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Comprehensive Plan Douglas County, Minnesota

September 13, 2011



Acknowledgments

Revision of the Douglas County Comprehensive Plan was a collaborative effort by many individual residents, county staff and officials, members of the Task Force, State and Federal agencies, and the contracted consultants. Significant time, energy, and consideration were dedicated to this multi-month process of creating a plan that reflects the goals and values of stakeholders and guides development while protecting county character and resources for future generations. It is with tremendous gratitude that the county acknowledges Douglas County residents who contributed their thoughts and opinions through a variety of venues as well as the following board, committee, Task Force members and staff:

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Introduction



Douglas County is located in west-central Minnesota along the Interstate 94 corridor. The County's strategic location serves as a regional hub between St. Cloud and Fargo-Moorhead. The County has a total area of 720 square miles, of which, 634 square miles is land and 86 square miles of water, comprising nearly 400 lakes. It contains 20 townships and 11 cities along with a number of smaller villages. The City of Alexandria is the County seat.

The County is known for its beautiful landscape with natural resources that are comprised of many lakes wetlands, woodlands and grasslands that beckon second homeowners, vacationers and recreationists to the area. With an estimated 2009 population of 36,390, current population trends show a faster rate of growth in Douglas County than has been previously occurring. Given that the Alexandria area has been identified as the 10th fastest growing Micropolitan Statistical Area (MSA) in the United States and the fastest growing MSA in the State of Minnesota, wise planning for development while protecting its highly valued natural resources have been key goals in the preparation of the current comprehensive plan update.

Committed to following community values and wishes to be stewards of the County's natural resources by balancing future development with natural resource protection, the County has used a natural resource-based planning approach for updating the comprehensive plan. The approach, which is based on sound natural resource information provides a solid tool for guiding rational land use decisions and allows for innovative tools for resource protection. The goal of this approach is to avoid unintended consequences that are often the result of traditional planning, such as open space seen as "leftover" remnants of land, degraded water resources, and loss of community character.

1.1 Purpose and Scope

The Comprehensive Plan is a document that provides a policy framework to guide land use planning and development activities over a 20-year period. It is an official document comprised of formally stated goals and policies that once adopted by the County Board guides land use, transportation, parks and trails, and natural resource decisions in Douglas County.

1.2 Legal Authority

Legal authority by counties to adopt comprehensive plans has been given by the State of Minnesota under Minnesota Statutes Chapter 394. Counties exercise authority under this statute to promote the "health, safety, morals, and general welfare of community". This authority enables a county to develop its comprehensive plan and implement it through a series of controls such as zoning and other ordinances, establishing incentive and educational programs, and prioritizing spending budgets. Most importantly, it is for the land use ordinances and programs to be consistent with the adopted comprehensive plan.

1.3 Use of the Plan

The plan is the foundation for day-to-day activities and serves as a decision making tool for the County elected officials, appointed officials and staff. The plan should be periodically reviewed and updated to respond to

emerging trends, unforeseen events/circumstances and to assess the County's progress toward achieving its vision.

All development and redevelopment within the County should be reviewed against the goals and policies of the comprehensive plan. The document should be reviewed annually to determine if any amendments are necessary.

Amending a section of the Comprehensive Plan is a normal process. Before any amendment is approved, adequate public review should take place prior to the public hearing.

1.4 Planning Process

Douglas County began the comprehensive plan update of the 1998 Douglas County Comprehensive Plan in the summer of 2009. A Task Force comprised of county officials and staff, representatives from Townships, and Cities, local, regional and state agencies, non-profit associations and groups, agricultural community, and private development interests was formed to guide and provide input during the planning process. The Task Force also served as advocates for the recommendations of the Plan before its adoption as county policy, after Plan adoption, and into the implementation phase.

Community input meetings were held at the beginning of the planning process during October 2009. Input was requested to help understand community values, concerns, and opinions of county residents. A SWOT analysis, a process used to help a community define the strengths, weaknesses, opportunities, and threats of a community system, was also used at the Community Input and Task Force Meetings early in the process (See Appendix A). The results of this analysis helped to determine community issues related to natural resources, parks and open space, land use, and transportation and served as the basis for the plan. Residents were updated during the planning period including during a presentation at the County Fair in August of 2010.

In addition, a number of Focus Groups were held during the course of the planning process to get input on identified key issues. Groups identified included members from the rural and agricultural property owners, the development community, the commercial and industrial business owners, the Alexandria Lakes Area Sewer District (ALASD), and area townships and cities.



The public had an opportunity to review and comment on the Draft Comprehensive Plan at an Open House on August 10, 2011 and August 11, 2011. A public hearing was held August 23, 2011. The Douglas County Board of Commissioners adopted the Douglas County Comprehensive Plan on September 13, 2011.

1.5 Plan Elements

The comprehensive plan consists of a number of interrelated plan elements. The elements work together to form a comprehensive plan for the future and include:

Natural Resources – provides goals, policies, and guidance to protect the County’s natural resources

Parks, Trails, and Open Space – provides goals, policies and plans to maintain and enhance Douglas County’s park, trail and open space system.

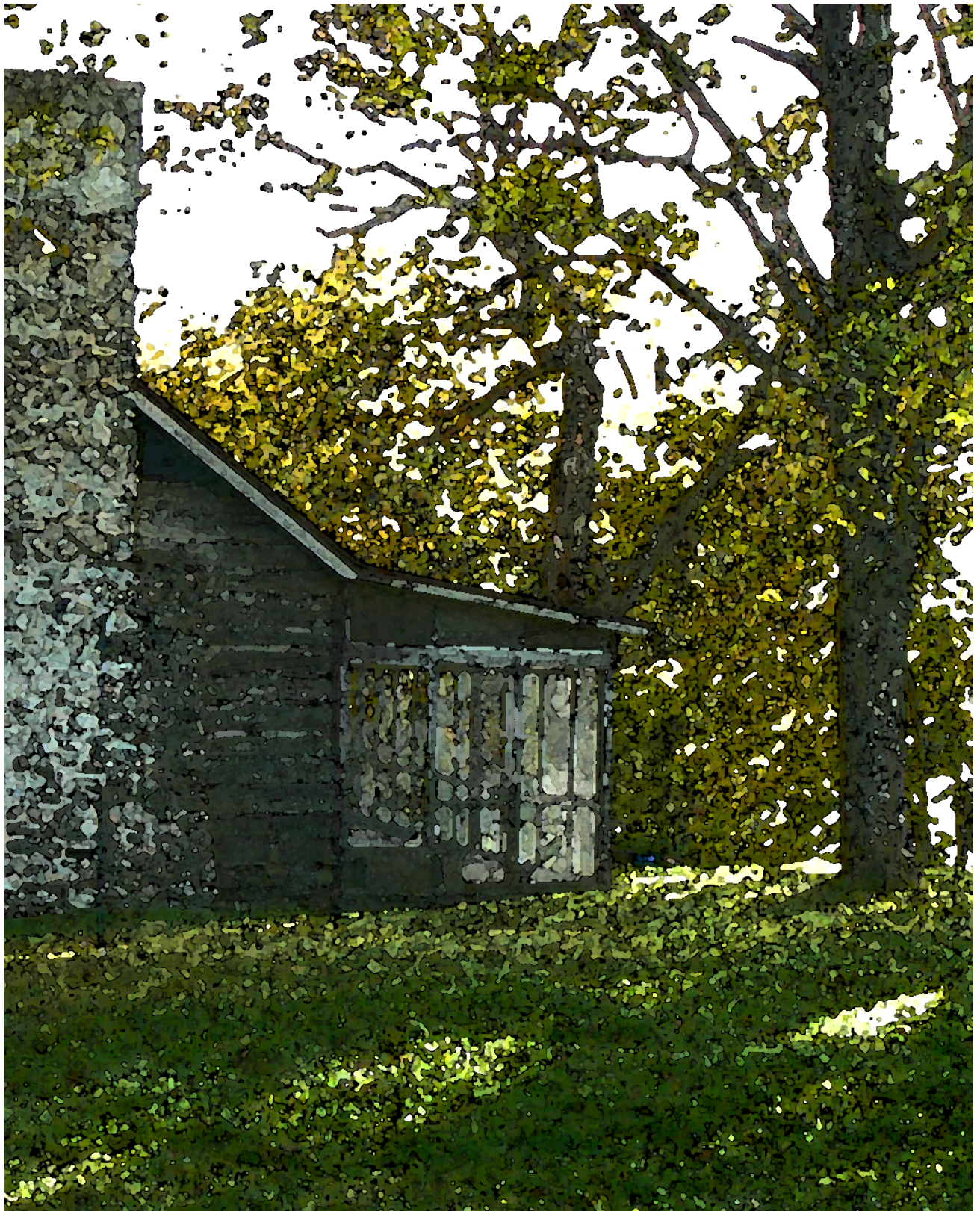
Land Use – provides goals, policies, density requirements and plans to guide the use of land in Douglas County.

Transportation – provides goals, objectives and policies to guide the transportation system in Douglas County.

Inter-governmental Cooperation – provides goals, policies, and guidance for working together with other communities and agencies to achieve a common vision.

Implementation – provides tools and strategies that Douglas County will use to implement the plans and achieve the Vision defined through the goals and policies outlined in the Comprehensive Plan.

Background



2.1 Introduction

Douglas County is located in west-central Minnesota along the Interstate 94 corridor. The County's strategic location serves as a regional hub between St. Cloud and Fargo-Moorhead. The County has a total area of 720 square miles, of which, 634 square miles is land and 86 square miles of water, comprising nearly 400 lakes.

2.2 Current Demographics and Socioeconomic Profile

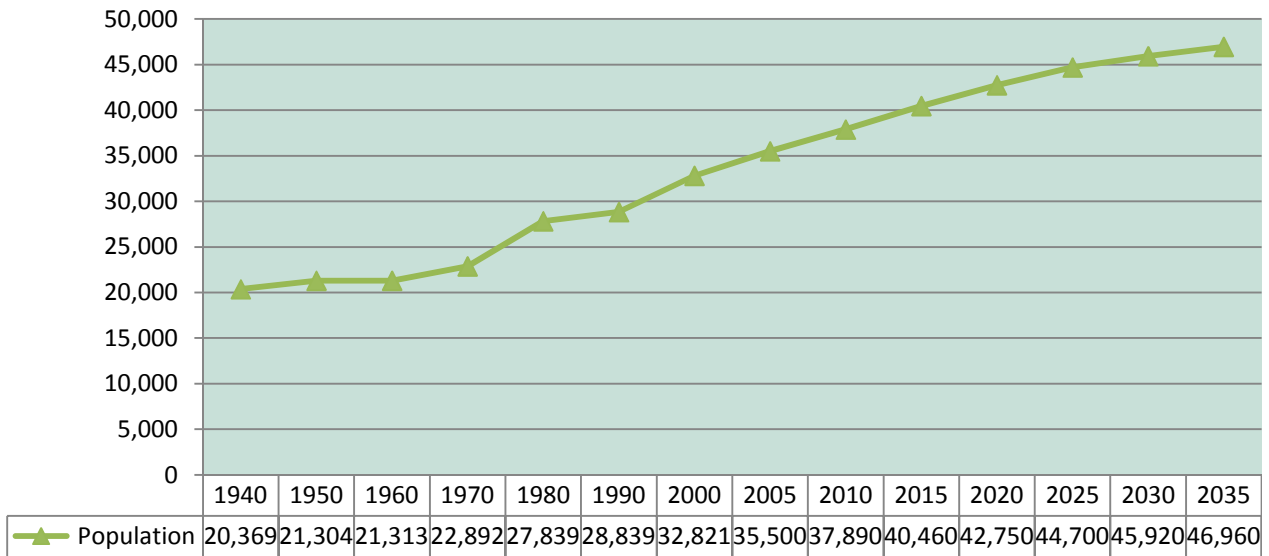
The demographic and socioeconomic information presented in this section uses the most current information made available by Douglas County, the Minnesota State Demographic Center, the US Census Bureau, and the Alexandria Area Economic Development Commission. Population growth trends and projections will have an important effect on the needs and demands of the community. For example, knowing the age composition of the community will determine the different types of services needed, whether it be more schools, nursing homes, etc.

Historical and Current Population Growth

Douglas County has had a fairly constant rate of growth in the past, as shown in Figure 2-1. Between 1940 and 1970, the population only increased about 2,500 residents. The biggest population influx occurred between 1970 and 1980 (21.6 percent) as a result of increased commercial, industrial, and recreational activity in the County, particularly in the City of Alexandria.

Current population trends indicate a faster rate of growth than in the past with a fairly large increase between 2000 and 2005. The Minnesota State Demographic Center estimates that the 2009 population is 36,151. The Alexandria area has been identified as the 10th fastest growing Micropolitan Statistical Area in the US and the fastest growing Micropolitan Statistical Area in Minnesota. A Micropolitan Statistical Area is classified as a county with an urban cluster of 10,000 to 50,000 people.

Figure 2-1 – Rate of Growth



Source: U.S. Census Bureau, Minnesota State Demographic Center

Looking at individual townships and cities reveal that certain areas have seen more growth than others. Table 2-1 shows the historical population for each township and city in Douglas County. The most rapid and significant growth has occurred in the central portions of the County within the lakes region and along major transportation routes. Alexandria, Carlos, and LaGrand Townships – all located in central Douglas County - had about a 200 percent increase in population between 1960 and 2000.

Table 2-1
Historic Township and City Population 1960 - 2000

Township/City	1960	1970	1980	1990	2000	1960-2000 % Change
Alexandria City	6713	6973	7608	8029	8820	31.4
Alexandria Township	1594	2512	3521	4014	4760	198.6
Belle River Township	528	446	432	373	350	-33.7
Brandon City	353	414	433	441	450	27.5
Brandon Township	478	445	555	586	647	35.4
Carlos City	262	260	364	361	329	25.6
Carlos Township	636	912	1354	1402	1912	200.6
Evansville City	411	553	571	566	566	37.7
Evansville township	359	320	270	265	244	-32.0
Forada City	98	152	191	171	197	101.0
Garfield City	240	198	284	259	281	17.1
Holmes City Township	554	489	595	614	737	33.0
Hudson Township	426	401	585	632	686	61.0
Ida Township	458	490	720	789	1057	130.8
Kensington City	324	308	331	295	286	-11.7
LaGrand Township	1311	1863	3030	3303	4056	209.4
Lake Mary Township	524	611	880	848	997	90.3
Leaf Valley Township	514	446	541	438	484	-5.8
Lund Township	380	315	323	318	355	-6.6
Millerville City	119	109	124	104	115	-3.4
Millerville Township	453	380	375	322	350	-22.7
Miltona City	163	172	187	210	279	71.2
Miltona Township	478	463	617	656	814	70.3
Moe Township	406	372	495	495	683	68.2
Nelson City	150	175	209	177	172	14.7
Orange Township	358	320	355	367	324	-9.5
Osakis City (Part)	1314	1237	1267	1198	1567	19.3
Osakis Township	497	520	555	574	584	17.5
Solem Township	398	325	303	242	239	-39.9
Spruce Hill Township	471	459	433	392	395	-16.1
Urness Township	334	246	240	233	266	-20.4

Source: U.S. Census Bureau, Minnesota State Demographic Center

Projected Population Growth

The Minnesota State Demographic Center projects that Douglas County's population will continue to rise until the year 2035. Within the next twenty-five years, the population is expected to increase 32 percent. These projections will have significant implications for private development and an increased need for services, such as road maintenance or expansion of sewer and water. While these population projections allow county staff to plan for total population growth, there still exists a need to more specifically identify where growth might occur over the next 20 years. Table 2-2 provides individual Township and City population projections that may help determine growth patterns. The pattern of growth mostly occurring in the

central portion of the County is predicted to continue in the future. Carlos, Ida, Moe, and LaGrand Townships will absorb more population growth than townships in the periphery of the County.

**Table 2-2
Future Township and City Population**

Township/City	2005	2010	2015	2020	2025	2030	2035	2000 - 2035 % Change
Alexandria City	11323	12106	12943	13687	14322	14721	15061	33.0
Alexandria Township	4139	4485	4867	5210	5506	5703	5873	41.9
Belle River Township	360	362	362	360	357	352	346	-3.9
Brandon City	437	442	443	443	441	436	430	-1.6
Brandon Township	633	655	673	690	702	707	709	12.0
Carlos City	397	412	426	439	449	453	456	14.9
Carlos Township	2054	2270	2508	2725	2915	3046	3161	53.9
Evansville City	568	577	580	580	579	573	567	-0.2
Evansville Township	240	239	236	233	228	222	216	-10.0
Forada City	193	202	210	218	224	227	229	18.7
Garfield City	302	318	335	349	361	368	374	23.8
Holmes City Township	736	780	826	868	902	923	941	27.9
Hudson Township	723	758	793	824	850	863	874	20.9
Ida Township	1131	1245	1370	1484	1584	1652	1711	51.3
Kensington City	285	286	285	284	281	276	271	-4.9
LaGrand Township	4374	4775	5216	5615	5961	6195	6399	46.3
Lake Mary Township	1093	1177	1268	1351	1421	1467	1507	37.9
Leaf Valley Township	479	497	513	527	538	543	546	14.0
Lund Township	344	356	366	375	382	385	386	12.2
Millerville City	114	118	122	126	128	130	130	14.0
Millerville Township	383	405	428	449	466	477	485	26.6
Miltona City	312	344	380	413	442	461	478	53.2
Miltona Township	756	795	835	870	900	916	930	23.0
Moe Township	718	792	874	948	1013	1057	1097	52.8
Nelson City	153	151	148	145	141	136	131	-14.4
Orange Township	322	319	314	307	299	289	280	-13.0
Osakis City (Part)	1441	1528	1621	1703	1772	1814	1849	28.3
Osakis Township	579	589	592	594	594	589	584	0.9
Solem Township	224	224	223	221	219	214	210	-6.3
Spruce Hill Township	413	425	433	441	446	446	446	8.0
Urness Township	251	259	267	273	278	279	280	11.6

Source: U.S. Census Bureau, Minnesota State Demographic Center

Age of Population

There is a national trend with birth rates declining and an aging population as evident by an increasing average age. The largest population group in history - the baby boom generation - is now in their late 40s to mid 60s. Table 2-3 gives the age distribution projections up to 2030. The results indicate that Douglas County will have to place a greater emphasis on meeting the needs of an aging population. Age groups over 65 years of age will have over one

hundred percent increase in the next twenty years. In contrast, the number of residents in age groups under 20 is projected to decline.

Table 2-3
Population Projection by Age Group

Age Group	2000	2005	2010	2015	2020	2025	2030	2035	2000-2035 % Change
0-4	1,808	1,824	2,170	2,110	1,990	1,910	1,870	1,870	3.4
5-9	2,067	1,892	2,160	2,480	2,440	2,350	2,230	2,210	6.9
10-14	2,394	2,143	2,070	2,330	2,620	2,580	2,480	2,390	-0.2
15-19	2,692	2,364	2,220	2,140	2,360	2,610	2,570	2,490	-7.5
20-24	1,941	2,654	2,280	2,210	2,080	2,240	2,340	2,360	21.6
25-29	1,612	2,854	2,660	2,430	2,340	2,190	2,300	2,390	48.3
30-34	1,747	1,949	2,900	2,810	2,620	2,520	2,350	2,470	41.4
35-39	2,288	2,061	2,160	2,940	2,900	2,750	2,640	2,470	8.0
40-44	2,567	2,499	2,210	2,270	2,950	2,950	2,810	2,700	5.2
45-49	2,362	2,683	2,680	2,380	2,410	3,030	3,040	2,910	23.2
50-54	2,021	2,380	2,830	2,840	2,520	2,530	3,070	3,120	54.4
55-59	1,809	2,037	2,630	3,110	3,110	2,770	2,720	3,240	79.4
60-64	1,624	1,753	2,280	2,880	3,370	3,370	2,990	2,930	80.4
65-69	1,474	1,565	1,810	2,350	2,930	3,410	3,390	3,030	105.6
70-74	1,418	1,405	1,530	1,780	2,330	2,890	3,340	3,340	135.5
75-79	1,178	1,318	1,230	1,340	1,590	2,090	2,590	3,010	155.5
80-84	898	936	1,010	960	1,070	1,280	1,710	2,140	138.3
85+	921	1,183	1,060	1,100	1,120	1,230	1,450	1,900	106.3
Total	32,821	35,500	37,890	40,460	42,750	44,700	45,890	46,970	43.1

Source: U.S. Census Bureau

Ethnic Diversity and Race

The first settlers in Douglas County were of European descent. Although still dominated by its European origins, the current population is more diverse than it was several decades ago. When comparing 2000 data to 2007 data, it becomes apparent that Douglas County has seen an upward trend in both ethnic and racial diversity. Table 2-4 shows the change in ethnic diversity and race distribution between 2000 and 2007. The populations with the largest increase were Black or African American and American Indian or Alaskan Native.

**Table 2-4
Ethnic Diversity and Race**

Race	2000	2007	2000-2007 % change
White	32,216	34,712	7.7
Black or African American	58	123	112.1
American Indian or Alaska Native	74	162	118.9
Asian	130	129	-0.8
Native Hawaiian and Other Pacific Islander	9	0	-100.0
Hispanic or Latino (of any race)	193	301	56.0
Some Other Race	3	4	33.3
Two or More Races	138	169	22.5

Source: U.S. Census Bureau

Median Household Income

2007 Data indicates that Douglas County had a median income of \$43,002 as shown in Table 2-5. This figure is relatively less than that of Minnesota of \$55,616. However, evaluating against the surrounding counties, Douglas County's median household income is comparable to most of the counties, with Stearns County being more comparable to the state.

**Table 2-5
Median Household Income**

	2000	2007	2000-2007 % Change
Douglas County	37,703	43,002	14.1
Grant County	33,775	40,005	18.4
Otter Tail County	35,395	40,864	15.5
Pope County	35,633	42,206	18.4
Stearns County	42,426	50,800	19.7
Stevens County	37,267	44,141	18.4
Todd County	32,281	40,938	26.8
Minnesota	47,111	55,616	18.1
United States	41,994	50,007	19.1

Source: U.S. Census Bureau

Education

The 2000 Census surveyed the level of education of citizens. Of the sample of persons aged 25 and older, 85.6 percent are high school graduates, and 17.3 percent have a bachelor's degree or higher. Table 2-6 shows statistics for high school graduates are slightly lower than that of the state, with a wider discrepancy for citizens with a bachelor's degree or higher.

Table 2-6
Education Attainment 2000

	High School Graduate or Higher	Bachelor's Degree or Higher
Douglas County	85.60%	17.30
Grant County	83.50%	15.70
Otter Tail County	81.40%	17.20
Pope County	81.80%	14.70
Stearns County	86.20%	22.00
Stevens County	84.40%	20.60
Todd County	79.30%	10
Minnesota	87.90%	27.40
United States	80.40%	24.40

Source: U.S. Census Bureau

Major Employers and Industries

Douglas County is predominantly a rural county with an agricultural base and a diversified urban core. The City of Alexandria serves as the trade, industrial and educational center. As a result, all of the major employers are located in the Alexandria area. The largest employers in Douglas County are Alexandria public schools, the County Hospital, and a number of moderate sized manufacturers, as shown in Table 2-7.

Table 2-7
Major Employers and Industries

Employer	Industry Sector	Employees
Alexandria Public Schools (Dist. 206)	Education	640
Douglas County Hospital	Health Care	620
Douglas Machine, Inc.	Packaging Equipment Manufacturer	530
Tastefully Simple	Direct Selling Establishment	365
Douglas County	Government	360
Alexandria Extrusion Company	Aluminum Extruded Parts	315
Knute Nelson	Nursing Home/Assisted Living	300
Verizon	Wireless Communications	275
SunOpta Inc. - Companies of Alexandria	Dairy Product Manufacturing	253
3M - Alexandria	Abrasives Division	250
Arrowwood Resort & Conference Center	Leisure & Hospitality	250
Central Specialties	Road Construction	250
Donnelly Custom Manufacturing Company	Plastic Molding Manufacturer	230
Brenton Engineering Company	Packaging Equipment Manufacturer	227
Alexandria Technical College	Education	220
Bethany Community	Nursing Home/Assisted Living	205
Alexandria Clinic, P.A.	Health Care	200
Henry's Foods Inc.	Grocery Product Wholesalers	170
ITW Heartland	Manufacturing	118

Source: Alexandria Area Economic Development Commission

Douglas County has a strong economy evident by the increase in industries between 2000 and 2007, as shown in Table 2-8. The number of industries has grown between 2000 and 2007 with an overall increase of 2,312. The industry with the largest increase was arts, entertainment, recreation, accommodation and food services with an 84.41 percent increase. This increase in the number of arts, entertainment, recreation, accommodation and food services can be attributed, in part, to the numerous lakes in the County that influence development as a regional recreation center and tourist destination.

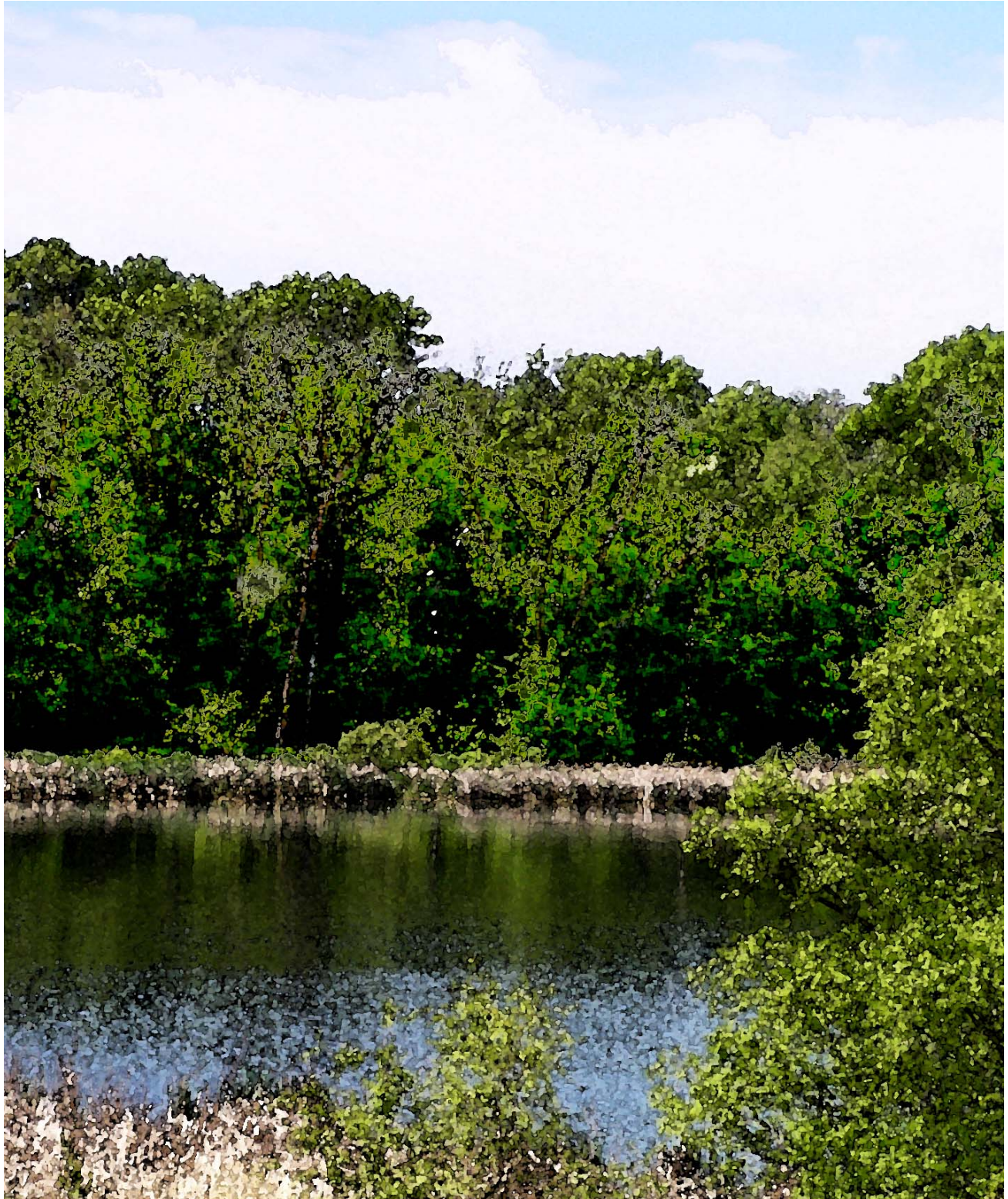
**Table 2-8
Industry (County)**

Industry	2000	2007	2000 - 2007 % Change
Agriculture, forestry, fishing and hunting, and mining	818	598	-26.89
Construction	1178	1574	33.62
Manufacturing	3059	2702	-11.67
Wholesale trade	521	772	48.18
Retail trade	2417	2749	13.74
Transportation and warehousing, and utilities	688	693	0.73
Information	432	534	23.61
Finance, insurance, real estate, and rental and leasing	745	656	-11.95
Professional, scientific, management, administrative, and waste management services	865	936	8.21
Educational, health and social services	3441	4483	30.28
Arts, entertainment, recreation, accommodation and food services	1187	2189	84.41
Other services (except public administration)	729	628	-13.85
Public administration	410	288	-29.76

Source: U.S. Census Bureau

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Natural Resources



3.1 Introduction

Natural Resource-Based Planning

Douglas County's current and future quality of life depends on how it conserves its natural resources. Natural resources are the air, minerals, land, water, plants, and animals that form the foundation to life in Douglas County. For example, oxygen in the air comes from plants. Without plants, the atmosphere would be poisonous to people and animals. Production of oxygen is a free ecosystem service that benefits people in Douglas County. There are many other ecosystem services that maintain a high quality of life and productivity of farming and businesses in Douglas County.

Benefits of treating natural resources in a sustainable way include:

- High quality forests, savannas, prairies, wetlands, lakes, and streams will support a variety of life—native trees, shrubs, wildflowers, groundcover, fish, birds, and other wildlife.
- Lakes, streams, and wetlands will be ecologically intact and clean enough to support aquatic life and provide recreational opportunities.
- Natural areas will provide essential ecosystem services, such as water infiltration and groundwater recharge, maintenance of lake water levels, and the sustenance of fish and wildlife populations.
- Soils remain fertile and productive, reducing the need for artificial inputs (e.g., fertilizer).
- Vegetation will help limit sediment, phosphorus, nitrogen, and contaminants from reaching lakes, streams and wetlands.
- Rainwater infiltrates, which reduces flooding and feeds groundwater.
- Groundwater is recharged, which feeds cold, clean water to lakes, streams, and wetlands.
- Water levels are more natural over the course of the seasons, which prevents erosion of shorelines and stream channels.
- Beautiful places exist for people to see and visit.



There are economic values to treating natural resources in a sustainable way. While this is more apparent in urban areas than rural areas, property values are higher near natural areas and open space¹. New developments that protect natural resources using conservation design and low-impact development techniques can save an average of 24-27% in construction costs per development². In addition to the economic and recreational benefits of natural resources, for many people nature and natural resources merit protection and care due to their intrinsic value, regardless of their value to humans. Many conservation strategies (e.g., protection of surface waters, groundwater, and habitat) can also help mitigate the adverse effects of climate change.

¹ Embrace Open Space study is at: <http://www.embraceopenspace.org/EOSReport/EconomicValueofOpenSpace.pdf>

² EPA Low Impact Development study is at: <http://www.epa.gov/owow/nps/lid/costs07/documents/reducingstormwatercosts.pdf>;
AES study is at: <http://www.appliedeco.com/Projects/ConDevArticleLayout.pdf>.



This natural resources chapter is a guide for how Douglas County can manage natural resources in a sustainable way. It will help protect and sustain Douglas County's quality of life for current and future generations. Douglas County staff recognized the role that natural resources play in land use planning, so it was decided that natural resource conservation should serve as the foundation of the County's comprehensive plan update. Through this process, natural resources will be preserved, expanded, restored, enhanced, and connected, while allowing for appropriate use of natural resources (e.g., aggregate mining), smart growth, sustainable development, and improved quality of life for county residents and visitors. This chapter will guide planning, zoning and ordinances. This chapter will also provide citizens with an understanding of how they can play a role in achieving these goals through appropriate land use and stewardship of their property.

Douglas County recognizes the role of conservation in achieving sustainability – that is, a county that thrives in terms of its community, economy, and the environment. Therefore, future decisions and land use practices should be based on sustainability principles. Sustainability principles for county comprehensive planning are incorporated into the natural resource goals and policies found later in this chapter, but they can be summarized as:

- Ensuring healthy waters, soils, vegetation, wildlife and human communities;
- Pursuing renewable energy sources;
- Practicing energy conservation and waste reduction;
- Establishing reliable funding mechanisms for ongoing stewardship; and
- Optimizing economic returns from a healthy, livable environment (e.g., tourism).

Appropriate use and management of natural resources is not all that Douglas County needs to be a great place to live in the 21st century; the County also needs good schools, a healthy economy, and efficient public services. But healthy natural resources will help ensure that Douglas County has a high quality of life that can be sustained far into the future.

Douglas County's Vision for Natural Resources

Douglas County's desire to become sustainable depends on stewardship of its ecosystems, water resources, plant communities, and wildlife species. Good stewardship protects the functions of ecosystems and the free ecosystem services necessary for a high quality of life.

Based on these principles, Douglas County's vision for natural resources is a landscape characterized by: clean air; clean lakes, streams, and wetlands; healthy forests; expanses of prairie and upland grasslands; clean groundwater; parks, trails, and natural areas that provide opportunities for active and passive recreation; productive working farms and ranches or just farms; and urban, suburban, and rural areas to live, work and play. The County recognizes the need to balance conserving natural features with supporting active agriculture and land development. The County wants all

decisions to be made strategically and to achieve the highest quality of life and economic well-being for Douglas County residents, workers, and visitors.

3.2 Existing Conditions

Related Plans and Data

This Natural Resources Section of the Douglas County Comprehensive Plan Update builds on previous work by the County and other entities. Some of the documents and data that provided the foundation for this section include:

- Previous Douglas County Comprehensive Plan (1998)
- Douglas County Comprehensive Local Water Management Plan (2009)
- Douglas County Sensitive Features Inventory (2006)
- Wellhead Protection Plans
- Minnesota DNR's County Biological Survey Data (2003)
- Minnesota DNR's Minnesota's State Wildlife Action Plan: Tomorrow's Habitat for the Wild and Rare (2006)

The Natural Environment of Douglas County

Douglas County is located at the transition zone between Minnesota's Central Hardwood Forest and Northern Glaciated Plains. Due to the transitional nature of the region, Douglas County possesses significant biodiversity and a complex mix of natural resources, including:

- Fertile soils
- Rare plants and animals
- Native plant communities
- A variety of critical habitats, ranging from forest to prairie
- Abundant wildlife, including upland birds and waterfowl
- Numerous lakes and wetlands
- Rivers and streams
- Abundant groundwater
- Aggregate resources
- Wind resources



Prior to the arrival of European settlers in the mid-1800s, Douglas County was covered by a complex mosaic of deciduous forest in the north and east and prairie in the south and west. The forests were Big Woods – Hardwoods (oak, maple, basswood, hickory) and Aspen-Oak Land (forest, woodland, and savanna). The County's prairies consisted of a diverse array of tall grasses and wildflowers in uplands, with wet prairie, sedge meadow, and mixed emergent marsh in lowlands.

Native American tribes, the Ojibwe and Sioux, lived and foraged in Douglas County. These tribes regularly used fire to manage their environment, improve hunting, and provide security and ease of travel. This practice helped form the landscapes that greeted European settlers. The region's

scattered lakes, forests, woodlands, and prairies provided an attractive location to settle and farm.

Deposits of the Des Moines Lobe of the Wisconsin Glaciation (over 10,000 years ago) resulted in significant aggregate resources within Douglas County, particularly in the northeast and southeast portions of the County. Tallgrass prairie, which previously covered much of the County, produced a deep, fertile and productive soil. A considerable amount of prime agricultural land continues to exist in the County's east and west regions.

Over the past 150 years, significant alteration of the landscape for agricultural production, urban/suburban development, and vacation homes and resorts has led to habitat loss, degradation, and fragmentation. Some of the original ecological services, such as water filtration by wetlands, have diminished as a result of these land use changes.

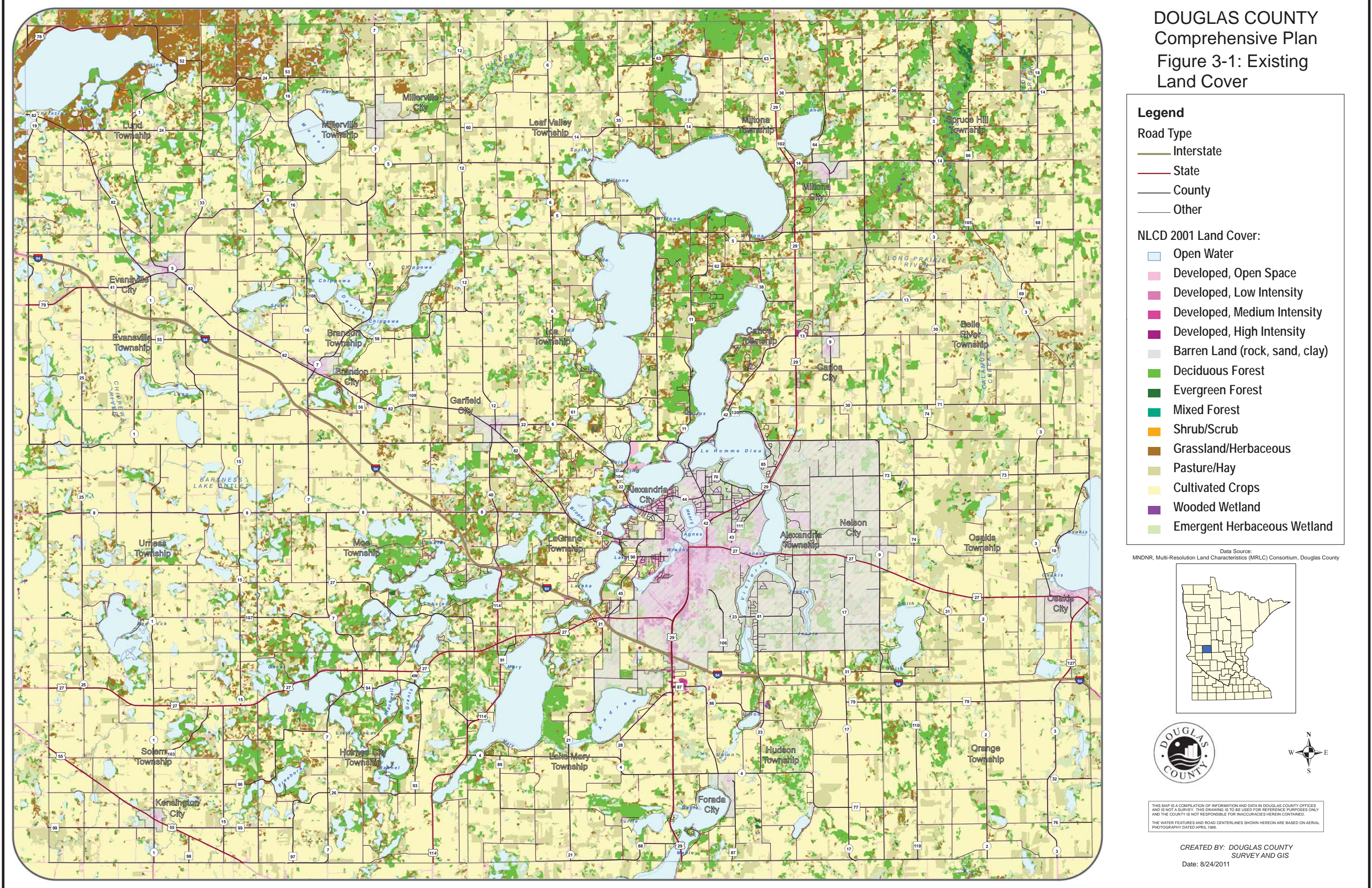
While regulations are in place to protect some natural resources (e.g., Minnesota Wetlands Conservation Act, shoreland ordinances, etc.), past and continuing development pressure highlights the importance of understanding Douglas County's natural resources and making sustainable land use decisions.

