

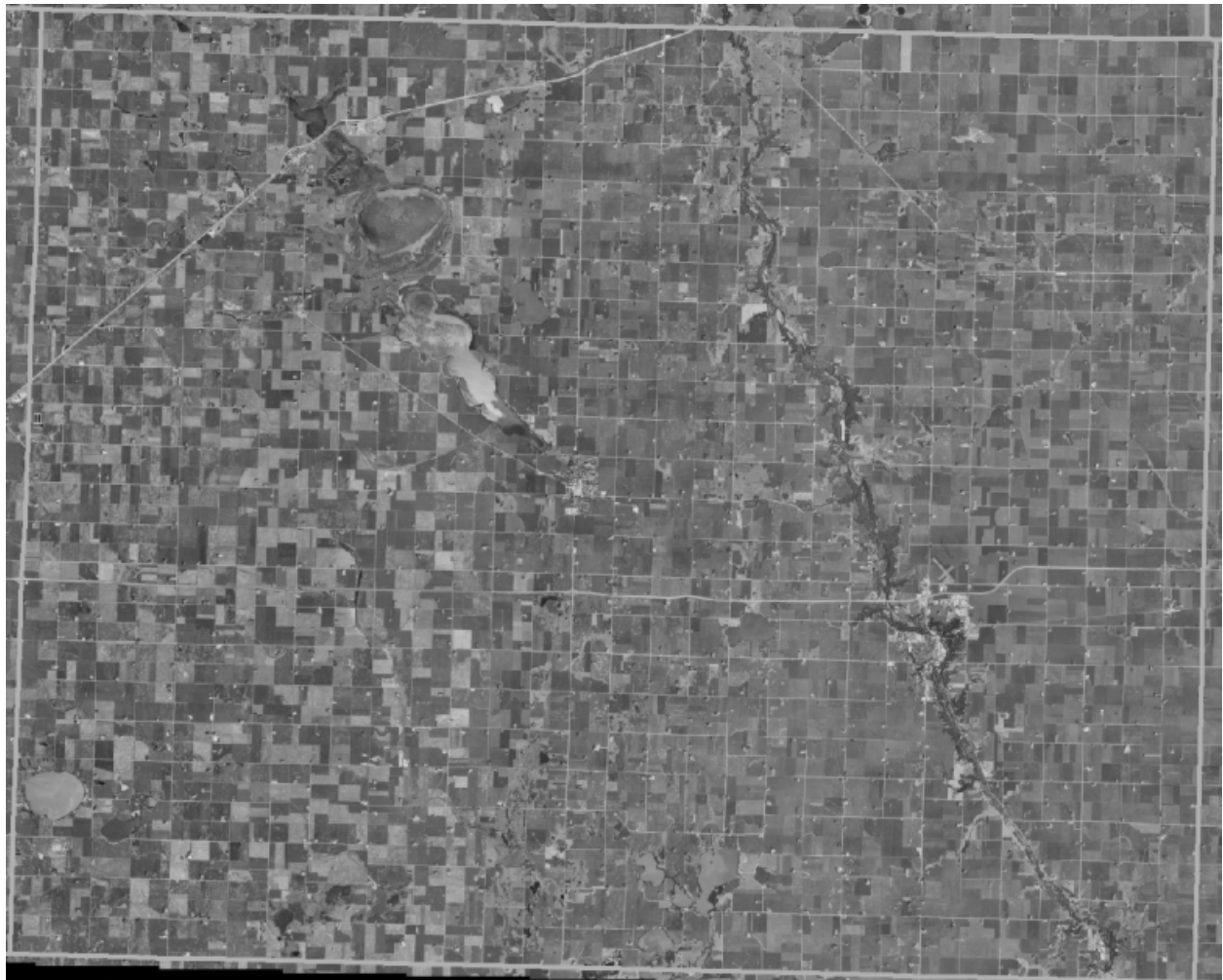
JACKSON COUNTY COMPREHENSIVE PLAN

PLANNING DOCUMENT

A FRAMEWORK FOR LAND USE AND GUIDE FOR FUTURE GROWTH

**Prepared by Jackson County Parks, Planning & Environmental Services
And Southwest Regional Development Commission**

June 8, 2010



Jackson County Comprehensive Plan

Adopted by Jackson County Board of Commissioners 6/8/10

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CHAPTER I. INTRODUCTION

Jackson County is home to about 11,000 people in Southwest Minnesota. The county encompasses a 719 square mile area on the state border with Iowa, approximately 50 miles from South Dakota. The prairie environment has provided fertile ground for a rich agricultural tradition, integrated with a network of cities and towns. While the demographic profile is aging, there are many new opportunities apparent for growth and development. Commercial agriculture is a major economic driver, inter-related with agricultural processing industries such as food and machinery manufacturing, and increasingly ethanol and bio-diesel production. The citizens of Jackson County value their community highly and work diligently to preserve the public health, safety and general welfare.

This *Jackson County Comprehensive Plan* is intended to provide a framework for land use, and help guide future growth in Jackson County. In short, the Comprehensive Plan outlines where Jackson County wants to go, and how the County intends to get there. This document is organized in six parts:

1. Introduction. This chapter provides general background information on the planning process.
2. Who We Are. The second chapter presents demographic and economic data and information that provides context for decision-making.
3. Where We Live. The third chapter describes the natural environment of Jackson County.
4. What We Have Built. The fourth chapter presents information on built infrastructure, public facilities, and commercial and residential development standards in the county.
5. Where We Go From Here. The fifth chapter lists land use goals and growth policies to be used in decision-making for Jackson County.
6. Implementation. The final chapter briefly outlines several tools to implement the goals and objectives of the plan.

1.1. WHY PLAN?

Families plan for their monthly budgets and long-term investments like a new home, college education or vacations to the lake. Businesses do long-range planning to identify market forces influencing their futures; most banks wouldn't think about financing a new startup or expansion without a well-thought business plan.

It is no different for communities. As the former Minnesota Planning agency wrote, "In an information-based economy where people can live virtually anywhere, communities wanting to be competitive, attractive places to live and work—places that thrive—will need to plan to make that happen."¹

¹ *Under Construction: Tools and Techniques for Local Planning*. St. Paul: Minnesota Planning, 2002.

Minnesota Planning outlined ten important reasons to develop and implement a local comprehensive plan. These include:

- 1) Providing legal justification for a community's land use decisions.
- 2) Creating the opportunity for residents to guide a community's future.
- 3) Helping a community identify issues, stay ahead of trends and accommodate change.
- 4) Offering a process for joint problem-solving and leveraging scarce resources among neighboring jurisdictions.
- 5) Protecting and makes the most of public investments.
- 6) Helping ensure that growth makes the community better, not just bigger.
- 7) Fostering sustainable economic development.
- 8) Helping a community maintain its resource base and other "natural capital".
- 9) Protecting property rights and values.
- 10) Providing an opportunity to consider future impacts of today's decisions.

