GLUP 2045

Olmsted County Planning Department

Olmsted County General Land Use Plan

Photo by John Weiss

OLMSTED COUNTY
MINNESOTA

Adopted August 16, 2022

Acknowledgements

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Resolution 22-117

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Resolution 22-117

WHEREAS, a public hearing was duly held on August 16, 2022, in the Commissioners Board Room, Olmsted County Government Center, 151 Fourth Street Southeast, Rochester, Minnesota, and the Olmsted County Board of Commissioners having heard and duly recorded and received all evidence, and being duly advised in the premises, and

WHEREAS, the Olmsted County Planning Advisory Commission conducted a public hearing on July 21, 2022, in the Commissioners Board Room, Olmsted County Government Center, 151 Fourth Street Southeast, Rochester, Minnesota, and the Olmsted County Planning Advisory Commission having heard and duly recorded and received all evidence, and being duly advised in the premises, recommended adoption of the revised map and text of the Olmsted County General Land Use Plan, and

WHEREAS, Olmsted County Planning staff met numerous times throughout the planning process with the Olmsted County Board of Commissioners; the Olmsted County Planning Advisory Commission; the Township Cooperative Planning Association (TCPA); and multiple county, township, city, and tribal departments, boards, commissions, and organizations to obtain input, insight, and feedback, and

WHEREAS, Olmsted County staff provided multiple opportunities for the public to learn about land use and the factors that influence Olmsted County's planning process, read draft documents, submit questions, provide comments, and stay abreast of the planning and meeting schedules, and

WHEREAS, the County Board of Commissioners finds that the amendment is in the public interest by adding, clarifying, and reorganizing portions of the Olmsted County General Land Use Plan to explain the connections between county characteristics and land use policies; updating boundaries of urban service areas reflecting recent changes in development; eliminating the Resource Protection-Potential Suburban land use designation and updating land use map amendment procedures accordingly, including acting on suburban land use plan amendments only twice per year; including new transportation considerations and policies to be included in land use reviews and CLUES, in addition to routine data updates; prioritizing infill suburban residential development by adding average trip lengths and removing amenities factors in CLUES; amending CLUES to better protect critical natural features from development consideration; and reformatting the plan document to make it more user accessible.

NOW, THEREFORE, BE IT RESOLVED, that the Olmsted County Board of Commissioners does hereby amend the Olmsted County General Land Use Plan by incorporating the revised text dated August 16, 2022, and the revised map dated August 16, 2022.

Dated at Rochester, Minnesota this 16th day of August, 2022.

OLMSTED COUNTY BOARD OF COMMISSIONERS

DocuSigned by:
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8/18/2022 | 9:05 AM CDT

Mark Thein, Chairperson

ATTEST: DocuSigned by:
Lisa Morris
8/18/2022 | 9:38 AM CDT

Lisa Morris-Helmstetler, Deputy Clerk to the County Board

Glossary and Acronyms

The terms used in GLUP 2045 are intended to have their customary dictionary definition. However, terms which are defined in the Olmsted County Zoning Ordinance are intended to have the ordinance definition also apply in GLUP 2045. In addition, the following terms and phrases have the meaning given them below.

Access management: The process and requirements applying to the approval of driveway and intersection location and design, providing for safe and orderly ingress and egress to a property. These are provided for by ordinance in Olmsted County.

Basic sector industry: "[A]ctivities which produce and distribute goods and services for export to firms and individuals outside a defined [local] economic area…" [1] In Olmsted County, basic sector industries include health care, manufacturing (especially electronics and food and kindred products manufacturing), agriculture, and lodging.

City: A statutory or home rule charter city as defined in Minnesota Statutes.

City of the First Class: As defined in Minnesota Statute (MS 410.01), a city that has attained a population of 100,000 or more.

CLUES: Comprehensive Land Use Evaluation System, a computer model developed to aid in determining land use suitability in Olmsted County.

Conservation easement: A nonpossessory interest of a holder in real property imposing limitations or affirmative obligations the purposes of which include retaining or protecting natural, scenic, or open-space values of real property, assuring its availability for agricultural, forest, recreational, or open-space use, protecting natural resources, maintaining or enhancing air or water quality, or preserving the historical, architectural, archaeological, or cultural aspects of real property (Minnesota Statutes 84C.01).

Environmental corridor: In October 1977, the Olmsted County Board adopted a policy promoting acquisition and protection of environmental corridors, defining environmental corridors as "… areas of land predominantly along river areas which are significant for historical, environmental, or recreational reasons. This land is to be used for preservation or passive recreation and should be established through public dedication, acquisition, easement, or common open space

[1] Chapin, F. Stuart. Urban Land Use Planning. University of Illinois Press. 1970. p.137.

provisions…" For purposes of this Land Use Plan, the term "environmental corridors" applies only to such easements or other similar lands. Environmental corridors have been acquired along Bear Creek as well as the Zumbro River.

Farm: As defined by the Olmsted County Zoning Ordinance, "a lot used for agricultural or horticultural uses and comprised of either at least eighty (80) acres or two (2) contiguous and undivided quarter-quarter sections in the A 1 Agricultural Zoning District, or being at least thirty five (35) acres in size in the other Zoning Districts..." As defined by the US Department of Agriculture National Agricultural Statistics Service, "a place with estimated (or expected) annual sales of agricultural products of at least $1,000."

FEMA: Federal Emergency Management Agency

Forestry: The management of forestland and woodlots chiefly for the production of products derived from trees (Christmas trees, wood and wood byproducts, maple syrup, and so on), usually or sometimes chiefly with related benefits in terms of wildlife habitat, recreation, landscape and ecosystem protection, biodiversity management, watershed management and carbon sequestration.

GIS (Geographic Information System): A system that creates, manages, analyzes, and maps all types of data. GIS integrates "where things are" with "what things are like there", helping users understand patterns, relationships, and geographic context.

GLUP: Olmsted County General Land Use Plan

Infill development: Development or redevelopment of a relatively small parcel or set of parcels surrounded by other developed land, including, for example, development of a vacant parcel abutted by existing commercial development.

Joint powers: Provisions of Minnesota Statute enabling jurisdictions to collaborate to perform governmental functions as a coordinated enterprise under the management of a joint powers board made up of representatives of participating jurisdictions.

LUPA: Land use plan amendment

MGS: Minnesota Geological Survey

MN DNR: Minnesota Department of Natural Resources

MnDOT: Minnesota Department of Transportation

MPCA: Minnesota Pollution Control Agency

Municipal Separate Storm Sewer System (MS4): A federally mandated stormwater management and permitting system administered in Minnesota through the Minnesota Pollution Control Agency, requiring affected local governments to manage the rate, volume, and hydrography of runoff.

OPAC: Olmsted County Planning Advisory Commission

ROCOG (Rochester-Olmsted Council of Governments): A Joint Powers Board created in 1971 to carry out federally required transportation and related land use planning as a Metropolitan Planning Organization.

Strip commercial development: Commercial development along a street or highway generally characterized by multiple access points, the absence of shared parking and loading areas, the use of public streets for movements between and among adjacent uses, and a high ratio of edge area (where conflicts with abutting uses occur) to parcel area.

Sustainable: Characterizing a pattern of resource management that meets human needs while preserving the environment so that these needs can be met not only in the present, but also for future generations. In the case of economic activities, the term “sustainable” characterizes businesses (such as agriculture, manufacturing, services, and so on) carried out in such a way as to maintain the long-term prosperity of the enterprise while at the same time avoiding degradation of the environmental resources relied upon or the ecosystem of which the enterprise is a part.

Sustainable development: Development that maintains or enhances economic opportunity and community well-being while protecting and restoring the natural environment upon which people and economies depend. Sustainable development meets the needs of the present without compromising the ability of future generations to meet their own needs.” (MS 4A.07)

TCPA (Township Cooperative Planning Association): A Joint Powers Board created in 1997 to implement land use planning and zoning in member townships.

Table of Contents

1 • Introduction to the General Land Use Plan

The Olmsted County General Land Use Plan (GLUP) is the set of land use policies that defines the community's vision of how, when, and where growth, redevelopment, and preservation should occur throughout the county.

It forms the basis for zoning laws and promotes orderly development patterns that protect the environment, conserve resources, and provide for transportation, industry, and economic needs.

Reasons for land use planning

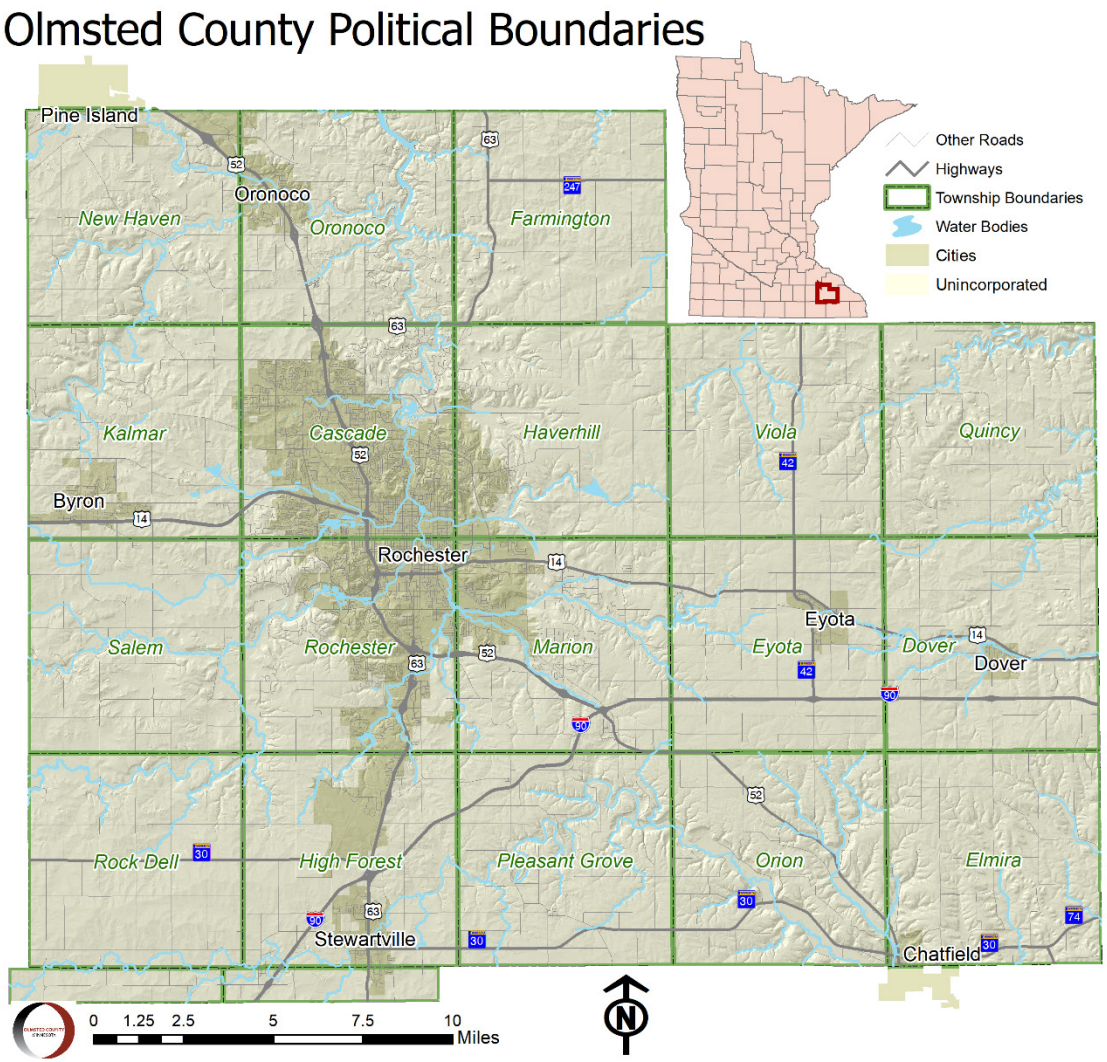
Olmsted County is a growing regional center located in southeastern Minnesota, roughly 80 miles southeast of the Twin Cities. Comprised of 18 townships and 8 cities (wholly and partially), the county covers 655 square miles. Rochester, the largest city, is the county seat (Figure 1-1).

Land use planning guides the county's effort to balance the consequences of change. It helps the community choose its desired future while moving toward it in an organized, informed, and fiscally sustainable manner.

Effective land use planning supports consistent decision-making when competing land use, development, infrastructure, and resource claims arise. These actions must reflect current conditions as well as be informed by predictions for the future, including

- Population and employment growth.
- Demand for land.
- Decisions on the size and location of public facilities and utilities.
- Protection of natural resources and the environment.

Figure 1-1



The GLUP, therefore, is regularly adjusted to reflect changes in population, land use demands, beliefs, and policy. Effective implementation of this plan, as detailed in Chapter 11, results in the wise and predictable use of community resources and a place people are proud to call home.

The comprehensive plan

Minnesota Statutes, Chapter 394, gives Olmsted County the authority to prepare and adopt by ordinance a comprehensive plan for the purpose of "promoting the health, safety, morals, and general welfare of the community." The GLUP is a part of Olmsted County's comprehensive plan, defined in Minnesota Statutes §394.22, Subd. 9, as

"…the policies, statements, goals, and interrelated plans for private and public land and water use, transportation, and community facilities including recommendations for plan execution, documented in texts, ordinances, and maps, which constitute the guide for the future development of the county or any portion of the county."

Other elements of the Olmsted County Comprehensive Plan include the Long Range Transportation Plan (prepared and adopted by the Rochester-Olmsted Council of Governments), the Comprehensive Water Management Plan, and the Housing Plan. The county should adopt the new "One Watershed, One Plan" documents for each of the county's three watersheds as part of the comprehensive plan if they replace the Comprehensive Water Management Plan.

The county may adopt future planning efforts as part of the comprehensive plan, including open space and parks plans, as well as the Olmsted County Multi-Hazard Mitigation Plan update. Public facilities plans, capital improvement programs, and county policy statements covering the use and management of land and related resources, contribute to the comprehensive plan.

Historic GLUPs

Land use planning creates a desired product: a highly livable community for current and future residents. Olmsted County adopted its first land use plan in 1978 to

- Provide a clear rationale for future amendments to the Olmsted County Zoning Ordinance.
- Inform Olmsted County municipalities as they planned for their current and projected service areas.
- Serve as a basis for consistent decision making on a variety of land use and related issues.

The 1995 GLUP significantly modified Olmsted County's approach to land use planning, reflecting the considerable physical, economic, and demographic changes occurring in the area. A computer model was developed (the Comprehensive Land Use Evaluation System, or CLUES) to aid in deciding the proper location of county land uses.

2022 update

The Olmsted County Board of Commissioners thinks the community-based values and principles adopted in the 1995 plan are as relevant today as they were then. The goals, policies, and priorities that support these ideas, however, may be modified to align them with today's opportunities and expectations.

The commissioners also believe the GLUP continues to work well and consider this update to be minor. They directed staff to focus on the following tasks:

- Include a transportation factor to CLUES in addition to routine data updates.
- Prioritize shorter average trip lengths in CLUES.
- Fine-tune land use plan amendment policies, particularly with respect to suburban development areas.
- Reorganize and clarify portions of the GLUP to better explain the connections between county characteristics and land use policies.

The projections used to calculate the need for urban and suburban development are based on forecasts from a variety of economic and demographic data sources. They are also based on assumptions about trends in development, especially the density of residential development. To reflect this time horizon, this plan update will be known as **GLUP 2045.** Chapter 11 of this document details the opportunities for monitoring and responding to community changes.

Land use connections

By definition, all elements of the Olmsted County Comprehensive Plan are interrelated. The GLUP, therefore, must strive to integrate and support the efforts of the other plan components and vice-versa.

These plans don't just affect each other, they also have lasting impacts on our natural and built environments. How does the location of a suburban subdivision affect the function and safety of the road network? Will a proposed development or road project alter the ability of a nearby wetlands to filter pollutants before rainwater reaches our drinking water supplies? What factors contribute to the county's ability to support truly affordable housing? Chapters 2 through 6 of the GLUP have been added to help users and decision makers better understand these relationships and their impact on the plan's goals and policies.

Planning scope

This land use plan addresses all areas of the county, both cities and unincorporated areas. It includes public and private land use, physical development, and land management decisions.

Minnesota Statutes Chapter 462 gives cities and townships the power to adopt their own zoning and subdivision controls, independent of county planning. Chapter 394, however, states that township zoning regulations must be as or more restrictive than, and consistent with, the county's regulations. The GLUP, therefore, informs the municipalities of the county's values and intentions, guides the zoning and subdivision practices of the unincorporated areas, and helps the townships ensure that their ordinances meet these standards.

The GLUP does not specifically address state or federal land use related policies except to recognize their local impacts and requirements. While the GLUP does not deal with public services and facilities in detail, planning for features such as schools and roads can rely on and help to carry out the plan's goals. This helps minimize tax dollars spent on unneeded infrastructure that could be better invested elsewhere in our community.

Public involvement

Because Olmsted County took a new approach to land use planning than it had in previous years, the development of the 1995 GLUP involved many segments of the population. Citizens, developers, interest groups, township representatives, small cities' officials, and other local government bodies were included from the very beginning of the planning process in order to ensure that the plan would address the concerns of the entire community. Surveys, numerous meetings, and open houses provided public input opportunities. The Suburban Concerns Task Force addressed issues related to existing and future suburban development.

Updates have primarily been refinements of the 1995 document and the CLUES model, rather than policy overhauls. As a result, public engagement efforts have been less extensive in recent years. Instead, the focus has been to meet with local government representatives to resolve disagreements and address the concerns of rural and suburban residents as well as those of Olmsted County's growing urban centers.

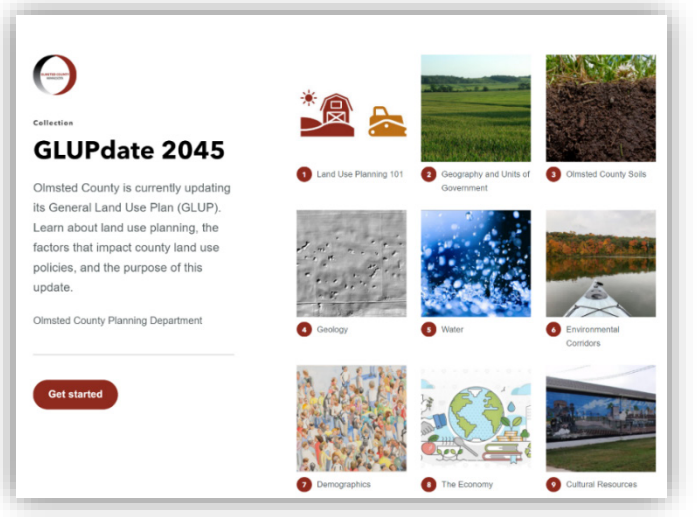
Since no planning principles or community vision statements were to be changed in GLUP 2045, initial public involvement efforts included presentation and discussion sessions. The COVID-19 pandemic restricted outreach plans by limiting the possibility and eventually the size of in-person gatherings. Virtual and online outreach was often the only choice.

The following groups provided Planning staff with input, insight, and feedback:

- Olmsted County Board of Commissioners
- Olmsted County Planning Advisory Commission (OPAC)
- Rochester-Olmsted Council of Governments (ROCOG)
- Olmsted County Environmental Commission
- Olmsted County Parks Commission
- City of Rochester Staff
- Olmsted County Township Officers Association (OCTOA)

- Township Cooperative Planning Association (TCPA)
- March 2018 Open Forum (County Administration invited all township and city officials to discuss this plan update and other topics of mutual interest)
- Representatives of the Prairie Island Indian Community
- Coalition for Rochester Area Housing Alliance

Online story maps provided an opportunity for the public to learn about land use planning and the factors that shape plan policies, submit questions, and provide comments.



OLMSTED COUNTY
MINNESOTA

2 • The People

Source: John Weiss

Understanding how the community may change over time is fundamental to land use planning. Trends in the size and composition of our population greatly affect how and where land uses make the most social and economic sense.

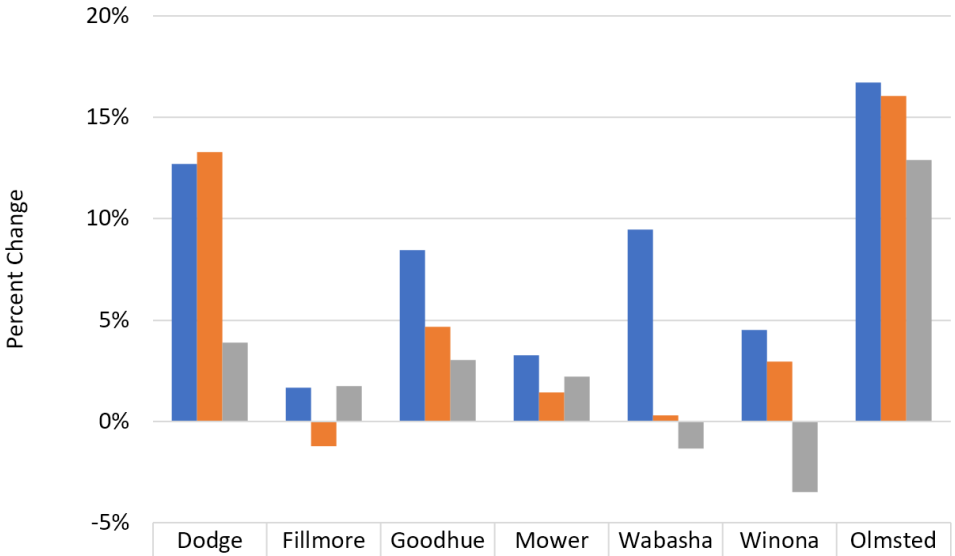
Population growth

While the populations of most southeastern Minnesota counties continue to grow, they are doing so at a slower rate than in the past. Wabasha and Winona counties have lost population in the last 10 years (Figure 2-1).

Olmsted County's population has consistently grown over the last 30 to 40 years, seeing about 15,000 to 20,000 new residents added each decade. Olmsted County's 2020 population of 162,847 ranks as eighth largest in the state and has grown by 12.9% since 2010, accounting for 18,599 new residents. This level of growth puts Olmsted County at fourth in the state in terms of largest percent population gains, behind Carver, Scott, and Wright counties.

Figure 2-2 shows the 2020 population distribution across Olmsted County. Rochester is the third largest city in Minnesota after Minneapolis and St. Paul, with a 2020 population of 121,395. Rochester has accounted for most of the population growth in Olmsted County, from about 66% in 1990 to almost 75% in 2020. Olmsted County's smaller cities have also been growing; as a group, their rate of growth in the past ten years exceeds that of Rochester. Small cities have more than doubled in population since 1990, compared to the City of Rochester increasing by about 64% during that time.

Figure 2-1: Rate of Population Growth, 1990-2020 (U.S. Census Bureau)



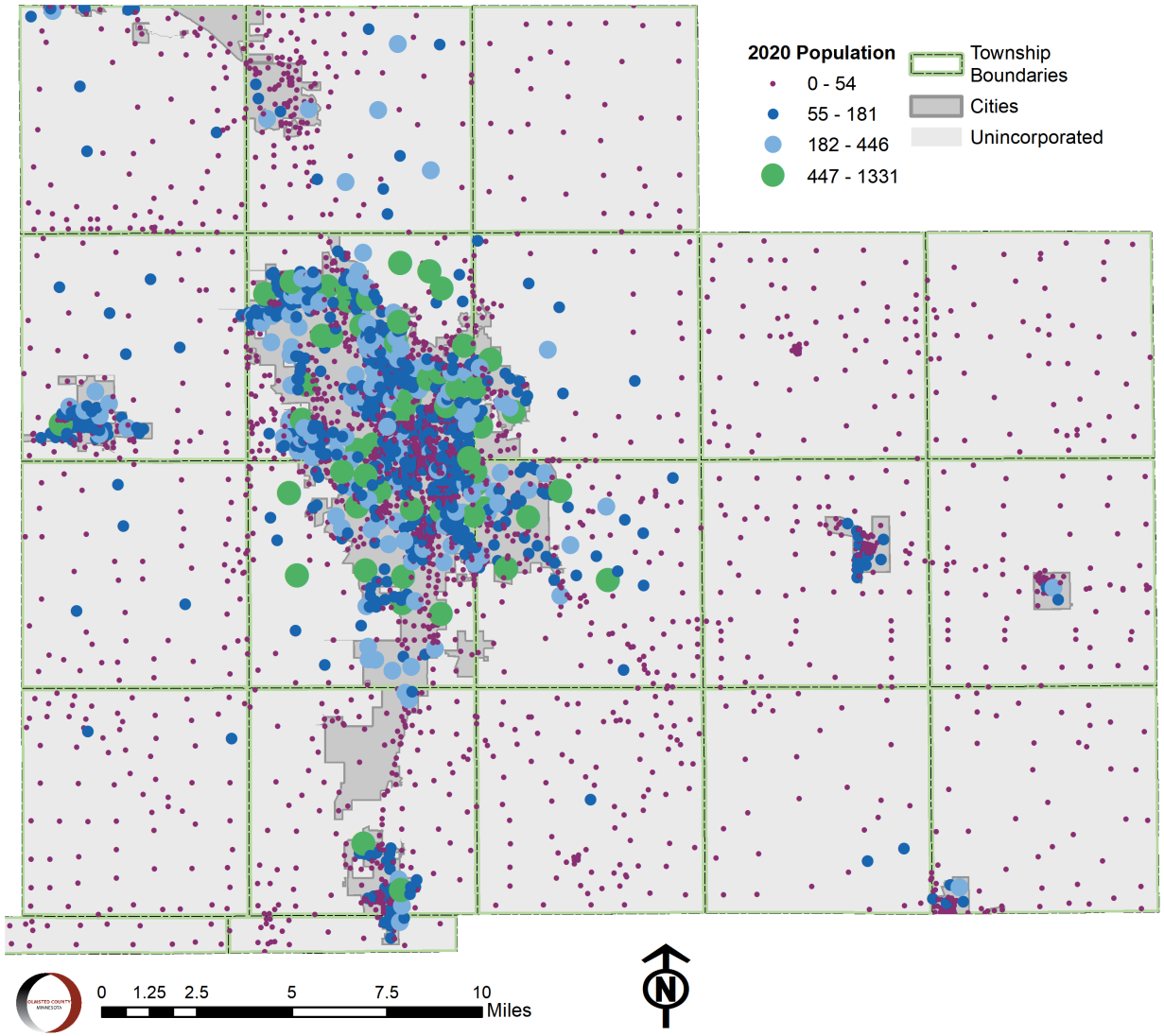
	Dodge County	Fillmore County	Goodhue County	Mower County	Wabasha County	Winona County	Olmsted County
1990s	12.71%	1.66%	8.45%	3.26%	9.45%	4.51%	16.72%
2000s	13.29%	-1.21%	4.66%	1.45%	0.31%	2.95%	16.07%
2010-2020	3.88%	1.73%	3.03%	2.21%	-1.33%	-3.48%	12.89%

Due to significant annexation activity, suburban townships saw a 20% decline in population between 2000 and 2010. But suburban and rural townships have seen a rebound in population growth since 2010.

Figure 2-2

2020 Population by Census Block

Source: U.S. Census Bureau



Looking to the future, the county is expected to add approximately 55,000 people through 2045. This growth will primarily be driven by the Destination Medical Center (DMC) initiative and its effect on adding demand for jobs in sectors such as retail services, leisure activities, construction, and public services.

Table 2-1 shows that Rochester is expected to capture the largest share of that growth, while Byron, Stewartville, and Pine Island are predicted to see significant increases compared to their existing size. The values for Chatfield and Pine Island include those city residents living in the adjacent county since they also affect Olmsted County planning efforts.

Table 2-1: Population Projections (ROCOG)

Jurisdiction	2015	2025	2035	2045	2015-2045 Growth		Share of Growth
Byron	5,320	6,835	7,815	8,724	3,404	64%	6%
Chatfield (Olmsted)	2,779	1,205	1,470	3,866	1,087	39%	1%
Dover	752	805	955	1,255	503	67%	1%
Eyota	2,038	2,045	2,495	2,809	771	38%	1%
Oronoco	1,443	2,010	2,450	2,575	1,132	78%	2%
Pine Island (Olmsted)	3,263	965	1,425	5,342	2,079	64%	2%
Rochester	112,089	128,285	147,420	162,277	50,188	45%	82%
Stewartville	6,153	7,020	7,905	8,937	2,784	45%	5%
Total for Municipalities	**129,775**	**149,170**	**171,935**	**190,482**	**60,707**	**47%**	
Suburban Townships	12,327	13,245	13,540	13,788	1,461	12%	2%
Exurban Townships	4,447	4,425	4,505	4,298	-149	-3%	-0%
Rural Townships	4,785	4,270	4,225	4,213	-572	-12%	-1%
Olmsted County	**151,334**	**171,110**	**194,205**	**212,781**	**61,447**	**41%**	

Similar to historic patterns, rural and exurban townships are generally expected to see a small decline in population, largely due to the aging of their population base. Suburban townships should see some increase in residents through 2045.

Figures 2-3 through 2-4 provide detailed population trends since 1990.

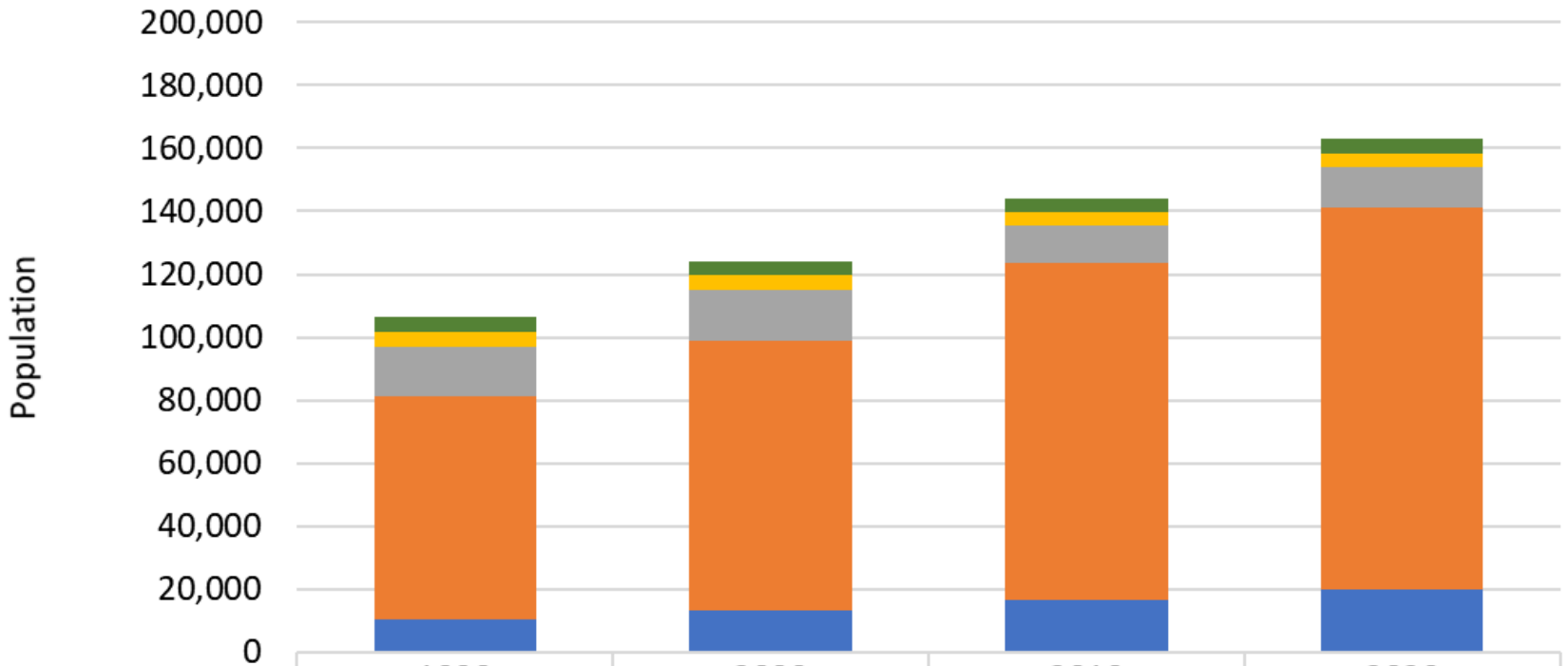
For Figures 2-3 and 2-4

Rural Townships: *Dover, Elmira, Eyota, Farmington, Orion, Pleasant Grove, Quincy, Rock Dell, Viola*

Exurban Townships: *Kalmar, New Haven, High Forest, Salem*

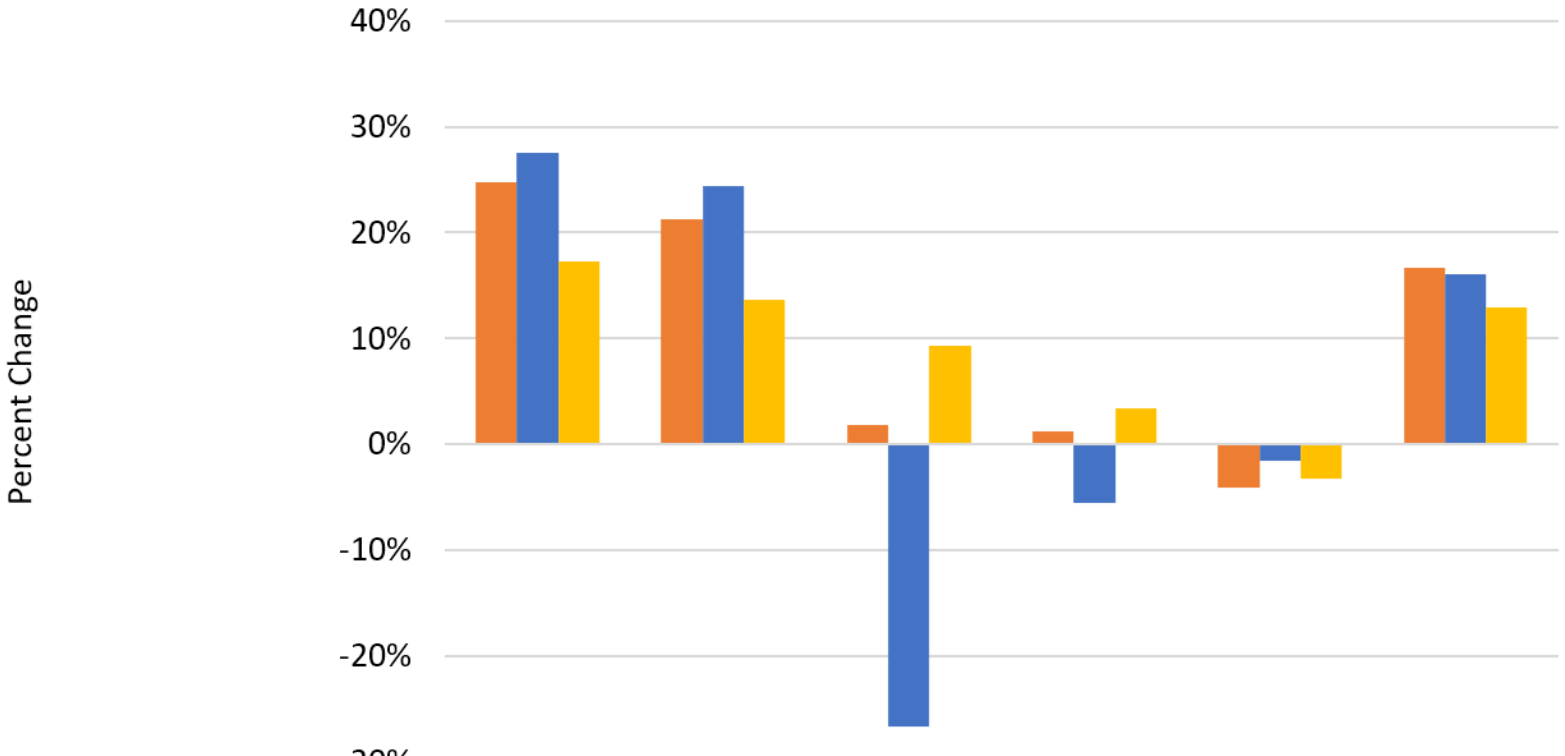
Suburban Townships: *Cascade, Haverhill, Marion, Oronoco, Rochester*

Figure 2-3: Olmsted County Population, 1990-2020 (U.S. Census Bureau)



	1990	2000	2010	2020
Total County	106,470	124,277	144,248	162,847
Rural Twps	4,897	4,695	4,624	4,471
Exurban Twps	4,492	4,547	4,292	4,438
Suburban Twps	15,807	16,098	11,812	12,906
Rochester	70,745	85,806	106,769	121,395
Small Cities	10,529	13,131	16,751	19,637

Figure 2-4: Rate of Population Growth, 1990-2020 (U.S. Census Bureau)



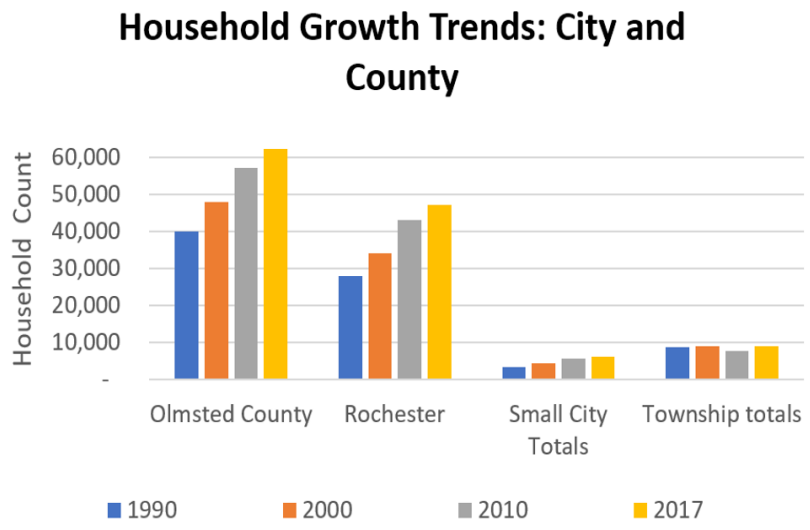
	Small Cities	Rochester	Suburban Twps	Exurban Twps	Rural Twps	Olmsted County
Rate of Growth 1990s	24.7%	21.3%	1.8%	1.2%	-4.1%	16.7%
Rate of Growth 2000s	27.6%	24.4%	-26.6%	-5.6%	-1.5%	16.1%
Rate of Growth 2010-2020	17.2%	13.7%	9.3%	3.4%	-3.3%	12.9%

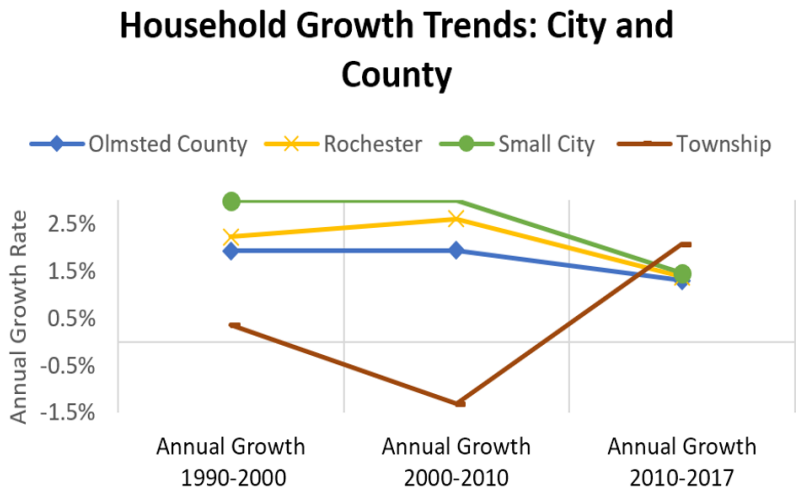
Household composition

Olmsted County is seeing changes in household composition similar to those experienced throughout the United States, with significant increases in single-person households expected over the planning period and limited growth in traditional family households with children. A growing number of single-person households will be composed of people over 65 years of age.

Figure 2-5 highlights Olmsted County household growth trends for 1990-2017. The annual rate of growth in the **number of households** in Olmsted County has been fairly stable since 1990, between 1% and 2%. The years since 2010 have seen an overall downturn in that rate, likely due to the effects of the Great Recession.

Figure 2-5: Household Trends (U.S. Census Bureau)





While Olmsted County cities saw steep declines in their rate of housing growth after 2010, they still were adding housing during that period. The suburban and rural townships experienced a decline in households between 1990 and 2010 due to annexations but reversed this downward trend and saw higher housing growth rates after 2010. The exurban townships

saw consistently strong growth rates despite the Great Recession, with a 6% annual growth rate between 2010 and 2017. Planning staff will watch to see if these trends continue as the 2020 Census data becomes available.

Table 2-2 summarizes the predicted changes among different **types of households**. A significant increase in single-person households is projected, both in the 65+ age group as well as among younger individuals. The number of married couple households with children will likely only increase by 2%, while married couple households without children should rise by 56%.

Table 2-2: Projected Change in Household Composition, 2000-2040 (Minnesota State Demographer)

Household Type	2017	2020	2030	2040	2017-2040	
	Census	Projected	Projected	Projected	% Change	Share of Growth
Total Households	**58,692**	**67,360**	**71,290**	**78,320**	**33%**	
Married couples with related children	13,853	13,890	14,060	14,160	2%	2%
Married couples without related children	17,359	22,610	24,470	27,120	56%	50%
Other families with related children	5,507	5,190	5,290	5,520	0%	0%
Other families without related children	2,365	2,160	2,320	2,680	13%	2%
Living alone	15,901	19,460	21,050	24,510	54%	44%
Living alone, age 65+	5,437	6,540	8,100	11,140	105%	29%
Other nonfamily households	3,707	4,050	4,100	4,340	17%	3%
Householders ages 15-24	3,165	3,780	4,070	4,520	43%	7%
Householders ages 25-44	21,247	23,430	23,650	23,420	10%	11%
Householders ages 45-64	22,215	25,000	24,610	25,160	13%	15%
Householders ages 65+	13,177	15,150	18,960	25,230	91%	61%

Age structure

Olmsted County will continue to see growth in all age groups. Figure 2-6 highlights the distribution of population by age based on comparison of 2015 and 2045 projections from the Minnesota State Demographic Center.

The greatest increase will occur among those over the age of 60 as the large baby boomer generation completes its move into that age bracket. The number of persons over 60 should nearly double over the next 25 years, as Generation X and the oldest millennials join the baby boomers in this age group. The rise in population among younger age groups will not be as dramatic as in past decades due to dropping birth rates and relatively slow growth in the number of younger households in the prime family formation years.

Net migration

"Net migration" is the number of people moving into an area minus the people moving from that area. In response to the slowing of resident labor force growth, the aging of the baby boomers, and a strong local job market, Olmsted County's population growth has been driven by new residents attracted to the area from local, national, and international locations. This trend started in the 1980s, accelerated in the 1990s, and continues today.

Migration has increased the share of the population in racial and ethnic minorities (Figure 2-7), more than doubling the minority share of population in the 1990s. The Minnesota State Demographer has indicated that population growth in Olmsted County is largely attributable to BIPOC (Black, Indigenous, People of Color) populations (Figure 2-8).

Figure 2-6: 2010 and 2045 Population Distribution by Age Cohort (Minnesota State Demographic Center)

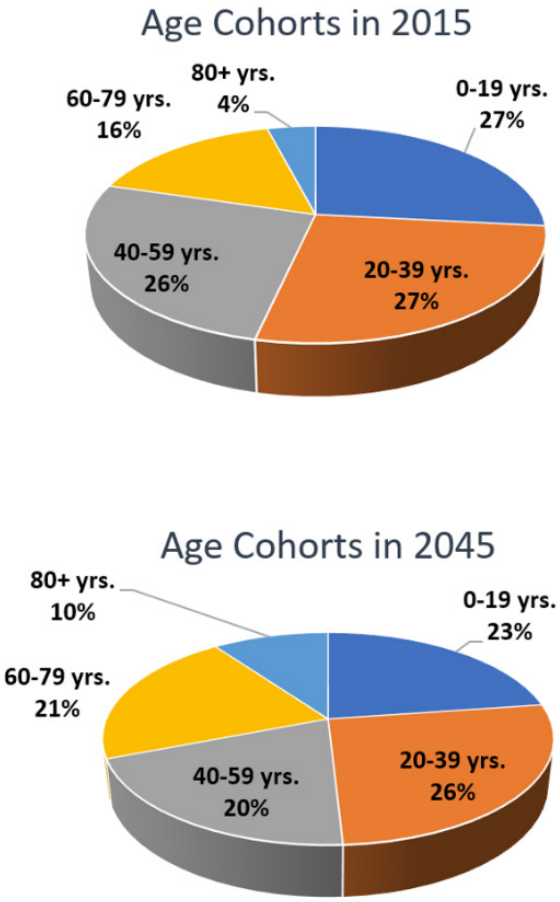


Figure 2-7: Race as Percentage of the Population (2019 U.S. Census ACS Data)

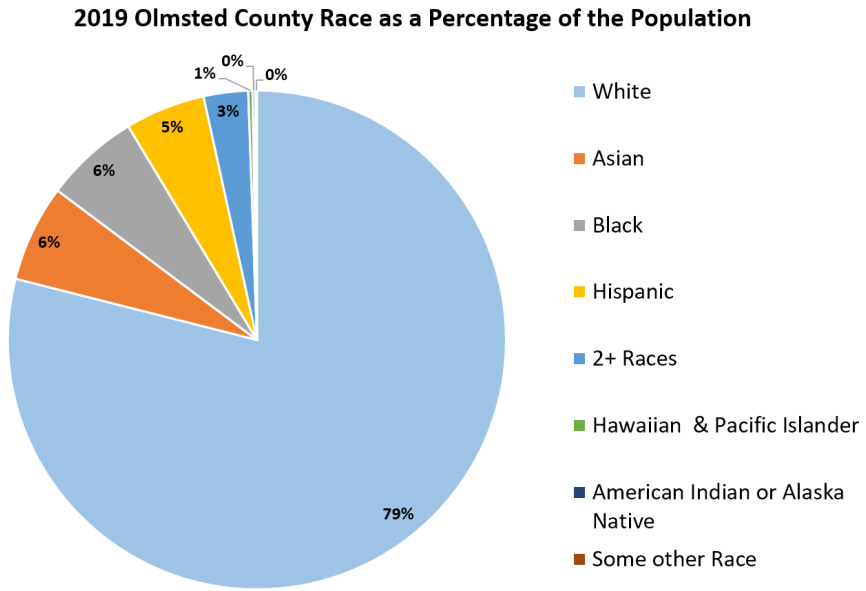
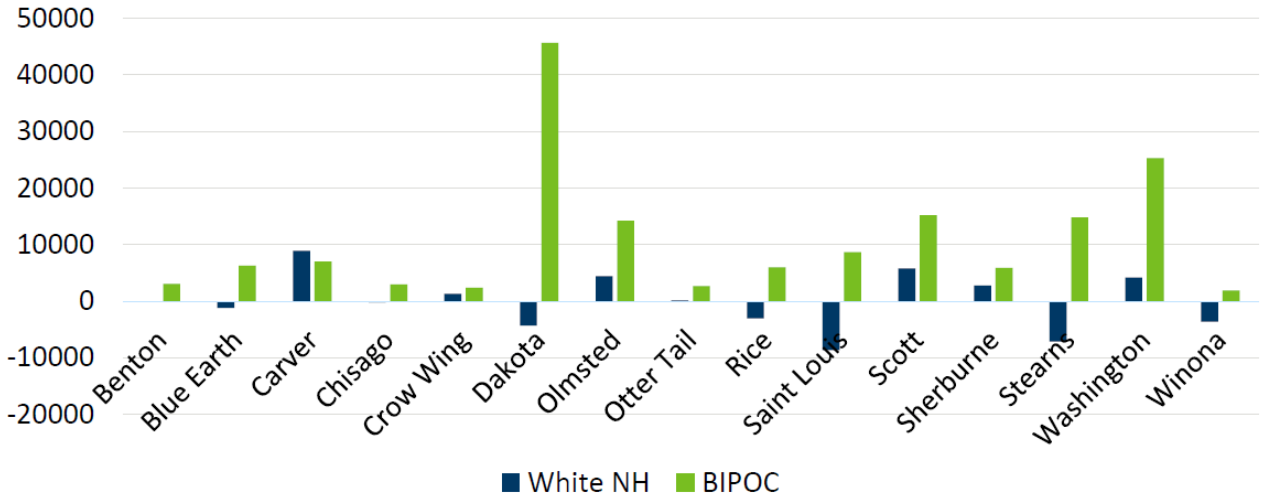


Figure 2-8: Change in County Population by White/BIPOC, 2010-2020 (U.S. Census Bureau)



Land use implications

Most of the projected population and household growth will take place in the urban service areas of Olmsted County cities. The age groups projected to significantly grow over the next 25 years are also those most likely to seek urban living in walkable neighborhoods with mixed use development. The Rochester Downtown Master Plan (2011) and the Destination Medical Center Plan (2015) expect a 100% to 200% increase in downtown Rochester's population as a result. Household types historically associated with suburban lifestyles, on the other hand, will grow only slightly.

Rochester will continue to house the vast majority of the county's population. The high level of job growth in the county, however, combined with short commuting times to jobs in Rochester and local economic development initiatives, has resulted in population growth rates in small cities comparable to those in Rochester. These communities will continue to offer attractive residential options for those desiring to live in a smaller community.

Applying conservative assumptions to household growth, housing style, vacancy rates, and resulting land area demands, urban service areas have more than adequate land area to handle projected residential growth. It is likely that some parts of the urban service areas will in effect become reserves for urban growth beyond the period of this GLUP, some of which may be in the form of interim development (see Chapter 10 for more information on interim development).

Trends in age and household structure will also impact travel modes and patterns in the county. The age groups with large growth rates are most likely to rely on transit or ride sharing services such as Lyft and Uber. Households with children, however, are expected to account for only 2% of the household growth during the life of this plan. These household units typically have the highest trip generation rates, suggesting that vehicle traffic may decline at the household level in the future.