Existing Land Cover

Land cover mapping data from 2001 provides a good summary of existing land cover in Douglas County (Figure 3-1). Unlike land use mapping (used primarily for planning), land cover mapping is typically used for natural resource inventory and assessment.

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DOUGLAS COUNTY Comprehensive Plan Figure 3-1: Existing Land Cover



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Natural Resource Inventory and Assessment

As part of the comprehensive plan update, a remote Natural Resource Inventory and Assessment (NRIA) of Douglas County was completed. Existing digital data were inventoried, compiled, and organized utilizing a geographic information system (GIS) platform. GIS is a powerful visualization and spatial analysis tool that can be used to rapidly compile and assess various datasets. In GIS information is overlaid in a common geographic framework. This allows planners to view data in two dimensions, place different types of information on top of each other in a map, and manipulate and ask questions of the data, such as how many acres of forest are in a certain watershed.

Data compiled and assessed as part of the Douglas County remote NRIA included:

- Aerial photography (2004)
- Land cover mapping (2001)
- Minnesota DNR County Biological Survey sites of biodiversity significance, native plant communities, rare natural features, and Protected Waters Inventory (PWI)
- Species of Greatest Conservation Need (SGCN) priority habitats; the Minnesota DNR's ecoregional assessment³ was used with land cover data to identify SGCN habitats;
- U.S. Fish and Wildlife Service's migratory and grassland bird habitats
- Fish spawning areas and aquatic vegetation mapping
- Major watershed and subwatershed boundaries
- University of Minnesota Landsat water clarity data
- Minnesota Pollution Control Agency impaired waters inventory
- Federal Emergency Management Agency's floodplains
- U.S. Fish and Wildlife Service's National Wetlands Inventory (NWI)
- Restorable Wetlands Inventory (RWI)
- U.S. Geological Survey's soil survey
- Minnesota Geological Survey hydrogeologic and aggregate mapping
- Douglas County wellhead protection areas
- Drinking water vulnerability mapping
- Topographic contours
- Lakes, rivers, streams, and ditches
- Municipal boundaries
- Transportation infrastructure (roads, railroads, etc.)
- Land ownership
- Zoning

³ Minnesota Department of Natural Resources. 2006. *Tomorrow's Habitat for the Wild and Rare: An Action Plan for Minnesota Wildlife*. Comprehensive Wildlife Conservation Strategy. Division of Ecological Services, Minnesota Department of Natural Resources.



These natural resources data were analyzed and discussed by ecologists, plant and wildlife biologists, water resource specialists, and other conservation professionals, as well as planners and county staff. Based on this analysis and discussion, preliminary maps were developed which prioritized locations of natural resources in the County warranting attention in the comprehensive plan. The prioritization maps were reviewed by the Comprehensive Plan Task Force, county staff, and local natural resource professionals, then adjusted to better capture and highlight conservation priorities in the County. Natural resource datasets were assigned to different conservation priority categories:

1 – High Quality and Rare Natural Resources

These features include the highest quality and rarest natural features on the landscape.

- MNDNRNative Plant Communities (e.g., Red Oak – Basswood Forest, Tamarack Swamp)
- MNDNRSites of Biodiversity Significance (large tracts of natural and semi-natural vegetation)
- MNDNRRare Features (e.g., endangered, threatened and special concern plants and animals)

2 – SGCN Habitats

These features focus on habitat suitable for Species of Greatest Conservation Need (SGCN). As part of Minnesota's state wildlife action plan, a list of SGCN species was developed for each of Minnesota's 28 ecological subsections. As part of the action plan, a land cover change analysis was conducted within each subsection, identifying and prioritizing habitats suitable for local SGCN species. Douglas County contains portions of the Hardwood Hills subsection as well as portions of the Minnesota River Prairie subsection. Using the best current land cover data for Douglas County (NLCD 2001), priority habitats were identified for each of these subsections based on the action plan's analysis.

- SGCN Priority Habitats (>40-ac blocks)
- Fish Spawning Areas (>40-ac blocks)
- Aquatic Vegetation (>40-ac blocks)
- Shallow Lakes Data

3 – Lowland/Aquatic Features

These features consist of open water (e.g., lakes and streams) and wetlands. Many of these already are regulated under Minnesota DNRPublic Waters rules, the Minnesota Wetlands Conservation Act, and Section 404 of the federal Clean Water Act.

- Minnesota DNRProtected Waters Inventory; lakes and most larger or deeper wetlands
- USFWS National Wetlands Inventory (NWI)
- Watercourses (e.g., rivers, streams, ditches)

Migratory & Grassland Bird Habitats (where ≥ 2 of these datasets overlapped):

- Selected U.S Fish and Wildlife Service Habitat and Population Evaluation Team (HAPET) Wildlife Priority Areas
- U.S Fish and Wildlife Service Grassland Bird Conservation Areas
- U.S Fish and Wildlife Service Wildlife Habitat Potential Model Areas

In addition to these conservation priorities, several potential constraints to land alteration or development were identified in the County, including:

- Bluffs around lakes, including a 30 foot buffer
- Steep Slopes (i.e., slopes $>12\%$)
- FEMA floodplains
- Wellhead Protection Areas
- Landfill contamination plumes

The NRIA, prioritization, and analysis allowed the assessment of numerous datasets and identification of spatial relationships across the County. This analysis identified the natural resource issues and opportunities most important to Douglas County, discussed below.

3.3 Issues and Opportunities

Despite a wealth of natural resources in Douglas County, many land use practices directly or indirectly affect these natural features and the ecosystem services they provide. Conservation planning helps to use land effectively and satisfy the demands placed on it, whether for human habitation, transportation, food production, sand and gravel extraction, or natural areas set aside for their ecosystem services and intrinsic value.

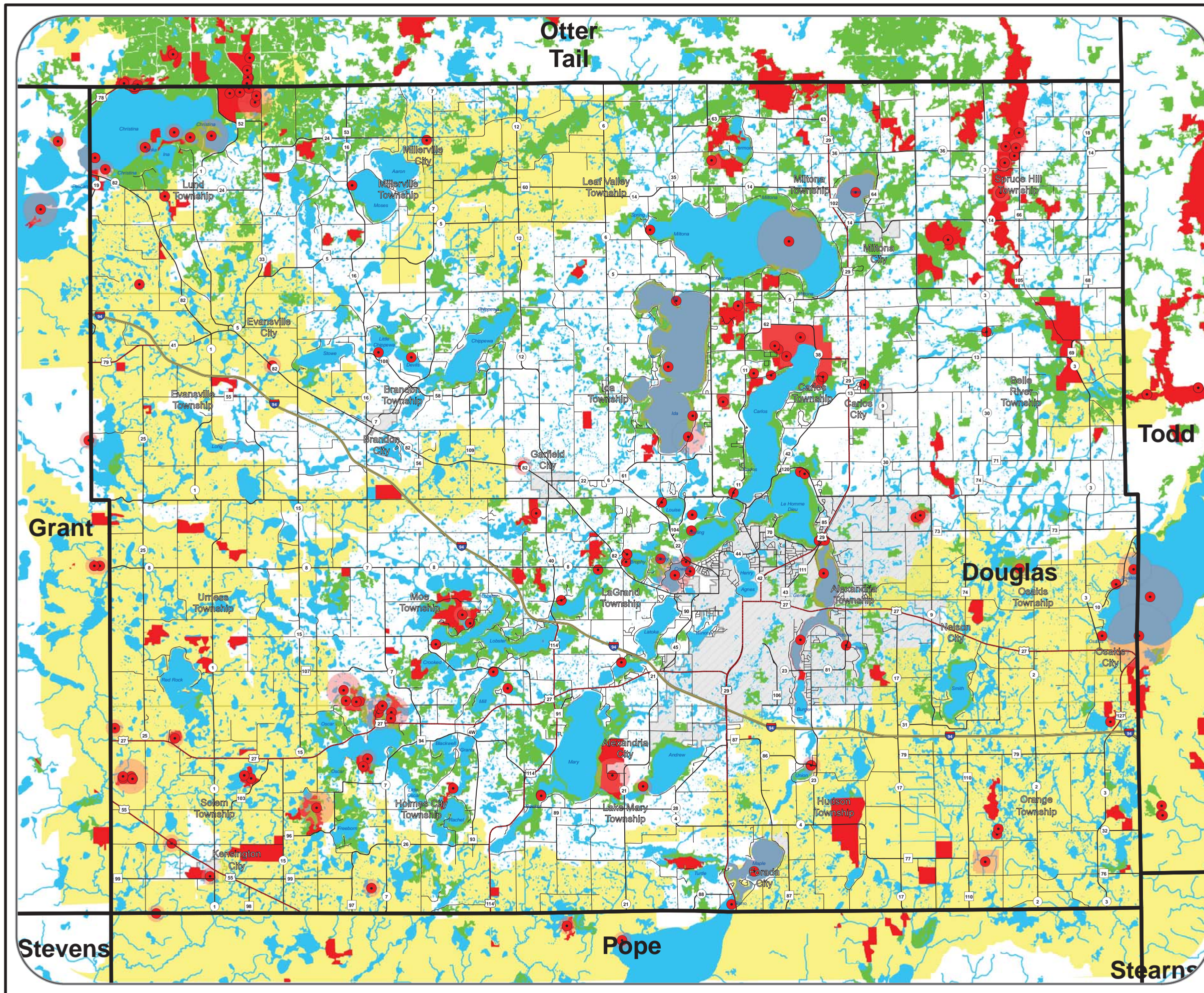
The Douglas County NRIA, subsequent analyses, and previous studies—including the recent Douglas County Comprehensive Local Water Management Plan of 2009—have identified conservation issues and opportunities within the County, and the challenges to implementing conservation.

High Quality and Rare Natural Resources

The NRIA and prioritization mapping shows that Douglas County's highest quality natural areas and rare natural features are concentrated in the northwest corner of the County around Lake Christina, and also in a diagonal swath from the County's southwest to northeast corner, culminating in the Spruce Hill area. The largest and highest quality of these areas are considered "core conservation areas" (Figure 3-2). Generally smaller and/or more isolated, high quality and rare natural features occur in the remainder of the County.

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DOUGLAS COUNTY Comprehensive Plan Figure 3-2: Priority Natural Resources



Legend

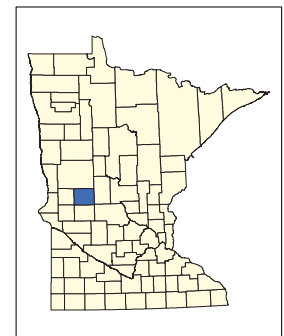
- MNDNR Rare Natural Feature (point)
- MNDNR Rare Natural Feature (polygon)
- MNDNR Native Plant Communities

MNDNR Sites of Biodiversity Significance:

- High
- Moderate
- Outstanding
- MNDNR Scientific & Natural Area (SNA)
- Lake Carlos State Park
- MNDNR Wildlife Mgmt Area (WMA)

- Bluff
- Bluff - Buffer 30 ft
- SGCN & Aquatic Habitats (>=40ac)
- MNDNR Protected Waters Inventory (PWI)
- Lake
- Flood Zone A
- NWI Wetland
- River/Stream
- Ditch
- USFWS Bird Habitat (prioritized)

Data Source:
MNDNR, USFWS habitat data, NLCD 2001, Douglas County



THIS MAP IS A COMPILATION OF INFORMATION AND DATA IN DOUGLAS COUNTY OFFICES AND IS NOT A SURVEY. THIS DRAWING IS TO BE USED FOR REFERENCE PURPOSES ONLY AND THE COUNTY IS NOT RESPONSIBLE FOR INACCURACIES HEREIN CONTAINED.
THE WATER FEATURES AND ROAD CENTERLINES SHOWN HEREON ARE BASED ON AERIAL PHOTOGRAPHY DATED APRIL 1996.

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SURVEY AND GIS
Date: 8/24/2011

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Lake Christina Area

Lake Christina, in the County's northwest corner, is associated with a large complex of natural and semi-natural habitats. The lake is almost completely surrounded by expanses of grassland and patches of forest – especially north into Otter Tail County, but also east and south of the lake. Numerous rare natural features have been documented in the lake, around its perimeter and nearby. The lake also is undergoing habitat improvements for waterfowl and waterbirds. This rich complex of open water in a matrix of grassland and forest patches is an important and regionally uncommon habitat mosaic. Some public land exists in the area (including a MNDNR Scientific and Natural Area in adjacent Otter Tail County), but the majority of the area is in private ownership.

Spruce Hill Area

Spruce Hill Township contains the greatest concentration of native plant communities in Douglas County. This complex (consisting of a variety of swamps, sedge meadows, and upland woodlands) runs south-to-north through a glacial slough. While Spruce Hill County Park and Spruce Creek Wildlife Management Area lie within the area, these public lands represent only a small portion of the natural corridor; the remainder of the area is in private ownership. The Spruce Hill area connects to the Douglas County Chain of Lakes and represents the northern end of a core conservation area.

Douglas County Chain of Lakes

The Douglas County Chain of Lakes, curving diagonally from the southwest to the north of the County, is a large concentration of lakes and forests. Prior to European settlement, it was classified as Big Woods – Hardwoods (oak, maple, basswood, hickory) and Aspen-Oak Land (forest, woodland, and savanna). Therefore, the remnant stands of native forest and second-growth forests in this area play a unique role in maintaining populations of woodland plants and animals in the County.

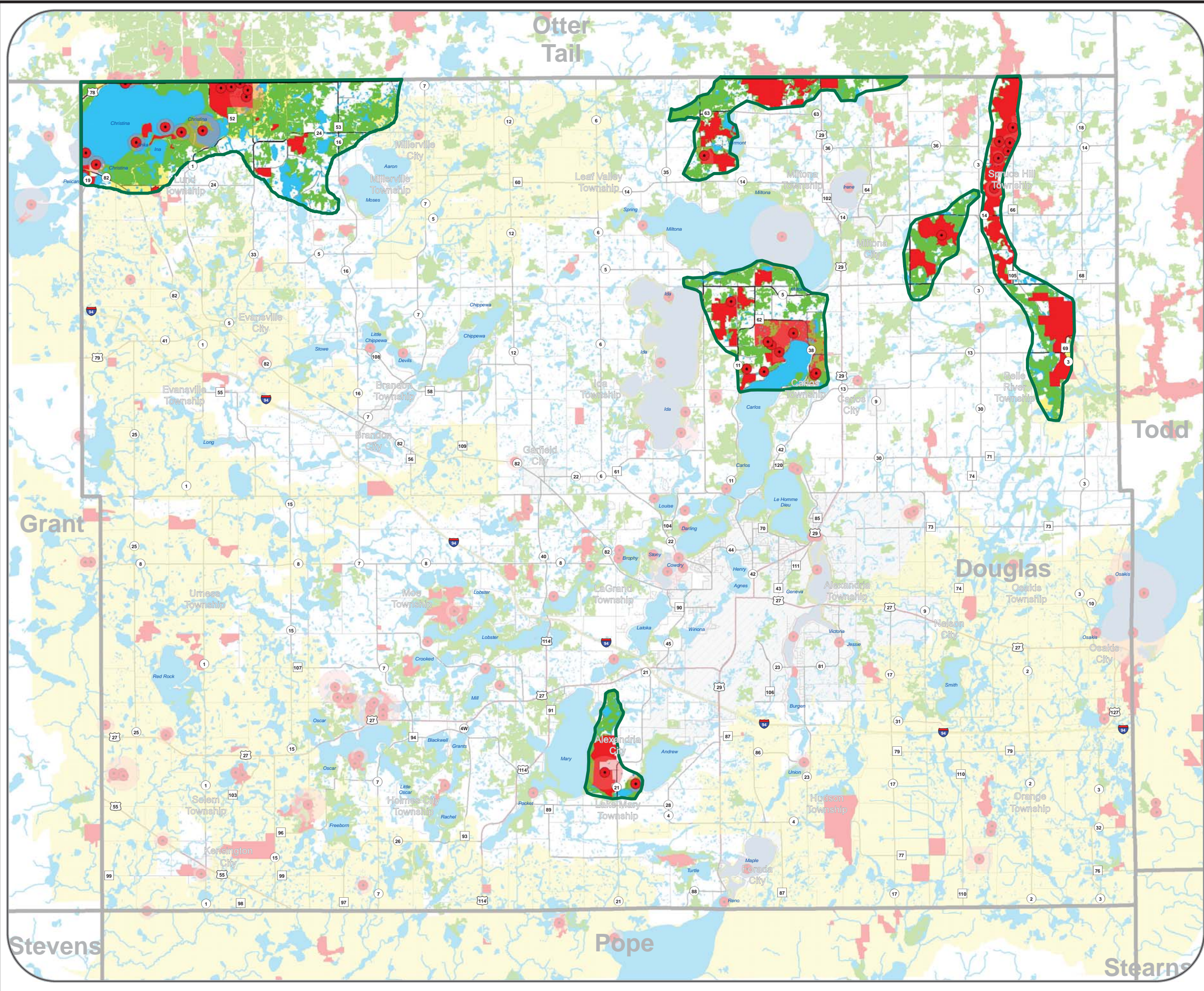
Wildlife Habitat

The analysis of SGCN habitats indicates that important areas for uncommon and declining wildlife generally follow the same distribution as the high quality and rare natural resources described above. The largest priority wildlife habitats appear to be around Lake Christina and north into Otter Tail County. Many moderate-sized priority wildlife habitats are concentrated along the County's Chain of Lakes.

While Douglas County is relatively rich in natural resources, only a small proportion of remnant native habitats remain. Most of the remaining natural areas were significantly degraded by past land uses, ongoing management and use, invasive non-native plants and animals, soil erosion and habitat fragmentation.



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DOUGLAS COUNTY
Comprehensive Plan
Figure 3-3: Conservation Nodes

Legend

- Node
- County Boundary
- MNDNR Rare Natural Feature (point)
- MNDNR Rare Natural Feature (polygon)
- MNDNR Native Plant Communities

MNDNR Sites of Biodiversity Significance:

- High
- Moderate
- Outstanding
- MNDNR Scientific & Natural Area (SNA)
- MNDNR Wildlife Mgmt Area (WMA)

Bluff

- Bluff - Buffer 30 ft

SGCN & Aquatic Habitats (>=40ac)

MNDNR Protected Waters Inventory (PWI)

- Lake
- Flood Zone A
- NWI Wetland

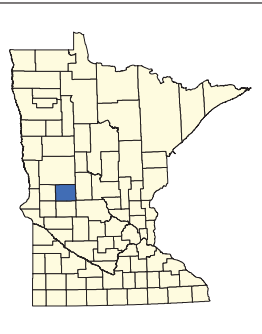
River/Stream

Ditch

USFWS Bird Habitat (prioritized)

Lake Carlos State Park

Data Source:
MNDNR, USFWS habitat data, NLCD 2001, Douglas County



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THE WATER FEATURES AND ROAD CENTERLINES SHOWN HEREON ARE BASED ON AERIAL PHOTOGRAPHY DATED APRIL 1996.

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SURVEY AND GIS
Date: 10/11/2011

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Watershed Assessment

A watershed analysis was completed for the County to complement the largely upland and wetland NRIA analysis. One of Douglas County's hallmarks is its lakes. The County recognizes the importance of maintaining high quality lakes for swimming, fishing, boating, tourism and overall quality of life. Surface waters are strongly influenced by their watersheds; therefore, understanding watersheds is critical to managing the County's lakes and other surface waters.

Douglas County encompasses portions of five major watersheds: Chippewa River in the west; Long Prairie River in the central and northeast portions; Pomme de Terre River in the northwest; Sauk River in the southeast; and a very small piece of the Redeye River in the very northeast corner of the County. These five major watersheds can be subdivided into 72 minor watersheds.

Due to Douglas County's natural and cultural history, there is considerable variation among minor watersheds in terms of size, soil types, topography, hydrology and land cover. All these factors affect surface water runoff, which in turn influences water quality. Using USDA digital soil survey data for Douglas County (SSURGO) and 2001 NLCD land cover data, an analysis of runoff was modeled for each of the 72 minor watersheds within the County.

The results of the watershed analysis indicate the greatest volumes of runoff occur in the west-central, southwest, far south, southeast, and east-central portions of the County. This pattern is largely influenced by the dominance of agricultural fields, shallow lakes (particularly in the southwest portion of the County), and abundant wetlands and shallow groundwater in these areas. Runoff can significantly affect the quality of surface waters, which underscores the importance of good stormwater management, conservation farming, and ecological buffers.

Lake Water Quality

While Douglas County has a wealth of high quality lakes, past and current land uses have compromised the quality of many of these water bodies, and some are impaired waters listed by the Minnesota Pollution Control Agency. The University of Minnesota has been conducting statewide lake water clarity studies using satellite imagery⁴. Lake clarity is a useful indicator of water quality since nutrient-enriched waters typically have lower clarity due to algae growth. Impaired waters data from the Minnesota Pollution Control Agency were also assessed. Analysis of these data indicate distinct patterns in the water quality of Douglas County's lakes.

Most lakes in the Chippewa watershed and adjacent areas in the western part of the County are small and shallow. Most of these lakes have moderate to poor water clarity, and several lakes and streams here are listed as impaired for nutrients or aquatic habitat. This is expected given the small size and

⁴ Olmanson, L.G., Bauer, M.E., and Brezonik, P.L. (2008). A 20-year Landsat water clarity census of Minnesota's 10,000 lakes. *Remote Sensing of Environment*. 112(11):4086-4097.

shallow depth of the lakes in an extensive agricultural area. By contrast, the Chain of Lakes in the Long Prairie watershed centrally located in the County are mostly medium to large and deeper. Most have moderate to good water clarity. Lake Winona west of downtown Alexandria is one of the only nutrient-impaired waters in the watershed. The higher quality of lakes in the Long Prairie watershed is likely due to extensive forest and grassland vegetation and greater lake depth, which makes lakes more resilient to nutrient enrichment. The Douglas County Soil and Water Conservation District has water quality data for many monitored lakes in the County.

Protecting and enhancing surface waters can be accomplished with effective stormwater management. In the last two decades, significant advances have been made in stormwater best management practices (BMPs), which are practical tools for improving stormwater runoff quality and regulation. Ecological stormwater management entails the use of nature-based elements (e.g., vegetated swales, infiltration basins, treatment wetlands) in a treatment sequence, or train, to effectively treat targeted pollutants. This stormwater treatment train approach can be customized for any area and designed at different scales, from an individual site to an entire watershed. Low impact development (LID) practices can be used during land development to protect surface waters.

Groundwater

Groundwater is a limited resource, used for drinking water and other potable purposes, industrial applications, and agricultural irrigation. Its increasing scarcity in much of the United States is raising awareness as to its value and the importance of protecting and conserving groundwater aquifers. Douglas County is fortunate to have thick, sand aquifers that yield large quantities of water. However, these aquifers can also be vulnerable to contamination. Pollution potential maps have been developed for the County⁵, closed landfills have been mapped by the Minnesota Pollution Control Agency, and wellhead protection plans have been developed for several communities within the County (Alexandria, Carlos, Evansville, and Osakis).

Conflicting Land Uses

Conservation of natural resources is often in conflict with other land uses. Examples of this include aggregate mining, (addressed in the land use chapter) and wind energy projects. However, there are methods to plan, site, design, and mitigate land uses in order to protect valuable natural resources, conserve other natural features and ecosystem services where feasible, and allow development to proceed in a more sensitive and mutually beneficial manner. For example, there are portions of the County that are more appropriate for wind energy development than others, based on average wind speeds, wildlife use, and cultural factors such as residential development. Conservation planning and zoning can minimize conflicts and produce no-loss or even win-win solutions for the environment, the community, and the economy.

⁵ Douglas Soil and Water Conservation District. 2009. *Douglas County Local Water Management Plan 2009-2019*, p 22.

Partnerships, Stewardship and Funding

The best laid conservation plans still require capacity to implement them and to provide the stewardship necessary to protect investments. Capacity entails financial resources (which in turn require public and political will) as well as technical expertise. Various forms of conservation partnerships are already in place and working successfully in Douglas County (e.g., MNDNR, Ducks Unlimited). The County will continue this culture of collaboration and partnership to the benefit of its projects.

Tools for Accomplishing Conservation Goals

There are many tools that can be employed to accomplish conservation goals on both public and private lands. Some of these tools include:



- Land purchase (fee title): Consider a bonding initiative for conservation and local habitat acquisition.
- Parkland dedication and other gifts: Continue to allow transfer of dedications from other parts of county to priority conservation areas (e.g., core conservation areas); the amount of park dedication required could be increased.
- Donation of land or easement: Seek donation of land or donation of conservation easement. Trust for Public Land can be intermediary. Donations can reduce federal and state taxes. Identify key messages and incentives to landowners on tax benefits of donation.
- Grants (e.g., Minnesota Clean Water, Land and Legacy Program, Minnesota DNR Environmental & Conservation Partnerships Grant program).
- Publicly-funded land conservation programs (e.g., Conservation Reserve Program (CRP), Conservation Reserve Enhancement Program (CREP), Reinvest in Minnesota (RIM), Wetland Reserve Program (WRP)).
- Conservation easements with a non-profit group (e.g., Minnesota Land Trust). Note that easements will not be held by Douglas County, but the County can help identify priority areas, provide incentives (e.g., tax credits, cost-sharing, technical assistance), and facilitate partnerships with other agencies/organizations (e.g., City of Alexandria, Douglas County SWCD, USFWS).
- Conservation design and low impact development. As part of a sustainable development ordinance, encourage conservation design and low impact development practices. Examples of conservation design ordinances include City of Lino Lakes, rural residential cluster development ordinance of Chisago City and Marine on St. Croix, and St. Croix County, WI. Examples of conservation development designs and approaches are widely available⁶. This type of ordinance preserves large natural areas, manages stormwater ecologically, minimizes land clearing and grading, reduces infrastructure costs (e.g., sewers, curb and gutter, irrigated turf grass, pavement, utility run lengths), and promotes stewardship of natural resources. Incentives to landowners might include

⁶ Applied Ecological Services: <http://www.appliedeco.com/ConservationDev.cfm>; Urban Land Institute: <http://minnesota.uli.org/Content/NavigationMenu18/ConservationDesign/ConservationDevelopmentFramework.pdf>

accelerated permitting, variances, and increased density. Low impact development practices focus on stormwater management, integrating these practices with existing stormwater management infrastructure operations and maintenance. Many examples exist⁷, and performance standards can be established to address the County's specific needs with regard to rate, volume/infiltration, and water quality.

- Ordinances for protecting and conserving shorelands, wetlands, waterways, floodplains, forests/woodlands, and erosion control. These ordinances should include structural setbacks and ecological buffers, based on the best available science.
- Stormwater easements.
- Trail easements.
- Deed restrictions and covenants.

3.4 Goals and Policies

The following goals and policies reflect the vision of Douglas County to be a sustainable community and stewards of its natural resources.

Goal #1

Douglas County will be a model for sustainable county governance by balancing social, economic, and environmental concerns.

Policies

NR1.1 Make decisions using a sustainability analysis tool, considering the value of ecosystem services and recognizing the social, economic, and environmental consequences resulting from county decisions. In the event of adverse impacts to any of these areas, mitigation plans should be developed and implemented.

NR1.2 Support initiatives in transportation, public facilities, and other infrastructure development projects to protect, expand, restore, enhance, and connect natural resources and invest in green infrastructure.

NR1.3 Adopt and implement the County's natural resources-based comprehensive plan.

NR1.4 Support sustainable development practices that incorporate conservation development standards and low impact development (LID) strategies.

NR1.5 Require tree preservation and mitigation standards for development projects and other land disturbances.

NR1.6 Require ecological buffers to minimize loss, degradation, and fragmentation of aquatic and other sensitive natural resources (e.g., wetlands, streams, floodplains, woodlands).

⁷ Low Impact Development Center, Inc.: <http://www.lowimpactdevelopment.org>; National Stormwater Center: <http://www.stormwatercenter.org>; USEPA NPDES Stormwater Program: <http://cfpub.epa.gov/npdes/stormwatermonth.cfm>; Minnesota Erosion Control Association: <http://www.mnerosion.org>; Applied Ecological Services: <http://www.appliedeco.com/StormWaterMgt.cfm>

-
- NR1.7** Support a conservation overlay district that provides incentives (or mandates) landowners to adopt certain approaches to construction and land treatment that improve natural resources.

Goal #2

Promote sustainable county operations.

Policies

- NR2.1** Support a carbon footprint audit (including energy audit) of the County and its operations.
- NR2.2** Support a reduction in the County's carbon footprint by operating as energy-neutral as possible. Complete an energy budget to better understand carbon emissions and carbon sequestration opportunities within the County. Explore cost-effective, renewable energy, and other carbon reduction strategies.
- NR2.3** Seek and promote cost savings opportunities through passive heating, cooling, stormwater management, and water conservation.
- NR2.4** Explore renewable energy projects for the County. Many small-scale wind turbines and other renewable energy sources are being adopted for public and other municipal applications.
- NR2.5** Support a waste audit of the County and its operations.
- NR2.6** Support waste reduction strategies by first reducing consumption, then re-using materials whenever feasible, and lastly recycling whatever is left.
- NR2.7** Support the use appropriate native species wherever possible on county land, including landscaped and horticultural areas.
- NR2.8** Promote the construction of low-maintenance facilities, including buildings and other structures, landscaped features (such as xeriscapes and formal gardens), parklands, and natural areas.

Goal #3

Promote the value of natural resources, conservation, sustainability and stewardship through education and training and other related initiatives.

Policies

- NR3.1** Support educational opportunities addressing the County's natural resource issues, conservation priorities and opportunities, and techniques to achieve sustainability.
- NR3.2** Support training opportunities to landscapers, excavators, and others involved in land development regarding design, construction, and maintenance of Best Management Practices (BMPs), including erosion control, rain gardens, infiltration systems, treatment wetlands, etc.
- NR3.3** Support outdoor education programs (e.g., hikes in county parks, bike tours along greenways, sponsor a BioBlitz).



-
- NR3.4** Collaborate with natural resource agencies on projects that would provide educational materials, inform the public on current projects, and provide opportunities for public involvement.
 - NR3.5** Collaborate to publish articles in local papers on natural resource goals, progress, projects, and opportunities for community involvement.
 - NR3.6** Support the design, construction, and advertisement of demonstration projects (e.g., low-impact development practices, native landscaping, etc.).
 - NR3.7** Support training on natural resources management for county staff.
 - NR3.8** Encourage cost-sharing or other incentives for residents to acquire stormwater best management practices, and shoreline restorations.

Goal #4

Create an environment where human health and well-being is supported and where sustainability principles are communicated and understood.

Policies

- NR4.1** Support programs like “Active Living” and develop “Douglas County – Sustainable Communities” initiative (or similar) to attract, motivate, and empower residents to support and advance county’s health, conservation, and sustainability goals.

Goal #5

Protect, buffer, expand, connect, restore, and manage healthy ecosystems (e.g., forests, savannas, prairies, lakes, rivers, streams, wetlands) to conserve biodiversity and for the benefit, enjoyment, and use by county residents and visitors.

Policies

- NR5.1** Expand and refine the Natural Resource Inventory and Assessment (NRIA) completed as part of the comprehensive planning process. Starting with priority natural areas, conduct field assessment of existing conditions (including land cover mapping of vegetation communities and wildlife surveys) to refine the County’s conservation area priorities and establish baseline conditions.
- NR5.2** Identify core conservation areas (the largest and highest quality) within the County. Discourage or prevent activities that would compromise the ecological integrity of these areas.
- NR5.3** Use county planning and zoning tools, such as land acquisition, to encourage protection of core conservation areas.
- NR5.4** Identify natural areas of county significance (including core conservation areas as well as rare or sensitive natural areas). These connections should be conceived as multifunctional areas that act as parks, trails, wildlife habitat, and regional surface water management areas.



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- NR5.5** Support a conservation overlay district, encompassing core conservation areas.
- NR5.6** Promote a culture of stewardship on public and private lands, including incentives and the use of conservation easements where appropriate.
- NR5.7** Protect larger tracts of existing native or second growth forest from fragmentation and degradation.
- NR5.8** Support the development of Ecological Restoration and Management Plans (ERMPs) for priority natural areas and natural/semi-natural county-owned lands. Restore and manage natural areas on county parkland for high ecological quality and for diversity of native plant and animal species.
- NR5.9** Explore partnerships with the Trust for Public Land and the Minnesota Land Trust. Consider formation of a multi-county land trust; local volunteer-led land trusts can be very effective in getting easement donations.
- NR5.10** Collaborate with the MNDNR, U.S. Fish and Wildlife Service, Ducks Unlimited and other local and regional agencies to protect, enhance, expand and connect upland grassland and waterfowl areas and preserve and enhance wildlife management areas.
- NR5.11** Collaborate with the MNDNR, U.S. Fish and Wildlife Service, and other local and regional agencies to prevent conflicts between wildlife and development projects (e.g., wind energy production, other renewable energy projects, aggregate mining).
- NR5.12** Collaborate with MNDNR and County Weed Inspectors to identify and control invasive plant and animal populations.
- NR5.13** Collaborate with county (e.g., Parks Department) and other partners to appropriately budget and identify reliable funding mechanisms for ecological stewardship of natural areas.



Goal #6

Provide clean waters and restore a more natural hydrologic cycle to Douglas County.

Policies

- NR6.1** Protect surface water resources (e.g., lakes, rivers, streams, wetlands) from land alteration, development, and invasive species.
- NR6.2** Support the development, in conjunction with Total Maximum Daily Load (TMDL) planning, of watershed plans for non-mercury-impaired waters.
- NR6.3** Promote lakeshed-based planning, beginning with priority and/or impaired lakes.
- NR6.4** Collaborate with MNDNR to identify and control invasive aquatic plant and animal populations.

- NR6.5** Support adoption of the draft State of Minnesota Shoreland Rules.
- NR6.6** Support the conservation of existing wetlands, especially higher quality native wetland communities.
- NR6.7** Continue to maintain high quality wetland banks within the County to provide mitigation opportunities for unavoidable wetland impacts.
- NR6.8** Support the protection of trout streams in the northeastern portion of the County are of high importance and should be preserved through buffering, setbacks, shading, and protection of groundwater recharge areas.
- NR6.9** Support Sauk River Watershed District rules (as amended).

Goal #7

Protect groundwater resources from land alteration and development.

Policies

- NR7.1** Protect groundwater quality from degradation due to land use, point-source contamination, and/or untreated stormwater infiltration in aquifers providing drinking water. Heed established well-head protection areas and promote the establishment of new drinking water protection areas where dense development occurs within the County.
- NR7.2** Preserve ground water quantity in aquifers that provide or may provide drinking water in the future by limiting over-development of the resource and ensuring sustainable use.
- NR7.3** Use existing resources (DNR Hydrological Sensitivity maps) to determine the sensitivity of groundwater resources to pollution and require consideration of such information during the planning and project development process.

Goal #8

Protect Douglas County's prime agricultural resources.

Policies

- NR8.1** Encourage the protection of prime agricultural land for sustainable protection.
- NR8.2** Update county inventory of prime agricultural land based on soils and current productivity.
- NR8.3** Support conversion standards to protect prime agricultural land from incompatible uses.
- NR8.4** Encourage farmers to follow conservation practices to protect agricultural lands.



Goal #9

Identify and map aggregate resources in Douglas County.

Policies

- NR9.1** Support the completion of a geologic atlas of Douglas County that will enable aggregate resource extraction to be planned in conjunction with natural resources and future development.
- NR9.2** Consider revising the County Reclamation Plan Standards to include site clean-up, grading of site after closure to remove steep slopes, addition of topsoil, revegetation, and a development plan..

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Parks, Trails, and Open Space



4.1 Introduction

Douglas County's parks, trails and open space system provide county residents and visitors with essential recreational opportunities while preserving valuable wildlife habitat, scenic landscapes, and cultural resources. This commitment to providing a recreational system contributes to an enhanced quality of life for residents while creating a regional attraction for visitors.



Community Parks provide places to play, socialize, meditate, relax and exercise. They are also outdoor spaces that can provide educational experiences for children not found inside traditional classrooms. In Douglas County, some parks preserve historical areas of special significance.

Hiking, Biking and Walking Trails provide connections to parks and other destinations within a community as well as providing linkages to adjacent communities and regional trails. They also provide an alternate mode of transportation enabling people to decrease dependence on their automobiles while increasing their opportunities to engage in daily or frequent physical activity.