A comprehensive land use plan is a proven method for a community, such as Jackson County, to examine current and future growth trends, assess development-related assets and liabilities, learn about best practices for the use of our land, air and water, and set visionary goals for the future. The plan is not a prescription for one particular set of rules or requirements. A comprehensive plan is rather the County's opportunity to set forth a shared vision for the future.

Legal Foundation for County Planning

Jackson County's legal authority to plan for and regulate the use of land outside incorporated municipalities is delegated by the Minnesota Legislature in statute. In 1959, Minnesota's County Planning Enabling Act authorized counties to adopt planning tools and land use controls. The former Minnesota Local Planning Assistance Center explained:

Minnesota Statutes §394.21 specifically grants to all counties, except those in the defined seven county Metropolitan Area, the authority to "carry on county planning and zoning". Minnesota Statutes §394.23 gives county boards the power and authority to prepare and adopt by ordinance, a comprehensive plan and "a comprehensive plan or plans when adopted by ordinance must be the basis for official controls adopted under the provisions of sections 394.21 to 394.37".

Minnesota Statutes §394.231 gives more specific guidance to the County on minimum requirements for a comprehensive plan, stating:

A county adopting or updating a comprehensive plan...shall consider adopting goals and objectives for the preservation of agricultural, forest, wildlife, and open space land, and minimizing development in sensitive shoreland areas. Within three years of updating the comprehensive plan, the county shall consider adopting ordinances as part of the county's official controls that encourage the implementation of the goals and objectives.

*The county **shall** consider the following goals and objectives:*

- (1) minimizing the fragmentation and development of agricultural, forest, wildlife, and open space lands, including consideration of appropriate minimum lot sizes;*
- (2) minimizing further development in sensitive shoreland areas;*
- (3) minimizing development near wildlife management areas, scientific and natural areas, and nature centers;*
- (4) identification of areas of preference for higher density, including consideration of existing and necessary water and wastewater services, infrastructure, other services, and to the extent feasible, encouraging full development of areas previously zoned for nonagricultural uses;*
- (5) encouraging development close to places of employment, shopping centers, schools, mass transit, and other public and private service centers;*
- (6) identification of areas where other developments are appropriate; and*
- (7) other goals and objectives a county may identify.*

A county comprehensive plan contains policies, statements, goals and interrelated plans for public and private land and water use, transportation and community facilities. Official controls such as zoning and subdivision ordinances must be consistent with this plan.

1.2. PLANNING PROCESS

A comprehensive plan was completed for Jackson County in 1968 by planning consultants Nason, Wehrman, Knight & Champman, Inc, of Minneapolis. That project was financed in part through an urban planning grant from the U.S. Department of Housing and Urban Development (HUD), under the National Housing Act Section 701 program, which was administered by the Office of Local and Urban Affairs in the Minnesota State Planning Agency.

The 1968 plan was organized in three basic steps, including research and analysis, the plan document and reports, and implementation procedures. The document contains extensive field surveys and analysis of population, economics, population and natural resources. The document itself contains over 100 pages with chapters on Land Use, Highways, and Parks and Recreation (including other county facilities). A zoning ordinance was also prepared at the same time.

In 1977, Jackson County received a planning grant from the State Planning Agency for the purpose of updating its zoning ordinance and subdivision regulations. The major purpose for the decision to update the zoning ordinance was to make the ordinance conform to the new administrative procedures and requirements of the County Planning Enabling Act passed in 1975. In addition, there was a concern over urban development in the prime agricultural areas in the county.

As a result, the County hired a planning consultant (Sovik, Mathre, Sathrum and Quanbeck of Northfield, MN) to assist it in developing some basic growth policies and updating its development ordinances. Over the course of a year, the Jackson County Planning Commission,

and County Staff with the assistance of the planning consultant, worked many hours to put together some basic growth policies and ordinances to better deal with the planning and development problems then facing Jackson County. Meetings were also held with the officials of the cities and townships in the county to obtain their input.

In 1993, the County Planning Commission and Staff again took up the task of overhauling the County's growth policies and ordinances, composing a unified *Jackson County Development Code*, which is now in effect as amended.

Much has changed in 40 years. In 2008, Jackson County contracted with the Southwest Regional Development Commission (SRDC) to assess issues related to existing land use goals and policies, conduct public outreach and draft materials to update the comprehensive plan. SRDC staff met with the County Planning Commission and County staff in June of 2008, and January, March and May 2009. SRDC also utilized results of other related planning projects, specifically the *Jackson County Local Water Management Plan* (2008) and the *Jackson County All Hazards Mitigation Plan* (2008). This plan includes and incorporates substantial portions of earlier planning documents, providing both continuity and contemporary reference points.

Minnesota Statutes §375.51 Subd.1 requires that a "public hearing shall be held before the enactment of any ordinance adopting or amending a comprehensive plan or official control as defined in section 394.22." This plan will then become effective after recommendation of the Planning Commission, publication of notice of intention, and adoption by the members of the County Board of Commissioners.

A good comprehensive plan is not intended to stagnate on a shelf. This is a living document that will only be useful if put into practice. As conditions change and goals and policies are exercised, Jackson County will want to periodically review, improve and update the plan.

CHAPTER II. WHO WE ARE

DEMOGRAPHICS AND ECONOMICS

Jackson County consists of twenty (20) townships, six (6) incorporated cities, and a number of unincorporated villages. [See Map 2-1 Jackson County Civil Divisions.] The City of Jackson, on Interstate-90 and US Highway 71, is the county seat and largest city in the county. Sioux Falls, South Dakota, is the nearest metropolitan area, located about 90 miles to the west. The Twin Cities of Minneapolis and St. Paul are about 170 miles north of Jackson County.

This chapter presents information on population, housing, employment and income in Jackson County, primarily from the United States Census, Minnesota State Demographic Center (MDC), and Minnesota Department of Employment and Economic Development (DEED).

2.1. POPULATION AND HOUSING

The Minnesota State Demographic Center estimates that there are 10,842 residents in the county as of 2008, 4% fewer than counted in the year 2000 US Census and about 7% fewer than counted in 1990. Growth has been found in Delafield, Sioux Valley, and West Heron Lake townships. Within Jackson County, 43% of residents live outside incorporated municipalities, in areas under the County's land use jurisdiction.

