of Environmental Assistance

Funding by the Minnesota State Arts Board, 2002

Most of the counties with the highest funding contain either large cities, a college or a university campus or both. Minnesota operates a decentralized system of funding the arts: the Minnesota State Arts Board and eleven regional arts councils work together to ensure that arts dollars are available in every county, supporting individual artists, arts organizations, arts in education programs and community arts festivals and events.

Lac qui Parle County stands out in this map because of high funding in 2002. Last year Dawson-Boyd Public Schools received an Arts Across Minnesota grant from the Minnesota State Arts Board totaling just under \$30,000. The Arts Across Minnesota program is designed to help make the state's premiere arts experiences accessible to Minnesotans in their own communities. The grant helped fund a series of master classes, workshops, and public performances by The Saint Paul Chamber Orchestra.



Source: Minnesota State Arts Board, 2002 Annual Report

The *Atlas of Minnesota* CD

The *Atlas of Minnesota 2nd Edition* Compact Disk (on the right) contains the following data for all the maps in the Atlas:

- geographic data – county and school district boundaries
- attribute data – all the data used to generate the Atlas maps
- metadata – information about the data used in the atlas (sources, dates, etc.)

ArcExplorer™ GIS viewer software from Environmental Systems Research Institute (ESRI) is included on the CD, allowing simple manipulation and display of the Atlas data files.

The CD also contains electronic versions of the Atlas:

- Adobe® PDF files of each chapter (Adobe® Reader is included on the CD).
- Microsoft PowerPoint® presentation graphics of each map page.
(You will need Microsoft PowerPoint® software to view and present these graphics.)

The CD Home page should automatically load on systems that support this feature. If the CD does not auto-run, use your web browser to navigate to the index.htm file in the root directory of the CD. In other words, type into the web address box: X:\index.htm where X is the CD drive on your computer.



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