Open space provides scenic opportunities and a way to preserve rural character within Douglas County. Open space is primarily undeveloped areas within the fabric of county development. It includes sensitive areas, natural plant communities, shore lands, wetlands, water bodies, wildlife management and water fowl production areas and wildlife refuges, etc.



Open spaces can be linear in form or take the form of “patches” within a broader landscape, e.g. a large woodland area within predominately-agricultural lands. They have the potential to provide areas of rich biological diversity, essential to providing habitat for area wildlife. When linked together they can provide living conduits for wildlife movement, passive recreational opportunities for people, and vegetative buffers along waterways that will enhance water quality throughout the County. Preserving green corridors becomes more important to maintaining a healthy natural environment as the County begins to develop.

4.2 Background

Following is a summary of previous and related park and trail related planning documents and programs:

Related Plans and Programs

Policy Plan for Douglas County Parks (1994)

The plan was prepared in 1994 to help establish future acquisition, development, and maintenance goals for Douglas County Parks. The plan included a needs assessment survey of residents, a park visitor survey, a recreation resource inventory and a recommendation for the formation of a County Park Commission. While not formally adopted, this plan has provided guidance for the Parks Division and will be used as the framework for updating the Parks, Recreation, Trails and Open Space chapter of the Douglas County 2020 Comprehensive Plan.

Minnesota State Comprehensive Outdoor Recreation Participation (SCORP) Survey (2005)

In 2005, the Minnesota Department of Natural resources released the results of its 2004 outdoor recreation participation survey. The survey provides a statewide assessment of outdoor recreation preferences.

A mail survey of 4,400 residents was distributed throughout the five survey regions of the state: North, Northwest, Central, Metro (seven-county metropolitan area), and South. The survey produced a 60% response rate.

The survey found that outdoor recreation is important to Minnesotans. Of those responding, 57 percent indicated that outdoor recreation is “very important”, 25 percent indicated that it is “moderately” important and 18 percent indicated that outdoor recreation is of “little importance”.

The survey found that there are a number of reasons cited by the respondents for going outdoors. The primary reason indicated was to “simply enjoy nature” and the second highest reason was to engage in exercise and feel healthier. Other reasons noted for going outdoors included outdoor recreation as a means to: build bonds with family and friends, escape the pressure of modern life, and to learn about and explore nature.

The top ten outdoor recreation activities of Minnesotans surveyed, which included a population of 20 years and older who engaged annually in an outdoor recreational, are shown in Table 4-1.

Table 4-1 Top Ten Outdoor Recreation Activities	
Activity	% Population
Walking	54
Boating of all types	43
Swimming or wading all places	41
Driving for pleasure on scenic roads	37
Picnicking	36
Fishing of all types	30
Biking outdoors of all types	29
Visiting outdoor zoos	27
Camping of all types	26
Visiting nature center	25

Source: 2004 Minnesota Outdoor Recreation Participation Survey

The results of the survey support the importance of trail planning and development. They also show the desire by recreationists to participate in water resource related activities.

Alexandria Area Comprehensive Transportation Plan (2009-Present)

The study began in July 2009 as a partnership between the State of Minnesota Department of Transportation (Mn/DOT), Douglas County, and the City of Alexandria. The study will evaluate existing and future transportation conditions in the Alexandria area with a goal of safe multi-

modal transportation networks for motor vehicle, bicycle, and pedestrian commuters.

Minnesota's State and Regional Parks and Trails Legacy Plan (2009-Present)

The study, led by the Minnesota Department of Natural Resource in collaboration with other park and trail providers, non-governmental organizations, and citizens began in the fall of 2009 as a result of Minnesotans passing the Clean Water, Land, and Legacy Act in 2008. The passing of this act provides 14.25% of funds generated from 3/8% sales tax increase to be used for regional and state parks and trails. The twenty-five year plan will provide guidance for how the funds should be spent, along with other funding sources for state and regional parks and trails.

Legislative Commission on Minnesota Resources, Greater Minnesota Park Inventory Regional Park Criteria (2005)

The inventory, financed by the Legislative Commission on Minnesota Resources (LCMR) was used to provide base information to assist in the identification of regional parks outside of the Twin City Metropolitan Area. Identification of the parks was based on the Minnesota Department of Natural Resources Regional Park Grant program criteria. Kensington Rune Stone Park in Douglas County was listed as a park with Regional Potential.

Active Living Douglas (ALDC) Assessment Report (2009)

The assessment is part of a county led program that promotes creating a healthy community based on making active living a routine part of daily life through policy and design. The study was conducted in partnership with the City of Alexandria, local organizations and businesses and School District 206. It focused on existing policies and environmental conditions.

Douglas County Comprehensive Plan Update Health Impact Assessment Report (2011)

The assessment, which was prepared by the Douglas County Health Department and the Minnesota Department of Health, evaluated the May 2010 draft of the County's Comprehensive Plan from a public health perspective. The report summarized findings and recommendations for the Plan determined by the Health Impact Assessment Process.

4.3 Issues and Opportunities

As part of the comprehensive planning process, the County held issues and opportunities workshops in October 2009. Participants were asked to discuss and write down issues and opportunities related to the following themes that emerged from the Douglas County Comprehensive Plan Task Force Meetings.

In general, there appeared to be interest in expanding the development of an interconnected county trail system that provides linkages to the Central Lakes Trail and other key destinations such as schools and businesses and better access to existing county parks (See Appendix A).



4.4 Park, Open Space, and Trail Classifications



The following section presents park and trail system classifications based on the National Recreation and Park Association (NRPA) and the American Academy for Park and Recreation Administration – Park, Recreation, Open Space, and Greenway Guidelines, Planning and Urban Design Standards (American Planning Association, 2006), the Metropolitan Council’s regional-level classifications, and State of Minnesota, Department of Natural Resources, 2007, Trail Planning, Design, and Development Guidelines, Trails and Waterways Division. These standards serve as general spatial and functional guidelines only; it is important that Douglas County adopts these standards for local use.

Park and Open Space Classifications

Regional Park

A Regional Park is a large park (>100 acres) located in an area of high quality natural resources. It will be suitable for outdoor recreation activities that are primarily based on the natural resource. Examples include boating and canoeing, fishing, swimming, trail uses, picnicking, and natural environment study. Facilities should offer a wide range of these activities.

A Regional Park will provide access to this type of outdoor recreation experience in close proximity to local communities especially when State or Federal Park resources are scarce. Ideally, parks in this class will be linked to conservation corridors as part of the Plan’s natural resource preservation strategy.

Unusual landscape features or interpretation of historically significant sites will add to the potential for the Regional Park to attract visitors from statewide, nationwide, or international tourism communities.

Regional Park Reserve

A Regional Park Preserve will have similar amenities to a Regional Park except that it will be larger, typically 1,000 or more acres. It may include areas with multi-county jurisdiction in cooperative agreements. This type of facility will have natural resource preservation as its primary goal. Viewing and study of wildlife habitat and native plant communities can complement other outdoor recreation in these large areas and reinforce the natural resource conservation strategies defined in this plan.

Both of these regional park types should include policy plans developed through cooperation with the political sub-divisions served by the regional facility.

County Park

A county park offers an area of natural or ornamental quality suitable for outdoor recreation that offers things like walking, viewing, sitting, and picnicking. A county park can also provide field and court games. The county park serves residents of the County and usually encompasses between 25 and 100 acres. The site has natural features with interesting landform and

may have an historic interpretation value. They typically are located near community facilities and natural resources.

Local-Level Classifications

Local units of government (townships and cities within the County) typically provide recreational facilities for citizens relatively close to where people live. They respond to the needs of small localized groups by providing neighborhood parks to the community at large. These facilities tend to be population and activity-based rather than resource-based.

Schools and Private Facilities

It is important to recognize the contribution of schools and private facilities to the recreational resources provided to county residents. They often provide the following recreational facilities: athletic fields and courses, in-door swimming pools, golf courses, horseback riding facilities, marinas, day camps, ski areas. Open space is also provided to the community by privately owned entities such as corporations, employee associations, non-profits agencies.

Special Use Park

The term “special use parks” cover a broad range of parks and recreational facilities oriented toward a single-purpose such as historical, cultural or social sites. These sites may offer local historical, educational, or cultural recreational opportunities. Examples of this type of park include historic downtowns, performing arts parks and facilities, arboretums, public gardens, indoor theatres, churches and public buildings. Other examples include: community and senior centers, community theatres, hockey arenas, golf courses, and aquatic parks, tennis centers, softball complexes and sports stadiums. Community centers, however, are typically located in neighborhood or community parks.

Greenways

Greenways are publicly or privately owned open space corridors that typically follow natural land or water features and are primarily managed to protect or enhance natural resources. They also link park components to create a “cohesive park, recreation and open space system,” that emphasizes the natural environment. Greenways allow for safe, uninterrupted pedestrian movement between parks throughout a community can enhance property values at the same time; help to achieve the conservation corridor and Active Living strategies of this plan.

Greenway locations are primarily based on availability of land and should be encouraged as park dedication in the subdivision process. Greenways are typically 25 feet wide within a subdivision and 50 feet minimum with 200 feet optimal where space allows.

Open Space

Open space, broadly defined, includes woodlands, fields, wetlands, stream banks, floodplains, steep slopes and unique geological formations – un-built areas. Open Space provides protection for scenic areas and endangered

habitats. It also continues to provide land for local food production and can help shape the form of urban growth by providing “breathing room”. See Chapter 5 Land Use for a more detailed definition of open space.

Trail Service Level

Service level of a trail refers to capacity of the trail or trail system to meet the needs and expectations of a given population or user group within a defined geographical area. The following describes the hierarchy of four service levels – local, county, regional, and state. The service level within a trail system increases as user groups become broader, more specialized and/or more resource dependent. Also included in this section is a description of private trails.

State Trails

State trails are typically destination trails and serve a statewide population. Travel time to a trailhead is often one to four hours. State trails are a minimum of twenty miles long and traverse high quality natural resource and scenic landscapes. Abandoned railroad corridors are often developed to accommodate state trails with connections to state parks or regional, county or local attractions.

Regional Trails

Regional trails serve multiple cities and/or counties in greater Minnesota. It takes about 30 minutes or more to travel to a trail head. Typically, the trail must be long enough for at least an hour of non-motorized recreational travel which is about 5 miles of walking or 20 miles of bicycling. Given the highest priority are those trails showing scenic qualities and a diversity of natural resource attributes. High priority is given to connections between State Trails and urban centers, parks, and other trail systems. Regional trails should provide a multi-modal surface.

County Trails

County trails differ from local trails in that they are typically located within county parks. Lengths can vary considerably. They are frequently designed for specific uses, i.e., mountain biking, skiing, interpretive trails, etc.

Local Trails

- Local trails provide “close-to-home” opportunities (typically within a five-minute drive or ten minute walk), and often have direct access from neighborhoods. Trail linkages to county, regional, and state trails are desirable. Local trails have the following characteristics:
 - Mostly non-motorized;
 - Lengths vary from ¼ mile to numerous miles of interconnected trails within a site or between communities;
 - Most often cities and townships have jurisdiction and funding responsibilities for local trails.

Blue Trails

- Blue trails are dedicated stretches of rivers or waterways that enjoy special clean water protection and are destinations for boating, canoeing,

fishing, and other outdoor recreation. They provide opportunities for people to discover rivers and waterways and help connect urban and rural communities to the outdoors. Blue trails also provide:

- Healthy recreation and educational opportunities for people of all ages;
- Connections for people to access special protected areas such as wildlife refuges, parks, and forests;
- Opportunities to build partnerships and support for natural resource conservation.

Private Trails

Private trails are those that traverse private land as part of larger trail system. The most common are grant-in-aid snowmobile trails, which traverse private land through agreements secured by local snowmobile clubs and are important to maintaining the network for snowmobiles in the state.

Trail Classifications and Guidelines

Trails serve a number of functions including commuter corridors linking business and retail centers, parks and natural areas, schools and neighborhoods, and communities. Trails support the principles of Active Living Douglas County to “create a healthy community that makes active living a routine part of daily life”. Planning for an inter-connected trail system enables residents to choose another mode of transportation to experience the natural and cultural resources or to travel to a favorite recreation destination within the County.

The following are trail classifications and guidelines consistent with the service levels described in the Minnesota Department of Natural Resources Trail and Planning, Design and Development Guidelines (2007) and are relevant for the planning of a county level trail system. The trails are categorized according to type of use, surfacing, location or season and include Share-Used Paved Trails, Natural Surface Trails, On-Road Bikeways, and Winter Use Trails. The use of this classification system will provide a clearly defined framework for future development of Douglas County’s trail system.

Share-used Trails

Classification: Neighborhood trail, city trail, county trail, regional trail and state trail.

Uses: Walking, jogging, bicycling, and in-line skating (in-line skating only accommodated when asphalt paved).

Service Levels: Trails occur at local, county, regional and state service levels.

Natural Surface Trails

Classification: Hiking trail, equestrian trail, mountain biking trail, off-highway vehicle (OHV) trail, forest access routes and roads, shared-use nature trails

Uses: User groups are consistent with classifications; Shared-use trails can be non-motorized or motorized, but typically not both.

Service Levels: Hiking trails occur at local, county, regional and state service levels, Equestrian and mountain biking trails are common at county, regional, and state level, OHV trails almost always at state or county level and local access trails typically traverse larger tracts of land at federal, state, or county level.

On-Road Bikeways

Classification: Bike route, bike lane

Uses: Bicyclists are primary users and in-line skaters are secondary users.

Service Levels: Bikeways are common are local, county, regional, and state service levels; they augment but do not replace shared-used paved trails

Winter-Use Trails

Classification: Cross-country ski trail, snowshoeing trail, winter hiking trail, dog sledding trail, skijoring trail, and snowmobile trail

Uses: User groups are consistent with classifications

Service Levels: Groomed cross-country ski trails and winter hiking trails are common at county, regional, and state service levels. Dog sledding and skijoring trails are most common at regional and state levels, and snowmobile trails are typically at the county, state, or private level.

For a greater discussion of trails, refer to the State of Minnesota Department of Natural Resources, 2007, Trail Planning, Design, and Development Guidelines, Trails and Waterways Division, 500 Lafayette Road, St. Paul, MN.

4.5 Existing Parks and Open Space

There are over 240 federal, state, county and local level recreation and resource managed properties in Douglas County. Most of these properties are federal and state-owned wildlife management, production, and refuge areas. They include Waterfowl Production Areas (WPA's) and Wildlife Management Areas (WMA's). Besides providing natural areas within the county for wildlife, they also provide recreational activities such as hiking, photography, wildlife viewing, and hunting (in designated areas).

County Parks

Douglas County owns and manages five properties totaling 450.75 acres that provide both active and passive recreational activities and are listed in Table 4-2. All are classified as County Parks (See Figure 4-1). See Appendix B for Existing Park Facilities Matrix.

Table 4-2
County Parks

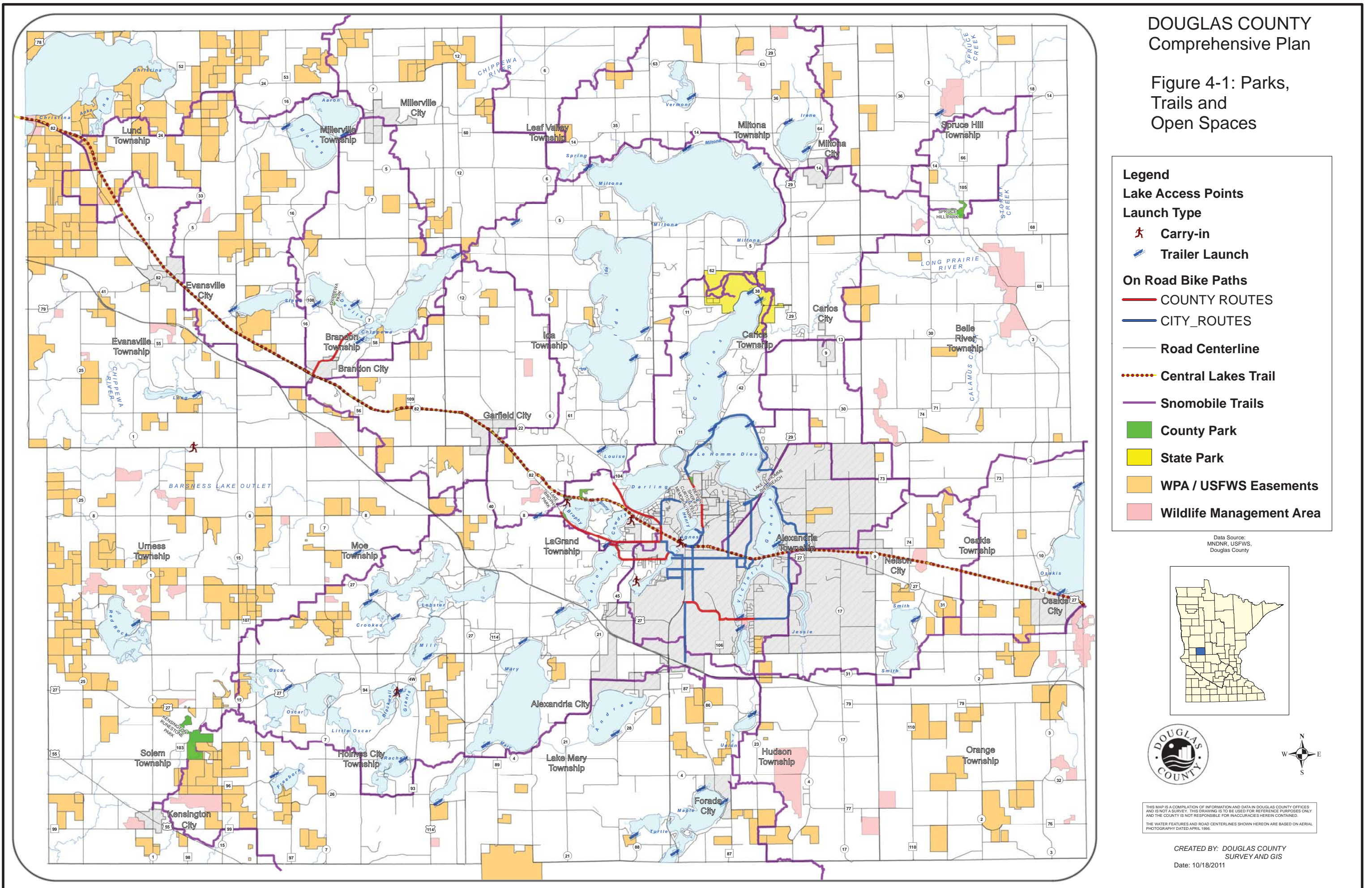
Park Name	Address	Town	Acres
Chippewa Park	9461 County Road 108 North	Brandon	37.25
Curtis A. Felt Memorial Park	2460 Parkside Road	Alexandria	5.68
Lake Brophy Park	4849 County Road 82 North West	LaGrand	5.99
Kensington Rune Stone Park	8755 County Road 103 SW	Kensington	305
Spruce Hill Park	13141 Spruce Hill Road	Miltona	96.83

Existing and Projected Parkland Acreage Needs

To meet the need for public parks within the constraints of land and fund availability it is prudent to use a park acreage standard as a guideline for park acquisition. Within urban areas, including the 7 county metropolitan area of Minnesota, 25 acres per 1000 residents is common. This standard does not include natural open spaces and does include municipal and school district lands as well as county and state park lands. Because there are over 48,000 acres of Federal and State Wildlife Management areas (WMA) and Waterfowl Production Areas (WPA) in Douglas County open for some forms of outdoor recreation, it makes sense to reduce the standard by 20%. Table 4-3 shows current and future conditions and needs using the 20 acre per 1000 residents' standard.

DOUGLAS COUNTY Comprehensive Plan

Figure 4-1: Parks,
Trails and
Open Spaces



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Table 4-3
Existing and Projected Park Land Needs

Park Property including County, Municipal & School District	Existing Acres	Standard 20 acres/1000 Residents	2009 Needs for 36,151 Residents	2020 Projected Needs for 42,750 Residents
County Parks (5)	450.75		723.02	855
School District Fields and other Municipal Parks in Douglas County	186			
Subtotal	637		637	637
Deficiency based on above number			86.02	218



The average park size within the Douglas County Five Park System, excluding the Kensington Rune Stone County Park with 305 acres, is approximately 36 acres. However, the range of those four parks is between 5.68 and 96.83. Using the typical 20 acre per thousand persons, the analysis shows an existing and future deficient of park land acres in the system. This type of analysis only shows a population-park acreage ratio, it does reflect user needs or facility conditions.

County Park History

The first park to be acquired by the County in 1969 was Deputy Sheriff Curtis A. Felt Memorial Park, formerly known as Three Havens Park. The park was renamed in honor of Curtis Felt, a Douglas County Deputy Sheriff slain in the course of duty in 1978. The park is dedicated to all those county law enforcement officers who have lost their lives in service to their communities.

While the County became aware of a historically significant archeological site during the middle 1960s when a group known as the Rune Stone Boosters were actively seeking to acquire the homestead of Olaf Ohman, the farmer whose land had contained a stone tablet that has become known as the Kensington Rune Stone, it was not until 1972 that the County preserved the then 193-acre site that has now expanded to 305 acres. This was done with the assistance of the Rune Stone Foundation. The site has become the Kensington Rune Stone County Park.

Chippewa Park, originally known as Hilliard's Park honoring property owners Hilliard and Delores Nelson, was acquired by the County in 1985. An organization known as the West Douglas County Park and Historical Development Association convinced the Board of County Commissioners that it was a worthy project and already opened to the public by the Nelsons for summer recreational use. The site came with its own history as it had been the venue for the first two Douglas County Fairs, in 1923 and 1924.

Spruce Hill Park, once the site of a pioneer village that was vacated in the early twentieth century, was acquired by the County in 1979. The park site provides hints of its past revealing depressions in the earth, old building foundation ruins, and the remains of an earthen dam constructed to a power sawmill.

Originally constructed as a wayside rest on U.S. Highway 52, Lake Brophy Park was turned back to local authority as part of the highway conversion. Having been part of the depression era work program projects of the 1930's and 1940's, the park boasts two examples of fine cut stone craftsmanship. The park has a history of community support demonstrated first in 1988 when a group of homeowners living near the lake organized an improvement project to install playground equipment, picnic tables, and a picnic shelter. The park has also benefited from the work of the Eagle Scouts and Community Service Groups.

While not technically "a park", Lake Le Homme Dieu Beach has become a popular swimming beach. Like Lake Brophy Park, the beach area was part of a wayside rest on Trunk Highway 29. In 1992 Douglas County entered a 20 year cooperative project agreement with the Minnesota Department of Transportation to improve and operate the facility for public swimming as well as wayside stopping. The County has received assistance from the Alexandria Golden K Kiwanis Club to rebuild restrooms, the parking lot, and the beach area.

County Managed Swimming Beach

Douglas County manages one swimming beach access property on Lake Le Homme Dieu and two in Chippewa Park, one on Little Chippewa Lake, and one on Devils Lake, as shown in Table 4-4.

Table 4-4 County Managed Swimming Beaches		
Beach Name	Address	Township
Le Homme Dieu Beach	2515 State Highway 29	Alexandria
Little Chippewa Lake Beach	9461 County Road 108 NW	Brandon
Devils Lake Beach	9461 County Road 108 NW	Brandon
Rotary Beach	County Road 42 NW	Carlos

State Park

The Department of Natural Resources manages one state park in Douglas County, as shown in Table 4-5.



Table 4-5 State Park			
Park Name	Address	Township	Acres
Lake Carlos State Park	2601 County Road 38 Northeast	Carlos	1231

Waterfowl Production Areas

Waterfowl Production Areas (WPAs) and FWS Easements are public lands purchased by the Federal government for increasing the production of migratory birds, waterfowl in particular. Most WPA's are open to the public and provide the following uses: hiking, bird watching, hunting, and recreational trapping of fur-bearing mammals. They are under the jurisdiction and management of the U.S. Fish and Wildlife Service. Federal

WPA's in Douglas County encompass approximately 10,914 acres and US FWS easements encompass approximately 30,846 acres.

Wildlife Management Areas

The Wildlife Management Areas (WMA) state program was established in 1951 for the purpose of protecting wildlife habitat, primarily wetlands, that were being destroyed by development and agricultural land uses.

Management of these areas includes water control, food lot planting, grass and woody vegetation covers for habitat, nesting and weed control. While all WMAs in Douglas County remain undeveloped, most provide public access for both hunting and wildlife viewing opportunities. There are approximately 4,790 acres of WMA land in Douglas County.

Water Access

Douglas County has 68 state and county water access locations for trailer launched boats (concrete), five carry in for non-motorized water craft, and four fishing piers as summarized in Appendix C and shown on Figure 4-1.

Golf Courses

There are ten public golf courses in Douglas County. These include: Alexandria Golf Club in the City of Alexandria, Hardwood Hills Golf Course located between Mary and Lobster Lakes near the City of Alexandria, Atikwa Golf Course at Arrowwood, Geneva Golf Club near the City of Alexandria, Osakis Country Club in the City of Osakis, Milona Golf Course at Lake Milona, Red Rock Golf near Kensington, Rodina Golf near Forada, Pine Ridge Golf near Brandon, and Nordic Trails Golf Club near Nelson.

Scenic Areas

Douglas County is included along the route of the Glacial Ridge Scenic Byway. The byway is a state and federally designated road that does not follow a linear course but traverses a number of different roads within Douglas, Kandiyohi, Pope, and Swift Counties. The byway highlights the natural, scenic, historical, cultural, and recreational qualities of the route and landscape for residents and visitors. Destinations along the byway in Douglas County include:

- “Big Ole” Central Park
- Kensington Runestone Museum
- Douglas County Historical Society
- Andes Tower Hills
- Kensington Rune Stone County Park
- Noonan’s Park
- Many lakes

Birding Trails

While not a pedestrian/bikeway trail system, the Minnesota Birding Trail, a project initiated by the Minnesota Chapter of the Audubon Society identifies existing roads and facilities that connect the best birding sites in Minnesota, including an identified route through Douglas County.



The four designated birding trails within the state include:

- Pine to Prairie Birding Trail
- Great River Birding Trail
- Minnesota Birding Trail
- North Shore Birding Trail

Each birding trail is composed of a number of ecological regions (ecosystems associated with characteristic combinations of soil and landform that characterize that region). Some of the regions are sub-divided into two loops. The northern loop of the Pomme de Terre Region of the Minnesota River Trail passes through Douglas County near Gustave Melby WMA and Christina Lake Public Water Access. These identified and mapped trails serve to make birding, a local and regional recreational interest, more accessible, convenient, and educational for the enthusiast.

History and Culture

The intent of this section of the Park, Recreation, Trail and Open Space chapter is to provide for greater support in preserving historical and cultural resources in Douglas County. The history and culture of Douglas County, particularly the existence of such sites as the Kensington Rune Stone and the general Lake District are notable regional attractions and tourist destinations. The following is a historical sketch of Douglas County provided by Rachel Barduson, Douglas County Historical Society:

Douglas County lies in the heart of Minnesota, a place of quality soil dotted with lakes that are clear and sparkling. It has timber land, open prairie and fresh water. In Douglas County it was impossible for the early settler to locate himself so as to be more than two or three miles from an abundance of good timber, or from the shores of a running stream, or a lake of good pure water.

The first settlement made by whites within the boundaries now comprising Douglas County was during the summer of 1858. For a number of years after establishment by the Legislature Douglas County was attached to Stearns County for judicial purposes. Later, a bill was passed authorizing the organization of the county with the Governor appointing J.H. Van Dyke, S.B. Cowdry, and A. Darling as the first commissioners. Officers were appointed and the organization was kept up until the Indian outbreak of 1862 when the settlement was abandoned and all records which had been made were lost. Nothing further was done with official matters until 1866, when the County was permanently organized.

The first post office in the county was established in 1858, at Alexandria, with Alexander Kinkead as the first postmaster. In the spring of 1859, J.C. Burbank and Co, of St. Cloud and St. Paul, commenced running a line of stages through the county. The stages ran through the settlements of Osakis, Alexandria, Chippewa (later renamed Brandon at a new location) and Evansville.

During the early part of August, 1862, the stage brought news that the Indians were collecting and putting on war paint at the Yellow Medicine Agency, and the settlers were warned to flee if they wanted safety. All the settlers in the vicinity of Alexandria congregated on the town site and held a council of war. Here it was decided that it must be a hoax. Four days later the Governor dispatched a messenger through this part of the state, distributing arms and ammunition, and commanding the settlers "to gather together or rendezvous, and arm themselves for safety." The women and children were taken to Sauk Centre or St. Cloud while the men returned and remained on their farms and homesteads.

From 1862-1866 Alexandria was constituted a government post and troops remained in the area until 1866. The old stockade has long since become a thing of the past.

On the fifth day of November in 1878 the first train rolled into Alexandria. This was an event, although long deferred, of great importance to the young city. It was the beginning of the era of a more rapid and substantial growth. It was an outlet and connecting link with the commerce of the outside world and secured to the town a new existence. It helped greatly to develop the surrounding county, and Alexandria as the county seat. Its advent was the signal for the development of new industries, adding greatly to the material wealth of the town. As early as 1871 the Alexandria Post boasted, "Alexandria, as a summer resort, compares in its air to sunny Italy. Indeed, the whole of Douglas County seems to be intended for one grand pleasure garden."

In addition to its natural beauty, the county is notorious for its Kensington Runestone. Many books have been written and much discussion will continue as the legend of Olof Ohman and his runic find continues as part of Minnesota's history.

It was in the year 1898 that Ohman unearthed evidence that the Norsemen were in America as early as the year 1362. Ohman found a huge granite stone. He was a sturdy Swede farmer who settled near Kensington and as he was taking out stumps on the side of a small hill, came upon the stone, deeply imbedded in the roots of a poplar tree. The stone can now be found at the Runestone Museum in Alexandria. Ohman's farm is now a Douglas County Park.

The County is home to many historical sites including Spruce Hill County Park, in the northeast corner of Douglas County, which is located on the old village town site of Spruce Hill. Today, markers along the old Red River Trail town site depict the locations of the old school, hotel, blacksmith and more. The fork in the trail leads a visitor in the southward direction of Alexandria, or, along the western passage up to Breckenridge. This Red River Trail was part of the network of tough and rutted roads stretched for 400 miles across western Minnesota to Pembina, North Dakota; it was a vital route for trade and communication during the years 1820-1872, yet with the arrival of the railroads the trails quickly fell out of use. Lake Brophy Park is one of Douglas County's historic and scenic county parks

featuring WPA stonework. The park was constructed in the 1940s as a highway rest area. Today, you can see examples of fine stone craftsmanship, throughout the park. These well made stone walls are a good representation of what WPA jobs helped to create, distinguished landmarks and structures that continue to enhance our communities. Douglas County also boasts the beautiful Carlos State Park, once a farm of virgin timber, the park also boasts WPA craftsmanship and now serves as an interpretive place for all visitors with trails and campsites along the shores of Lake Carlos.

4.6 Pedestrian and Bicycle Trails



Trails related to recreational activities such as running, bicycling, in-line skating, and walking have become increasingly popular as people are becoming more aware of health benefits of lifetime activity. Trail systems are integral Active Living components in Douglas County and an important part of this plan (See Figure 4-1). County trail systems not only offer recreational opportunities to residents within the County but can also provide connections to regional and state trail systems.

State Trails

The Central Lakes Trail, 55 miles connecting Stearn's County Lake Wobegon Regional Trail with Fergus Falls in Ottertail County. The trail connects Osakis, Nelson, Alexandria, Garfield, Brandon, Evansville, and Melby in Douglas County.

Regional Trails

There are no off-road trails designated as Regional in Douglas County. The only on-road bike route system is a regional system supporting bicycle commuters and recreational cycling.

County Trails

Douglas County currently maintains 35 miles of the Central Lakes Trail and a number of on-road bike routes throughout the County.

Kensington Rune Stone Park and Spruce Hill Park have cross-country ski trails within the boundary of the park. Lake Carlos State Park also has ski trails within the boundary.

Local Trails

The City of Alexandria has a pedestrian/bicycle trail linking City Park to the Central Lakes Trail and downtown area. The City streets designated as bike routes are shown on the City's bike routes map.

All-Terrain Trails

No designated ATV trails exist in Douglas County at this time.

Blue Trails

No designated Blue Trails exist in Douglas County at this time.

4.7 Park Dedication

The intent of a park dedication program is to give future County Boards a source of new park lands or a revenue source to make up the local share needed to apply for federal, state, and private grant funds. By linking park dedications to property development, the County can insure that future residents will have a stake in the development of the public outdoor recreation system.

In conformance with Minnesota Statutes Section 394.25, Douglas County requires the dedication of land or equivalent cash contribution for parks, recreation areas, playgrounds, trails, open space, and wetlands. (See 5.13 of Douglas County Subdivision Ordinance).

4.8 Funding

There are a number of funding options available for land acquisition, development and maintenance of parks, trails, and open space. Typically, multiple sources are needed to accomplish projects within the system. Using all options, as they become available should be considered as part of the funding strategy. Funding options to consider include:

- **Grants:** Grant programs provide substantial contributions for parks, trails, and open space; however, they generally require matching funds from local units of government. A recent example is the Parks and Legacy Grant Program which is funded from the Parks and Trails fund created by the Minnesota Legislature from the Clean Water, Land and Legacy Amendment (passed by voters in 2008).
- **Park Land Dedication:** Park land dedication is authorized by state law and is administered under the Douglas County Park Dedication Ordinance. Park land dedication for public parks as the result of land subdivision and/or land development can be applied by counties in the State of Minnesota, where it meets the criteria as stated in the statute.
- **User Fees:** Counties may establish, where appropriate. These are often used for park entrance or activity fees. Douglas County does collect a fee for overnight camping in Chippewa Park.
- **Donations:** Douglas County does accept donations from other units of government whose constituents realize a benefit from the use of certain parks within the system.
- **Taxes:** Counties have the ability to fund the acquisition, development, and maintenance of parks through the general levy. The taxed amount currently being levied toward parks, trails and open space is about \$388,000.00 per year or \$25.00 per household.
- **Tax Forfeited Lands:** Up to 20% of the net proceeds from tax forfeit land sales can be used for park acquisition and maintenance. The funds are to be set aside annually by the resolution of the County Board (M.S. 282.08 (b)).
- **Partnerships with Cities or Townships:** Establishing partnerships, combining resources, reducing or eliminating duplication of efforts by working together is critical to the success of all future parks and trails in Douglas County.

- **Bond Referendum:** Counties may choose to place a referendum for parks, trails, and open space before the voters in a general election. Voters are able to have a stake in the process by deciding the amount of money should be spent on parks, trails, and open space.
- **Non-Profit Partnerships:** Counties may partner with non-profit organizations that specialize in land acquisition for parks, trails, and open space. These organizations are often able to provide technical and financial assistance and may often be able to help with fund raising. Douglas County has an ongoing partnership with the Kensington Rune Stone Park Foundation as an example of this.

4.9 Active Living Douglas County

Active Living Douglas County is part of a nationally growing movement; Active Living by Design (ALBD). The program was created in 1998 by the Robert Wood Johnson Foundation. Its goal is to create community-led partnerships to build a culture of active living and healthy eating. Douglas County has received support from Blue Cross and Blue Shield of Minnesota to promote the active living principles. (See Appendix D for list of Active Living Principles).

Developing goals and policies within the Parks, Trails, Open Spaces chapter of the Comprehensive Plan that support the Active Living by Design movement in Douglas County will facilitate needed changes to the parks and trail system. These changes will help to implement the vision and goals and “make active living a routine part of daily life”.

4.10 Goals and Policies

The following goals and policies are organized into seven critical areas: 1) Administration, 2) Land Acquisition, 3) Planning and Design, 4) Facility Development and Maintenance, 5) Trails, 6) History and Culture, and 7) Funding.

Administration (AD)

Goal #1

Create a County Park Commission.

Policies

AD1.1 Consider a Park Commission appointed by the County Board of Commissioners to provide public participation on policy changes, expansion on proposals, department succession, and other issues assigned by the County Board of Commissioners.

AD1.2 The duties of the Park Commission should include:

- Recommendations to the County Board of Commissioners for park land acquisition and methods of financing;
- Review and make recommendations for revision of master plans for county and regional parks;



- Additional items as the Board of Commissioners may, from time to time, assign to the Commission for its study and report;
- Review and recommendations on the annual park budget and capital improvements program before presentation to the County Board;
- Review and make recommendations on general park operating policies;
- Initiate park policy recommendations to be presented to the County Board.

Goal #2

Establish coordination between Active Living Douglas County and Douglas County Parks Division of Public Works Department.

Policy

AD2.1 Create a linkage between the Park Division of Public Works and the Health Education function of Public Health to achieve Active Living Douglas County objectives (See Appendix D).

Land Acquisition (LA)

Goal #1:

Maintain adequate acreages for County Park sites, trail development and open spaces based on current and future needs.

Policies

- LA1.1** Adopt a county park acreage standard of 20 acres of parkland per 1,000 populations.
- LA1.2** Acquire approximately 218 additional acres of land for park and trail purposes.
- LA1.3** Consider the provision of parkland based on county resident demand and interest and unique regional recreational opportunities.
- LA1.4** Examine the potential acquisition of additional parkland in areas of high growth or demonstrated demand.
- LA1.5** Parkland shall be selected and facilities designed to accommodate and enhance outdoor recreation including but limited to summer uses such as picnicking (large and small groups), hiking, sightseeing, nature studies, fishing, water and lakeshore related activities; and winter uses such as sledding, skiing, and snowmobile riding.



Goal #2

Coordinate the actions of government units with citizens and special interest groups to provide a collaborative county-wide recreation system.

Policy

- LA2.1** Establish joint agreements with other government entities to help achieve Goal #1.

Planning and Design (PD)

Goal #1

Develop and adopt a Comprehensive Parks, Trails, Recreation and Open Space System Plan based on needs and desires of Douglas County residents.

Policies

- PD1.1** Review the plan annually and update every 5 years.
- PD1.2** Conduct needs assessment every 10 years as a basis for development and update of the plan.
- PD1.3** Consider all public school facilities and recreation areas in the planning of the county park, recreation, trail and open space plan.
- PD1.4** The park and trail classifications developed in the plan shall be used as the basis for development of the park and trail system.
- PD1.5** Incorporate Active Living Douglas County principles into park, recreation and trail system planning.
- PD1.6** Coordinate efforts with local, state, and federal agencies and governments to plan and develop the Comprehensive Parks, Trails, Recreation and Open Space System Plan.