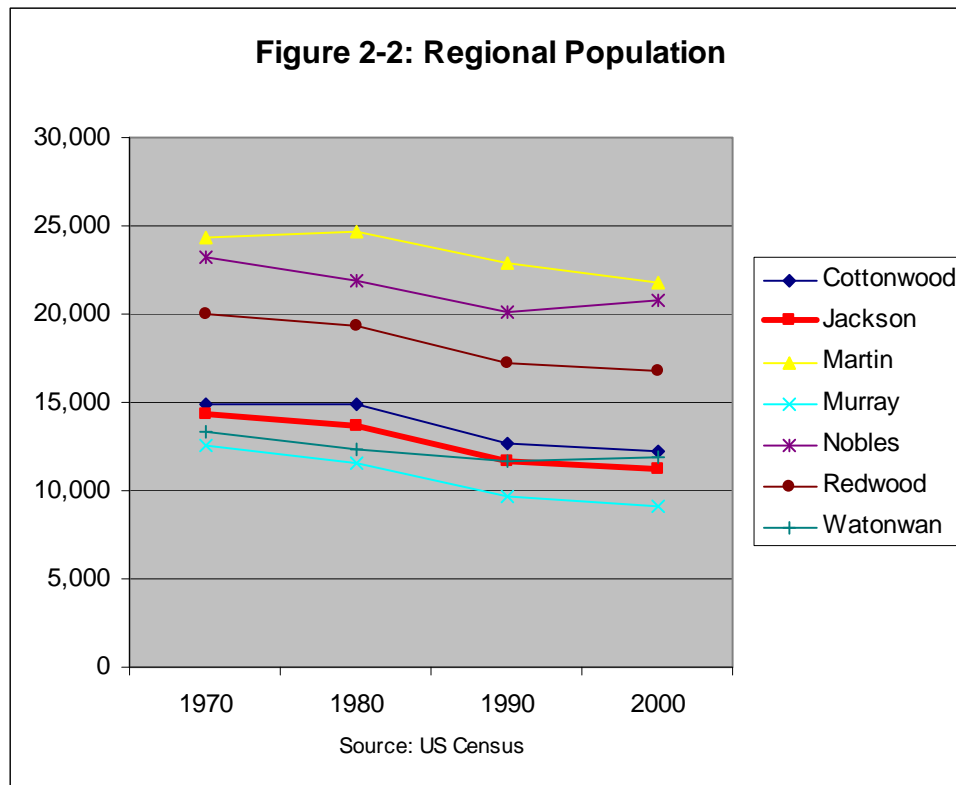
Although total population has contracted in the county, the number of households is stable to slightly expanding. The Demographic Center estimates that there are almost 4,600 households in the county in 2008, with greatest increase in the City of Jackson. There are also areas of seasonal housing development in the county that may not be adequately captured by Census figures.

Long-term trends in Jackson County are similar to other counties in the region. The population of Jackson County peaked in 1960 at 15,501, and has declined by over 20% since the first *Jackson County Comprehensive Plan* was prepared. This is less than nearby Murray County's 27% drop over the same decades but more than other adjacent counties. The greatest change in the region was in the 1980s, with the 1990s looking more like the 1970s with modest contraction in population. Only

Jackson County Comprehensive Plan		
Figure 2-1: Population		
Civil Division	2008 Estimate	
	Population	Households
Alba township	186	76
Alpha city	121	50
Belmont township	207	91
Christiania township	326	133
Delafield township	289	116
Des Moines township	242	116
Enterprise township	178	81
Ewington township	200	95
Heron Lake city	752	289
Heron Lake township	376	144
Hunter township	227	94
Jackson city	3424	1515
Kimball township	141	54
La Crosse township	176	64
Lakefield city	1666	735
Middletown township	236	105
Minneota township	283	118
Okabena city	174	74
Petersburg township	261	103
Rost township	246	93
Round Lake township	188	84
Sioux Valley township	272	99
Weimer township	162	68
West Heron Lake twp	207	72
Wilder city	62	28
Wisconsin township	240	99
County	10,842	4,596

Source: Minnesota State Demographic Center

Nobles County among those experienced growth in the 1990s, and all adjacent counties have declined in population since 1970. The Demographic Center projects the County's population will grow to 11,550 in 2035.



Jackson County Comprehensive Plan

Figure 2-3: Census 2000 County-at-a-glance

	Jackson County		Jackson County
Population		Household	
2000 Population*	11,268	Number of households*	4,556
1990 Population*	11,677	Number of families*	3,117
Percent change from 1990 population*	-3.5	Income	
2007 population estimate***	11,015	1999 Median household income**	\$36,746
2010 population projection***	11,130	1999 Median family income**	\$43,426
2000 Total minority population*	429	Population below poverty level**	944
Urban population**	3,289	Percent of population below poverty level**	8.6
Rural population**	7,979	Housing	
Median age*	40.8	Number of housing units*	5,092
Population by Age		Number of owner-occupied housing units*	3,601
Population under 18 years*	2,761	Number of renter-occupied housing units*	955
Population 18 years and over*	8,507	Median housing value**	\$63,400
Population 65 years and over*	2,308	Median contract rent**	\$273
		Average travel time to work (minutes)**	15.7

* 2000 Census SF1 Profile

*** Minnesota State Demographic Center

** 2000 Census SF3 Profile

Census 2000 found that 50.2% of Jackson County residents are male, compared to 49.1% nationwide. The median age is about 41 years old, compared to 35 for the United States. Over 20% of residents are retirement age, compared to 12% in the U.S. overall. Over 150 people reported their race as Asian and 210 consider themselves Hispanic or Latino (of any race). Over 84% of all residents are high school graduates or higher, compared to 80% nationwide; 14% hold a Bachelor's degree or higher vs. 24% nationwide.

Housing

The number of housing units in Jackson County has steadily increased, although almost two-thirds of all housing units were built before 1960. Over 87% of all housing units are single-family, detached structures. Most housing units in Jackson County are owner-occupied. Only 21% of occupied housing units are rentals, compared to almost 34% across the U.S.

The median value of owner-occupied housing units has increased from \$32,100 in 1990 to \$56,800 in 2000. Contract monthly rents increased from a median of \$174 in 1990 to \$357 in 2000. Over 17% of all households renting reported spending more than one-third of their household income on rent. Utility gas is used for home heating fuel by 44% of households, fuel oil by 14% and electricity by 10%.

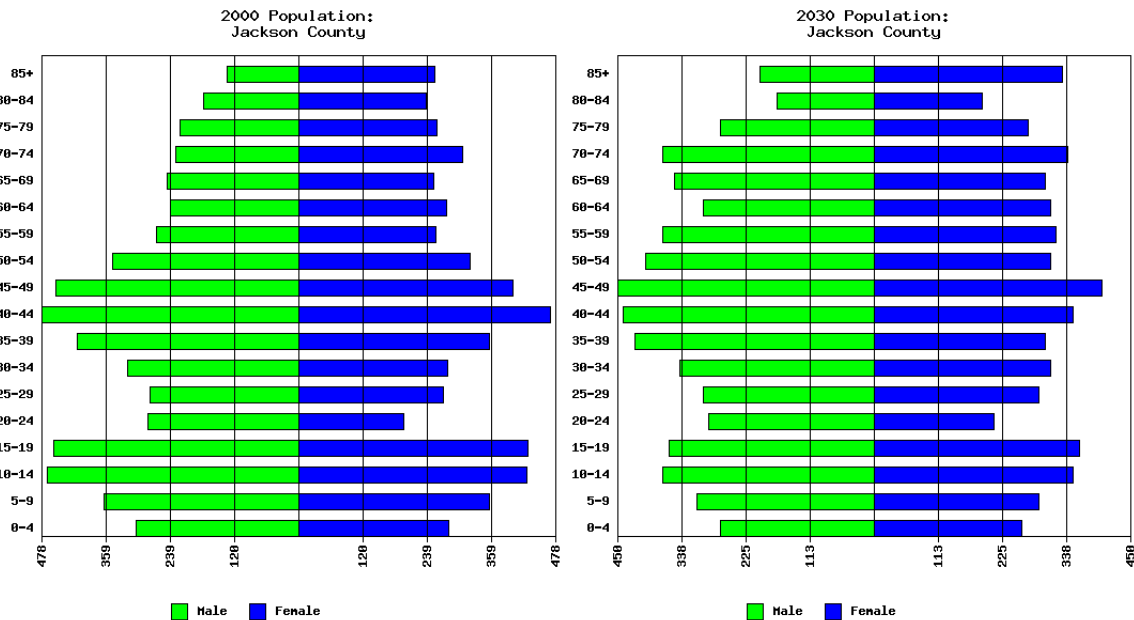
Jackson County Comprehensive Plan		
Figure 2-4: Age of Housing Stock		
Year Built	Total Units	Percent of Total
Pre – 1940	2,007	39%
1940 – 1959	1,268	25%
1960 - 1969	457	9%
1970 - 1979	867	17%
1980 - 1989	262	5%
1990 - 1998	193	4%
1999 - March 2000	38	1%
Total	5,092	