People moving to our area bring their cultural traditions and lifestyle preferences with them. Olmsted County must be open to and prepared for land use needs and expectations that will accommodate our new community members.

OLMSTED COUNTY
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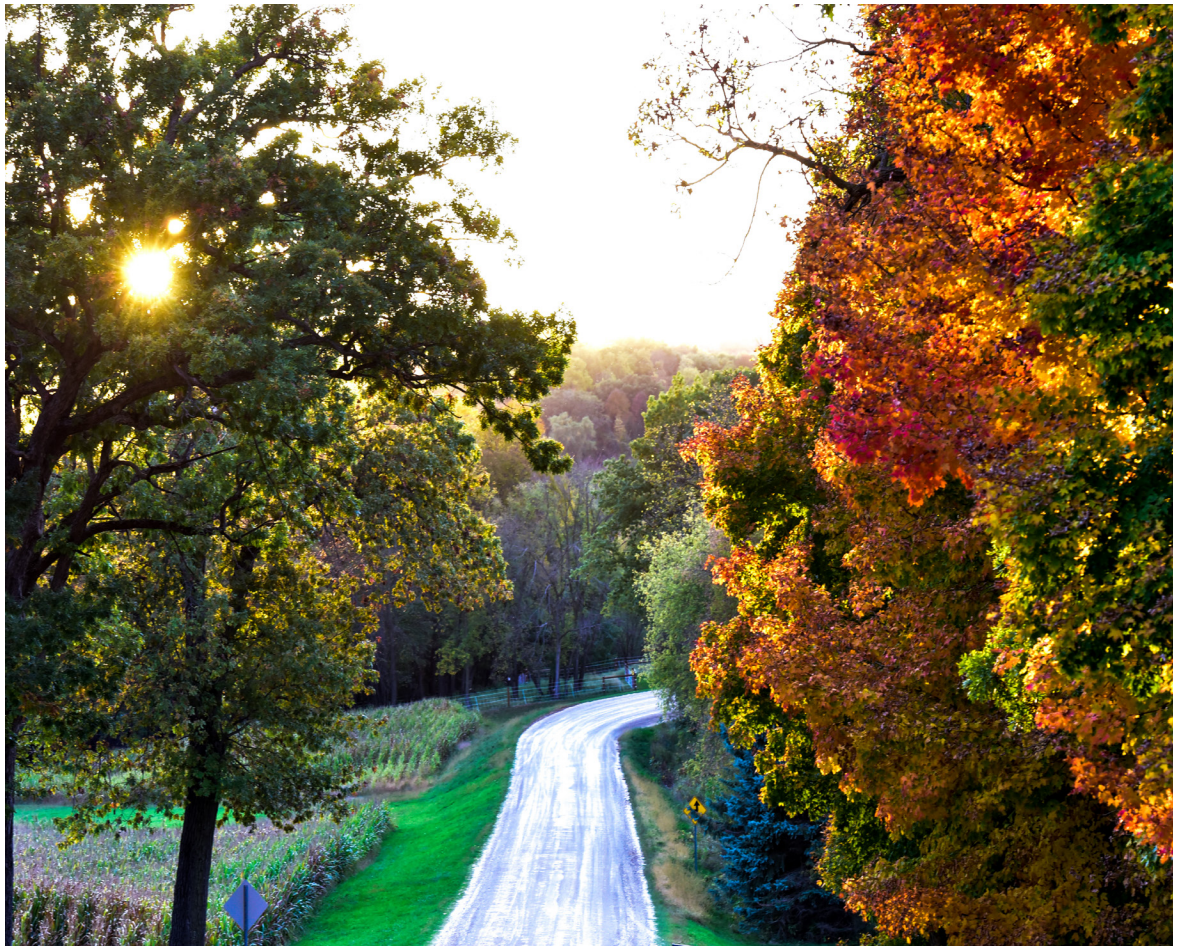
3 • The Land



Source: John Weiss

Olmsted County's natural features have historically shaped its land use patterns. Climate, terrain, water, soils, and geology physically limit how land is developed.

The GLUP strives to ensure that wise use and understanding of these features also satisfies the community's health, environmental, and economic needs.

Geography

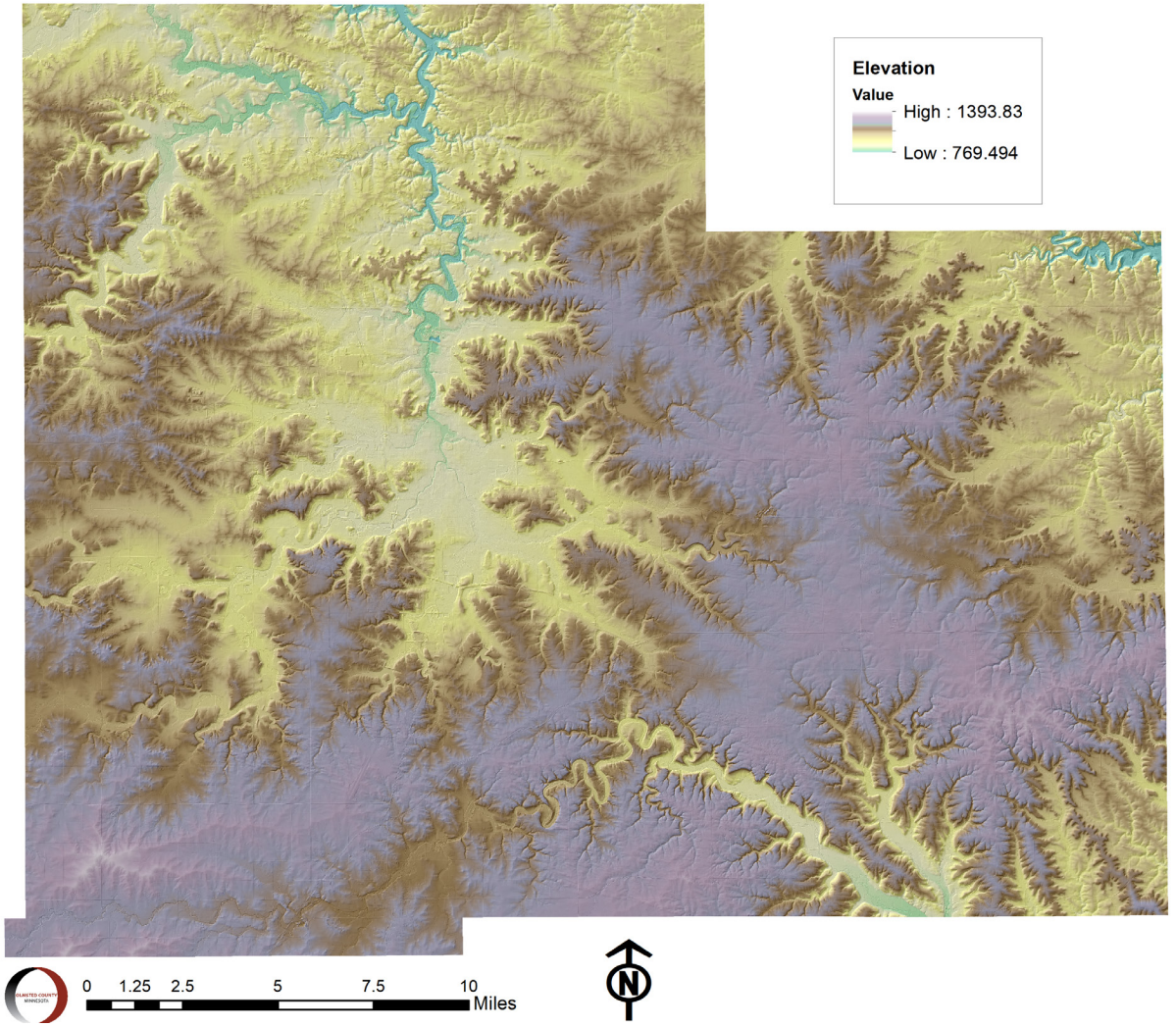
Our climate has large variations in seasonal temperature. Winters are long and cold; summers are warm and humid. Severe storm events are routine year-round, ranging from severe thunderstorms and tornadoes to ice storms and blizzards. Climate adaptation has and will continue to increase not only the number of these weather events, but also their severity and impact upon the land and the built environment.

Olmsted County has a flat to gently rolling terrain, broken up by steep slopes found along stream corridors.

The highest elevation of approximately 1360 feet above sea level is in the southwest part of the county, while the lowest is the bottom of the North Fork Whitewater River valley at about 800 feet (Figure 3-1).

Figure 3-1

Elevation



Surface water and associated features

While Olmsted County has no natural lakes, an intricate network of seasonal and permanent waterways blankets the landscape. Three major watersheds — the Root River, Mississippi River Winona-La Crescent (WinLac), and Zumbro River — drain the land, and surface pollutants, into this system (Figure 3-2).

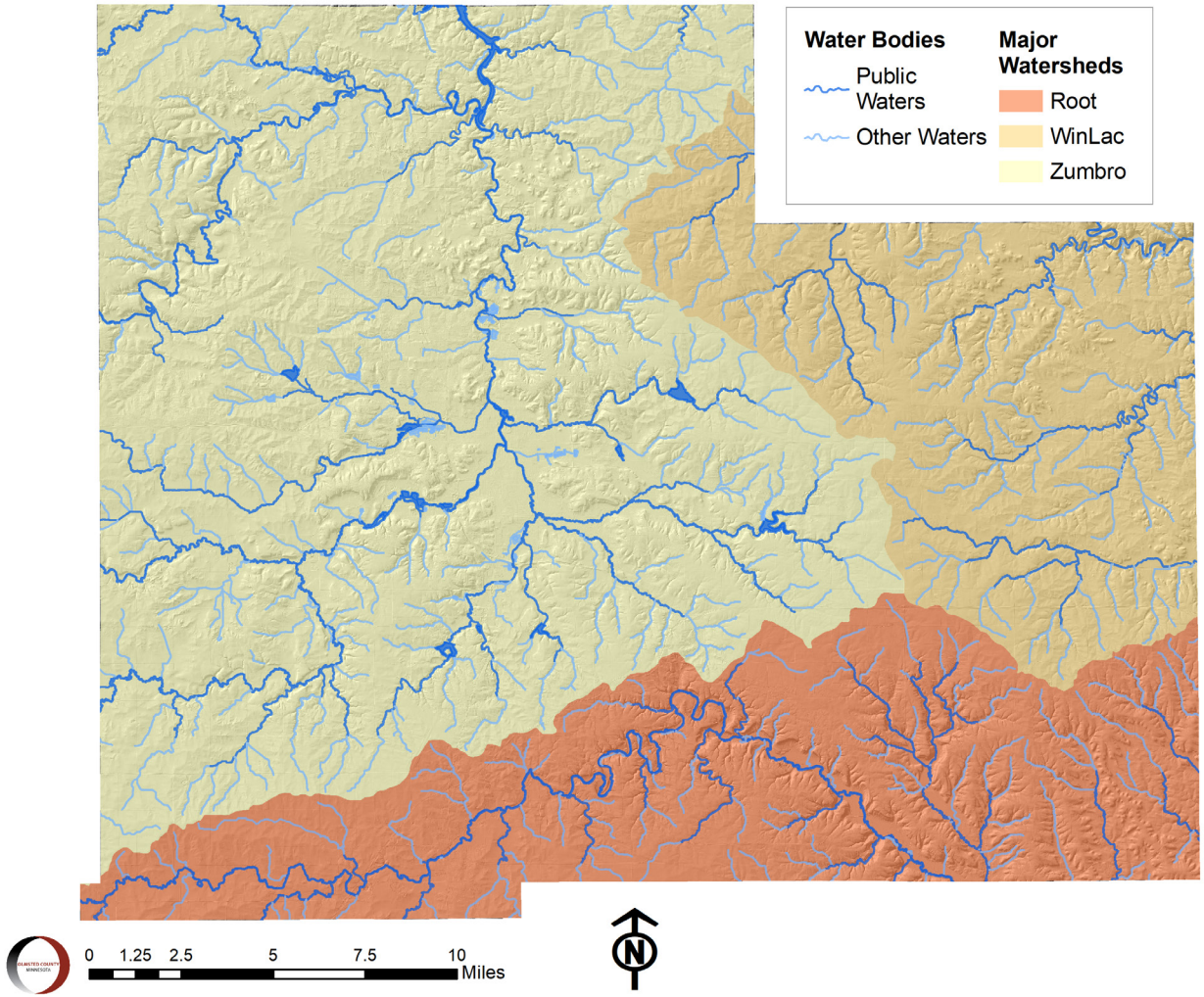
Floodplain

Floodplain is the land next to lakes and rivers that has a one percent chance of flooding in any given year. These natural areas affect stormwater runoff, water quality, and plant and wildlife ecosystems.

While some types of development are allowed within the floodplain, proper floodplain management minimizes risk from potential flood hazards. Since 1980, Olmsted County has administered floodplain

Figure 3-2

Major Watersheds



management zoning controls. These regulations exceed the minimum standards required by the Federal Emergency Management Agency (FEMA) and the Minnesota Department of Natural Resources (MN DNR).

FEMA has not evaluated all areas of the county with the potential for flooding as part of their National Flood Insurance Program (NFIP). Unstudied floodplains are found in undeveloped, natural, and agricultural areas along rivers, small streams, non-public waters, and naturally occurring drainageways. In these areas, the Soil Survey of Olmsted County can be used to identify water-deposited soils that are potentially prone to flooding.

County staff must evaluate any proposed changes to the floodplain for potential negative consequences. The mapping and analysis abilities of geographic information systems (GIS) can help calculate flood risk. Considerations include:

- **Pollution reduction:** Properly managed floodplains reduce the amount of sediment deposited into our water resources and enhance the environmental quality of neighboring areas.
- **Economic impacts:** Flood events cost the U.S. billions of dollars every year (Figure 3-3). Floodplain management can help public and private landowners lower their risk of land, building, infrastructure, and property damage due to flooding.
- **Adjacent impacts:** Land use choices help reduce potential impacts of flooding on neighboring properties outside the floodplain such as soil erosion and loss of road access.

Shorelands

Minnesota's Shoreland Management Program was created in 1969 with the adoption of the Shoreland Management Act. Figure 3-4 illustrates the minimum

Figure 3-3

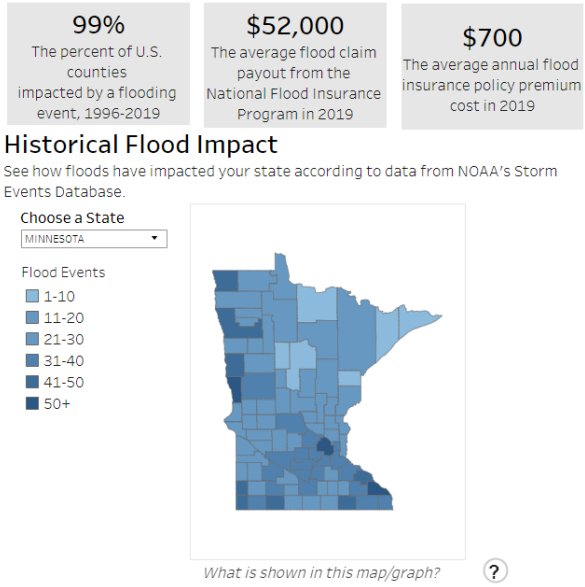
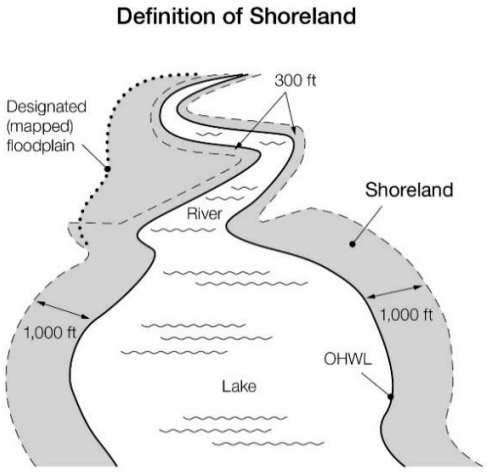


Figure 3-4: (Source MN DNR)



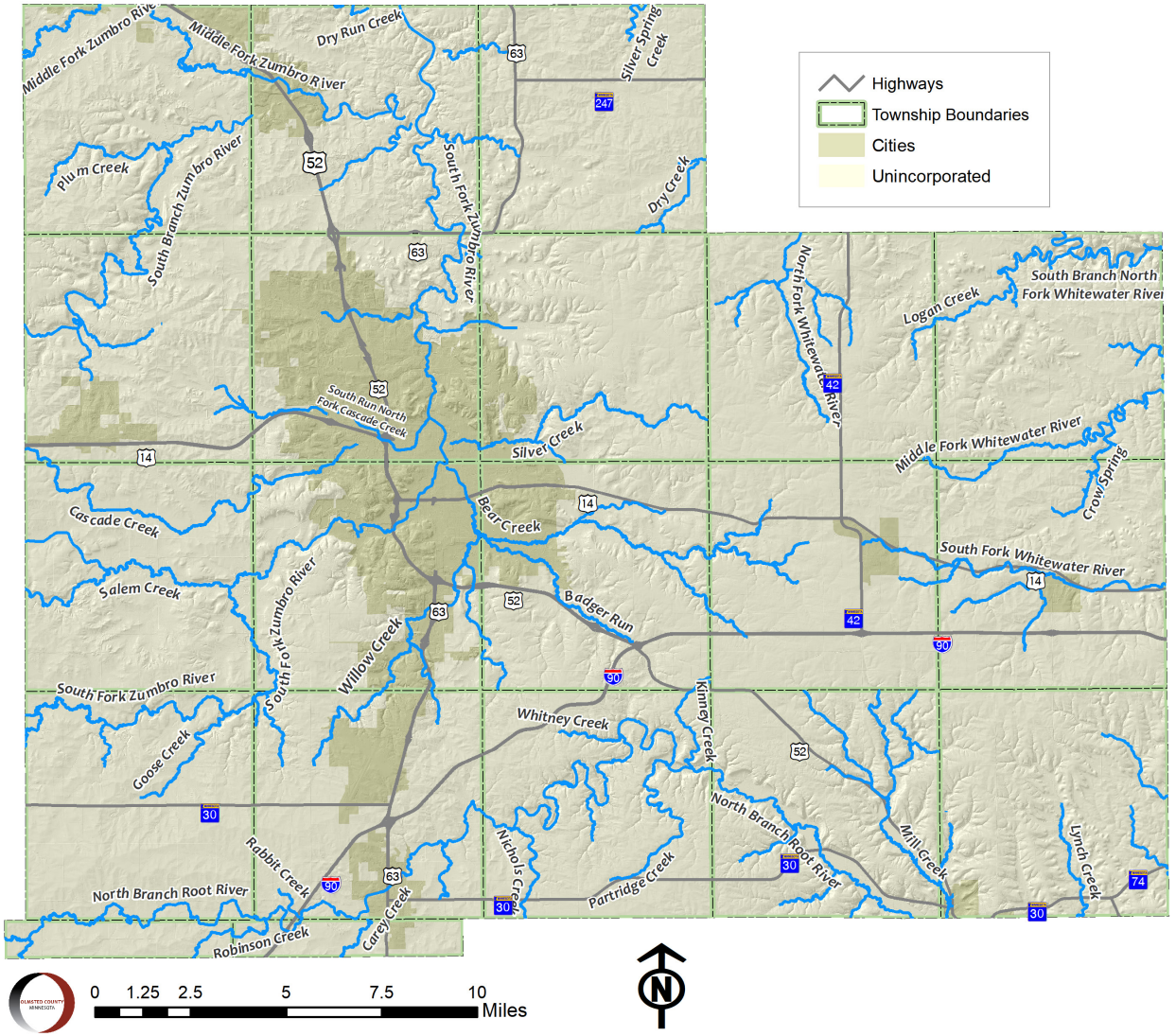
development standards for areas next to public waters in order to protect sensitive shoreland features, important habitat, and soils with a high risk of erosion.

Shoreland standards sustainably regulate development near sensitive water bodies (Figure 3-5). Natural deep-rooted vegetation anchors the soil and reduces the amount of sediment entering public waterways. This protects water quality and greatly reduces the need for expensive, time consuming restoration efforts to remove surface water pollution.

Olmsted County has shoreland management strategies in its subdivision and zoning ordinances. These regulations are based on the Minnesota Department of Natural Resources' model ordinance and are at least as or more restrictive than those found in Minnesota State Statutes.

Figure 3-5

Public Waters



County policies for shoreland management include:

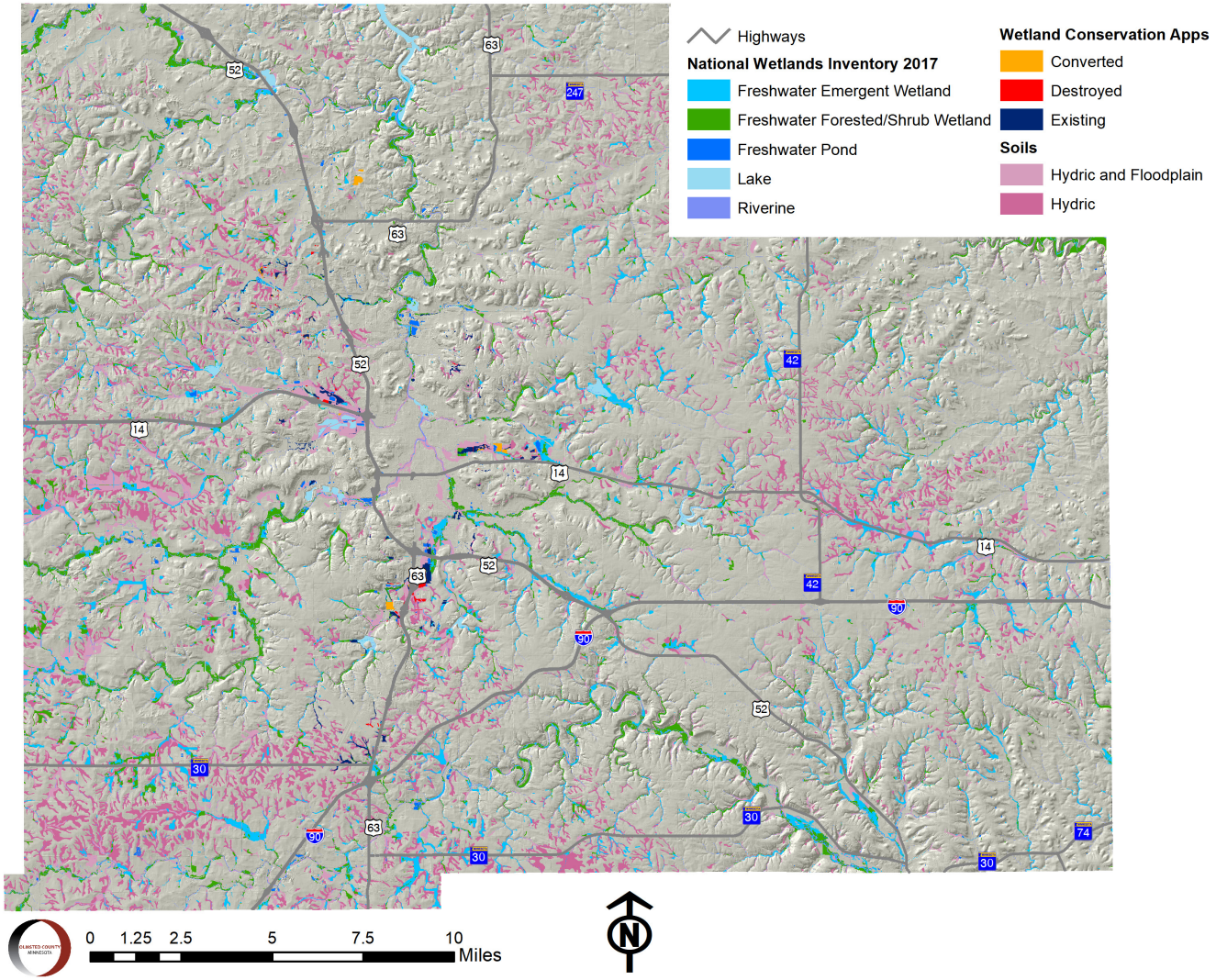
- Work with MN DNR to map all shoreland in Olmsted County into electronic databases.
- Work with Township Cooperative Planning Association and townships in shoreland management issues.
- Educate landowners on the importance of shoreland stewardship.

Wetlands

Wetlands are areas where water permanently or seasonally covers the soil or is present either at or near the surface of the soil (Figure 3-6). Plants in these areas have typically adapted to life in very wet conditions. Minnesota has more wetland acreage than any

Figure 3-6

Wetlands



other state except Alaska, in spite of extensive losses due to conversion for agricultural and development uses since the mid-19th Century.

While many people think of wetlands as swampy, marshy areas with standing water and cattails, there are many types of wetlands in Minnesota, each with widely varying characteristics. Some wetlands are dry for much of the year; others may be covered by several feet of water. Some wetlands have grasses and sedges, shrubs, or trees. They may be small, confined basins or extend for hundreds of miles.

The debate over the value of wetlands has existed since Minnesota gained statehood in 1858. Early water management in Minnesota consisted mainly of manipulating surface waters – mostly wetlands and small lake areas – in an attempt to make more land suitable for farming. People considered wetlands as undesirable wastelands, and wide scale land drainage was common.

As settlement increased, especially along the state's rivers, floods and property damage often occurred and people began to value wetlands in floodplain areas as water storage basins. In the late 1980s and early 1990s, summer drought patterns increased public awareness of the need for wetland preservation.

In 1991, Minnesota passed the Wetland Conservation Act (WCA) to save these critical areas from destruction. Wetland preservation permanently protects the ability of relatively pristine Minnesota wetlands to perform their natural functions.

- **Erosion control:** Wetland vegetation reduces wave damage along lakes and stream banks.
- **Flood control:** Wetlands can slow and retain runoff water, reducing the frequency and amount of flooding along streams and rivers.
- **Groundwater recharge and discharge:** Some wetlands recharge groundwater by holding surface water and allowing it to slowly filter into the groundwater reserves. Some wetlands are discharge areas; they receive groundwater even during dry periods and help maintain flows in nearby rivers and streams.
- **Water quality**: Wetlands naturally protect the water quality of downstream lakes, streams, and rivers by removing pollutants. This may result in less investment in gray infrastructure, such as catch basins, pipes, and ponds.
- **Rare species habitat:** 43 percent of threatened or endangered species in the U.S. live in or depend on wetlands.
- **Recreation:** Wetlands are a great place to canoe, hunt, fish, and watch wildlife.
- **Economic value:** Wetlands provide economic commodities such as wild rice and bait fish.

State and/or federal law protects most wetlands in Minnesota. In some cases, local ordinances are in place. WCA applies to all wetlands, including those on private property, to achieve “no net loss” of wetlands. Olmsted County has enacted a Wetland Conservation Ordinance and Decorah Edge Overlay District to regulate local wetland conditions within our community. With some exemptions, wetland protection laws regulate activities in or near wetlands that can negatively affect the wetland through draining, filling, or excavating.

Soils

The U.S. Department of Agriculture’s Soil Conservation Service (now known as the Natural Resources Conservation Service) issued the **Soil Survey of Olmsted County, Minnesota** in March 1980. The soil survey is a detailed inventory and evaluation of all the soils in Olmsted County.

The data cataloged in the soil survey are valuable to land use planning and form the basis of many of the adopted policies and tools found in the GLUP. While the scale of the data is not suitable to site-specific projects, the information contained in this document, such as physical properties, engineering classifications, and management concerns, helps virtually all land users understand the general suitability of the soil for their needs.

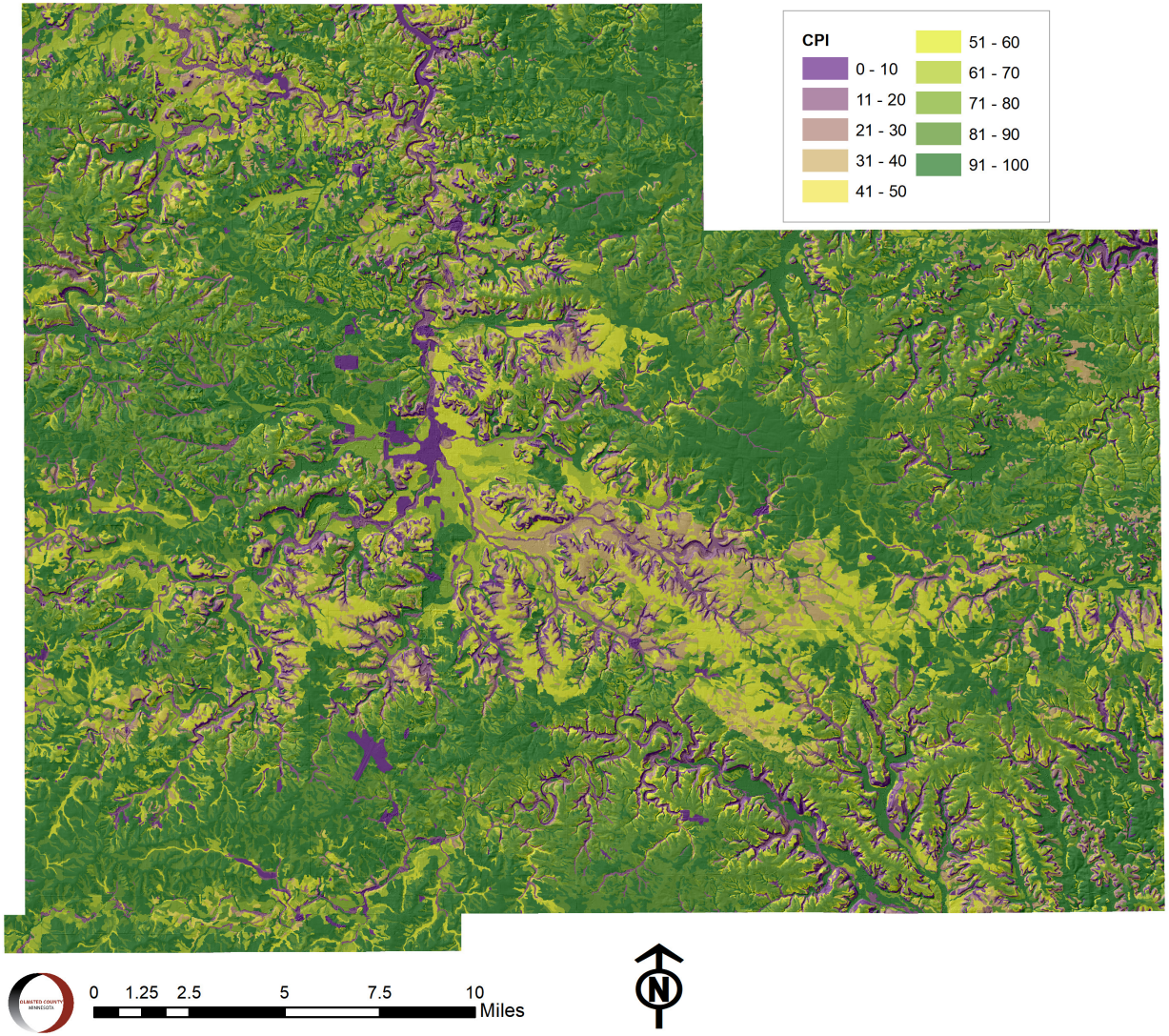
Some of the most significant soils characteristics are described below.

Crop productivity index (CPI)

The CPI ranks soils based on their potential for intensive crop production. Values range from 0 to 100; the higher the CPI, the higher the production potential (Figure 3-7). The GLUP typically categorizes areas with high CPIs as “Resource Protection” on the land use map in order to reserve them for agricultural uses.

Figure 3-7

Crop Productivity Index (CPI)

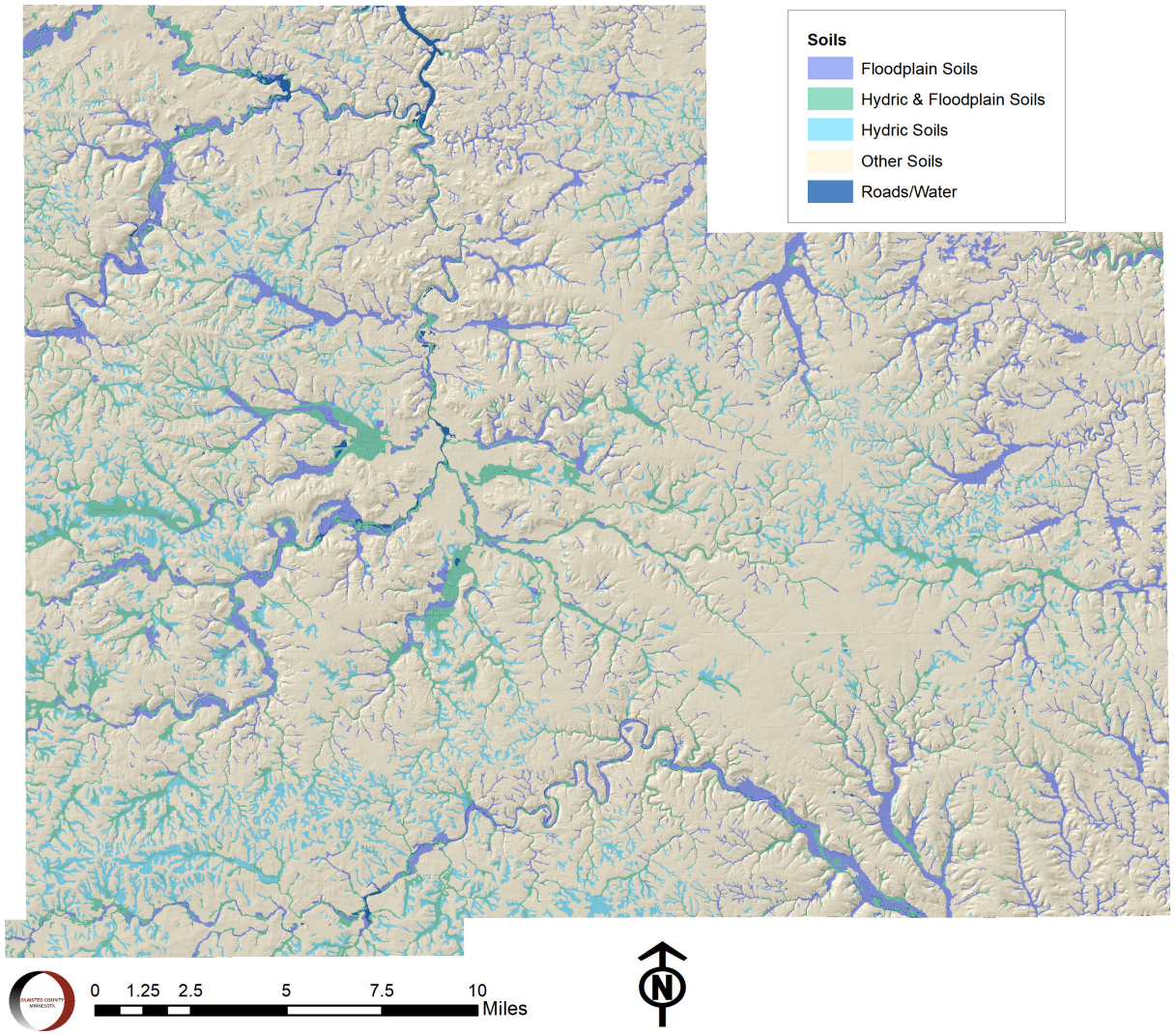


Hydric and floodplain soils

Hydric soils were formed under conditions of water saturation and are indicators of potential wetlands. Floodplain soils were deposited during floods and flag areas that may be prone to flooding (Figure 3-8). Building in these soils may result in unstable foundations and roadways, wet basements, and building collapse. Preservation of these soils allow for natural water storage and filtration.

Figure 3-8

Hydric & Floodplain Soils

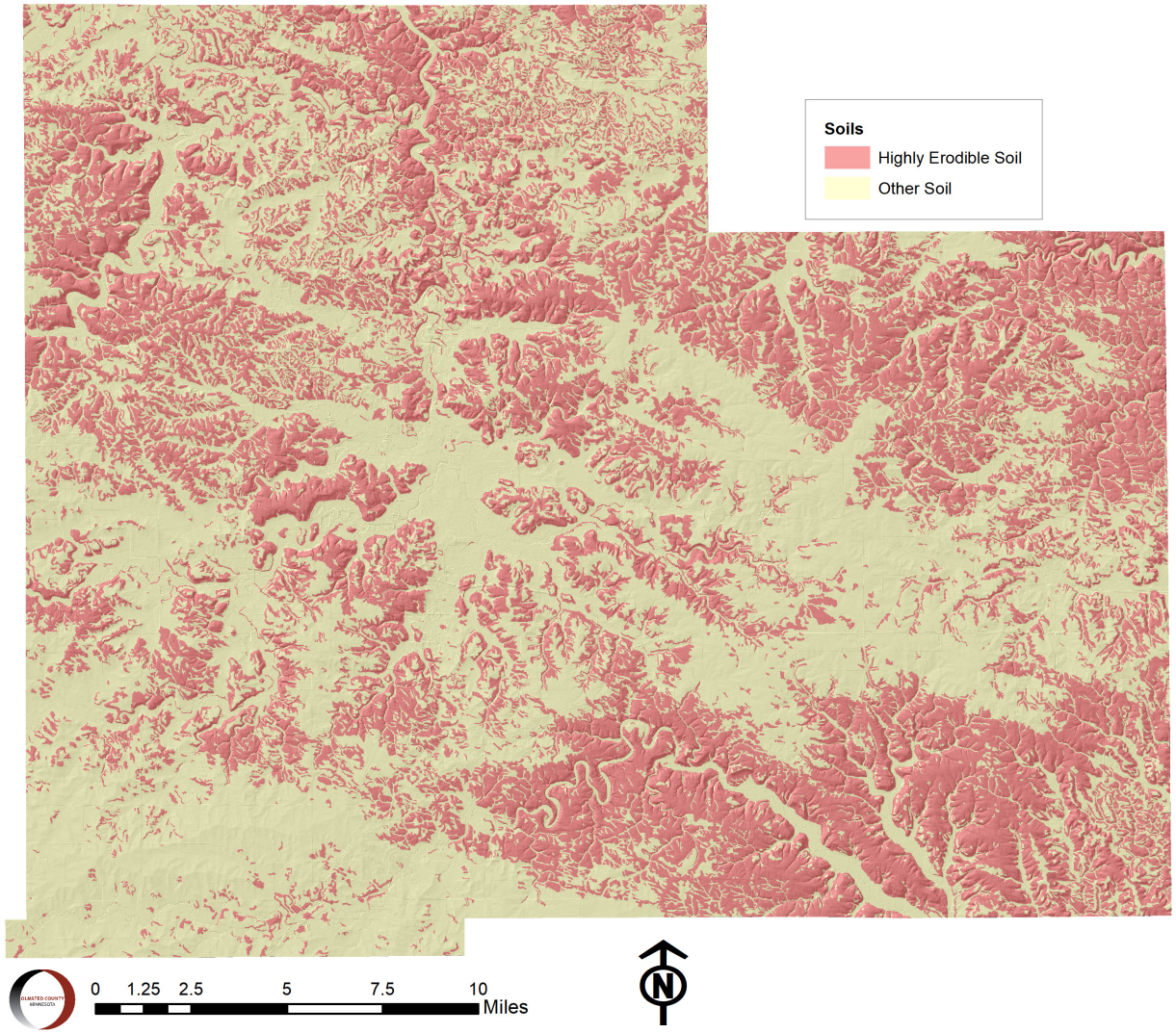


Erodible soils

The soil survey classifies a significant portion of Olmsted County soils as “highly erodible”; that is, they tend to wear away due to wind or water movement (Figure 3-9). This erosion can result in surface instability and landslides, especially during storm events. Erosion control measures are critical to proper maintenance of properties having these soils.

Figure 3-9

Highly Erodible Soils

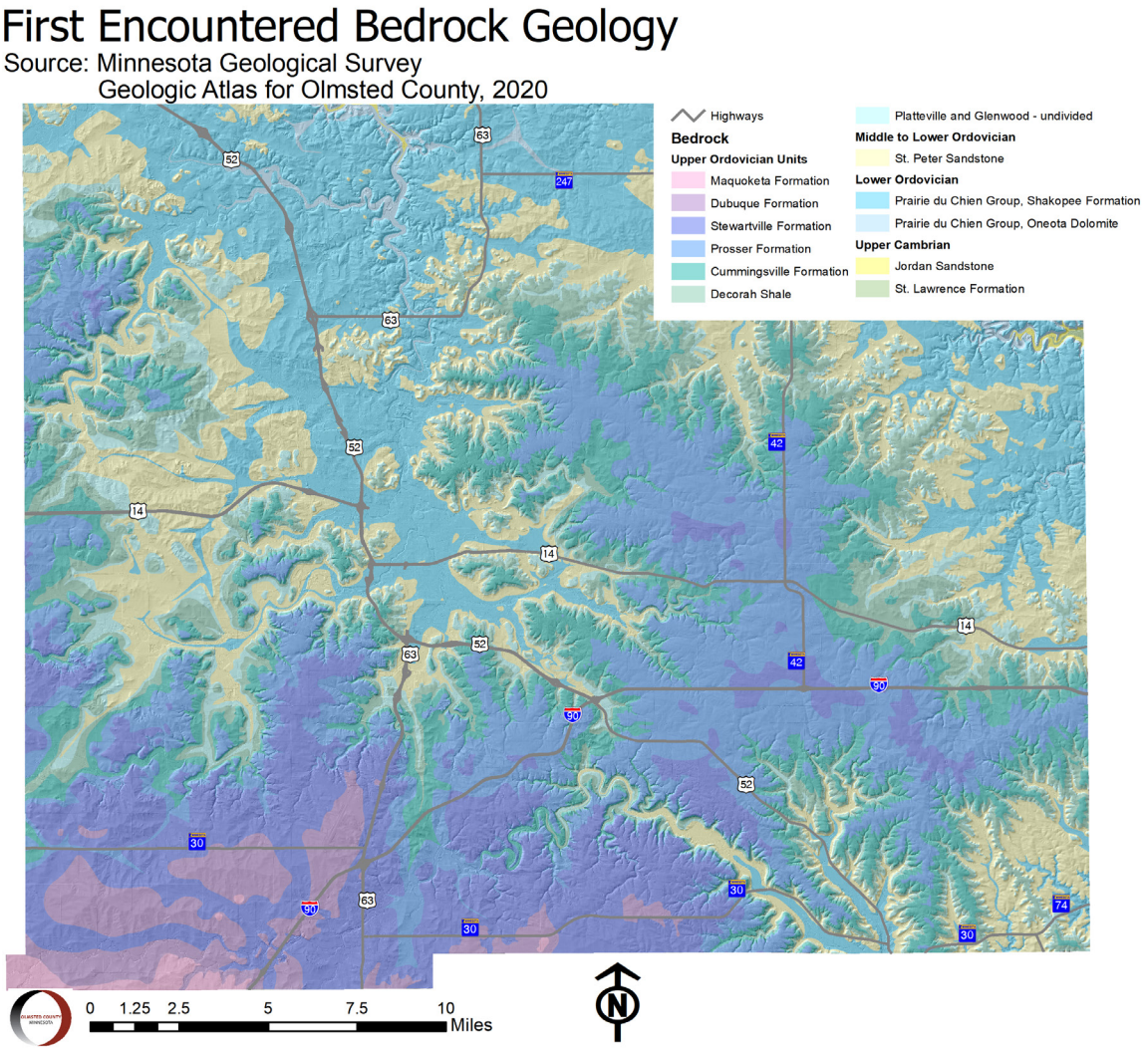


Geology

In 1988, the Minnesota Geological Survey (MGS) created Olmsted County's first "geologic atlas" to describe the area's geology, hydrogeology, and sensitivity to the movement of surface pollutants to the geologic formations below. This dataset contains critical information for evaluating the potential environmental impacts of land use activities and deciding on proper responses to hazardous events. An update of this data is underway.

The bedrock units that lie beneath Olmsted County's surface form a series of "aquifers", thick layers of sandstone, limestone, and dolostone that hold large amounts of water in their cracks and pores (Figure 3-10). These aquifers are the source of all drinking water in the county. Denser "confining layers" keep water from flowing into deeper formations by separating these aquifers.

Figure 3-10



Mildly acidic groundwater is slowly dissolving the bedrock in our part of the state, producing distinct groundwater conditions and landforms known as “karst”. The Minnesota Pollution Control Agency (MPCA) considers Olmsted County an “Active Karst” region (Figure 3-11).

Karst aquifers are highly susceptible to contamination because fractures and sinkholes form passageways that funnel water and contaminants from the surface into the groundwater system below. Their interconnected cavities allow the water to move rapidly over considerable distances (Figure 3-12).