Goal #2

Assure that private development will adhere to county standards for open space for parks, trails, and/or open space preservation.

Policy

- PD2.1** Maintain zoning and subdivision regulations that provide for and encourage the continued development of parks, open space, trails, and recreational opportunities.

Goal #3

Park land, trails and facilities to be planned and designed by professional planners and designers.

Policies

- PD3.1** Contract site and facility master planning to qualified professional park planners and designers.
- PD3.2** Procure professional planning and design services for County Park land and facilities to include site planning, landscape, play equipment and structures, etc.

-
- PD3.3** Establish and promote high quality design standards for the development of specific components of the park and trail system including the consideration of long-range maintenance costs.

Facility Development and Maintenance (FD)

Goal #1

Utilize innovative means to construct, renovate and maintain parks and park facilities.

Policy

- FD1.1** Use resource and energy conservation for park facility improvements and additions.

Goal #2

Maintain a pool of trained staff to maintain park facilities.

Policies:

- FD2.1** Train maintenance staff in Public Works to perform a wide range of skills related to park facility maintenance and natural resource preservation.
- FD2.1** Provide training for the Parks Division maintenance staff that includes naturally sustainable maintenance practices and playground safety and accessibility procedures.

Goal #3

Provide park and recreation facilities that will meet or exceed the needs and desires of the community.

Policies:

- FD3.1** Each park developed shall have at minimum a public drinking water supply, sanitary restrooms, wastewater treatment or disposal, and an adequate means of litter control and collection.
- FD3.2** Construct or upgrade recreational facilities that will meet or exceed ADA requirements for accessibility.
- FD3.3** Periodically conduct a systematic safety audit of each park with a corresponding plan for improvements and corrections to facilities including policy update recommendations to ensure to the fullest extent possible, the most current safety and design standards.
- FD3.4** All park facilities will be periodically reviewed and assessed for improvement and renovation requirements.





Trails (TR)

Goal #1

Provide county residents with an interconnected multi-modal network of on-road and off-road trails to integrate Active Living Principles into outdoor recreation and commuter transportation opportunities.

Policies

- TR1.1** Expand or develop county-wide trail connections and provide linkages between county parks and the Central Lakes Trail.
- TR1.2** Whenever physically and economically feasible, acquire utility, roadway and railroad right-of-way easements that allow construction of future trails.
- TR1.3** Provide trails for specialized user groups such as atv, equestrian, off-road biking and motor-sports, etc. where appropriate areas can be sited.
- TR1.4** Mark all trails with directional, informational, and safety signs.

Goal #2

To have river and waterway segments within Douglas County identified as Blue Trail sites as a way of promoting surface water protection while providing outdoor recreation opportunities.

Policy

- TR2.1** Support the American Rivers Blue Trail program initiative as an innovative way to protect clean water and critical riverside lands, while promoting river recreation and sustainable economic development within Douglas County.



History and Culture (HC)

Goal #1

Maintain the historic character of the county, cities, and towns while encouraging their development as cultural and commercial centers.

Policy

- HC1.1** Promote cultural heritage and recognize the importance of century old farm homesteads.

Goal #2

Increase awareness of the social and economic value of historic preservation.

Policy

- HC2.1** Support the identification and preservation of older historic structures, landscapes and features that provide a sense of local character and identity.

Goal#3

Ensure the protection of artifacts at archaeological sites.

Policy

HC3.1 Adopt the Secretary of the Interior’s Standards and Guidelines for Archaeology and Historic Preservation for new construction and renovations within park properties.

Goal #4

Encourage the arts in community development plans throughout the County.

Funding (F)**Goal #1**

Determine the appropriate funding source for annual land acquisition and park development, operations and maintenance, and capital improvements and renovations.

Policies

- F1.1** Allow the use of all funding mechanisms provided for in the Minnesota Statutes governing county park systems.
- F1.2** When appropriate, use property tax levy; fees generated from park users and contributions from other government subdivisions for annual operations and maintenance.
- F1.3** When appropriate, use bond funds for land acquisition and park development.
- F1.4** When appropriate, use bond funds for capital improvements and renovations.

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Land Use



5.1 Introduction

The Land Use Plan is intended to show how Douglas County's land patterns should evolve in the future based on community vision and goals, current land use patterns, population projections, housing needs, economic base, and community facilities. This chapter should be utilized in conjunction with other chapters of the Comprehensive Plan to guide development and redevelopment in Douglas County over the next ten years.

While the information serves as the foundation for development of goals and policies. The Land Use Plan is not a static document and should be reviewed and amended when needed to incorporate changing community goals and conditions.

Douglas County, like many other rural Minnesota Counties, is facing challenges due to poorly planned growth, loss of community character, and stressed natural resources including loss of critical wildlife habitat. Property taxes are rising and infrastructure improvement and maintenance costs continue to burden residents and local units of government.

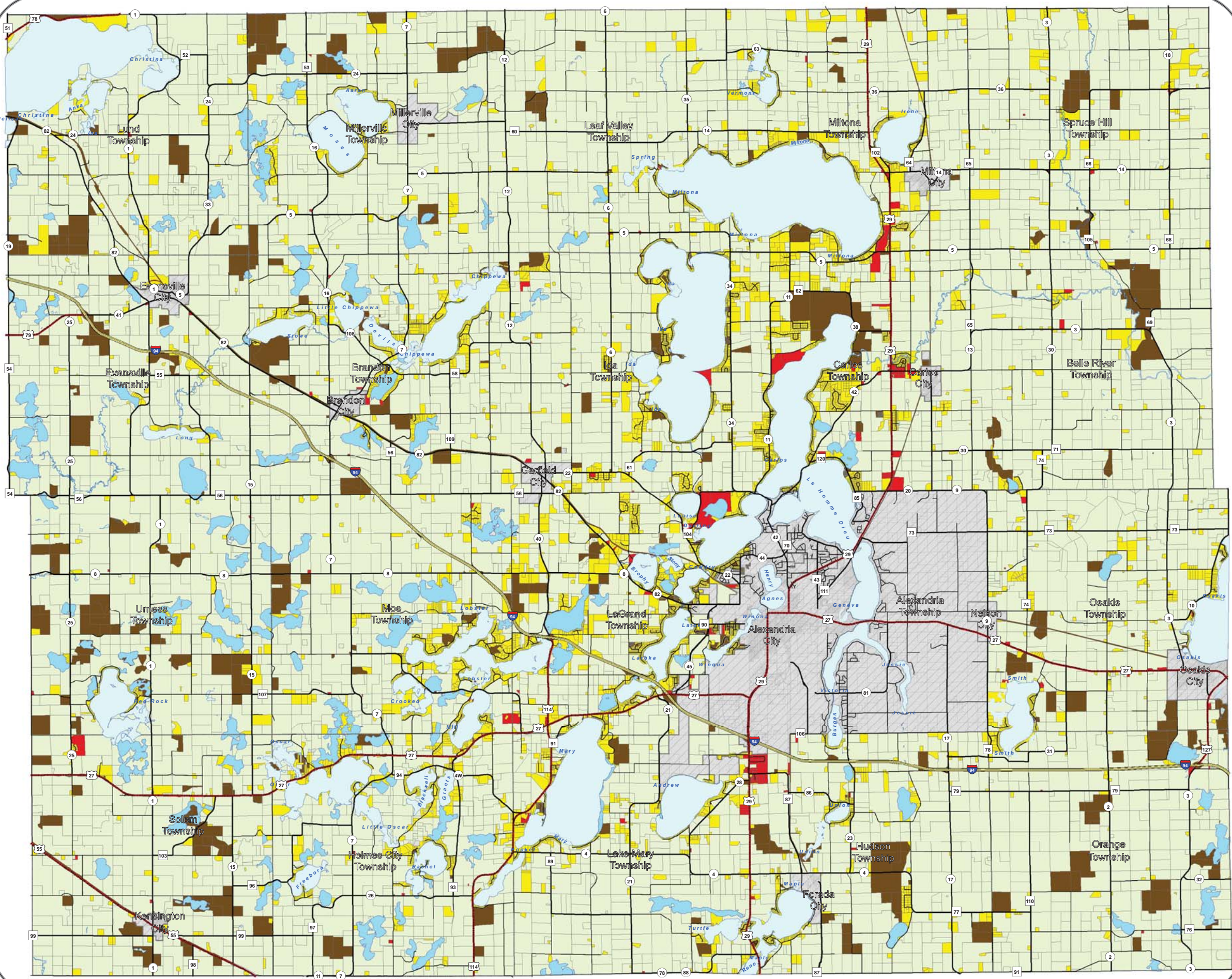
However, communities can address these challenges by developing a vision and a set of goals and policies that define and guide the way they wish to grow rather than watching growth happen and then reacting to its implications. The Land Use Plan will provide Douglas County with planning tools needed to address these issues and to ensure excellent quality of life for those who live, work and play within its boundaries continues to improve.

5.2 Existing Conditions

An accurate description of Douglas County's current land use and land cover patterns is an important step in planning for a desired land use pattern. Existing land use and land cover were compiled through an analysis and aggregation of 2009 Douglas County Assessed Parcel Data. Figure 5-1 shows a visual representation of current land use patterns within the County as of 2009.

DOUGLAS COUNTY
Comprehensive Plan

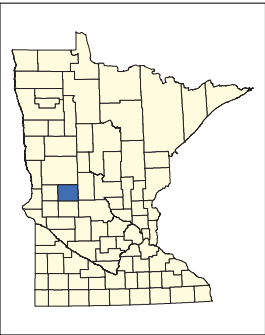
Figure 5-1:
Existing Land Use



Parcel Assessed Land Use

- Agricultural/Rural
- Commercial/Industrial
- Residential
- Public/Semi-public
- Municipalities
- Water
- Other

Data Source:
MNDOT & Douglas County



THIS MAP IS A COMPILATION OF INFORMATION AND DATA IN DOUGLAS COUNTY OFFICES AND IS NOT A SURVEY. THIS DRAWING IS TO BE USED FOR REFERENCE PURPOSES ONLY AND THE COUNTY IS NOT RESPONSIBLE FOR INACCURACIES HEREIN CONTAINED.
THE WATER FEATURES AND ROAD CENTERLINES SHOWN HEREON ARE BASED ON AERIAL PHOTOGRAPHY DATED APRIL 1996.

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5.3 Existing Land Use

Table 5-1 shows the distribution of acres by existing land use and land cover categories. Together the table and maps represent the best and most current available existing land use data.

Table 5-1 Existing Land Use/Land Cover Acreage And Percent Total		
Land Use Category	Total Acres	Percent of Total Acres
Agricultural/Rural	317,875.98	69
Commercial/Industrial	1,899.33	.4
Residential	33,468.31	7
Public/Semi-public	23,633.86	5
Municipalities (Including Alexandria Township)	26,572.36	6
Water	54,497.98	12
Unclassified	2,780.62	.6
TOTAL	460,728.44	100

Source: Douglas County Parcel Assessed Use Map, 2009

The land area of Douglas County is approximately 634 square miles with a total of 353,243 acres of land in private ownership. Public and semi-publicly owned land, municipalities and water cover approximately 107,485 acres of land in the County.

Agricultural/Rural Land Use

The predominant land use within the County is (cultivated, pasture, timber) agriculture, accounting for approximately 69% of area.

Residential Land Use

Residential land use comprises approximately 7% of land within the County. Single-family residential is the predominant form of residential development.

Commercial/Industrial Land Use

Commercial/Industrial land development accounts for approximately 0.4%. This includes commercial uses that occur in both agricultural and residential areas. Commercial uses within the agricultural areas include livestock, dairy, and poultry facilities. Home-based incubator uses within the residential area include commercial uses such as cabinetry contracting, small engine repair, etc. Commercial uses related to seasonal recreation include golf course and lake resorts.

Industrial uses occur in both agricultural and residential areas. Industrial uses within agricultural areas include crop hauling facilities and resource extraction in residential areas.

Public/Semi-Public Use

Public/Semi-Public Land Use within the County is agricultural production, accounting, and comprises approximately 5% of land area in Douglas County.



Municipalities

Municipalities which include all cities and Alexandria Township comprise approximately 6% of the land area in Douglas County.

Water Areas

Permanent public bodies of water (predominately lakes) comprise approximately 12% of total area in Douglas County.

5.4 Land Use and Development Trends

Overall, intensity and density of all land use activities have been increasing over the last twenty years in Douglas County. Significant growth is occurring in townships with natural features and amenities such as lakes, creeks, and woodlands. The area around the City of Alexandria has also experienced significant residential and commercial growth, particularly Alexandria Township. However, there has been a population decline in agricultural landscapes due to changes in farming practices and pressure to convert farm land to other area. Farming operations have become larger in scale, more mechanized and less labor intensive most notably in the Townships of Millerville and Belle River. Smaller family farm operations are increasingly being purchased by or rented to larger production farming operations, leading to fewer rural families. The remainder of the County has been experiencing steady growth.

5.5 Platted Land

Platted land is an indicator of the area of land being converted from vacant and agricultural uses to residential and commercial uses. Currently there are 988 plats comprising 18,814 acres in Douglas County that are not State, County or Auditor plats. Most platting is for residential development.

5.6 Development Density

Over the next twenty years, it is anticipated that population density will increase in the County, especially within the central portion of the County and the Townships of Carlos, Ida, Moe, and LaGrand Townships. It will be necessary to curb high intensity and high density development in rural areas, which may negatively impact the rural character valued by Douglas County stakeholders. It will also be important to balance growth and development to protect or conserve natural resources.

5.7 Economic Trends

Douglas County has a strong agricultural and industrial economic base as shown by the increase of firms locating to the county between 2000 and 2007 (See Chapter 2, *Background*). This increase is attributed to the influencing factor of the numerous lakes located in the County and on development as a regional recreation center and destination. In addition, there has been an 84.41 percent increase in arts, entertainment, recreation, accommodation and food services followed by wholesale trade and construction. Value and price of lakeshore land has steadily increased. This increase is not expected to slow, except for minor deviations due to the current national economic downturn. However, due to demand for recreational and agricultural land, as

well as rural residential living, it is expected that development pressure will continue to grow in the County despite the increased prices.

5.8 Public Infrastructure

Public infrastructure, especially the transportation network, sanitary, and water services contribute to the overall pattern of residential development in the County as the network and services provide access to buildable land.



Transportation: Transportation transit and road improvement projects such as the Rainbow Rider Transit Service and numerous State Highway reconstruction projects will have some have some impact on development within Douglas County. However, no major transportation projects have been identified through Fiscal Year (FY) 2014. (See Chapter 6, *Douglas County Transportation*). Road development by private landowners and developers to gain access to the existing transportation network will continue to occur, which will allow for continued development in Douglas County.

Sanitary Sewer: The Alexandria Lake Sanitary Sewer District (ALASD), which was created in 1971, provides sewer services to the City of Alexandria and the Townships of Alexandria, Carlos, Hudson, LaGrand, Ida, and Lake Mary, the City of Nelson, Carlos State Park, the City of Forada and two I-94 Rest Areas. Boundaries of the district extend west to Lake Brophy, south to Lake Mary and Maple Lake, east to the United Parcel Service Office on Highway 27, and north to Carlos State Park. Wastewater not treated by the district is treated on-site by Subsurface Sewage Treatment Systems (SSTS). As development continues, so will potential impacts to water quality from an aging waste-water treatment facility and out-dated septic treatment systems.



Utilities: Douglas County is served by a number of utility providers of water, electricity and telecommunication including:

Alexandria Light and Power (ALP). It is a city-owned utility company that currently provides service to approximately 35 square miles in and around the City of Alexandria. Areas not hooked up to the public water utility obtain water through individual well systems.

Lake Region Electric Cooperative. It is a non-profit service provider located in Pelican Rapids, Minnesota. It serves a mix of residential, commercial, industrial, and seasonal homes within a 3,200 square mile service area including an area in northwestern Douglas County.

Otter Tail Power. Headquartered out of Fergus Falls, Minnesota, Otter Tail Power is a subsidiary of Otter Trail Corporation. Incorporated in 1907, the company serves an area of 50,000 square miles including areas within Douglas County.

Runestone Electric Association. Incorporated in 1935, it is a member-owned cooperative serving over 13,600 members in the rural areas of Douglas, Pope, Grant, Stevens, Ottertail, Stearns and Todd Counties. The Association is the primary electrical service provider in Douglas County.

Stearns County Electric Association. Incorporated in 1937, the Association serves nearly 25,000 members in six Central Minnesota Counties including Douglas County.

Todd-Wadena Electric Cooperative. Headquartered in Wadena, Minnesota, Todd-Wadena Electric Cooperative is a non-profit, member-owned rural electric system in central Minnesota. Organized in 1940, the cooperative serves about 8,500 members in portions of six counties within a 2,200 square mile area including northeastern portions of Douglas County.

Xcel Energy. It is a public utility company based in Minneapolis Minnesota with service to eight states including Minnesota. It serves several areas in the southern and western edges of Douglas County.

5.9 Natural Resources

Douglas County's natural resources provide an abundance of amenities for residents. Such natural resource amenities include lakes, 200 of which are greater than 40 acres in size, Federal and State Wildlife Management and Production Areas. It is important to preserve these amenities for future generations as development pressures continue. Development within the Alexandria Area and around the lakes will continue to be prevalent in the future.

5.10 Open Space

While the term "open space" evokes a number of connotations to people, it has been broadly defined in this plan to include: woodlands, fields, wetlands, stream banks, floodplains, steep slopes, and unique geological formations. Basically, open space is any land that is not occupied by buildings. It can range from low-impact, natural resource-driven habitat areas to recreation-oriented, high impact parks. The importance of the open spaces system is that it is integrated into the overall community fabric of Douglas County to provide recreation, conservation, aesthetic benefits and relief from current and future development. It serves a number of functions including:

- Open space for the conservation of natural resources
- Open space for public health and safety
- Open space for outdoor recreation
- Open space for the managed production of resources

5.11 Agriculture

Douglas County's desire to retain working farms and ranches within the County will continue to affect development patterns and trends. In order to sustain long-term agriculture the County will need to continue planning for low density development in core agricultural areas of the County. That means high density traditional residential development will not be allowed in certain areas of the County so that working farms can be sustained.



5.12 Existing Land Use Regulation

Zoning, a locally enacted law, protects public health, safety, and welfare, under Minnesota State Statute, counties are granted general zoning powers within unincorporated areas of the County.

Zoning involves dividing an area (i.e. Douglas County) into districts or zones such as agricultural, residential, commercial, industrial, and other public purposes. The zoning regulations or codes then dictate which uses are allowed within each district and define parameters to which the use is constructed and/or operated. Zoning provides for orderly growth by protecting homes and property from harmful and incompatible uses on neighboring properties. The Zoning Ordinance, along with the Comprehensive Plan provides the County the legal authority to enforce its land use control and regulations.

Overall, zoning ordinances should be based on a land use plan in order to be effective and protect public interest. The development of the Comprehensive Plan for Douglas County provides the Planning Advisory Commission (PAC), Board of Adjustment (BOA), and County Board of Commissioners a document upon which the community has provided input and stated desires regarding future land use decisions within the County. The Comprehensive Plan will also form the basis of planning for any future changes to the Douglas County Zoning Ordinance (See Appendix F).

5.13 Issues and Opportunities

Land use issues regarding future development are diverse and include issues related to residential and commercial growth, agriculture and lake shore uses, extractive land uses and natural resource protection.

Issues and opportunities that emerged through the public participation process include:

- Impacts of agriculture on lakeshore residential uses;
- The need to strike a balance between rural residential use and agricultural land preservation;
- Pressure on existing infrastructure as a result of “leap frog” developments;
- Managing residential growth through orderly development of land in areas that are served by public infrastructure, particularly around existing cities and towns;
- Protecting water quality of surface and groundwater resources;
- Mapping and requiring reclamation planning for resource extraction (sand and gravel) extraction sites;
- Lack of detailed mapping for sand and gravel operations and regulations/rules for land reclamation;
- Platting of residential developments are too far ahead of actual development;
- A need to implement Conservation and development practices that protect natural resources; and

- Integrating Active Living Douglas County principles into existing and future development (See Appendix D).

(See Appendix A for complete listing of issues that emerged through public comments.)

5.14 Planned Land Use

The Future Land Use Plan (See Figure 5-2) identifies land uses in the County as Agriculture Core, Agriculture Limited, Rural Residential, Residential, Commercial/Industrial and Public/Semi Public.

Table 5-2 shows distribution of acres by planned Land Use Categories.

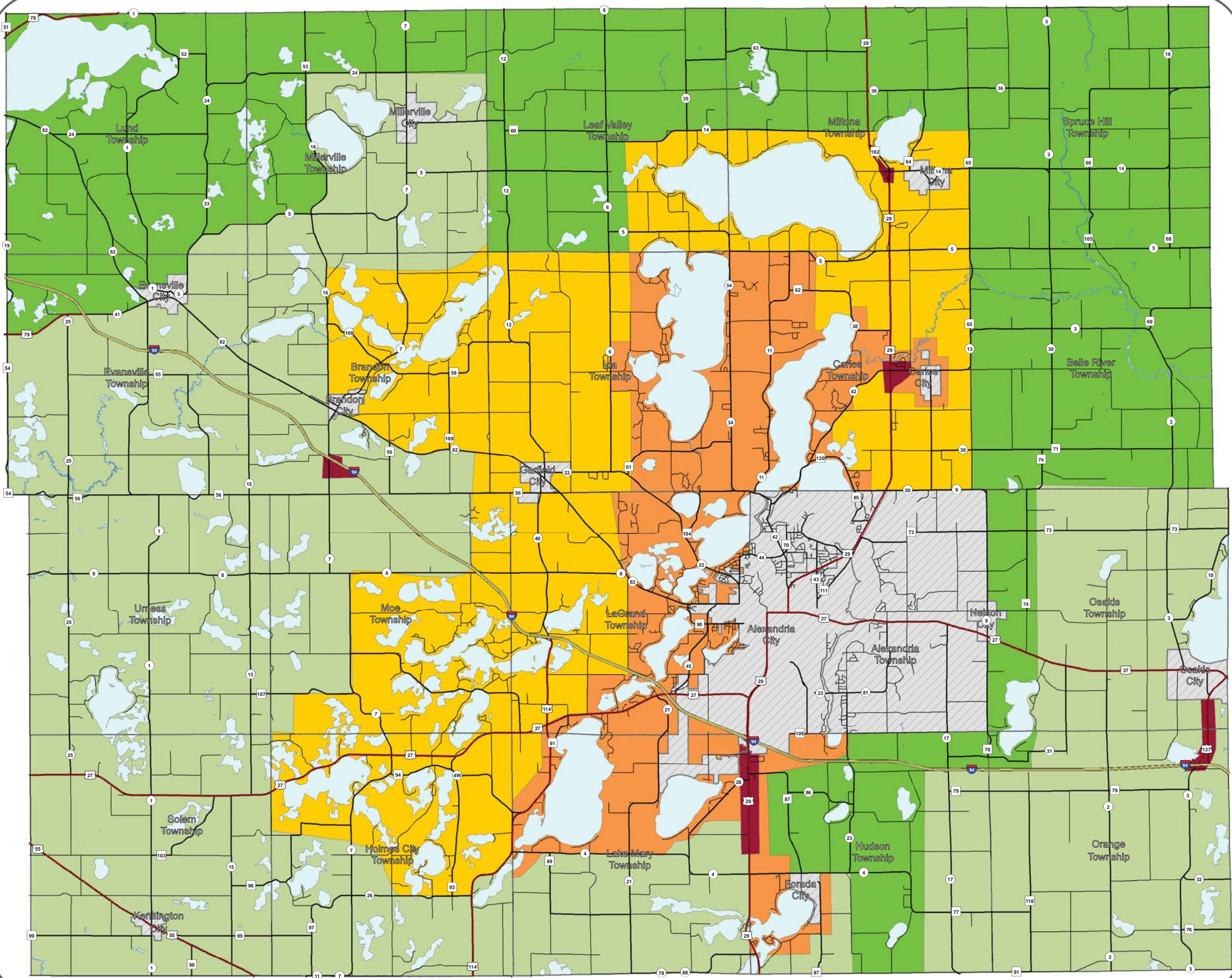
NOTE: All land use category area numbers to be verified and calculated by Douglas County GIS.

Table 5-2 2030 Planned Land Use		
Land Use Category	Total Acres	Percent Total Acres
Agriculture Core	156,456.84	33.9
Agriculture Limited	121,605.51	26.4
Rural Residential	68,651.06	14.9
Residential	29,977.53	6.5
Commercial/Light Industrial	1,816.23	0.4
Municipalities	27,917.24	6.1
Water	54,515.33	11.8
TOTAL	460,939.74	100

Agriculture Core will remain the predominate land use classification in the County followed by Agriculture Limited. These two classifications will encompass 60.3% of the land use in Douglas County.

DOUGLAS COUNTY
Comprehensive Plan

Figure 5-2: Future
Land Use

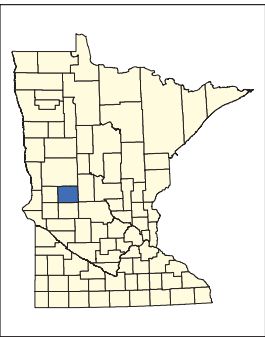


Road Centerline
Road Type

- Interstate
- State
- County
- Other

Future Land Use
Land Use Type

- Agriculture Core
- Agriculture Limited
- Rural Residential
- Residential
- Commercial Light Industrial
- Municipalities
- Water



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5.15 Goals and Policies

Goals serve as visions for the Douglas County development patterns which programs, activities and decisions are directed, but which may never be attained. They represent general statements that outline idealized situations that strive to accomplish managing future growth while protecting social, economic, and natural resources.

Land use policies identify the way in which programs and activities are conducted to achieve the County's vision, goals, and recommendations of the Douglas County Land Use Plan. Policy statements represent the official position and action items that the County will follow to implement planned growth strategies, sustain agricultural lands, conserve natural resources and open space and support active living principles.

The Douglas County Board and Planning Advisory Commission will pursue these policies toward the vision, goals, and recommendations of the plan. The County can affect these policies by implementing authorized regulatory tools such as planning, zoning, subdivision, sanitary controls, stormwater management, impact fees, and site plan development review team (DRT) review, and through other non-regulatory approaches such as informational and educational programs.



General Land Use Goals and Policies

Douglas County's general goal is to manage land use in order to encourage compatible land uses, preserve the rural, recreational and agricultural character, protect natural resources, promote alternative energy, support benefits of active living principles and meet needs of the County residents in a sustainable manner. The following general goals and policies either apply countywide throughout all land use categories or are applicable to more than one.

Goal #1

Provide for efficient and sustainable growth and the economical extension of public services to developing areas.

Policies

LU1.1 Encourage diversified housing, commercial, industrial development that maximizes use of public infrastructures such as roads, sewer, water, and other public services.

LU1.2 Help maintain financially healthy local governments through wise planning of land and public facilities such as roads, parks, and buildings.

LU1.3 Support efficient, orderly growth of cities adjacent to their borders by encouraging redevelopment infill within municipal boundaries before expansion into rural areas.

LU1.4 Develop fiscal impact standards for new development that consider capital investments of new sewer, water, and road infrastructure and long term operations and maintenance of new facilities.

LU1.5 Encourage contiguous development throughout the County whenever possible to discourage leap-frog pattern of development.

LU1.6 Encourage joint planning efforts between Cities, Townships, and county for development, facilities, and services on community borders.

LU1.7 Allow for conservation design options in agricultural and residential land use areas, such as “Cluster Developments” to preserve open space and rural character and reduce infrastructure development costs.

LU1.8 Encourage transit-oriented, pedestrian-friendly, traditional neighborhood development patterns of growth that support healthy living and provide connections to public transit and non-motorize transportation facilities.

LU1.9 Promote land uses throughout the County that encourage active and healthy lifestyles and support Active Living Principles (See Appendix D).

LU1.10 Maintain a positive balance between living and working environments with an appropriate mix and distribution of residential, commercial, and recreational land uses.

Goal #2

Encourage commercial and industrial development in a way that supports economic development while preserving rural character.

Policies

LU2.1 Promote low impact commercial and industrial uses (i.e., home-based businesses or cottage industries) in areas that can support development, do not impact nearby properties, and do not require municipal infrastructure services.

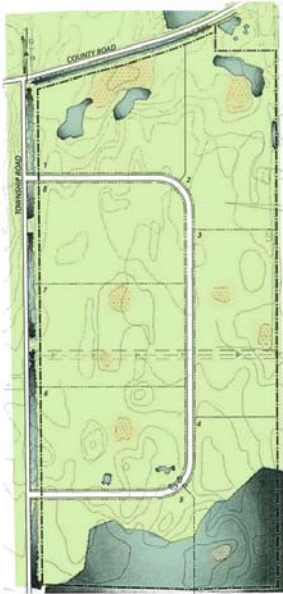
LU2.2 Support small clusters of commercial and light industrial development in areas with existing development and at key intersections (nodes) within the County that do not impact nearby properties and do not require municipal infrastructure services.

LU2.3 Discourage commercial strip development patterns along highways and roads within the County.

LU2.4 Support land use patterns that efficiently connect housing, jobs, transportation, transit, and retail and commercial centers.

LU2.5 Pursue a healthy economic environment and quality of life that will attract and retain quality businesses and employment.

LU2.6 Recruit businesses that fit skills and income needs of the County’s labor force.



example of standard lotting versus conservation/cluster subdivision



LU2.7 Provide for removal and processing of sand and gravel, rock, soil and other aggregate materials vital to the economic well being of the region, while protecting adjacent land uses from adverse impacts.

Goal #3

Preserve long term agricultural land and open space in order to maintain a viable and sustainable agricultural economy while protecting the rural character of the County.

Policies

LU3.1 Preserve long term agricultural practices on parcels of land that are large enough to support viable commercial farm production.

LU3.2 Minimize potential for land use conflicts between agricultural, recreational and residential uses.

LU3.3 Manage land use so that urban services will not need to be extended into agricultural areas, ensure infrastructure service levels (on-site septic systems, gravel roads, etc.) will meet basic service needs.

Goal #4

Maintain a sustainable land use pattern/cover which recognizes the significance of natural resources so that they can be preserved or conserved for future generations.

Policies

LU4.1 Preserve natural and open landscapes of the County's unincorporated areas.

LU4.2 Ensure sustainability through proper identification and management of natural resources for future generations.

LU4.3 Encourage the preservation of trees and existing native vegetation in a manner consistent with the site ecology and the planned land use.

LU4.4 Encourage tree planting and native vegetation restoration of disturbed sites to be consistent with the site ecology and the planned land use.

Goal #5

Protect and preserve archaeologically and historically significant cultural resource sites for future generations.

Policies

LU5.1 Identify and protect prehistoric and cultural assets which meet national, state, or local criteria for historic designation from destruction or harmful alteration whenever possible.

LU5.2 Whenever possible, the County shall further the goal of cultural resource preservation using education and incentives in lieu of stringent regulatory controls.





Goal #6

Protect and enhance surface and groundwater water quality and aquatic habitats within the County.

Policies

- LU6.1** Encourage surface and groundwater protection through application of high quality design standards for all sanitary sewer systems.
- LU6.2** Coordinate efforts with municipalities and regional utilities such as ALASD to provide the highest level of service in development within the District.
- LU6.3** Support future Sanitary Sewer Service Area studies in conjunction with comprehensive planning efforts to ensure cost effective service for existing and future service areas.
- LU6.4** Encourage vegetative buffers along drainage ditches and other waterways to protect water quality.
- LU6.5** Encourage the implementation of best management practices for all land development activities that include soil and water conservation, reduction and treatment of stormwater runoff, reduction of pesticide, herbicide, and fertilizer use, and management of pests and noxious weeds.
- LU6.6** Work with other agencies, entities, and private landowners to protect and enhance water quality within the County and region.
- LU6.7** Protect and improve surface water quality to maximize aesthetic, recreation, and economic benefits generated from the resource.
- LU6.8** Support goals, policies, and recommendations of the Douglas County Comprehensive Local Water Management Plan. (See Appendix E for Copy of Plans Goals, Objectives, and Action Items.)



Goal #7

Promote alternative, non-carbon based energy generation within the County.

Policies

- LU7.1** Support alternative, non-carbon energy generation such as passive and active solar, geo-thermal and wind turbine systems by allowing alternative energy system in agricultural and rural residential areas of the County.
- LU7.2** Adopt language in the zoning ordinance that permits alternative, non-carbon energy generation where it is compatible with surrounding land use and environment.

Specific Land Use Categories and Policies

The following describes each proposed land use categories including goals, characteristic and density ranges followed by policies associated with each category. Land use categories are more general than current zoning districts.

Each category may correspond to more than one zoning district or may not “match” any existing districts.

Agriculture Core (AC)

This land use classification encompasses the rural, agricultural area of the County. Major goals of this planning area are to preserve productive farm land for future use, to protect agricultural activity from encroachment by incompatible uses, and to preserve open space within community. These areas will remain predominantly rural in nature and will be managed to provide to the extent possible, the environment where working farms are viable over the long term. Limited residential uses and other agricultural limited industrial and sustainable energy (i.e., large wind turbine facility development) – related uses will also be permitted. Residential housing development shall be limited to a density of 1 dwelling unit per 40 acres. However, greater residential densities may be allowed through conservation design where soils and circumstances are non-supportive of agriculture.

Policies

The following policies are intended to ensure that land uses in the agriculture core policy area of the County are compatible with a rural area and level of service standards available in that area.

- AC1.** Encourage sustainable agriculture methods of production as a viable economic activity.
- AC2.** Adopt a “Right to Farm Ordinance” that would provide for the protection of a person’s right to farm or engage in agricultural or forestry operations in the County.
- AC3.** Development should be done utilizing best management practices for soil and water conservation to prevent erosion and sedimentation during and after construction.
- AC4.** Development projects should make provisions for protection of wildlife habitat including migration corridors, conservation of sensitive areas, and integration of existing outdoor recreational areas.
- AC5.** Provide for Conservation Design in this Land Use Category as a development option to protect and preserve natural resources and rural character and to provide large contiguous cover or openings that would accommodate wildlife movement.
- AC6.** Where conservation site design is used, a bonus of gross density shall be allowed.
- AC7.** Require highest level of sanitary and water (public or private) services to support land use development where site specific studies demonstrate soil, topographic, and groundwater conditions are appropriate for such utility service systems.
- AC8.** Allow Communal Sanitary System for higher density cluster/conservation design development if an appropriate entity (i.e.,



sanitary district, municipality, etc.) operates and maintains the system.

- AC9.** Require use of best management practices including low-impact development standards to manage on-site stormwater according to the level of potential impact.
- AC10.** Limit infrastructure improvements (gravel roads) and services (wells, SSTS, etc.) to residential and agricultural-related industrial development in this land use area in order to maintain rural character.



Agriculture Limited (AL)

This land use classification also encompasses the rural, agricultural area of the County, but provides for additional development flexibility. Major goals for this planning area are to provide for a combination of agriculture, agriculture-related, agricultural limited industrial and sustainable energy (i.e., large wind turbine facility development) – related uses, hobby farms, resorts, and large-lot residential will also be permitted. Residential housing development shall be limited to a density of 1 unit per 20 acres. However, larger densities may be allowed through conservation design where soils and circumstances are non-supportive of agriculture.

Policies

The following policies are intended to ensure that land uses in agriculture limited policy area of the County are compatible with a rural area and the level of service standards available in that area.

- AL1.** Encourage the use of best management practices for soil and water conservation and wildlife habitat protection and conservation.
- AL2.** Encourage sustainable agriculture methods of production as a viable economic activity.
- AL3.** Allow Conservation Design in this Land Use Category as a development option to protect and preserve natural resources and rural character and to provide large contiguous cover or openings that would accommodate wildlife movement.
- AL4.** Allow for a bonus of the gross density where conservation site design is used. Require use of communal wells for higher density cluster/conservation design development.
- AL5.** Require highest level of sanitary and water (public or private) services to support conservation land development where site specific studies can demonstrate soil, topographic, and groundwater conditions are appropriate for such utility service systems.
- AL6.** Allow Communal Sanitary System for higher density cluster/conservation design development if an appropriate public entity (i.e., sanitary district, municipality, etc.) operates and maintains the system.



-
- AL7.** Require use of best management practices including low-impact development standards to manage on-site stormwater according to the level of potential impact.

Rural Residential (RR)

Major goals for this land use classification are to provide lower density residential development in the less developed areas of the County, provide for a combination of agriculture, hobby farms, home-based cottage industries, and large lot residential are appropriate, provide a buffer between agricultural and residential land uses, provide for residential development opportunities not currently served by wastewater services, and allow for small wind turbine facility development. Residential housing density should be limited to 1 unit per 10 acres.

Policies

The following policies are intended to ensure land uses in rural residential policy area of the County are compatible with a rural area and level of service standards available in that area.

- RR1.** Encourage use of best management practices for soil and water conservation and wildlife habitat protection and conservation.
- RR2.** Allow Rural Residential development to include hobby farms, home-based cottage industries and land area for urban agricultural.
- RR3.** Allow Conservation Design in this Land Use Category as a development option to protect and preserve natural resources and rural character and to provide large contiguous cover or openings that would accommodate wildlife movement.
- RR4.** Allow for a bonus of the gross density where conservation site design is used.
- RR5.** Require highest level of sanitary and water (public or private) services to support land use development where site specific studies can demonstrate soil, topographic, and groundwater conditions are appropriate for such utility service systems.
- RR6.** Allow Communal Sanitary System for higher density cluster/conservation design development if an appropriate entity (i.e., sanitary district, municipality, etc) operates and maintains the system.
- RR7.** Require use of best management practices including low-impact development standards to manage on-site stormwater according to the level of potential impact.
- RR8.** Encourage housing opportunities in a rural environment where large lot sizes and rural character will be maintained.

Residential (R)

The goal for this land use classification is to provide for residential development opportunities in areas that are served or will be served with





public wastewater services in the foreseeable future. Residential developments shall be limited to a density of 2 units per 1 acre.

Policies

The following policies are intended to ensure that land uses in the Residential policy area of the County are compatible with a more transitional pattern of residential to urbanized development and the levels of service standard available in that area.