Source: US Census 2000

Aging Demographic

Southwest Minnesota has an aging demographic. The Minnesota Demographic Center projects 19% fewer school-aged children and 37% more people aged 80+ in Jackson County in 2030 than in 2000. The growth in the share of local senior citizen population is a significant trend which Southwest Minnesota is leading state-wide. The state's population aged 65+ is projected to exceed the share of the youngest population (aged 0-14) by 2030. This is due in part to increased longevity as modern medicine extends our lifespan. According to the US Census Bureau's *Statistical Abstract*, a person born in 1970 could expect to live to age 70. We expect that a person born in 2010 will live to age 78. Also, as the baby boomers (those born from 1946 through 1964) mature, they leave an identifiable bulge in the nation's population pyramids.

Figure 2-5: Population Pyramids



Source: Minnesota Demographic Center

There are two components to population change: migration and natural increase. Population loss in rural areas is often blamed on out-migration, as young people leave for college and new jobs elsewhere. However, that is only part of the picture. Minnesota Demographic Center data show that after decades of natural increase, Jackson County had 62 more deaths than births in 1990s, and 55 more deaths than births since 2000. This negative natural increase means fewer school-age children and fewer new workers in the future. On a positive note, there were more births than deaths in the county in 2007.

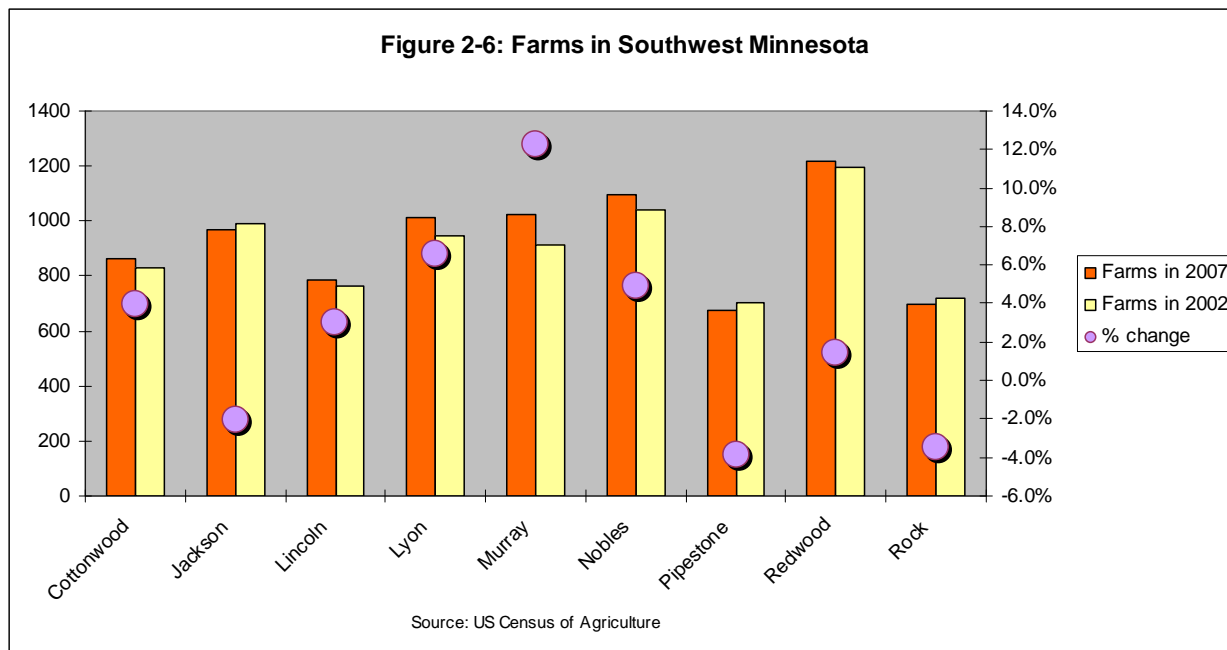
Census 2000 is the most current detailed source of demographic information for Jackson County. Census 2010 will only include basic information, including name, age, race and Hispanic origin. Additional data will have to be provided by the American Community Survey, a new on-going project of the U.S. Census Bureau.

B. EMPLOYMENT AND INCOME

Agriculture is the primary economic driver in Jackson County. Across America we see a similar picture: as farms expand the number of people employed full-time in agriculture has become smaller. There were 20 fewer farms counted in Jackson County by the U.S. Department of Agriculture's *Census of Agriculture* in 2007 than were counted in 2002. The average size of farm in Jackson County was 413 acres and median size 239 acres. The average operator was age 55.

More farmers in Southwest Minnesota engage in farming full time than average for the state. Less than half of principal operators in Minnesota report that farming is their primary occupation. Almost two-thirds of farmers across Region 8 counties report farming as their

primary occupation, ranging from 57% in Murray County to 68% in Redwood County, with 61% of farms in Jackson County reporting farming as the principal operator's primary occupation.