Figure 3-11

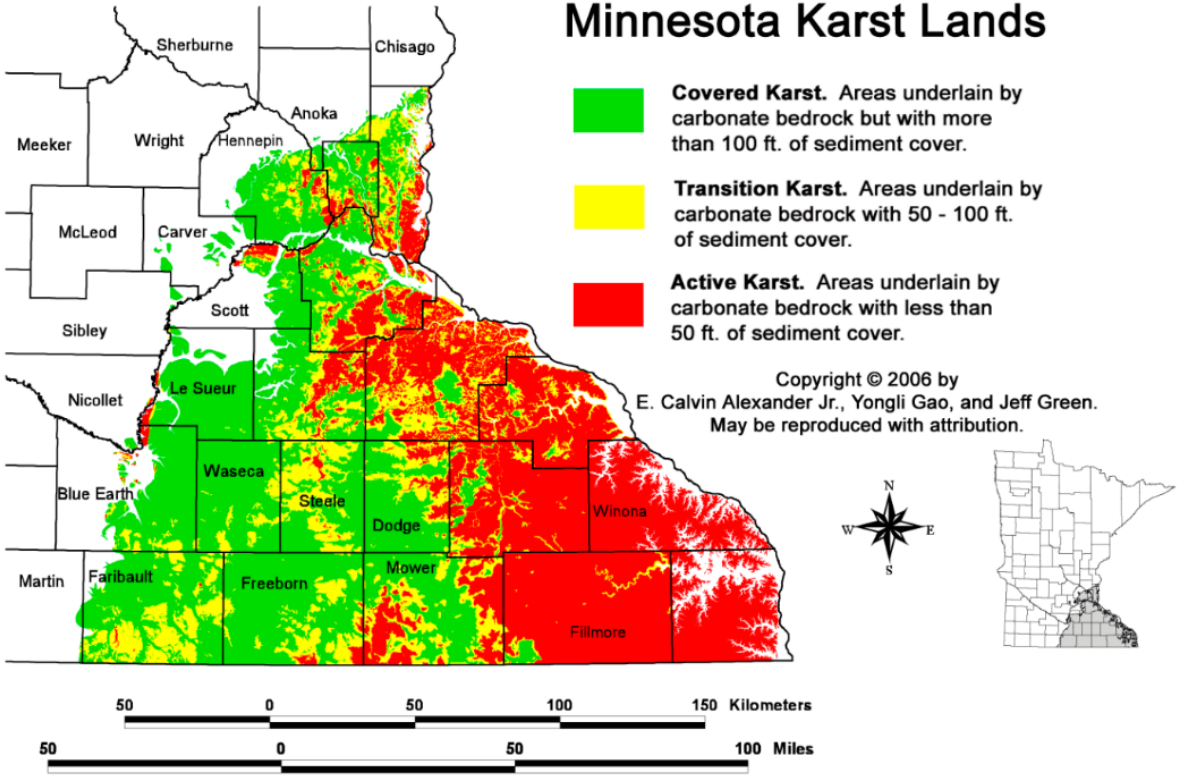
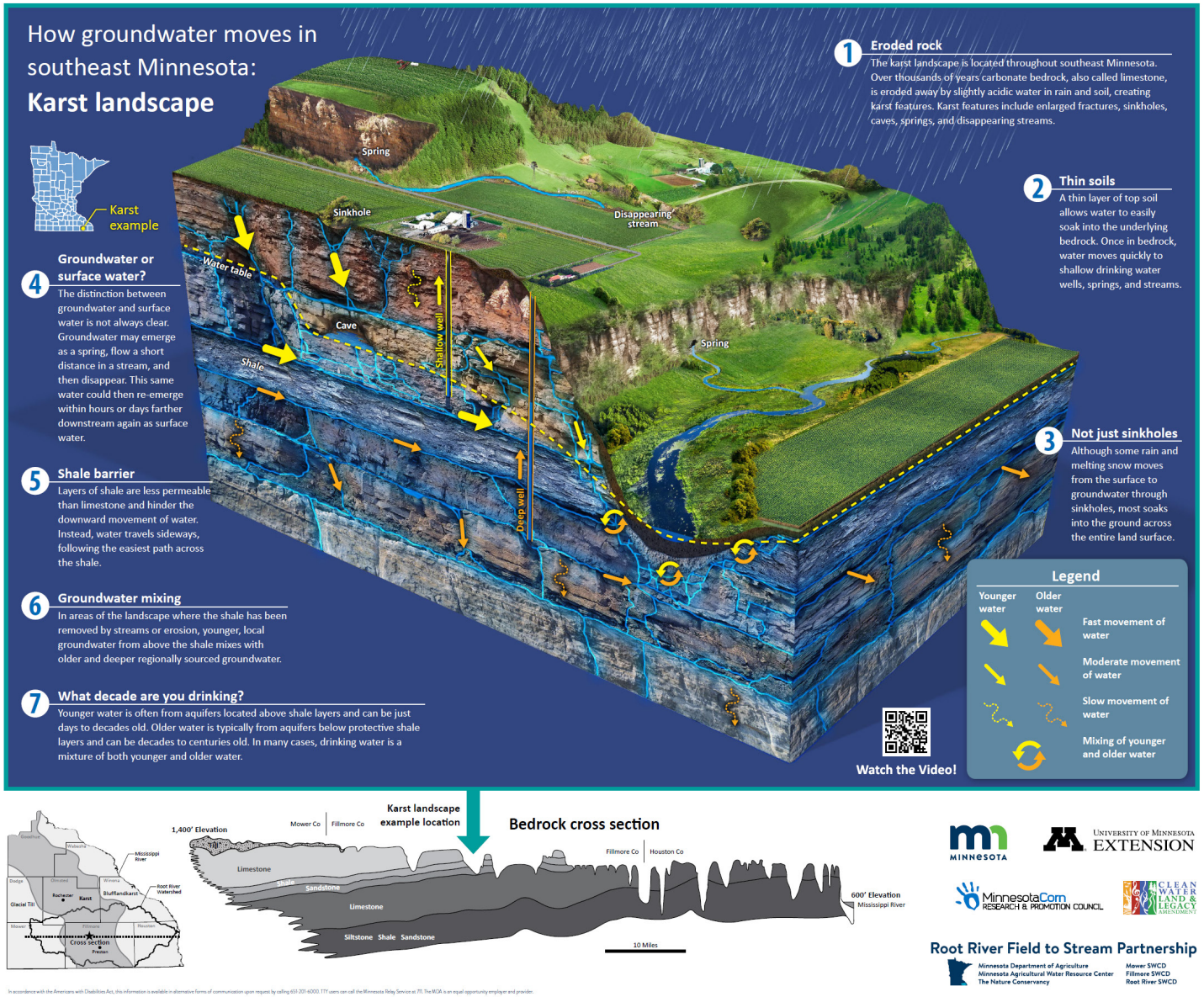


Figure 3-12



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MinnesotaCorn RESEARCH & PROMOTION COUNCIL
CLEAN WATER LAND & LEGACY AMENDMENT

Root River Field to Stream Partnership

Minnesota Department of Agriculture
Minnesota Agricultural Water Resource Center
The Nature Conservancy
Mower SWCD
Fillmore SWCD
Root River SWCD

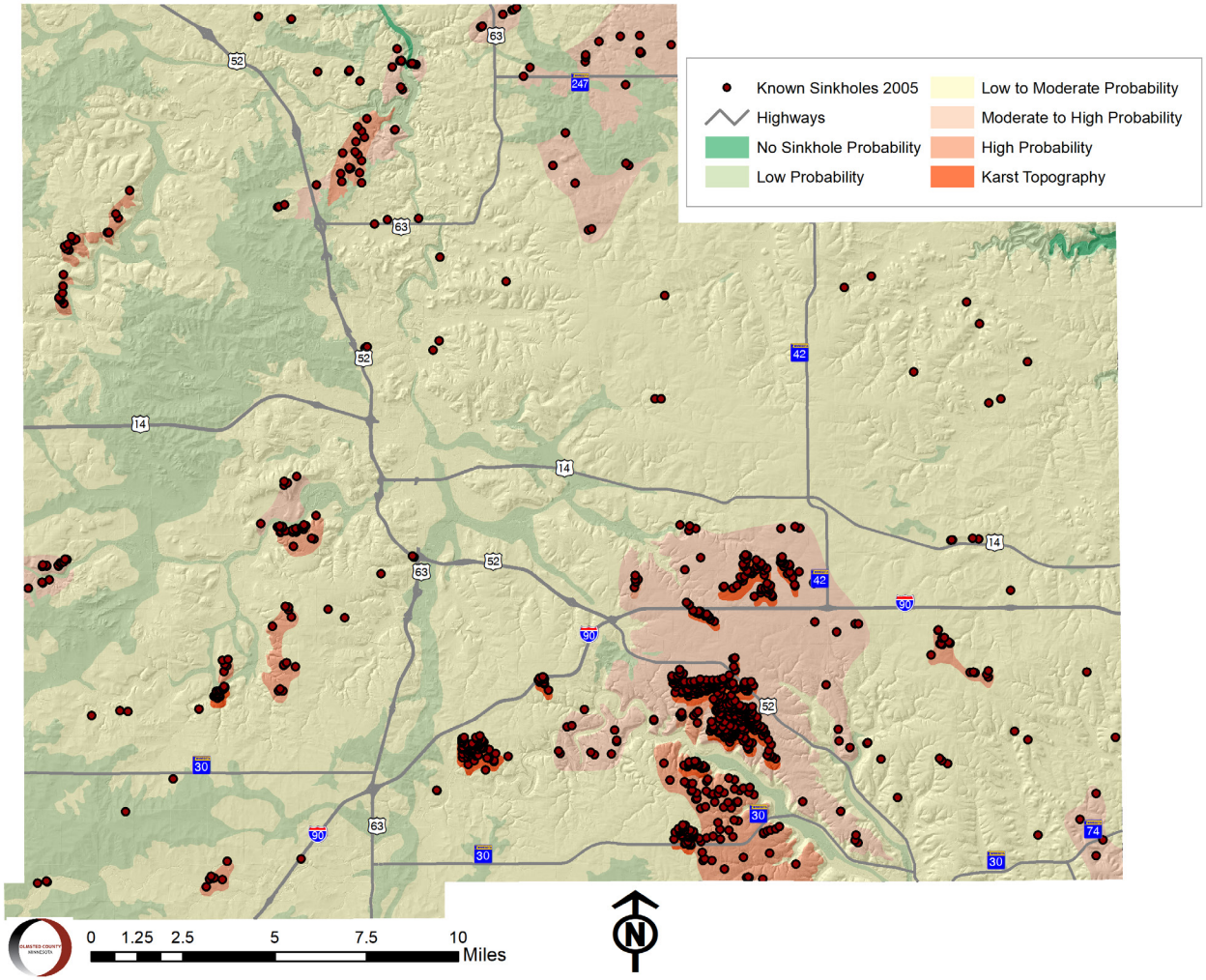
Karst features include caves, disappearing streams, sinkholes (Figure 3-13), and springs.

Typically, the closer the water table is to the land surface, the more susceptible the water is to contamination. Much of Olmsted County has just a thin coating of soils over the bedrock surface, providing little filtration ability or natural protection from surface pollutants to the aquifers below.

Figure 3-13

Sinkhole Probability

Source: Minnesota Geological Survey, Geologic Atlas for Olmsted County, 1988

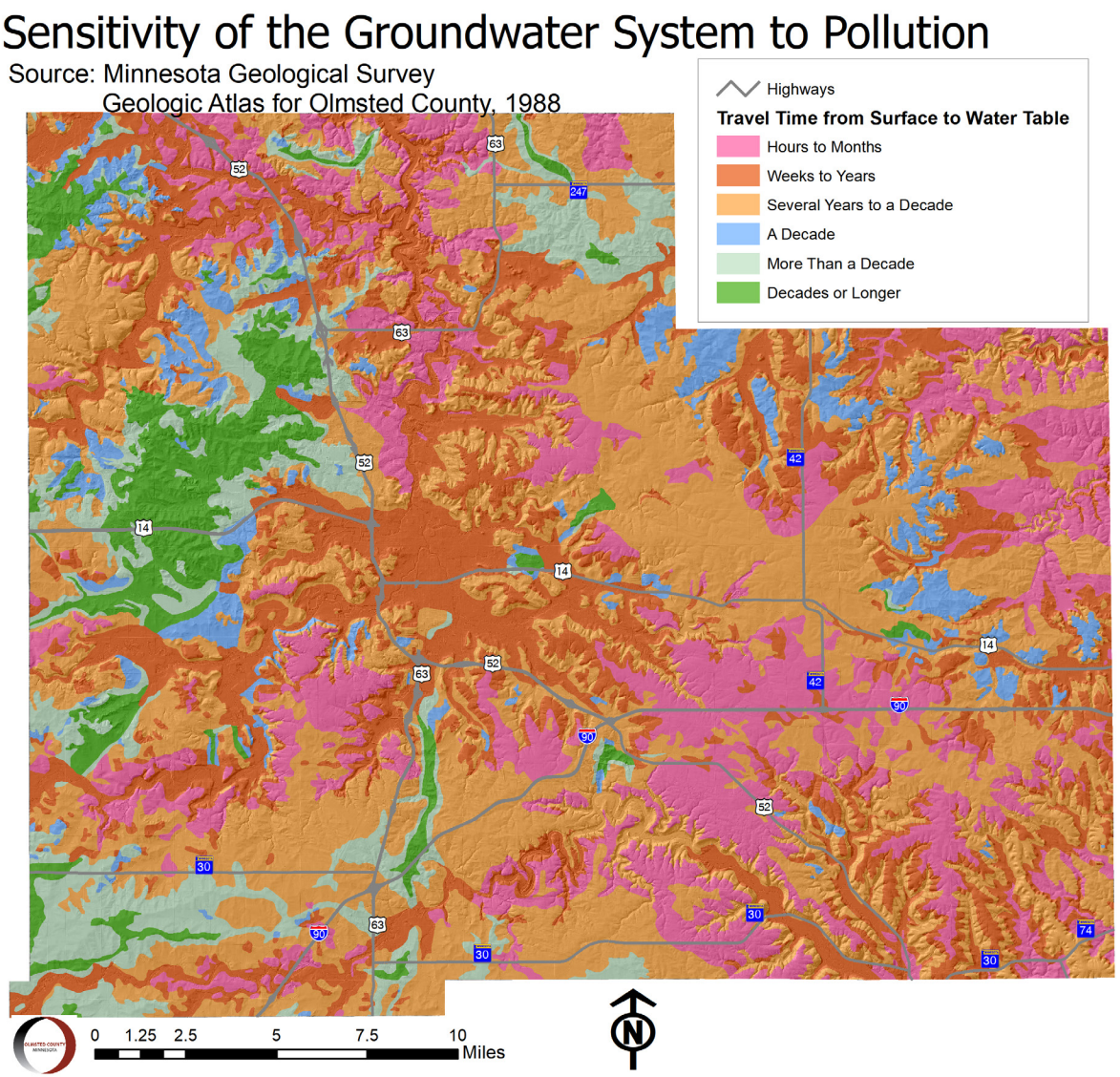


The combination of karst geology with shallow depth to bedrock increases the rate at which water carrying these contaminants can move downward from the land surface to the groundwater supplies. As a result, surface pollutants can reach the first encountered bedrock through most of the county in a matter of hours to a few years (Figure 3-14).

Decorah edge

The Decorah Edge is a unique area within Olmsted County. The Decorah shale formation limits the ability of water to pass through to the aquifers below (Figure 3-15). The water in the soil above the shale will flow laterally until it reaches areas where it can exit the soil. It then flows over the land until it reaches an area where it can soak back into the ground and continue its journey to our drinking water aquifers below. These flows are most visible

Figure 3-14



during wet periods when seeps and springs discharge along hillsides, but they can also be seen in excavations and in the basements of poorly-placed homes.

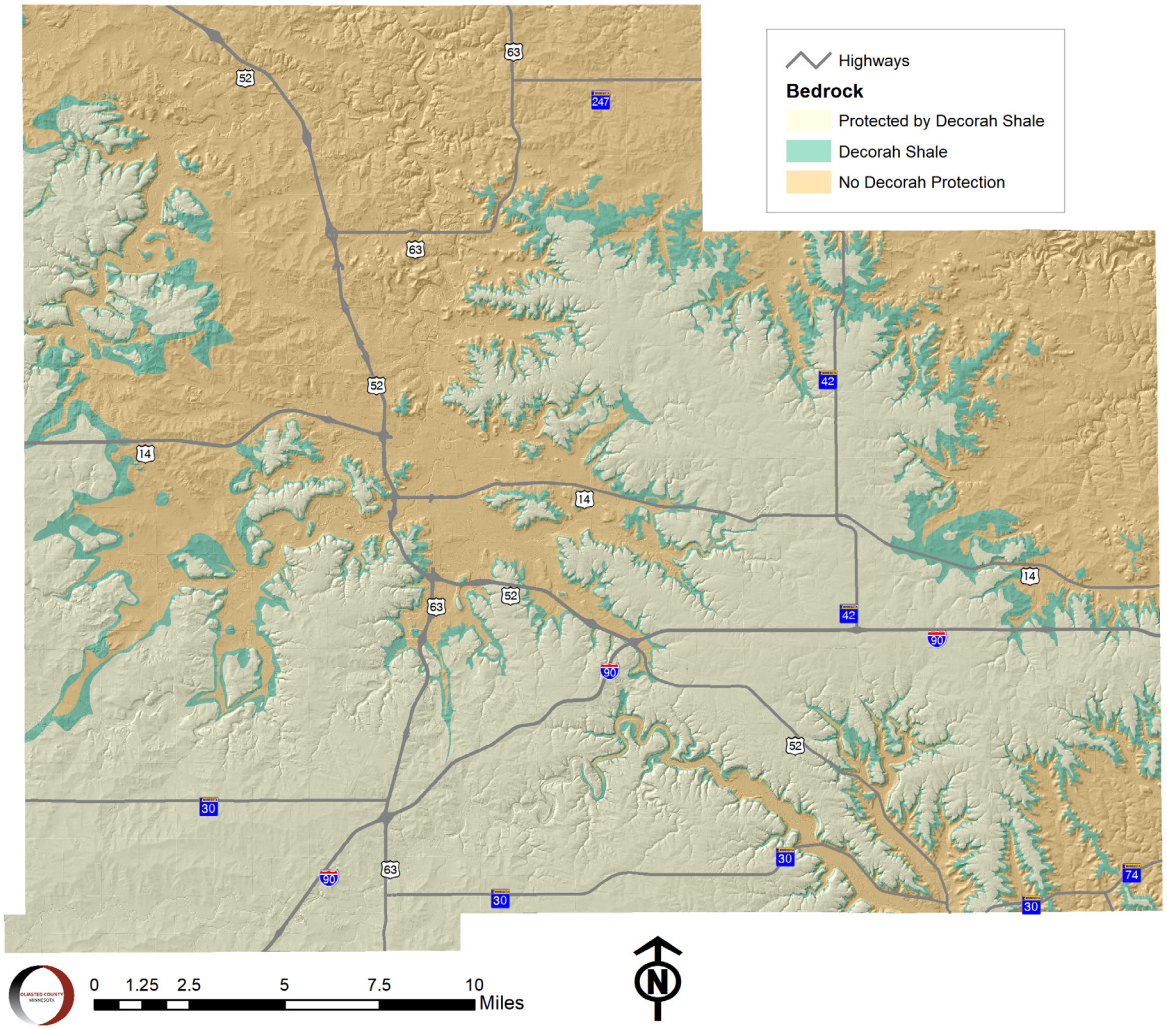
The Decorah Edge is a critical groundwater recharge area. It works as a natural filter removing pollutants from water as it flows through the soils, vegetation, and wetlands that overlie these areas. About half of Rochester's drinking water is replenished at the Decorah Edge.

In Olmsted County, the Decorah Edge is vulnerable to development pressures. Agriculture, urban, and suburban uses are common in the areas that drain to the Decorah Edge. Development disturbs groundwater flows, removes vegetation, and affects the filtration of our future drinking water. As a result, the groundwater above the Decorah Edge is often

Figure 3-15

Decorah Shale

Source: Minnesota Geological Survey, Geologic Atlas for Olmsted County, 2020



polluted with fertilizer, pesticides, manure, and sewage; the water just below the Decorah Edge generally has fewer of these pollutants.

Building on the Decorah Edge can be hazardous. Wet basements, flooding, and structural damage due to shrinking and swelling of the clay materials in the Decorah Edge soils can be expensive and frustrating to deal with.

Olmsted County and the City of Rochester have passed ordinances to protect the Decorah Edge features in our community. They keep maps that show those areas needing more study prior to development activities. The benefits of the Decorah Edge are well understood, the full impact of losing them is not.

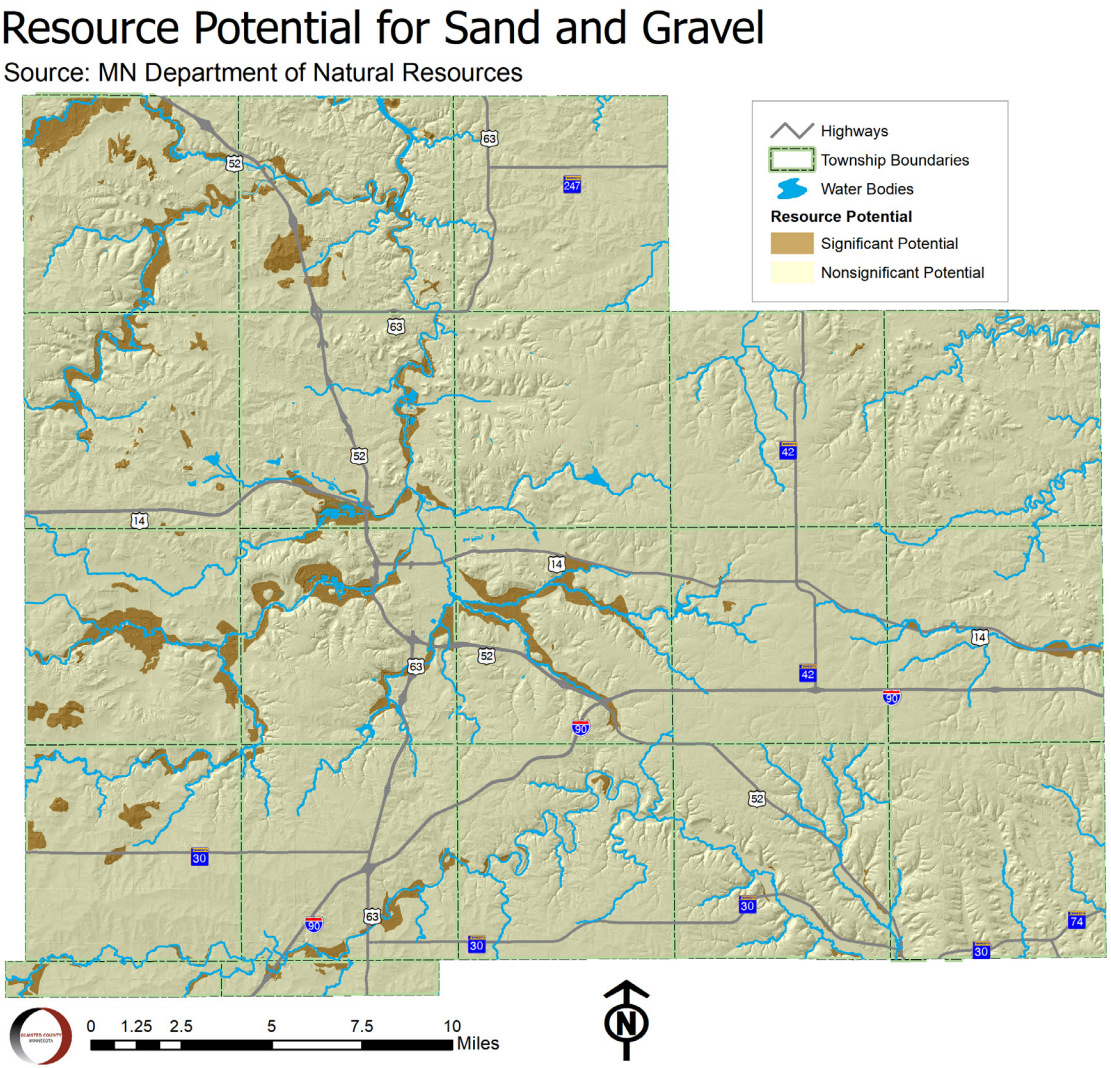
Geologic resources

Geologic resources, including sand, gravel, and limestone products, are vital components of our built environment. Residential construction, road projects, agricultural operations, and commercial activities rely on access to these materials. Figures 3-16 and 3-17 show the areas in Olmsted County that have significant potential for extraction of these resources.

A number of these areas currently have mineral extraction operations located on them (Figure 3-18). Some of these deposits are in sensitive shoreland areas, where ordinance requirements can make it difficult to access the resource. Technology, however, is improving to ensure that resources are extracted as efficiently as possible.

Where possible, county land use policy should preserve sites with excellent geologic resources for extraction operations. While the presence of materials dictates the location of these facilities,

Figure 3-16



extraction and transportation costs often determine which sites are ultimately used. The timing and manner in which these activities occur must ensure they operate in an environmentally conscious manner, address potential impacts (noise, dust, etc.) on surrounding properties, and have safe and adequate access to the county's network of nine- and ten-ton roads.

Figure 3-17

Resource Potential for Crushed Stone

Source: MN Department of Natural Resources

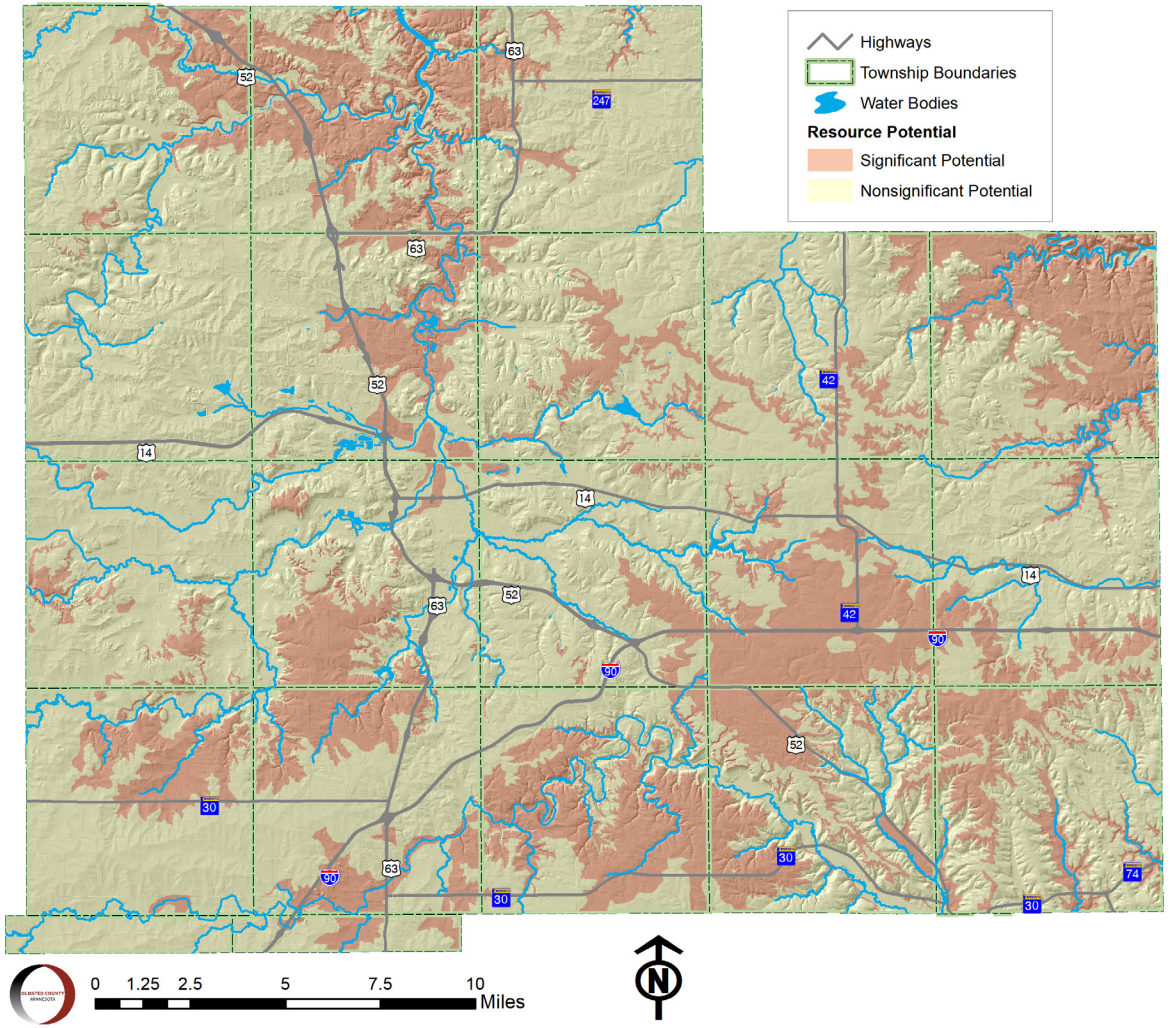
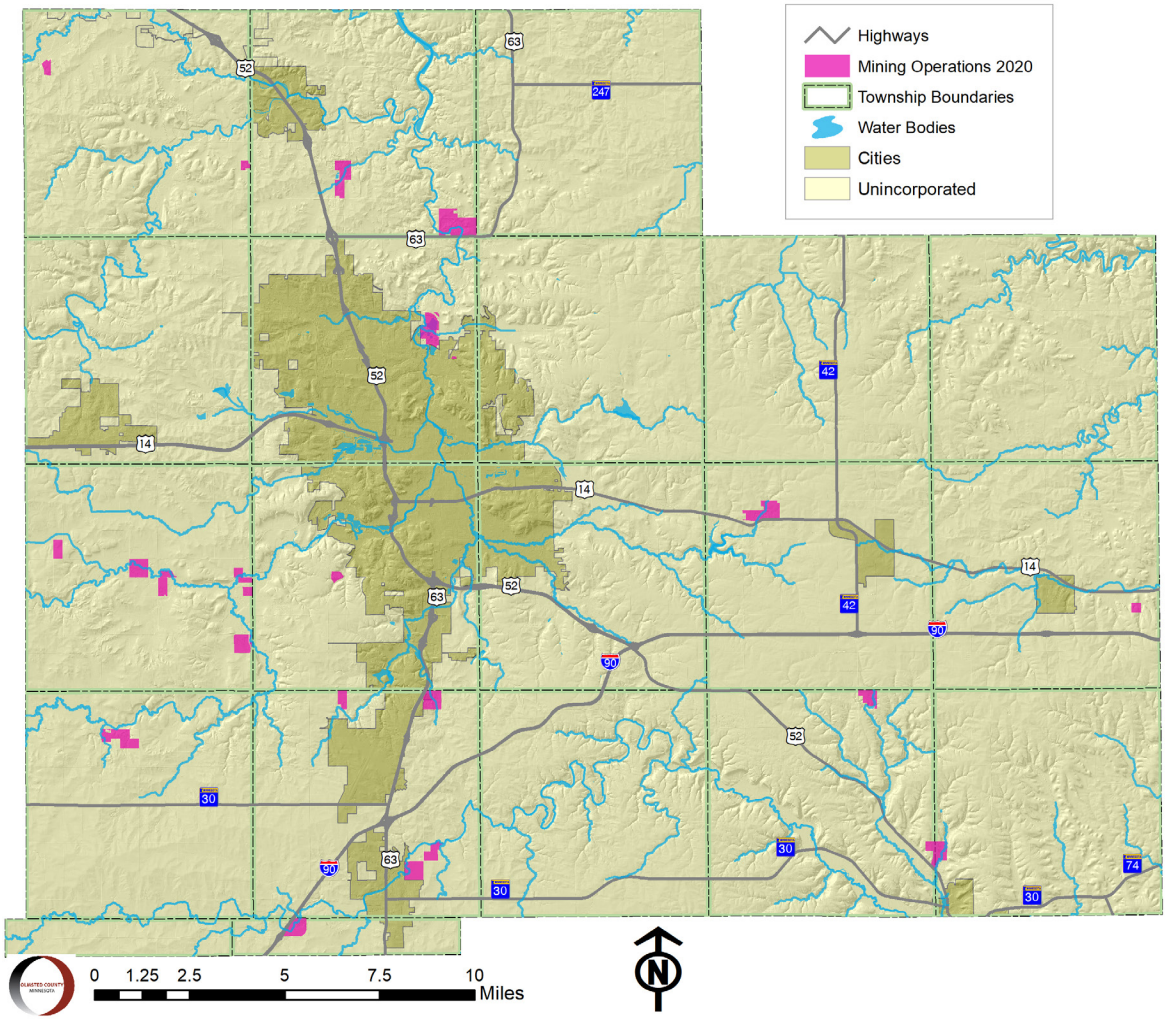


Figure 3-18

Current Mining Operations

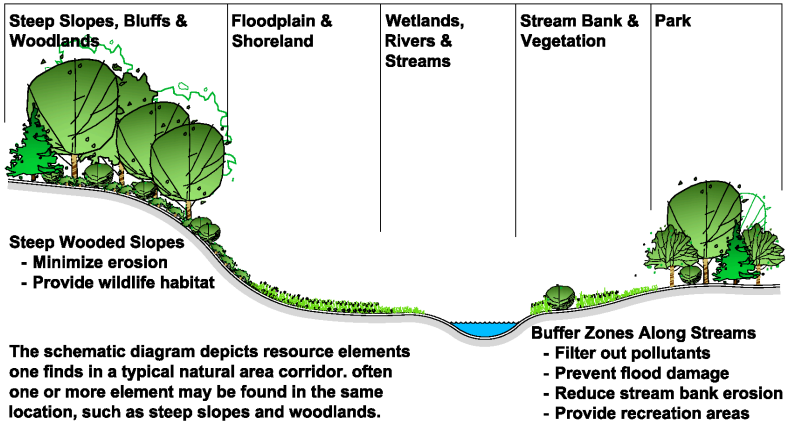


Environmental corridors

Environmental corridors are continuous linear connections of significant natural, environmental, historical, scenic, and recreational features. Identification and conservation of environmental corridors can protect key habitat and natural drainage systems while providing future connections to existing parks, population centers, and other open space systems. They promote cultural, social, and economic benefits by linking valued landscape features, creating opportunities for expansion of open space and trail systems, providing buffer areas between communities and other land uses, and contributing to the county's overall quality of life.

Typical elements for corridor identification (Figure 3-19) include existing public lands, water bodies, steep slopes, native plant communities, wildlife habitat, and groundwater recharge areas. Mapping these areas will help guide development and county land purchases. Zoning regulations, public dedication, acquisition, easements, or common open space provisions in a residential subdivision are examples of tools that help formally establish environmental corridors.

Figure 3-19



Land cover

Land cover is what we see on the land's surface, be it from the ground or through aerial photos. It includes vegetation, water, ice, bare rock, and structures (buildings, roads, etc.).

When surveyors recorded Minnesota's public land survey system from 1848-1907, they noted the size and species of trees they used as survey reference points. They also provided the U.S. General Land Office with descriptions of the geography and vegetation they saw. Francis J. Marschner used these records to create a map of original vegetation across the state.

Figure 3-20 shows that Olmsted County's original landscape consisted primarily of prairie, brush prairie, aspen-oak forest, oak openings and barrens, river bottom forest, and big woods.

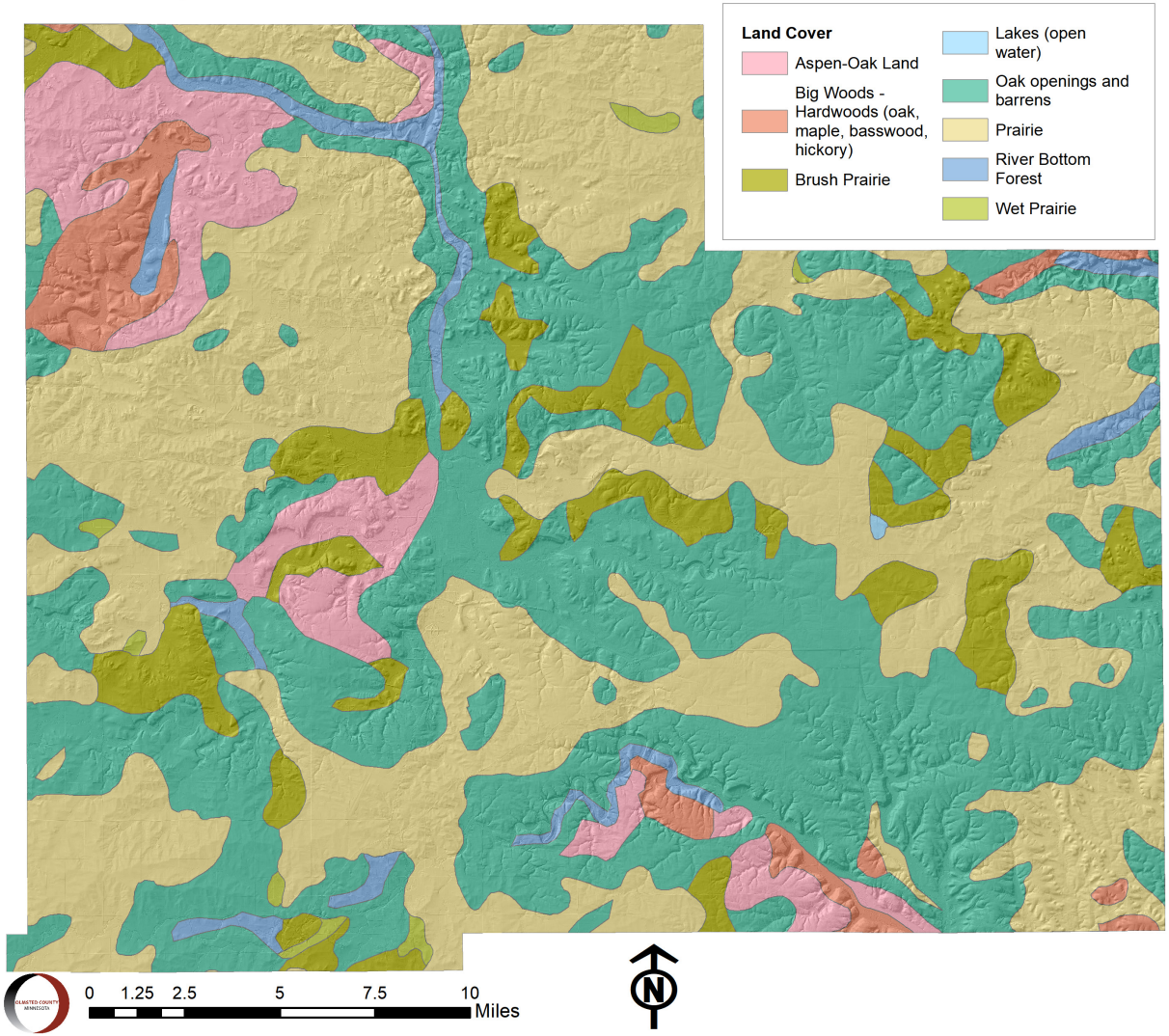
Current land cover analysis uses tools such as satellite imagery, aerial photography, and ecological databases to assess ground cover. On-site visits may be used to confirm the presence of these cover types.

Olmsted County's land cover data uses the Minnesota Land Cover Classification System (MLCCS) to classify land cover into two primary categories. "Cultural" systems are areas where human activity has changed the landscape. These include "artificial surfaces" that are generally impervious to precipitation (e.g., structures and roads) and "cultivated lands" where the original vegetation has been replaced by human-planted species (e.g., cropland, tree farms). "Natural/semi-natural systems", on the other hand, are naturally occurring land covers, such as forests, wetlands, and grasslands (Figure 3-21).

Figure 3-20

Marschner's Original Vegetation

Source: MN Department of Natural Resources



As shown in Table 3-1, the 2020 MLCCS indicates that Olmsted County land cover has changed significantly since the mid-1800's. Approximately 77% of the county's land surface is now built on or cultivated.

In Olmsted County's sensitive geologic settings, these land covers, and their maintenance, affect how surface contaminants may impact our water resources. Unlike geologic constraints, however, cover types and land management practices are controlled by landowners, land managers, and governmental agencies. Uses and practices that damage our ground and surface water can be replaced with those that do not.

Figure 3-21

MLCCS 2020 Land Cover

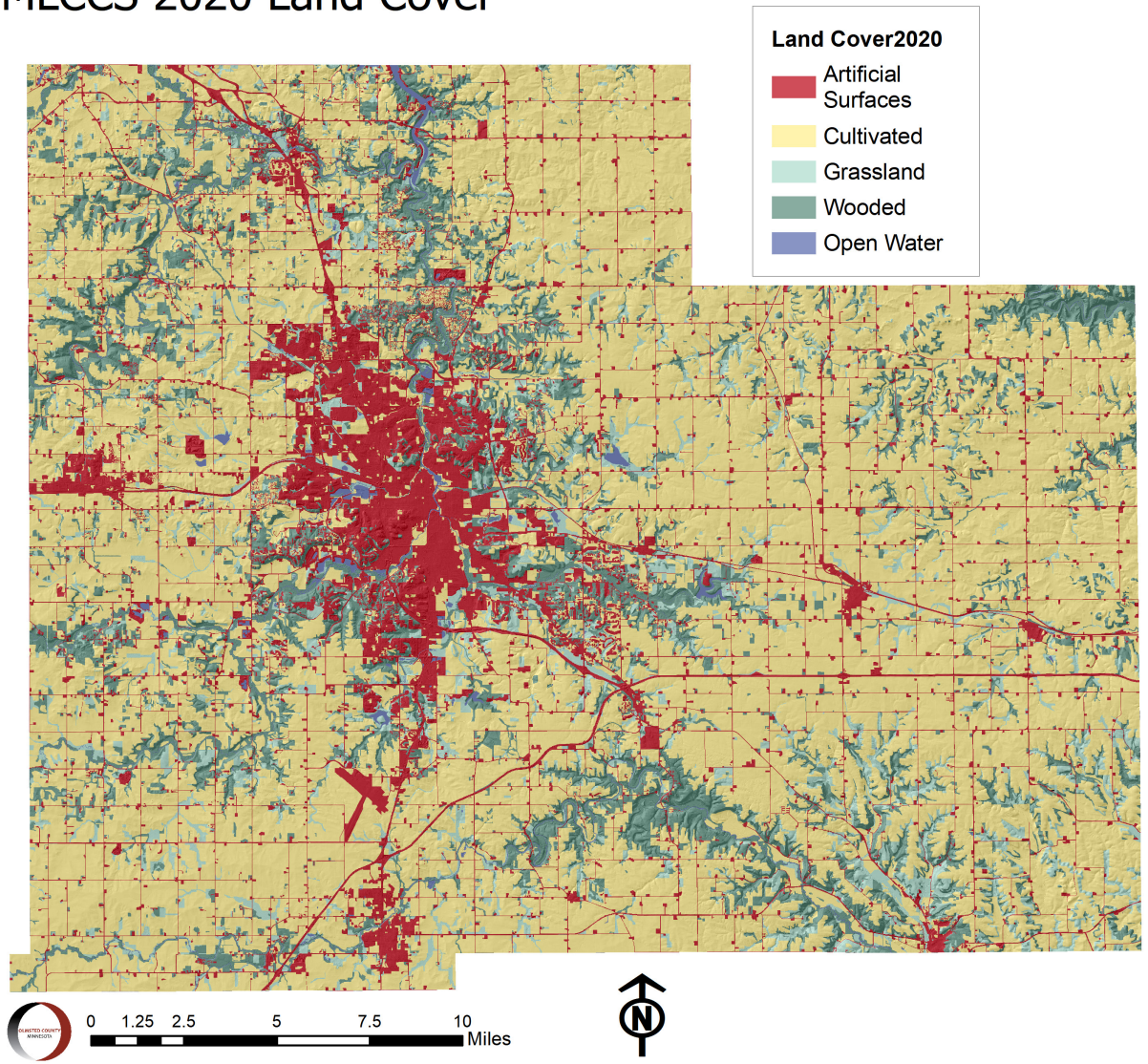


Table 3-1: Olmsted County Land Cover 2020

Land Cover	Acres	% of County
Artificial Surfaces	54412.5	13.0%
Cultivated Land	269235.8	64.2%
Cultural Total	323648.3	77.2%
Wooded	63509.3	15.2%
Grassland	28519.0	6.8%
Open Water	3424.8	0.8%
Natural/Semi-Natural Total	95453.2	22.8%
Total Acres	419101.5	NA

OLMSTED COUNTY
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4 • The Infrastructure

Infrastructure is the set of basic physical systems that support households and businesses. These systems are critical to economic development, health, and survival. They require costly investments and may be funded publicly, privately, or through public-private partnerships.

Transportation and open space systems are the primary infrastructure systems the county helps provide. Smart land use planning must consider the quality and capacity of these service systems and whether additional and future demand for them can be provided in a timely, cost effective manner. Development patterns should maximize the use of existing infrastructure investments and promote efficient and economical growth.

Transportation

The purpose of the transportation system is to move people and goods both within the county and through it. Constructed and maintained at considerable public and private expense, it is an irreplaceable community asset. Quality transportation infrastructure is important to the community's economic success and quality of life. Managing the transportation system to serve the needs of residents, businesses, customers, visitors, and workers is one of the major responsibilities of state and local government.

The primary transportation system in Olmsted County is the network of local streets and highways. There are 1,860 centerline miles of roads in the county, whose ownership is distributed among the state of Minnesota, Olmsted County, cities, and townships as shown in Table 4-1. Figure 2-27 illustrates the road authority for each public road in Olmsted County.

Table 4-1

	State Road Mileage	County Road Mileage	Municipal Road Mileage	Township Road Mileage
Rochester	21.4	36.2	474.1	1.5
Byron	1.0	1.9	30.3	0.7
Chatfield	0.8	0.9	7.9	
Dover	0.6	2.1	5.0	
Eyota	2.3	2.2	11.5	0.3
Oronoco	2.0	0.0	21.8	0.1
Pine Island	0.0	2.0	7.2	1.6
Saint Charles	0.0	0.0	0.1	
Stewartville	2.7	2.3	24.2	0.5
Townships	129.7	449.9	0.0	611.3
Total Miles	160.5	497.4	582.1	616.0

Roadway function

While all roadways serve to move vehicle traffic between origins and destinations, not all roadways are designed or intended to function in the same manner to accomplish that purpose. Generally, all trips will involve up to five trip stages which include:

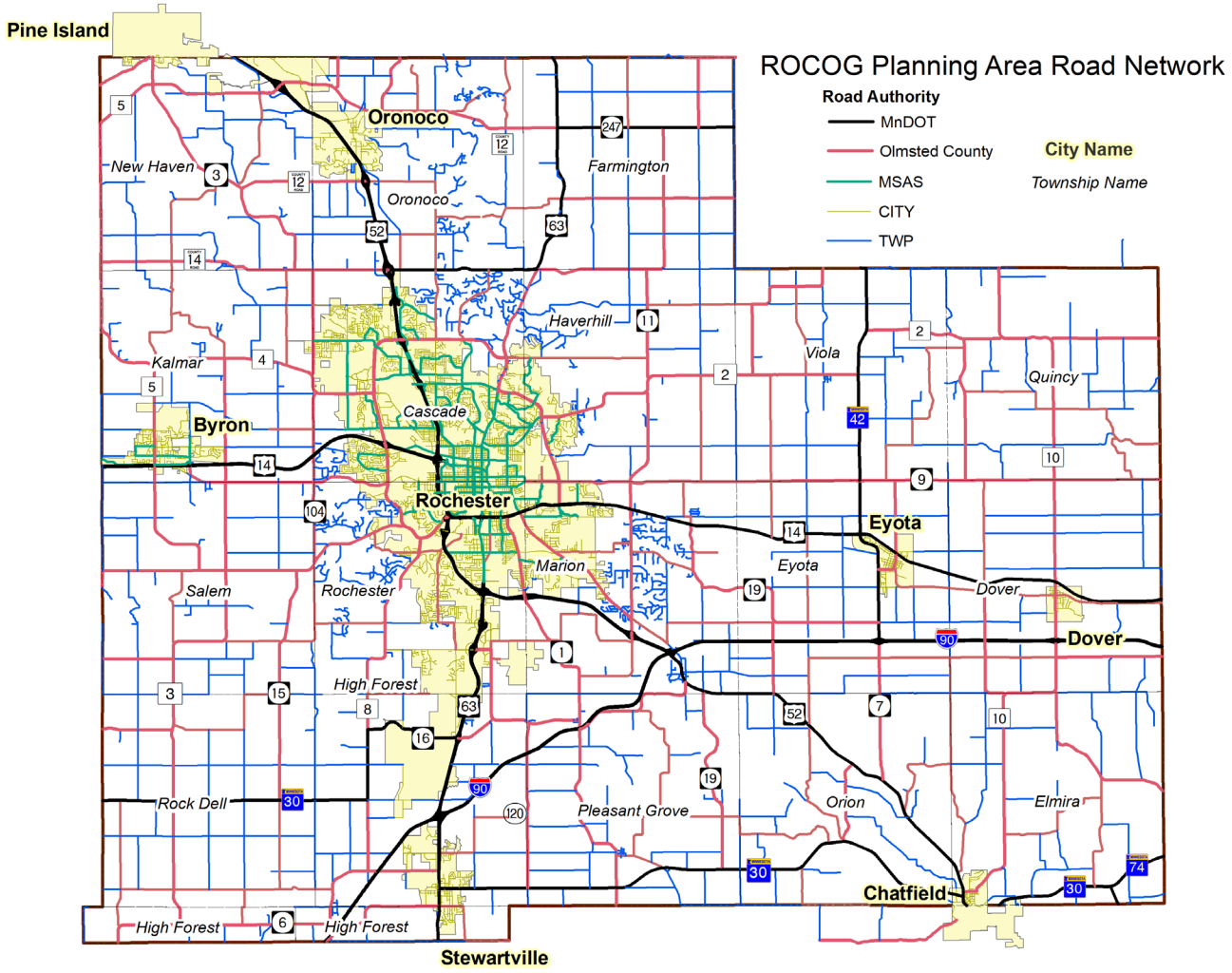
- **Access:** initial entry onto the road network.
- **Local collection:** movement from point of access to the major road network.
- **Primary movement:** generally conducted on major collector or arterial streets, primary movement covers the majority of the travel distance in a trip.
- **Local distribution:** movement from the major street network to the point of destination.
- **Termination:** exit to destination from road network.

These trip stages can generally be grouped into two functions: roadway mobility and roadway accessibility. Mobility is intended to provide for a low level of travel friction between local trip origin area and destination area; it is generally

achieved by minimizing the amount of conflict encountered through the primary movement portion of the trip. Accessibility, on the other hand, provides many opportunities for entry and exit. The higher the number of access points, the higher the potential to experience delays due to from vehicle access/egress movements. While these two functions lie at opposite ends of the continuum of roadway function, most roads provide some combination of each.

Local township roads, municipal streets, and minor county roads typically provide access to residences and businesses. Primary movement is provided by state highways and the network of county and municipal state-aid highways that serve as the main arteries of traffic in the region. In the greater regional area of Olmsted County, these main arteries serve most of the miles of travel that occur, connecting cities and towns, supporting commuting to jobs throughout the county, and serving

Figure 4-1

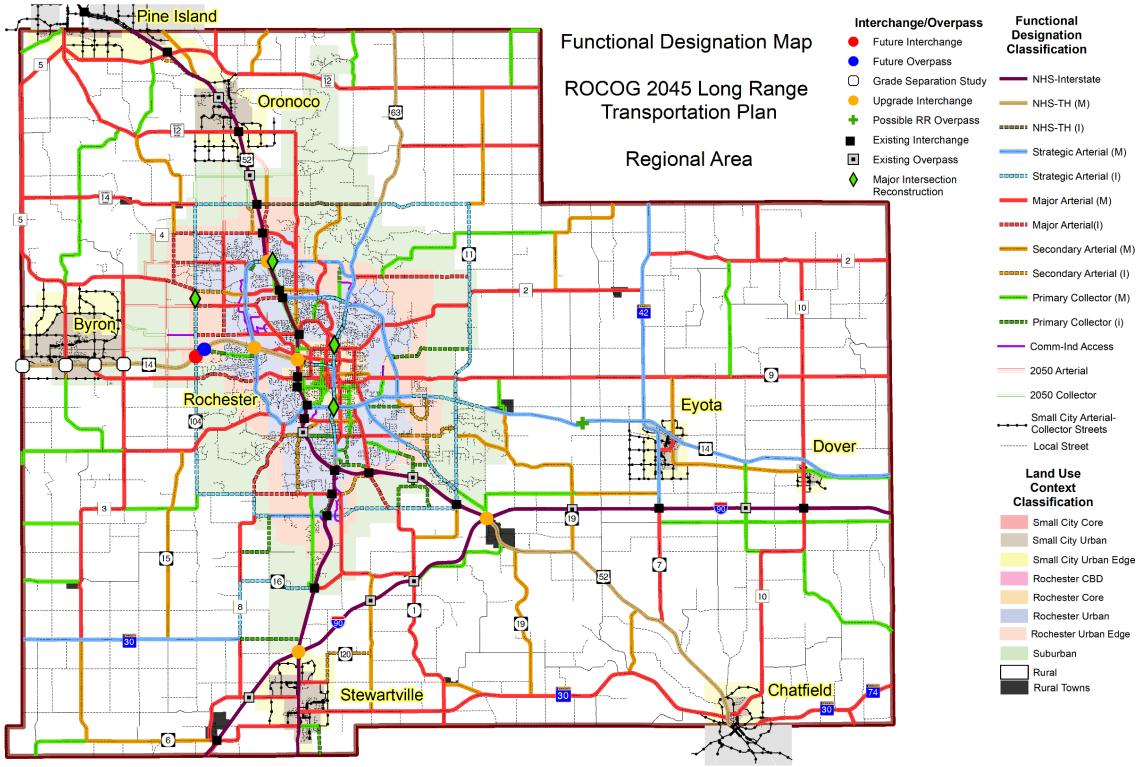


important commercial and industrial purposes such as farm to market travel and other truck travel associated with businesses in Olmsted County. On these roadways, the expectations for efficient movement are higher.

Functional classification

The concept of functional classification or functional designation is used to help understand how the road network is intended to operate. Functional classification identifies the role a highway or street plays in the transportation system (Figure 4-2). Some highways are intended to emphasize mobility for longer distance trips, while other roads are intended to primarily provide access to land. Planners and engineers have developed functional classification categories based on the number and types of trips that roads carry, the surrounding land uses, and the stage of urban or rural development that lands adjacent to a road segment are in. The factors considered when classifying a roadway include:

Figure 4-2



- **Travel significance:** Highly significant roadways connect large activity centers such as cities and carry longer-distance travel between and through regions. Such travel should be directed to roads where efficient movement is provided, generally on state or major city/county roadways.