- R1.** Encourage use of best management practices for soil and water conservation and wildlife habitat protection and conservation.
- R2.** Allow conservation design and other conservation type development options to protect and preserve natural resources.
- R3.** Allow for a bonus of the gross density where conservation design is used.
- R4.** Allow urban-type agriculture in areas where it is compatible with the character of the neighborhood.
- R5.** Require the use of communal wells for all cluster/conservation design developments and traditional developments with 25 or more housing units.
- R6.** Require the use of best management practices to manage on-site stormwater according to the level of potential impact.
- R7.** Require the highest level of sanitary and water services (public or private) to support residential development.
- R8.** Proposed subdivisions shall connect to centralized public sanitary sewer services. Proposed developments of 20 units or greater shall complete a sewer infrastructure expansion study in cooperation with ALASD to determine the infrastructure requirements for the connection of potential future development.
- R9.** Existing subdivisions and dwellings shall be required to connect to public sanitary sewer services at the discretion of the township or sanitary district in which they are located.
- R10.** Wind energy development should be prohibited in Residential and Shoreline land use areas.
- R11.** Encourage new residential subdivision to provide trail connectivity to existing and planned trail system and to public recreation facilities.

Commercial/Light Industrial (C/LI)

Major goal for this land use classification is to direct major commercial and light industrial development to existing commercial and light industrial nodes and future areas with adequate transportation and public services (water and sewer) and allow for small-scale commercial and light industrial within agricultural and commercial land use areas that do not demand a high level of



central services (water and sewer) and are sited where the road system (existing or planned) has adequate capacity. Permitted uses include retail sales, restaurants, filling stations, home-businesses and light industrial and cottage industries /services.

Policies

The following policies are intended to ensure that land uses in commercial/light industrial policy area of the County are compatible with rural and residential development and the level of service standards available in that area.

C/LI 1. Encourage redevelopment of commercial areas in viable city centers through private investment in existing and new structures.

C/LI 2. Coordinate efforts with local communities to identify appropriate sizes and types of businesses to meet needs of residents, businesses, and visitors.

C/LI 3. Support the role of the City of Alexandria as a major commercial center for large scale retail and commercial development that requires significant infrastructure to support it.

C/LI 4. Encourage development of major commercial facilities (shopping centers and large box retail) to locate in or near existing cities where public services (sewer and water) and roads can easily be extended and constructed.

C/LI 5. Encourage commercial and light industrial uses such as home-based businesses and cottage industries in areas that do not require public services.

C/LI 6. Encourage commercial and light industrial uses (bait shops, filling stations, trucking facilities and warehouses) within the County that do not require significant water and wastewater infrastructure and could be sited in locations where transportation and power (electrical) infrastructure exist or can feasibly be extended without altering the character of the area.

C/LI 7. Require proposed new commercial and light industrial development outside of public service areas (water and sewer) to demonstrate adequate wastewater treatment plans.

C/LI 8. Create performance criteria (soils, managed/bonded group septic, visual buffers, etc) for resort development or expansion along lakes or in sensitive watersheds.

C/LI 9. Encourage use of best management practices for soil and water conservation and wildlife habitat protection and conservation.

C/LI10. Require use of best management practices such as low-impact development standards to manage on-site storm water according to the level of potential impact.



Public/Semi Public (P/SP)

Public and semi-public lands serve as buffers to historic sites, as educational resources, as areas for public recreation and enjoyment, and as open spaces within the community. Major goal for this land use classification is to identify areas that are under semi-public or public ownership including schools, municipal facilities and parks, local, state, federal and non-profit lands.

Policies

The following policies are intended to ensure that land uses in public/semi public policy area of the County are compatible with other land uses and the level of service standards available in that area.

P/SP1. Encourage buffering around open space areas such as wildlife management and production areas.

P/SP2. Allow no development except for recreational or institutional uses in these areas.

P/SP3. Encourage use of best management practices for soil and water conservation and wildlife habitat protection and conservation.

P/SP4. Require use of best management practices including low-impact development standards to manage on-site stormwater according to the level of potential impact.

Transportation



6.1 Introduction

The Douglas County Comprehensive Plan establishes a vision for how the County is anticipating social, economic, and environmental changes over the next 20 plus years. The Comprehensive Plan is intended to provide a framework to assist the County in ensuring that a planned vision is realized to the extent possible. As part of that vision, the County recognizes the travel needs of its residents (seasonal and year-round), businesses, and others traveling through the County. Furthermore, Douglas County recognizes its role within the transportation system and that its policies and improvement projects need to encourage and contribute to the orderly development within the communities, the County, and the region.

Transportation facilities both link and, in some cases, separate land uses within communities and throughout the County. Therefore, transportation is an integrated component of the Douglas County Comprehensive Plan because it assesses all components of the transportation system. This plan encompasses the location, limits, function, and capacity of the transportation network in Douglas County.

Purpose and Content of the Transportation Chapter

The purpose of the Transportation Chapter is to provide the policy and program guidance needed to make appropriate transportation related decisions when land use changes occur, when elements of the transportation system need upgrading, or when transportation problems occur. This Chapter defines how the Douglas County Public Works Department will provide for an integrated transportation system that will serve existing and future needs of farmers, residents, businesses, visitors, and how the County's system of roadways will complement the portion of the state highway system and local street networks (cities and townships) that lie within the County's boundary. To provide for safe transportation facilities that offer adequate capacity with a high level of mobility, a transportation improvement plan that corresponds to the County's overall comprehensive plan must be adopted and implemented.

Report Organization

The Douglas County Transportation Chapter is organized into the following main sections:

- Introduction
- Existing Transportation System
- Analysis of Future Needs/Characteristics
- Transportation Goals and Policies
- Implementation Plan

6.2 Existing Transportation System

Roadway Jurisdictional Classification System

Jurisdiction over the system of roadways in Douglas County is shared among four levels of government (state, county, cities, and townships). Roadway jurisdiction is important because it affects a number of critical organizational

functions and obligations including regulatory, maintenance, construction, and financial commitments. Figure 6-1 depicts the existing jurisdictional classification for all roadways within Douglas County. The system includes the Interstate highway system and trunk highway system, managed by the Minnesota Department of Transportation (Mn/DOT), the County State Aid Highway (CSAH) and county road system, managed by Douglas County, local city streets, managed by each municipality, and township roads, managed by individual townships. In general, the following relationships regarding jurisdictional designations are observed:

- Roadways that serve regional, inter-county or state-wide travel needs are typically owned and maintained by Mn/DOT.
- Roadways that serve sub-regional needs generally qualify as county state aid highways or county roads and are owned and maintained by Douglas County.
- Roadways that primarily serve local transportation needs and property access are owned and maintained by the local municipalities and townships.

Jurisdictional Classification Guidelines

Jurisdictional classification is based on a variety of issues and factors including functional classification, system continuity, access control, type of trips served (length of road/length of trip), average daily traffic volumes, special facilities or land uses served, and funding/maintenance issues. Functional classification is a means by which roadways are grouped into classes according to the character of service they are intended to provide. Functional classification is further discussed later in this Transportation Chapter.

State Highway System

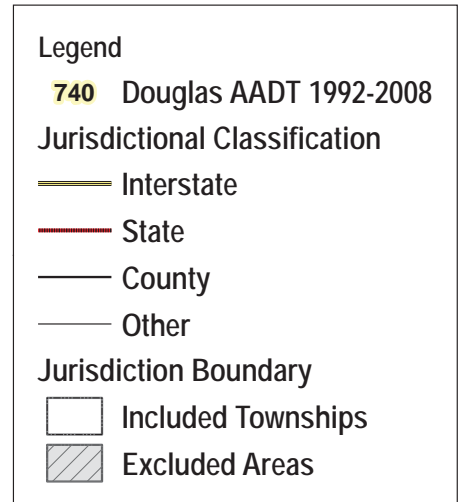
Generally, state jurisdiction is focused on routes that can be characterized as serving longer trips at higher speeds with regional, inter-county, and/or state-wide travel needs. Interstate Highways and Trunk Highways commonly have the highest traffic volumes, accommodate more truck movements, and are typically spaced at intervals consistent with population density, such that all developed areas of the state are within reasonable distance of state highway. The functional classification system for roads under the state jurisdiction is normally either Principal Arterial or Minor Arterial.



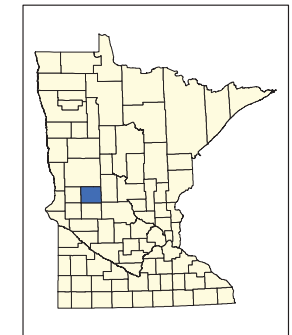
The interstate highway and trunk highway systems provide vital links for Douglas County to several communities to the north (Fergus Falls, Detroit Lakes, and Moorhead) and to the south (Saint Cloud and the Twin Cities). The 2008 Annual Average Daily Traffic (AADT) Map, prepared by Mn/DOT, indicates Interstate 94 (I-94) carried a range of traffic from 14,500 to 18,200 trips.

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Figure 6-1: Existing Jurisdictional Classification and AADT



Data Source:
MNDOT & Douglas County



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Traffic on TH 29 ranged from 4,500 trips in Miliona Township to 19,000 trips in downtown Alexandria. Traffic volumes along other trunk highways increase as they pass through and/or approach municipalities and drop to lower levels in rural areas of Douglas County. Figure 6-2 depicts the existing traffic volumes for Douglas County. Existing roadways within Douglas County under Mn/DOT's jurisdiction include:

- Interstate 94;
- Truck Highway 27;
- Trunk Highway 29;
- Trunk Highway 55;
- Trunk Highway 78
- Trunk Highway 79
- Trunk Highway 114; and
- Trunk Highway 127

County Road System

The County's jurisdictional system is made up of both County State Aid Highways (CSAH) and County Roads (CR). These roads provide north-south and east-west connections throughout the County and convenient access to urban areas and state highways. The County system emphasizes higher mobility rather than land access. The functional classification system for roads under the County's jurisdiction is usually Minor Arterial, Major Collector, or Minor Collector. A county roadway system is often spaced at intervals consistent with population density so as to provide reasonable access to arterial or collector roads. Traffic volumes on rural county roadways tend to be at moderate levels and well within the capacity range of a two-lane roadway.



Douglas County has approximately 544 miles of roadway under its jurisdiction. Individual county roads are not listed due to the large number of these types of roadways under Douglas County jurisdiction (see Figure 6-1). The 2006 AADT for the Douglas CSAH and County Road system and 2008 AADT for state highways are shown in Figure 6-1.

City Streets

Within Douglas County there are eleven municipalities that have their own network of local roadways. City streets are typically closely spaced shorter routes (less than 1.5 miles) that primarily focus on providing land access and connections between neighborhoods and commercial nodes rather than continuity to outlying rural areas. The functional classification of most city streets is collector roadways, but in some cases can be designated as arterial routes if they serve highly developed areas and/or provide important connections between major traffic generators such as industrial parks, shopping centers, and education complexes.

Township Roads

The twenty townships within Douglas County all have an extensive network of regularly spaced local roadways that primarily focus on providing land

access to adjacent properties. Township roads also provide vital connections to the Douglas County roadway system and in some cases to state highways, but their function focuses on access rather than mobility. Township roads commonly carry low levels of traffic (less than 200 trips per day) and have minimal design features including gravel surfaces.

Roadway Functional Classification System

Functional classification is a system by which roadways are grouped according to the function they are intended to serve. Basic to this process is the recognition that individual roadways do not function independently, but rather most travel involves movement along a network of different functional types of roads. Functional classification involves determining what role (level of mobility versus property access) each roadway should perform prior to determining its design features, such as street widths, design speed, and intersection control. Furthermore, functional classification is an important consideration in the development of local regulations for land development. The mobility of higher classified roadways should be protected by careful management of site development and access spacing standards.

Transportation problems commonly occur when a roadway's design and the management of access to the roadway are inconsistent with the functional and operating demands imposed by the surrounding land uses. Four basic functional classification categories are typically used for county-level transportation planning. The functional classification categories include:

- Principal Arterials;
- Minor Arterials;
- Collectors (Major & Minor); and
- Local Streets.

As previously mentioned, a functional classification system also provides a means for identifying roadways which are oriented toward providing mobility for through-trips (Principal and Minor Arterials) versus those that are oriented more toward providing accessibility or land access (Collectors and local streets). Figure 6-3 depicts the relationship between land access and mobility and how the different classifications of roads provide varying degrees of mobility versus land access. Figure 6-2 shows the basic framework and layout of the functional classification system of roads.

Figure 6-2 – Relationship between Land Access and Mobility

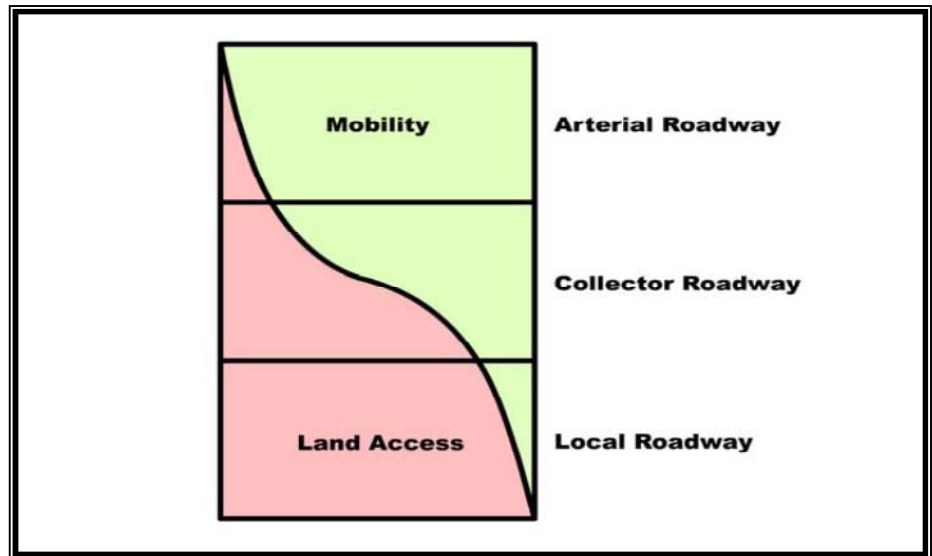
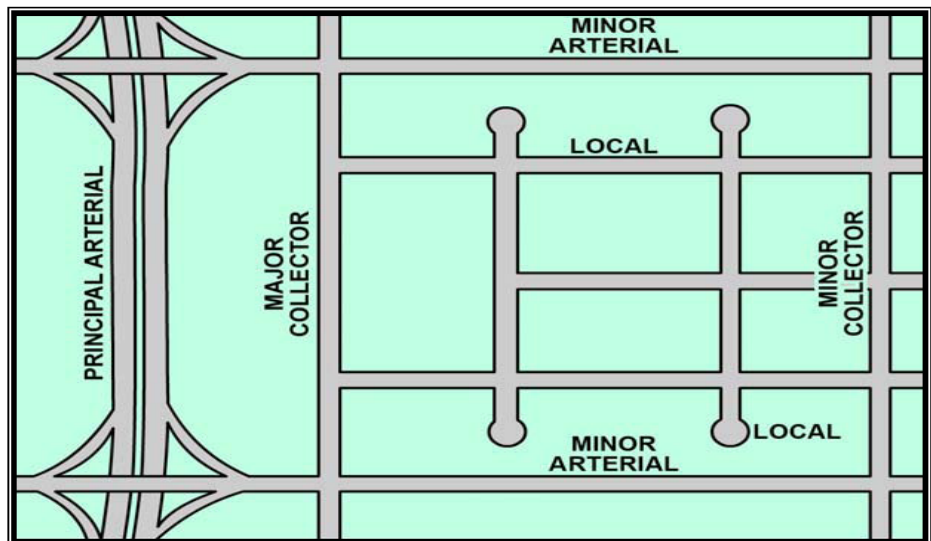


Figure 6-3 – Basic Functional Classification System Framework



Principal Arterials

Principal arterials typically have the highest volume capacity and provide the highest level of service at higher speeds for the longest uninterrupted distance. This type of roadway is intended to connect larger cities with one another and connect major business centers. The functional emphasis is mobility rather than access. The nature of land uses adjacent to principal arterials is typically of a higher intensity. Interstate 94 and portions of Highways 27 and 29 are classified as principal arterials (see Figure 6-4).

Principal Arterial Roadway Characteristics:

- Emphasis on mobility rather than providing land access
- High speed design with travel speeds of 55 mph or greater in rural areas
- Serve longer (regional, state-wide) trips, typically greater than 8 miles

-
- Commonly spaced at least 6 to 12 miles apart.

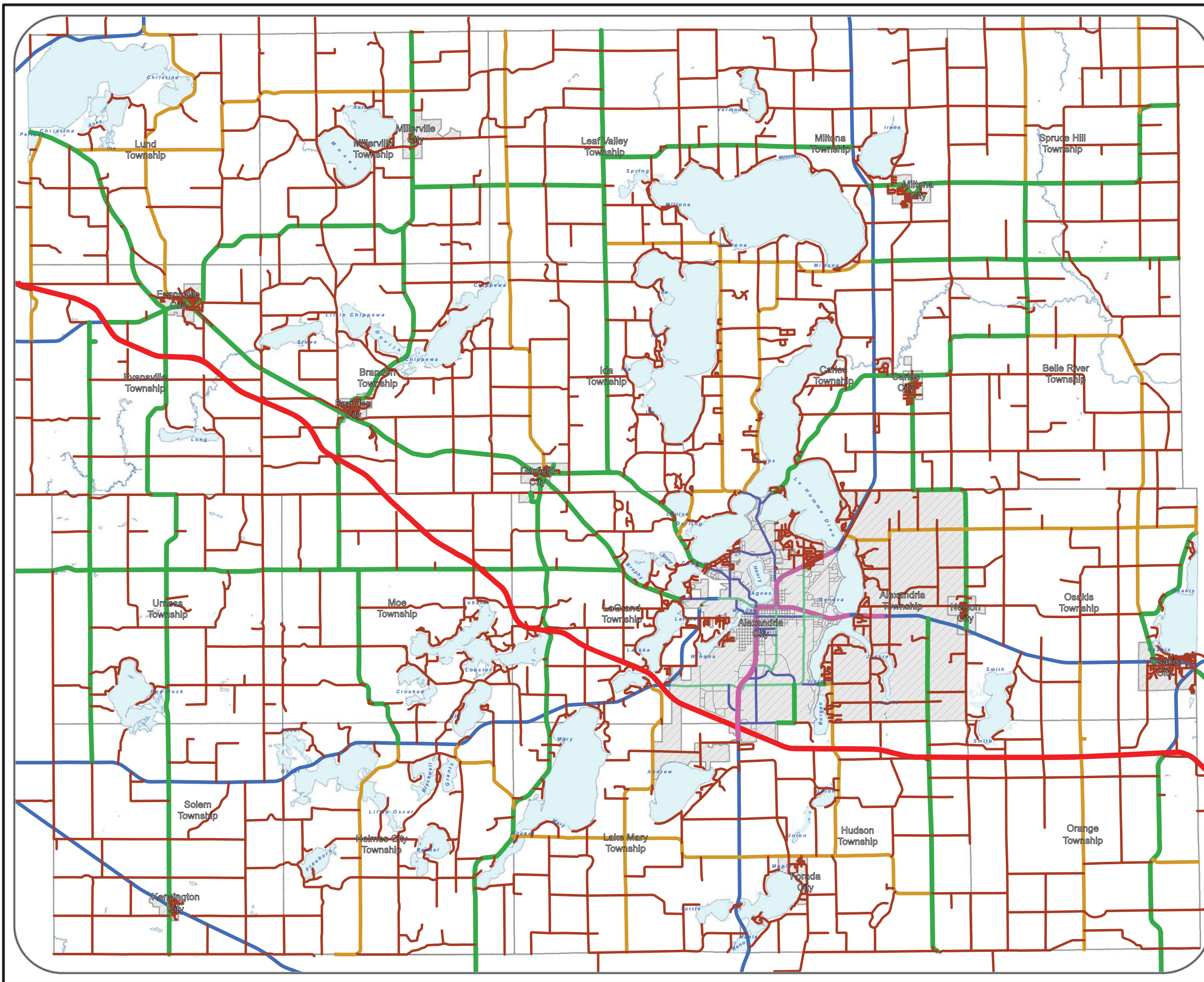
Minor Arterials

Minor arterials are intended to connect important locations inside and outside of Douglas County. This type of roadway is intended to provide service for trips of moderate length (greater than 2 miles) at a somewhat lower level of mobility than principal arterials. However, minor arterials have a greater focus on mobility than land access. They generally connect to principal arterials, other minor arterials, or collectors. Minor arterials are of regional importance because they relieve traffic on or substitute for principal arterials when necessary. In Douglas County, the following roadways are classified as minor arterials (see Figure 6-4):

- Most of Trunk Highway 27
- Most of Trunk Highway 29
- Trunk Highway 55
- Trunk Highway 78
- Trunk Highway 79
- Trunk Highway 127
- County State Aid Highway 43
- County State Aid Highway 45
- County State Aid Highway 46 (McKay/34th Avenue – Alexandria)
- Part of County State Aid Highway 82
- County State Aid Highway 90
- Nokomis Street (Alexandria)
- 3rd Avenue (Alexandria)
- 22nd Avenue (Alexandria)
- 34th Avenue (Alexandria)

DOUGLAS COUNTY Comprehensive Plan

Figure 6-4: Existing
Functional Classification



Legend

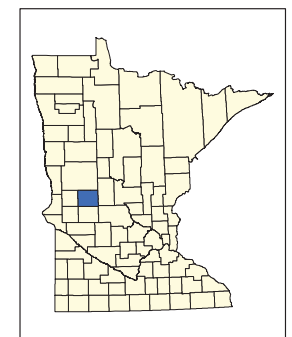
Functional Class

- Principal arterial - Interstate
- Rural Major collector
- Principal arterial - Other
- Rural Minor arterial
- Rural Minor collector
- Rural Local
- Urban Collector
- Urban Minor arterial
- Urban Local

Jurisdiction Boundary

- Included Townships
- Excluded Areas

Data Source:
MNDOT & Douglas County



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Minor arterial Roadway Characteristics:

- Emphasis on mobility rather than providing land access.
- High speed design with travel speeds of 55 mph or greater in rural areas.
- Serve longer (regional, inter-county) trips, typically greater than 8 miles.
- Commonly spaced at least 6 to 12 miles apart.

Collectors

Within a functional classification system there are commonly two types of collector roadways (Major and Minor), which provide a balance between land access and mobility. Major collector roadways are designed to serve shorter trips that occur primarily within the County, and to collect and distribute traffic from one part of the County to another and from employment centers to the arterial system. These roadways are typically part of the County's state aid highway system. The major collectors on the County's system include the following roadways (see Figure 6-4):

- CSAH 1 (CSAH 41 to south City line);
- CSAH 3 (CSAH 13 to CSAH 14, CSAH 10 to TH 27, and I-94 to south City line);
- CSAH 5 (CSAH 82 to CSAH 6 and TH 29 to east City line);
- CSAH 6;
- CSAH 7 (TH 27 to north City line);
- CSAH 8;
- CSAH 9;
- CSAH 10;
- CSAH 13;
- CSAH 14;
- CSAH 17;
- CSAH 22;
- CSAH 23 (CR 46 to east City limits)
- CSAH 40;
- CSAH 41;
- CSAH 42;
- CSAH 44;
- CSAH 82 (CSAH 45 to west City Line);
- CR 106; and
- TH 114

Minor collector roadways collect and distribute traffic to the major collector and arterial networks. These roads are generally shorter and less continuous than major collectors, but serve to supplement those roadways. Minor collectors are also typically part of the County's state aid system. The County's minor collector system includes the following roadways (see Figure 6-4):

- CSAH 1 (CSAH 5 to TH 78);

-
- CSAH 2;
 - CSAH 3 (CSAH 14 to north City line and CSAH 13 to CSAH 10)
 - CSAH 4 ;
 - CSAH 4W;
 - CSAH 5 (CSAH 6 to TH 29);
 - CSAH 7 (TH 27 to south City line);
 - CSAH 12;
 - CSAH 18;
 - CSAH 21;
 - CSAH 23 (southeast Alexandria City limits to CSAH 4);
 - CSAH 24;
 - CSAH 32;
 - CSAH 34;
 - CSAH 19;
 - CSAH 104;
 - CR 73;
 - CR 85;
 - CR 86;
 - CR 87;
 - CR 90; and
 - CR 120.

Major and Minor Collector Roadway Characteristics:

- Emphasis equally balanced between mobility and providing land access for major collectors and more focused on land access for minor collectors.
- Serving trips that are typically less than 5-8 miles.
- Commonly spaced at ½ mile (urban areas) to 2 miles (rural areas) apart.
- Travel speeds range from 30 mph in urban areas to 55 mph in rural areas.

Local Roadways

All other public roadways within Douglas County (County Roads, city streets, and township roads) are classified as local roadways.

Local Roadway Characteristics:

- Local roads provide the highest level of direct property access and typically carry lower traffic volumes at slower speeds (30 mph or less).
- Typically serve trips that range from one city block in urban areas to less than 2 miles in rural areas.
- Local roadways are spaced as needed.



Existing Transportation Characteristics, Needs, and Issues

It is important that an analysis of the transportation system characteristics, needs, and issues is based on an evaluation of the existing transportation system and an understanding of how traffic will likely grow in the near future. This section will identify the existing and the near future transportation system characteristics, issues, and needs.

Existing System Capacity Analysis

A review of potential capacity constraints on the existing state highway and County roadway system was completed using the most recent AADT (as previously shown on Figure 6-1). Traffic operations data indicates that a roadway begins to experience noticeable operational problems once traffic approaches approximately 85% of a roadways design capacity. For a two-lane road that means operational problems begin to occur when traffic volumes exceed approximately 10,500 trips per day (see Table 6-1). Roadway level of service (LOS) is commonly used to assign a value to the level of congestion and efficiency on a road. LOS is a measure of delay and operating conditions defined by the Highway Capacity Manual using a grading scale ranging from A to F. LOS A and B typically indicate conditions when traffic demand is well below the roadway capacity and travel is rather unimpeded. At a LOS C, the average speed decreases and slower traffic and turning traffic quickly cause delays/congestion. At LOS D, traffic volumes approach a roadway's functional capacity, stoppage and delays begin to occur, the average speed is substantially lower, and passing is unlikely to occur. At LOS E, traffic demand exceeds capacity, drivers are choosing other routes and times to travel, and any disturbance to the traffic flow, such as turning traffic, promptly drops this condition to a LOS F. A LOS F means traffic demand far exceeds capacity, heavy congestion is prevalent, long periods of stop and go conditions occur, and travel time is severely degraded.

Table 6-1
Average Daily Traffic (ADT) Planning Level Capacities

Roadway Type	Level of Service Based on ADT					
	A	B	C	D*	E	F
Two-lane	<8,000	8,000–9,500	9,250–10,750	10,500–12,000	11,750–13,250	>13,250
Three-lane (center left turn lane)	<9,000	9,000–12,000	11,500–14,500	14,000–17,000	16,500–19,500	>19,500
Four-lane undivided	<12,000	12,000–15,000	14,500–17,500	17,000–20,000	19,500–22,500	>22,500
Four-lane divided (center median)	<19,000	19,000–22,000	21,500–24,500	24,500–27,000	26,500–29,500	>29,500

* ADT associated with LOS D represent traffic volumes approaching 85-percent of a roadways design capacity.

The capacity thresholds listed in Table 6-1 were considered for the various roadways throughout Douglas County. In addition to assessing the operations of the existing system, the capacity table provides a means to determine what typical roadway sections would be generally acceptable at various levels of

traffic. The information contained in the table was also utilized in an assessment of future capacity constraints later in this chapter.

Capacity deficiencies result in increased congestion, reduced travel speeds, and increase travel times. Furthermore, roadway congestion causes drivers to seek out alternative routes, which can place additional traffic on county and city streets that may not be designed to handle such a function. Residential property owners along these routes recognize the increase in traffic when congestion on the regional system occurs and this increase in traffic can create conflicts with residential land uses. Capacity improvements should begin to be planned for roadways that are anticipated to operate at LOS D. This should provide adequate opportunity to plan corrective improvements before operational problems reach LOS E or F. According to existing traffic volumes there appears to be no short-term capacity concerns on any roadways found throughout the rural areas of Douglas County. The only capacity concerns identified under the existing conditions are located in the City of Alexandria. These roadways and traffic operation concerns are being further studied as part of the Alexandria Area Transportation Study being conducted in partnership by the City, County, and Mn/DOT. The findings and recommendation of the study are anticipated to be complete in fall 2010.

Existing System Safety Analysis

In addition to capacity issues, roadway safety can be a major concern and should be a priority for all jurisdictional levels. Safety and operational problems result from when a roadway or system of roads inhibits the efficient movement of traffic. Sharp curves, offset or inadequate intersection design, inconsistent speed control or acceleration space can all contribute to safety and operational problems. Other safety concerns can arise due to traffic volumes on a particular roadway or intersection approaching or exceeding the design capacity or conflicts between slower moving traffic (e.g. heavy trucks or agricultural equipment) and faster moving vehicular traffic. The vast majority of crashes occur at roadway intersections and/or access points. An effort must be made to correct design problems which contribute to unsafe or inefficient road conditions.



Mn/DOT's crash mapping software (MnCMAT) was used to identify crash locations and frequencies throughout Douglas County. A ten-year reporting period beginning 1999 and ending 2008 was used in this assessment of existing safety conditions. The highest concentration of crashes occur in the incorporated areas of Douglas County where traffic volumes are higher and access points are more frequent. The total number of reported crashes was 1,388. Of this total, 21 crashes involved fatalities, 21 involved incapacitating injuries, and 99 involved non-incapacitating injuries. The remainder of crashes did not involve injuries and/or involved property damage only.

Road Safety Audit and County Road Safety Plan

In 2008, a Road Safety Audit (RSA) was conducted on select County State Aid Highways and County Roads within the County. Twenty-five separate sites or roadway segments were reviewed and comprehensive assessments

were completed. Other system wide improvements were observed and documented in the RSA.

The Road Safety Audit Final Report, dated January, 2008 provides detailed characteristics and conditions at each of the 25 sites and includes specific safety improvements the County may consider in order to improve the overall safety conditions. The RSA report is available for review at the Douglas County Public Works Building. A more rigorous investigation of possible geometric design improvements and/or intersection control evaluation is recommended prior to determining the appropriate corrective measures.

A Roadway Safety Plan (RSP) is designed to provide the basis for systematic implementation of safety measures across an entire jurisdiction. A RSP is currently being prepared for Douglas County and is scheduled to be completed in summer 2011. The end result of the process will be a document that identifies an array of proactive measures, based on current crash trends that will increase safety for roadway users. The documentation will include a list of safety improvements that will be developed by route and location. The completion of the RSP will be advantageous in securing future safety funds to implement the identified safety improvements.

Rest Areas

Within Douglas County, Mn/DOT District 4B operates and maintains two full service rest areas along Interstate 94. Rest areas are developed and operated to meet the motoring public's safety, comfort, travel, and tourism needs. The Burgen Lake Rest Area is located approximately 1.5 miles east of Trunk Highway 29 and services I-94 westbound traffic. The Lake Latoka Rest Area is located approximately 1.15 miles northwest of Trunk Highway 27 and services I-94 eastbound traffic. Both rest areas include an array of facilities including modern flush toilets, pay phones, vending machines, pet exercise area, picnic grounds, and interpretive information.

Rest Areas contribute to the safety of the traveling public by providing fatigued drivers the ability to stop and rest. They also reduce the need for stops along highway shoulders and provide an escape from driving under hazardous weather and road conditions. Though their primary value is accident prevention, they also address many needs of commercial truck operators.

Public/Agency Involvement in Identifying Needs and Issues

An initial listing of transportation related issues and needs in Douglas County were compiled based on field observations and input from the following:

- Public Input/Open House Meetings
- Task Force Meetings with local jurisdictions and other stakeholders
- County staff

Public input meetings were conducted in the early stages of the development of the Comprehensive Plan. The intent of these meetings was to introduce the public to the planning process and solicit input on county-wide issues and



needs. A Task Force meeting was held in January 2010 that provided members with an update on the Alexandria Area Transportation Planning Study and provided an opportunity for local jurisdictions and other stakeholders to express transportation issues throughout the County. These meetings provided an opportunity for collaboration that over time may benefit all agencies and the public which in turn can result in financial and time savings through economies of scale as well as potentially reducing construction impacts through the coordination of projects among jurisdictions.

The transportation needs and issues mentioned in the public and agency input process have been sorted by type and are summarized below:

Safety & Traffic Operations

- Speeding is viewed as a safety issue.
- Several intersections throughout the County were identified as having unsafe conditions due to reduced sightlines from skewed approaches, overgrown vegetation, and/or topography (vertical elevations) constraints.
- Pedestrian/bicycle safety is perceived as a safety issue especially in Alexandria where there are few designated crossings.
- At times of the year truck and farm traffic can create conflicts with auto traffic on several county and local roads.
- Access along Trunk Highways and other major routes should be minimized to ensure safe and efficient operations.
- The County should support expanded transit services both in Alexandria and throughout the rural areas of the County.

Capacity

Potential capacity improvements to state, county, or city roadways may be needed in the City of Alexandria as the region continues to grow and traffic volumes increase.

Alternative Travel Modes

Alternative modes of transportation (e.g. transit, trails) in Douglas County are currently limited. The existing multimodal uses can be summarized as follows:

Transit: The Rainbow Rider Transit Service is an independent transportation agency that operates both fixed route and demand-response/dial-a-ride services. Rainbow Rider provides daily services throughout Douglas County and connecting services to/from Pope County with occasional routes to locations within Todd County. In 2009, Rainbow Rider provided service to nearly 140,000 riders. Rainbow Rider is currently in the process of purchasing two new storage facilities and is exploring the use and purchase of hybrid buses to add to their fleet.

Transit is an important component to the overall transportation system for Douglas County residents because they provide transportation choices for



commuters and mobility services to transit dependent users. Currently, there are no designated park and ride lots within Douglas County.

Trails: The Central Lakes Trail provides a continuous system across the County and connects several municipalities or developed areas including Osakis, Nelson, Alexandria, Garfield, Brandon, Evansville, and Melby.

Rail: The Canadian Pacific (CP) Railroad operates two rail lines that pass through Douglas County. One line parallels Highway 55 across southwestern Douglas County. According to the Mn/DOT Freight and Commercial Vehicle Operations Office, this line averages twelve trains daily at speeds up to 49 mph. A second CP line runs north-south through Douglas County from Glenwood in Pope County to Parkers Prairie in Otter Tail County. This line averages 9 trains daily at speeds up to 40 mph.

6.3 Analysis of Future Needs and Characteristics

This transportation system issues analysis and needs assessment examines the transportation system that currently serves Douglas County and documents its current and anticipated future deficiencies. Future deficiencies and recommendations are based on effects on the current system with an application of long-range (2030) travel projections. The transportation system analysis includes the following elements:

- Development of 2030 traffic projections;
- An inventory and assessment of the roadway system's existing and future capacity conditions and safety/operations using 2030 traffic projections;
- An inventory and determination of the suitability of the current functional and jurisdictional designation of the local and regional roadway system in the County with consideration of the 2030 forecasts;
- Consideration of preservation techniques such as access management and right-of-way preservation; and,
- Review of programmed or planned transportation improvements.

2030 Traffic Volume Projections

Traffic volume projections were prepared for the year 2030 using the Douglas County State Aid 20-year Growth Factor and were taken from the Alexandria Area Transportation Study. Future traffic projections for identified key roadways throughout Douglas County are illustrated on Figure 6-5.

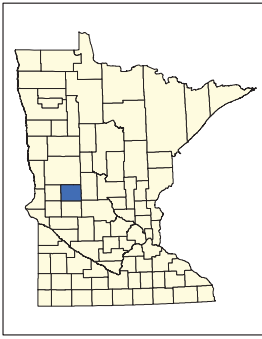
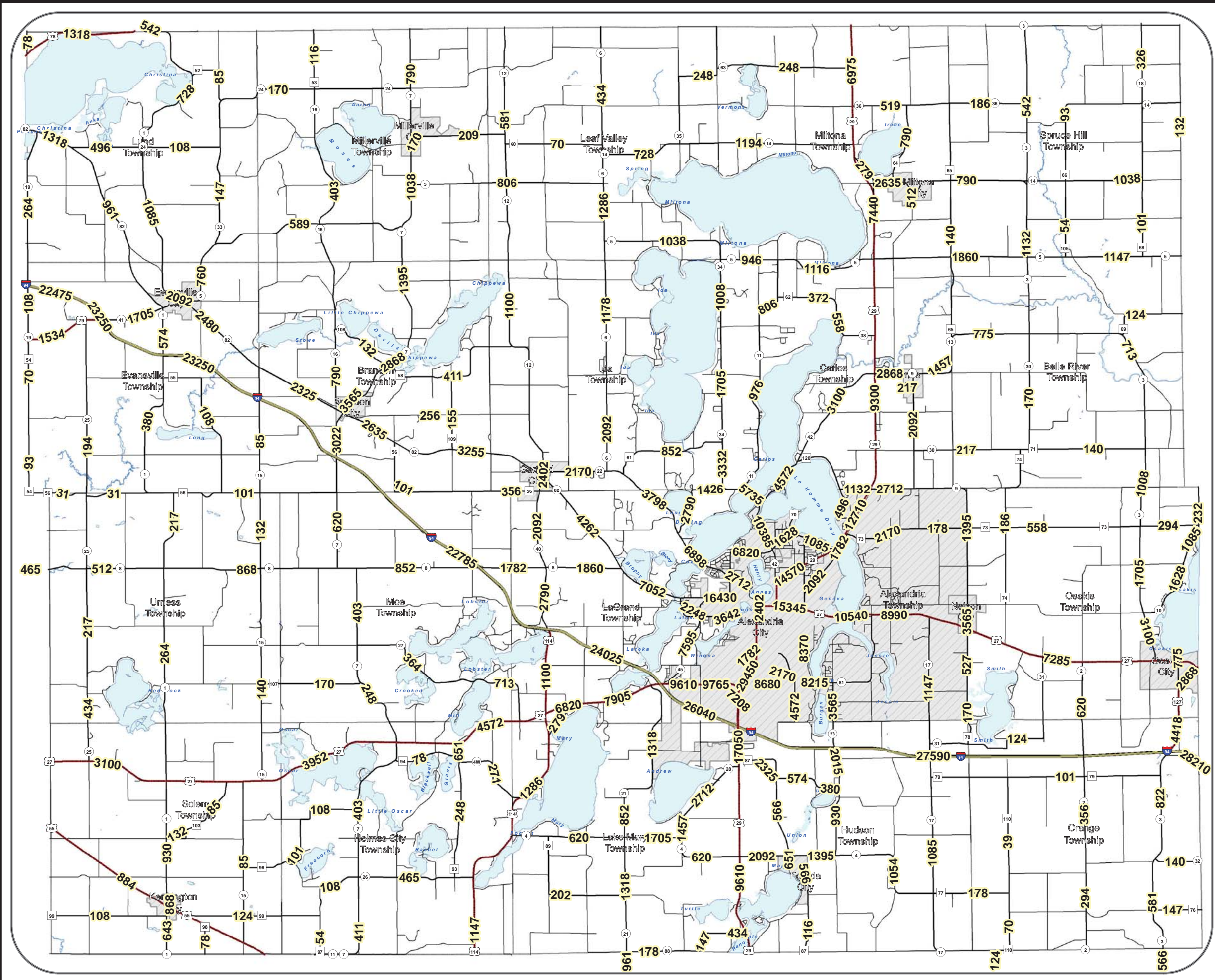
Capacity Assessment

As previously stated, Douglas County has a well-planned system of roadways that fulfill travel desires of residents and employees. However, as development and travel demand increase, issues may arise regarding roadway capacity.