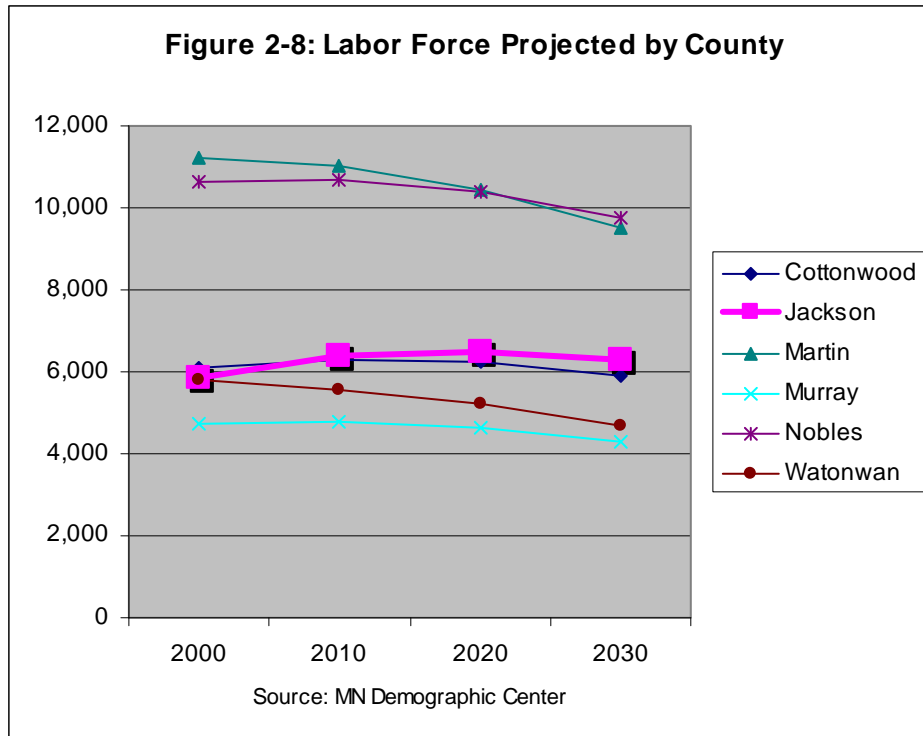


Farmers in Jackson County realize almost 60% of the market value of their production from crops. There were 657 farms that grew corn for grain (195,970 acres harvested in 2007), 631 farms that grew soybeans (152,412 acres), and 153 with forage (3,620 acres of hay, etc.). There were 149 farms that had cattle and calves in inventory in 2007, 91 with hogs and pigs in inventory, and 40 with sheep and lambs. Jackson County had the smallest number of cattle among the counties of Southwest Minnesota, but also has the 5th largest number of broilers and 2nd largest number of pigeons or squab of any county in the state.

Jackson County Comprehensive Plan			
Figure 2-7: Unemployment Rate			
	1998	2003	2008
Jackson County	3.3	4.1	4.3
Southwest Minnesota	3.5	4.1	4.6
State of Minnesota	2.7	4.9	5.4
United States	4.5	6.0	5.8

Source: DEED LAUS

Unemployment is less of a problem in Jackson County and Southwest Minnesota than in the rest of the United States, with rates generally tracking below the national average. While population in the region has been stagnant, the labor force has been growing, expanding about 2% in Jackson County over the last ten years. More people have been participating in the local workforce, and participating longer. This generally runs against state and national trends and is not expected to continue indefinitely.



Labor force statistics consider people who reside within the county. Employment statistics consider jobs located in the county. There have historically been more people counted in Jackson County's labor force than available jobs. County-level aggregations may, however, be misleading. The City of Windom, for example, lies within Cottonwood County, but provides employment opportunities within easy commuting distance for northern Jackson County.

Jackson County Comprehensive Plan

Figure 2-9:
Commuting Patterns of Jackson County Residents, 2000

Workplace State-County Name	Count	Share
Jackson Co. MN	3,968	70.91%
Nobles Co. MN	542	9.69%
Cottonwood Co. MN	527	9.42%
Dickinson Co. IA	274	4.90%
Martin Co. MN	97	1.73%
Emmet Co. IA	24	0.43%
Clay Co. IA	19	0.34%
Murray Co. MN	18	0.32%
Watonwan Co. MN	16	0.29%
Blue Earth Co. MN	11	0.20%
Lyon Co. MN	11	0.20%
Other	89	1.59%
Total Commuting	5,596	

Source: US Census

Jackson County has employment in a variety of industries. At least until the effects of the current recession began to be felt, the county enjoyed modest employment growth in most major industries since 2000, when the new North American Industrial Classification System (NAICs) was adopted. It is important to remember that these statistics are compiled from unemployment insurance reports, and so do not reflect self-employed persons such as most farms and many entrepreneurs and small businessmen.

Jackson County Comprehensive Plan Figure 2-10: Employment By Industry			
Industry	2000	2004	2008
Natural Resources and Mining	152	142	159
Construction	168	154	132
Manufacturing	847	1,175	1,313
Trade, Transportation and Utilities	811	781	814
Financial Activities	145	123	132
Professional and Business Services	na	117	100
Education and Health Services	851	1,636	1,659
Leisure and Hospitality	373	308	32
Public Administration	313	322	326
Total	4,382	4,871	5,075
na-not available or undisclosed. Numbers do not sum due to non-disclosure.			

Source: DEED QCEW

Jackson County Comprehensive Plan Figure 2-11: Major Employers		
Company	Product or Service	Number of Employees
AGCO Corporation	Farm Machinery & Equipment	1000
Jackson County Central Schools	Elementary & Secondary Schools	175
Technical Services for Electronics	Medical Equipment & Supplies	135
Jackson County	Local Government	130
Accident Insurance Recovery Solutions	Insurance Carriers	100
Good Samaritan Center	Nursing Care Facilities	100
Hussong Manufacturing	Vent., Heating Equip. Mfg	80
Jackson Medical Center	General Medical Hospitals	75
Colonial Manor Nursing Home (Lakefield)	Outpatient Care Centers	72
Farmers Co-op Assn	Misc. Nondurable Goods Wholesaler	65
Erickson Trucks 'n Parts	Motor Vehicle Body & Trailer Mfg	60
Lakefield Public Schools	Elementary & Secondary Schools	59

Source: DEED MNPro.com and Jackson County, as of June 2009

With low unemployment and a growing labor force, one might expect rising incomes in the community. However, income figures from the Bureau of Economic Analysis are equivocal on Southwestern Minnesota's economic health. The State of Minnesota has consistently had a higher per capita income than the national average, while the region has consistently had lower per capita income than the state average.

Jackson County Comprehensive Plan								
Figure 2-12: Southwest Minnesota Per Capita Income								
	1970	1975	1980	1985	1990	1995	2000	2005
Blue Earth	3,445	5,578	8,873	12,503	16,141	20,555	25,910	31,602
Brown	3,575	5,508	8,878	12,837	17,109	20,216	25,597	30,964
Cottonwood	3,622	5,919	9,326	16,752	16,168	18,007	23,248	30,937
Faribault	3,537	6,026	8,968	13,270	16,433	18,414	23,573	32,732
Jackson	3,912	6,751	9,351	12,525	16,224	17,682	22,761	30,323
Lyon	3,585	5,347	9,184	12,838	16,655	19,759	25,956	31,838
Martin	3,917	6,313	9,702	13,658	17,498	20,099	26,117	32,668
Murray	3,445	6,195	9,089	12,412	15,829	17,620	23,722	30,404
Nicollet	3,186	5,475	8,013	11,999	16,390	19,716	26,544	31,760
Nobles	3,594	6,437	9,177	12,633	17,596	18,364	23,187	29,637
Redwood	3,438	5,383	8,570	12,626	16,394	18,873	23,849	29,193
Rock	3,891	7,074	9,568	12,534	17,433	18,917	24,574	30,721
Sibley	3,423	6,145	8,039	12,352	15,423	16,522	21,985	27,673
Watsonwan	3,563	5,943	9,675	12,327	15,824	18,254	22,854	29,574
MN	4,039	6,223	10,256	15,166	19,891	24,078	32,017	37,290

Source: Bureau of Economic Analysis, REIS

CHAPTER III. WHERE WE LIVE

OUR NATURAL ENVIRONMENT

Natural resources shape a community. Jackson County lies on the edge of the Coteau des Prairies—the Buffalo Ridge that rises high above the tall-grass prairie, with modest and at times erratic rainfall on a rolling landscape. Land, water and air provide each place a unique look and feel. The environment provides these things that make this place different from any other in the world.