- **Route spacing:** It is not feasible to provide major roads to accommodate every possible trip in the most direct manner possible or in the shortest amount of time. Since major roads are spaced at much greater intervals than local streets, they must be managed more closely to ensure safe and efficient travel.
- **Efficiency of travel:** Trip makers will typically seek out routes with the fewest delays and shortest travel time. Arterial roads provide this kind of service for longer trips, while travelers making shorter trips tend to use local and/or minor collector roadways for a much higher proportion of the trip length.
- **Speed limit:** Typically, there will be a relationship between posted speed limits and roadway classification. Arterials generally have higher posted speed limits due to perceived efficiency of these routes for primary movement. Minimizing cross-traffic and driveways on these roads allows for these speeds to be safe.
- **Connectivity and continuity:** This concept refers to the number of alternative travel paths that are available for movement between the same origins and destinations. On a regional level, travel tends to congregate towards those facilities providing the most direct travel in terms of travel time, with continuity (the ability to travel significant distance on the same roadway) an important consideration.
- **Access:** Existing access conditions will impact the ability to achieve efficient travel. On major roadways, this often leads to limiting locations at which vehicles can enter or exit the roadway. Absent this control, other measures are eventually needed to manage traffic flow and improve safety, such as medians, signals, and auxiliary lanes.

Arterials serve a high share of longer distance trips and daily vehicle miles of travel. In rural areas, Arterials typically account for approximately half of the daily vehicle miles of travel; in urban areas, this percentage is often higher. Collectors account for the next largest percentage of travel. Urban Collectors account for somewhat less (5 to 15 percent), while the percentage for Rural Area Collectors is typically in the 20 to 30 percent range.

In rural settings, major arterial roads generally serve the highest volume of traffic at the highest speeds over long intercity or inter-county distances. Minor Arterials should be identified and spaced at intervals consistent with population density, so that all developed areas are within a reasonable distance of a higher level major or minor arterial. All arterials in rural areas are typically designed to provide relatively high overall travel speeds, with minimum interference to through movement. Collectors generally serve primarily intra-county travel (rather than statewide) and constitute those routes on which predominant travel distances are shorter than on Arterial routes.

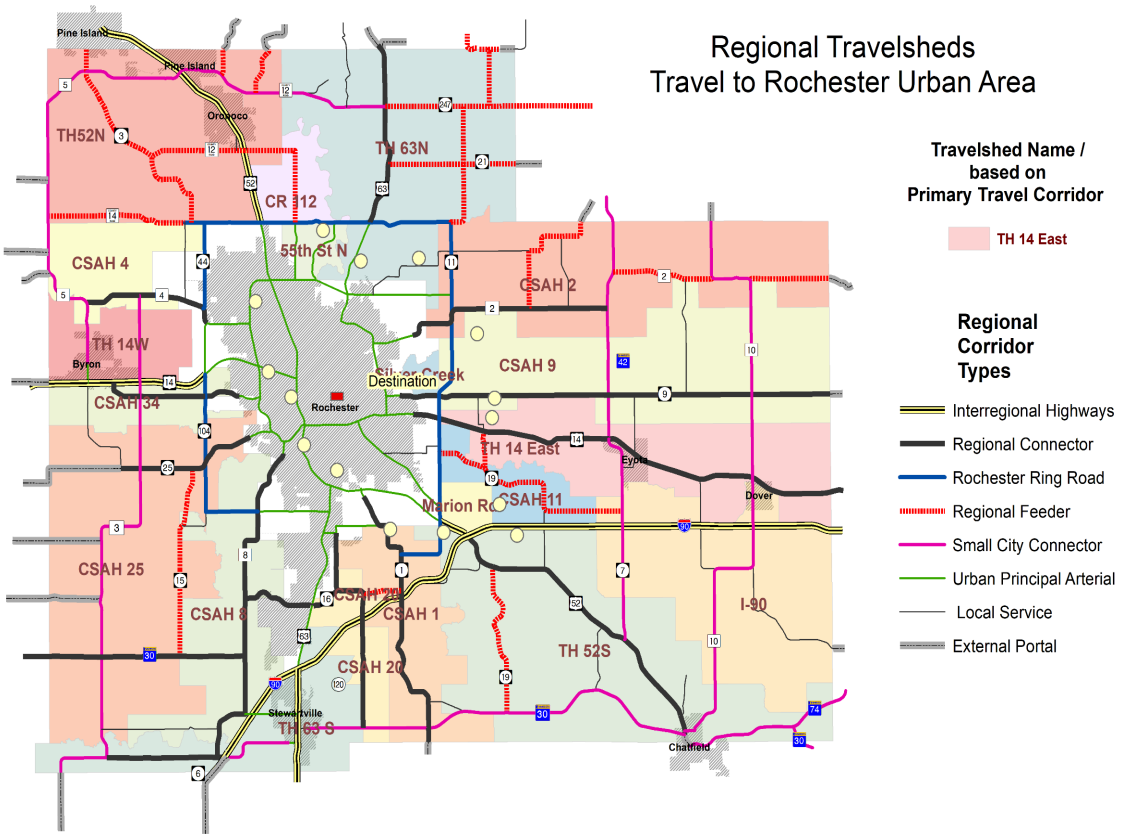
More information on functional classification is found in chapters 10A-10C of the ROCOG Long Range Transportation Plan.

Travelsheds

The basic premise behind the travelshed concept is that development allowed within a travelshed should not necessarily be based on a single countywide policy. Instead, it should take into consideration available capacity and safety conditions on the roadways that provide primary service to land uses in that area.

Travelsheds (Figure 4-3) recognize that the quality of travel and level of service is not uniform across the county, but has been historically impacted by limits of funding, geographic conditions, or the level of travel demand that may have led to different levels of investment and prioritization of improvements over the years. Differences in the quality and availability of transportation services, transportation infrastructure, and in land uses should be clearly related to geographically identified areas.

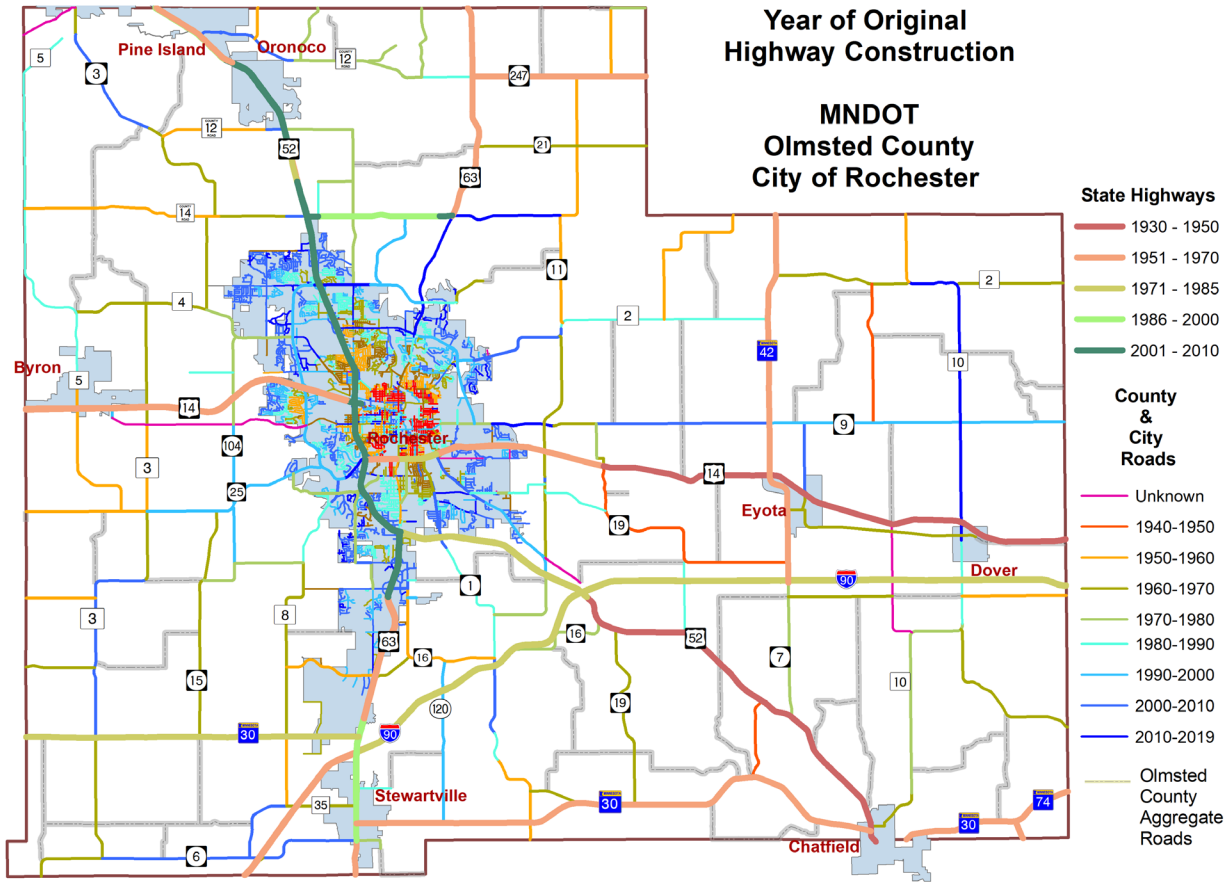
Figure 4-3



The GLUP, therefore, provides information specific to individual travelshed areas that should be considered in the consideration of land use proposals. The GLUP and future development proposals should consider factors such as safety issues, inadequate capacity, and risk factors such as bridge condition or flooding concerns that impact travel in the area and access to the site in question. These factors should be considered in addition to functional classification and regional

importance of the roadways that will provide access, and how future growth in through-travel should be accounted for. This analysis may lead to the conclusion that development is not appropriate for an area due to inability to correct deficiencies, or that the timing of development is inappropriate given the need for investment in safety, capacity, or structural defects in the existing road network.

Figure 4-4



Figures 4-4 through 4-12 highlight some of the key condition and operating metrics for the non-urban highway network in Olmsted County. These condition maps help us understand travel conditions and whether concerns exist that would identify road network limitations that could impact the viability of proposed land uses or the timing of development in various areas of the county. This information includes both “red flag warnings” that identify specific locations of concern such as flooding risk, as well as more subjective information such as quality of service concerns related to mobility and safety. These factors can impact landowner and motorist expectations.

Figure 4-5: Structural Condition of Bridges– MNDOT

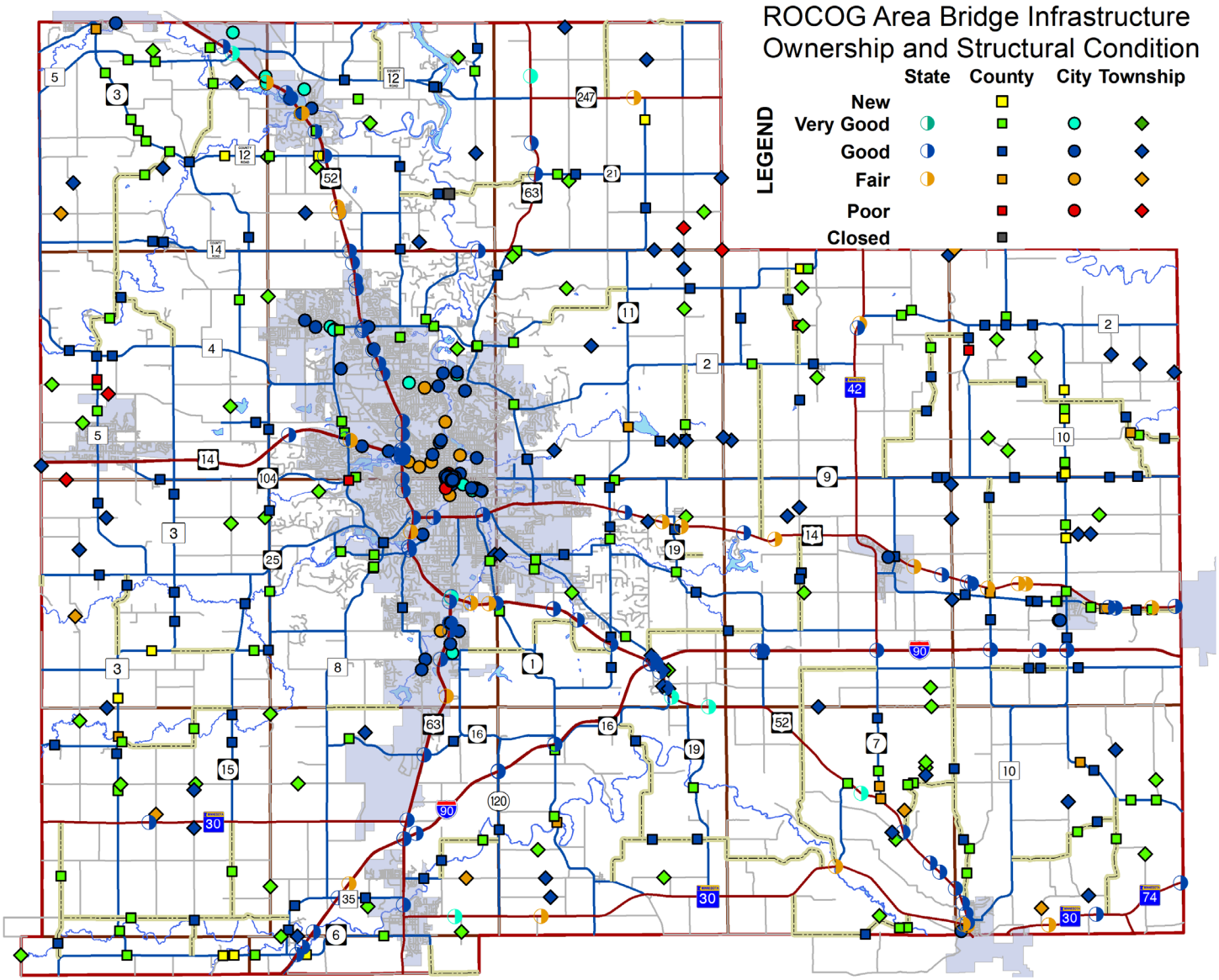


Figure 4-6

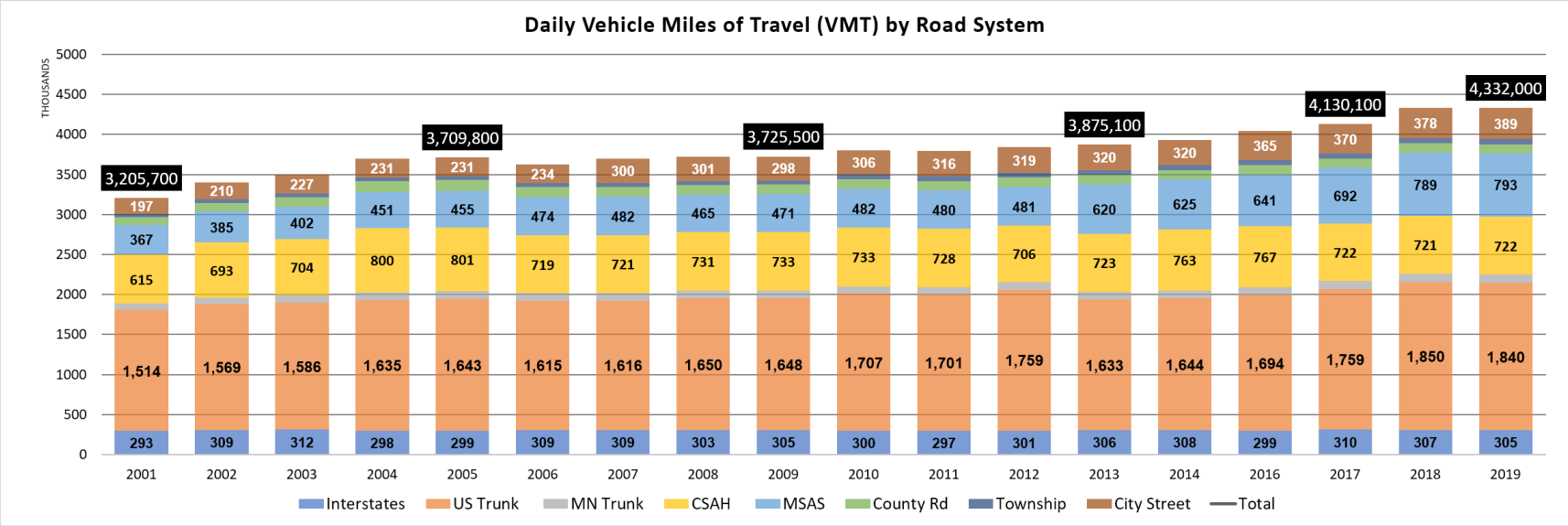


Figure 4-7

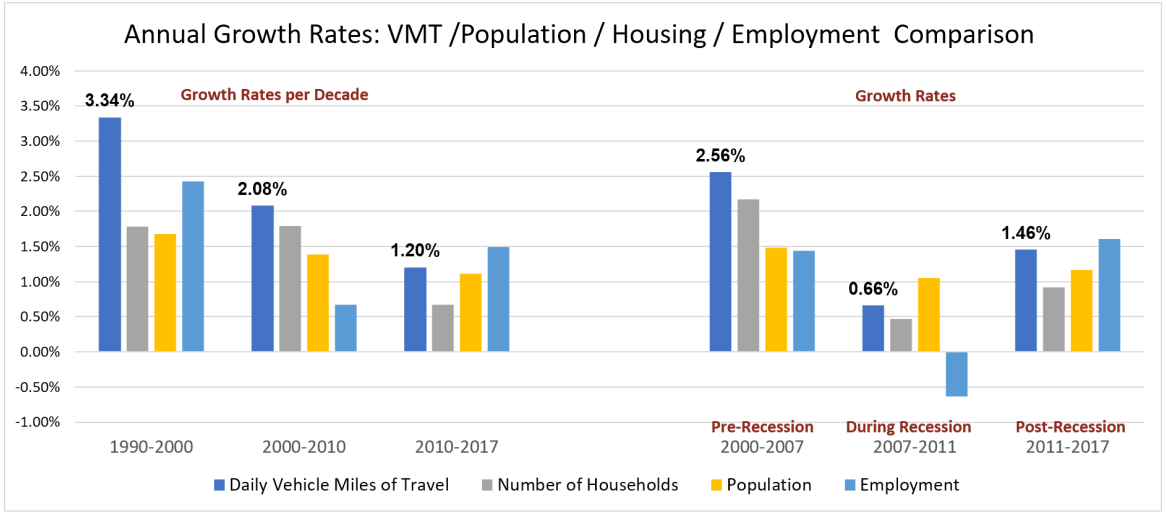


Figure 4-8

2019 Average Daily Traffic - Regional Arterial & Collector Roads

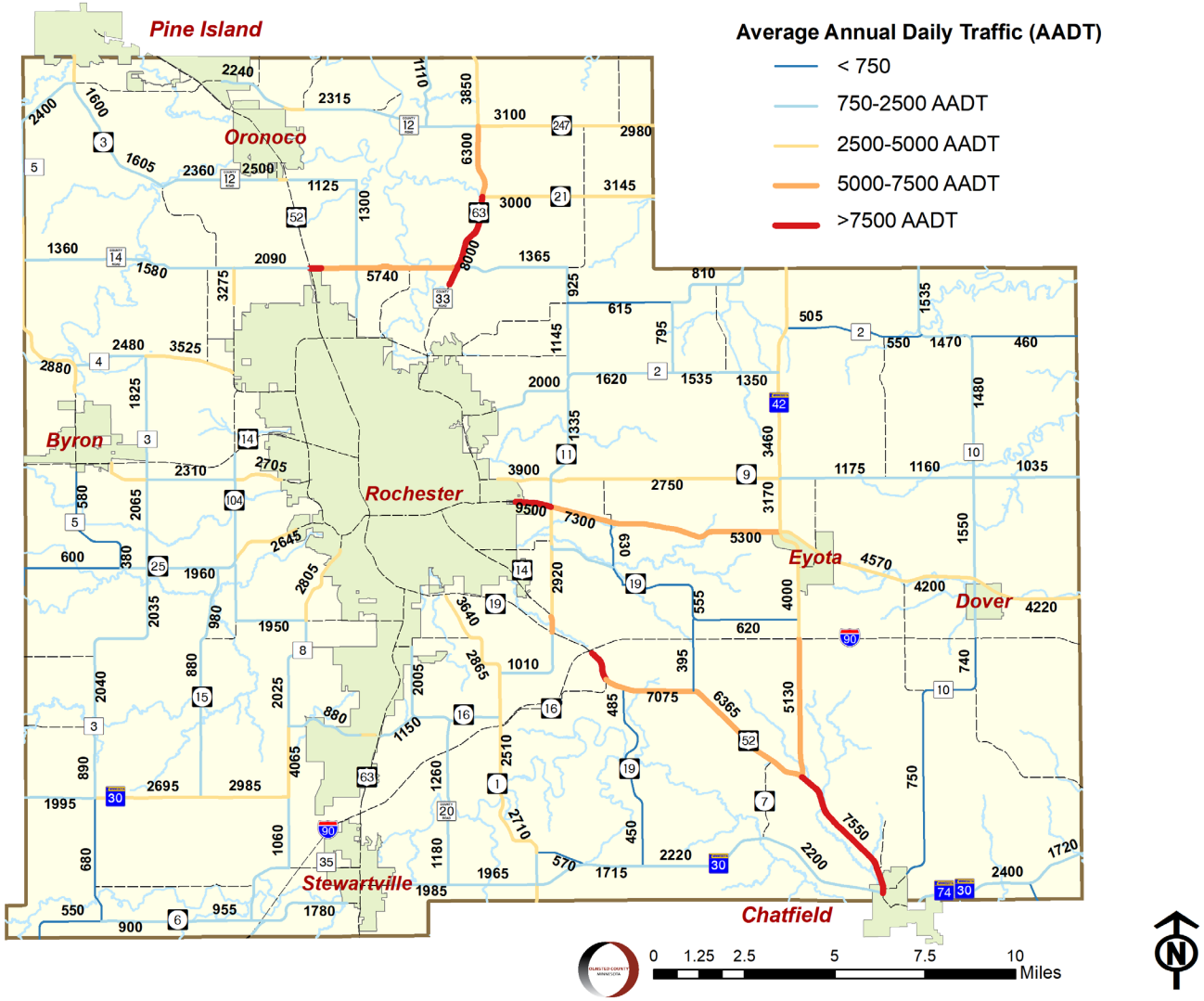


Figure 4-9

Remaining Reserve Capacity - Regional Arterial & Collector Roads

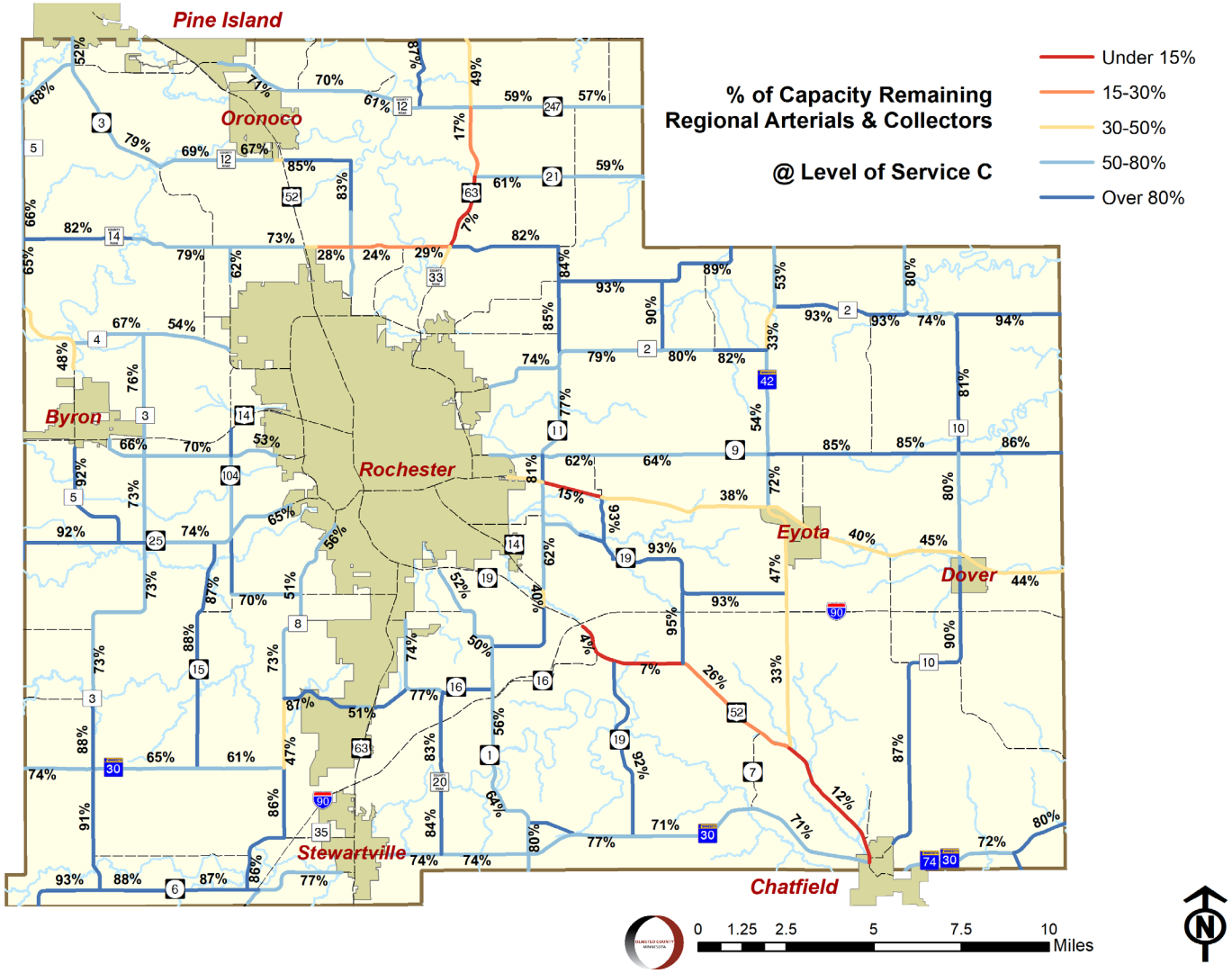


Figure 4-10

Regional Highways and Travelsheds Crash Rate Evaluation

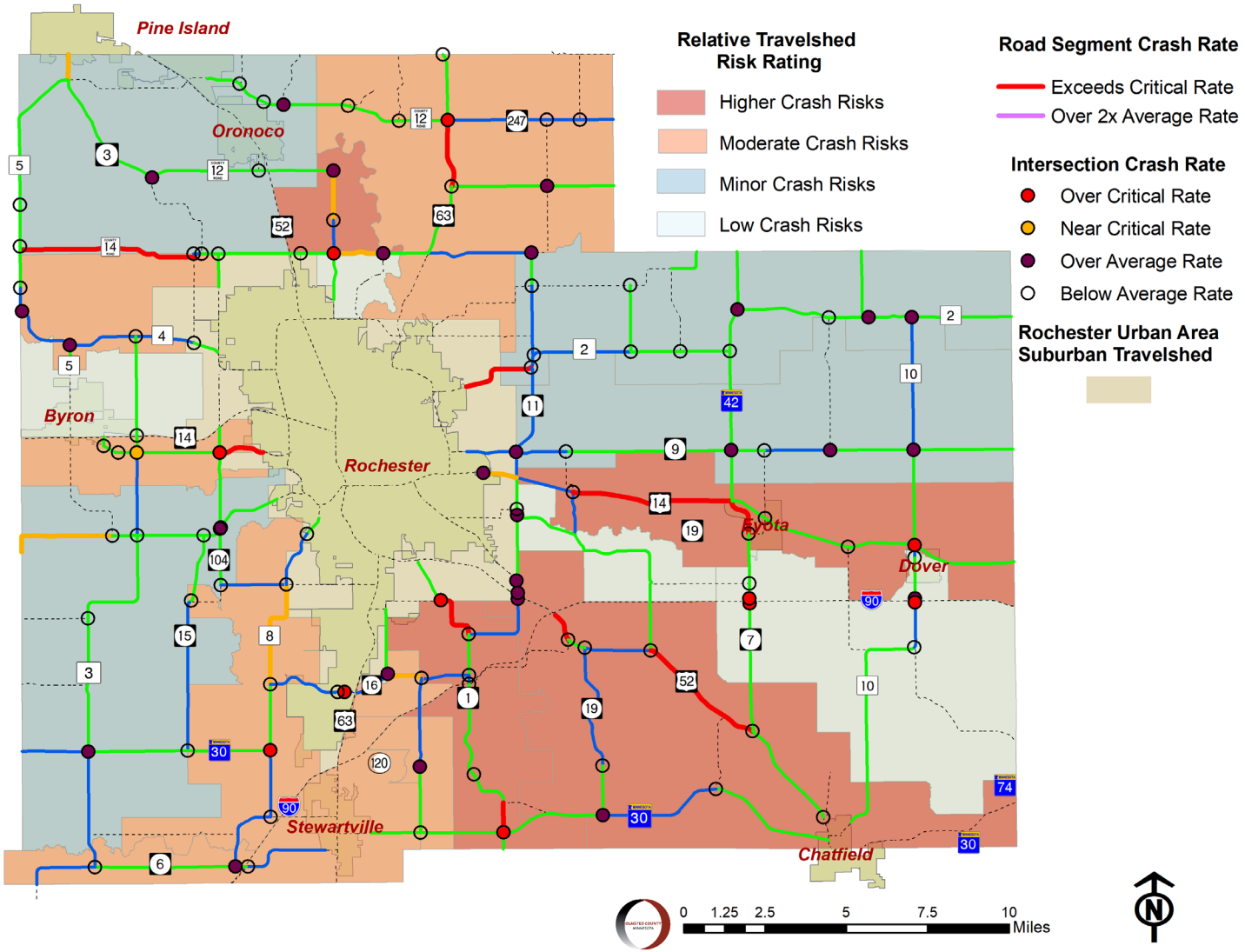


Figure 4-11: Road Flooding Hazard (Source Olmsted County Multi-Hazard Mitigation Plan, 2017)

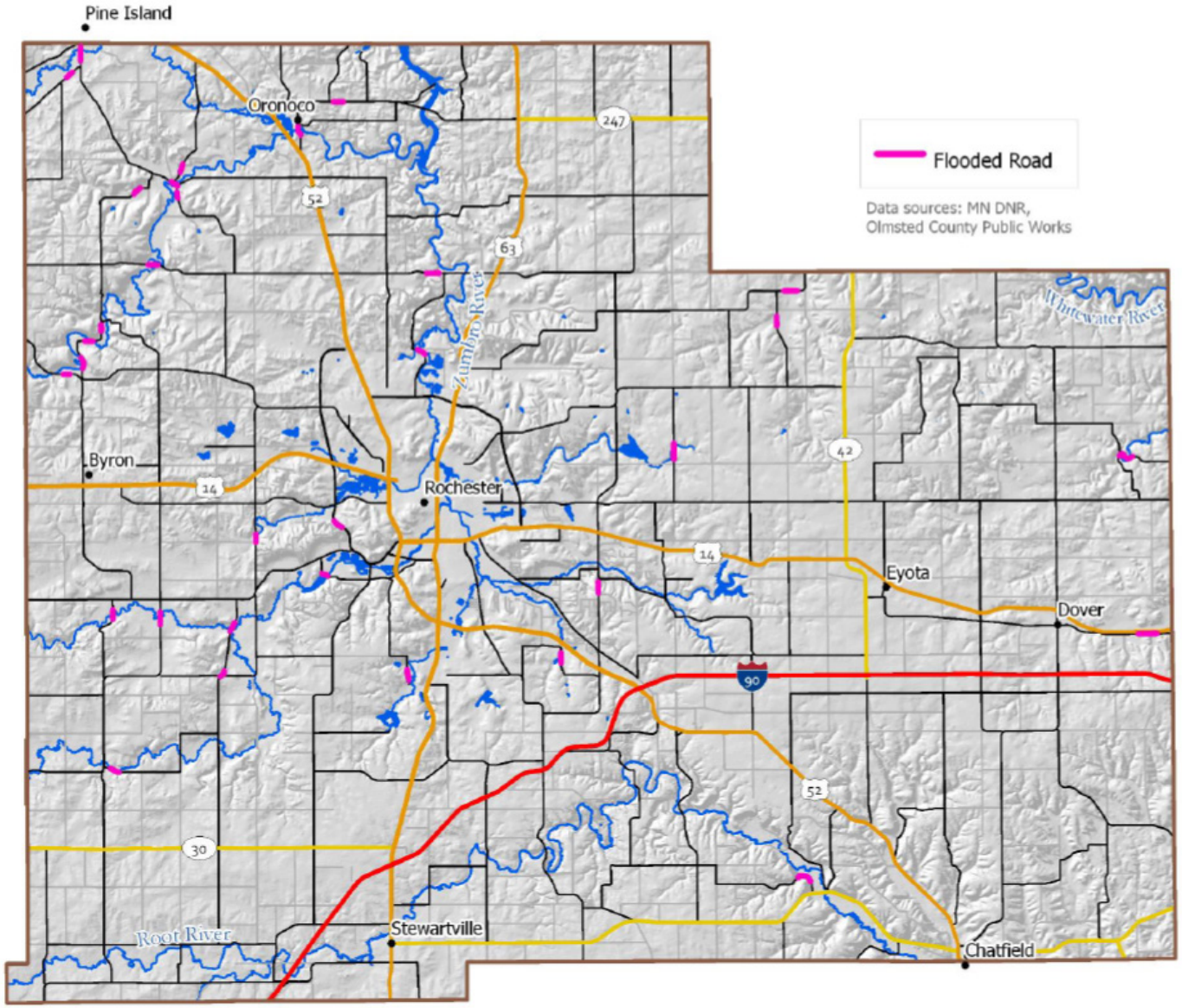
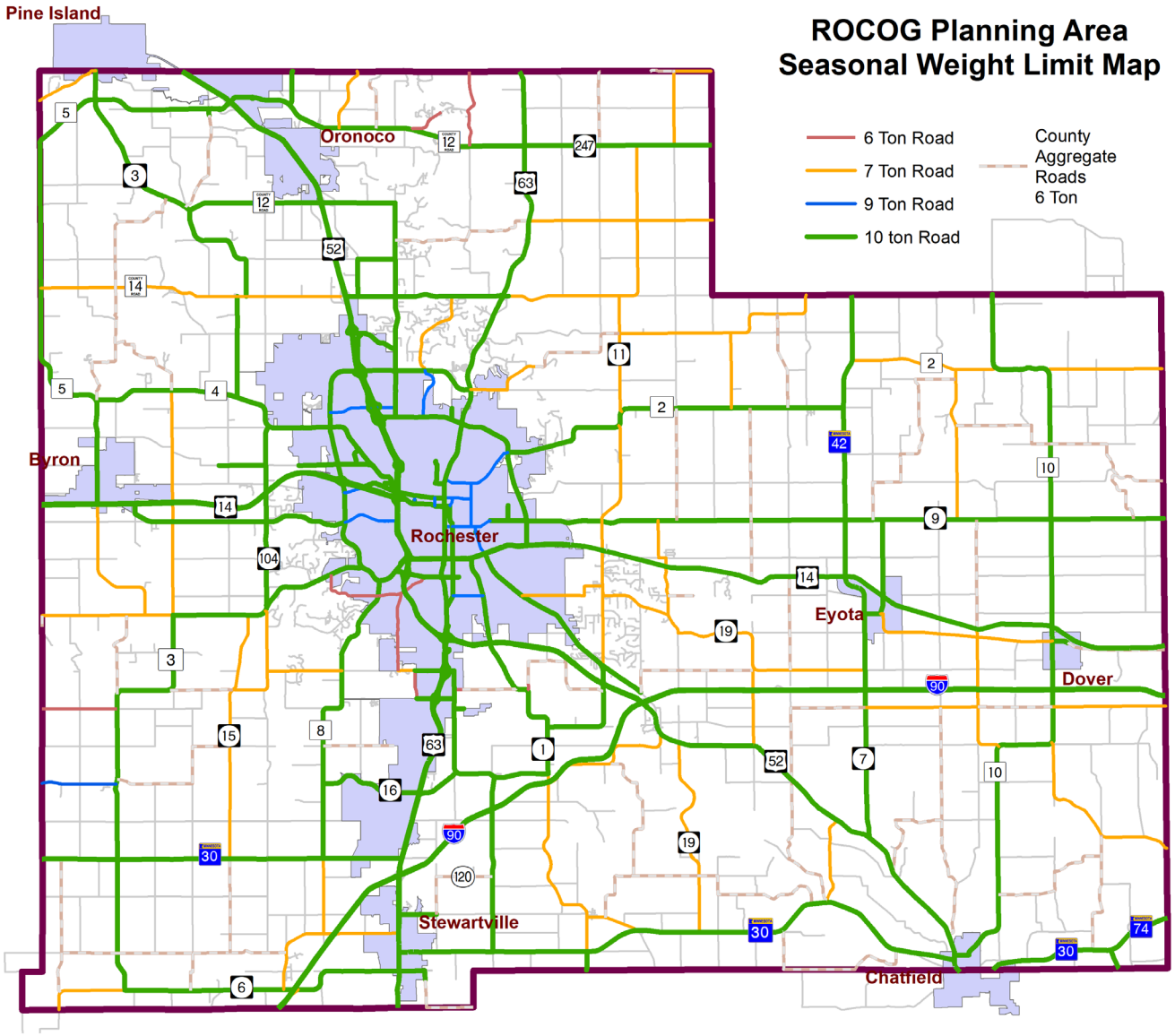


Figure 4-12


ROCOG Planning Area
Seasonal Weight Limit Map
6 Ton Road
7 Ton Road
9 Ton Road
10 ton Road
County Aggregate Roads 6 Ton
Pine Island
Oronoco
Byron
Rochester
Eyota
Dover
Stewartville
Chatfield

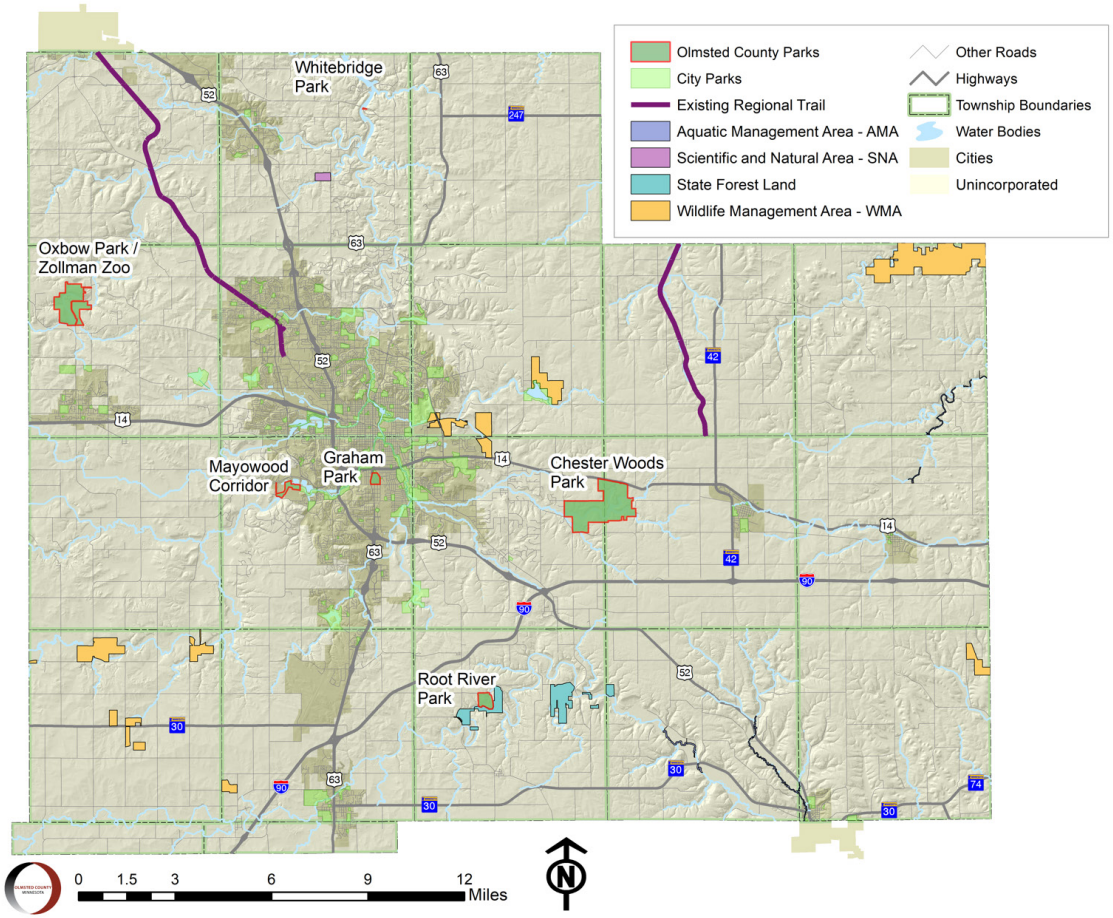
Parks and open space

Olmsted County straddles the transition zone from eastern limestone bluffs and woodlands to prairie farmland in the west. Blufflands, limestone outcroppings, wooded hillsides, prairies, historic structures, and an undulating stream network connect our natural and cultural landscape, create a unique sense of place, and draw residents and visitors to explore the outdoors.

Parks and recreational areas that preserve these features offer physical and mental health benefits to those who actively enjoy them. These lands also benefit the region's environmental and economic health by filtering pollutants from our air and water, controlling erosion and flood waters, providing plant and animal habitat, and drawing business investment and tourist dollars to our economy. Parks support our present and must be sustained for our future.

The parks and open space system (Figure 4-13) includes existing county regional parks, trails, and open spaces located within Olmsted County that provide services to county residents and guests. Other agencies provide complementary open space and recreation services within the

Figure 4-13



county, including the state of Minnesota, MN DNR, and all Olmsted County cities. It also includes future regional facilities and corridors that will serve the county as the community grows. The current system covers more than 12,000 acres.

City parks

Each city in Olmsted County provides park and recreational opportunities. The total city park area is 4,998 acres.

State of Minnesota lands

The state of Minnesota provides a variety of open spaces within Olmsted County.

Wildlife Management Areas

Wildlife management areas (WMAs) are part of Minnesota's outdoor recreation system, established to protect those lands and waters that have a high potential for wildlife production, public hunting, trapping, fishing, and other compatible recreational uses. WMAs cover 4,022 acres of land within Olmsted County and are the backbone to MN DNR's wildlife management efforts by:

- Protecting wildlife habitat for future generations.
- Providing citizens with opportunities for hunting, fishing and wildlife watching.
- Promoting important wildlife-based tourism in the state.

Source: John Weiss

Forestry lands

Minnesota State Forestry Lands are managed by MN DNR with the mission of keeping Minnesota’s forests and trees growing strong. Forests need care and management to provide clean water and natural resources for future generations. Sustainability of these lands, therefore, is a key focus including what trees to plant, what areas to harvest, and which places to preserve. Minnesota state forest lands cover 808 acres of land within Olmsted County.

Aquatic Management Areas

Aquatic Management Areas (AMAs) provide access to unique areas for recreational fishing. The AMAs provide MN DNR representatives access to protect critical shore land habitat and provide areas for education and research. AMAs cover 220 acres of land within Olmsted County.

Scientific and Natural Areas

Scientific and Natural Areas (SNAs) are exceptional places where native plants and animals flourish, rare species are protected, and we can experience and study Minnesota's fascinating natural features. SNAs cover 78 acres of land within Olmsted County.

Source: John Weiss

Regional state trails

Olmsted County has two regional trails: the Douglas State Trail and the Great River Ridge State Trail. Regional state trails cover 90 Acres of land within Olmsted County.

The Douglas State Trail is a paved 12.5 mile, multiple use trail developed on an abandoned railroad grade. This trail crosses outstanding rural scenery, traversing some of the richest agricultural land in Minnesota. The trail begins in northwestern Rochester, travels through the town of Douglas (for which the trail is named) and terminates in Pine Island. It is generally level and wheelchair accessible.

Located in the beautiful southeastern Minnesota river valley, the Great River Ridge State Trail has picturesque views of river bluffs. Built on former railroad grade, this trail is also a fairly easy ride. When complete, the trail will be paved between the cities of Plainview and Eyota. Currently, there are 13 miles of paved trail from Plainview, south through the town of Elgin.

Olmsted County parks system

The Olmsted County parks system consists of a diverse group of parklands that vary in size and usage. The mission of Olmsted County Parks is to foster an appreciation of the natural world through education, natural resource management,

and public participation in the stewardship of our parklands. These lands range from multi use facilities to single purpose use areas. The land, facilities, and staff provide numerous services and programs for our residences and visitors.

Chester Woods Park

Chester Woods Park was developed in conjunction with the South Zumbro flood control project and opened in 1995. With 1,333 total acres of forest, prairie, and open water, Chester Woods Park is the largest park unit in the county park system. Its campground, nature trails, and reservoir have been well used for 20 years.

Oxbow Park and Zollman Zoo

Oxbow Park was established in 1967 with the acquisition of 465 acres; Zollman Zoo was established in 1969. Oxbow Park is now a 635 acre natural resource based park with miles of hiking trails, picnic areas along the Zumbro River, and a campground. The focal point, Zollman Zoo, houses over 30 species of native Minnesota animals.

Root River Park

Established in 2009, Root River Park is one of the newest additions to the county park system. It consists of 125 acres of rolling fields, prairies, and trails along the wooded slopes of the Root River.

Lake Zumbro Park

This 1.4-acre area was originally a road that crossed Lake Zumbro until the bridge collapsed after an accident in 1972. A few years later it was established as an ADA fishing pier. In January of 2020, Olmsted County acquired the adjacent 3.17 acre property known as Fisherman's Inn. The vision of

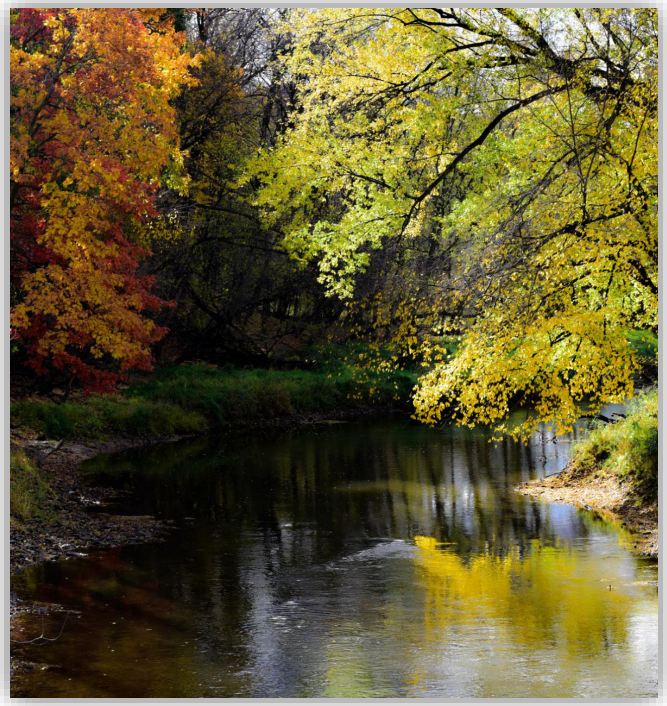
Olmsted County is to enhance White Bridge Pier to improve the experience of those seeking to fish, launch motorized and non-motorized boats, and picnic.

Mayowood Corridor

This 58.95-acre property is located along the South Fork of the Zumbro River. Through a collaborative effort, the Mayowood Corridor Park is owned by Olmsted County and managed by City of Rochester Parks and Recreation Department. The city of Rochester established and maintains a pedestrian/bike trail system along the corridor.

Graham Park

Graham Park is a 60-acre property that was donated to the county in 1919 by Dr. Christopher Graham. Graham Park is perfectly positioned to fulfill its founder's intent as a place that fosters an appreciation for agriculture, celebrates innovation, and gathers people together to learn from one other. With a goal to become a self-sustaining regional destination, Graham Park is home to the Olmsted County Fair, Graham Arenas, and the Rochester Farmers Market. Its 2017 master plan envisions a new multi-use arena, expo facility, and a festival park, while continuing to evaluate the potential for adaptive reuse and preservation of the existing structures. Graham Park is managed by the Olmsted County Facilities department.



Source: John Weiss

5 • The Economy

Olmsted County's economy is built around health care, technology, and agriculture. For over 140 years, the city of Rochester has been the regional center for industry and commerce in southeastern Minnesota and northeastern Iowa.

Land is critical to the health of this economy. Whether it's for growing food or locating businesses, how we plan for and regulate land uses will affect the production of goods and services in our area.