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DOUGLAS COUNTY
Comprehensive Plan

Figure 6-5: Future
Traffic Projections



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To gain a clearer understanding of the primary areas of concern regarding future roadway capacity constraints, an assessment of forecast operational concerns throughout the County has been completed using 2030 forecast traffic volumes along with planning level capacity guidelines (see Table 6-1). The assessment of 2030 forecast traffic volumes indicate traffic demand on several roadways in and around the City of Alexandria will be nearing and/or exceeding traffic volume thresholds that could result in operational deficiencies (LOS D or worse) if improvements are not constructed. These roadways are being further evaluated as part of the Alexandria Area Transportation Study.

In addition, forecast volumes along TH 27 in the City of Osakis are approaching LOS D capacity threshold. The forecast 9,000 trips along TH 27 coupled with on-street parking and numerous access points (both private drives and public streets) may result in unacceptable service levels in the future. Preserving the existing capacity should be studied along with long-term capacity expansion.

Safety Assessment

While the number of reported crashes on the County Highway system has been relatively stable over the years there are areas where conditions should be monitored in the future to determine if there is a steady increase in concern and what type of improvements could be considered. Some locations may in fact be the result of an aging system that was built prior to modern design standards or under substantially different land use as currently exists. Implementation of current roadway design standards will help eliminate many safety concern areas located throughout the County.



The Road Safety Audit also identified several key locations where safety strategies could be implemented to improve safety conditions. It is recommended that an Intersection Control Evaluation (ICE) be completed at intersections that are determined to be unsafe. An ICE report will help define the root of the problem as well as the appropriate corrective measures.

Other Safety Initiatives

To bring traffic safety to the forefront of awareness and implementation, Douglas County has and will continue to be actively engaged in a number of transportation safety project, program, and policy initiatives. Below is an example of a few safety initiatives:

Shoulder Widening Projects

Douglas County Public Works continues to identify, develop, and construct minor safety improvements such as widening shoulders and improving roadway in-slopes (flatter ditch slopes). These improvements often benefit not only vehicular traffic, but improve safety conditions for pedestrians/bicyclists.

Roadway Structural Capacity

A key asset of rural roads is to serve as a means of moving goods to and from markets. This requires a system capable of accommodating the heavier loads placed upon them by trucks and farm equipment. A plan, including a route map, for an interconnected ten-ton road system has been developed by Douglas County.

In general, many of the county roads serving the agricultural community are considered to be underweight or lack the structural capacity to serve larger vehicles, which during certain times of the year (spring) limits access to farm operations and to arterial routes. This impacts the efficiency of truck movements and may even prohibit specific areas of the county from being served.

Constant improvement of the structural capacity of the roadway system to meet the changing needs of the traveling public and land uses should be a primary objective of Douglas County. In an ideal situation, all county roads would be sufficient to handle heavy loads during all times of the year. Realistically, however, this is not achievable in Douglas County due to fiscal constraints and the impracticality of such an investment because of the dispersed development pattern.

The future 10-ton roadway system includes all state highways (I-94 and Trunk Highways 27, 29, 55, 78, 79, 114, and 127) as well as several County Highways (parts of CSAHs 1, 3, 7, 8, 9, 10, 12, 13, 14, 17, 20, 25, 40, 41, 43, 44, 45, 46, 82, and County Road 87).

Right-of-Way Preservation

There are many different techniques available to protect roadway corridors for future improvements. The basic approaches can be summarized as follows:

Land acquisition (purchase of easements, title purchase, and eminent domain) – Land acquisition is an approach typically applied when specific improvements are eminent. The applicability of acquisition is linked to the availability of funding.

Landowner agreements (development agreements, transferable development rights) – Landowner agreements are often limited in effectiveness when dealing with a large project area. By definition these agreements are applied on a parcel-by-parcel basis and are most effective when dealing with larger land holdings.

Land use regulations (development exactions, setback ordinances, official map, and subdivision regulations) – Land use regulation techniques are facilitated through the comprehensive planning and zoning process. Certain regulations such as setbacks can be applied, while others such as official maps are typically developed for individual corridors and require a more substantial level of corridor definition.



Access management (limiting property access) – Access management principals should be a part of any transportation plan. To be successful, it is important that the guidelines are applied consistently and uniformly at the time development and platting occurs. The Douglas County Access Management guidelines are further discussed in the following section.

In summary, the applicability of these right-of-way preservation options is dependent on many factors including available funding, the immediacy of development, and the timing of the need for road improvements.

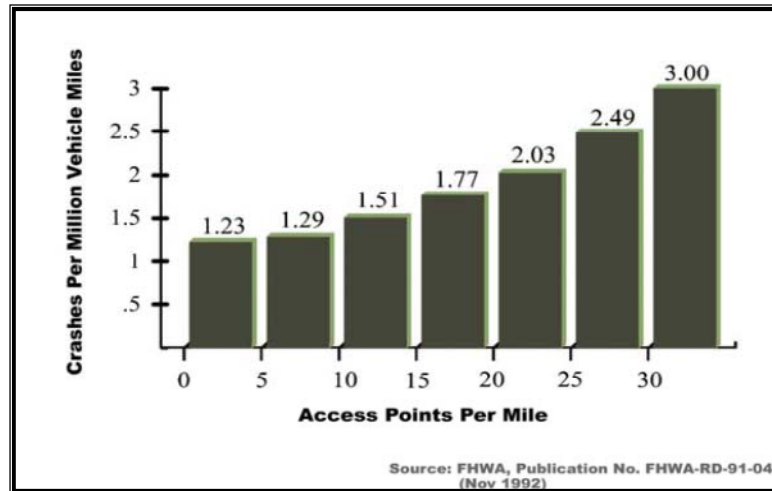
Access Management

Access management is an effort to maintain the effective flow of traffic on the network so each roadway can provide its functional duties while accommodating access needs of adjacent land.

Successful access management requires cooperation between land development and transportation interests in order to protect the public's investment in roads. The roadway functionality graphic (previously shown in Figure 6-2) illustrates the access/mobility relationship. There is a direct correlation to the amount of access provided and the ability to move traffic on a roadway. Higher levels of access reduce a roadways ability to move through-traffic. Therefore, principal and minor arterials that have a high mobility function should have low level of access and local roads that focus less on mobility should be allowed to have a higher level of access.

Figure 6-6 shows the relationship between increased levels of access and increased crash rates. By law reasonable access must be provided to each parcel. Therefore, early coordination between land development and roadway access needs to occur. Douglas County can control access onto county roadways only and access onto other roadways becomes the responsibility of the state, cities, or townships. Access onto local roadways is managed through local subdivision, zoning regulations, access permits, and development standards. In Douglas County, the continued use of access spacing guidelines is recommended as a strategy to effectively manage existing access and to provide access controls for new developments along county roadways.

Figure 6-6 – Relationship Between Access Points and Crash Rates



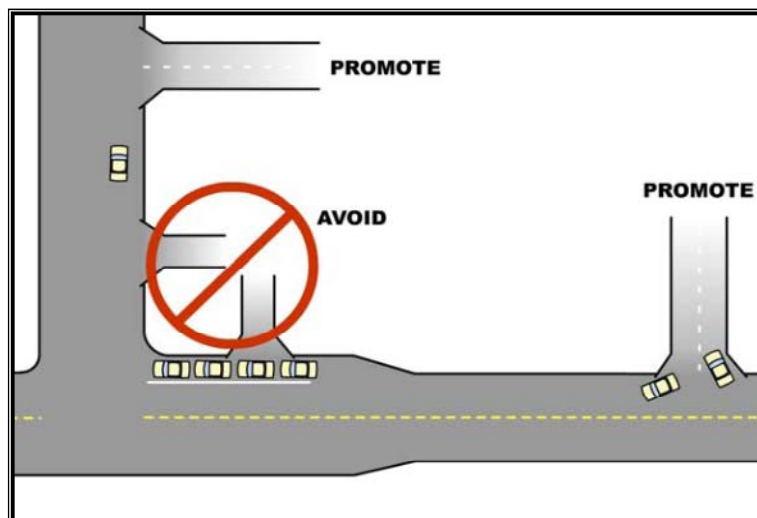
The access spacing guidelines for Douglas County (shown in Table 6-2 thru 6-4) are consistent with current practices in other counties.

When the County receives a development proposal that proposes access onto a roadway under the jurisdiction of the state or city/township, the County will coordinate the review of these proposals with the appropriate agencies.

The County will also participate in the design process with the appropriate agency when roadways are proposed for construction or reconstruction to ensure proper design and location of access points.

Figure 6-7 provides a sample access planning application designed to minimize vehicle conflicts, improve safety, and maintain reasonable levels of access to adjacent land uses.

Figure 6-7 – Proper Driveway Location



Another access management example is when a subdivision is proposed along an arterial or major collector route, it should be reviewed with not only access to the lots within that particular development (plat), but also in relation to adjacent properties that may experience land use changes in the future (see Figure 6-8).

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Table 6-2
Urban Public Street Spacing Guidelines (Speeds less than 45 mph)

Type of Public Access Requested	Type of Roadway and ADT Affected by Access ⁽¹⁾⁽⁷⁾				
	Controlled Access Arterial Freeway Facility	Multi-Lane Divided Arterial or Collector Over 10,000	Two-Lane Arterial or Collector 2,000 - 10,000	Two-Lane Arterial or Collector Less than 2,000	Two-Lane Local Roads
A. Local: Low-Volume, Non-Continuous Streets⁽²⁾⁽³⁾	No Direct Access	1/4 Mile Spacing with No Median Opening ⁽⁴⁾	1/8 Mile Spacing ⁽⁶⁾ with Turn Lanes	1/8 Mile Spacing ⁽⁶⁾	1/16 Mile Spacing
B. Local: Medium-Volume, Non-Continuous Streets⁽²⁾⁽³⁾	No Direct Access	1/2 Mile Spacing with Signals and Turn Lanes ⁽⁵⁾	1/4 Mile Spacing ⁽⁶⁾ with Turn Lanes	1/8 Mile Spacing with Turn Lanes	1/8 Mile Spacing with Turn Lanes
C. Collector: Low and Medium Volume Through Streets⁽²⁾	No Direct Access	1/2 Mile Spacing with Signals and Turn Lanes ⁽⁵⁾	1/4 Mile Spacing with Signals and Turn Lanes	1/4 Mile Spacing with Turn Lanes	1/8 Mile Spacing with Turn Lanes
D. Collector and Arterial: High Volume Through Streets⁽²⁾	1 Mile Spacing (Interchange)	1/2 Mile Spacing with Signals and Turn Lanes	1/2 Mile Spacing with Signals and Turn Lanes	1/2 Mile Spacing with Signals and Turn Lanes	1/4 Mile Spacing with Signals and Turn Lanes
E. Arterial: High-Volume Streets and Expressways⁽²⁾	1-2 Mile Spacing (Interchange)	1 Mile Spacing with Signals and Turn Lanes	1 Mile Spacing with Signals and Turn Lanes	1 Mile Spacing with Signals and Turn Lanes	1/2 Mile Spacing with Signals and Turn Lanes

¹ The urban access guidelines are applicable to Mn/DOT, County and City roads. **Bold areas** are guidelines that may be modified (see Notes).

² All volumes represent 20-year forecasts. "Low Volume" < 2,000; "Medium Volume" = 2,000 to 10,000; and "High Volume" > 10,000.

³ Non-continuous streets refer to cul-de-sac or short length local streets (less than a 1/2 mile) which do not necessarily cross the roadway in question.

⁴ Additional accesses may be permitted in the form of right-in/right-out if the corridor extends through a mature small town CBD or if the facility is under the jurisdiction of the County or city. These areas should be evaluated on a case-by-case basis.

⁵ For four-lane County or city roads, the guidelines may be relaxed to 1/4 mile spacing.

⁶ Continuous left turn lanes or a raised median with left turn lanes may be considered if retrofitting an existing corridor and access guidelines cannot be achieved.

⁷ All access locations should have adequate stopping sight distance, drainage, spacing from adjacent access, and alignment.

Table 6-3
Rural and Developing Areas Access Spacing Guidelines

Type of Public Access Requested	Type of Roadway and ADT Affected by Access ⁽¹⁾⁽⁸⁾				Two-Lane Local Roads
	Controlled Access Arterial Freeway Facility	Multi-Lane Divided Arterial or Collector Over 10,000	Two-Lane Arterial or Collector 2,000 - 10,000	Two-Lane Arterial or Collector Less than 2,000	
A. Field Access	No Direct Access	No Direct Access ⁽⁴⁾	Spacing based on other criteria ⁽⁵⁾ (1 per 40 acre or 1/4 Mile Spacing)	Spacing based on other criteria ⁽⁵⁾ (1 per 40 acre or 1/4 Mile Spacing)	Spacing based on other criteria ⁽⁵⁾ (1 per 40 acre or 1/8 Mile Spacing)
B. Private Residential or Business Access	No Direct Access	No Direct Access ⁽⁴⁾	1/4 Mile Spacing ⁽⁶⁾	1/8 Mile Spacing ⁽⁷⁾	1/16 Mile Spacing
C. Low-Volume, Non-Continuous Streets⁽²⁾⁽³⁾ or Shared Driveways	No Direct Access	1/2 Mile Spacing with No Median Opening ⁽⁴⁾	1/4 Mile Spacing ⁽⁶⁾ with Turn Lanes	1/8 Mile Spacing ⁽⁷⁾	1/16 Mile Spacing
D. Medium-Volume Non-Continuous Streets⁽²⁾⁽³⁾	No Direct Access	1 Mile Spacing with Signals and Turn Lanes	1/2 Mile Spacing with Turn Lanes	1/4 Mile Spacing with Turn Lanes	1/8 Mile Spacing with Turn Lanes
E. Low and Medium-Volume Through Streets⁽²⁾	No Direct Access	1 Mile Spacing with Signals and Turn Lanes	1/2 Mile Spacing with Signals and Turn Lanes	1/2 Mile Spacing with Turn Lanes	1/4 Mile Spacing with Turn Lanes
F. Medium and High-Volume Through Streets⁽²⁾	3-5 Mile Spacing (Interchange)	2 Mile Spacing with Signals and Turn Lanes	1 Mile Spacing with Signals and Turn Lanes	1 Mile Spacing with Signals and Turn Lanes	1/2 Mile Spacing with Signals and Turn Lanes
G. High-Volume Arterials and Expressways⁽²⁾	6-12 Mile Spacing (Interchange)	5+ Mile Spacing with Signals and Turn Lanes	2 Mile Spacing with Signals and Turn Lanes	1-2 Mile Spacing with Signals and Turn Lanes	1-2 Mile Spacing with Signals and Turn Lanes

¹ Rural and developing area access guidelines are applicable to Mn/DOT, County and City roads. **Bold areas** are guidelines that may be modified (see Notes).

² All volumes represent 20-year forecasts. "Low Volume" < 2,000; "Medium Volume" = 2,000 to 10,000; and "High Volume" > 10,000.

³ Non-continuous streets refer to cul-de-sac or short length local streets (less than 1/2 mile) which do not necessarily cross the roadway in question.

⁴ Additional access may be permitted in the form of right-in/right-out (1/4 mile spacing) if there is no other feasible local road access point.

⁵ Access criteria should be based on factors such as stopping sight distance, drainage, and spacing and alignment with other access points.

⁶ Access spacing may be reduced on County facilities to 1/8 mile.

⁷ Local land accesses off of collector and arterial streets should be minimized.

⁸ All access locations should have adequate stopping sight distance, drainage, spacing from adjacent access, and alignment.

Table 6-4

Urban Driveway Access Spacing Guidelines for New Development, Redevelopment of Existing Areas and Changes in Land Use

Minimum Driveway Distance from Intersection Street							Minimum Spacing Between Adjacent Driveways
Street with Proposed Driveway ^(a)	Nearest Intersection Street						
	Local Street	Minor Collector	Major Collector ^(d)	Minor Arterial			
				(Low Density)	(High Density)		
Local Street Private Residential ^(b) Commercial/Multi-Family	40 ft. 50 ft.	40 ft. 50 ft.	50 ft. 90 ft.	50 ft. 90 ft.	50 ft. 90 ft.	40 ft. 50 ft.	
Minor Collector Private Residential ^(b) Commercial/Multi-Family	40 ft. 50 ft.	40 ft. 50 ft.	50 ft. 90 ft.	50 ft. 90 ft.	50 ft. 90 ft.	40 ft. 90 ft.	
Major Collector ^{(d)(e)} Private Residential ^(b) Commercial/Multi-Family	Not Permitted 90 ft.	Not Permitted 90 ft.	Not Permitted 220 ft.	Not Permitted 220 ft.	Not Permitted 220 ft.	Not Permitted ^(h) 200 ft.	
Minor Arterial (Low Density) ^{(c)(d)} Private Residential ^(b) Commercial/Multi-Family	Not Permitted Not Permitted	Not Permitted Not Permitted	Not Permitted Not Permitted	Not Permitted 660 ft.	Not Permitted 660 ft.	Not Permitted ⁽ⁱ⁾ 230 ft.	
Minor Arterial (High density) ^{(c)(d)} Private Residential ^(b) Commercial/Multi-Family	Not Permitted Not Permitted	Not Permitted Not Permitted	Not Permitted Not Permitted	Not Permitted Not Permitted	Not Permitted Not Permitted	Not Permitted ⁽ⁱ⁾ 230 ft	

General Comments:

- Areas marked "Not Permitted" indicate that: a) direct access to private residential uses should be prohibited on major collectors and arterials, and b) when direct access is requested for higher intensity land uses (individual commercial/multi-family residential, multiple commercial) and the intersecting streets are of different functional classifications, access should be granted from the street with the lower functional classification.
- The "Minimum Driveway Distance from Intersecting Street" guidelines refer to full access driveways. Driveways may be located

Notes:

- Maximum curb cut width is 24 feet unless specific site plan (Internal Design and Access Review) is approved by County Engineer.
- Private Residential includes single-family, two-family, town home, quadraminium, and manor home dwellings.
- Apply specific design criteria.
- Driveways onto arterials and major collectors should be prohibited if possible. If driveways cannot be prohibited, the number of driveways onto arterials and major collectors should be minimized.
- If the nearest intersecting street is a signalized minor collector, driveways may

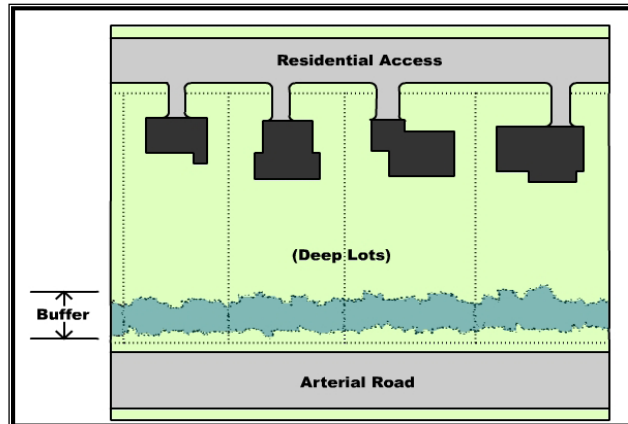
within these minimum distances but must be approved by the city engineer and should be limited to right turns into and out of the property.

3. Access will not be permitted onto the streets within right turn lanes or taper areas.
4. The County Engineer reserves the right to adjust these guidelines on a case-by-case basis. Departure from the guidelines may be approved by the County Engineer.

be located less than 125 feet from the corner, but access should be limited to right turns into and out of the property.

- f. If the nearest intersection street is a signalized major collector, driveways may be located less than 220 ft. from the corner, but access should be limited to right turns into and out of the property.
- g. If the nearest intersection street is a signalized minor arterial, driveways may be located less than 660 ft. (low density) or 1,320 ft. (high density) from the corner, but access should be limited to right turns into and out of the property.
- h. Assumes a speed of 40 mph.
- i. Assumes a speed of 45 mph.

Figure 6-8 – Minimize Access to Higher Function Roadways

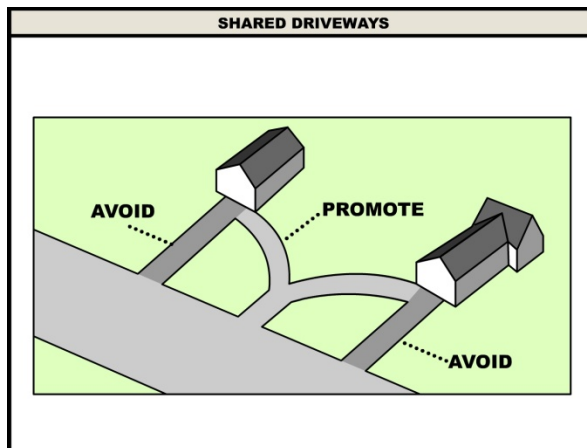


A focus on providing alternative access to an arterial through a connected local roadway should be considered. An internal street network should be designed to accommodate/connect to adjacent parcels that may someday experience similar levels of development. The ability to minimize the number of access points (both public streets and private drives) to arterial and collector roads that have a functional duty of providing mobility over land access is a primary objective of managing access.

As noted above, access guidelines can be implemented using different methods. Any process should also consider hardship cases that fall outside the guidelines. In existing corridors where substantial development has occurred, the number of existing access points usually exceeds access guidelines. Unless these areas are undergoing redevelopment, access management must be approached differently. The access management strategy for such areas should entail minimizing new accesses, while consolidating/reducing existing access points as redevelopment occurs. The following access suggestions provide alternatives for minimizing access and for addressing access issues when the guidelines cannot be met:

Consolidate & Limit the Number of Access Points for Individual Properties
Access consolidation techniques are most applicable in situations where a substantial amount of land development has already occurred. Consolidation simply reduces the number of access points thereby decreasing the number of potential conflict points. Consolidation is most effective during redevelopment of a parcel(s). The implementation of this technique must be accompanied by good internal vehicle circulation in parking areas and on local streets. The remedy for poor site design is too often a request for additional access to the highway. Several developments along within the municipalities currently have multiple access points that may or may not be critical for everyday business operations.

Figure 6-9 – Consolidate/Shared Access Point



Shared Access Points or Cross Access Easements for Adjacent Properties

Cross-access easements are another form of access consolidation that involves agreements between adjacent property owners to maintain a joint/shared access point or to promote internal site circulation (see Figure 6-9). This technique can be especially applicable along highway sections where a number of adjacent individual residential or commercial lots have already been developed, but too few to make construction of a public street feasible.

New Developments Shall Obtain Access From an Adjacent Road

When a request for land development is submitted, specific access management techniques can be required of the development prior to granting approval. Interim access can also be granted pending further development in the area that may enable construction of supporting roads to provide alternative access. The County's approval process (i.e. platting and Subdivision Ordinance) may require dedication of right-of-way to accommodate future construction of a frontage/backage road. Streets in a development should be aligned to provide access to adjacent properties, which helps promote neighborhood connectivity, and provides quick and efficient routes for emergency vehicles and other services (i.e. mail, garbage, road maintenance).

Encourage Proper Lot Layout to Minimize Access Points

Promote access points onto local routes, instead of onto arterials or collectors. Direct residential access onto arterial or collector routes slows traffic flow and can result in conflicts when traffic levels increase. Access points should be placed on local roads, not on high-speed, high-volume state or county roads. Another technique is to require new developments that are located at an intersection (corner lot) obtain access from the secondary (intersecting) roadway rather than from the highway. The access to the local roadway should be designed in a manner that will not adversely affect the safety and operations of the local street and intersection.

Median Restrictions

If access points cannot be eliminated, consider turning movement restriction (e.g., left-in or right-in/right-out only) through installation of raised medians or other channelization or signing. The primary function of median barriers is to restrict the types of movements at intersections and/or access points, which consequently reduces the number of conflict points and potential crashes. A conflict point is a location on the roadway where normal traffic operations or patterns intersect (through traffic and turning traffic).

Intersections along a roadway can have many points of conflict with each point increasing the probability of crashes occurring in the area. By restricting the types of movements, the conflict points can be reduced.

Figure 6-10 depicts a total of 32 conflict points associated with a standard four-legged full access intersection with no restrictions. A center median barrier creates a situation where left turns and cross street through movements are prohibited. As a result the number of conflict points is reduced from 32 to only four (see Figure 6-11).

Figure 6-10 – Intersection with Full Access (No Restrictions)

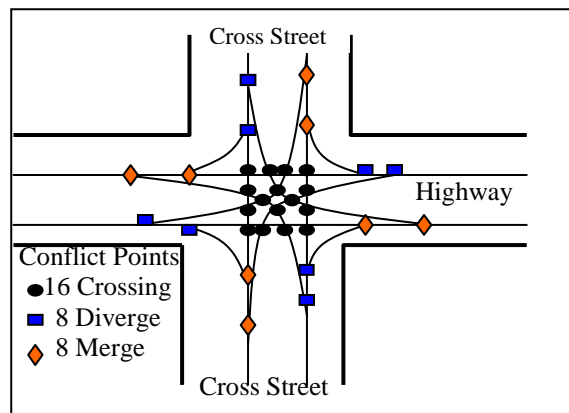
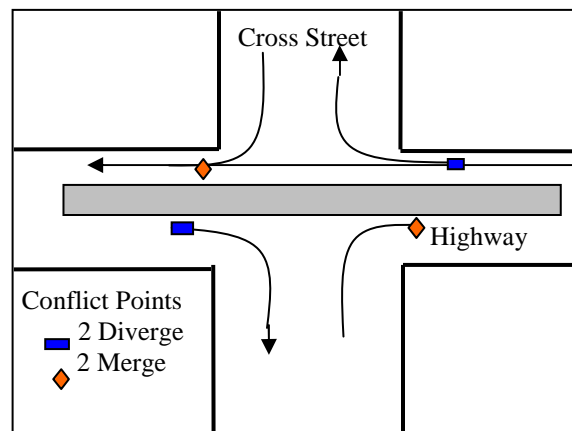


Figure 6-11 – Intersection with Right-in/Right-Out Access Only



Geometric Design and Right-of-Way Standards

Geometric design standards are directly related to a roadway's functional classification and the amount of traffic that the roadway is designed to carry. For Douglas County roadways, geometric design standards are consistent with Mn/DOT State Aid design requirements. Compliance with these standards will enable each road to perform its intended function in the network. Figures 6-12 and 6-13 illustrate roadway typical sections for two-lane regional arterials and minor arterial/ major collector roads. Each component identified in the typical sections is essential to a particular roadway's ability to perform its function in the roadway network.

Figure 6-12 – Lane Regional Arterial Roadway Typical Section

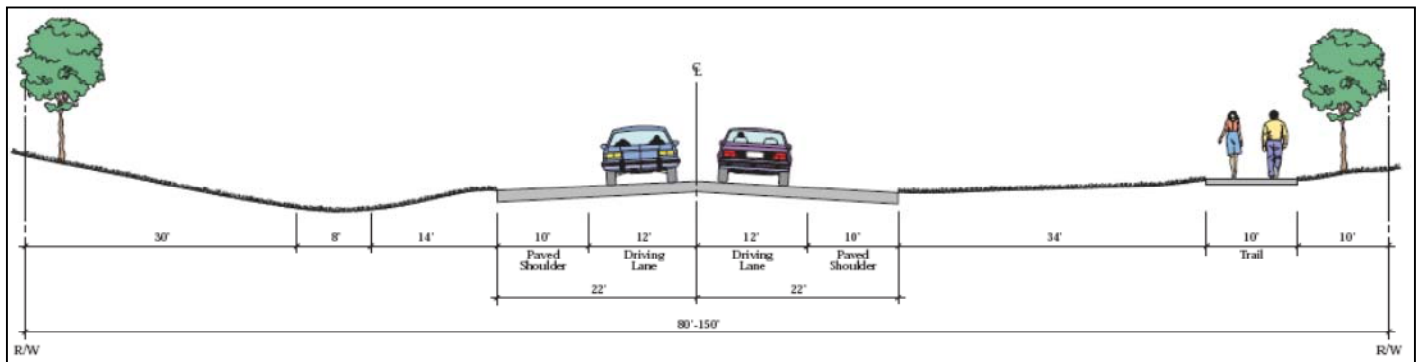
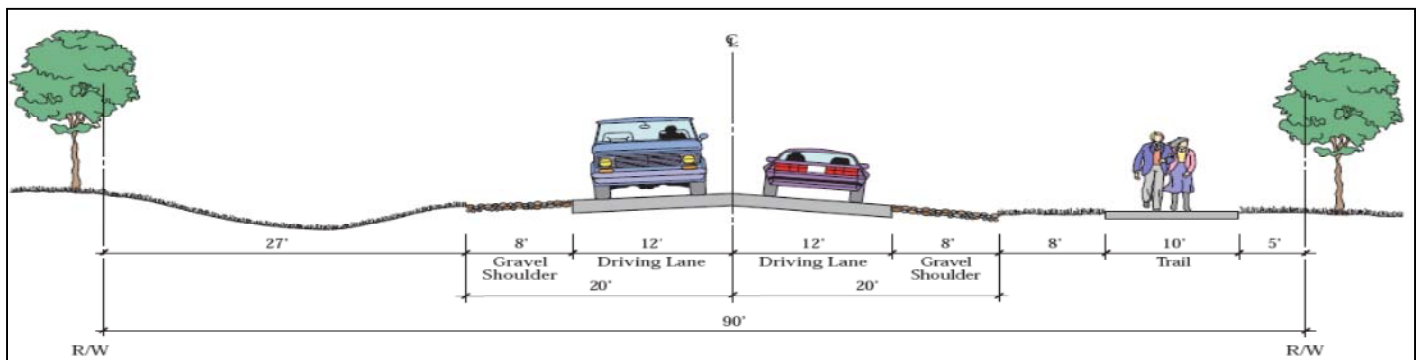


Figure 6-13 – Two-Lane Minor Arterial/Major Collector Roadway Typical Section



Roadway Width – Roadway and travel lane widths are directly associated with a roadway's ability to carry vehicular traffic. On all County Arterial and Collector roadways, a 12' travel lane is required for each direction of travel. The 24' total travel width is needed to accommodate two-way traffic safely. In addition to the travel width, minimum shoulder/parking lanes widths are also required to accommodate parked or stalled vehicles. Roadway widths not meeting design standards may result in decreased performance of the particular roadway and additional travel demand on the adjacent roadway network components. For example, a sub-standard collector roadway may result in additional travel demand on an adjacent local street resulting in an overburden for adjacent landowners. Similarly, additional local circulation

may result on an adjacent minor arterial resulting in reduced mobility for regional trips.

Right-of-Way Width – Right-of-Way width includes the minimum property necessary for the recommended roadway design under normal conditions. The minimum right-of-way provides sufficient space for the roadway itself, traffic control devices, snow storage, and other maintenance activities. Additional right-of-way and/or easements may be necessary to accommodate elevation changes as well as turn lanes at intersections, sidewalks and trails, and private utilities. Right-of-Way requirements may be increased for site-specific circumstances, at the discretion of the County Engineer.



Additional Right-of-Way for Sidewalks, Trails, and Berms – These amenities and alternative modes of transportation can be accommodated within the right-of-way of the roadway as long as a sufficient amount of right-of-way exists to safely locate these features. Sidewalks and trails along roadways shall meet the Americans with Disability Act (ADA) requirements and shall be placed outside a roadway's clear zone. Sidewalks shall be 5'-8' wide and typically require an additional 10-15 feet of right-of-way. Bituminous trails shall be 8'-12' wide and typically require an additional 15-20 feet of right-of-way. Berms are encouraged to preserve the livability of residential areas along minor arterials in urbanizing areas. Since the berms principally benefit adjacent property owners, they shall be primarily constructed outside the County-owned right-of-way and maintained by local units of governments or private property owners. The width of a berm greatly depends on desired heights and surrounding topography. Surface water drainage needs to be considered in areas where berms are proposed to ensure adequate drainage systems are protected and not affected by the berm.

Intersection Design Standards – In addition to the typical section elements illustrated on Figures 6-12 and 6-13, additional design requirements are necessary to achieve and maintain safe and efficient operations at roadway intersections. Roadway intersections result in critical locations for roadway performance. The overall safety and efficiency of a roadway network can often be determined by the quality of intersection design and operation. Construction of properly designed right- and left-turn lanes can dramatically improve intersection safety and operations. Bypass lanes are another option to improve safety and operations, but should only be considered in rural areas under the conditions where a "T" intersection would result and where the fourth leg of the intersection is not expected to be constructed.

Traffic control on the Douglas County roadway system, including at public and private street intersections, shall be consistent with the Minnesota Manual on Uniform Traffic Control Devices (MMUTCD).

Driveway Design Standards – Similar to roadway intersections, driveways create conflict points along county roadways. Improperly designed driveways may result in operational and safety deficiencies for both the roadway and driveway users. Design details for driveways on county roadways shall be reviewed and approved by the County Engineer.

Future Functional Classification System

The functional classification system (see Figure 6-3) for roadways in Douglas County was reviewed to ensure appropriate network connectivity is maintained and that the appropriate classification is assigned based on 2030 projected traffic volumes. Additional criteria considered in determining if a roadway's functional classification should be changed included:

- Estimated Trip Length
- Trip Type
- Spacing
- Continuity
- Mobility
- Connections to Activity Centers
- Accessibility
- Speed

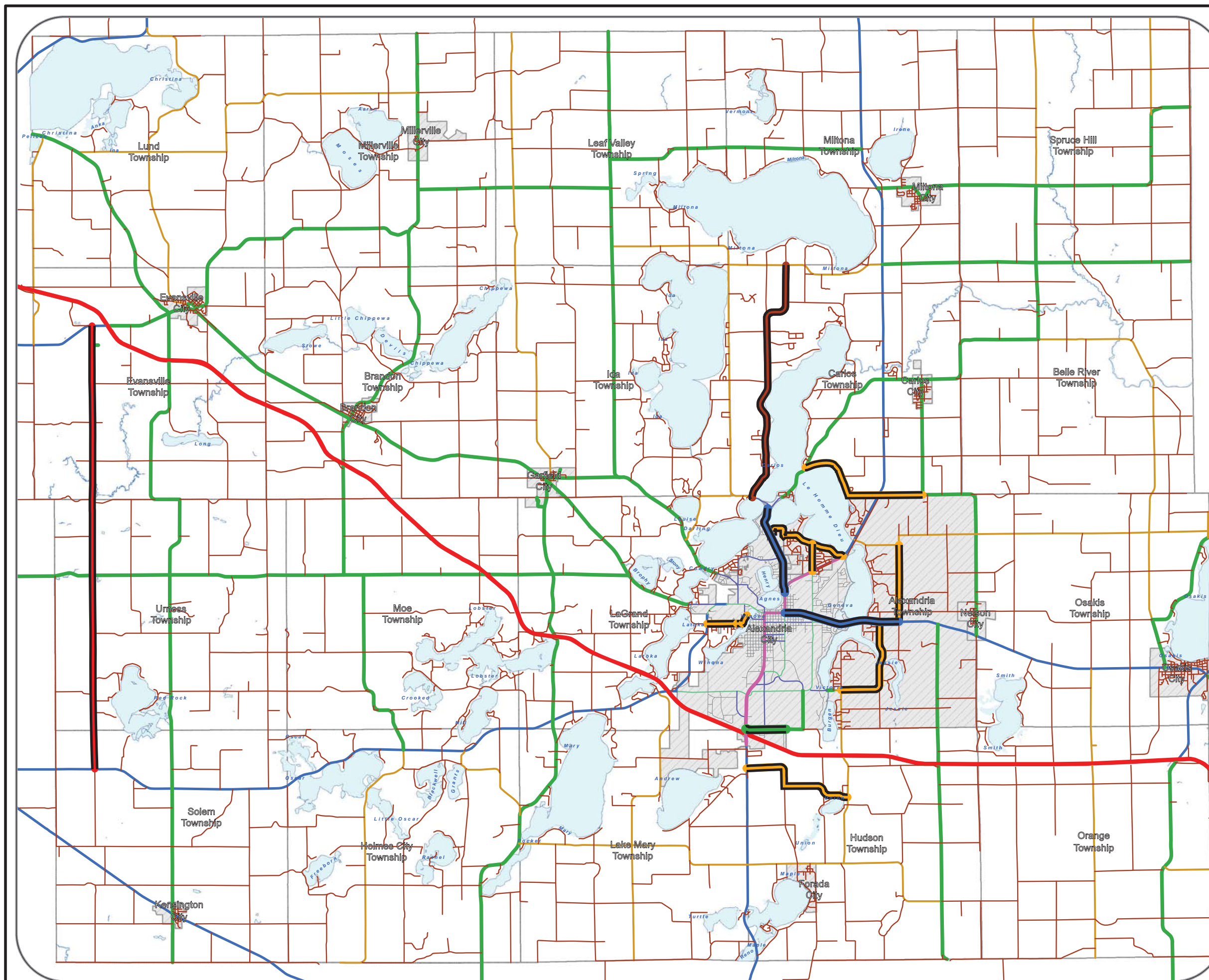
Based on this review, there are a few changes that should be considered to the functional classification system. Table 6-5 and Figure 6-13 identify the recommended routes for reclassification of their functional classification designation.