Minnesota Statutes (§394.23) requires that “when adopting or updating the comprehensive plan...the board must consider adopting goals and objectives that will protect open space and the environment.” Furthermore,

This chapter provides information on the landscape that makes up Jackson County; waters, shoreland, drainage and floodplains; and open space, historical sites and natural areas.

3.1. THE LANDSCAPE

Jackson County has a typical continental prairie climate, with comparatively long and rugged winters to warm, semi-humid summers. The majority of precipitation falls between April and September, summertime also characterized by occasional severe storms and occasional drought. Rainfall can be variable year to year; however, neither severe drought nor severe flooding are seldom experienced.

Jackson County Comprehensive Plan													
Figure 3-1: Average Temperature and Precipitation													
As measured at Windom, MN, 1948-2007													
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Average Max. Temperature (F)	23.5	29.5	40.4	57.7	70.9	80.5	84.6	81.9	73.7	61.3	42.6	28.5	56.3
Average Min. Temperature (F)	4	9.8	21.1	34.4	46.5	56.8	61.5	58.9	49.2	37.2	23.6	10.8	34.5
Average Total Precipitation (in.)	0.68	0.66	1.8	2.76	3.48	4.26	3.72	3.44	3.02	1.84	1.43	0.76	27.84
Average Total SnowFall (in.)	7.6	6.8	9.2	3	0	0	0	0	0	0.6	5.2	7.4	39.8
Average Snow Depth (in.)	5	5	3	0	0	0	0	0	0	0	1	3	1

Source: High Plains Regional Climate Center

Currently, agriculture is the primary use of land. Studies by the University of Minnesota’s Remote Sensing and Geospatial Analysis Laboratory found that, in the year 2000, about 82% of the land area in Jackson County was cultivated, with 8% urban, 6% in grass/shrub/wetlands, 3% forest, and 2% covered by water. [See Map 3-1 Land Use.]

The landscape of Jackson County is the result of glacial activity that occurred 12,000 to 20,000 years ago. Sioux Quartzite lies under glacial drift at between 100 to 300 feet below the surface. The surface is predominately clay soils, with very limited gravel, sand or shale holding water. Pre-settlement vegetation in this area consisted of wetlands, grasslands and hardwood forests in river-bottom stands; however, most of the farmland has been artificially drained. The highest elevation of Jackson County is 1,570 feet located in Round Lake Township. The low point is 1,280 feet located in Petersburg Township, where the West Fork of the Des Moines River exits the county.

On the surface now we find distinct physiographic regions. The eastern part of the county is a mostly flat, clay loam ground moraine. The Altamont moraine trends north and south through the central part of the county, in which the West Fork of the Des Moines River has carved a valley floor about 100 feet lower than the surrounding landscape. The Altamont has a high content of shale and calcium carbonate. The Heron Lake system gives evidence of an ancient glacial lake that once covered much of the northwest part of the county. Extensive glacioulacustrine deposits characterize southwestern Jackson County, with numerous flat-topped hills and small bodies of water.

Soil erosion is a long-term concern, especially in agricultural communities which depend on the continued productivity of the land. Jackson County Soil & Water Conservation District estimates that about 50% of soil in the county is prone to erosion from water and wind. New development proposals should take into account the need to protect the land from erosion.

Aggregate Resources

The growth of American cities and the construction of highways between population centers have created a demand for enormous amounts of aggregate materials. During that same time period, new development has covered areas with aggregate resources, effectively removing that material as a viable resource. Combined with changing environmental regulations and economic considerations, producers have a much more complicated task to meet increasing demand for aggregate. Aggregate occurs where Mother Nature placed it, not necessarily where we need it.

Mining, unlike many activities, is a temporary, interim use of land requiring specific performance standards to be compatible with other long-term uses. There are potential environmental impacts associated with aggregate extraction including loss of habitat, noise, dust, erosion, sedimentation, impacts on roads, and reclamation and conversion of the land use. Many of those environmental impacts can be mitigated by incorporating a Best Management Plan that addresses those issues.

It is important that Jackson County inventories this resource and incorporates the protection and management of aggregate resources into its Development Code. This will allow future decision makers the ability to apply sustainable resource management principles to this issue and insure a supply of aggregate, well into the future.

3.2. WATER

The watershed divide between the Missouri and Mississippi Rivers runs through the county. [See Map 3-2 Watersheds.] Six major watershed areas in three major basins track these physiographic regions:

- Watonwan and Blue Earth rivers flowing easterly to the Minnesota River.
- East Fork Des Moines, and Upper and Lower portions of the West Fork Des Moines River, which flow through Iowa to the Mississippi River.
- Little Sioux River, which flows into Iowa and on to the Missouri River.

In addition to rivers and streams, there are many lakes and wetlands in the county. Ten lakes—Independence, Fish, Loon, Clear, Little Spirit, Pearl, South Heron, Timber, Rush, and Round Lake—provide opportunities for catching game fish. These lakes are generally shallow. Fish Lake is considered the deepest lake with a maximum depth of 26 feet. Rush Lake is the shallowest of these lakes with a maximum depth of three feet.

It's not always clear when a shallow lake should more properly be called a wetland. The Minnesota Department of Natural Resources (DNR) website states:

According to the experts, a wetland has mostly wet soil, is saturated with water either above or just below the surface and is covered with plants that have adapted to wet conditions.

The U.S. Environmental Protection Agency (EPA) website includes this definition from the federal Clean Water Act:

...the term wetlands means “those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs and similar areas.”

The US Fish and Wildlife Service and DNR identify eight different types of wetlands, such as bogs, marshes, prairie potholes, shrub/wooded swamps, seasonal basins and wet meadows. Over half of wetlands state-wide have been lost since settlement; approximately 95% in Southwest Minnesota. Wetlands are considered to provide an important role in erosion control, wildlife and fisheries habitat, flood control, and ground water recharge.

Wetlands are regulated by federal, state and local agencies. At the federal level, the US Army Corps of Engineers and the US Department of Agriculture's Natural Resource Conservation Service (NRCS) have responsibilities for regulating wetlands. While the United States Army Corps of Engineers' authority has been limited by the United States Supreme Court, work in wetlands determined to be waters of the United States under the federal Clean Water Act (CWA) requires an Army Corp permit. The federal farm bill's “Swamp Buster” provision provides that a landowner who alters a wetland for agricultural purposes can lose eligibility for many USDA benefits, such as price support programs.