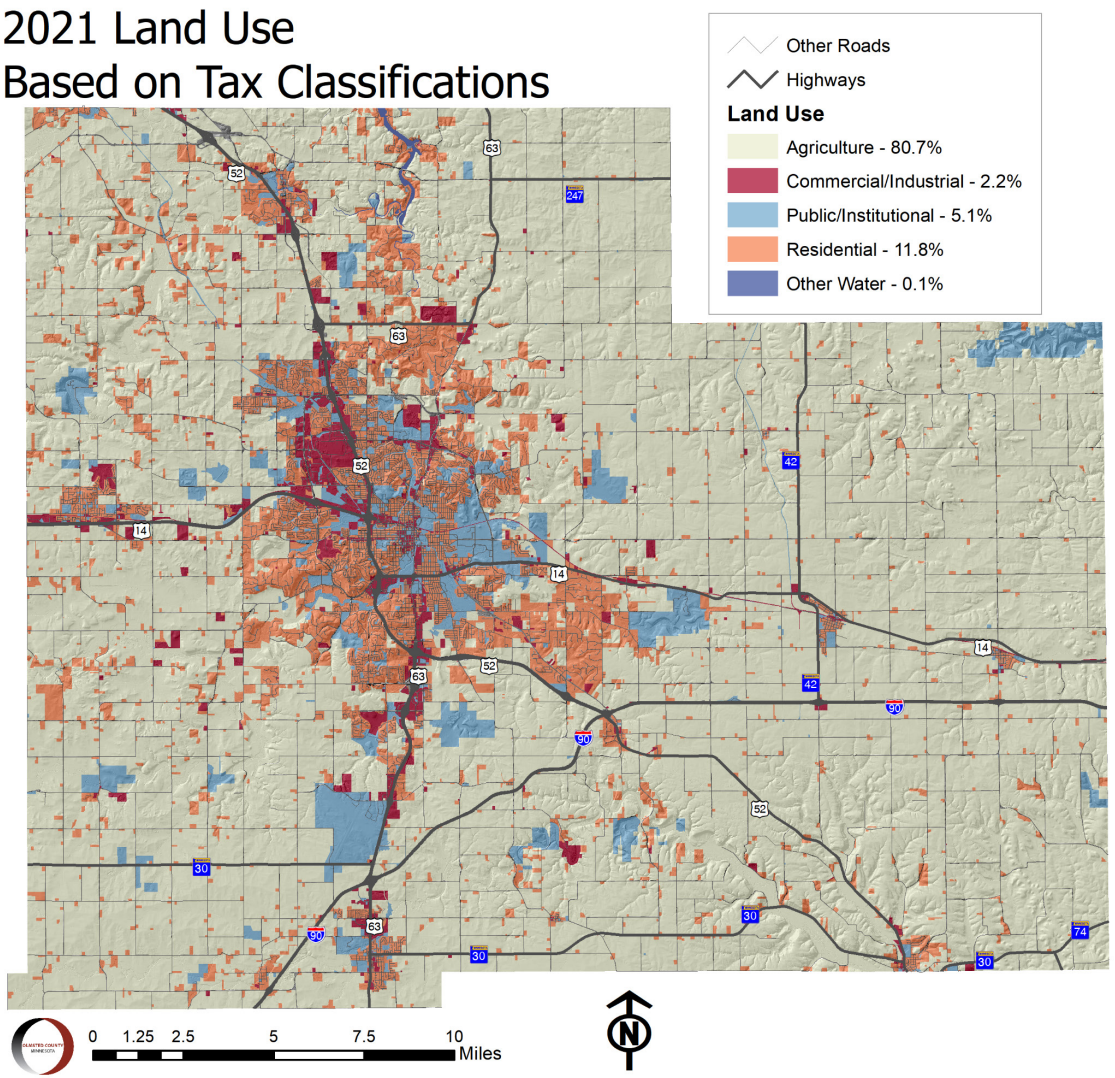
Land use

While land cover describes surface characteristics, land use is based upon its function. Any given land use may take place on one or more pieces of land, and several land uses may occur on the same piece of land. Based on tax classifications, Olmsted County's current land uses may be placed into five categories (Figure 5-1).

- **Agricultural**
- **Commercial/Industrial**
- **Residential**
- **Public/Institutional**
- **Other Water** (water bodies not included as part of the above land uses)

While Figure 5-1 illustrates current land activities, one product of the GLUP, the Olmsted County Future Land Use Map, reflects the community's vision for the future. The future land use designations are meant to be broader than those found on the current map; some have a spatial component to their definition.

Figure 5-1



- **Resource Protection Areas** are primarily intended for uses such as agriculture and mineral extraction, as well as protection of sensitive environmental features.
- **Suburban Development Areas** are very low-density residential uses not intended to have municipal sewer and water services.
- **Urban Service Areas** include cities and their adjacent areas intended to be added to the cities over the next 25-50 years.

Described in greater detail in Chapter 11, this map (Figure 11-1) shows, based on the GLUP's adopted policies, what the most appropriate land uses are for the county over the scope of this plan. The policies providing the foundation for the map are found in Chapters 7-10 of this document.

Economic trends

Major changes have occurred in the local economy, particularly in recent years.

- The health services and education sectors have grown significantly in importance, particularly with the focus of Destination Medical Center (DMC) and evolution of the University of Minnesota-Rochester campus.
- The manufacturing sector has seen a considerable decline in its contribution, due in no small part to IBM's reduced footprint over the last 10-15 years.
- Brick and mortar retail and wholesale trade sectors have declined as a share of the county's economy, demonstrated by the decreasing number of establishments and growing number of vacant storefronts.
- The leisure/hospitality sector has grown in numbers but wage growth lags.
- The information services sector has seen an uptick in activity, supplying and maintaining critical telecommunications infrastructure vital to the 21st century economy.

Table 5-1 highlights the changes that have been occurring in the local economy by primary employment sector in terms of changes in share of the economy, number of businesses, and share of local wages.

Employment

The top four private-sector employers in Olmsted County are Mayo Medical Center, IBM, Olmsted Medical Center, and Charter Communications. The Mayo Clinic and IBM together employ approximately 40,000 people in a workforce of approximately 86,000 persons.

Table 5-1: Employment Sector Shares (ROCOG Analysis of County Business Patterns and Bureau of Labor Statistics data)

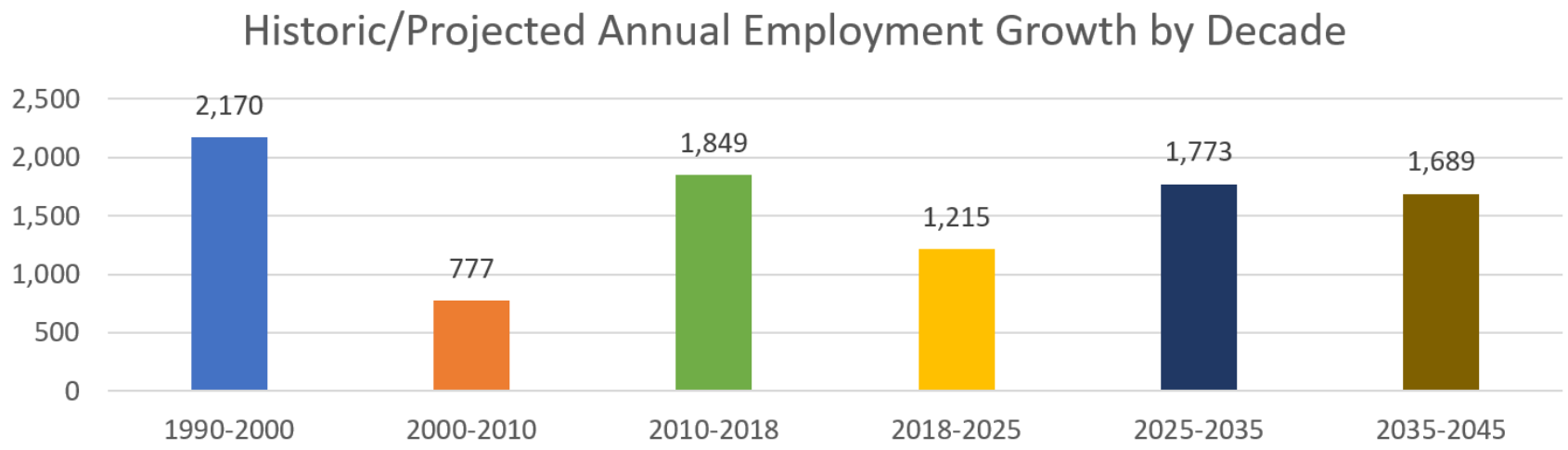
Employment Sector	Sector Share of Employment		Sector Share of Establishment		Sector Share of Wages Paid		Change in Sector Share		
	2000	2017	2000	2017	2000	2017	Employment	Establishments	Wages Paid
Resources and Mining	0.2%	0.3%	0.9%	1.4%	0.1%	0.2%	0.1%	0.6%	0.0%
Construction	4.9%	3.9%	12.6%	10.6%	5.3%	4.1%	-1.0%	-2.0%	-1.2%
Manufacturing	15.2%	6.9%	3.5%	3.1%	22.1%	8.9%	-8.3%	-0.4%	-13.2%
Trade	16.4%	14.2%	25.8%	21.7%	10.8%	7.3%	-2.1%	-4.1%	-3.4%
Information	1.2%	1.7%	1.8%	1.5%	1.2%	1.6%	0.5%	-0.3%	0.4%
Finance	2.9%	2.1%	10.5%	10.1%	2.7%	1.9%	-0.7%	-0.4%	-0.7%
Business Services	6.3%	5.3%	12.9%	13.3%	5.6%	4.4%	-1.0%	0.4%	-1.2%
Education / Health	38.0%	50.9%	8.9%	12.1%	43.6%	63.8%	12.9%	3.1%	20.2%
Leisure / Hospitality	8.4%	9.1%	9.9%	11.6%	3.2%	3.0%	0.7%	1.8%	-0.2%
Other Services	2.7%	2.5%	11.7%	12.5%	1.6%	1.2%	-0.1%	0.8%	-0.4%
Public Admin	3.9%	3.1%	1.5%	2.0%	3.9%	3.5%	-0.9%	0.5%	-0.4%

Rochester Public Schools leads public-sector employment, which at 2,830 employees is the second-largest employer in Olmsted County. The City of Rochester and Olmsted County have a combined employment of over 2,500.

While total employment numbers in Olmsted County have generally been on a steady upward path for the last 30 years, the rate of employment growth from year to year has fluctuated. Olmsted County experienced employment growth of 15,000 to 20,000 jobs per decade from the 1980s through the early 2000s (Figure 5-2). During the Great Recession of the late-2000s, the county saw an absolute decline in the number of jobs for three consecutive years (2008-2010); total employment dropped by approximately 5,000 persons, resulting in less than half the employment growth in the 2000s than in earlier decades. The economy did not recover those lost jobs until 2014.

Job growth in our local economy, however, does not always follow the national economy. This is likely due to the large share of health service jobs, which do not see as wide of swings in activity as production-oriented sectors, such as manufacturing. Roughly 15,000 new jobs were added from 2010 to the beginning of 2019. At levels comparable to those

Figure 5-2: (US Dept. of Commerce, Bureau of Economic Analysis; Projections by ROCOG)



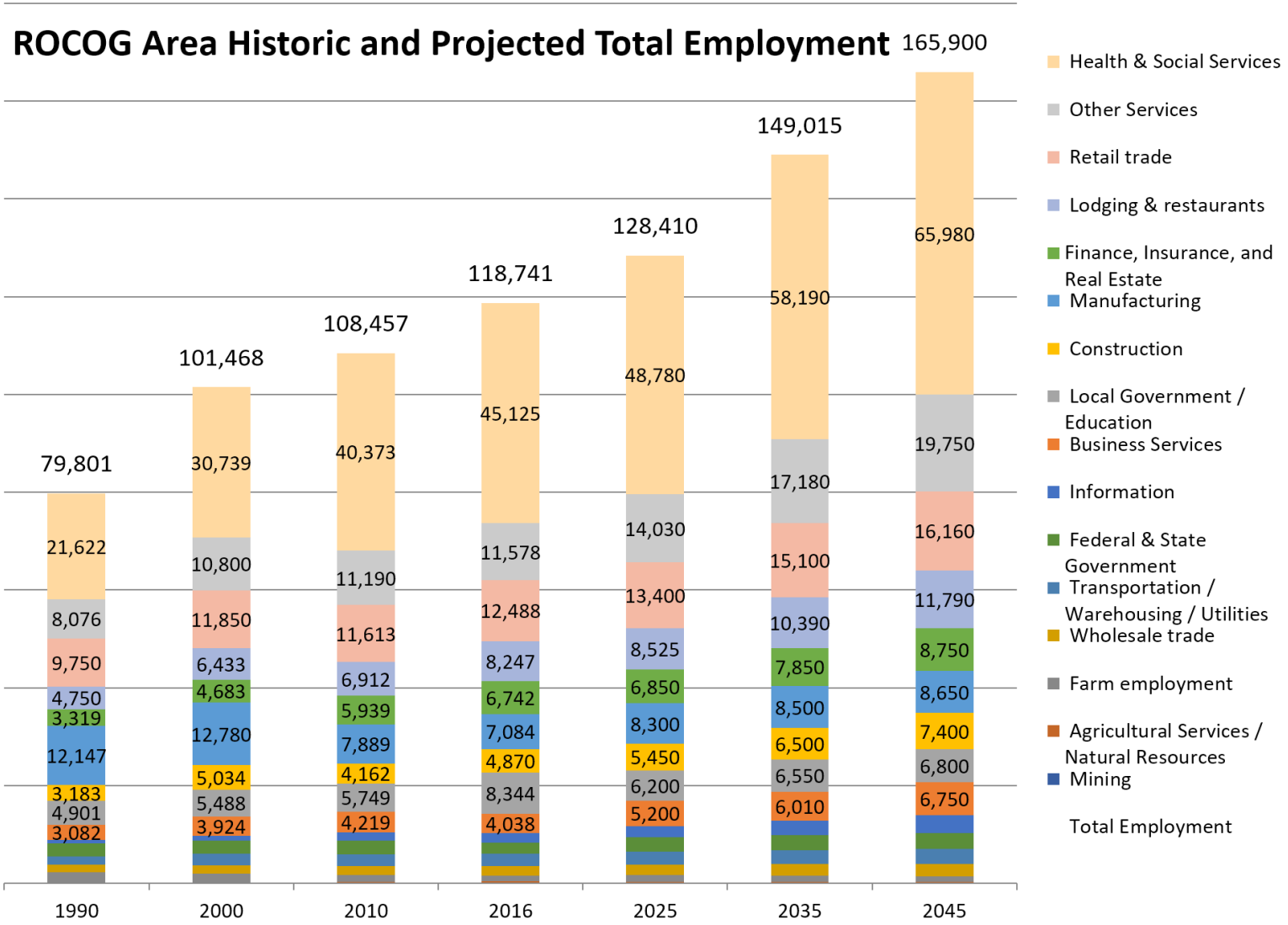
of the 1980s and 1990s, growth in the health sector will be the main driver of future job growth in the county. This will result in a significant increase of health-related visitors to our area along with growth in the retailing and service sectors. A total increase of 45,000-48,000 jobs is expected by the year 2045 (Figure 5-3).

Labor force and commuting

Since 1949, the United States Office of Management and Budget (OMB) has used U.S. Census data to group counties and cities across the country into specific geographic areas for data collection and statistical analysis. These areas consist of a core having a substantial population and the surrounding communities that are economically and socially integrated with that core.

The names given to these units have changed over the years, but in 2000, the term “core based statistical area” (CBSA) was adopted to collectively refer to metropolitan and micropolitan statistical areas. Minnesota has eight CBSAs (Figure 5-4). Olmsted County is part of the Rochester Metropolitan Statistical Area (MSA) (Figure 5-5).

Figure 5-3: Employment Projections (ROCOG)



Each MSA must have at least one urbanized area of 50,000 or more residents. By rule, Rochester is the "principal city" in the MSA because it has the most residents. Olmsted County is the "central county" of the MSA because half of its population live in an urban area; it also has a population of at least 5,000 in a single urban area of at least 10,000. Three adjacent "outlying counties" – Dodge, Wabasha, and Fillmore – are included in the Rochester MSA because at least 25% of each county's labor pool commutes to work in Olmsted County. These four counties share a high degree of social and economic integration with Rochester because of these commuting ties.

Due to demographic trends described in Chapter 2, regional commuters play a significant role in meeting the county's labor force needs. Olmsted County draws workers from throughout southeastern Minnesota, northeastern Iowa, and southwestern Wisconsin to fill local jobs (Figures 5-6 and 5-7). Approximately 33,000 persons from across the region commute to the county's primary employment center, Rochester, each day for work, including about 13,000 Olmsted County residents from outside of Rochester and 20,000 from outside Olmsted County.

The regional labor market, however, may not be able to support the county's increase in job growth if southeast Minnesota labor force projections for the counties outside Olmsted hold true. From 2000-2017,

- Olmsted County's share of the regional labor force grew from 58% to 67%.
- Olmsted County's labor force grew by 12,300.

Figure 5-4: (2020 U.S. Census)

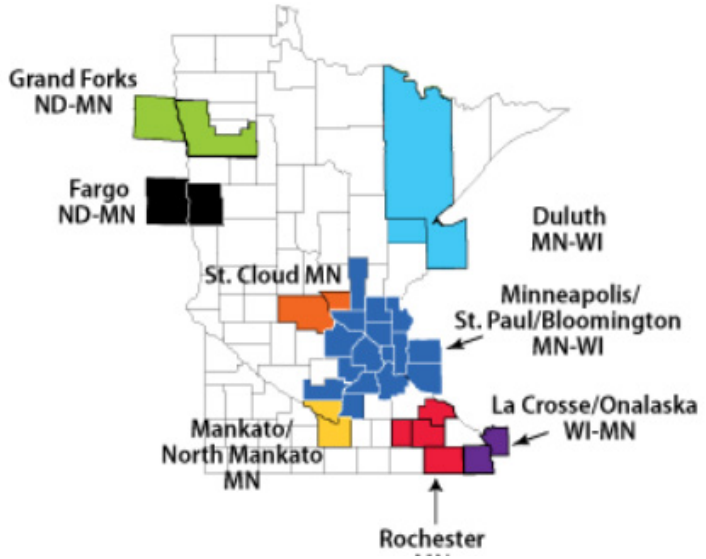
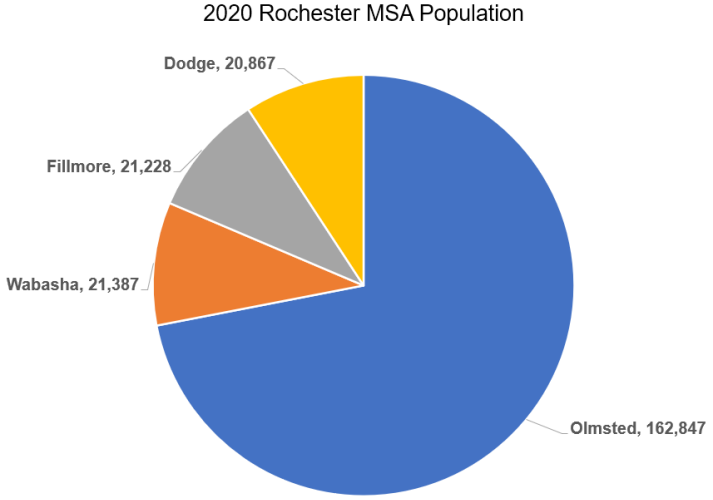
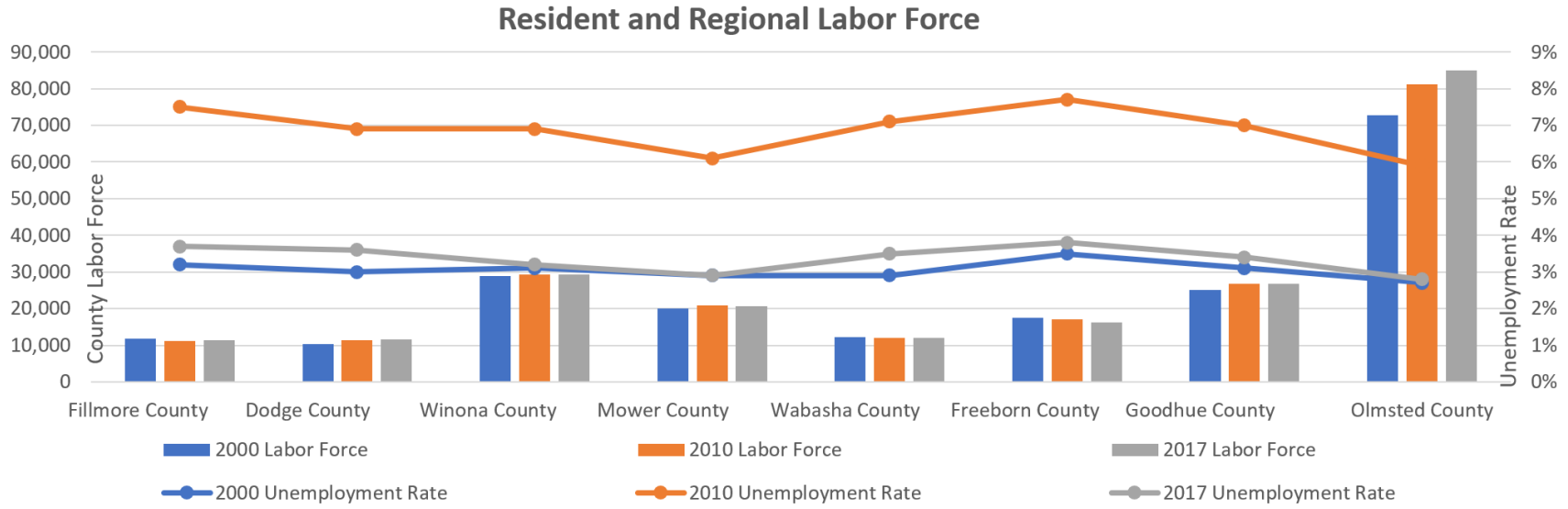


Figure 5-5: Minnesota CBSAs (MN Dept. of Employment and Economic Development)



- The labor force in surrounding southeast Minnesota counties grew by only 1,900 with three counties seeing declines.

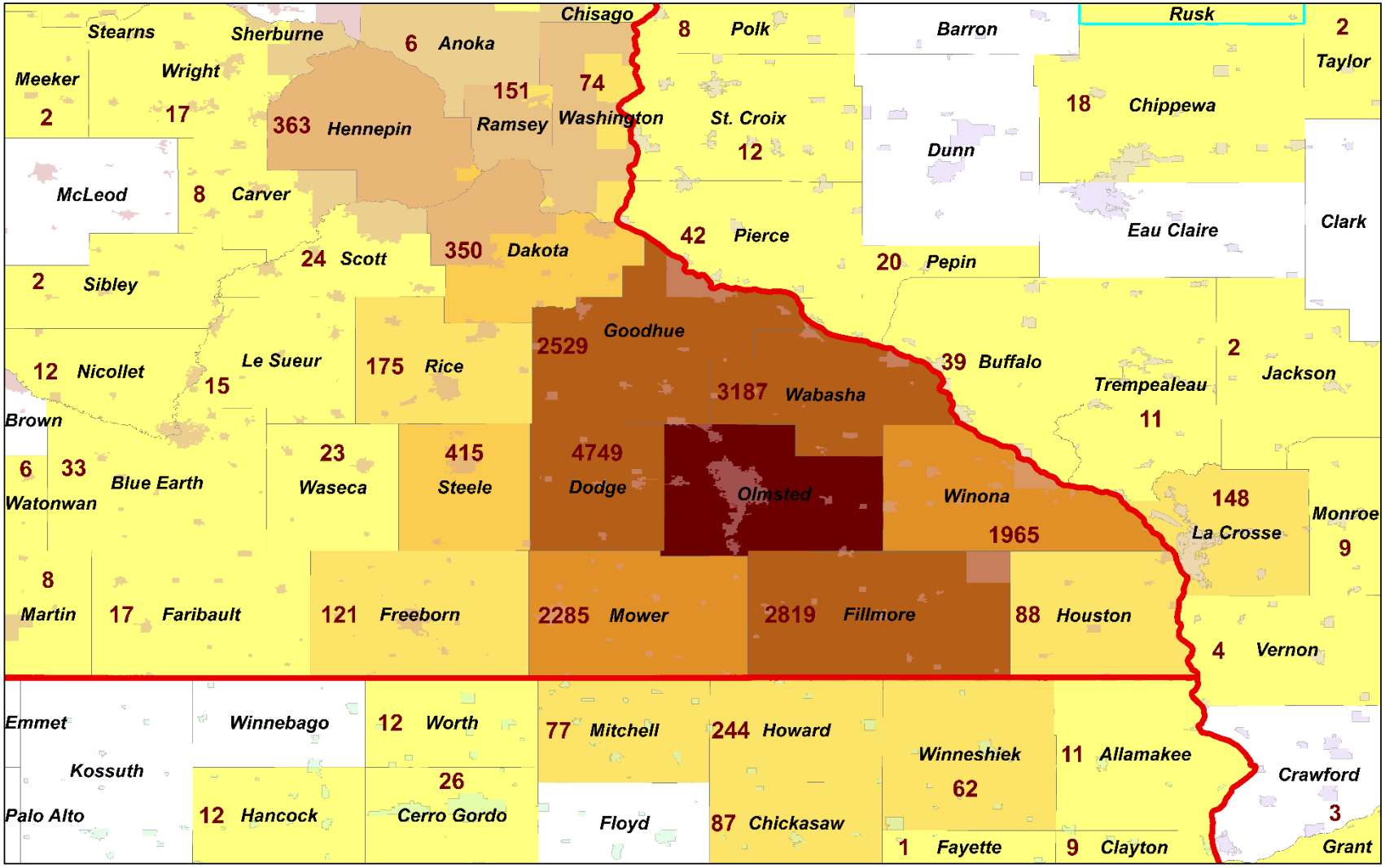
Figure 5-6: Resident and Regional Labor Force (ROCOG Analysis of U.S Census, Bureau of Labor Statistics and SE MN League of Municipalities data)



A Southeast Minnesota League of Municipalities study projects the Olmsted County labor force will grow by 30,450 between 2015 and 2040, while the regional labor force outside Olmsted will grow by only 3,000. While growth in the number of regional workers with a job in Olmsted County has resumed, it has not reached the pace seen before the recession. Efforts are underway to bolster labor force supply, including educational and recruitment efforts to keep more young adults in the region and to bring numbers of new residents from outside of Minnesota back to pre-recession levels.

The need for a large commuter work force results in a significant level of peak period travel demand on regional highways to Rochester. Thus, maintaining reasonable accessibility to Rochester is important for Olmsted County's economy.

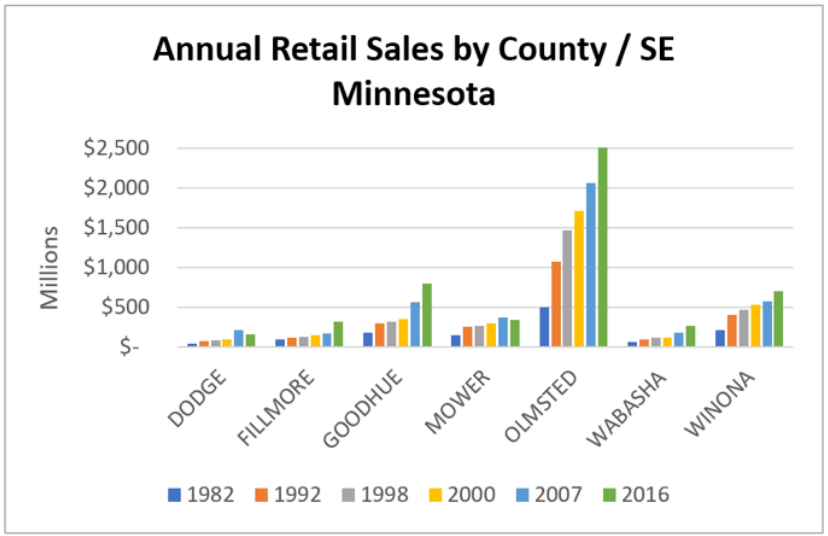
Figure 5-7: Regional Distribution of Commuters to Olmsted County (U.S. Census 2012-2016 5 Year ACS Commuting Flows)

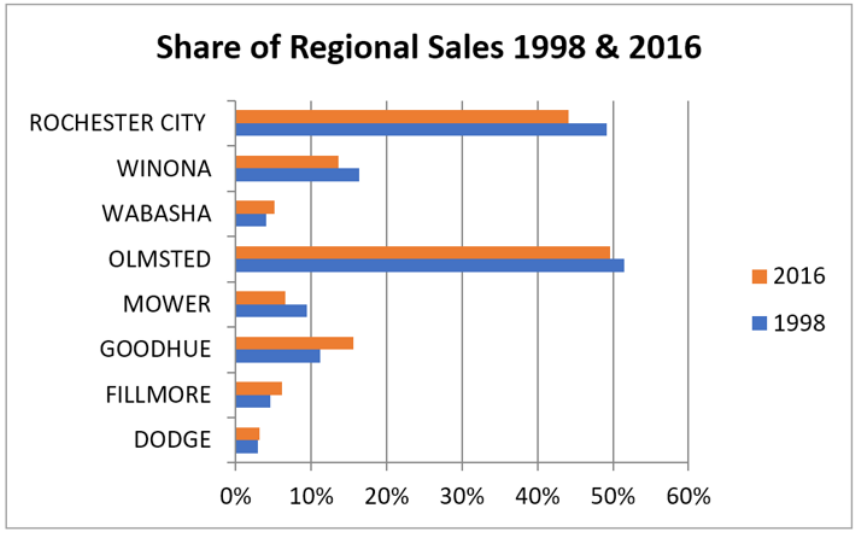


Retail sales

The retail sector is an important component of the local and regional economies. Figure 5-8 highlights the trends in the value of total sales of retail goods in Olmsted and surrounding counties for selected years since 1982.

Figure 5-8: Olmsted County Capture of Regional Sales Activity (ROCOG Analysis of Minnesota Department of Revenue Data)





All counties in the region have seen steady growth in retail sales since 1982 at rates between 125% (Mower County) and 408% (Olmsted County). Olmsted County's share of retail sales has consistently exceeded its share of regional population by 7-15% over the last 25 years. An outsize share of regional retail sales also occurs in Rochester, given its role as the regional economic center for southeastern Minnesota; this also contributes to increased travel demand in the county. Sales taxes from these purchases are a method for capturing some revenue from visitors, commuters, and others who do not live in Olmsted County, but who use our public infrastructure. While the total amount of sales has increased from 1998 to 2016, the share of regional retail sales has declined slightly. These trends imply that retail customers in the region are finding more places to make their purchases outside of Olmsted County.

Agriculture

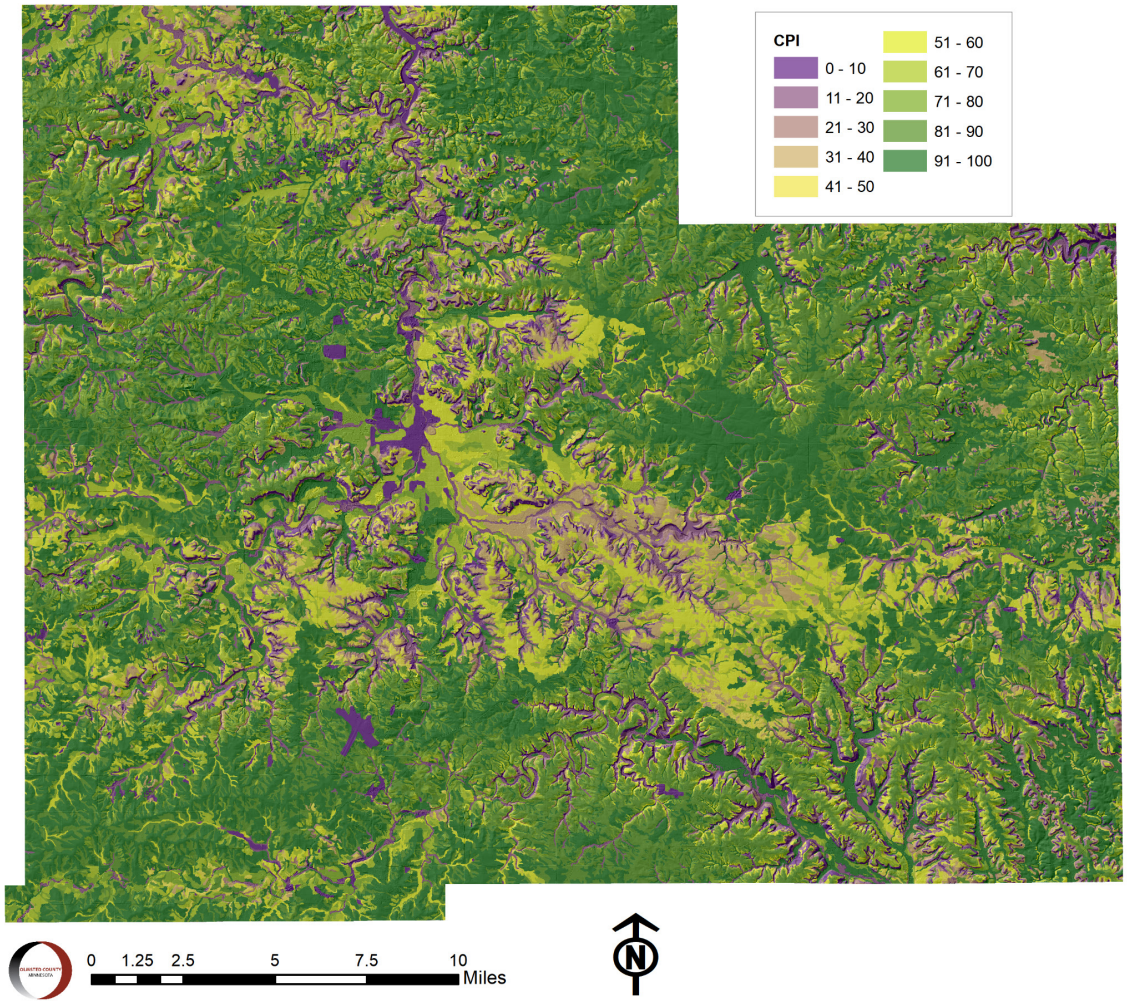
Agriculture continues to be a significant basic sector industry in Olmsted County. Most farm products are exported, with income flowing into the county. Farmers also supplies raw materials to other local and regional industries, such as Marigold and Hormel. Preserving the best of these areas for long term agricultural and horticultural use is in the long-term interest of the county, state, and nation.

Agriculture is heavily dependent on the land resource. Olmsted County is home to vast amounts of prime farmland (Figure 5-9), much of it protected from conversion by zoning restrictions (Figure 5-10). When prime agricultural lands are lost to urban and suburban development, other lands (such as those with wetlands and steep slopes) may be converted to farmland, incurring greater economic, environmental, and energy costs.

Agricultural operations involve noise, odor, dust, farm chemical spraying, and large equipment traffic on public

Figure 5-9

Crop Productivity Index (CPI)

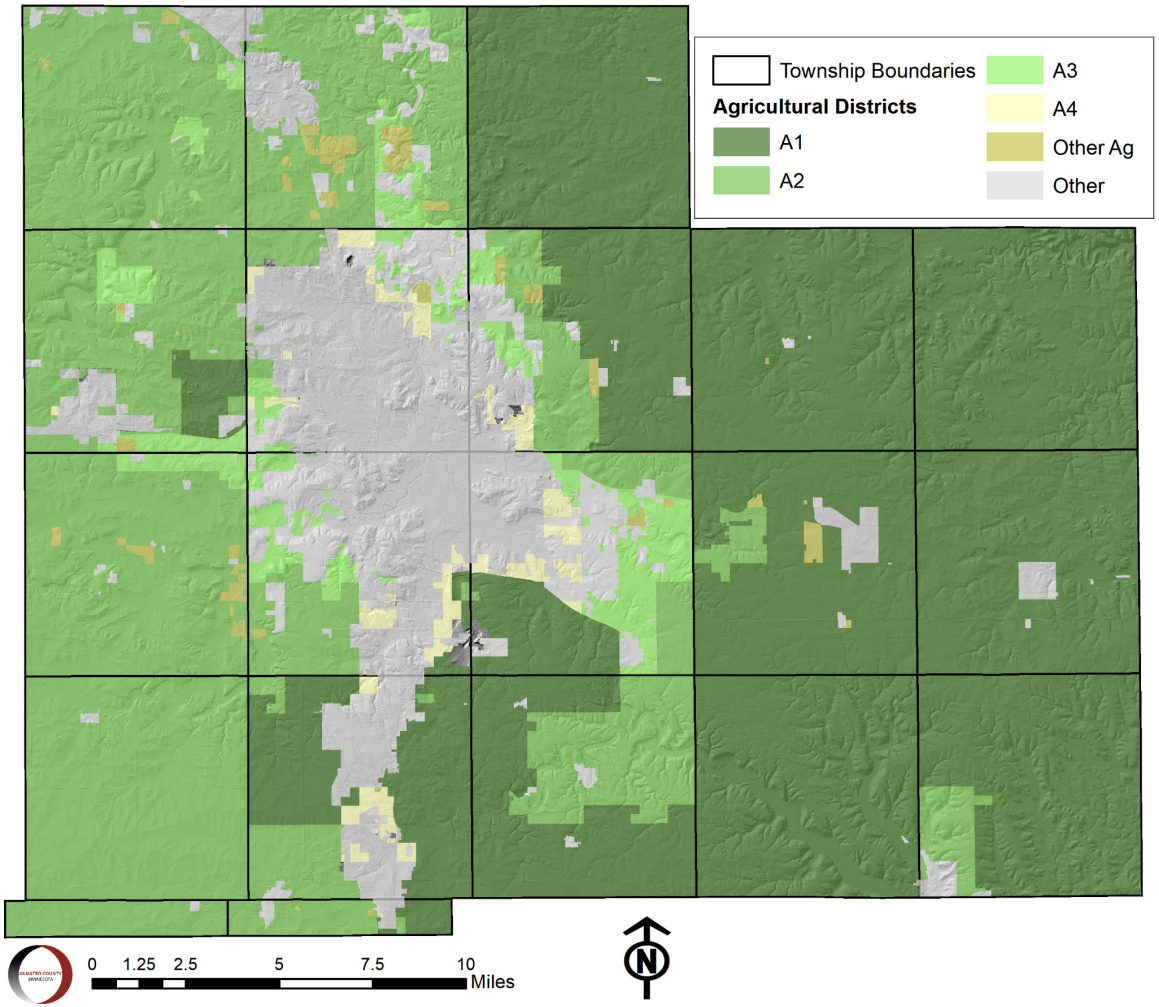


roads. These impacts are a source of complaints by nearby non-farm owners and discourages additional agricultural investment in these areas. Non-farm residential development can negatively affect agricultural operations by

- Directly and permanently removing agricultural land, including significant areas of prime soils, from production.
- Potentially reducing the intensity and profitability of farming by deterring such uses as livestock operations.
- Increasing the price of agricultural lands due to speculation and non-farm investment.
- Creating land ownership and parcel patterns that make it difficult to accumulate the land area needed for larger farming operations.
- Increasing per capita infrastructure and energy costs by reducing residential density.

Figure 5-10

Olmsted County Agricultural Districts



Current conditions

The United States Department of Agriculture (USDA) conducts the Census of Agriculture every five years. This "Ag Census" is a complete count of U.S. farms and ranches that raised/sold at least $1,000 of agricultural products. It also reports the characteristics of the people who run these operations. The Ag Census data falls into four general categories; farm operations and sales, crops and livestock, land use practices and crop treatments, and producer demographics. Fifteen years of data (2002-2017) was analyzed to determine the current state of Olmsted County agriculture as well as emerging trends.

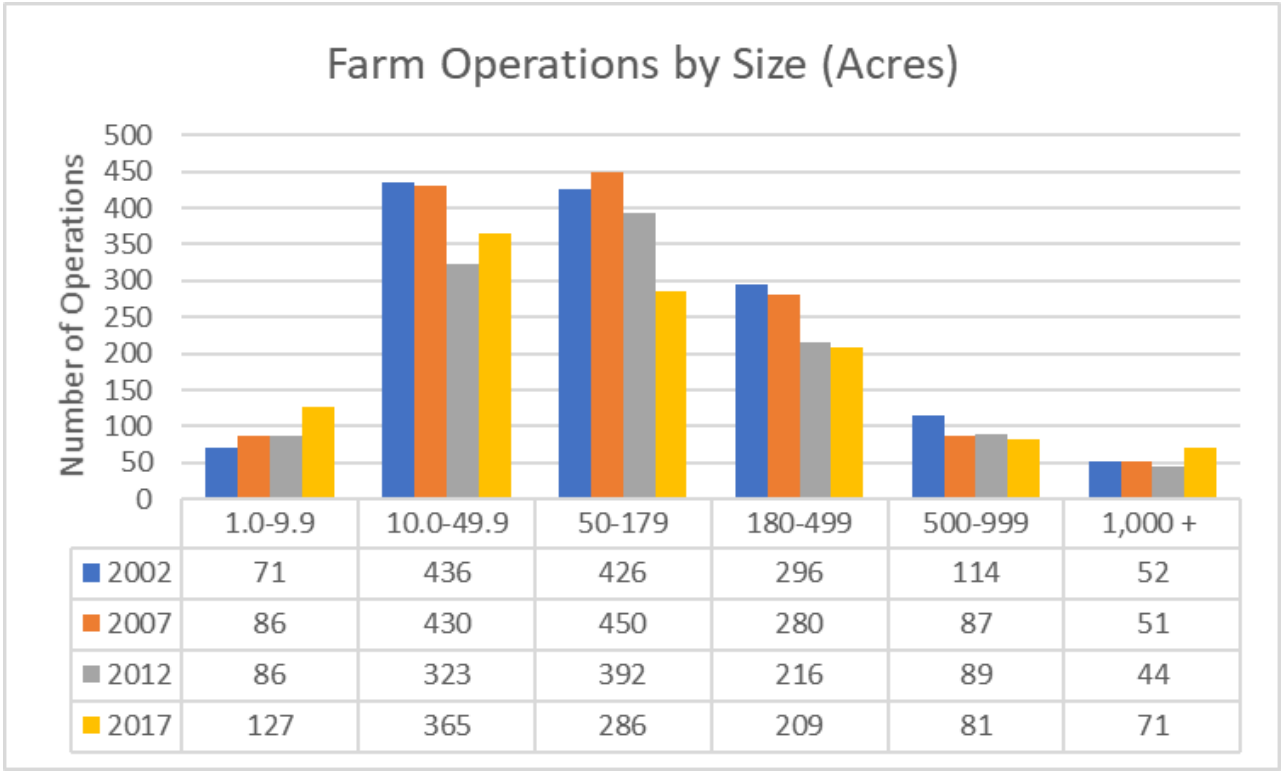
Farm operations & sales

In 2002, Olmsted County had 1,395 farming operations on 313,020 acres. By 2017, there were 256 fewer operations, with a total of 285,944 acres being farmed. Figure 5-11 breaks this data down by land holding size.

Approximately 27,000 acres of farmland were converted to other uses during this time period, mainly due to urban and suburban growth across the county. Enrollment in conservation programs also took marginal farmland out of production.

While there was an overall loss in the number of farms,

Figure 5-11: Size of Farms (USDA Census of Agriculture)



	1.0-9.9	10.0-49.9	50-179	180-499	500-999	1,000 +
2002	71	436	426	296	114	52
2007	86	430	450	280	87	51
2012	86	323	392	216	89	44
2017	127	365	286	209	81	71

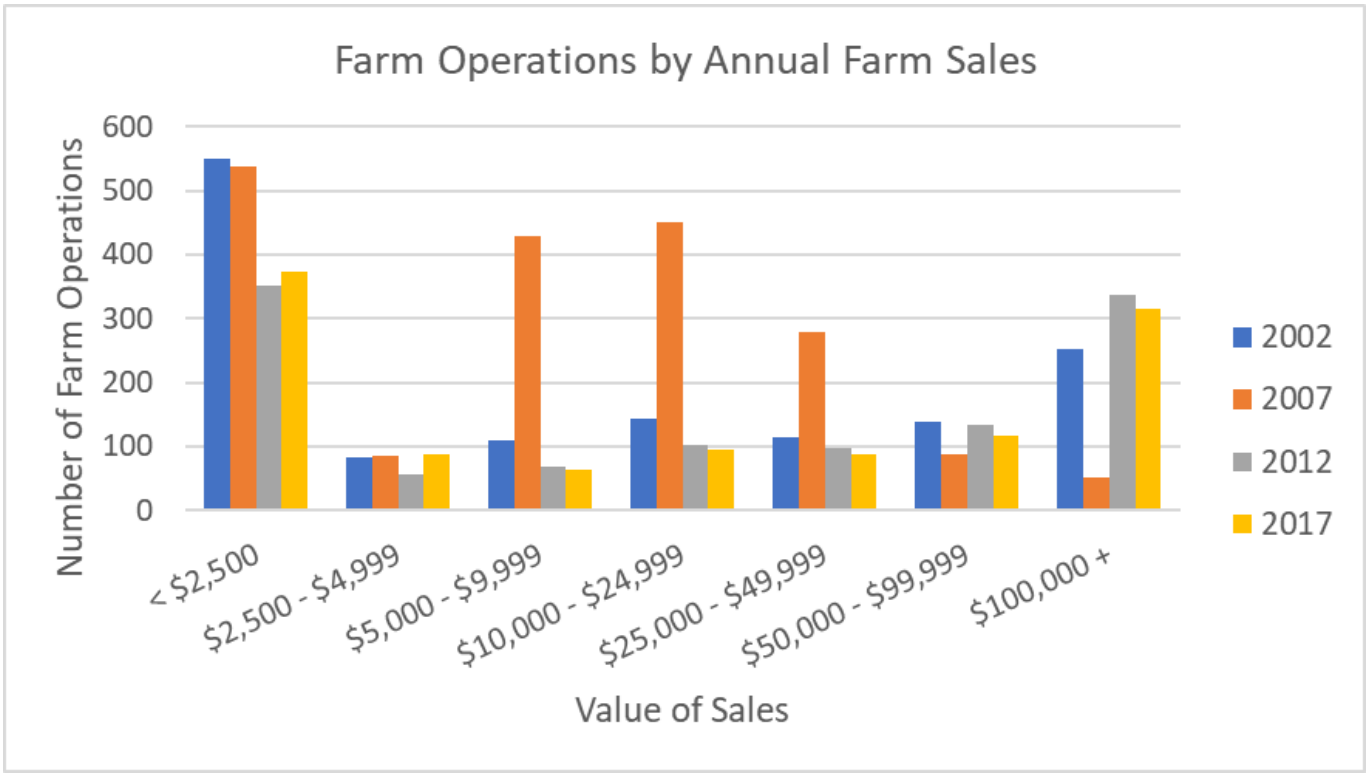
the percentage loss of farm acreage was half that and the average farm size rose from 224 to 251 acres. This indicates that some farms were consolidated rather than lost, as demonstrated by the rise in the number of very large farms. There has also been an increase in the number of small to very small farms, reflecting an interest in hobby farms and alternative farm products.

Farm product sales tended to increase until 2012 and then dropped in 2017. In 2002, 36% of Olmsted County farming operations made more than $25,000 in annual farm sales while 64% made less than $25,000. In 2017, of a total 1,139 farming operations, 46% made more than $25,000 in annual farm sales, while 54% made less (Figure 5-12). The average market value of agricultural products sold per farm rose from $74,668 to $188,249 (Figure 5-13).

Crops & livestock

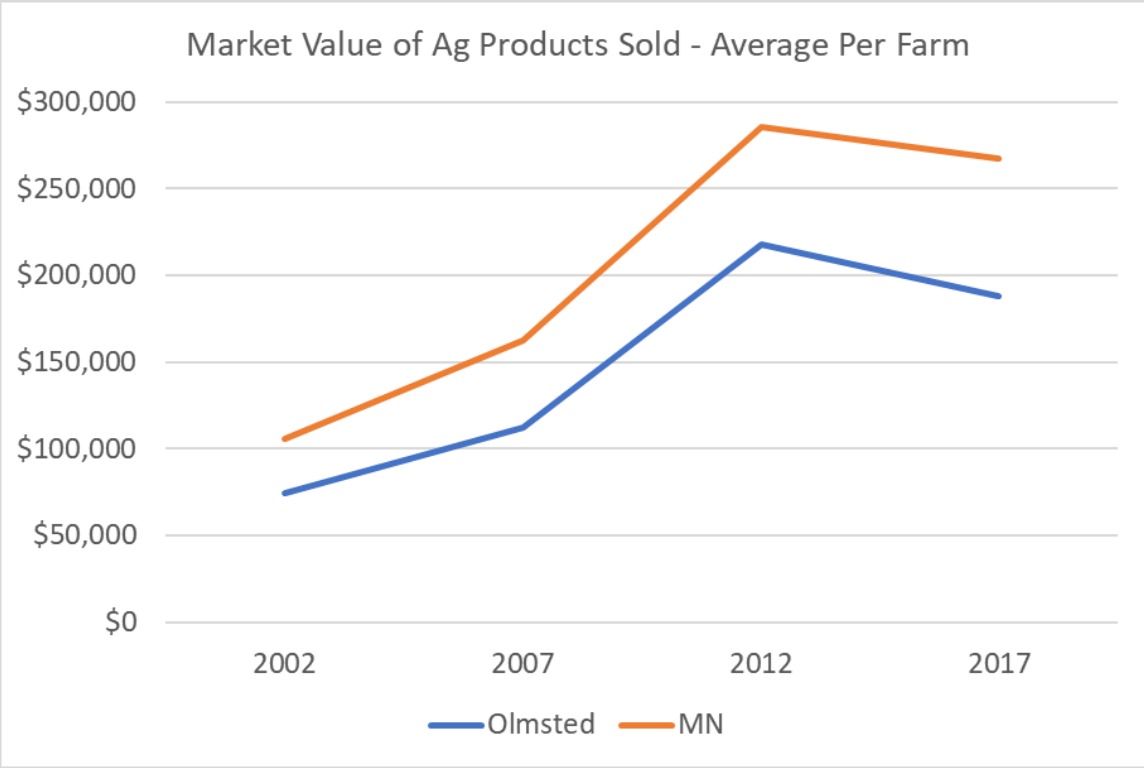
The top three crops harvested in Olmsted County in 2002 were corn, soybeans, and hay. Though numbers fluctuated slightly in 2017, the trends remained stable. Since corn and soybeans are common commercial crops in southeastern Minnesota, this will most likely remain true in the future.

Figure 5-12: Farm Operations and Sales (USDA Census of Agriculture)



In 2002, the top three livestock animals inventoried were hogs, cattle (beef and dairy), and sheep. In 2017, chickens (layers and broilers) replaced sheep. These changes may be attributed to changes in the market. Poultry production grew as “red meat” production declined.

Figure 5-13: Average Market Value of Agricultural Products (USDA Census of Agriculture)



Land use practices & treatments

Tracking agricultural land use practices (e.g., the use of cover crops to manage soil erosion), helps to understand how agricultural land can best be protected and preserved for future generations of farmers. Land use practices on farms were not recorded in the 2002 Ag Census survey but were recorded in 2017. Six land use practices were actively used in Olmsted County: tile drainage (44,521 acres), artificial ditch drainage (9,790 acres), conservation easements (957 acres), conservation tillage (157,829 acres), conventional tillage (42,054 acres), and the use of cover crops (9,397 acres). Many of these practices are vital to the maintenance and preservation of topsoil and soil nutrients that contribute to a successful harvest.