Table 6-5
Recommended changes to Functional Classification Designation

Route	From	To	Proposed Functional Classification
Part of CR 86 and CR 87	TH 29	CSAH 23	Minor Collector
CR 81	CSAH 23	TH 27	Minor Collector
Liberty Road	TH 27	CR 73	Minor Collector
Part of CR 120, CR 85, and CSAH 20	CSAH 42	CSAH 9	Minor Collector
50 th Avenue	TH 29	Railroad Crossing	Major Collector
CR 90	CSAH 45	Willow Drive	Minor Collector
CR 70	CSAH 42 (Nokomis St)	CR 70 (Govt Point Dr)	Minor Collector
CR 70 (South LeHomme Dieu Drive)	CR 70 (Govt Point Dr)	TH 29	Minor Collector
CR 70 (McKay Ave)	CR 70 (S. LeHomme Dieu Dr)	TH 29	Minor Collector
CSAH 42 (Nokomis Street)	TH 29	CSAH 11	Minor Arterial
TH 27 (3 rd Avenue)	TH 29	Liberty Road	Minor Arterial
CSAH 11	CSAH 5	CSAH 42	Rural Local
CSAH 25	TH 79	TH 27	Rural Minor Collector

DOUGLAS COUNTY Comprehensive Plan

Figure 6-14: Future
Functional Classification



Legend

Future Functional Class

- Major Collector
- Minor Arterial
- Minor Collector
- Rural Local
- Rural Minor Collector

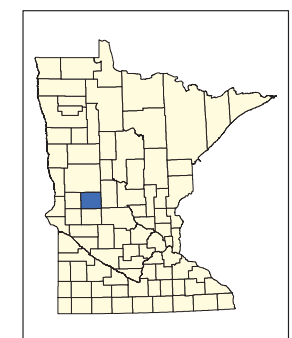
Functional Class

- Principal arterial - Interstate
- Rural Major collector
- Principal arterial - Other
- Rural Minor arterial
- Rural Minor collector
- Rural Local
- Urban Collector
- Urban Minor arterial
- Urban Local

Jurisdiction Boundary

- Included Townships
- Excluded Areas

Data Source:
MNDOT & Douglas County



THIS MAP IS A COMPILATION OF INFORMATION AND DATA IN DOUGLAS COUNTY OFFICES AND IS NOT A SURVEY. THIS DRAWING IS TO BE USED FOR REFERENCE PURPOSES ONLY AND THE COUNTY IS NOT RESPONSIBLE FOR INACCURACIES HEREIN CONTAINED.
THE WATER FEATURES AND ROAD CENTERLINES SHOWN HEREON ARE BASED ON AERIAL PHOTOGRAPHY DATED APRIL 1998.

CREATED BY: DOUGLAS COUNTY
SURVEY AND GIS

Date: 8/4/2011

1 0.5 0 1 2 3 4 Miles

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Given the criteria presented above, roadways located within and within close proximity to the communities may experience a change in their function due to ongoing changes in land use. This situation would typically require a higher functional designation be given to a particular roadway. A future designation change would acknowledge a roadways' true function that may place an emphasis on mobility over land access. The County will continue to monitor several other roadways as land use changes (development and/or redevelopment) occur over time.

Future Jurisdictional Classification System

As discussed in Section 2.1, roadway jurisdiction is important because it affects a number of organizational functions and obligations (i.e. regulatory, maintenance, construction, and financial). An investigation of the existing jurisdictional system versus the appropriate designation based on the types and volume of trips a roadway serves, functional classification, and maintenance ability was conducted. The goal in reviewing jurisdiction is to match the function of a roadway with the appropriate organizational level (government jurisdiction) that is best suited to handle the route's function.

Jurisdictional Transfer Guidelines Issues and factors that must be considered when determining potential jurisdictional changes include: historical practices, type of trips served (purpose and length) by the roadway, existing and forecast volume of traffic, access controls, existing and future functional classification designation, legal requirements, and funding and maintenance issues. The following guidelines are proposed to provide a basis to review the routes in Douglas County for potential jurisdictional transfers, but are not to be used to determine if a jurisdictional transfer is feasible and/or politically acceptable, nor do they establish a time frame under which a transfer is to occur. Instead, the guidelines define a common sense approach for arriving at logical jurisdictional designations. Once there is agreement on how the jurisdictional designations should be established, an on-going jurisdictional transfer process will need to be developed. This process should address issues such as the financial implications for construction and maintenance of the facility, operational implications (perceived level of service, ability to maintain), perceived fairness in the distribution of route responsibilities, and timing of transfer. It is not anticipated that all guidelines must be met in order for a jurisdictional designation to be recommended. However, the more criteria a route meets, the stronger the case for considering a future change in jurisdiction.

State Jurisdiction Guidelines

State jurisdiction (Interstate Highway, U.S Highway, and Trunk Highway) is focused on routes that commonly can be characterized as follows:

- classified as either a principal or minor arterial;
- typically longer routes that provide for statewide and interstate travel, serving longer regional trips that connect larger population and business centers;

- commonly spaced at intervals that are consistent with population density, such that all developed areas of the state are within reasonable distance of an arterial. (As a guide, rural arterial routes are considered to “serve” a community if it is within 10 miles or 20 minutes travel time on a minor arterial);
- typically have higher design features (such as paved shoulders, turn lanes, and properly spaced access points), which are intended to promote mobility (higher travel speeds) and have less emphasis on property access; and
- typically carry the major portion of trips entering and leaving urban areas.

County Jurisdiction Guidelines

More commonly located in rural areas, county jurisdiction (County State Aid Highways and County Roads) is focused on routes that can be characterized as follows:

- functionally classified as a minor arterial, major collector, or minor collector; provide essential intra-county connections/links not served by principal and/or other minor arterial routes. County highways/roads serve larger populations or traffic generators (business nodes) that are not directly served by arterial routes;
- commonly spaced at intervals that are consistent with population density so as to provide reasonable access to arterial or collector routes in developed areas; and may provide links between local traffic generators and outlying rural areas.

Local Jurisdiction

Roadways that primarily provide property access and local traffic circulation are normally under local jurisdiction (city or township). These routes typically constitute 65 to 80 percent of the entire system mileage and can be characterized as follows:

- typically shorter in length and carry lower traffic volumes; and
- primary emphasis on land access and traffic circulation to residential neighborhoods, rural developments, and small commercial/industrial areas.

Candidates for Potential Jurisdictional Transfer

Based upon the guidelines listed above, a number of routes should be considered for jurisdictional transfer. If the current average daily traffic volume on a specific route is low (<200 trips), this supports the idea that the segment of roadway is not serving a intra-county or regional function and therefore should be considered for jurisdiction under a local roadway authority (city/township).

For any jurisdictional transfer to occur, Douglas County would need to follow the provisions outlines in Minnesota State Statutes §162.02 and

§163.11. Furthermore, Douglas County and the local jurisdiction (city or township) would need to enter into an agreed-upon process. Such a process may involve the following elements:

- A non-binding schedule with a target time frame for completing the jurisdictional transfer.
- Obtaining municipal consent for the jurisdictional transfer of a CSAH routes to a local agency if the route falls within the municipal boundary.
- A clear understanding of relevant statutory requirements including the requirement that a route that reverts to the township requires a public hearing, completion of repair or improvements to meet standards for comparable roadways in that jurisdiction, and continue maintenance for a minimum two year period before the date of revocation, as well as other limitation of the establishment, alteration, vacation or revocation of county highways.
- The transfer of responsibility for operational and maintenance requirements, including utility permitting, driveway access permits, changes to traffic controls and signing, and level of routine regular maintenance.

Programmed or Planned Improvements

Programmed improvements are those improvements that have been approved for implementation with identified funding sources. Programmed improvements are identified in Mn/DOT's State Transportation Improvement Program (STIP), Douglas County's Construction Plan, and the cities Capital Improvement Plans (CIPs).

Mn/DOT

The State Transportation Improvement Program (STIP) for FY 2011-2014 identifies several improvements within Douglas County.

FY 2011

- Rainbow Rider Transit operating assistance
- Assistance in purchase of 3 buses for Rainbow Rider Transit
- Pedestrian/Bike Trail adjacent to TH 29 between CR 85 and LeHomme Dieu Beach

FY 2012

- Trailblazer Transit operating assistance
- Assistance in purchase of 2 buses for Rainbow Rider Transit

FY 2013

- Rainbow Rider Transit operating assistance
- Assistance in purchase of 3 buses for Rainbow Rider Transit

FY 2014

- CSAH 1 re-grade/surface from Evansville to 3.1 miles south



-
- TH 29 mill and overlay from TH 55 junction (north of Glenwood) to I-94

Douglas County

The Douglas County Public Works (2011-2015) Construction Programs identifies several transportation improvements within Douglas County including:

Fiscal Year (FY) 2011

- CSAH 1 Reconstruction (CSAH 5 NW for 0.4 miles)
- CSAH 5 Reconstruction (CSAH 1 to Main Street)
- CSAH 7 Overlay (S. Millerville limits to N. County Line)
- CSAH 11 Reconstruction (Carlos/Darling Bridge to 0.3 miles north of CSAH 34)
- CSAH 34 Reconstruction (CSAH 11 to Casa Marina Road)
- CSAH 156 Overlay (S. JCT CSAH 7 to N JCT CSAH 7)
- CSAH 158 Overlay (S JCT CSAH 9 to N JCT CSAH 9)
- CSAH 159 Overlay (SOO Line RR to CSAH 158)
- Millerville Township Bridge Replacement
- Bike Trail (LeHomme Dieu Beach to CR 85)

FY 2012

- CSAH 19 Surfacing (TH 79 to Pelican Point Road)
- CSAH 20 Reconstruction (TH 29 to CSAH 9)
- CSAH 44 Overlay (CSAH 22 to CSAH 42)
- CSAH 45 Turn Lanes & Signal (CSAH 82 intersection)
- CSAH 82 Overlay (W County Line to CSAH 41)

FY 2013

- CSAH 1 Grading/Box Culvert (0.8 miles N of Lake Jennie Rd to CSAH 82)
- CSAH 11 Overlay (CSAH 34 to Carlos Timbers Drive)
- Various CSAH overlays, to be determined

FY 2014

- CSAH 1 Surfacing (0.8 miles N of Lake Jennie Rd to CSAH 82)
- CSAH 1 Overlay (CSAH 8 to 0.8 mi. N. of Lake Jennie Road)
- CSAH 4 Reconstruction (CR 93 to TH 27)
- CR 94 Overlay/Surfacing (Country Lane to CSAH 4)
- Various CSAH overlays, to be determined

FY 2015

- CSAH 13 Overlay (TH 29 to CP rail line)
- CSAH 28 Shoulder Widening (CSAH 4 to TH 29)
- CSAH 42 Overlay (0.4 miles SW of CR 120 to TH 29)
- CSAH 46 Overlay (CP Railroad to 9th Avenue)

- CSAH 162 Reconstruction (Osakis)
- Various CSAH and CR overlays, to be determined



City Street Improvements

Local roadway improvements within the eleven municipalities will also occur as they deem necessary. Continued coordination between Douglas County and these communities should occur to assess the potential of collaborative efforts on future road improvement projects.

Coordination with Other Jurisdictions

Douglas County should continue to coordinate with adjacent jurisdictions (i.e., Ottertail County, Grant County, Pope County, and Todd County) as well as the cities and townships within the County and Mn/DOT when planning future improvements. Coordination among jurisdictions provides opportunities for collaboration that could benefit all agencies and the public, which in turn can result in financial and time savings through economies of scale as well as potentially reducing construction impacts to residents and businesses through the coordination of projects.

Alternative Modes of Transportation and Active Living Principals

Travel modes that are alternatives to private use of the automobile are growing in importance in all areas throughout the nation. Transit, bicycles, and pedestrian facilities must be planned, supported, and enhanced in the future to assist in reducing single-occupant vehicles placing a high travel demand on the roadway system. It is envisioned that the multimodal system in Douglas County will develop through cooperation, coordination, and in partnership with the state, cities, townships, as well as private partnerships. The expansion of these facilities will also assist in promoting Active Living principals into the daily activities of county residents.

Active Living is often defined as a way of life that integrates physical activity into our daily routines. Studies indicate that nearly two-thirds of the American population is overweight and that approximately 70 percent of adults do not achieve the U.S. Surgeon Generals recommendation for thirty minutes of physical activity at least five days a week. The goal of active living principles is to encourage real changes in design, transportation, and policies to create and promote environments that make it safe and convenient for people of all ages to be more physically active.

Because multimodal system and facilities serving the residents of Douglas County is limited, the County shall explore the implementation of a “complete street” policy that would require future transportation improvements to consider all users, including motorist, pedestrians, bicyclists, and transit uses. Below is a summary of the existing transit, trail, and rail facilities located within the County.

Transit

The Rainbow Rider Transit Service provides demand-response/dial-a-ride and fixed (deviation) route services and operates bus service throughout Douglas County, Grant, Pope, Stevens, Todd, and Traverse Counties in Central Minnesota. Douglas County will continue to support these services as

well as future opportunities that may expand transit services including additional fixed routes with scheduled times/dates between towns and potential service to the Saint Cloud Area.

Trails



In recent years, increased attention has been given to bicycles not only as a means of recreation, but also as a means of practical transportation. Although the trips have many similarities, people biking for recreation often value different facility characteristics than those biking to an employment or shopping destination. Two basic needs for improving bicycling/pedestrian facilities for all purposes are:

- The need for continuous facilities that connect important origin and destination points. This includes removing physical barriers and ensuring system continuity is maintained across political boundaries; and
- The need to provide facilities with increased safety for the user. A trail/sidewalk system can serve some commuter transportation demand, however these facilities typically service recreational needs. The development of trails/sidewalks will primarily be a local responsibility for the communities with some opportunities to partner with Douglas County.

The Central Lakes Trail crosses the County and provides connections between several communities and developed areas along the route. Within these communities and developed areas, future pedestrian/bicycle connections would provide continuity by linking residential and commercial areas to this cross county corridor.

In cooperation with local units of government and other interest groups, the County should also consider establishing a trail system that connects higher density developed areas (cities) to County Parks, Wildlife Management Areas, and other public lands or regional amenities.

Future county roadway projects will consider the integration of complete street principals where all users (motorists, pedestrians, bicyclists, transit) are considered in the early planning and design processes. Also, additional safety features shall be considered in pedestrian/bicycle improvements, especially within municipalities where the demand for this type of alternative transportation is greater. Possible improvements may include additional signing, pavement stripping, flashing crosswalks, actuated signal systems (i.e. Hawk signal system), and grade separated crossings (over/underpass).

Rail

The County will continue to support the use of the Canadian Pacific (CP) rail lines that run parallel to TH 55 and north-south through Glenwood, Alexandria, and Parkers Prairie. These rail services provide freight services that benefit agricultural and industrial uses in the County and throughout the region.

6.4 Goals, Objectives, and Policies

Transportation goals, objectives, and policies should reflect a vision of what Douglas County's transportation system should provide and help guide priorities for future investment. They will also help guide priorities for future investment, either as a publicly-maintained local system or in partnership with regional or state transportation agencies. These transportation goals, objectives, and policies provide the County with a means to measure the performance of the transportation system over time, and as necessary, an opportunity to reassess, revise and/or supplement the desires of the County. These goals, objectives, and policies are not ranked or presented in order of importance or need.

Goal #1

Preserve and Enhance the Transportation System (TS).

Objectives

- 1.1** Maintain the existing transportation system by making scheduled improvements to replace worn or obsolete components of the system.
- 1.2** Seek opportunities to improve existing roadways through land use changes or redevelopment opportunities and by coordinating improvements with local and State roadway partners and their funding programs.
- 1.3** Pursue functional classification changes and jurisdictional reassignments to ensure roadways are appropriately classified based on the function provided and that the appropriate jurisdiction is responsible for each roadway type.

Policies

- TS1.1** As the greatest investment priority, the County shall preserve its existing transportation system in the highest order of operating condition.
- TS1.2** The County will continue to maintain pavement and permanent right-of-way fixtures associated with the roadway system (including bridges) using routine inspections and maintenance and improvement programs coordinated by Douglas County Public Works.
- TS1.3** The County will coordinate regional roadway preservation improvements with other transportation system partners in the County, including Mn/DOT, municipalities, and existing/future transit providers in the area.
- TS1.4** The County will develop a transportation system that is cost-feasible, where each expenditure works toward satisfying a public transportation policy.
- TS1.5** The County will review all plans for development/redevelopment to determine their impact on the transportation system.
- TS1.6** The County should develop a list of roadways where jurisdictional and functional classification changes should be pursued and/or monitored for reassignment.

Goal #2

Improve the Functionality and Safety of the Transportation System.

Objectives

- 2.1** Analyze the current transportation system and assess its performance.
- 2.2** Identify system deficiencies by examining trend data, including safety (crashes), forecast traffic volumes (capacity), and accessibility (mobility).

Policies

- TS2.1** The County will encourage the study of reasonable traffic management techniques where documented safety issues exist.
- TS2.2** The County will monitor crash statistics for trends and tailor crash reduction improvements for targeted areas.
- TS2.3** The County will capture opportunities to implement local and regional roadway improvements with proposed development and/or redevelopment projects.
- TS2.4** The County will continue to work with public roadway partners and private property owners on access management strategies along primary highway corridors.
- TS2.5** Where applicable, the County will integrate safety features into pedestrian/bicycle improvements, especially within municipalities.
- TS2.6** The County's land use development standards will promote safe and efficient access to the transportation system. Require new development to provide an adequate system of local streets while limiting direct access to major thoroughfares (e.g. TH 27, TH 29) in order to maintain safe and efficient operations on these roadways.
- TS2.7** Require the dedication or preservation of right-of-way consistent with adopted right-of-way standards when property is platted or subdivided, and work with landowners/developers during the site planning and platting process to implement safe and efficient roadway design that look first to provide access via a local roadway rather than a regional roadway.
- TS2.8** The County shall continue to implement access management guidelines to assist in preserving future roadway capacity and improving safety along all roadways.

Goal #3

Enhance Transit Opportunities and Usage.

Objectives

- 3.1** The County will support local and regional transit providers and programs that benefit residents and visitors to the area.
- 3.2** The County will assess the changing transit needs of area residents through continued coordination with the outreach efforts of local and regional providers.

-
- 3.3** The County will encourage transit use through improvements to accessibility, service, and choice.
 - 3.4** The County will ensure planned development/redevelopment consider future accommodations for transit facilities or services.

Policies

- TS3.1** The County will coordinate with the Rainbow Rider Transit Service to determine future transit services consistent with the County's transit market and its associated service standards and strategies.
- TS3.2** Evaluate the need for transit facilities and accommodations in the redesign and reconstruction of roadways whether or not they are currently used by transit providers.
- TS3.3** Reduce travel demand by encouraging programs that provide alternatives to single occupant vehicles.
- TS3.4** Encourage collaboration with surrounding counties and communities on the need for and location of improved and/or expanded transit services.

Goal #4

Enhanced Pedestrian/Bicycle Facilities.

Objective

- 4.1** Provide a network of interconnected pedestrian/bicycle facilities that provides connections among communities, to residential neighborhoods, and commercial developments.

Policies

- TS4.1** Work with the other local units of government to identify and construct pedestrian/bicycle connections that are efficient and safe for all users.
- TS4.2** The County will explore the implementation of a complete streets policy where appropriate pedestrian/bicycle facilities will be reviewed and required in county transportation projects and new developments/subdivisions.

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Inter-governmental Cooperation



7.1 Introduction

Intergovernmental cooperation is an arrangement by which counties, municipalities, school and other special service districts communicate issues and coordinate plans, policies and programs to address and resolve areas of mutual concern and benefit for the greater community. The level of complexity may depend on the specific issue(s) being considered. Examples of intergovernmental cooperation include identification of mutual issues and concerns, information and / or resources sharing, entering into formal agreements or the consolidation of services and / or jurisdictional authority.

Benefits that may be derived through intergovernmental cooperation include the ability to identify and act upon common issues with consistency, predictability and mutual understanding; the establishment of trust between jurisdictions; economies of scale (through avoidance of service redundancies), operational efficiencies and cost savings. Most common examples of intergovernmental cooperation typically involve multi-jurisdictional agreements for sharing police and fire protection services.

7.2 Local Units of Government

Douglas County contains eleven cities and twenty townships for a total of thirty-one individual governmental units. With approximately 12,415 people, Alexandria is the largest municipality in the county. In addition, the County includes a special sanitary sewer district and is home to seven (7) school districts, one charter school and a number of private schools.

Cities

1. Alexandria
2. Brandon
3. Carlos
4. Evansville
5. Forada
6. Garfield
7. Kensington
8. Millerville
9. Miltona
10. Nelson
11. Osakis

Townships

1. Alexandria
2. Belle River
3. Brandon
4. Carlos
5. Evansville
6. Holmes City
7. Hudson
8. Ida
9. La Grand
10. Lake Mary
11. Leaf Valley
12. Lund
13. Millerville
14. Miltona
15. Moe
16. Orange
17. Osakis
18. Solem
19. Spruce Hill
20. Urness

School Districts

- I.S.D. 206 (Alexandria)
- I.S.D. 207 (Brandon)
- I.S.D. 208 (Evansville)
- I.S.D. 213 (Osakis)
- I.S.D. 547 (Parkers Prairie)
- I.S.D. 2149 (Minnewaska)
- I.S.D. 2342 (West Central)

Regional Agencies:

Districts

Pope-Douglas Solid Waste - Pope / Douglas Solid Waste Management is a partnership created by Pope and Douglas County in 1983. This partnership was created to manage the solid waste stream generated in both counties.

Sauk River Watershed District – A watershed management district covering 5 counties with the mission of applying “unique abilities and authorities in ways that protect and enhance [the] watershed’s resources for today and tomorrow.”

Douglas Soil and Water Conservation District (SWCD) – was organized in 1954 by local farmers for the purpose of promoting the art and science of good land use. The SWCD assists landowners and operators in planning and applying the soil and water conservation practices needed to protect and improve their soil and water resources. The SWCD is a legal subdivision of the State of Minnesota, operating under a charter issued by the Secretary of State on November 12, 1946. The activities of the District are governed and directed by an elected board of five supervisors.

Chippewa River Watershed Project – The Chippewa River Watershed Project is a non-regulatory, cooperative partnership and citizen based approach focused on improving water quality and watershed life in the Chippewa River and its tributaries. The CRWP is currently funded with state Clean Water Partnership Grants, Federal 319 Grant Dollars, and local water plan contributions. The CRWP also relies heavily on the volunteerism and commitment of our partners.

Local Utility

Alexandria Lakes Area Sanitary District (ALASD)

The Alexandria Lakes Area Sanitary District provides wastewater collection and treatment services to an area of 200 sq. miles including the City of Alexandria and to substantial portions of the surrounding townships of Alexandria, Hudson, LaGrand, Lake Mary, Ida, and Carlos.

Non-governmental Organizations

The Alexandria Area Economic Development Commission (AAEDC) was formed in 1990 and serves as a catalyst for industry and community development in Douglas County and the Alexandria Area. The organization provides a range of services helping businesses start-up or relocate to the

area, to working on long-term goals of expansion, as well as providing information and leadership for numerous community initiatives.

Douglas County Lakes Association (DCLA)

“The mission of the DCLA is to support member associations by coordinating and leading county-wide environmental and limnological efforts; to provide governmental and regulatory liaison; and to promote education, public awareness, and advocacy of lake and lakeshore issues.”
From organization web site.

Existing Intergovernmental Cooperation

Joint Powers Agreement for the Douglas County Lakes Area Regional Planning Agency.

Joint County-Township Planning Agreement with Alexandria Township.

County officials and staff participate significantly in the Douglas County Association of Townships.

Douglas County Public Works holds an Annual Informational Meeting for Townships and Municipalities.

7.3 Goals and Policies

Goal #1

Douglas County shall initiate and/or participate in the intergovernmental coordination mechanisms necessary to ensure consistency among local, county and regional government plans and policies and to participate in resolving conflicts that may arise.

Goal #2

Douglas County shall coordinate land development and planning activities to allow for orderly growth and facilitate the efficient provision of government services and facilities. The County shall coordinate with those State, regional or local entities having planning, implementation, operation and maintenance responsibilities for providing government and quasi-government (nonprofits and nongovernmental entities) services and facilities. This is especially important when establishing or modifying services, service areas, service extensions/expansions and where applicable, establishing level of service standards. Areas of coordination may include, but not be limited to, the following topics:

- Land Use
- Transportation
- Parks and Recreation
- Utility Services including waste water treatment
- Conservation
- Housing
- Libraries
- Schools
- Development Activity

-
- Annexation

Goal #3

Douglas County shall initiate public outreach activities to inform and educate its townships, municipalities and citizens on the contents of the Comprehensive Plan.

Policies

- IG1.** Douglas County shall periodically review the comprehensive plans and plan amendments of constituent and adjacent local governments, state and regional agencies for consistency with the goals, objectives, and policies of this Comprehensive Plan.
- IG2.** Douglas County shall provide its comprehensive plan and plan amendments to its municipalities and applicable regional and state agencies.
- IG3.** Douglas County shall coordinate with its municipalities to ensure compatibility in land planning and zoning for those lands adjacent to an incorporated area.
- IG4.** Douglas County should seek to identify and resolve current and potential issues resulting from orderly annexation agreements between townships (not including Alexandria Township) and the City of Alexandria and become involved in future agreements as they are being developed.
- IG5.** The Douglas County Comprehensive Plan shall continue to be coordinated with the Minnesota Department of Transportation's System Plans to the maximum extent possible.
- IG6.** Douglas County and its municipalities shall continue to coordinate to the maximum extent feasible to achieve a consistent and compatible county-wide transportation system.
- IG7.** Douglas County shall initiate coordination with school districts on the development of school facilities and supporting land use, services, and infrastructure through the joint review and sharing of plans, programs, and data between agencies.
- IG8.** Townships and cities should be included in Parks and Trails planning activities when they occur within that Township, adjacent to a city or within 2 miles of the City of Alexandria.
- IG9.** Douglas County and the Alexandria Lakes Area Sewer District (ALASR) shall coordinate the expansion and / or extension of waste water treatment infrastructure, land use planning and land development through the joint review and sharing of plans, programs, and data between agencies.
- IG10.** Douglas County shall negotiate interlocal agreements addressing extra-jurisdictional service delivery when increased efficiency and effectiveness will be achieved.
- IG11.** Douglas County shall continue to coordinate its shoreland policies and regulations with the MNDNR.

IG12. Douglas County shall continue to coordinate its surface water and groundwater policies and regulations with the MNDNR, MN DOH and MNPCA. Douglas County will work with MPCA to develop a Closed Landfill Restricted Use Ordinance.

Implementation



8.1 Introduction

The Comprehensive Plan as a general goal and policy guide to resource conservation and land development in Douglas County has little meaning if it is not carried out with specific land use actions.

Implementing programs need to be developed to achieve the intent of the Plan. These programs can take many forms. The County presently has several land use control mechanisms such as zoning and subdivision ordinances that control land use activities to assure compatibility with the Comprehensive Plan. It is also necessary that these programs be maintained so that conflicts do not exist between the Plan and the implementing ordinances.

This section is the overall recommendations of the Comprehensive Plan. The Douglas County Land and Resource Management Department will take the primary responsibility for implementing the recommendations of this chapter.

8.2 Development Ordinances

Zoning Ordinance

Zoning is the primary regulatory tool used by governmental units to implement planning policies. It consists of the Official Zoning Map and the supporting ordinance text.

The purpose Zoning Ordinance is to promote the public health, safety, comfort and general welfare of the people of Douglas County. The Ordinance regulates and restricts the location of buildings proposed for specific uses, the height and bulk of buildings, provides for minimum sanitation standards, and regulates and determines the areas of yards and housing density, to a considerable degree depending on the provision of water and/or sewage treatment facilities.

Within a land use plan designation, there may be several zones that will accomplish the intent of that designation. For example, an area designated in the Plan for rural residential may be zoned any one of several zones that permits residential development. The particular zone will be based upon the type of conditions in that area and how they apply to the rural development policies of the Plan.

Any zoning proposal, whether on a large area basis or an individual property, must be determined to be consistent with the goals and policies of the Comprehensive Plan. Where a conflict exists between the Plan and existing zoning, the Plan directives must prevail.

The Zoning Ordinance and Zoning Map are amended from time to time to reflect new policies adopted by the County. The County should review its existing Zoning Ordinance and Map for inconsistencies with the adopted Comprehensive Plan Update, and create a schedule for amending the zoning documents to reconcile divergences. An important first step is to compare the current zoning map with the adopted Land Use Map and reconcile discrepancies. There may be valid reasons why the two documents are not

identical, but these reasons should be clear. The current version of the zoning ordinance went into effect September 18, 2003 and was last updated on September 26, 2006.

Subdivision Ordinance

The other most widely used land use control mechanism is the subdivision or land division control ordinance. The purpose of the ordinance is to safeguard the best interest of Douglas County, the homeowner, the developer, the township, and local municipalities within the County; encourage well planned subdivisions by the establishment of design and construction criteria; to improve land records by establishing standards for surveys and plats; and protect the environmentally sensitive areas of the County. The current version of the subdivision ordinance went into effect August 2006 and was last updated September 26, 2006.

Park and Recreation Facility Ordinance

The purpose of this ordinance is to provide rules and regulations for the use of and general conduct in the parks and open space under the jurisdiction of Douglas County Board of Commissioners. The Park and Recreation Facility Ordinance was adopted by the Board of Commissioners on July 6, 2004.

Water Surface Use Ordinance

The purpose of the water surface use ordinance is to control and regulate, the use of the all waters located within the boundaries Douglas County and to promote its fullest use and enjoyment by the public in general and the citizens of Douglas County in particular; to insure safety for persons and property in connection with the use of its waters; to harmonize and integrate the varying uses of its waters; and to promote the general health, safety and welfare of the citizens of Douglas County, Minnesota. The ordinance was adopted by the Douglas County Board of Commissioners on June 23, 2009.

8.3 Capital Improvement Program

Another potential tool for implementation is the Capital Improvement Program, which establishes schedules and priorities within a five-year period. The County first prepares a list of all public improvements that will be required in the next five years, including transportation and county facilities projects. Then all projects are reviewed, priorities are assigned, cost estimates prepared, and potential funding sources identified. The Capital Improvement Program allows the County to provide the most critical public improvements, yet stay within budget constraints. Many of the recommendations of this Comprehensive Plan can be articulated in a Capital Improvements Program. Through this CIP, the recommendations can be prioritized, budgeted and programmed into the County's decision making process.

8.4 Community Involvement and Communication

The County should continue to encourage opportunities for citizen participation at all levels of the planning and development processes through appointed citizen commissions and boards, and attendance and participation at public meetings. The County should continue to disseminate information

through the County's website (www.co.douglas.mn.us), brochures, and press release distribution to area newspapers.

8.5 Inter-Governmental Cooperation

One of the more critical plan implementation programs is Douglas County's cooperation with the cities, special interest groups and other counties. Planning issues often have regional implications that affect several jurisdictions. To carry out not only the County Plan but also to aid other jurisdictions to accomplish their goals and policies, coordination agreements and cooperative decisions must be made.

Coordination between the cities and townships and Douglas County is vital municipal growth. The cities and townships have the primary interest in the lands within their growth boundaries while the County has jurisdiction over land use changes. The similar situation exists in rural areas with special districts such as sewer and watershed districts.











In adopting agreements and recognizing regional and other jurisdiction's plans, the County is committed to the vital coordination that is necessary to accomplish effective planning for the area. (See Table 8.1 for specific strategy recommendations).















8.6 Specific Implementation Action Items












A community's final step in the comprehensive planning process is to set priorities for strategies associated with the specific Plan Elements to achieve its vision and goals. Just as many distinct policies can speak to a given goal, a community can select a range of strategies or action items – consistent with its policies – to achieve any of its goals. Reaching an understanding of which should be given the highest priority is a key step a community should take to implement the Plan.







Figure 8-1 provides a summarized list of specific implementation action items for each comprehensive plan element. The action items have been assigned a priority rating of high, moderate, or low and assigned a completion timeline in terms of a short or medium timeframe that Douglas County should undertake to implement the 2030 Plan Update. The recommended action items may require substantial cooperation with others, including local governments and property owners. In addition, other local and County government priorities may affect the completion of these key actions in the time frames presented.

Figure 8-1 – Implementation Action Items

Plan Element	Action Item	Priority	Short-Term 1-3 years	Medium- Term 4-6 years	On-going
Natural Resources					
	Establish a Conservation Overlay District based on priority natural areas identified in the plan and establishes the rule that apply to those areas.	High			
	Expand and refine Natural Resources Inventory and Assessment Data for Sensitive Areas and areas within the Conservation Overlay District.	Medium to High			
	Revise the development process to include consideration of: 1) Conservation Overlay District; 2) Planning area-specific conservation priorities; 3) planning area-specific storm water management criteria; 4) updated sensitive areas mapping; 5) site-specific Natural Resources Inventory/Analysis and proposed ecological restoration and management plans.	High			
	Identify conceptual county-scale conservation corridors based on natural resource data and existing or future trail connections.	Medium			
	Support the completion of a county geologic atlas in cooperation with Minnesota Geologic Survey and share the resulting information with other jurisdictions in Douglas County.	High			
	Create a Shoreland overlay zoning district and adopt some or all of the 2009 Draft Shoreland Rules.	Medium			
	Update the County's environmentally sensitive features review process for proposed developments (i.e., use more complete and updated information).	High			
	Promote revision of the County's runoff management standards to address rate, volume, and water quality. Limit impervious surfaces and their connectivity and require volume control such that there is no runoff for a given storm event (to be determined). Provide incentives for naturalized stormwater management (e.g., vegetation filtering, infiltration, and maintaining stable water levels).	Medium			
	Compile existing lake and watershed studies and management plans from within the County. Identify and fill important data gaps. Utilize data and refine county's stormwater management policies.	Medium			
	Identify, map, categorize and prioritize stormwater problem areas. These are areas that contribute significantly to downstream water quality problems, including suspected or	High			

Plan Element	Action Item	Priority	Short-Term 1-3 years	Medium- Term 4-6 years	On-going
	confirmed impaired waters. Incorporate findings into the development review process.				
Parks, Trails, and Open Space					
	Create a County Board appointed Parks, Trails, and Open Space Commission to serve as a citizen advisory board on policy, department succession, recreational facility improvements, and park expansion.	Medium			
	Prepare and adopt a five-year Parks, Trails, and Open Space System Plan that would provide a greater level of park and trail system detail and serve as an efficient tool for annual budgeting and funding purposes. Provide details on implementing a regional parks and recreation system including active living principles.	Medium			
	Coordinate with Active Living Douglas County to share user survey software and education program development tools.	High			
	Coordinate with Active Living Douglas County to incorporate active living principles into park and trail design that would provide a variety of opportunities for physical activity and accommodate a wide range of individual preferences and abilities.	High			
	Provide opportunities for regular training and certification to include playground safety, accessibility, and natural sustainable maintenance practices, etc.	High			
	Update the Park and Recreation Facility Ordinance to conform with policy statements found within the Comprehensive Plan.	High			
Land Use					
	Update the comprehensive zoning and subdivision ordinances to conform with policy statements found within the Comprehensive Plan.	High			
	Review of Comprehensive Plan by County Staff on an annual basis to identify areas in need of amendments and report to County Board for approval.	Medium			
	Adopt Active Living Principles that incorporate development patterns that encourage mixed uses, compact and compact design.	High			
	Develop fiscal impact standards for new development that consider capital investments of new sewer, water, and road infrastructure including long-term operations and new facility maintenance.	High			
	Adopt a "Right to Farm" policy for Ag and Ag Limited.	High			

Plan Element	Action Item	Priority	Short-Term 1-3 years	Medium- Term 4-6 years	On-going
Transportation					
	Invest in improved pavement conditions in a effort to establish an interconnected network of 10-ton structural capacity roads capable of accommodating the heavier loads placed upon them by trucks and farm equipment.	Medium			
	Continue to monitor high volume intersections and make appropriate safety improvements (pavement markings, signage, turn lanes, correct skews/sight lines, lighting) as deemed necessary to alleviate a safety concern. Site specific technical studies that investigate crash rates, types, and severity rates may be necessary to determine the appropriate safety improvement(s).	High			
	Cooperate with Mn/DOT and the City of Alexandria to continue monitoring existing at-grade railroad crossings at CSAH 46 (34th Ave.) and County Road 106 (50th Ave.).	Medium to High			
	Monitor the following roadways in and surrounding the City of Alexandria to ensure no significant congestion issues develop. CSAH 21; CSAH 22; CSAH 42; CSAH 43; CSAH 44; CSAH 45; CSAH 46; and CSAH 82.	Medium			
	Continue to monitor several intersections and roadway segments identified in the Road Safety Audit completed in January, 2008 over time to ensure appropriate improvements are made within a timely fashion to reduce safety concerns.	Medium to High			
	Continue to support the implementation of expanded transit services and pedestrian/bicycle facilities throughout Douglas County.	High			
	Review future transportation projects and new developments for the inclusion of appropriate pedestrian and bicycle facilities and where appropriate, require these alternative transportation facilities be included.	High			
Intergovernmental Cooperation					
	Facilitate public meetings to present and discuss the Comprehensive Plan.	Medium			
	Make a printed copy of the Comprehensive Plan and plan amendments available at the County's Land and Resource Management office for citizens to review and on the Douglas County website.	High			

Plan Element	Action Item	Priority	Short-Term 1-3 years	Medium- Term 4-6 years	On-going
	Initiate an annual planning coordination meeting with the staff from municipalities in the County and Alexandria Township.	High			
	Coordinate an annual meeting between ALASD and the Planning Advisory Commission to discuss future land use planning, development projects, and to encourage the sharing of planning information. Include affected Local Government Units, ASLASD Sanitary Sewer Board representative and ASLAD staff Development Review Team discussions of projects proposing an extension of central sanitary sewer services.	Medium			
	Seek input and coordinate with cities and Alexandria Twp on proposed plats with over 20 housing units and all zoning and conditional use applications on land directly adjacent to cities and Alexandria Twp and within 2 miles of the City of Alexandria.	High			

Appendix A

Community Input

Natural Resource Preservation

- Zebra mussels/ milfoil control – people (boats) are not inspecting when they leave lake
- Control in fishing tournaments – no one at recent tournament, sponsors need to patrol landing
- Shoreline development – need very firm guidelines; quit giving variances
- Extra protection for Sloughs/”Shallow Lake”
- Lake Osakis is polluted but becoming better
- Invasive species
- Protection of shallow lakes – motorized restrictions on NES lakes
- Water quality should be high priority
- Control water runoff from agricultural land to protect the lakes. Filter runoff to clean it before it gets to the lakes.
- Look at aquifers – future water supply
- Is there a way to control carp?
- Provide tax incentives to lakeshore property owners who are willing to “turn back the clock” to a less altered shore
- Public access to shoreline areas by dedicating 25 feet from water as public space
- Revise Green Acre Law. Preserve CRP as farmland
- Work to adopt the DNR’s “Alternative Shoreland Standards”
- Work to address runoff from ag land to our lakes
- Have sensitive area maps for each lake – analyze and keep protected
- The city of Alexandria has less restrictive rules for shoreland than the county. Every time the city annexes shoreland, we fret.
- Controlled access lots are not a good thing and DNR alt.
- ALASD needs an alternative to discharge of treated waste water into Lake Winona

Intergovernmental Cooperation

- Law Enforcement Center – no planning involved. Center came up conveniently right after jail approval. No room for expansion
- Petty personal issues on various boards seem to get in way of making decisions. Shades of good old boy network
- Weakness is the Jail – LEC
- Building codes in the 2 mile radius of city of Alexandria; Lack of County building code
- Cooperation between county/city/township/school districts for funds
- HRA’s (County/City) for affordable housing developments
- Need to combine regional to be able to provide continued services. Should be dropping boundaries
- More divulging of information between counties and any government departments with good ideas
- City and county don’t cooperate. County/Townships get along fairly well. Cooperation poor overall especially with Alexandria

Agricultural Preservation

- Organic farming – better understanding on county/township level for need to follow national guidelines
- Development of agricultural related industries seem to be more restricted than other industries
- Dakota County has strong agricultural community
- Old Barns – can they be preserved? Provide incentives or tax break to help save them
- Revisit rural residential zoning classification
- Preservation of existing aquifers

- Houses conflict with farm operations
- Cluster subdivision/conservation
- Provisions for wind farms

Public Infrastructure

- County Rd 42 did not need to be that wide/long
- Wireless internet vs. lines was a good improvement
- Public transportation – Rainbow rider good but not economical; use smaller vehicles/more diversified fleet
- Any control on school open enrollment?
- Woodland School – no one can walk to it
- Why so many grade schools? No new high school
- We are a small community, but a large city; we are rural and want to keep that flavor/atmosphere
- Better transportation services in the outlying towns for the elderly
- Need heavier built and surfaced roads – roads poorly built, soft
- Need inspections/upgrades to sewer/septic systems
- Being on I-94 allows us to get to the Twin Cities and Fargo easily and allows other to get to us
- Need roads accessible for bikes/walkers safely along with cars
- Need bike trails to new schools
- Sewer in out parts of Douglas County is non-existent. Should have been addressed years ago
- Excellent roads – Can always use more money
- Sanitary sewer systems are extremely important to protecting surface and ground water
- Paving rural gravel roads encourages suburban development; LaGrand township encouraged this on their website
- Strength is the solid waste incinerator
- Alexandria Airport is a good asset; possible regional cooperation. Need new location
- Add new minimal cloverleaf at East bypass I-94 and County Rd 17
- Reengineer County Rd 27 and 45 and I-94; reduce speed limits from 55 intersection to 45 in the area of stoplights
- Think ahead for light rail. We will want it eventually
- Need truck bypass not through Alexandria
- Limit on garbage trucks per small city lane

Land Use

- We don't want to become like a Burnsville (large, overdeveloped, urban)
- GIS is good
- Growth should go up and not out
- Infrastructure is need to support development
- Agricultural preservation
- Contain urban sprawl. Keep rural areas rural
- Enforce current regulations regarding individual septic systems; start mandatory periodic septic testing
- Developments around high value agricultural lands are an issue
- Rural residential areas planned out too far ahead of actual development; rural residential should be a conditional use instead.
- All shoreland on a particular lake is in the same “zoning district.” May need sensitive areas, etc.
- Look at wellhead protection areas
- Gravel deposits should be mapped and protected

- Gravel pits need to be reclaimed when vacated.
- Connect existing trails/develop horse, multi-use trails
- Zoning ordinance is outdated and complicated
- Need zoning buffers (commercial to residential)
- Need to better utilize existing gravel pits, enforce existing rules, bond for reclamation
- Where does population growth go?; area between Lake Ida and Lake Carlos?
- Growth is good but it has to be orderly
- Encourage development in city and townships where infrastructure exists
- Traditional neighborhood development (TND) will help to reduce expansion of development to our surrounding natural and agricultural areas
- Green acres concept for woodlands
- Encourage conservation practices that protect natural resources
- Need north/south connection through the community

Economic Development

- Downtown trouble
- Need more industries
- Keep working to attract new industry
- Develop industrial park areas
- Keep jobs in area for our youth
- Infrastructure to support development
- Jobs are hard to come by
- Shift to more service jobs
- People have lost good jobs
- Workforce housing needed
- Encourage industrial/economic development that provides jobs with a livable wage
- Develop industrial parks as close to city limits as possible
- Need diverse economic base
- Low wages – who can make it on \$10/hr?