There is ongoing concern in the county for protecting water and the natural environment. Local elected officials, staff and cooperating agencies in Jackson County updated the *Jackson County Local Water Management Plan* in 2006 and 2007 (adopted in 2008), selecting four priority concerns:

1. Improve Surface Water Quality
2. Feedlots and Subsurface Sewage Treatment Systems (see also following chapter on Infrastructure and Development)

3. Drainage Management

4. Protect Groundwater

The County's water plan sets objectives for water quality to prevent soil erosion; encourage perennial cover, buffers and conservation tillage; improve stream bank and lakeshore development, and address TMDL impaired waters.

The federal CWA requires states to adopt water quality standards. A water body is considered "impaired" or polluted if it fails to meet these standards. The Act includes two basic approaches to water quality protection and restoration. One is the "technology-based, end-of-pipe approach" which sets parameters for point source effluent. This approach has been implemented in the National Pollutant Discharge Elimination System (NPDES) permits required of certain water users, such as cities and large feedlots.

Jackson County Comprehensive Plan				
Figure 3-2: Impaired Waters 2008				
		TMDL Plans*		Affected Use
		Needs	Approved	
Lakes				
Fish			Hg	Aquatic Consumption
Heron (Duck)		Nutrient/Eutro		Aquatic Recreation
Heron (South Heron)			Nutrient/Eutro	Aquatic Recreation
Heron (North Heron)			Nutrient/Eutro	Aquatic Recreation
Heron (North Marsh)			Nutrient/Eutro	Aquatic Recreation
Loon		Nutrient/Eutro		Aquatic Recreation
Clear		Nutrient/Eutro		Aquatic Recreation
Little Spirit		Nutrient/Eutro		Aquatic Recreation
Streams				
Des Moines River	Windom Dam to Jackson Dam	A, DO	FC, T	Aquatic Life, Aquatic Recreation
Okabena Creek	Elk Cr to South Heron Lk		FC, T	Aquatic Life, Aquatic Recreation
Jack Creek	JD 26 to Heron Lk		FC, T	Aquatic Life, Aquatic Recreation
Heron Lake Outlet	Heron Lk to Des Moines R		pH, T	Aquatic Life
Division Creek	Heron Lk to Okabena Cr		T	Aquatic Life
Des Moines River	Lime Cr to Heron Lk outlet		FC, T	Aquatic Life, Aquatic Recreation
Des Moines River	Jackson Dam to JD 66		T	Aquatic Life
Des Moines River	JD 66 to MN/IA border		FC, T	Aquatic Life, Aquatic Recreation
Judicial Ditch 56	Unnamed cr to Des Moines R		T	Aquatic Recreation
Des Moines River, East Branch	Headwaters to Okamanpeedan Lk	DO, T	Aquatic Life, Aquatic Recreation	
* Pollutant, Stressor or Indicator				
A: Ammonia				
DO: Dissolved Oxygen				
Hg: Mercury				
FC: Fecal Coliform				
pH: pH				
T: Turbidity				

Source: MPCA GIS files

The second nonpoint source approach relies on federal water quality standards. The Clean Water Act requires the State to conduct a Total Maximum Daily Load (TMDL) study on identified waters to identify sources of each of the pollutants, calculate the maximum amount of a pollutant a water body can receive, and allocate reductions necessary to meet water quality standards. The nonpoint approach relies on water quality monitoring to provide long-term trends and data. Minnesota Pollution Control Agency (MPCA) administers the TMDL program.

In December, 2008, EPA approved the West Fork Des Moines River Watershed for Multiple Impairments, to reduce fecal coliform, turbidity, and excessive nutrients. The TMDL identifies certain sources of pollutants:

- Fecal coliform: septic systems, wastewater treatment facilities, run-off from pasture lands, cattle in streams, and run-off from manure spread on cropland.
- Total Suspended Solids (turbidity): soil run-off, bank slumping and stream bank scouring.
- Phosphorus: cropland and pasture run-off, streambank erosion, wastewater treatment plants, and internal phosphorus release.

MPCA will be developing implementation plans to meet TMDL targets.

Shoreland

The State of Minnesota regulates the use of land within 300 feet of a river or 1,000 feet of a lake over 25 acres in size (10 acres in urban areas). There are about 40 lakes and many miles of moving water in Jackson County designated as Shoreland areas by DNR. Local government is responsible for implementation, administration and enforcement of ordinances to meet the state regulations. [See Map 3-3: Shoreland & Floodplain.]

DNR identifies three river types in Jackson County—Agricultural, Transition, and Tributary river segments—as well as Natural Environment, Recreational Development and General Development lakes, where uses of adjacent land must meet different state standards. According to the DNR website:

Lakes and rivers are divided into the following classes based on a combination of factors:

- **Natural Environment Lakes** usually have less than 150 total acres, less than 60 acres per mile of shoreline, and less than three dwellings per mile of shoreline. They may have some winter kill of fish; may have shallow, swampy shoreline; and are less than 15 feet deep.
- **Recreational Development Lakes** usually have between 60 and 225 acres of water per mile of shoreline, between 3 and 25 dwellings per mile of shoreline, and are more than 15 feet deep.
- **General Development Lakes** usually have more than 225 acres of water per mile of shoreline and 25 dwellings per mile of shoreline, and are more than 15 feet deep. Spirit Lake, which extends from Iowa, is the only Jackson County lake in this category.
- **Transition Rivers** are in a mixture of cultivated, pasture, and forested lands.
- **Agriculture Rivers** are in intensively cultivated areas, mainly southern and western areas of the state.
- **Tributary Rivers** are all other rivers in the Protected (Public) Waters Inventory not classified above.