It is possible, if not common, for producers to use more than one treatment strategy to ensure their crops grow. In 2002, of a total 1,359 farming operations, approximately 49% used commercial fertilizer, 39% used herbicide, 30% used manure, and 26% used insecticide. In 2017, of a total of 1,139 farming operations, 24% used commercial fertilizer, 47% used herbicide, 25% used manure, and 27% used insecticide.

Organic farming (discussed later in this chapter) was not counted in the 2002 Ag Census. In 2017, 22 farming operations were designated as organic, though there are only three certified and licensed organic farms in Olmsted County.

Producer demographics

In 2002, 98.5% of all producers in Olmsted County were white. Furthermore, 77.3% of all producers were male. More than half (53.5%) of producers were over the age of 45, with the average producer being 53 years old (Figures 5-14 and 5-15).

By 2017, 98.3% of all producers were white and 66.7% of producers were male. Approximately 80% of producers were over the age of 45 with 30% of producers over 65. The average producer was 57.8 years old.

Our farming community is aging, with fewer young farmers entering the market. Strategies to incentivize and make prime agricultural land affordable for a new generation of farmers may help keep family farms alive and productive in our area.

Figure 5-14: Age of Producers (USDA Census of Agriculture)

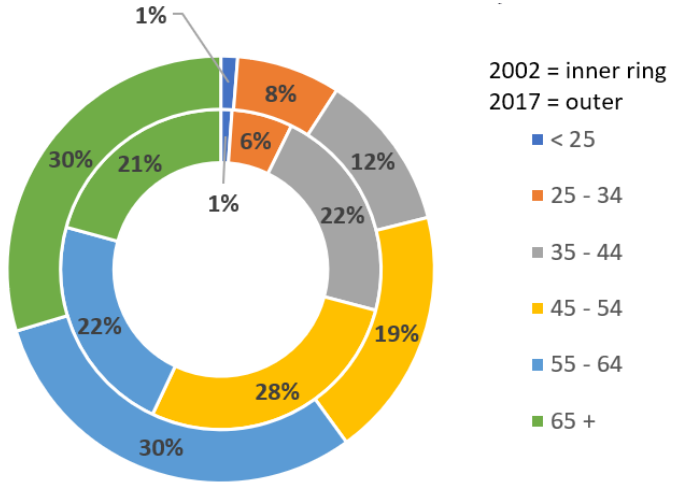
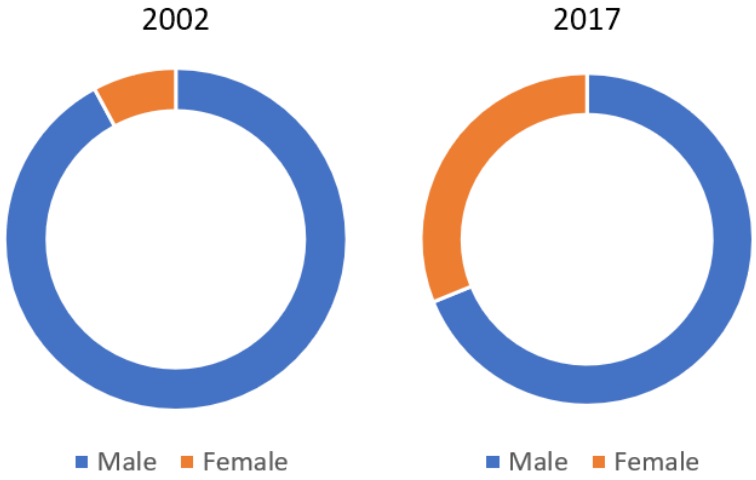


Figure 5-15: Sex of Producers (USDA Census of Agriculture)



Future agricultural uses

Three emerging trends appear to be driving future agricultural land use. These include an increase in demand for organic approaches to farming, a desire for smaller acreage “hobby farms”, and a push for renewable energy source siting. These factors will impact the size and use of agricultural land holdings.

Organic farms

Organic agriculture refers to how an agricultural product is handled prior to being sold. Typically, this refers to farming practices that do not use synthetic insecticides, herbicides, and

fungicides. Organic farming offers an alternative to conventional farming practices that helps operators enhance the natural environment, bolster biodiversity, and protect soil integrity by using land management practices such as cover cropping and crop rotation. Most notably, organic farming operations don't use genetically modified crops (Sustainable Agriculture Network, 2007).

Organic farming has been practiced in the United States since the late 1940s. According to the Pew Research Center, there was an approximate 56% increase in the number of organic farming operations nationwide between 2011 and 2016. This amounts to an approximate 14,000 operations throughout the United States. (Sustainable Agriculture Network, 2007).

Not just any product can be labeled organic and the demand for such products is growing. Since organic farming operations tend to be smaller in size due to the land management techniques they use, this could be a feasible option for new farmers to enter the market.

Hobby farms

A hobby farm is generally a small-scale farm that is primarily for recreation or special interest rather than profit. They can introduce farming to amateurs and enthusiasts alike and are often owned by people who have off-farm employment and tend to their crops and livestock outside of traditional work hours. Owners of hobby farms tend to look for properties that are manageable given obvious time constraints, often ten acres or less in size. This is a departure from conventional farming, where the average farm size in Olmsted County is approximately 250 acres. Agricultural land use planning should provide opportunities for small-scale farming.

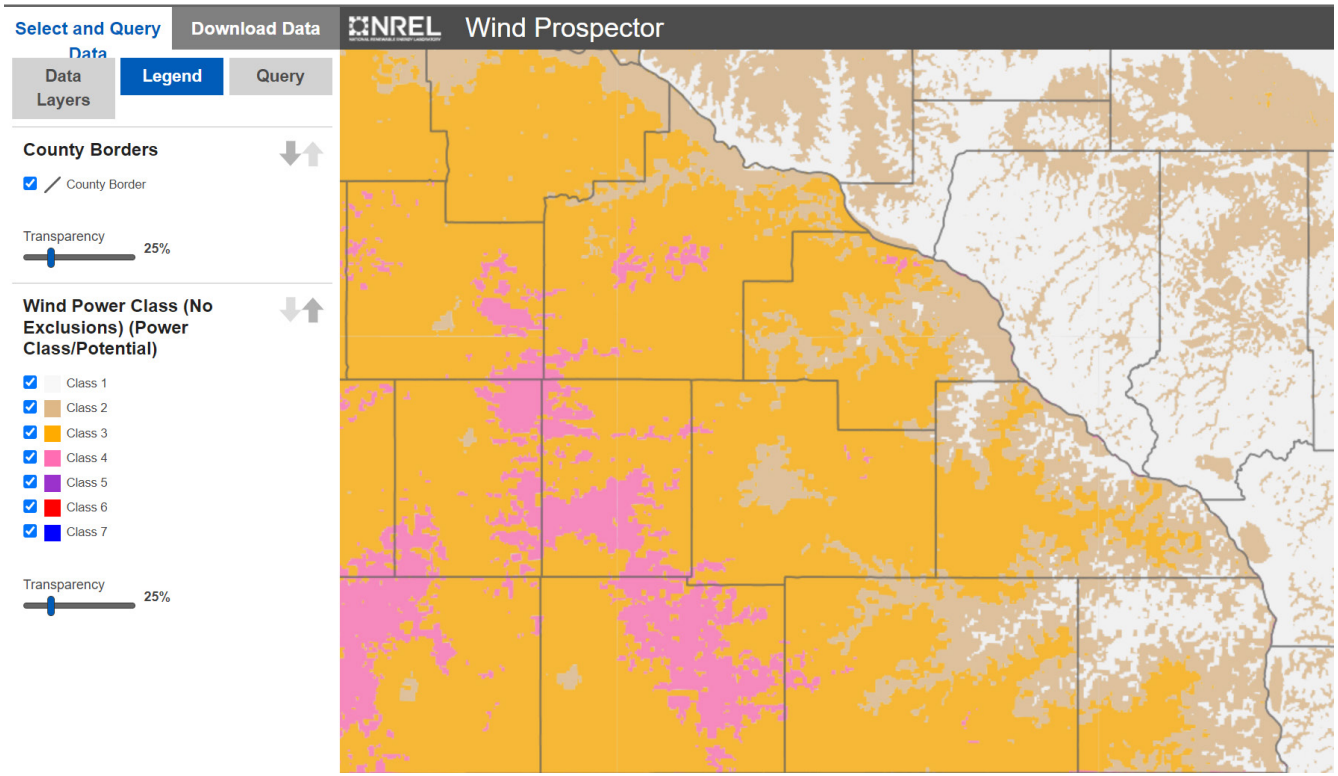
Since the population of farmers is rapidly aging, an injection of youth will be necessary to continue farming the county's prime agricultural land. Furthermore, the price of agricultural land continues to increase at a rate that makes it nearly impossible for new farmers to join the industry unless the land is inherited. Tapping into those populations who have traditionally not been associated with mainstream farming could ensure the continued viability of non-corporate agriculture in our community.

Energy farm siting

In 2019, the Walz administration committed Minnesota to becoming carbon neutral by the year 2050. To meet this goal, there will need to be a significant uptick in the amount of renewable energy that is produced. southeastern Minnesota has high suitability ratings for two renewable sources, solar and wind. Utility companies, such as Xcel Energy, have committed

themselves to a similar goal per Our Minnesota Climate, a multi-agency initiative focused on putting Minnesota back on track to reduce greenhouse gas emissions by 80% by 2050.

Figure 5-16: Wind Energy Potential (NREL)



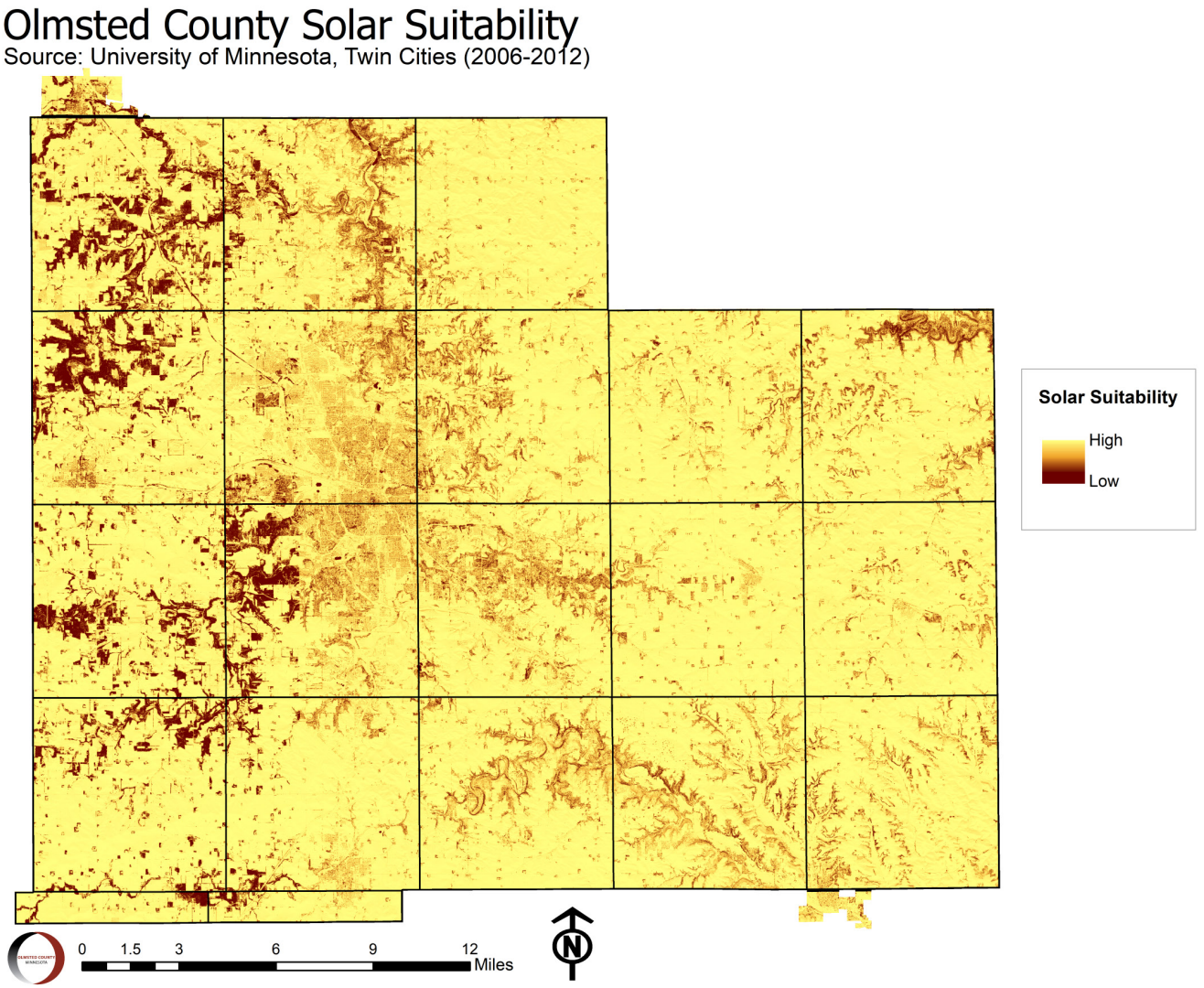
The Wind Energy Resource Atlas of the United States estimates the resource in terms of wind power classes ranging from class 1 (the lowest) to class 7 (the highest). Each class represents a range of mean wind power density or equivalent mean wind speed at the specified height(s) above ground. Areas designated class 3 or greater are suitable for most wind turbine applications, whereas class 2 areas are marginal. According to the National Renewable Energy Laboratory (NREL), part of the U.S. Department of Energy, Olmsted County's wind power classes range from 2 to 4, with 3 being the predominant rating (Figure 5-16).

A joint report authored by the Minnesota Department of Commerce's Energy Environmental Review & Analysis division (EERA) and the Minnesota Department of Agriculture (MDA) concludes that land best suited for solar energy siting often has prime agricultural soils. For determining general prime solar farm locations (Figure 5-17), the following criteria were developed:

- Where is the most productive solar resource?
- Is there access to transmission or reasonably affordable interconnection?
- Does the site offer favorable ground slope and limited environmental liability?
- Are there landowners willing to lease or sell the land or energy rights?

In general, the best locations are on agricultural land that tends to be relatively large, flat, and open parcels of land. When prime farmland is present on a property that an owner is considering selling or renting to an energy company, the developer

Figure 5-17



should be able to, in good faith, make the case that all other potential options have been exhausted.

Depending on their location, solar farms can protect vulnerable groundwater, preserve current soil quality via perennial vegetation, create pollinator habitat, and be co-located with other agricultural uses such as grazing. They generate a stable source of income for farmers and provide tax relief eligibility.

Feasible, economical alternative energy sources can wean us away from those that produce air pollution and greenhouse gases. How to balance these benefits with those of agriculture are critical policy discussions that must be had at the county level to ensure that regulating these activities are not knee-jerk responses but carefully considered.

6 • Land Use Connections

Olmsted County actively plans not only for land use, but also for other major elements of our natural, social, and built environments. These documents reinforce each other and strengthen their individual impacts.

The relationships among all of these components should be considered when implementing the GLUP so as to ensure all county programs are working together to promote the quality of life we expect in our community.

Water quality

Sustainable access to clean, safe water is critical to Olmsted County's health and economic vitality. Virtually all of the water our residents and businesses rely on each day for drinking, cooking, animal care, and materials processing comes from the groundwater aquifers that underlie the county.

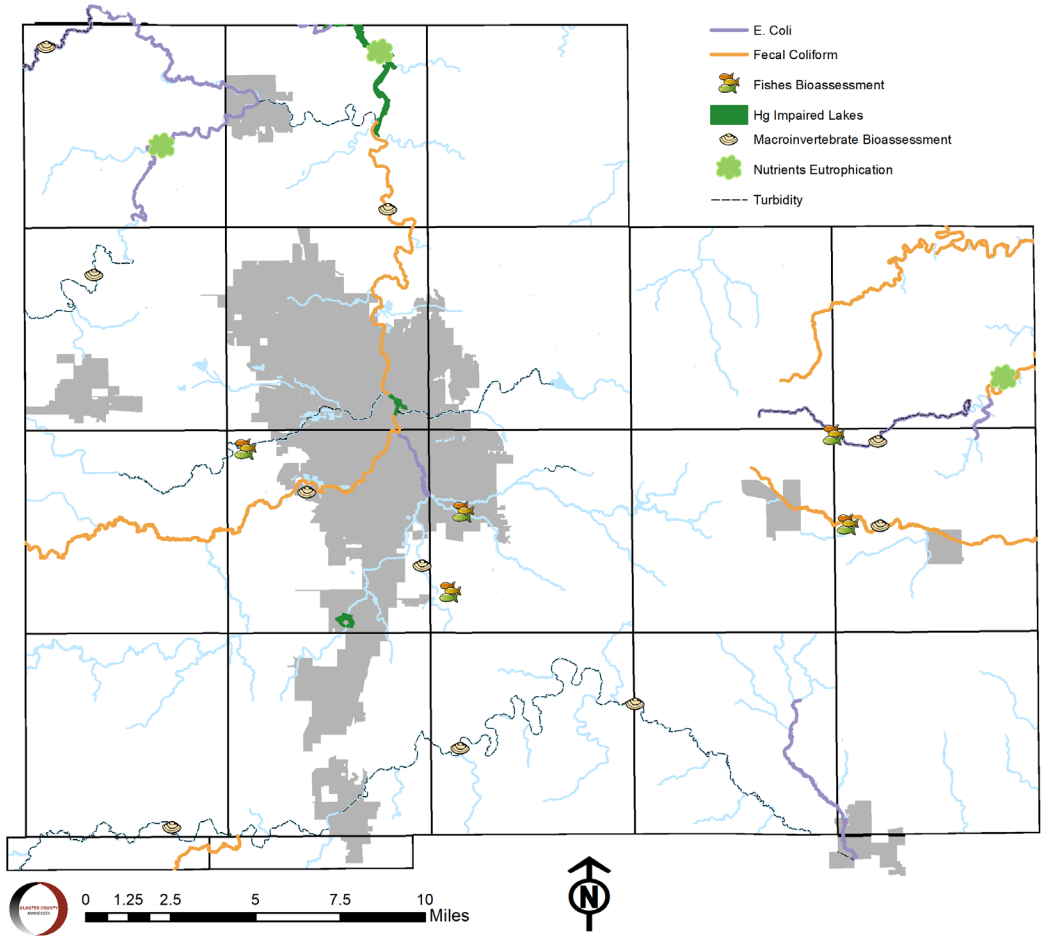
Groundwater knows no jurisdictional boundaries. Hydrogeologic and local land use conditions determine if and how contaminants entering the aquifer from within and beyond county boundaries will ultimately impact our water supplies. Some land use activities in sensitive areas, as well as factors such as improper well construction and abandonment, have introduced contaminants into the groundwater system. Drinking water wells, for example, are now prohibited in the upper aquifers due to higher levels of detected contaminants.

Minnesota's water quality standards protect our surface waters. They conserve lakes, rivers, streams, and wetlands by determining the pollutant levels at which water is no longer usable for drinking, swimming, fishing, and other beneficial uses. A water body is

Figure 6-1

Olmsted County Impaired Waters

Source: Minnesota Pollution Control Agency (2018)



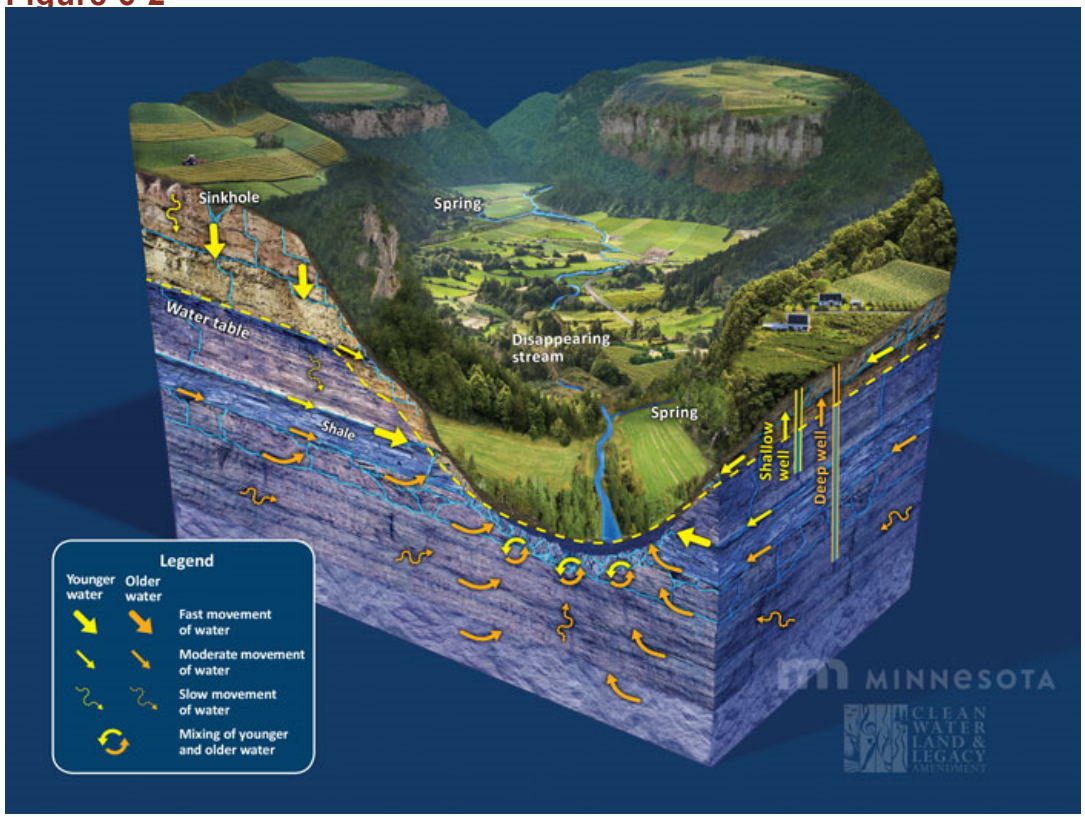
deemed “impaired” if it fails to meet one or more water quality standard of the federal Clean Water Act. Once critical levels are met, best management practices must be instituted and monitored to reduce this contamination. Numerous stretches of Olmsted County’s major water bodies have been placed on the state’s Impaired Waters List (Figure 6-1). While surface water is not a drinking water source in Olmsted County, recreational activities in impaired waters can impact human and animal health as can eating fish from them.

As noted in Chapter 3, the groundwater and surface water systems in Southeast Minnesota are highly interconnected due to our karst geology (Figure 6-2). This surface/groundwater dynamic makes it critical that we closely monitor the quality of our rivers and streams. Olmsted County staff, decision makers, and the public must understand these relationships in order to protect this valuable resource.

Water management planning outlines cooperative and coordinated strategies by which stakeholders work together to protect, maintain, and restore the water and natural resources within a given planning area. The Water Resources Division of the Olmsted County Soil and Water Conservation District (SWCD) coordinates the local, state, and federal water resource management programs and projects undertaken in the county. Land management practices must strive to support and make progress toward the common goals of these plans to maintain the water quality we rely on for our physical and economic existence.

Detailed information on the county's water planning efforts can be found on the Water Resources Division website.

Figure 6-2



Transportation

Transportation planning focuses on how to move people and goods in a safe, efficient, and reliable manner. Knowing where people are currently living, or are planned to in the future, as well as where they work, go to school, shop, and play helps ensure that transportation dollars are spent as responsibly as possible.

Land use planning should, in turn, consider important transportation system objectives, such as the need to preserve the function, effectively use the capacity, and maximize the safety of the road system. The primary network of arterial roads is critical to the safe and efficient movement of people and goods on a regional basis, constitutes an irreplaceable public asset, and is constructed and maintained at significant public expense.

Land use decisions also need to consider issues related to local road infrastructure and how to effectively manage access to and from the arterial network. The appropriate use of local roads is critical to a functional major highway system. The location and design of development can impair the function and accessibility of highways over time if local roads are ignored and people come to rely on the major street and highway system for local traffic movement.

Many national and local planning studies indicate that concentrated development patterns have a number of public benefits, including reducing the total costs of public capital investment and services in comparison with “sprawl,” defined as development characterized by very low density “leapfrog” design. These cost reductions can take several forms, including stabilizing or reducing the expected increases in costs for public services and facilities due to the growth of the community, or increasing the efficiency of the existing public infrastructure.

The direct costs of sprawl are considerable for local and regional communities. Communities that develop in an inefficient pattern may find that the costs of services increase faster than tax receipts or that service levels are reduced. Transportation systems are heavily affected by sprawl because it forces use of the car as the major mode of transportation. This places increased pressure on road systems, resulting in higher costs to the public for more roads and increased maintenance.

When the full costs of development related to off-site infrastructure improvements are not paid by the development, existing taxpayers pay indirectly through increased taxes, fees, and reduced service levels. The GLUP encourages local government to make sure that new growth pays the full costs of providing public services and infrastructure. A compact and contiguous settlement pattern ensures that even development on the fringes of the Urban Service Areas will incur a lower cost for public services and infrastructure.

Learn more about transportation planning in the Olmsted County area on the Rochester Olmsted Council of Governments (ROCOG) website.

Housing

Housing is a basic need and makes up a significant portion of the developed lands in the county. Housing is not a “one size fits all” commodity. Individuals have different housing needs than those of families. Residential preferences may change as people age. People of all income levels should have access to the broadest possible range of choice in housing. and should have a reasonable choice of type and location.

Source: Pictometry

Urban service areas have the greatest ability to accommodate affordable housing due to their compact nature. Municipal services allow for smaller and more affordable lot sizes as well as denser housing styles such as townhomes and apartment buildings. Urban service areas should provide for a variety and mix of urban residential densities, prices, types, styles, patterns, and locations. Residential areas should be integrated with commercial and industrial areas, public institutions, and other uses in order to

minimize the need for motor vehicle travel and to provide travelers in residential areas and business centers with a wide range of choice in mode of travel.

Source: Pictometry

Housing types in suburban development areas are limited due to the reliance on private wells and capacity constraints of septic systems. As treatment system technology advances, higher residential density may be feasible, resulting in lower lot costs. Land development regulations should encourage site design that protects the features and natural functions of the landscape, minimizes the lifecycle costs of future public services and facilities, and encourages the use of alternatives to the private automobile.

Resource protection areas allow for the least amount of housing density. The density of non-farm development should be controlled through restrictions on the number and density of non-farm sized lots allowed in resource protection area zoning districts. Odor, dust, and noise producing activities, such as rock quarries, wind turbines, and feedlots, are consistent with the intent of the Resource Protection Area and have priority over non-farm uses, as long as those resource uses comply with existing environmental standards.

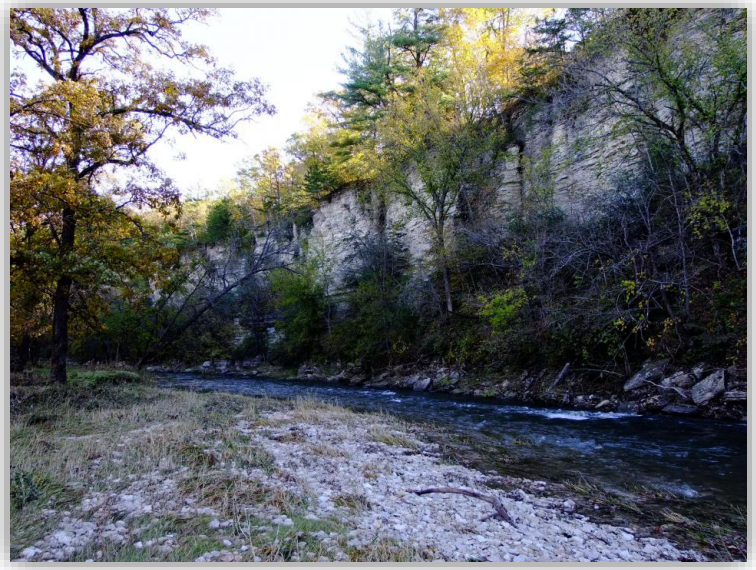
Maxfield Research and Consulting, LLC has conducted a series of housing studies for the county The latest study projects housing demand from 2020 through 2030 and provides recommendations on the amount and type of housing that could be built in Olmsted County to satisfy demand from current and future residents over the next decade. Median sales prices in Olmsted County continue to rise, single-family home supply is at a historic low, and the supply of vacant developed lots is shrinking. The rental market, however, has been booming as over 5,000 new apartment units have been built. Unfortunately, among affordable and subsidized rental units, vacancy rates are extremely low. New construction is catering to move-up and executive buyers while the existing housing stock and townhomes serve entry-level buyers.

Detailed land use planning and zoning efforts should be coordinated with these proven dwelling needs and any future community housing planning. Click on this link Comprehensive Housing Needs Analysis for Olmsted County, Minnesota to learn more about Olmsted County's housing needs.

Parks and open space

Olmsted County is one of the fastest growing areas of the state and is a regional destination for visitors to Southeast Minnesota. When preparing for residential and economic development, we must also plan for the environmental and cultural infrastructure that is needed to support this growth, account for the changing needs of our aging population, and accommodate a new generation of recreational activities. At the same time, we must maintain the quality of life that draws people to our area in the first place. The acquisition and development of public park and recreational areas is one means of providing this infrastructure, ensuring its access for **all** members of our community.

Blufflands, limestone outcroppings, wooded hillsides, prairies, historic structures, and a winding stream network connect Olmsted County's natural and cultural landscape, creating a unique sense of place that draws residents and visitors to explore the outdoors. Parks and recreational areas that preserve these features offer physical and mental health benefits to those who actively enjoy them. These lands also benefit the region's environmental and economic health by filtering pollutants from our air and water, controlling erosion and flood waters, and drawing business investment and tourist dollars to our economy.



The mission of Olmsted County Parks is to foster an appreciation of the natural world through education, natural resource management, and public participation in the stewardship of our parklands. The GLUP intends to promote consistent execution of these strategies by

- Incorporating the Olmsted County Parks Commission's land use-related policies into the GLUP's goal to protect natural and cultural resources.
- Identifying demographic conditions and trends that indicate when additional lands or uses will be needed for the county's parks and recreational areas system.

- Consolidating policies that specify those physical and geographical features considered to be desirable by both state and local entities for inclusion in regional parks and recreational areas.
- Identifying data sets that will map land characteristics most suited to achieving these objectives.
- Facilitating the county's procurement of outside funding to assist regional park and recreational area projects by demonstrating that long term goals and strategies have been deliberated and formally adopted.

To effectively build and manage the county's park and open space system, a set of land use-related priorities has been established in order to make the greatest use of available funding. This identification will also make staff and decision makers aware when high priority lands may be under development pressures and facilitate development proposal evaluation accordingly.

- Prioritize outcome-based planning to improve natural resources, including consideration of those listed by state and/or federal agencies, when found to be of significant value.
- Prioritize preservation of viewshed areas surrounding Olmsted County parks when making zoning and land purchase recommendations and decisions.
- Prioritize acquisition of properties with special natural resources or historically significant structures.
- Provide opportunities for people of all abilities and ethnicities to get outdoors and interact in sustainable ways with nature.
- Place high value on preserving historical aspects of buildings and other features.
- Plan corridors to connect to other natural resources in the area.
- When acquiring new public land, focus on properties that would create access to current parks where feasible.
- Continue to use projected population figures to drive planning for future park needs and purchases.

As open space funding becomes available, the county's environmental, geographic, and other databases will be very useful in locating those lands that best meet the policies for acquiring and developing park and recreational areas. When state and local GIS offices update and add pertinent data to their systems, this information should be added to this site evaluation process.

Learn more about all Olmsted County's parks system has to offer.

Cultural Resources

Olmsted County has a unique and rich cultural history that blends agricultural productivity, medical innovation, and natural beauty. Features such as the Plummer Building, the Benike family farm, and the Frank Ford bridge (Figure 6-3) remind us of what makes Olmsted County home. Through policies adopted as part of this plan, the community should continue to support the preservation of features that provide historic, cultural, and landscape identity.

Figure 6-3

In the early 1990s, the MN DNR, in cooperation with Olmsted County and the City of Rochester, completed a County Biological Survey. This inventory of native plant communities and rare species helps ensure that development and infrastructure projects avoid these critical areas. A similar resource inventory is needed for cultural resources. The work completed for rural areas of Olmsted County through the efforts of Professor Emeritus Robert Douglas of Gustavus Adolphus College provides a basis for developing such an inventory. A list of the sites identified in this study is presented in Appendix B of this document.

"Through historic preservation, we look at history in different ways, as different questions of the past, and learn new things about our history and ourselves. Historic Preservation is an important way for us to transmit our understanding of the past to future generations".

National Park Service

Hazard Mitigation

Hazard mitigation is defined as any sustained action to reduce or eliminate long-term risk to human life and property from hazards. While mitigation strategies and efforts cannot eliminate all natural threats and hazards, Olmsted County strives to limit their potential physical, economic, and social impacts as much as possible. Preparation is key to the county's ability to respond to and rebound from adverse situations.

Developed with the assistance of technical experts and community stakeholders, Olmsted County's Multi-Hazard Mitigation Plan identifies and analyzes those hazards most likely to impact the county, assesses the community's ability to respond to these events, and recommends strategies to mitigate their impact. This plan is required by the federal government in order to receive federal disaster assistance and mitigation funds. It will be updated in 2023.

Olmsted County is vulnerable to a variety of potential natural disasters which threaten the health, safety, and welfare of our residents and visitors. Events such as tornadoes, windstorms, floods, wildfires, severe winter storms, landslides, and extreme temperatures can exact massive personal and economic loss. Land use planning can be of great assistance to hazard mitigation efforts by diverting development, when possible, away from areas most likely to be impacted by these natural events and requiring structural features and site designs that help people stay safe and emergency responders reach those in need.

Environmental justice

Though many definitions exist for the concept of **environmental justice**, the United States Environmental Protection Agency (EPA) provides a foundational definition.

"Environmental justice is the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies. Fair treatment means that no group of people, including a racial, ethnic, or socioeconomic group, should bear a disproportionate share of the negative environmental consequences resulting from industrial, municipal, and commercial operations or the execution of federal, state, local, and tribal programs and policies."

The GLUP must ensure that no group in our community unduly bears negative environmental effects of county land uses. Research indicates that these groups typically are people of color, Indigenous populations, low income neighborhoods, and those with disabilities. We must strive to reverse any land use laws, regulations, and policies that disproportionately affect those groups and continue to do so. These consequences spur a domino effect that results in negative community health impacts, higher rates of doctor visits, and overall poor quality of life.

It is possible to prevent future environmental injustices due to unsound land use practices. The real challenge lies in recognizing and reversing any historical environmental injustices. There are tools in the planner's toolkit to assist in resolving environmental concerns and relieving disproportionately impacted communities from their burden. These include guiding documents, such as the GLUP, and regulations that enforce land use policies, such as zoning and subdivision ordinances. No one solution fits all, as municipalities differ in their needs, goals, and desires. Furthering the cause for environmental justice initiatives will be a joint effort involving many stakeholders working together for the betterment of our community.

In 2016, the Rochester-Olmsted Council of Governments (ROCOG) produced an environmental justice protocol titled A Matter of Fairness: Mitigating Impacts, Eliminating Disparities, and Ensuring Equitable Access. This document outlines a framework for identifying those areas that are prone to environmental injustices as well as defines policy strategies to help ensure all residents of Olmsted County have equitable access to sufficient transportation options through the elimination of disparities and barriers. The protocol acknowledges that environmental injustices have occurred, and continue to occur, predominantly in low-income communities and communities of color.

In 2017, the Olmsted County Board of Commissioners passed a resolution formalizing the county's commitment to health, social, and racial equity.

"One Olmsted works to eliminate disparities and create equitable outcomes for all through our commitment to diversity and inclusion and development of strong community partnership."

The goals of the One Olmsted initiative include:

- Ensure an inclusive and supportive workforce environment.
- Ensure our services to residents are equitable, reduce barriers to use, and promote inclusiveness.
- Increase the number of staff who represent the community at large in diverse ways.

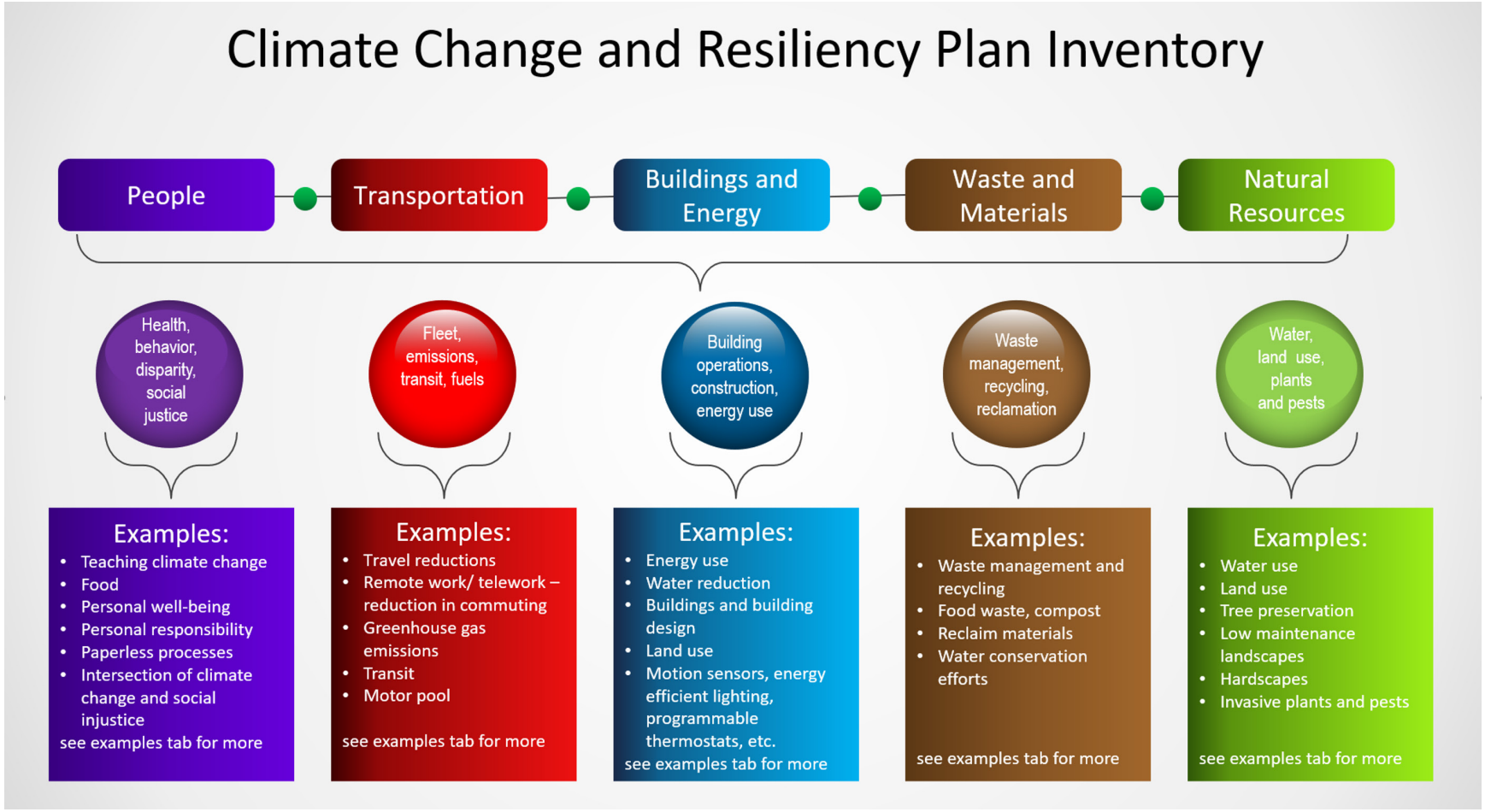
Sustainability

Sustainability means meeting our needs without compromising the ability of future generations to meet their needs. Sustainable development, therefore, refers to development that maintains or enhances economic opportunity and community well-being while protecting and restoring the natural environment upon which people and economies depend.

The concept of sustainability was identified as a key Community Value for Planning with the adoption of the 1995 GLUP. Numerous Olmsted County land use principles and policies are based on this concept. The need to maintain sustainable human communities should be a top priority in land use planning decisions. Changes in fossil fuel availability and affordability, weather, food habits, and other significant social, cultural, and economic patterns need to be addressed by making responsible land use decisions.

Olmsted County has embarked on a **Climate Change, Sustainability, and Resiliency Workplan** (Figure 6-4). Its purpose is to act on climate change by assessing and reducing the county's carbon footprint using facilities, lands, operations, and activities strategies. This will allow the county to prepare and plan for the potential impacts of climate change on the county and its residents, preparing them for long-term resiliency. This assessment is due for completion in 2022.

Figure 6-4


Climate Change and Resiliency Plan Inventory
People
Transportation
Buildings and Energy
Waste and Materials
Natural Resources
Health, behavior, disparity, social justice
Fleet, emissions, transit, fuels
Building operations, construction, energy use
Waste management, recycling, reclamation
Water, land use, plants and pests
Examples:
Teaching climate change
Food
Personal well-being
Personal responsibility
Paperless processes
Intersection of climate change and social injustice
see examples tab for more
Examples:
Travel reductions
Remote work/ telework – reduction in commuting
Greenhouse gas emissions
Transit
Motor pool
see examples tab for more
Examples:
Energy use
Water reduction
Buildings and building design
Land use
Motion sensors, energy efficient lighting, programmable thermostats, etc.
see examples tab for more
Examples:
Waste management and recycling
Food waste, compost
Reclaim materials
Water conservation efforts
see examples tab for more
Examples:
Water use
Land use
Tree preservation
Low maintenance landscapes
Hardscapes
Invasive plants and pests
see examples tab for more

OLMSTED COUNTY
MINNESOTA

7 • Values, Principles, and Policies

The social, environmental, infrastructure, and economic factors described in Chapters 2 through 5 laid the foundation for the community values, land use principles, and policies adopted in this planning document.

Since the GLUP's original adoption in 1995, policies have been modified in subsequent minor plan updates to reflect new data, concerns, trends, and technologies.

Community planning values

As part of creating the 1995 GLUP, Olmsted County used public input obtained through numerous outreach opportunities, surveys, and working sessions to identify the community's key planning values. The county believes these ideals are as relevant today as when they were initially adopted.

Beauty: We should recognize and protect the natural beauty, diversity, and built heritage of Olmsted County. New development should preserve and augment those qualities.

Efficiency: We should develop our land use and infrastructure systems in a cost effective and fiscally sound way, reducing the cost of government services.

Accessibility: We should make community decisions in an open, fair, and democratic way, so that all citizens have access to and can participate in decisions.

Competition: The community should provide incentives through the market system to promote community goals and the global competitiveness of area farms and businesses.

Habitability: We should minimize risks to human health from environmental contamination and develop safe, secure neighborhoods and communities.

Equity: We should ensure that the benefits, costs, and impacts of land use decisions apply fairly to all citizens of the community.

Sustainability: We should moderate the demands we make on the environment so that we protect its ability to provide for the needs of future generations.

Planning principles

The GLUP incorporates these community planning values into planning principles that lead toward countywide sustainable development patterns. These principles form the foundation for the policies of this plan.

1. Wisely use the energy resources, urban systems, and land area of Olmsted County by concentrating urban and suburban development and creating an orderly pattern of development.

Modern communities cannot function without adequate water, transportation, utilities, communications, emergency services, waste treatment, parks, schools, and other facilities and services. Due to limited financial resources, communities should maximize their use of existing infrastructure and service investments. The GLUP encourages orderly and compact growth, as opposed to sprawl and leapfrog development, to carry out this objective, minimize the costs of facilities and services, and avoid conflicts between incompatible land uses. This strategy protects public and private sector investments and property values while reducing the amount and per household costs of travel and energy consumption.

Orderly county land development must focus on the timing, location, density, and overall land use patterns. When planning for new growth, it is important to consider the quality and capacity of existing services and whether additional demand can be accommodated in a cost-effective manner.

The public and private sectors must continue to provide infrastructure and services in a prompt and economical manner, recognizing that land use strategies used in rural areas may differ from those needed for urban and suburban locations. Infrastructure investment should be coordinated with land use decisions and community needs. Expansion must support orderly development.

2. Encourage practices and technologies that maximize efficiency of resource use and minimize waste.

Settlement patterns and economic activity use natural resources, import products, and export waste and products. A sustainable community must work to minimize the non-renewable resources that are consumed or imported, and the waste that is exported, without long-term declines in productivity. The challenge for non-renewable resources is to use such materials so that at the end of the useful product life, the material becomes a resource for a future use. The challenge for energy resources is to convert from fossil fuels to renewable energy supplies, and from energy-intensive development to energy-conserving land uses and modes of transportation.

3. Preserve the natural and cultural resources that provide a “sense of place” for the county.

Olmsted County’s human-made and natural physical features distinguish it from other communities. Such elements include historic, geologic, hydrologic, biological, and ecological features combined in a landscape that the community

recognizes as significant. The community should encourage the preservation of features that contribute historic, cultural, and landscape identity as an important part of our quality of life.

4. Ensure that growth pays for itself by incorporating long-term costs and benefits into the community decision-making process.

In order for market forces to work in favor of efficient, sustainable private development, with a minimum of public regulation, growth must pay for itself. This does not mean that development costs should not be amortized, but only that public sector investments should not subsidize new development with tax dollars from older areas. Secondly, the costs of development borne by its consumers should include the full social and environmental cost of the development. Finally, public entities should manage public investment and regulate land use in order to properly manage growth.

The county, city, and township governments must take account of the long-term impacts of changes in land use on other private investment as well as public assets and resources. Then, decisions will reflect consideration of the cumulative impacts of proposed development.

5. Conserve and restore natural resources, including agricultural resources, and protect the ecological systems of the natural environment and economic uses of those resources.

Land should be considered not only as a commodity but also as an ecological system that includes land, water, air, and communities of plants and animals. The diversity of our area's ecological systems guarantees their health; that diversity should be maintained and enhanced. System conservation manages renewable resources so that their rates of replenishment equal or exceed those of their use.

Resource related activities are a basic cultural and economic element in the community and are the county's most extensive land use. One significant threat to ecologically sound resource uses is the conversion of those uses to other purposes. In fact, the soils of Olmsted County include some of the most productive in the world. National and global demands for agricultural products will certainly increase in response to population growth and pressure on global agricultural resources. Olmsted County needs to protect the best of its agricultural resources from permanent removal from agriculture for the foreseeable future. Once a decision is made to develop a piece of land for urban or suburban purposes, it is not feasible to convert it back to a productive natural resource use.

Dispersed residential and some commercial land uses disrupt many resource-oriented activities such as forestry, mineral extraction, and especially agriculture. Agriculture is directly impacted by complaints about agricultural operations from non-farm uses. Nearby non-farm development indirectly impacts the price of agricultural land and the future investment plans of landowners.

Protecting environmental quality benefits our community and the environmental systems that support their quality of life. This is particularly true of water and air, which are the major media receiving pollutants from human-influenced activities. Our residents and visitors should be protected from pollutants that threaten their health. Local governments, residents, and businesses should work to prevent pollution at its source, rather than remove it at its outlet, to prevent transfer of pollutants to another system or geographic area.

6. Encourage the development of affordable housing and provide for a reasonable range of choice in housing and lifestyles.

Housing is a basic need and makes up a significant portion of the county's developed lands. Individuals and families have different needs for housing. All household types and income levels should have adequate access to the broadest possible range of choice in housing style, location, and affordability.

7. Encourage the creation of economic opportunities in an equitable fashion for all citizens.

Economic opportunity must be available to all members of the community so they can live, work, profit, and thrive. The private sector must continue to be the primary creator of these opportunities with the support of cost-effective public services. This means that economic development should be directed to areas where essential public services can be provided in an environmentally sound and cost-effective manner. While private property rights are a protected and important part of our economic system and individual economic opportunities and decisions, the community must weigh these rights with those factors that are in the interest of the larger community. Creating an equitable community for all residents is necessary for a livable community.

8. Seek methods for implementing community policy that are cost-effective, that link costs to benefitting properties, and that accomplish public goals while accommodating private interests.

The community has multiple priorities and limited resources available to implement them. These limitations affect the opportunities available for dealing with land use related issues and problems, making it necessary and desirable to seek ways to meet multiple goals in a cooperative fashion. An example is cluster development near Decorah Edge sites, which accommodates private development interests while protecting edge support areas and their related public benefits. Changes in land use present opportunities to correct pre-existing problems, such as improving management of access and correcting environmental hazards, while addressing development needs.

9. Cooperate with local jurisdictions within and adjacent to Olmsted County in the development and implementation of the GLUP.

Land use, environmental, natural resource, and related issues cross political jurisdiction boundaries. In recognition of this fact, the GLUP has been developed in a cooperative fashion. The ongoing planning process should continue to encourage collaboration among the Township Cooperative Planning Association (TCPA), the Rochester Olmsted Council of Governments, city administrations, cooperative zoning enforcement agreements between townships and Olmsted County, the Prairie Island Indian Community, and the Olmsted County Planning department.

10. Respond to land use and resource management issues in a flexible and proactive way.

The planning activities of local jurisdictions must be able to identify and deal with land use related issues before they become expensive problems for the community. The governmental entities in the county need to develop natural resource plans, housing plans and programs, community development programs, capital improvement programs, corridor improvement plans, orderly annexation agreements, and other public action plans in advance of development pressure in order to avoid undue delay for private sector development and unnecessary cost for public facilities. In a financially constrained environment, using interim low cost strategies to minimize or mitigate the impact of existing or expected conditions while planning and identifying resources for long term solutions must also be recognized as an important proactive response.

11. Create and maintain sustainable communities.

The need to maintain sustainable human communities should be supreme in land use planning decisions. Changes in fossil fuel availability and affordability, weather, food habits, and other significant social, cultural, and economic patterns need to be addressed by responsible land use decisions.