Recreational

- Need more bike trails
- Brandon needs a better trail access; current parking at top of hill; then you have to go downhill on the grass with bikes or rollerblades; get land near the corner for parking area at same level as trail
- Brandon area county roads need tarred shoulders for bicyclists
- Add services to Chippewa City Park sign
- County should look at purchasing more lakeshore land for recreational use
- Preserve resorts
- Need additional public beaches
- More or expanded bike trails – link them to schools and places of business
- Redefine what a “park” looks like. Primitive areas providing wildlife habitat can be enjoyed by the citizenry
- Brandon needs a better access point
- County park system is good
- Add walking bridge access outlet between Devils and Little Chip in Chippewa Park
- Keep tax rates on resort property low to encourage resorts to stay open. Resort business brings a lot of business to our area

- The town needs a convention center and a 3,000 seat auditorium
- Poor siting of homes and expecting sewers
- Need ghost platting
- Fill in closer to cities – no leapfrog development
- Residential lots are too large
- More trail systems – more connectivity to central lakes trail
- Need more control with kids at spruce hill park at night
- Too many little parks, not enough big ones
- Parks are expensive to maintain
- Need larger auditorium suitable to our community – have technology with sound system
- Resorts are selling off- can't afford to buy an entire resort when owners need to sell
- The existing bike lanes are great – we need more everywhere

Demographics

- Promote business/industrial development to provide jobs to keep our young people in the area
- Possible satellite clinics for medical care in small communities
- Continue home health care programs
- Consider additional housing options for the aging population
- How does the county deal with welfare?
- More retirees coming to Douglas County. Is there adequate housing/transportation/home deliverable meals

Mapping Exercise Key Points

Participants at the public input meetings were asked to place dots on a series of maps indicating things that were good and things that were bad. Green dots indicated things that were good and blue dots indicated things that were bad. Participants also made notes on or near the dot to indicate what it was that was either good or bad. The following is a summary of the key items that were listed as good and bad:

- Strong Natural Resources are present in Spruce Township that need to be preserved
- The amount of lakes, open space, parks, and public land in Douglas County is good
- Trails are good – more are needed
- Farmland is good – preserve it
- Protect and improve County, State, and Federal Land
- Gravel resources were marked as bad
- Zebra Mussels are bad
- East Side I-94 Exit is bad
- Rural Residential Land Use is bad

**SWOT Analysis Results
Community Meeting
October 22, 2009**

STRENGTHS

- Natural resources/lakes (10)
- Strong agricultural base (3)
- Strong industrial base (3)
- Interstate (3)
- Recreational opportunities (3)
- Diverse economy/workforce (2)
- Healthcare (2)
- Good school system (2)
- Water quality/quality fisheries (1)
- Sewer Districts (1)
- Technical college (1)
- High draw factor (1)
- Distance to Twin Cities (1)
- No floodplain issues (0)
- Transportation infrastructure (0)
- County hospital (0)
- Historic resources (0)

WEAKNESSES

- Socio-economic weakness – financial issues (4)
- Lack of protection of natural environment and lakes (3)
- Weak agricultural and natural resource preservation (2)
- Contentious sewer issues – cost (2)
- Cost of services to rural residential areas (2)
- Lack of understanding between urban and rural populations (2)
- Conflicting idea of what rural is (1)
- Lack of preservation of small towns (1)
- Lack of rapid transit (1)
- Lack of major carriers at airport (1)
- Large area defined as rural residential (0)
- Distance to the Twin Cities (0)
- Economic disparity (0)
- Zebra mussels (0)
- Lack of public beaches (0)
- Expensive lakeshore property (0)
- Limited amount of quality lakeshore left (0)

OPPORTUNITIES

- Location – distance from major centers (3)
- Still have rural areas that are rural (1)
- Still have natural resources (1)
- Boulevard along Hwy 29 by Theatre L’Homme Dieu (0)
- Live in rural area and enjoy Alexandria’s amenities

- Continue with low taxes
- People want to come to Alexandria
- Opportunities for better inter-governmental cooperation
- Adopt building code
- Growth in retired population
- Opportunity for more land dedication

THREATS

- NIMBY and NOML (8)
- Government conflicts (6)
- Trickle down affect of state budget problems (3)
- Water quality (1)
- Growth (1)
- Zebra mussels (1)
- Other invasive species (0)
- Aging (0)
- Unplanned growth (0)
- Workforce issues with amount of retirees

ACCOMPLISH

- Solve transportation issues
- Usable plan
- Plan for multi-modal transportation
- Right to farm – infringement on agriculture
- Zoning – land use conflicts
- Protect lakes
- Orderly development
- Recreational needs
- Septic inspection
- Smart planning
- Pro growth
- How plan will support businesses
- Maps for planning
- Promote growth
- Protect natural resources
- Incorporating water plan
- Alternative energy/energy/zoning
- Plan that has clear measures for implementation
- User friendly
- Realistic vs. idealistic

Appendix B

Existing Park Facilities Matrix

County Park Facilities Matrix						
Facilities Available	Kensington Rune Stone Park	Spruce Hill Park	Lake Brophy Park	Chippewa Park	Curtis A. Felt Park	Le Homme Dieu Beach
Camping				X		
Charcoal Grills	X	X	X	X	X	
DATA Snowmobile Trail	X	X				
Drinking Water	X	X	X	X	X	X
Electricity	X	X		X	X	
Heated Bldg	X					
Hiking	X	X		X		
Historic Display	X		X		X	
Horseshoe Court	X			X		
Lakeshore	X	X	X	X		X
Picnic Shelters	X	X	X	X	X	
Picnic Tables	X	X	X	X	X	X
Playground	X		X	X	X	
Rest Rooms	X	X	X	X	X	X
Softball Field		X			X	
Volleyball Court	X				X	X
X-C Skiing	X	X				
Swimming				X		X
On Bike Trail			X	X	X	X
Fishing			X	X		X

Appendix C

Water Access Locations

Water Access Locations		
Access Name	Access Type	Administrator
Aaron Lake	Concrete	DNR
Agnes Lake	Fishing Pier	City/DNR
Agnes Lake	Concrete	City
Andrew Lake	Concrete	DNR
Andrew Lake	Carry In	DNR
Blackwell Lake	Concrete	DNR
Brophy Lake	Concrete	DNR
Burgen Lake	Concrete	DNR
Carlos Lake (East)	Concrete	Township
Carlos Lake (Northeast)	Concrete	DNR
Carlos Lake (West)	Concrete	DNR
Carlos Lake (North St. Park)	Concrete	DNR
Chippewa Lake	Concrete	DNR
Cowdry Lake	Concrete	DNR
Cowdry Lake	Carry In	DNR
Crooked Lake	Concrete	DNR
Devils Lake	Concrete	DNR
Freeborn Lake	Concrete	DNR
Geneva Lake (East)	Concrete	DNR
Geneva Lake (West)	Concrete	DNR
Geneva Lake	Fishing Pier	DNR
Gilbert Lake	Concrete	DNR
Grants Lake	Concrete	DNR
Ida Lake	Concrete	DNR
Ida Lake	Concrete	DNR
Ida Lake	Concrete	Township
Indian Lake	Concrete	DNR
Irene Lake (Northwest)	Concrete	DNR
Irene Lake (Southeast)	Concrete	DNR
Jennie Lake	Carry In	DNR
Latoka Lake (North)	Concrete	DNR
Latoka Lake (South)	Concrete	DNR
Le Homme Dieu Lake (Northwest Shore)	Concrete	DNR
Le Homme Dieu Lake (Northeast Shore)	Concrete	DNR
Little Chippewa Lake	Concrete	DNR
Lobster Lake	Concrete	DNR
Long Lake	Concrete	DNR
Long Prairie River	Carry In	DNR
Louise Lake	Concrete	DNR
Maple Lake (Northwest)	Concrete	DNR
Maple Lake (Northeast)	Concrete	DNR
Maple Lake	Fishing Pier	DNR
Mary Lake (North)	Concrete	DNR
Mary Lake (South)	Concrete	DNR
Mill Lake	Concrete	DNR
Miltona Lake	Concrete	Township

Water Access Locations		
Access Name	Access Type	Administrator
Miltona Lake (North Shore)	Concrete	DNR
Miltona Lake (Northeast Shore)	Concrete	DNR
Mina Lake	Concrete	DNR
Moses Lake	Concrete	DNR
Osakis Lake (Northwest)	Concrete	DNR
Osakis Lake (South)	Concrete	City
Osakis Lake	Concrete	DNR
Oscar Lake	Concrete	DNR
Pocket Lake	Concrete	DNR
Rachel Lake	Concrete	DNR
Red Rock Lake	Concrete	DNR
Reno Lake	Concrete	DNR
Smith Lake	Concrete	DNR
Stowe Lake	Concrete	DNR
Turtle Lake	Concrete	DNR
Union Lake	Concrete	DNR
Vermont Lake	Concrete	DNR
Victoria Lake	Concrete	DNR
Victoria Lake	Fishing Pier	DNR
Whiskey Lake	Concrete	DNR
Winona Lake	Carry In	City

Source: Minnesota Department of Natural Resources

Appendix D

Active Living Principles

ACTIVE LIVING BY DESIGN PRINCIPLES

Active Living Douglas County is part of a nationally growing movement; Active Living by Design (ALBD). The program was created in 1998 by the Robert Wood Johnson Foundation. Its goal is to create community-led partnerships to build a culture of active living and healthy eating. Active Living is a way of life that integrates physical activity into daily routines and is based upon the following Active Living Research principles:

- Physical activity is a behavior that can favorably improve health and quality of life.
- Everyone, regardless of age, gender, language, ethnicity, economic status or ability, should have safe, convenient and affordable choices for physical activity.
- Places should be designed to provide a variety of opportunities for physical activity and should accommodate a wide range of individual preferences and abilities.
- Development patterns should encourage mixed uses, compact design, and a variety of transportation choices.
- Buildings should be designed and oriented to promote opportunities for active living, especially transportation.
- Transportation systems, including transit, should provide safe, convenient and affordable access to housing, worksites, schools and community services.
- Parks and green space, including trails, should be safe, accessible and part of a transportation network that connects destinations of interest, such as housing, worksites, schools, community services and other places with high population density.
- Municipalities and other governing bodies should plan for ongoing interdisciplinary collaboration, promotion of facilities, behavioral supports, policies that institutionalize the vision of active living, and routine maintenance that ensures continued safety, quality and attractiveness of the physical infrastructure.
- Community governing and planning processes should address the multiple impacts of the built environment and transportation choices on residents' ability to be physically active.

Appendix E

Douglas Co. Comprehensive Local Water Management Plan -
Plan's Goals, Objectives, and Action Items

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III. Goals, Objectives, and Action Items

Priority Concern: Development Pressures and Land Use

Goal 1. Manage development and growth in Douglas County in such a way as to maintain and/or improve the region's water quality.

Objective A. Guide new development with thorough planning, consideration for natural resources, and accurate information.

Actions:

1. Encourage the incorporation of the Local Water Management Plan into the County Comprehensive Plan.
2. Actively participate in the review and revision of county ordinances as they relate to the protection of water resources.
3. Identify specific protection or restoration needs of each major watershed within the County. Consider specific recommendations for best management practices and/or zoning changes to address needs.
4. Maintain updated ordinance information on county website and provide summary information to realtors.
5. Review development plans, encourage common infrastructure, and promote the use of low impact development concepts to conserve woodlands, expand open space, and protect other significant natural features.
6. Seek methods of creating incentives for conservation developments and disincentives for lot and block development designs.
7. Continue to promote the use of sensitive areas maps by the Planning Advisory Commission, Board of Adjustment, and County Board of Commissioners for use in the evaluation of environmental impacts that specific permit applications may have on local natural resources. Promote updating, increasing accuracy, and adding new information as better or more recent data becomes available, including information from the recently completed DNR County Biological Survey.
8. Continue to enforce existing shoreland ordinances and other ordinances as they relate to water quality. Where needed, dedicate personnel in the Land and Resource Management Office for targeted enforcement.
9. Cooperate and assist with the development of alternative wastewater treatment systems.

10. Improve communication between cities and county regarding shoreland alterations especially on lakes with split authority by holding a biennial meeting.

Objective B. Implement and promote land use practices that will reduce and/or mitigate negative human impacts on natural resources.

Actions:

1. Encourage conservation easements to provide buffers and/or prevent filling in wetlands on new developments in order to conserve natural areas and preserve water quality. Assist the Development Review Team with the evaluation of preliminary plats as needed.
2. Review the needs of the county in regards to implementing Surface Water Zoning ordinances. Consider setting standards for development based on lake designation or designation of special protection areas within a single lake (i.e. natural environment designation for sensitive areas of general development lakes).
3. Protect shore impact zones (SIZ) on all lakes. Revise ordinance(s) to better define "intensive clearing" and to require a Shoreland Alteration Permit for all clearing within the SIZ. Revise ordinance(s) to prohibit filling of all wetlands in SIZ.
4. Promote buffer strips, lakescaping, rain gardens and other practices that reduce the impacts of human activities. Attend meetings and give presentations to service organizations, lake associations, and realtors.
5. Obtain grant funds whenever possible to provide cost-share assistance.
6. Maintain an educational booth at the annual County Fair.
7. Continually educate LRM and SWCD staff on new best management practices, low impact development strategies, and water resource management technology.
8. Provide all new County Commissioners and Planning Advisory Commission members with information on the effects of various land uses and related water resource impacts by conducting an annual workshop, regular presentations, and requested training.
9. Continue to support solid waste programs and education efforts in hazardous waste disposal and recycling. Support efforts to educate citizens about the environmental impacts of illegal burning.
10. Utilize an aggressive marketing strategy of select water quality issues, best management practices, and conservation through use of the media, billboards, community and school presentations, and other education programs. Annually conduct a resource-related poster contest.

Priority Concern: Natural Habitat Destruction

Goal 1. Preserve, restore, and enhance natural habitat in Douglas County.

Objective A. Protect existing natural areas which provide crucial habitat for aquatic and terrestrial plants and animals.

Actions:

1. Create and maintain a clearinghouse of funding opportunities available for habitat protection and restoration projects on the Douglas SWCD website.
2. Encourage surface water zoning for the protection of aquatic habitat, vegetation, and lake bottom sediment.
 - a. Compile existing DNR data of submergent vegetation on shallow lakes and bays to identify areas where surface water ordinances should be placed.
 - b. Work with Douglas County LRM to update ordinances to include surface water restrictions of shallow basins or shallow bays of larger lakes to protect submergent vegetation.
 - c. Investigate the feasibility of surface water zoning such as no-wake zone designations on shallow lakes and sensitive bays of larger lakes as needed.
 - d. Create new ordinances to protect sensitive lakes by establishing special protection areas.
 - e. Work with LRM to implement a docking ordinance to protect in-lake vegetation.
3. Encourage Douglas County to adopt the new DNR Shoreland Standards or incorporate Alternative Shoreland Standards in a timely way.
4. Reduce wetland impacts within shoreland and urban areas of Douglas County.
 - a. Work with the City of Alexandria to establish wetland setbacks on all wetlands within the city of Alexandria.
 - b. Consider all wetlands in Douglas County to be high priority and work to further restrict wetland impacts.
 - c. Develop new wetland mitigation standards for replacement of wetlands (i.e. replacement required as close to the disturbance as possible or within same minor watershed).
5. Protect remnant woodland areas of Douglas County as a way to preserve natural hydrologic function.
 - a. Create an inventory of large wooded tracts of land in Douglas County.
 - b. Work to protect these areas from land altering activities.

Objective B. Restore previously impacted natural habitat.

Actions:

1. Restore high priority wetlands identified through the drained basin inventory to provide fish and wildlife habitat. Restore 25 acres per year.
2. Promote existing conservation programs (CRP, CCRP, WHIP, RIM/WRP) and the utilization of local, state, and federal funding opportunities.
3. Restore large drained lake basins (Crooked Hansford lakes, Wilken lake, and others identified in Douglas County) using Wetland Reserve Program ranking system to prioritize basins.
4. Work with MN DNR on water quality improvement/wildlife projects on Lakes Christina and Jennie or other projects as they arise.

Objective C. Enhance existing habitat by encouraging the establishment of healthy and diverse native vegetation.

Actions:

1. Promote buffer strips, lakescaping, rain gardens and other practices that reduce the impacts of human activities. Provide technical assistance and obtain grant funds whenever possible to provide financial assistance to landowners.
2. Research the feasibility of establishing a county tax incentive for installing, restoring and maintaining shoreline buffers, modeling Burnett County [Wisconsin] Land and Water Conservation Department.
3. Develop a guide book for shoreland property owners on restoring native buffers, local ordinances, strategies for improving water quality, and funding opportunities.
4. Assist the DNR and other organizations with exotic species control and education by providing informational materials to the public.
5. Promote the importance of preserving and restoring aquatic vegetation, as well as the importance of retaining fallen woody debris, by providing educational materials, encouraging no-wake zones, and lakescaping. Participate in at least one radio program and hold one workshop or open house annually.
6. Inventory/assess the land use adjacent to legal drainages, with special priority to those upstream of high priority lakes or rivers. Encourage the adoption of policies that require the establishment of buffers and/or side inlets where erosion and water quality issues exist. Offer assistance to landowners through conservation programs (such as CCRP) or other cost-share programs as funding is available.

Objective D. Create educational opportunities for the public.

Actions:

1. Host educational programs on the importance of preserving shoreline vegetation (in-lake and riparian).
 - a. Support Nonpoint Education for Municipal Officials (NEMO) workshops.
 - b. Create handouts, brochures, etc. describing the benefits of shoreland restoration, buffers, windbreaks, and conservation acres to wildlife and water quality.
 - c. Participate in Kids' Groundwater Festival, Junior Viking Sportsmen's Habitat Day, Awake the Lakes/Day of the Lakes, and other natural resource related events when possible.
2. Establish a resource bank for Lake Associations and/or individuals to use for setting up workshops or annual meetings.
 - a. Create data base of information on protecting and improving water quality for use by individuals or Lake Associations.
 - b. Create data base of speakers that would be available for speaking at Lakes Association meetings on water quality improvement and protection.
3. Encourage maintenance of ditches done in such a way to protect wildlife habitat. Create information material for landowners, encouraging best management practices during ditch maintenance.

Priority Concern: Wastewater and Stormwater Management

Goal 1. Improve stormwater runoff management in Douglas County.

Objective A. Improve stormwater runoff quality by increased utilization of stormwater best management practices throughout the County.

Actions:

1. Promote the use of erosion and sediment control and other best management practices to reduce the amount of sediment and nutrients entering watercourses from commercial and residential areas.
2. Encourage the use of pervious pavement systems including long term maintenance and inspection to ensure proper function. LRM will track locations of permitted pervious pavement systems. Establish a standardized inspection form.
3. Produce and distribute educational materials to inform citizens about the MN state law prohibiting the use of phosphorus in lawn fertilizers.
4. Maintain and update the inventory of all feedlots in the County through the county Feedlot Program. Follow the annual feedlot work plan and inspect, in priority order, feedlots based on proximity to water, open lots, and watershed.

5. Encourage the writing and utilization of nutrient management plans through incentives and cost-share programs. Provide technical and financial assistance for the closure of abandoned manure waste systems as needed.
6. Promote the use of erosion and sediment control and other best management practices such as buffer strips and no-till seeding to reduce the amount of sediment and nutrients entering watercourses from agricultural lands. Install sixty-five acres of buffer strips, create 2,000 feet of terraces or sediment blocks and seed 1,200 no-till acres per year.
7. Pursue funding to provide incentives or cost-share to assist agricultural landowners for implementation of erosion and sediment control and BMPs. Assist agricultural landowners with the installation of a 50 foot buffer strip on all agricultural land riparian to public waters and encourage similar practices on residential and commercial properties.
8. Work with agricultural landowners to replace open lateral tile lines with alternative tile intakes. Provide assistance when appropriate and available.

Objective B. Encourage compliance with stormwater rules and ordinances by continuing public education, promotion of BMPs, and further data collection, assessment, and management.

Actions:

1. Continue storm drain marking projects in Alexandria, Brandon, Carlos, Forada, Miltona, and Osakis to improve community awareness.
2. Monitor at least one ditch, storm drain, and/or storm water pond to evaluate quality and quantity of storm water each year.
3. Ensure MPCA and LRM Joint Powers agreement remains in place. LRM has regulatory authority for construction stormwater for NPDES permitted sites and sites where more than one acre of impervious surface is created. Provide information and workshops to contractors regarding new NPDES requirements as it become available. Review all stormwater pollution prevention plans (SWPPP) for proposed plats.
4. Create and maintain a database of detention ponds and other storm water management systems to track maintenance schedules and intervals of clean out requirements. Ensure maintenance of storm water management facilities on a regular basis.
5. Conduct tillage survey to determine crop residue levels and target areas for conservation tillage practices.

Goal 2. Improve wastewater management in Douglas County.

Objective A. Work to prevent SSTS failure and related sewage pollution in Douglas County.

Actions:

1. Work cooperatively with watershed and lake organizations to distribute educational materials and information to the public regarding SSTS operation and maintenance. Maintain a supply of brochures and other information for distribution.
2. Digitize septage disposal sites to identify areas of land spreading in coarse-grained soils that have potential for ground water contamination. Upon completion, re-evaluate the use of these areas as suitable disposal sites.
3. Educate property owners on proper septic system maintenance by distributing information, maintaining the Douglas County Website, and providing news releases at least twice a year.

Objective B. Identify and ensure the upgrade of failing septic systems.

Actions:

1. Pursue grants and low-interest loans to assist with SSTS upgrades. Continue to use Chippewa River Watershed Project and MN Department of Ag BMP Loan programs.
2. Require SSTS inspections within the next five years in all shoreland zoning districts and inspections within 10 years in all other residential zoning districts.
3. Continue to require a septic system inspection and/or Certificate of Compliance at property transfers for any systems over five years old. Continue to require Certificates of Compliance for permit applications with existing septic systems over five years old.
4. Continue to enforce Chapter 7080 of Minnesota State Rules throughout the County by requiring the upgrade on non-compliant systems and inspection of all SSTS installations.

Priority Concern: Water Quality

Goal 1. Protect and maintain surface water quality in Douglas County from further degradation.

Objective A. Monitor and assess surface waters to meet the required amount of data for MPCA impaired waters assessment.

Actions:

1. Utilize water quality data to determine long term trends and gauge effects of changing land uses.
2. Collect data on all lakes in the County approximately 50 acres or larger within the next eight years. Work with MPCA to assess surface waters to determine water quality status for protection and restoration.
3. Create a priority lake list based on major watershed (eight-digit HUC), land use, and lake ecology.
4. Work with the Minnesota DNR Division of Waters to create/acquire lakeshed maps for identified priority lakes.
5. Train volunteers in advanced water quality monitoring, beyond Secchi disk readings. Monitor lake inlets and outlets.
6. Pursue funding for monitoring activities.

Objective B. Encourage water quality protection through planning.

Actions:

1. Assist with MPCA Lake Assessment Plans.
2. Assist lake associations with the development of Lake Management Plans. Seek funding to complete development and implementation.
3. Encourage lakeshed-based planning.
4. Participate in appropriate meetings to provide technical advice, assist in coordination of water quality improvement efforts of both local and regional organizations. Attend at least 10 DCLA meetings each year.
5. Cooperate with lake associations to implement lake-specific projects. Facilitate participation in grant programs, such as the Healthy Lakes Program.

6. Educate citizens and local decision-makers on the economic values of clean water resources in sustaining the local tourism industry and maintaining property values by conducting two or more presentations at local organizations' meetings.

Objective C. View drainage systems as key to watershed management.

Actions:

1. Increase water quality monitoring of drainage ditches.
2. Host workshop(s) on alternative tile intakes.
3. Seek funding for incentives and promote side inlets, alternative tile intakes, ditch buffers, and ditch abandonment.

Goal 2. Improve or restore impaired surface waters.

Objective A. Assist with the development of TMDL studies and implantation plans.

Actions:

1. Support and cooperate with the PdTJPB on projects within or affecting Douglas County. Attend committee meetings as requested.
2. Support and cooperate with the CRWP and the MPCA on the Chippewa River TMDL process and other projects within or affecting Douglas County. Attend 12 CRWP meetings each year.
3. Support and cooperate with the SRWD and the MPCA on the Sauk River TMDL processes and other projects within or affecting Douglas County.
4. Assist and cooperate with Todd SWCD and the MPCA on the Long Prairie River TMDL process and projects.
5. Assist and cooperate with the MPCA with the Lake Winona TMDL process. Continue to work with the City of Alexandria and other agencies to improve water quality of Lake Winona.
6. Assist and cooperate with other TMDLs as needed.

Objective B. Assist with the implementation of completed TMDL.

Actions:

1. Work with TMDL lead local government units (LGUs) and MPCA to put best management practices (BMPs) on the ground to improve water quality of impaired systems.

2. Seek funding through special grants and appropriations for the implementation of BMPs.
3. Assist with monitoring of surface waters to determine the effectiveness of TMDL implementation activities.

Goal 3. Protect and maintain ground water resources in Douglas County

Objective A. Maintain and promote existing cooperative partnerships that monitor ground water.

Actions:

1. Continue to maintain seven monitoring wells to measure static water levels in select areas.
2. Provide public information on how and where to get wells tested, types of tests available, maximum allowable limits on ground water and drinking water contaminants, and what do if a well is contaminated.
3. Assist county residents with well water testing for nitrates and provide advice to them regarding testing results.
4. Work with the MN Department of Agriculture to acquire information on nitrate sensitive areas.

Objective B. Develop plans to protect ground water quality and quantity.

1. Cooperate with cities and the Minnesota Department of Health in developing and implementing wellhead protection plans for all public/community water supplies in the County.
2. Determine the feasibility of conducting a comprehensive ground water inventory such as a geologic atlas to determine availability, extent, and sensitivity to pollution of ground water resources. Incorporate ground water sensitivity information into the sensitive area maps.
3. Promote municipal water systems in all industrial areas.
4. Promote sealing of abandoned wells in all areas to reduce the potential for ground water contamination. Provide cost-share assistance when available.
5. Examine soil sensitivities and feedlot locations for potential ground water contamination. Target priority areas for nitrate testing and additional information.
6. Seek funding to study the impacts of abandoned manure pits on ground water. Seek funding for soil borings to be done to allow for the certification of compliance on undocumented manure storage facilities.

Objective C. Educate citizens on the importance of protecting ground water quality and conserving ground water resources.

1. Continue to promote public education of maintaining our ground water resources through avenues such as the Kids' Groundwater Festival, which will reach over 400 fourth grade students annually.
2. Promote the importance of water conservation.
 - a. Support municipalities in their adoption of water conservation rate structures.
 - b. Educate and encourage the public to use water efficient plumbing fixtures and appliances, and rainfall sensors on landscape irrigation systems.
 - c. Host workshops and promote the use of rain barrels.
3. Educate local officials and landowners on the benefits of reclaiming abandoned gravel pits to protect ground water recharge areas.

Implementation Schedule

Responsible Parties for Implementation

DCLA: Douglas County Lakes Association
DNR: Minnesota Department of Natural Resources
DU: Ducks Unlimited
LRM: Douglas County Land and Resource Management
NRCS: Natural Resources Conservation Service
SWCD: Douglas Soil and Water Conservation District
WPTF: Water Plan Task Force

Funding Sources

Amend-CW: Dedicated Sales Tax Funding for Clean Water
Amend-OH: Dedicated Sales Tax Funding for Outdoor Heritage
CRP: USDA-FSA Conservation Reserve Program
CWL: Clean Water Legacy Grants
DCLA: Douglas County Lakes Association
EQIP: USDA-NRCS Environmental Quality Incentive Program
Existing Staff: In-Kind
Federal/State Grants: Various Grants
RIM/WRP: BWSR Reinvest in Minnesota/USDA-NRCS Wetland Reserve Program
SCS: BWSR State Cost-Share Program

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Appendix F

Douglas County Zoning District

Douglas County Zoning District

Below is a description of each of the districts found in the County's current ordinance. A more detailed description can be found in the Douglas County Zoning Ordinance.

A – Agricultural District

The purpose of the A – Agriculture District is to provide, maintain and enhance agricultural land in the County which has been historically farmed, and to protect the agricultural and natural resource land from scattered residential development.

RR - Rural Residential

The purpose of the RR – Rural Residential District is to allow select residential development in areas where vacant or farmed land has been subject to increased amounts of single family residential development. This district is intended to be reserved for future higher density rural residential development when support services and infrastructure can be provided. It is also the purpose of this district to maintain a low density rural environment until such time as the need for additional rural residential development and rezoning to Residential (R).

R – Residential

The purpose of the R – Residential District is to allow select residential development where existing development has taken place. The purpose is also to allow residential development in staged growth areas adjacent to cities within Douglas County. The following criteria is used to determine whether development is reasonable and orderly in the staged growth areas: 1) existing pattern of growth, 2) availability of sewer and water services and 3) lot sizes of other developments in the area.

RS - Residential Shoreland

The purpose of the RS - Residential Shoreland District is to protect and regulate the use and development of the shorelands of public waters thus preserving and enhancing the quality of surface waters, conserve the natural environmental values of shorelands, and provide for wise use of waters and related land resources.

C- Commercial

The purpose of the C- Commercial District is to provide for the establishment of commercial and service activities which draw from and serve customers from the entire community or region.

I-Industrial

The purpose of the I- Industrial District is to provide for industrial uses in areas that will not be incompatible with other land uses in the County.

Appendix G

Definitions

Definitions

Active Recreation

Recreational uses that involve the development of parkland to provide facilities including the construction of buildings, fields, courses and/or other related infrastructure to support recreational activities.

Best Management Practices (BMPs)

Practices principally applicable to construction sites, parking lots, and new developments that reduce the toxicity contained in, and the volume of, water that runs into storm drains, treatment facilities, and waterways.

Cluster Development

A pattern of development employing a site planning technique that concentrates dwelling units in specific areas on a lot, site or parcel to allow the remaining land to be used for commonly owned or dedicated open space to preserve the area for agriculture, recreation or preservation of features or structures with environmental, historical, cultural or other significance. The techniques used to concentrate dwelling units may include, but shall not be limited to reductions in lot areas, setback requirements and bulk requirements, with the resultant open space being devoted by deed restrictions for one or more uses.

Conservation Design

A density neutral form of development that takes into account the natural landscape and ecology of site and facilities development while maintaining the most valuable natural resources and functions of the site. The use of conservation design promotes:

- water quality protection
- flooding reduction
- habitat and biodiversity protections
- recharged aquifers protection

Conservation Development

Conservation development, is an ecologically-based approach to development that begins with identifying priority and secondary conservation areas (portions of the site to avoid and protect) and integrates the built environment around these natural features to provide culturally and economically successful communities. Major organizing elements in conservation development typically include clustered development, smaller lots, connectivity of natural areas (e.g., greenways), restoration and stewardship of degraded lands, integration of restored areas into developed areas, low impact development practices, and trails. Residential conservation developments typically dedicate at least 50% of the site to natural open space, restoring and connecting native ecosystems and providing passive recreation opportunities.

Cottage Industry

An industry where the creation of products and services is home-based rather than factory-based. Products and services created by these industries are often unique and distinctive rather than mass-produced.

Ecosystem Services

Ecosystem services include, but are not limited to, provision of clean air and water, productive and stable soils, wildlife habitat, pollination, climate mitigation, and human enjoyment of, and fulfillment from, nature.

Low Impact Development

Low impact development (LID) is focused on an alternative approach to traditional stormwater design. Rather than expanses of impervious surfaces for runoff, conventional curb and gutter collection systems, stormwater ponds, and other gray infrastructure, LID uses pervious materials, vegetated swales, bioinfiltration cells, bioretention, and other ecological stormwater techniques to manage runoff and restore more natural hydrologic regimes to decrease runoff rate and volume as well as improve water quality.

Open Space

An area intended to provide light and air. Open space may include, but is not limited to, grasslands, wetlands, wooded areas, and water bodies.

Passive Recreation

Recreational uses that typically require little or no modifications to the land; and that produce little or no noise, light, or visual intrusion on surrounding area. Passive recreation improvements may include trails, small structures such as restrooms or visitor centers, parking etc. Passive recreation activities may include hiking, jogging, bird watching, photography, nature study, fishing, canoeing, biking, etc.

Private Parks

Land and/or facilities that provide recreational opportunities are privately-owned.

Public Parks

Lands owned, leased or secured under easement or use agreement by a political body, including but not limited to the federal government, State of Minnesota, Douglas County, and other local jurisdictions for the benefit of the citizens and managed for recreation and resource protection and preservation purposes.

Renewable Energy System

An energy system that includes technologies designed to capture solar, wind, geothermal, water, or bio-based energy to satisfy on-site electric power demand or to directly offset space-heating, space-cooling, or water heating energy consumption.

Sustainable Development

Sustainable development employs appropriate project siting practices, conservation development standards, and low impact development strategies to balance the environmental, cultural, and economic aspects of projects and maximize benefits.

Urban Agriculture

It is the production of food near or within the boundaries of a city and can include the backyard gardening, rooftop gardening, greenhouses, market and community gardens, edible landscaping, beekeeping, poultry, etc.



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