12. Ensure land use decisions and transportation management and investment are mutually supportive.

Understanding the interconnected relationship between land use and transportation planning is critical to the community's long term economic success, quality of life, and protection of significant public infrastructure investment. Knowing where people live, work, shop, and play helps transportation planners prioritize critical infrastructure investments that serve these land uses and promote the safe and efficient movement of people and goods within the county. In return, land use planning must consider roadway function, capacity, and safety when determining an area's suitability for development. To ensure that land use decisions do not cause an undue burden to the transportation network, we must strive to:

- Preserve the capacity and functionality of the existing transportation system.
- Enhance travel safety.
- Minimize the introduction of additional risk and conflict to the transportation network.
- Plan new development so as to limit impact to the investment of scarce resources in transportation.

Land use should not impact the roadway functional hierarchy, particularly regarding the concept of limiting access on major roadways. Land development activities can impair the purpose and operation of the public highway system and damage the public investment in that system. While every owner of property abutting a public road has a right of reasonable access to the general system of highways, roads, and streets, it is not to a particular means or location of access. Regional mobility is reduced as efficient travel is diminished or safety is increasingly compromised. Thus, the access rights of an owner of property abutting a major arterial highway must be subordinate to the public's right and interest in a safe and efficient highway. Priority should be placed on providing direct property access via local or minor collector roads to the extent possible. Allowing safety and operations to deteriorate with the assumption that it can be upgraded in the future is not practical.

Thus, land use designation as part of the plan update or a land use map amendment should consider:

- The extent to which the proposed land use pattern may impact the safety and operations of significant regional travel corridors serving major travel movements.
- The extent to which proposed access and expected trip generation will impact safety on major travel corridors providing primary service to the development, not only at access points but also at other locations along major corridors serving the development that exhibit safety problems.
- Whether the addition of traffic and access from the proposed development is compatible with the operation and use of the major corridor(s) serving the development.

GLUP policies

The policies of this plan are based on the community values and planning principles described above. They identify how the county will accommodate the demands for the area's limited land resources, while protecting the public interest in the long-term use and management of those lands. The policies are grouped into three categories.

Land use policies form the basis for the land use designations, locational criteria, land use scoring system (CLUES), and Future Land Use Map.

Land development policies inform future zoning and subdivision ordinance amendments addressing the processes and standards applied to urban, suburban, and rural non-farm development.

Resource management policies provide the rationale for programs addressing land use issues related to natural resources, such as groundwater protection and environmental impact.

The GLUP organizes these policies as they apply to the three major land use areas in Olmsted County: Resource Protection Areas, Suburban Development Areas, and Urban Service Areas. These policies are located in Chapters 8-10.

Various policies in this plan address land use issues within the urban service areas but outside the municipal limits of the cities. The Future Land Use Map does not address detailed land uses within the urban service areas; those will be described in the cities' plans. However, the county and many of the townships do have authority for zoning decisions outside existing city limits. The policies, locational criteria, and land use descriptions included in detailed urban service area plans will be reviewed so that the county, cities, and townships can make coordinated land use decisions.

General resource management policies

The following resource management policies apply throughout the county regardless of land use designation.

1. Environmental corridors

The county, city, and affected state agencies should create systems of environmental corridors in the urban, suburban, and rural areas of the county. Environmental corridors should be considered in floodplains, shorelands, wetlands, areas of unique habitat for flora or fauna, wildlife corridors, and bluff areas within shorelands. Especially along river or stream corridors where there is a potential for passive recreation, environmental corridors should provide for public access trails providing connections between river or stream accesses. The subdivision ordinance should require subdivisions affecting such areas to dedicate land or easements as a condition of plat or lot split approval. The acquisition of land and easements should be focused on these areas, especially where there is a possibility to provide for future trails or to connect large tracts of natural habitat in good condition, particularly state natural resource lands and natural resource-oriented county and city parks.

2. Ecosystem protection

Critical areas should be managed so as to protect natural ecosystems. Critical areas include shorelands, wetlands (especially groundwater-fed wetlands), trout streams, public waters, wildlife management areas and similar sites, natural resource oriented parks, reservoir sites, habitat for significant fauna and flora and areas of relatively undisturbed native vegetation, important scenic areas, Decorah Edge support areas, steep slopes, and blufflands.

3. Resource conservation

Land development ordinances should promote conserving resources, including soil, water, energy, and geologic resources.

4. Geologic resources

Geologic resources, including sand, gravel, and rock, dictate the location of extraction facilities. Where feasible, sites with excellent geologic resources should be preserved for such uses. Where such sites are in the path of development, development phasing should provide for resource extraction prior to development. The operations and site plans of such

facilities should address the control of water pollution sources, noise and dust, storage and disposal of waste, impact on surrounding lands, and impact on surface and groundwater. Ordinances regulating sand and gravel pits and rock quarries should require reclamation plans that address restoration and future use of the site.

5. Groundwater protection

Water quality and the sustainable yield of aquifers used or potentially usable for drinking water supply should be protected. They are currently at risk from a number of sources, including but not limited to spills, wells that provide a conduit for contamination of aquifers, and nutrients and long-lasting chemicals applied to the land surface. Strategies to prevent groundwater pollution, include:

- Encouraging best management practices for urban, suburban, and resource uses.
- Providing for recharge of aquifers with water that can meet drinking water standards at the point where it enters lower aquifers.
- Enacting programs to replace failing on-site treatment systems or extend public sewer and water to serve such areas.
- Acquiring conservation easements and other easements in areas critical to maintaining groundwater quality, such as Decorah Edge and till edge wetlands and related features.
- Preserving or restoring habitats with deep-rooted vegetation (such as forests and native grasslands) in areas of focused recharge or high risk of groundwater contamination, such as areas around sinkholes and in wetlands and “losing” segments of streams associated with focused recharge of lower aquifers.
- Designating and managing wellhead protection areas.

6. Shoreland management

Shoreland areas should be managed so as to minimize destruction of existing vegetation, soil erosion, contamination of rivers or streams from runoff from abutting uses, and streambank erosion. In general, permanent vegetative buffers should be maintained along rivers or streams in order to take up nutrients from field runoff and to filter out sediments and agricultural chemicals before they enter the stream. Given the karst topography of much of our area, surface waters readily recharge groundwater, so keeping chemicals associated with land uses out of surface waters protects both our waterways and our drinking water.

7. Floodplain management

Since 1980, Olmsted County has adopted floodplain management zoning controls that exceed the minimum standards recommended by the Federal Emergency Management Agency and the Minnesota Department of Natural Resources. Local regulations reduce downstream flood impacts by restricting loss of storage in any part of the 100-year floodplain and by maintaining pre-flood control flood plain boundaries in the breach zones downstream of flood control project reservoirs. Considering the evidence of increased frequency of severe weather events, these local regulations should be maintained.

8. Surface waters

Olmsted County is fortunate to have a number of rivers and streams, many of which once were cold-water fishery streams. Because the trout streams in Olmsted County are fed by springs draining calcium-rich aquifers, they contain a high level of calcium, a key mineral supporting fish populations. Thus, Olmsted County trout streams have been among the most productive sport fisheries in the state. As a result of the impaired status of some potential trout streams, however, there are only four designated trout streams remaining in the county.

Olmsted County's surface waters are important for other reasons as well, including providing natural habitat for aquatic plants and animals, wildlife corridors for animals and plant dispersal, and recreation. Land management practices in all land use designations should maintain these values and protect these habitats. Many of the Olmsted County surface waters evaluated so far by the Minnesota Pollution Control Agency have been shown to be impaired for at least one reason, with common factors including fecal coliform bacteria levels and turbidity. Streams with impairments occur in all of the land use types in Olmsted County. Factors that account for the unimpaired status of these streams should be identified and relevant mitigation practices should be encouraged.

Keeping sediments and other contaminants associated with land uses out of surface waters will involve maintaining vegetated buffer strips adjacent to surface waters; controlling tile line discharges into surface waters; addressing tiling, other discharges, and runoff impacts on stream channel erosion; and controlling urban and suburban runoff volume, rates of flow, and hydrographs (as mentioned in Chapters 9 and 10 in the sections on land development policies).

9. Agriculture

Olmsted County's land area includes some of the best cropland in the nation, having a combination of adequate rainfall, deep prairie-derived organic matter, deep loess-derived soils with adequate available water capacity, and a growing

season long enough for nationally important crops. Preserving the best of these soils for long term agricultural and horticultural use is in the long term interest of the county, state, and nation.

Locational criteria

“Locational criteria” are characteristics of sites and areas found in the GLUP land use categories. They are based on the GLUP principles, policies, and land use descriptions and have been incorporated into the Comprehensive Land Use Evaluation System (CLUES) model. These criteria allow for area-wide and site-specific analysis as part of the delineation of the Future Land Use Map and the analysis of specific proposals for future land use changes.

The locational criteria are intended to be used together in an evaluation process that reflects the overall appropriateness of an area for a particular use designation. No single criterion, however, determines the designation of an area.

8 • The Resource Protection Area

Source: Pictometry

The Resource Protection Area includes lands intended for agriculture and other resource uses, such as mineral extraction, forestry, and resource-related businesses. It also protects sensitive natural areas, such as wetlands and native prairies.

Limited rural residential development and land intensive commercial and industrial uses may be accommodated, as well as urban commercial and industrial uses meeting exceptional access and site characteristics.

Land use policies

1. Resource Protection Area identification

The location of the Resource Protection Area is based in part on the Comprehensive Land Use Evaluation System (CLUES) model described in Appendix A of this document. It is primarily intended to provide for and protect sensitive natural areas and resource-related uses. Critical environmental features include floodplains, wetlands, habitats identified on the Olmsted County Biological Survey, and areas prone to sinkhole formation. Resource-related uses include public and private parks and open space, wildlife management areas, mining, farming, forestry, and similar uses. Inclusion in this designation can be based on suitability for any one of these or similar uses, presence of natural features, or a relative lack of suitability for the Suburban Development or Urban Service Area designations.

2. Agricultural land conservation

Agricultural land uses should be protected from interference caused by incompatible non-farm development. The Olmsted County Zoning Ordinance should reserve areas of the county with the best agricultural characteristics for agricultural and related natural resource activities. Opportunities for agricultural investments should be protected so that economically viable farms can be created, sustained, and expanded. This can be done by limiting the location, amount, and density of non-farm development in areas of the county best suited for agricultural use; regulating the splitting of large parcels of historically agricultural lands; and encouraging diversified and non-conventional farm operations that may use cropland, pasture, and woodland resources.

Very large feedlot operations should be restricted to sites where public roads are adequate and land use and environmental impacts can be minimized.

3. Residential development

Non-farm residential uses in the Resource Protection Area should be accommodated only in accordance with the following policies:

- Subdivision ordinances should provide for plats in areas of the county designated as Resource Protection Area, including those with a mix of non-farm and farm size parcels and uses, only where it can be shown that the impact on abutting uses, the need for public road area, and the impact on prime agricultural land can be reduced through

the use of platting as compared to metes and bounds subdivision approaches. Staff approved “administrative plats”, authorized by Minnesota Statutes 505, may be a tool to consider adding when updating subdivision ordinances.

- In the Resource Protection Area, odor, dust, and noise producing activities, such as rock quarries, wind turbines, grain drying, pesticide and fertilizer storage and distribution facilities, and feedlots are consistent with the intent of the GLUP and have priority over non-farm uses as long as those resource uses follow existing environmental standards.
- The density of non-farm development should be controlled through restrictions on the number and density of non-farm sized lots allowed in Resource Protection Area zoning districts. The County should explore zoning ordinance amendments that would support lot splits where conservation easements guarantee the use of the newly created parcel for farming (including farm residences) or environmental protection. Such easements would accommodate parcels not meeting the current land-area based definitions of “farm,” and would
  - ► Allow for mortgage loans for resource-related dwellings on separate parcels.
  - ► Provide for easier entry into farming for those not needing or able to acquire current farm-sized parcels.
  - ► Assure that the parcel was not in conflict with the intent to protect the area for long-term resource use.

4. Commercial development

Commercial uses in the Resource Protection Area should primarily be limited to those that are closely related to extraction or utilization of natural resources or that are land intensive and have relatively low requirements for sewage treatment and customer and employee traffic. Such uses shall demonstrate that commercial truck traffic generated by the use will not, under normal operations, increase structural pavement damage to roads not on the ten-ton network unless accompanied by a plan to mitigate such potential damage. Small commercial uses permitted in existing Rural Mixed-Use Areas may also be allowed at infill sites in other areas of the county. These include commercial uses that

- Supply farms with materials or equipment.
- Sell directly to the consumer from farms (such as orchards or nurseries with sales operations).
- Directly rely on natural resources in other ways, such as sand and gravel sales and recreational commercial uses.
- Are characterized by low numbers and numbers per acre of employees and customers on-site.

- May be served by on-site sewage treatment.

Zoning ordinances should accommodate limited larger urban-style commercial uses on rural sites with exceptional site characteristics including

- Sites located within ¼ mile of an existing freeway with access to freeway traffic provided by an existing interchange. The site traffic generated by the use must not create a high risk access condition, as determined by MN DOT Access Management Manual standards, or degrade interchange operations below Level of Service Standards established by MN DOT or found in the Olmsted County Zoning Ordinance.
- Similar sites along planned freeway corridors where funding for planned interchanges or other access improvements to the proposed site are programmed for construction within an adopted Capital Improvement Program. Interim traffic conditions must be shown to meet established level of service standards and have a low risk of elevated crash incidents at the planned freeway access.
- The ability, given existing topographic conditions, traffic levels, and travel speeds, to create an intersection design with safe access and no documented crash risk problems.
- Avoidance of wetlands, steep slopes, native vegetation, and other environmentally sensitive areas.
- Compatibility with adjoining development, including, for example, residential development, park and open space uses, and resource uses with odor, noise, or dust emissions.
- Consistency with long term orderly development of urban areas.

Recreational commercial uses are limited to those uses with special needs for large areas of open space related to scenic or other natural areas, especially where such needs cannot typically be accommodated in urban service areas. Sites for such uses should have exceptional resource characteristics, consistent with goals of

- Preserving the natural environment and the scenic beauty of the area.
- Avoiding a major, permanent conversion of highly productive agricultural and forest soils to non-farm uses.
- Conserving energy.
- Avoiding undue public expenditures, such as for road improvements and public safety.

5. Industrial development

Except on infill sites or sites with exceptional access characteristics, industrial uses in the Resource Protection Area should be limited to those that are closely related to natural resources or that are land intensive and have low requirements for public services and infrastructure. These include uses that directly rely on natural resources, such as sand and gravel extraction, and those that are land intensive but have low employment numbers and may be served by on-site sewage treatment, such as a transmission repair shop. Zoning ordinances should accommodate these types of industrial uses in the Resource Protection Area and the location of rural industrial sites should be carefully reviewed to ensure that

- Future industrial development does not create barriers to orderly urban or suburban development.
- Safe, adequate road access can be provided; for intensive resource related uses, this access must be to the year-round ten-ton road network.
- Neighboring land uses are compatible.
- Environmental impacts and site constraints are minimal.

Zoning ordinances should accommodate limited larger intensive industrial uses on rural sites meeting the exceptional site characteristics listed in Policy 4 above. Industrial uses characterized by very high levels of customer traffic and employment and by high demand for services conventionally supplied in urban areas should be excluded from the Resource Protection Area.

6. Other development requiring extensive land area

Some land uses, such as solar and wind energy development, bio-fuels production, airports, landfills, and mining operations, may need extensive land and buffer areas due to odor, noise, dust, related environmental impacts, or potential safety problems. These uses must usually locate outside urban areas to meet their needs. Such uses should be separated from existing or planned residential areas, and new residences should not be built near them.

7. Communication towers and utilities

The location of communication towers, high voltage power transmission lines, petroleum/natural gas pipelines, and other similar special uses should be controlled to the extent allowable to minimize potential aesthetic, public health, or welfare

impacts, including those to property. Where available, communications facilities should share towers in order to minimize the need for scattered locations and resulting impacts.

8. Rural Mixed-Use Areas

A few historic rural communities are identified on the Olmsted County Future Land Use Map as Rural Mixed Use Areas. These include the villages known as, Douglas, Genoa, High Forest, Pleasant Grove, Potsdam, Rock Dell, Salem Corners, Simpson, and Viola. These areas are designated as Rural Service Districts in the Olmsted County Zoning Ordinance. Any proposals to establish new Rural Mixed Use Areas or expand existing ones should be evaluated in terms of consistency with the overall intent of the Resource Protection Area, with the principle of accommodating infill development, and with a general development plan that designates locations for residential and non-residential growth.

Land development policies

9. Public services

The level of public services (county and township) provided in the Resource Protection Area, should reflect the needs of resource uses rather than the needs of non-farm dwellers.

10. Non-farm development

Non-farm parcels in the Resource Protection Area should be permitted only at a very low density and in such locations as to cause minimal impact on surrounding resource and resource related land uses. When new non-farm lots are created, they should be located such that farm fields are not divided by the non-farm parcel or by access roads or driveways. Access provisions should not remove highly productive soils from potential agricultural use. Standards for non-farm parcels should minimize the removal of resources from resource uses as well as impacts on feedlots, agricultural investments, and resource investments.

11. Commercial and industrial development

Resource-oriented commercial or industrial uses that generate odors, noise, dust, fire and explosive hazards, electrical interference, or air pollutants should maintain an adequate separation from existing or planned residential areas. Industrial

performance standards should be applied where industrial activities are not regulated by state or federal permitting systems.

12. Historic preservation

Rural land uses including or adjacent to sites and buildings which exhibit a significant historical or architectural heritage should provide for their preservation through historic preservation regulations, public acquisition, or easements where appropriate.

Resource management policies

13. Sensitive environmental areas

Sensitive environmental areas should be protected from degrading land use practices and their development discouraged, in order to support such critical natural functions as groundwater protection, stormwater management, and erosion control. These lands include:

- Areas prone to hazardous environmental conditions including floodplains, sinkhole concentrations, and steep or unstable slopes.
- Areas sensitive to human impacts, including areas prone to groundwater pollution, groundwater recharge areas, soils with severe limitations to development, public waters, wetlands, blufflands, and areas of relatively undisturbed native vegetation.
- Areas that may present an unacceptable risk to human health due to present or past pollution.

Locational criteria

The following factors are components of the CLUES model. Areas are more likely to be included in the Resource Protection Area if they have these characteristics.

14. Soil resource

Soils with higher ratings for crop productivity, pasture suitability, and forest productivity are indicators of valuable agricultural and forest lands.

15. Aggregate resource

Because aggregate resources are rare, have high transportation costs, and are an important resource for construction, sites with high aggregate resource potential should be kept available for extraction operations.

16. Wind energy potential

A wind energy study for Olmsted County (validated subsequently by site-specific meteorological studies), identified sites with high potential for wind energy production based on land cover, land uses, elevation and topography, and proximity to transmission lines. Its resulting model is updated as part of the five-year GLUP review.

17. Farm size or parcel size

Protection of parcels 40 acres and larger not only supports efficient conventional farming practices, but it also provides for the continuation of all types and sizes of agricultural operations over the long term. Concentrations of these large parcels indicate the presence of significant agricultural activities.

18. Existing resource investment

The major resource investments considered in the GLUP are pit and quarry operations, building investments, feedlots, conservation measures such as terraces, forest, and land investment as measured by parcel and farm size. Areas of the county with concentrations of these features or higher levels of investment in agricultural buildings and conservation reflect commitment to resource uses.

19. Existing land use

Areas of existing resource land uses that are not impacted by relatively high concentrations of incompatible non-farm residential and commercial land uses are more likely to continue to see resource investment.

20. Proximity to existing or planned public lands and facilities

Areas adjacent to existing or planned public facilities such as the airport, sanitary landfills, or public utility uses such as alternative energy farms or electrical substations are generally incompatible with residential development. Lands designated for use as county parks, state forests and natural areas, reservoir sites, planned environmental corridors and

trails, environmental education areas, and wildlife management areas are significant resources and in some cases are more compatible with agricultural uses than with urban or suburban uses.

21. Sensitive environmental features

Shorelands, steep slopes, groundwater wetlands, surface water wetlands, state-designated natural habitats, and areas prone to sinkhole formation are critical to resource management and protection.

9 • The Suburban Development Area

Source: Pictometry

Suburban Development Areas consist of very low density residential areas, relying for the indefinite future on private well and septic systems.

New commercial and industrial uses are permitted only where exceptional site characteristics are met.

Short-term temporary uses may include crop production, animal husbandry not involving new feedlots, forest management, other agricultural uses, and sand and gravel operations.

Land use policies

1. Suburban Development Area identification

It is the policy of this plan to provide for a wide range of choice in residential location and lifestyle, including large lot and/or very low density development. As detailed in Appendix A, the CLUES model will be one tool used to evaluate and identify the potential for suburban development. CLUES accounts for factors influencing the energy and fiscal impacts of suburban development, such as concentration of existing residential development, access to safe roadways, and proximity to employment and commercial centers, while providing separation from such incompatible land uses as junkyards and feedlots.

2. Housing affordability

Olmsted County is committed to increasing the availability of affordable housing across the area. The economics of urban-scale development in our cities gives residents the most affordable housing options. In the future, technological advances, innovative zoning codes, and new site design and funding strategies may broaden the opportunities for increased density and lower land costs in the suburban areas.

Addressing suburban land supply on an annual basis can expand land purchase options and reduce risk and delay in development approval. This may increase the effective supply of suburban land and lower the price of suburban land. If this price reduction is passed on to homebuyers, affordability should improve.

3. Adequate land area

As a growth management plan, the GLUP intends to provide a supply of land meeting the expected demand for orderly, compact suburban residential development. To accomplish this goal while preventing sprawl, the supply of land in the Suburban Development Area should be managed to reflect population projections, employment trends, and general market conditions. An annual review of these conditions, as well as analysis of land development applications and building permits, will help ensure that suburban housing demands are being met. This review process is detailed in Chapter 11.

4. Commercial development

Small, neighborhood-oriented commercial uses may be accommodated in the Suburban Development Area on sites with appropriate site characteristics, including

- Location at the intersection of two public streets where at least one street is functionally classified as an arterial or collector roadway, serving a significant area beyond the immediate neighborhood, where access can be provided off the lower classification street at the intersection.
- Topography and access design conducive to safe site ingress and egress.
- Avoidance of flood plains, wetlands and Decorah Edge support areas, areas with sinkholes, steep slopes, native vegetation, and other environmentally sensitive areas.
- Compatibility with adjoining development, including, for example, residential development and open space uses.

5. Suburban Mixed Use Areas

A few historic villages close to existing suburban development are identified on the Olmsted County Future Land Use Map as Suburban Mixed Use Areas. The sites designated for such development – Chester, Marion, and Sleeper's Corner – are currently zoned as Rural Service Districts. Any proposals to establish new Suburban Mixed Use Areas or expand existing ones should be evaluated in terms of consistency with the overall intent of the Suburban Development Area, with the principle of accommodating infill development, and with a general development plan that designates locations for residential and non-residential growth.

Land development policies

6. Cluster development

Suburban densities can be accomplished either through conventional large lot subdivisions or through cluster designs. Particularly where sensitive features are present, suburban development should consider cluster development concepts, consistent with a low overall density, to protect sensitive environmental areas and reduce infrastructure costs. This approach could also be useful in preventing suburban development from creating a barrier to future urban service area

expansion. County land development ordinances should protect sensitive environmental areas whether or not cluster designs are applied and provide incentives to encourage clustered styles.

Cluster development is permitted in the Decorah Edge Overlay Zone, without rezoning to a “special district.” Outside the Decorah Edge Overlay Zone, the mechanism for cluster development has been the special district. Since special districts by definition are unique, reliance on this approach has resulted in inconsistent standards for compact design, open space preservation, reduction of road length and area, and other desired attributes of cluster development. Zoning and subdivision ordinances should be revised to incorporate such standards so that cluster development can be accommodated consistently and in such a way as to protect the sensitive features and amenities that suburban residents value.

7. Efficient site design

Land development regulations should encourage site design that protects the features and natural functions of the landscape, minimizes the lifecycle costs of future public services and facilities, and is as efficient and dense as possible.

8. Efficient use of suburban area

Because the GLUP limits the size of the pool of land suited for suburban land uses, its subdivision requires a general development plan to ensure that the incremental effect of lot splits does not interfere with long term orderly suburban development. Infill development may be exempt from this requirement.

9. Infill development

As reflected in the locational criteria, infill development of areas abutted by existing suburban development should be encouraged in order to make more efficient use of existing public infrastructure and developable land as well as limit the area of conflict between residential and resource land uses.

10. Paying for growth

New development should provide proportional financial support for community facilities to the extent that the development increases the need for such facilities.

11. Traffic impact

Residential land uses in the Suburban Development Area shall not rely on direct private lot access to any arterial or primary collector roads. Proposed residential streets serving new development shall meet Olmsted County's access management requirements for connections to any arterial or primary collector road. Proposed land uses involving a level of traffic generation that is higher than that associated with residential uses or would result in a significant change in the amount or type of traffic should be carefully reviewed for impacts related to road capacity, travel conflict, and safety. The process for reviewing land use plan map changes, zone changes, and general development plans should include detailed review of the projected traffic impacts that will result from the proposed land use change and provide a plan for management of access and any off-site improvements needed to accommodate the development.

12. Capital improvement planning

Road authorities should integrate consideration of land use policies and plans with capital improvements programming decisions, recognizing current and future land use needs. Likewise, land use decisions should consider existing infrastructure conditions and potential future public infrastructure impacts and demands resulting from proposed land use changes, especially those on roads.

13. Runoff control

Surface water runoff from industrial, commercial, and residential land uses should be controlled. Generally, the rate, volume, and hydrography of the runoff from the developed area should meet that of its native vegetation level. Accelerated erosion should not occur. Regulations relating to runoff control should meet or exceed the requirements of abutting Municipal Separate Storm Sewer System (MS4) permittees.

14. Historic preservation

Suburban development including or next to sites and buildings which exhibit a significant historical or architectural heritage should provide for their preservation through historic preservation regulations, public acquisition, or easements where appropriate.

15. Intergovernmental cooperation

The county, township, tribal, and affected city governments should cooperate in planning for urban, suburban, and interim development areas. General development plans should be developed that identify drainage, street, and open space systems covering the areas zoned for these development types.

Resource management policies

16. Alternative energy use

Regulations should allow for the use of on-site alternative energy generation in Suburban Development Areas, consistent with safety considerations. Land use regulations should encourage development and housing designs that use alternative heating, cooling, and electrical generation technologies.

17. Environmental impact

Where suburban development patterns and individual development proposals incorporate areas with significant natural features, development should be designed to preserve such areas and minimize adverse impacts to them.

18. Groundwater protection

Land use designations and best management practices should be used to protect wellhead protection areas, Decorah Edge, and other sensitive hydrogeologic areas from land uses that may cause groundwater pollution. Because development in the Suburban Development Area is expected to rely on private wells and on-site sewage treatment for decades, if not permanently, such development should include mechanisms to ensure that treatment and dilution of discharge is sufficient to provide for the long-term safety of potable water supplies in the development and adjoining areas. Such mechanisms can include advanced designs with nitrate removal or reduced density of development to allow adequate dilution. Maintenance of land area in native vegetation should be encouraged for reasons of runoff control, water conservation, and groundwater quality.

19. Environmental corridors and environmental protection

Subdivision ordinances should require the dedication of land, money in lieu of land, or conservation easements for the purpose of providing land for trails and other open space uses, protecting sensitive environmental areas, and preserving significant natural features.

Locational criteria

The following factors are components of the CLUES model. Areas outside Urban Service Areas are more likely to be included in the Suburban Development Area if they have the following characteristics.

20. Proximity and access

Development of sites close to concentrations of existing non-urban residences, major employment centers, and commercial areas will promote a more compact and efficient suburban growth pattern. Areas meeting these proximity criteria should have a desired level of accessibility to arterial and primary collector highways with adequate capacity to provide safe travel opportunities to nearby communities.

21. Unsuitability for resource uses

Residential development of sites and areas with low suitability for resource-oriented uses shift growth pressures away from our most productive and environmentally critical lands.

22. Development limitations

Suburban development in areas with few limitations based on soils, topography, other physical features is more cost-effective and sustainable.

23. Orderly development

An orderly development pattern is most attainable in areas that are adjacent to compatible land uses, generally contiguous to existing development, and where the long-term extension of public utilities in the urban service areas would not be constrained.

24. Environmental sensitivity

Areas with a high susceptibility to groundwater contamination, based on the county's geologic atlas, and areas of environmental sensitivity for other reasons, such as very steep slopes, flood prone and landslide prone areas, and areas of undisturbed native vegetation, should not be developed for suburban land uses.

25. Land use compatibility

Suburban Development Areas should be separated from incompatible land uses such as feedlots and industrial uses.

26. Non-farm development

Areas with significant non-farm development at densities higher than one unit per 20 acres may indicate a lack of continued resource investment.

27. Proximity to airports

Locations within the area covered by airport zoning districts associated with the Rochester International Airport and similar locations with airport related noise or safety concerns are generally excluded from Suburban Development Areas.

10 • The Urban Service Area

Urban Service Areas consist of cities and the land around them planned for municipal service extension within the next 25 to 50 years.

Urban development, interim development, and resource uses consistent with long-term urban density development, such as limited non-farm residences, continuing farming activities, parks, mining activities, and wildlife and forest management are accommodated in this area.

Changes in use should be consistent with the applicable city's municipal land use plan.

Land use policies

1. Urban Service Area identification

Minnesota Statutes do not require consistency among county land use plans and those of their cities. The Urban Service Area boundaries delineated on the Olmsted County Future Land Use Map typically reflect the municipal growth areas in effect for each city at the time of the GLUP update. These boundaries may be adjusted on the county's map based on concerns raised in meetings with impacted governmental units. As cities amend their plans, they should apply for a county land use plan amendment to reflect changes to their municipal growth boundaries unless it's done in concert with a GLUP update.

In accordance with established planning principles, the GLUP recommends that Urban Service Area boundaries be based on the following characteristics. Consistency with these factors should be evaluated in the event that an Urban Service Area boundary is challenged.

- Projected growth in population, employment, and the related need for land for development
- Location needs of land uses
- Compatibility of land uses with surrounding ones
- Availability, capacity, and service territories of planned urban services and infrastructure
- Land suitability based on natural features (such as flood plain, soils, slopes, elevation, and presence of sensitive environmental features), recognizing that features surrounded by developable lands may be appropriate to include
- Suitability for resource uses
- Related community land use and infrastructure policies
- Quality of connections to regional transportation networks and adequacy of the existing/planned major street network to serve urban development
- Availability of infrastructure and other public services to support employment centers
- Areas of existing development relying on failing on-site sewage treatment that are in need of urban services

2. Orderly development

Urban development should result in a compact, contiguous settlement pattern. Adjacent uses should be compatible in terms of intensity of use, traffic generation, hours of activity, noise sensitivity, and open space requirements. Low density urban residential development is considered to be generally compatible with neighboring suburban style development. Centralized municipal style urban services and systems will be provided only within the Urban Service Areas, consistent with infrastructure and related land use policies. Since county and township zoning ordinances apply to unincorporated lands inside the Urban Service Area, zoning districts used in these areas must ensure that development does not impede future extension of municipal services.

3. Integrated development

Regulations should encourage the integration of compatible land uses in neighborhoods within Urban Service Areas and provide for a variety and mix of urban residential densities, prices, types, styles, patterns, and locations. Housing diversity will lead to neighborhoods integrated by age, race, and income.

The cities' detailed municipal service area plans should strive to integrate residential areas with commercial and industrial areas, public institutions, parks and open spaces, and other uses in order to minimize the need for motor vehicle travel and to provide residential areas and business centers with a wide range of choice in mode of travel. Where detailed Urban Service Area land use plans are not yet prepared, land use plan decisions should be based on adopted locational criteria for major use categories and mixed-use development.

4. Adequate land area

The GLUP is a growth management plan intended to provide for orderly and compact development. Large lot or other land intensive development within Urban Service Areas is generally inconsistent with this goal unless it provides for future higher density development. The land area within Urban Service Areas should be adequate to accommodate projected employment and housing growth and prevent increasing land prices due to scarcity of urban land supply, but it should not be excessive. For growth management reasons and to prevent sprawl, projected employment and population growth over the planning period should determine the size of Urban Service Areas. Except for pockets of unserviceable land or land developed prior to annexation, all lands within Urban Service Areas should eventually be provided with municipal facilities.

5. Commercial development

Commercial land uses that are characterized by high levels of employment, trip generation, customer traffic, and municipal service needs should be located within Urban Service Areas. Municipal plans should concentrate urban commercial uses in clusters that serve defined neighborhood, community, or regional markets.

Several factors need to be reviewed when considering the expansion of existing or the development of new commercial areas, including

- The current availability of commercial land within the Urban Service Area and other areas identified for commercial development.
- The suitability of the proposed site (based on the locational criteria for commercial uses) in comparison with existing undeveloped areas identified for commercial development and with undeveloped areas elsewhere in the Urban Service Area designated for non-commercial purposes.
- The adequacy of transportation facilities to accommodate commercial growth by providing effective accessibility, adequate capacity, and efficient mobility by multiple modes while maintaining safety and meeting operational goals for existing and projected travel demand.

Strip commercial development (commercial development characterized by orientation to a street frontage and significantly greater site frontage than site depth) frequently causes transportation problems and land use conflicts. In general, new strip commercial development should not be permitted. However, infill parcels in existing strip commercial development could be allowed for low impact or neighborhood-oriented uses when consistent with access management and traffic impact policies. Where such development currently exists, problems associated with poorly integrated accesses and land use conflicts should be corrected prior to or concurrently with infill development. When possible, the costs of such corrections should be borne by the benefited area and not just the infill parcel. Land development regulations should require that strip commercial development mitigate or avoid traffic and land use impacts.

6. Industrial development

Urban industrial land uses have significant sewer service needs or high levels of employment, trip generation, or heavy vehicle traffic. They should locate primarily in Urban Service Areas where adequate utilities are in place, centralized sewer and water are available or programmed with sufficient capacity, and satisfactory functional and structural transportation

capacity is available or programmed for the movement of persons and goods. Industries with a significant potential for groundwater contamination should locate outside wellhead protection areas. Municipal land use plans should reserve sites that have excellent access for freight shipment by rail, air, and freeway for industrial use.

Land development policies

7. Efficient site design

Land development regulations should encourage residential and non-residential site design that protects the features and natural functions of the landscape, minimizes the life-cycle costs of future public services and facilities, and encourages the use of alternatives to the private automobile. To minimize the need for travel and maximize the feasibility of efficient modes of travel such as transit, bicycling, carpooling, and walking, land development regulations should encourage mixed use development in Urban Service Areas. All Urban Service Area development should be carried out in accordance with an approved general development plan (GDP), except in relatively rare circumstances related to infill development on small parcels.

8. Infill development

Municipal land development regulations should encourage infill development of residential, mixed use, commercial, and industrial areas in order to efficiently use existing public infrastructure and developable land. Communities should implement this policy through land development standards, public investment in services and facilities, and public assistance or incentives to the private sector. Additional higher density residential development should be encouraged in older large lot developments when public water and sewer systems become available.

9. Public facilities and services planning

Cities should develop sustainable, fiscally sound phasing plans for systems of public facilities and services consistent with their municipal service area boundaries. The public facilities should include centralized sewer and water systems; multi-modal transportation facilities with an appropriate mix of transit, bicycle, pedestrian, and auto/truck facilities; public parkland; and stormwater management systems. The sewer and water plans should be firm enough to provide predictability for long range planning by the public and private sectors, yet sufficiently flexible to respond to changing conditions. Planning for the expansion of water and sewer systems should address both the environmental problems

presented by existing development on small lots relying on individual septic systems and needs related to population and employment growth.

Land development should occur where public facilities are adequate to handle it, using agreements that provide for concurrent construction of the facilities, phasing construction in accordance with facility availability, or directing development to areas with sufficient capacity to serve the intended use.

10. Paying for growth

New development should provide proportional financial support for community facilities to the extent that the development increases the need for such facilities. Financial support should apply to parkland, stormwater management, water and sanitary sewer systems, and multimodal transportation (pedestrian, bicycle, and vehicular). Requirements should be consistent with the normal conditions for city development and include land dedication, on-site improvements, and appropriate contribution to off-site improvements.

11. Traffic impact

Proposed land uses involving a significant change in the amount or type of traffic should be carefully reviewed for traffic generation, conflict, and safety. The process for reviewing land use plan map amendments, zone changes, and general development plans should include a system for detailed review of traffic impacts caused by land use change and for managing access. The review should meet the requirements of the municipality, county, and township ordinances applicable to the site.

12. Capital improvement planning

Municipalities should integrate land use planning and capital improvements programming decisions. Land use decisions should consider existing and future public infrastructure impacts and needs. Capital improvements programming should recognize the current and projected needs of planned land use.

13. Neighborhood livability

Financial and regulatory policies should support programs to maintain the number and quality of housing units and stabilize or improve the livability of neighborhoods. Such programs could include building or renovating housing units,

helping neighborhoods to organize crime prevention programs, and making public investments in parks, landscaping on public property, lighting, etc.

14. Compatibility

The impacts of urban development, especially commercial and industrial uses, should be managed in order to address the effects on and compatibility with adjacent land uses, natural systems, and public facilities. Standards regarding noise and light emissions, signage, and landscaping are examples of how zoning ordinances can reduce potential conflicts among adjacent land uses.

15. Historic preservation

Sites and buildings exhibiting a significant historical or architectural heritage should be preserved through historic preservation regulations, public acquisition, or easements where appropriate.

16. Intergovernmental cooperation

The county, township, tribal, and affected city governments should cooperate in planning for urban, suburban, and interim development areas. Since Olmsted County has adopted a zoning ordinance that covers all unincorporated areas of the county, and many townships have adopted their own zoning regulations, lands within Urban Service Areas but outside of city limits, are subject to county or township zoning regulations. Coordination among all of these governmental entities will help ensure that current and future land uses are appropriate and meet the goals of all parties. General development plans should be developed that identify drainage, street, and open space systems covering the areas zoned for these development types.

17. Interim development

Areas within Urban Service Areas may rely on individual or community sewage treatment systems as an interim measure, provided the ability to serve the subwatershed of the affected area with municipal services is not compromised and that the affected city and township reach agreement on multi-parcel service area orderly annexation agreements (see section below on orderly annexation agreements). Such agreements should apply to service territories reflecting the geographic area logically related to the provision of future urban services, such as a sub-watershed identified as the service territory of a planned sewer interceptor. Interim urban development must ensure eventual connection to a centralized sewer and

water system and provide for future urban infrastructure through requirements for special development approaches such as:

- The installation of sewer and water facilities on-site at the time of development, for example, relying on shared wells and community drainfields.
- The establishment of an escrow or similar account to pay for future infrastructure costs.
- Agreements for sewer and water service hookup and other infrastructure needs related to pedestrian, bicycle, and vehicular transportation, stormwater management, and parkland supply.
- Clustering buildable lots to minimize infrastructure costs and provide flexibility for future development.
- Platting arrangements and zoning requirements to allow for future lot splits.
- Arrangements providing for the township's infrastructure maintenance needs.
- Site planning approved through a general development plan that includes city and township review; zoning approval would depend on GDP approval.

These special development approaches must be incorporated into an interim development agreement between the owner/developer and the applicable city. Cities should consider adopting standard procedures that ensure a consistent interim development process. Olmsted County is not the lead agency for this development tool, but its staff may assist in its implementation, particularly with respect to county roads and impacts on adjacent unincorporated land uses.

The agreement should also include provisions regarding when the transition to municipal services is to occur. This timing should ensure that neither the owner/developer nor the applicable city is overburdened by the costs of municipal service extension. For example, not requiring service connection until a private well or septic system begins to fail would allow an owner to not pay municipal service fees until the life of their private system investment has ended. The agreement should also ensure that a subdivision is designed to minimize public expenditures on service extension.

The three types of interim development, all of which should require GDP approval by the appropriate zoning control authority, include:

- Residential interim development.
- Interim land-intensive non-residential development with relatively low requirements for water use, sewage treatment, and customer and employee traffic (such as a lumberyard or a motor freight business). Such uses should not preclude

eventual high-value business uses from using prime commercial locations. For this reason, zoning controls should set limits on maximum building size, maximum impervious surface ratio, and floor area ratio consistent with future higher, more intensive uses of urban commercial locations.

- Other non-residential development with levels of employment or customers typical of urban areas or urban fringes, such as a convenience store, is limited to areas where there is agreement that the development will connect to and pay charges for services.

The location of such uses shall be consistent with the applicable municipal land use plan. Where detailed land use plans for the Urban Service Area in question are not available, the location of such uses should reflect the locational criteria in the GLUP text.

18. Orderly annexation agreements

The county encourages orderly annexation agreements to be developed concurrently with map amendments expanding Urban Service Areas. While orderly annexation agreements are negotiated between townships and cities, and the county is not a party to these negotiations, the county sees such agreements as an important tool whereby townships and cities can collaborate to meet their own needs while furthering the goals of the GLUP. Nevertheless, if the affected city and township cannot reach agreement, the county retains land use planning authority and has the latitude to make zoning and land use plan decisions independent of these negotiations. This must be consistent with GLUP goals of limiting sprawl; encouraging compact, orderly, energy-efficient, and sustainable development; ensuring that the designated Urban Service Area is consistent with projected land area needs; and protecting the extension of urban services into the affected sub-watershed areas.

Inclusion in an area covered by an orderly annexation agreement is a necessary precondition for interim development because it shows that local governing bodies are committed to the orderly extension of urban services into the area covered by the agreement.

The following are recommended standard considerations for inclusion in such agreements. There are additional matters that should be covered in such agreements; those listed below address only the land use issues of importance to the county

- The area subject to the agreement should entail the complete area of a realistic and cost-effective sewer sub-watershed identified in the sewage collection system planning of the respective city.

- The area covered by an orderly annexation agreement should include only lands mapped as Urban Service Area. Areas included in an orderly annexation area generally should not be designated on the Olmsted County Future Land Use Map as Suburban Development Area or Resource Protection Area, except where the agreement extends beyond fifty years.
- Once a predetermined proportion of the sewer sub-watershed is developed, the balance of the sub-watershed may be annexed and served.

Any land developed as interim development prior to annexation in the area covered by the agreement should be subject to the following requirements.

- General development plan requirements of the township, county, and city all apply.
- The development plan should provide for eventual development at an urban density and intensity of use comparable to at least the lowest density residential zoning district mapped in the city's zoning ordinance. The plan should preserve the ability to achieve such an intensity by such means as cluster development and the establishment of interim open space within lots and as outlots.
- The county encourages each city, in cooperation with abutting townships, to develop a model agreement and accompanying development agreements that specify arrangements for development charges and dedication requirements and that identify the proportion of sub-watershed development that will trigger annexation of the balance of the sub-watershed.
- The ability of landowners to conduct resource-related uses should be maintained, with the exception that constraints applying generally to new resource uses in close proximity to cities, interim development, or suburban development should apply within areas covered by orderly annexation agreements.

Resource management policies

19. Alternative energy use

Regulations should allow for the use of on-site alternative energy generation in residential, commercial, and industrial areas, consistent with safety considerations. Land use regulations should encourage developments and designs that use alternative heating, cooling, and electrical generation technologies.

20. Environmental impact

Where urban and suburban development patterns and individual development proposals cannot avoid areas with significant natural features, development should be designed to minimize adverse impacts to those features.

21. Groundwater protection

Land use designations and best management practices should be used to protect wellhead protection areas and other sensitive hydrogeologic areas from land uses that may cause groundwater pollution.

22. Open space provision and environmental protection

The dedication of land, money in lieu of land to be used for acquiring land or easements, or conservation easements should be encouraged for the purpose of providing open space and protecting sensitive environmental areas or significant natural features.

23. Runoff control

Surface water runoff from industrial, commercial, and residential land uses should be controlled. Generally, the rate, volume, and hydrography of the runoff from the area to be developed should meet pre-development levels. Accelerated erosion should not occur.

Locational criteria

The boundaries of the Urban Service Area depend on criteria related to centralized sewer and water systems provided by the municipalities.

24. Urban services availability

Land included in the Urban Service Area must be part of a sub-watershed identified in municipal wastewater and water planning as an area that can be provided services within approximately 25 to 50 years of the adoption of the municipal land use plan.

25. Development pattern

Existing small-lot residential development, commercial uses, and industrial uses in close proximity to sewered area but relying on on-site sewage treatment should be included in the Urban Service Area due to the need for connection to a centralized wastewater system.

26. Prime industrial land

Areas that are very well suited for industrial development, due to level terrain and proximity to rail, freeway, and airport facilities, are likely to be included in Urban Service Areas.

27. Development suitability

Lands adjacent to sewered areas that are relatively easy to develop based on elevation, soil depth, slope, and ownership are more likely to be included in the Urban Service Area.

11 • Realizing the Vision

The previous chapters presented the framework that will guide Olmsted County's land use activities for the next 25 years.

This chapter will describe how these concepts become reality through policy implementation, data reviews, text and map amendments, and plan updates.

Implementation tools

To achieve the community's desired outcomes, land use strategies must be incorporated into a variety of tools that transform principles and policies into actions.

CLUES

A three-part computer model, referred to as the Comprehensive Land Use Evaluation System (CLUES), is one tool that assists land use decisions. CLUES was formulated to analyze Olmsted County characteristics and help decision makers guide growth to the most suitable areas of the county while avoiding or minimizing the impacts of development. Based on the U.S. Department of Agriculture's Land Evaluation and Site Assessment System (LESA), CLUES applies the GLUP's policies and locational criteria in an objective manner that logically and consistently compares lands throughout the county.

Future land use map

The Olmsted County Future Land Use Map is a geographic representation of GLUP 2045's policies, land use categories, and locational criteria that guide the following county decisions.

- Applications of policy to particular areas of the county
- Plan amendments
- Zoning designations and related requirements under the county zoning ordinance
- Land subdivision requirements
- County review of capital improvements, services, and service levels

The amount of land to be designated for Suburban Development will be based on population, employment, and housing projections and trends.

CLUES provides the foundation for the Olmsted County Future Land Use Map (Figure 11-1). New land use maps can be produced with the model whenever changes in policy, land use, or public facilities occur. The most up-to-date version of this map will be located on the Planning Department's website and in the county's online interactive web map. Appendix A of this document describes how CLUES is used to create this tool.

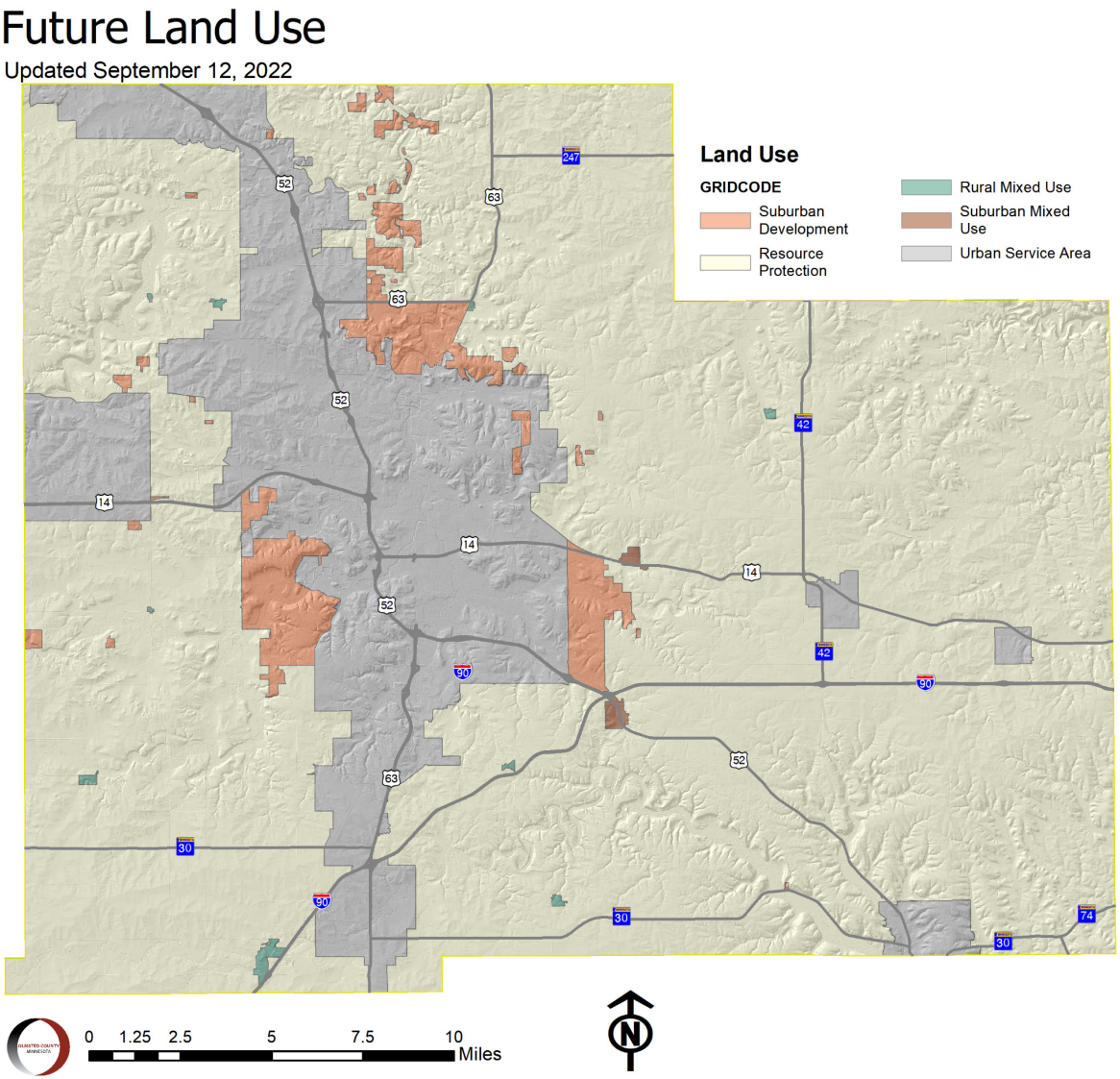
The cities and townships can also use the GLUP to develop their land use plan maps. It can inform their development of more detailed or small area plan maps as well as assist in evaluating future growth boundaries.

Ordinances

Subdivision, zoning, and related ordinances are regulatory tools used to implement GLUP 2045. These ordinances are used by Olmsted County, its cities, and many of its townships to protect public health, safety, and welfare.

Subdivision ordinances provide standards for splitting property. They encourage well-planned subdivisions by establishing design standards that protect vital natural resources, facilitate the creation and expansion of adequate transportation systems and other infrastructure development, and discourage inferior development designs that might adversely impact the local tax base.

Figure 11-1



Zoning ordinances establish districts whose permitted uses, site design standards, building requirements, and environmental criteria are used to carry out the vision of the land use plan and other connected plans.

Transportation concerns are addressed in part by zoning and subdivision ordinances through requirements for street design and traffic impact analysis, while the issue of access is addressed more directly by access management ordinances and access/driveway permit requirements of the state, county, cities, and towns in Olmsted County.

Solid waste, septic system, and wetlands conservation regulations are examples of other ordinances designed to carry out the GLUP's development and environmental policies.

Capital improvement plans

Olmsted County's Capital Improvement Plan (CIP) prioritizes and schedules major public improvements. Financial projections related to these projects are included in this document. Examples of capital improvements include construction of highways, bridges, buildings, and parks and their accompanying land acquisition and equipment costs.

ROCOG's Transportation Improvement Program (TIP) focuses specifically on transportation investments throughout Olmsted County as identified in ROCOG's Long Range Transportation Plan (LRTP). Many of these projects are multijurisdictional, requiring collaboration and cooperation among various levels of government, neighboring communities, and other agencies.

The GLUP provides valuable land use information for these efforts, such as projected growth, development trends, and identification of the areas of the county that will be most affected by those impacts. Township and city CIPs also benefit from this information.

Other plans and projects

The GLUP informs and strengthens other planning efforts and projects throughout Olmsted County. Transportation, water, solid waste, hazard mitigation, parks, and other resource related plans use the GLUP to support common goals and devise consistent policies. Economic development agencies may use the GLUP to evaluate areas suitable for commerce expansion. Environmental groups can use it to identify areas where conservation projects may be most successful. Coordinating efforts such as these not only support the goals of multiple entities, but they may also lead to funding opportunities that place a premium on cooperation.

Annual land use review

Planning staff will submit an annual report to the Olmsted County Planning Advisory Commission (OCPAC) and the Olmsted County Board of Commissioners. This document will be widely distributed to local units of government.

The intent of the report is to ensure that County land use decisions are consistent and reflect current data. The annual report will provide information on development activity and land use issues that informs the County's capital improvements program, budget, and other facilities and service level projects.

The annual report should be of sufficient detail and scope to use in the evaluation of proposed GLUP and land use plan map amendments. The report should include the following pieces of data.

- Changes in population
- Number of vacant acres in the Urban Service and Suburban Development Areas
- Number of plats
- Number of vacant subdivision lots in the Urban Service and Suburban Development Areas
- Number of housing units built
- Development density
- Commercial and industrial building by size
- Agricultural land developed or otherwise removed from agricultural uses
- Number and location of nonfarm lot splits
- Other local or state planning or regulatory changes that occurred during the previous year
- Other land use or resource related issues

The county will use this information to determine the need for additional Suburban Development land.

Amendments

The GLUP is a dynamic document that will be adjusted when changes in population or employment projections, major land use, or land use policy make amendments necessary. Such amendments to the GLUP and the Olmsted County Future Land Use Map must be made in a consistent, orderly way that recognizes the long-term impacts to the community.

No application for an amendment to the GLUP document or the Olmsted County Future Land Use Map shall be reconsidered by the Olmsted County Planning Advisory Commission (OCPAC) within the one-year period following a

denial by the County Board of Commissioners of said request. OCPAC, however, may permit a new application if, in their opinion, new evidence or a change of circumstances warrant it.

Text amendments

GLUP text amendments may only be initiated by OCPAC or the Olmsted County Board of Commissioners. Private parties may not initiate GLUP text amendments.

Map amendments

Site-specific amendments to the Olmsted County Future Land Use Plan Map may be initiated by

- The property owner(s) of the parcel(s) that is (are) proposed for change.
- The Olmsted County Board of Commissioners.
- The Olmsted County Planning Advisory Commission.
- A township board, for properties under multiple ownership within its jurisdiction as part of a township land use planning initiative.
- A city council, generally for properties under multiple ownership or changes in lands included in the Urban Service Area.
- Olmsted County Planning department staff, when they receive notice of a township or city plan that impacts the adopted Future Land Use Plan Map as part of the GLUP update.

When initiated by a private party, the GLUP map amendment process requires the submittal of a completed application form that provides basic information about the site and the proposed change, an official township recommendation and resolution with findings, a resolution and findings of support from all applicable cities (if amending an Urban Service Area), and a processing fee.

The amount of land needed for suburban residential uses is limited based on population, employment, and housing projections and trends. On an annual basis, approximately 200 acres of land may be added to the Suburban Development Area through the map amendment process and coupled with general development plan (GDP) approval.

The analysis of proposed map amendments will address the following questions:

1. Was a mistake made in the data used or in the application of the data at the time the GLUP was adopted?
2. Have conditions of land use, land subdivision, ownership, or growth in the community changed the character of the site and surrounding area? Have they resulted in an unanticipated shortage of land available for the proposed use?
3. Is the proposed amendment consistent with the policies of the GLUP (recognizing that those values must be addressed and balanced in land use decisions)? Specifically, how does the proposed amendment address the key community values and planning principles listed in Chapter 7? Does it meet the policies and locational criteria of the requested land use designation?
4. Have policies related to the proposal changed since the GLUP was last updated?
5. Is the land under consideration as suited or better suited for the proposed use than other lands now designated for the proposed use? (This analysis will be based in part on the Comprehensive Land Use Evaluation System model and the Natural Heritage Information System.)
6. Is there an alternative to the proposed change that better meets the intent of the GLUP? (a different use designation or a smaller land area, for example)
7. For expansions of the Suburban Development Area: how does the proposed amendment impact the amount of land needed to accommodate suburban development by 2045?
8. Will the proposed land use result in a level of traffic generation that is higher than that associated with residential uses or in a significant change in the amount or type of traffic? How do these impacts relate to road capacity, travel conflicts, and safety?

Procedure

The GLUP text and map amendment processes will include all of the following:

- A staff report and recommendation to be presented at the public hearing.
- A public hearing conducted by OCPAC in accordance with state law, at which the commission will consider the staff report, referral agency comments, comments from township boards and affected cities, and public input. OCPAC will make a recommendation to the Olmsted County Board of Commissioners.
- A public hearing conducted by the Olmsted County Board of Commissioners in accordance with state law, following which the board will reach its decision and provide findings of fact.

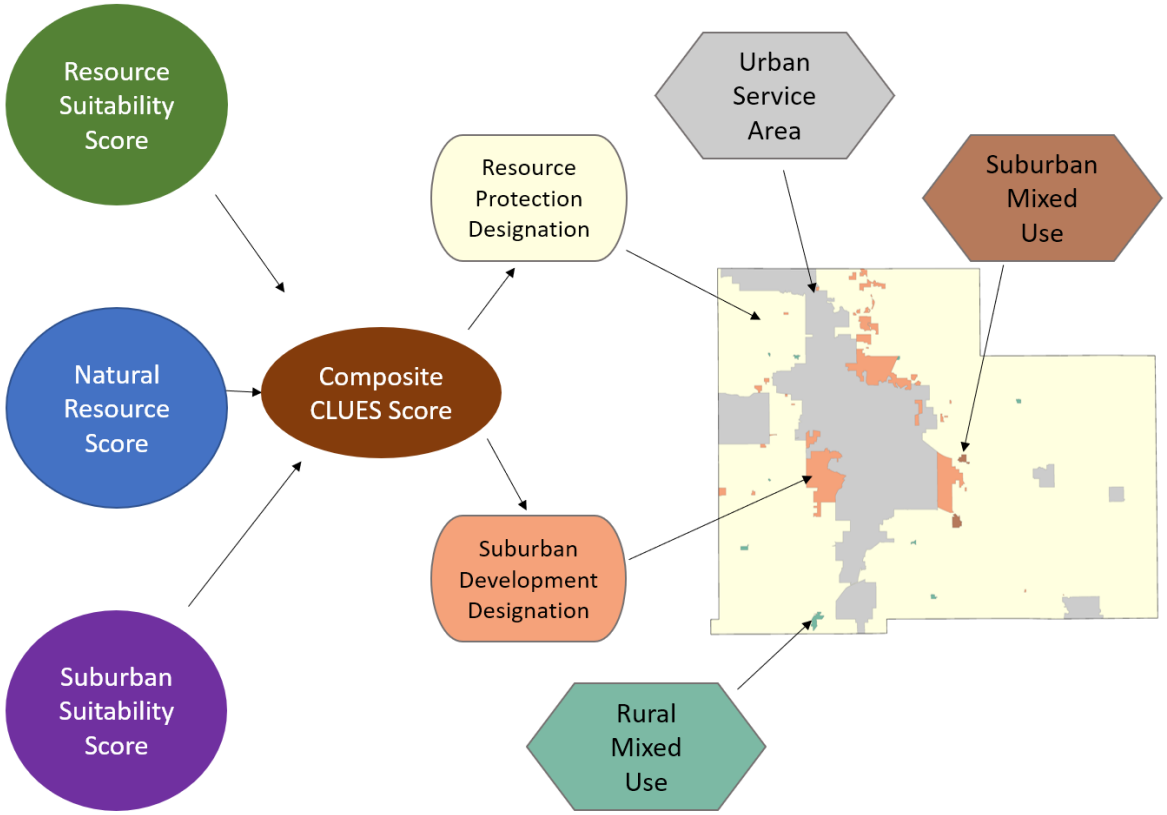
- **The Olmsted County Board of Commissioners wants to limit the number of times they consider Suburban Development Area map amendments to twice a year**. Complete applications are due, therefore, by the end of the last business day of July and December.

Plan updates

The GLUP will be reviewed and updated every five years in order to address the changing needs of the community brought about by employment, population, housing growth, and other influences affecting land use, public services and facilities, and the environment. The county will use an abbreviated planning process including:

- A review of the changes that have occurred, new issues, and the effectiveness of the GLUP and implementation measures.
- A request for public input.
- Data analysis and policy review of changes, issues, and public comments.
- Draft policy and map changes based on the review and public comments.
- Seeking the input of townships and cities regarding changes to be considered.
- Public meetings, required public hearings, and final adoption of a revised GLUP and Future Land Use Map.

Appendix A • CLUES Model



The Comprehensive Land Use Evaluation System (CLUES) is a computer model that evaluates land use suitability throughout the county by applying adopted policies and locational criteria in an objective, consistent manner.

The model calculates scores for resource use, natural resource protection, and suburban residential development. These scores are combined to determine the relative suitability of sites outside urban service areas for the Resource Protection and Suburban Development land use designations.

This model helps decision-makers guide growth to the most appropriate areas of the county while avoiding or minimizing the impacts of urban development on non-urban uses.

Getting started

Olmsted County has a robust geographic data system that supplies the land use, geologic, natural resource, ownership, and other information that powers the CLUES model. The following sections describe the data used for each part of the model and how it is used to guide land use suitability decisions.

- Airport zoning
- Olmsted County Biological Survey (MN DNR)
- MN DNR aggregate mapping (sand, gravel, crushed stone)
- Olmsted County Geologic Atlas (MGS, MN DNR)
- Karst features (MGS)
- Feedlots
- Land cover
- Fens
- Parcel boundaries and land ownership
- Address points
- City limits
- Forest Management Areas (MN DNR)
- Land use
- Scientific and Natural Areas (MN DNR)
- Soils
- Rivers and streams
- Wetlands
- Wind energy potential
- Wildlife Management Areas (MN DNR)
- Topography
- Roads
- Parks
- Oronoco landfill methane area of concern (MPCA)

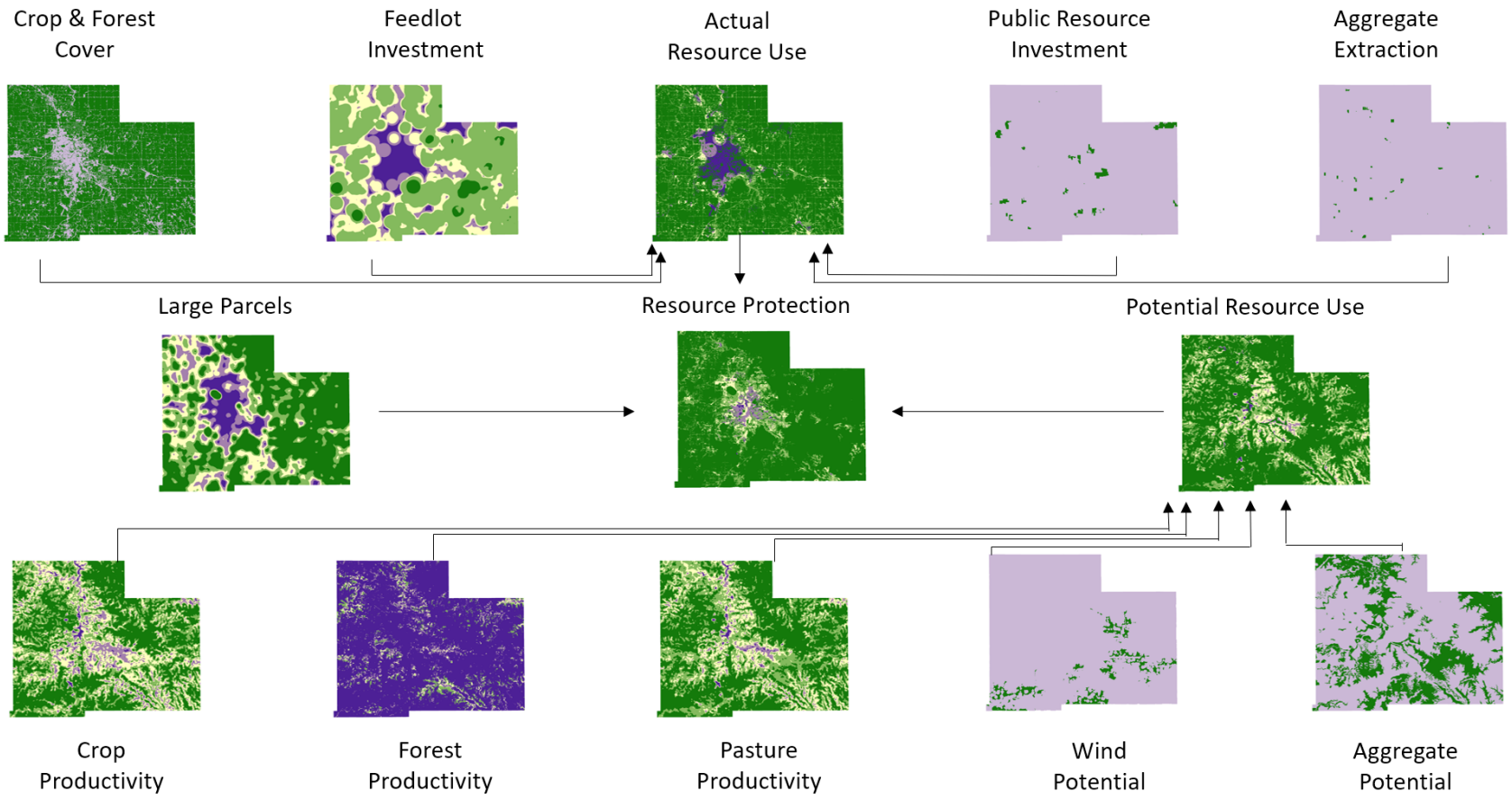
Resource protection score

The **resource protection score** (Figure A-1) represents the value of land areas for resource production uses (agriculture, mining, forestry) based not only on the value of current investments in the land, but also on the land's potential for future productivity and the size of the land holdings. The score is the sum of the **actual and potential resource investment scores**, weighted by the value of preserving large parcels of land used for intensive resource use. In Figure A-1, the **greener** the area, the more suited it is for resource protection.

The **actual resource investment score** accounts for uses that are currently occurring on the land. It is the maximum value among the following factors.

- **Crop and forest land cover:** Lands having an agricultural or wooded land cover receive a **crop/forest score** of 100; all other lands are given a score of 0.

Figure A-1: Resource Protection Score



- **Feedlot investment:** Using data maintained by Olmsted County's feedlot technician, the model calculates the density of total animal units found within 1/4 mile of every feedlot in the county. This data is averaged over a one-mile circular radius to reduce the impact of small, isolated feedlots on the model. A logarithmic formula is applied to create a scoring scale from 0 to 100. The higher the **feedlot investment score**, the more animal units are found in that area and therefore, the higher the area's feedlot investment.

- **Public resource investment:** Special resource lands, in which public entities have made an investment, are given a **public resource score** of 100. This includes state Forest Management Areas, state Wildlife Management Areas, and rural county parks. All other lands are given a score of 0.
- **Aggregate extraction investment:** The MN DNR's aggregate resource maps are used to identify parcels that have an active mineral extraction operation on them, such as a sand or gravel pit. Those lands receive an **aggregate extraction score** of 100; all others receive a score of 0.

The **potential resource investment score** accounts for the potential of the land to support resource investment uses. It is the maximum value among the following factors.

- **Crop productivity index:** Replacing the crop equivalency rating (CER), the Natural Resources Conservation Service's crop productivity index (CPI) provides a relative ranking of soils based on their potential for intensive crop production. These scores are averaged over an 1/8-mile radius (the width of one ¼ section) to reflect the general characteristics of an area. This **crop productivity score** ranges from 0 to 100, with the higher scores indicating a higher productivity potential.
- **Productive forested soils:** The potential productivity of soils for forestry uses is ranked in the Olmsted County Soil Survey. These scores are averaged over an 1/8-mile radius to depict the general characteristics of an area and set to a scale of 0-100. The higher **forest productivity scores** indicate a higher soil potential for forest production. Only those soils that currently have woods on them are selected.
- **Productive pasture soils:** The potential productivity of soils for pasture uses is ranked in the Olmsted County Soil Survey. These scores are averaged over an 1/8-mile radius in order to depict the general characteristics of an area and set to a scale of 0-100. The higher **pasture productivity scores** indicate a higher soil potential for pasture support.
- **Large scale wind energy potential:** The 1995 wind energy potential database was updated to account for the constraints posed by wooded areas and development that has occurred since that time. Areas considered to have significant potential for large scale wind energy production receive a score of 100. All other lands receive a **wind potential score** of 0.
- **Aggregate potential:** The MN DNR's aggregate resource maps rate the suitability of lands for crushed rock and sand and gravel extraction. The suitability rankings are based on factors such as resource quality, deposit size, and

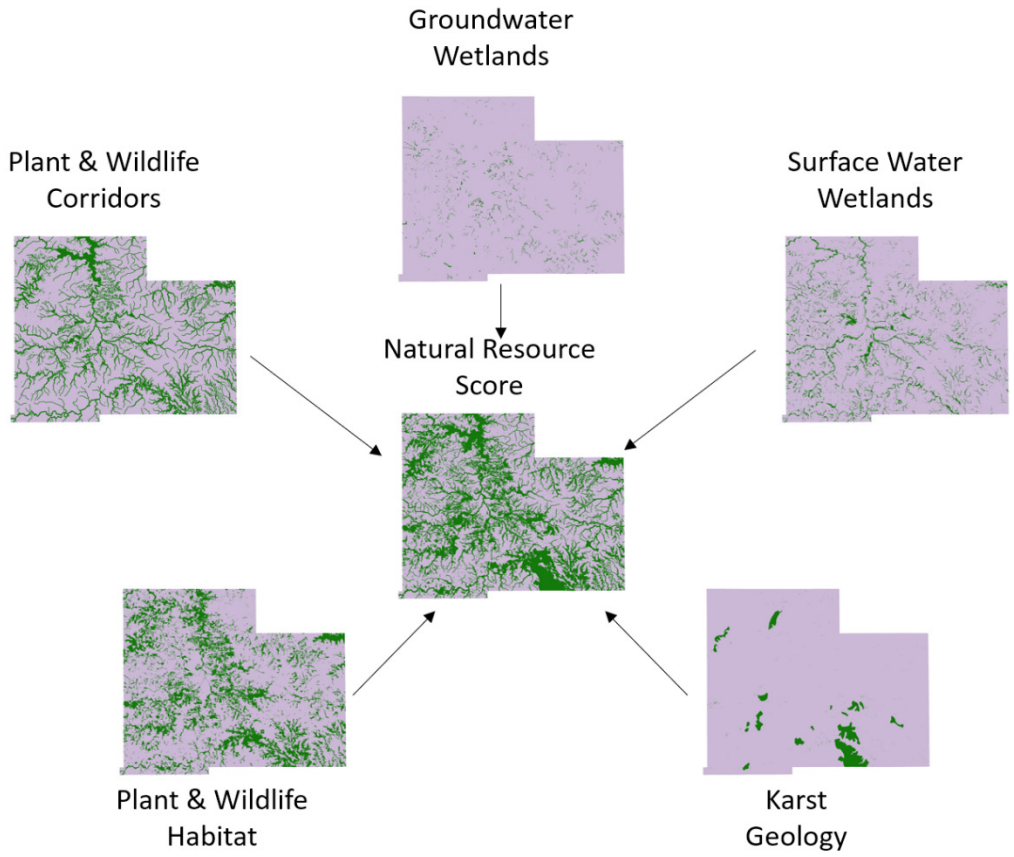
overburden thickness. Those lands that have "significant" potential for crushed rock or sand and gravel resources are given an **aggregate potential score** of 100. All other lands receive a score of zero.

Natural resource score

The **natural resource score** (Figure A-2) reflects the value of significant natural features to our physical and environmental health, performing such functions as groundwater protection, stormwater control, flood control, erosion control, and critical habitat maintenance. This score ranges from 0 – 100 and is the maximum value of the following components. In Figure A-2, the **greener** the area, the more suited it is for natural resource protection.

- **Plant and wildlife corridors:** Shorelands, lands within 150' of non-public streams, and steep slopes (18+%) are given a **plant and wildlife corridors score** of 100; all other lands receive a score of 0.
- **Groundwater wetlands:** All combinations of soils that indicate the presence of fens or seeps, known fens, Decorah Edge support soils, and 50-foot buffers of known springs are given a **groundwater wetlands score** of 100; all other lands receive a score of 0.
- **Surface water wetlands:** All wetlands delineated on the National Wetlands Inventory and wetland-related combinations of land cover and hydric

Figure A-2: Natural Resource Score



soils not already scored 100 in the groundwater wetlands score are given a **surface water wetlands score** of 100; all other lands receive a score of 0.

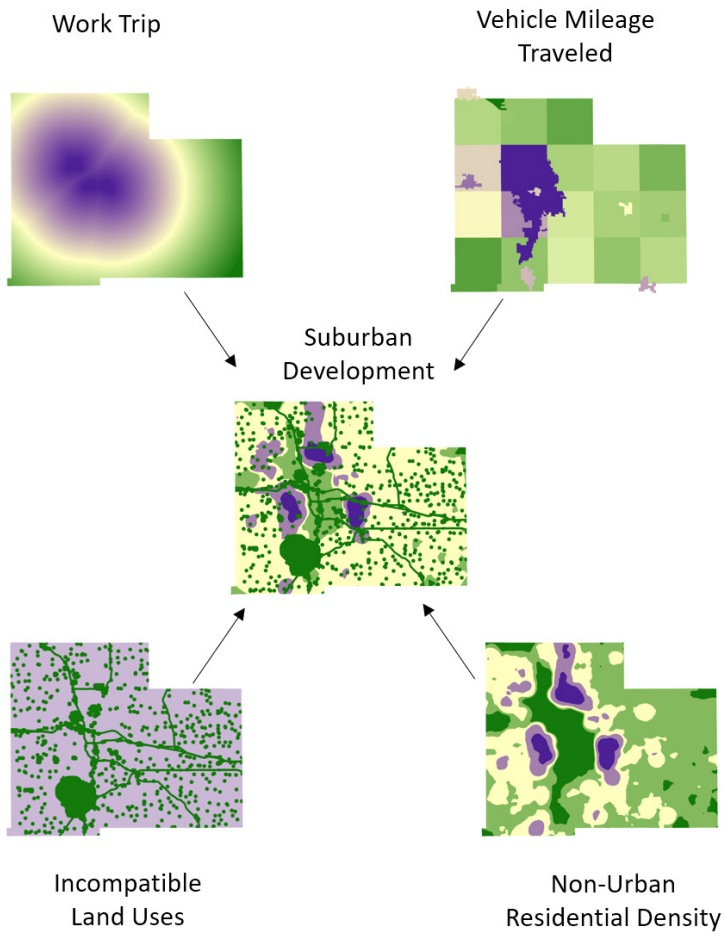
- **Plant and wildlife habitat**: Sensitive and unique lands designated on the Olmsted County Biological Survey, state Scientific and Natural Areas, and undisturbed land covers are given a **plant and wildlife habitat score** of 100; all other lands receive a score of 0.
- **Karst geology:** Areas within 100 feet of a known sinkhole are given a score of 100. The sinkhole probability data from the Olmsted County Geologic Atlas is scaled from a score of 0 with areas of "no sinkhole probability" receiving a score of 0 ranging to a score of 100 for areas of "karst topography". The maximum of these two scores results in the **karst geology score**.

Suburban development score

The **suburban development score** reflects energy and fiscal impacts of developing the area for very low density residential uses on the community, provided there are no incompatible land uses close by. The energy and fiscal impact of development is considered to be a function of the density of existing rural and suburban development, the proximity to employment centers, and the average length of all vehicular trips for residents of each city and township. The suburban development score ranges from 0 – 100 and is the weighted sum of the **residential density and proximity scores**, provided the **incompatible land use score** is 100; otherwise, it is given a value of 0. In Figure A-3, the more **purple** the area, the higher its suitability for suburban development.

- **Rural and suburban residential density (2/3 weight):** The **residential density score** measures the density of rural and

Figure A-3: Suburban Development Score



suburban addresses in Olmsted County. This data is averaged over an area with a one-mile circular radius to reduce the impact of small, isolated residential pockets on the model. A scale from 0 to 100 is used to represent the proportional range in density. Higher scores indicate areas that are already residential in nature and therefore less likely to see resource-related investments.

- **Proximity (1/3 weight):** The **proximity score** is the average of the **work trip and VMT scores** and reflects the distance traveled for daily trips. The score ranges from 0 to 100, with 100 having the shortest average trip length and 0 having the longest.

  Census data was used to determine the relationship between the distance a commuter is from Olmsted County's significant employment centers and the proportion of commuters who come from that distance. The distance from all areas of the county to those employment centers is multiplied by that value. The **work trip score** equals 100 minus the distance score. The higher the score, the closer the area is to the employment centers.

  The **VMT (vehicle miles traveled) score** is based on data indicating the average distance residents in each city and township drive for all their daily trips. A score of 0 to 100 is calculated, with 100 having the shortest average trip length and 0 having the longest.

- **Incompatible land uses:** An **incompatible land use score** of 0 is given to industrial sites, highway and railroad corridors, airport zoning districts, and areas within a buffer of 1/4 mile around feedlots, pits, and quarries. These uses are not suitable neighbors for residential neighborhoods. All other areas are given a score of 100.

Urban service areas

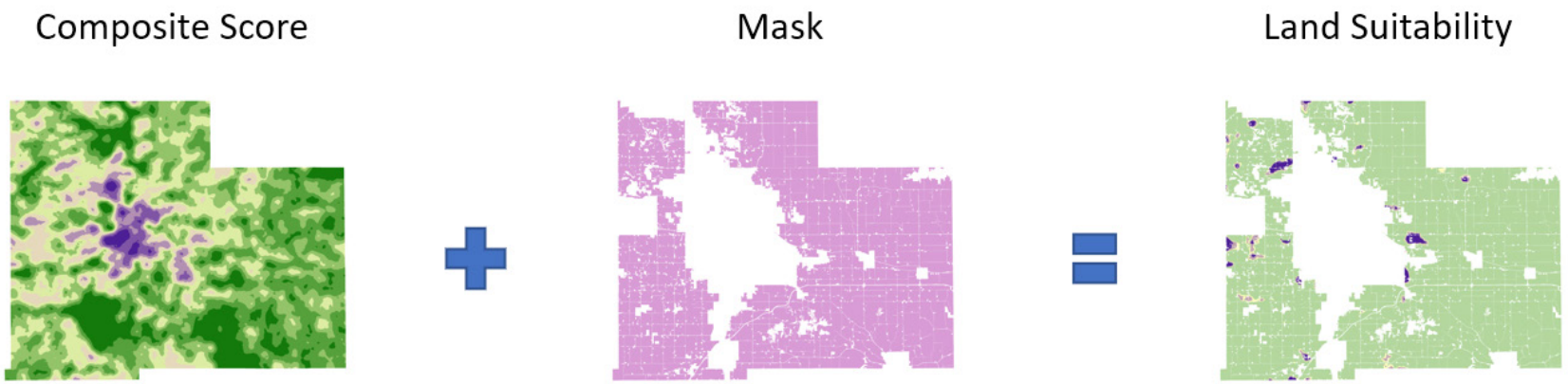
CLUES is not used to help delineate the urban service areas (USAs). Staff has contacted all Olmsted County cities to obtain their planned future urban service areas. Factors influencing inclusion in the urban service area include transportation infrastructure, ease of sewer and other municipal service extension, potential for commercial or industrial development, compatibility with existing adjoining uses, and environmental constraints. The submitted USA boundaries are overlaid on the CLUES results.

Composite CLUES score

The **composite CLUES score** (Figure A-4) is calculated as follows.

1. The resource protection score (**RP**) is doubled in order to set the basis for comparison with the area's suitability for suburban development. The RP will range from 0-200; the higher the score, the more suited the area for the Resource Protection land use designation.
2. Subtract the suburban development score (**SD**) to determine whether the CLUES scores are more suited for Suburban Development designation (lower scores) or Resource Protection designation (higher scores) on the Olmsted County Future Land Use Map. Negative values will round up to 0. This score will range from 0-200. **2RP – SD**
3. Double the natural resource score (**NR**) to set it at the same scale as step 2 above. This score will be either 0 or 200. **2NR**
4. Use the maximum value between **2RP – SD** and **2NR**. This will ensure that the model protects critical natural features from being targeted for development.

Figure A-4: Composite CLUES Score



The closer the final score is to 0, the more suitable the area is for **suburban development**. Scores closer to 200 are deemed more suitable for **resource protection** (including critical natural resources). A mask of the Urban Service Areas, existing suburban development areas, Orderly Annexation Agreement areas, public lands, city limits, and built parcels less than 10 acres in size is then imposed on these scores in order to indicate what land has been reserved for public uses, is intended for development, or has already been developed. In Figure A-4, the **greener** the area, the more suited it is for Resource Protection; the deeper the **purple**, the more suited the area is for Suburban Development.

A computer model cannot account for all factors used in making land use decisions; other county policies aid in determining an area's designation. It is, however, a highly effective guide for decision making. The computer scores, for example, may indicate that a small pocket of land is highly appropriate for suburban development. If, however, that land is cut off from the rest of the suburban development area by a major highway, or it sits in the middle of a resource protection area, planning practices would recommend that that land should be designated as resource protection. It may also be the case that an island of land scores strongly for resource protection. If it is surrounded by suburban development area, however, that land may be more appropriately designated for suburban development.

OLMSTED COUNTY
MINNESOTA

Appendix B • Cultural Resources

Olmsted County contains human-made and natural physical features that are significant to its history and character. Historic, geologic, hydrologic, biological, and ecological features combine to create a landscape that the community recognizes as significant.

The community should encourage the preservation of these features as an important part of our quality of life.

Inventory

In the early 1990s, the Minnesota Department of Natural Resources published a systematic survey of the county's natural habitats, known as the Olmsted County Biological Survey. This effort identified significant natural areas and collected and interpreted data on the status, distribution, and ecology of plants, animals, and native plant communities throughout the county. It is used extensively in land use planning and decision-making in order to preserve these critical areas.

A similar resource inventory is needed to help protect Olmsted County's cultural resources. Strategies such as avoidance and reuse could prevent the loss of our community's heritage and keep it alive for future generations. The work completed for rural areas of Olmsted County through the efforts of Professor Robert Douglas of Gustavus Adolphus College provides a basis for developing such a catalog.

The basis for his effort was early county atlases, which were used to identify locations of significant agricultural, cultural, and business-related sites and structures in rural areas at the end of the 19th century. With only a few exceptions, Dr. Douglas excluded residences and sites in cities. He conducted extensive field work to determine the current fate of those sites and structures and adjoining areas. Following presentations at the Olmsted County Planning Advisory Commission and the annual meeting of the Olmsted County Township Officers Association, Dr. Douglas added to the compilation, following up on the suggestions of rural residents and elected officials who knew of additional significant sites.

There are two lists provided below: a list of structures listed on the National Register of Historic Places (also included in the 1995 GLUP), and the list of sites identified through the work conducted by Dr. Douglas. Entries found on both lists are noted in *italics*.

Sites on the National Register

Small cities and rural Olmsted County

- Bush, John G., House — Center Street, Dover
- Eyota Cooperative Creamery — 222 Washington Avenue, S., Eyota
- Frank's Ford Bridge — County Road 121 over South Branch Zumbro River, Oronoco Township (Figure B-1)

Figure B-1

- Krause, Christopher, Farmstead — CSAH 10 Sec. 27, Dover Township
- Mayowood Historical District — County Highway 125, Rochester Township
- Oronoco School — County Highway 18, Oronoco
- Pleasant Grove Masonic Lodge — off CSAH 1, Pleasant Grove Township
- St. Mary's Hospital Dairy Farm — County Highway 104, Cascade Township
- Stoppel, George, Farm — County Highways 25 and 22, Rochester Township
- White, Milo, House — 122 Burr Oak Street, Chatfield

City of Rochester

- Former Avalon Hotel — 301 North Broadway
- Chateau Dodge Theatre — 15 1st Street SW
- Chicago Great Western Depot — 20 4th Street SE
- Mayo, Dr. William J., House (Mayo Foundation House)— 701 4th Street SW
- Plummer Building, Mayo Clinic — 110 and 115 2nd Avenue SW (Figure B-2)
- Plummer House and Garden — 1091 Plummer Lane SW
- Pierce House — 426 2nd Avenue SW
- Rochester Armory — 121 North Broadway
- Rochester Public Library (now Mayo Medical School)— 226 2nd Street SW
- Toogood Barns (now Stone Barn Dentistry) — 615 16th Street SW
- Whiting, Timothy A. House — 225 1st Avenue, NW (Central Park)

Figure B-2

Sites in *A Field Guide to Historic Sites in Olmsted County*

Cascade Township

- *St. Mary's Hospital Historic Dairy Barn*. Located on CR 104, ½ mile south of US Hwy 14. Section 31. (Figure B-3)
- Pleasant Prairie Cemetery. Located on the Frontage Road, just south of its intersection with CSAH 14. It can be seen to the left headed north of US 52. Section 4.
- Remains of Historic Feed Mill. Along the South Fork of the Zumbro River, near intersection of CR 133 and 55 St. NW. Section 11.

Dover Township

- Dover School. Located in Dover, MN.
- Dover United Methodist Church. Located in Dover.
- Evergreen Cemetery. One-fourth mile west of CR 10 on north side of 25 St. SE.
- School. Located on farmstead at northwest corner of CR 10 and 10 St. SE.
- Wolf Mound (naturally occurring monadnock). One mile east of CR 10 on south side of 15th St SE. On Bernard Wegman farm. Lat/Lon N 94 01 W 92 06 220. (Figure B-4)

Elmira Township

- Elmira Church. Near the southwest corner of the intersection of CR 30 and 60 St. SE.
- Historic Barns. Located on CR 30, a mile or so south of Elmira Church on the east side of the road.

Figure B-3

Figure B-4

- School. Five miles south of Dover on 170 Ave. SE; turn right onto 90 St SE; 1/2 mile on right (north side).
- School. On west side of Chatfield, heading west on MN Hwy 30; north side of the road.

Eyota Township

- School House foundation. 2.5 miles west of MN Hwy 42 on north side of 30 St SE. Located on Kyle Kimery farm.
- Holy Redeemer Cemetery. 1.5 miles south of US 14 East on the west side of 110 Ave SE.
- Oak Grove Cemetery. Located on the east side of the road across from Holy Redeemer Cemetery.
- English Lutheran Cemetery. One mile west of CR 7 on south side of CR 129.
- Cline Cemetery. 0.25 miles west of CR 7 on north side of 55 St SE.
- Site of Trout Spring Creamery. CR 7 south to 55 St SE. It is 1 ½ miles on the left. Dave Ward Farm.
- Stage Road Inn (?) CR 7 south to 55 St SE.1 and ½ miles on the right. Mr. and Mrs. Greg Meyer farm.
- Historic Quarries. CR 7 south left for ½ mile on 60 St SE.
- Site of Ecker Grist Mill. Located in the Southeast corner of Chester Woods Park.
- Bear Creek Spring House. CR 7 south (MN Hwy 42). Right onto 30 St SE. Near intersection with CR 102.

Figure B-5

Figure B-6

- Historic Eyota Mural. On the side of the Higgins Custom Cabinetry building in downtown Eyota. (Figure B-6)

Farmington Township

- Zion (German) Evangelical Church Cemetery. Located on CSAH 21,1/2 mile west of 70 Ave NE.
- Emmanuel Lutheran Church (MO Synod) in Potsdam, MN.
- Emmanuel Lutheran Church Cemetery. Located by the church in Potsdam.
- Abandoned Stores. In Potsdam.
- Restored School House.1/2 mile north of Potsdam on CSAH 11.
- Round Barn. About 0.5 miles north of CSAH 14 (75 St NE) on 7th Avenue NE. N 44 7" W 92 20'.
- Old Smoke House or Spring House. Located on Gene Schnell Farmstead at the intersection of MN 247 & CSAH 11. (Figure B-7)
- Round Barn. Located just east of Potsdam on MN 247. N 44 10" 7", W 92 20'
- Greenland Cemetery. Located at the junction of MN 247 and Co. Rd 128.
- School. Located ½ mile north of MN 247 on 50 Avenue NE.
- Farm Hill Cemetery. Just east of the junction of US 63 and 125 St NE.
- School. At junction of US 63 and 125 St NE.
- Ringe Creamery. Intersection of 40 Ave NE and CSAH 14 (75 St NE).
- Historic Granary. Located on the Blue Horizon Farm.1/4 mile east of 40 Ave NE on CSAH 14 (75 St NE).

Figure B-7

Haverhill Township

- Old School House. Located ¼ mile west of the intersection of 75 St NE and 40 Ave NE; N 44 07 and W 92 24.
- Fitch Cemetery. Located ½ mile east of the intersection of 75 St NE and 40 Ave NE.

- Old School. Corner of 75 St NE and Hadley Valley Rd. NE.
- Haverhill Town Hall. Located near the junction of CSAH 11 and CSAH 2. (Figure B-8)
- Family Cemetery. Near intersection of CSAH 11 and CSAH 2. Just south of the Haverhill Town Hall.
- St. John's Evangelical Cemetery. Located on 65 St NE ½ mile west of CSAH 24.

High Forest Township

- High Forest Cemetery. Located in the northeast part of the village of High Forest. (Figure B-9)
- High Forest Community Church. In High Forest.
- School. Located near the intersection of 95 St SW and 31 Ave SW. Near the end of the new runway of the Rochester Municipal Airport.
- Historic Bank Barn. Located 1 mile east of Stewartville on MN Hwy 30.
- Historic Barns. South of Stewartville, 0.25 miles west of TH 63 on CSAH 6.

Kalmar Township

- Old (First Security) Town Bank (in Byron).
- Former City Hall (in Byron)
- Odd Fellows Lodge (in Byron)
- Byron Fire Station Number 1 (in Byron)

Figure B-8

Figure B-9

- Possible site of Byron Mill. Located near CSAH 5 west of the intersection with CR 105, at the confluence of Tompkins Creek and the South Branch Middle Fork of the Zumbro River.
- Helleckson Log House. Located in Oxbow Park.
- Site of the Post Town Community. Located at the intersection of CR 103 and CR 105.
- Kalmar Town Hall. Located at the intersection of CSAH 3 and Town Hall Road.
- Mount Hope Cemetery. Located at the intersection of CSAH 4 and 70 Avenue NW.
- Douglas Trail. Located in the village of Douglas. (Figure B-10)

Marion Township

- School. Located near Chester Heights, at the corner of C.R. 119 and 10th Street SE.
- Marion Town Hall. Located just north of the intersection of CSAH 36 (Marion Road) and CSAH 11.
- Marion Church of Christ, 5296 65th Ave SE, Rochester. In Marion across from the park.
- Marion Cemetery. Located on the east side of Marion.
- Historic water barrel. Located in the back of Marion Church of Christ. (Figure B-11)
- Predmore Lane sign. One-fourth mile north of TH 52 on 75th Avenue SE.
- Classic bank barn built of local limestone in 1879, now on the Schmidt farm.

Figure B-10

Figure B-11

- Log Cabin Motel & Grill, 2345 Marion Road SE, Rochester.

New Haven Township

- Center Grove Cemetery. Located ¼ mile west of Douglas on CSAH 14. (Figure B-12)
- Historic Town of Genoa. Two miles west of Douglas on CSAH 14.
- Othello Cemetery.1/4 mile west of the junction of CSAH 14 and 110 Ave NW.
- Old New Haven Town Hall. Near junction of CSAH 3 and CSAH 31.
- New Haven School. Located next to the Town Hall.
- St. Michael's Cemetery. Located at the intersection of 105 Street NW and CR 113.
- School. Old District 77. Located at the intersection of CSAH 5 and CR 113.
- School. Old District 80. 1/4 mile south of the junction of 125 St NW on New Haven Road NW.

Figure B-12

Figure B-13

Orion Township

- Orion Center Cemetery. CSAH 7 intersection with Mill Creek Rd SE. (Figure B-13)
- Orion Township Hall. Located 500 feet north of Orion Center Cemetery.
- School foundation and well (plugged). CR 129 at the intersection of N. Branch Rd SE.
- Church (House). Cummingsville on N. Branch Rd SE.
- School. One mile southeast of Cummingsville on MN Hwy 30 on north.

- School. Part of a house on corner of MN Hwy 30 and 90 Ave SE.

Oronoco Township

- Old Oronoco School (residence in City of Oronoco).
- New Oronoco School (Community Center in City of Oronoco). (Figure B-14)
- Presbyterian Church (in City of Oronoco).
- Old Mill Stone (in Allis Park in City of Oronoco).
- Historic Commercial Building (VFW Hall in City of Oronoco).
- Oronoco Cemetery. ½ mile east on CSAH 12 from Oronoco.
- *Frank's Ford Bridge*. At the end of C.R. 121 at the Zumbro River.
- Historic Barn. Near intersection of CSAH 14 (75th St NW) and 11 Ave NW.

Figure B-14

Pleasant Grove Township

- Marker for the Dubuque Trail (Walker's Stage Road). Located adjacent to Union Cemetery in village of Pleasant Grove.
- School. Located behind marker for the Dubuque Trail.
- Jerusalem Cemetery. Located south of I-90 on CSAH 20, ¼ mile east on 87th St. SE.
- St. Bridget's Catholic Church. Located on the north side of CSAH 20 east of the intersection of CSAH 16 and CSAH 20.
- St. Bridget's Cemetery. Located immediately east of St. Bridget's Church on the north side of CSAH 20.
- School. About 1.5 miles west of CSAH 1 on 93rd St. SE.
- Bank. Located in village of Simpson, immediately west of CSAH 1 on CSAH 20.

- Fairview Cemetery. Located at the southwest corner of the intersection of CSAH 12 and 75th St. SE.
- *Fugle's Mill.* Located on the west side of CSAH 1 south of the Root River bridge. (Figure B-15)
- Limestone Quarry. ¼ mile north of Fugle's Mill on west side of CSAH 1.
- Barn. Located across from Fugle's Mill on CSAH 1.
- Pleasant Grove School (now a residence). Located in the village of Pleasant Grove.
- Pleasant Grove Town Hall. Located in the village of Pleasant Grove.
- *Masonic Lodge #22*. Located in the village of Pleasant Grove.
- Union (Evergreen) Cemetery. Located east of the village of Pleasant Grove on the NW corner of the intersection of CR 139 and CR 140.

Figure B-15

Figure B-16

Quincy Township

- Round Barn. Located along CR 107 roughly 2,000 feet south of the bridge over the Middle Fork of the Whitewater River. (Figure B-16)
- Quincy Mill Site. Located across from the bridge over the Middle Fork of the Whitewater River on CR 152
- Little Valley Cemetery. Near junction of CSAH 2 and 163 Ave NE.
- Possible site of Little Valley Post Office. On a farmstead at the junction of CSAH 2 and 175 Ave NE.
- Pleasant Valley Cemetery. Located on 140 Ave NE 1/4 mile south of 75 St. NE.

Rochester Township

- Donovan School.
- Pagenhart farmstead.
- Peters farmstead. South of Zumbro River on Bamber Valley Road SW. (Figure B-17)

Rock Dell Township

- Rock Dell Township Hall. Located at the northwest corner of MN Hwy 30 and CSAH 3.
- Quarry. Located ½ mile east of Rock Dell on CR 126.
- Old Zumbro Creamery. In the village of Rock Dell. (Figure B-18)
- Log House. In the village of Rock Dell.
- Zion Cemetery. ½ mile south of the intersection of CSAH 3 and 60 St SW.
- East St. Olaf Lutheran Church. 6200 CSAH 3 SW.
- East St. Olaf Lutheran Cemetery. Across CSAH 3 from the church.
- John P. Tverberg Family Log Home. Located in the East St. Olaf Lutheran Church Cemetery.

Salem Township

- South Zumbro Lutheran Church. Near the junction of CSAH 17 and 120 Ave SW.
- South Zumbro Cemetery. Located ½ mile west of CSAH 3 on CSAH 17.
- Riverside Cemetery. Located ½ mile south of the junction of CSAH 25 and CSAH 3.

Figure B-17

Figure B-18

- Separator Plant. It is now the Hiawatha Valley Farm Store. Located at the intersection of CSAH 25 and CSAH 3. (Figure B-19)
- Salem Corners Town Hall. Located at the intersection of CSAH 25 and CSAH 3.

Viola Township

- St. Paul's United Church of Christ and Cemetery. Located ½ mile east of CSAH 7 on CSAH 9.
- Oak Hill Cemetery. Near junction of MN Hwy 42 and 23 St NE.
- Viola Town Hall. In the town of Viola.
- Viola Gopher Count Historical Marker. In the Viola park.
- Viola Bible Church. In Viola. (Figure B-20)
- Viola Cooperative Creamery. 10500 Viola Rd NE
- School house. Near the ghost town of Corra at the junction of 97 Ave NE and CSAH 24.
- Possible site of Corra Post Office. Near intersection of 97 Ave NE and CSAH 24. Near the old schoolhouse.

Figure B-19

Figure B-20

OLMSTED COUNTY
MINNESOTA

Appendix C • Public Commentary

This appendix contains records of the questions and concerns we received from the general public regarding the land use planning process and as part of the public review of the draft document.

Feedback and questions

From: Don Gardner
To: Goslee Sandi
Subject: Re: Olmsted County land use plan comment
Date: Thursday, July 21, 2022 4:23:36 PM
Attachments: image001.png
image001.png

I appreciate the thought in your response. Thank You.

On Thu, Jul 21, 2022, 3:11 PM Goslee Sandi <goslee.sandi@co.olmsted.mn.us> wrote:

> Mr. Gardner,
>
> Thank you so much for taking the time to both look through the GLUP summary and provide feedback. As someone with an undergraduate degree in sociology, I really appreciate your suggestion about cultural immigration and agree it would be a beneficial educational historical component. While the plan does provide numbers regarding the community's diversification, it does not get into the level of detail that I think you're suggesting (I'm thinking back to a couple of cultural geography classes I took in college on migration patterns – fascinating stuff). I think the final paragraph of Chapter 2 gets to your point, albeit in a summary fashion:
>
> People moving to our area bring their cultural traditions and lifestyle preferences with them. Olmsted County must be open to and prepared for land use needs and expectations that will accommodate our new community members.
>
> That said, I will be sharing your email with the Olmsted County Planning Advisory Commission (OCPAC) at tonight's public hearing on the land use plan update. The Olmsted County Board of Commissioners will also receive your comment. I will ask OCPAC if they'd like to recommend that the county board hold off on adoption of this plan to give us time to pull more detailed information together or if they think that the draft section is sufficient for their current needs and would prefer that we beef this information up with the next plan update. Since we typically update this document every five years, and the next one will likely be considered a "major" update, I suspect we'll be starting work on it in 2025. Major updates typically have included more extensive public outreach that could include, for example, meeting with various cultural groups to find out what their land use needs are and how we can better incorporate them.
>
> We will also be starting work (this year?) on updating the Olmsted County Zoning Ordinance. Now that you have my wheels turning, I'm thinking that meeting with these groups might even be more helpful for that effort. The zoning ordinance is regulatory, whereas the land use plan is aspirational.
>
> Please don't hesitate to reach out directly to me at the contact information listed below if anything else comes to mind. The purpose of tonight's planning commission hearing is for them to make a recommendation to the Olmsted County Board regarding the adoption of this plan update. The county board will likely hear this item at their August 16 meeting (3:00 pm), so if other questions/concerns arise, we will make the board aware of them as well.
>
> Thanks again and take care!
>
> **PLEASE NOTE:** Olmsted County's email addresses are changing at the end of July. Please update your contact information for my work e-mail address to sandi.goslee@olmstedcounty.gov to ensure that I continue to receive your e-mails.
>
> Sandi Goslee
> Principal Planner | Olmsted County Planning Department
> 2122 Campus Drive SE, Suite 100 | Rochester, MN 55904
> 507.328.7168 | sandi.goslee@olmstedcounty.gov

From: Don Gardner
Sent: Thursday, July 21, 2022 11:36 AM
To: Planning Web <planningweb@CO.OLMSTED.MN.US>
Subject: GLUP

Read GLUP summary. Believe it should have a educational historical component that exlpores cultural immigration and timing differences so folks are not tracked in just their personal ancestry. Understanding of each others life and cultural perspective is important to plan for the future changing demographics and land use.