Figure 3-3: DNR Lake Shoreland Classifications

DOW Number	Resource Name	DNR Classification	County Classification
17002400	String Lake (pt. Cottonwood Co)*	Natural Environment	Natural Environment
17004100	South Clear (pt. Cottonwood Co)	Natural Environment	Natural Environment
32000400	Unnamed Wetland Sec15 T104R34	Natural Environment	Natural Environment
32000800	Chandler	Natural Environment	Natural Environment
32001500	Boot	Natural Environment	Natural Environment
32001600	Lower's	Natural Environment	Natural Environment
32001700	Independence	Natural Environment	Natural Environment
32001800	Fish (pt. Cottonwood Co)	Recreational Development	Recreational Development
32001900	Summit (pt. Cottonwood Co)	Natural Environment	Multiple
32002000	Loon	Recreational Development	Recreational Development
32002200	Clear	Natural Environment	Natural Environment
32002300	Spirit (pt. Iowa)	General Development	General Development
32002400	Little Spirit (pt. Iowa)	Recreational Development	Recreational Development
32002500	Grovers (pt. Iowa)	Recreational Development	Recreational Development
32002700	Pletz Marsh	Natural Environment	Natural Environment
32002800	Unnamed Lake Sec15 T101R36	Natural Environment	Natural Environment
32002900	Unnamed Lake Sec16 T101R36	Natural Environment	
32003000	Unnamed Wetland Sec20,29 T101R36	Natural Environment	
32003100	Rush	Natural Environment	Natural Environment
32003200	Anderson's Marsh wetland	Natural Environment	Natural Environment
32003300	Pearl	Natural Environment	Natural Environment
32003700	Unnamed (Camoron) Sec32 T101R36	Natural Environment	
32003800	Sangls Marsh	Natural Environment	
32003900	Big Injun Slough	Natural Environment	
32004000	Summer Marsh	Natural Environment	Natural Environment
32004200	Husen Marsh	Natural Environment	
32004500	Flaherty	Natural Environment	Natural Environment
32005200	Unnamed Lake Sec25 T104R36	Natural Environment	Natural Environment
32005300	Teal Lake wetland	Natural Environment	Natural Environment
32005500	Unnamed Lake Sec18,19 T101R36	Natural Environment	Natural Environment
32005700	Heron	Natural Environment	Natural Environment
32005800	Timber	Recreational Development	Recreational Development
32005900	Skunk	Natural Environment	Natural Environment
32006100	Unnamed Lake Sec27,28,33 T101R37	Natural Environment	
32006200	Unnamed (Camoron) Sec28 T101R37	Natural Environment	
32006300	Rush	Natural Environment	
32006400	Unnamed Lake Sec32 T101R37	Natural Environment	Natural Environment
32006900	Round	Natural Environment	Natural Environment
32007100	Plum	Natural Environment	
32007200	Illinois	Natural Environment	Natural Environment
32008000	Unnamed Lake Sec15,16 T104R38	Natural Environment	
32008400	Iowa Lake (pt. Nobles Co, pt. Iowa)	Natural Environment	Natural Environment

*pt: only partly in Jackson County, these lakes cross a county or state boundary

Lakes are divided into the following classes based on a combination of factors:

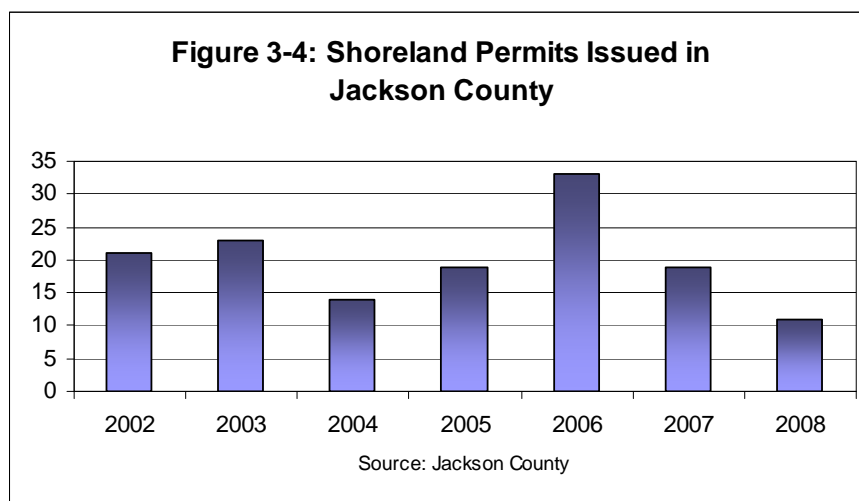
Natural Environment Lakes usually have less than 150 total acres, less than 60 acres per mile of shoreline, and less than three dwellings per mile of shoreline. They may have some winter kill of fish; may have shallow, swampy shoreline; and are less than 15 feet deep.

Recreational Development Lakes usually have between 60 and 225 acres of water per mile of shoreline, between 3 and 25 dwellings per mile of shoreline, and are more than 15 feet deep.

General Development Lakes usually have more than 225 acres of water per mile of shoreline and 25 dwellings per mile of shoreline, and are more than 15 feet deep.

DNR also maintains authority over dams and water control systems on public waters. Any major changes in the use of lands in or affecting shoreland areas should involve DNR and other stakeholders early in the process.

In 2008 and 2009, a state-wide Shoreland Rules Update Project assessed shoreland conservation standards. The current regulatory regime is often considered unclear and is misunderstood by both land use professionals and the general public. Preliminary draft revisions were released in April 2009 for comment. Proposed standards are intended to promote better water quality protection, enhanced protection for vulnerable areas, improved planned unit development (PUD) standards, specific resort standards, higher standards for new development (including conservation development) and changes for local government implementation. The preliminary draft rules also make minor changes to classifications of lakes and rivers. Local ordinances will need to be updated to reflect final standards.



Many lakes in the county have areas that are unsuitable for development, such as wetlands or soils not capable for development (poorly suited for septic systems, wet soils, strength, etc.). However, new development does not always lead to degradation of environmental quality. Conservation Design, for example, is a planning process which clusters development in a portion of the site so that other areas can remain in natural or agricultural use. Low Impact Development (LID) is another technique intended to manage stormwater by replicating natural filtration processes of a site's pre-development hydrology. Conservation Design and LID projects both rely on creative street and lot design, with runoff typically retained to minimize impervious surfaces and create attractive building sites.

Floodplains and Drainage Management

The County's water plan is concerned with working toward more natural flows in the drainage system, with objectives to promote the use of modern drainage structures and technology, wetland restoration and management, and flood impact reduction.

The state of the art in drainage management has changed substantially over the years. The traditional approach sought to drain land as quickly and efficiently as possible. This lead to

environmental issues that will take years to resolve. Modern, comprehensive drainage management can provide the private and public tools to stabilize the effects of both wet and dry weather cycles, reduce soil erosion, and improve water quality, while also providing additional benefits to plant and wildlife habitat.

A combination of private, County and Judicial ditches, along with natural waterways, comprise the county's drainage management system. According to the 1997 edition of the County's water plan, the majority of drain systems in Jackson County were established between 1905 and 1920, with 106 miles of open ditch and 590 miles of county underground tile existing at that time. As the 1997 plan stated, an objective cost-benefit analysis needs to be completed on drainage systems which are the most costly to maintain.

Areas in the county are known to be at risk of seasonal and storm-event flooding. Statewide, the DNR Division of Waters administers the National Flood Insurance Program (NFIP) of the Federal Emergency Management Agency (FEMA), now part of the Department of Homeland Security. Jackson County and the City of Jackson regulate development in their floodplains based on Flood Insurance Rate Maps (FIRM) produced by FEMA. Approximately 40 housing units are built in the mapped floodplain in unincorporated Jackson County, with about an equal number of commercial and residential structures at risk in the City of Jackson. The City of Okabena has mapped floodplain but not residences are located in the flood hazard area.

The National Oceanic and Atmospheric Administration (NOAA) has documented almost a dozen major flood events in Jackson County over the past 50 years. For example, on July 5, 2004, flash flooding occurred in Jackson County. Rainfall of up to four and half inches falling on saturated ground caused flooding of county roads, farmland, and other low areas southwest of Okabena. Then on July 11, 2004, flash flooding occurred again. Up to six inches of rain fell on saturated ground causing flooding of roads, farmland, other low areas, and basements. A golf course in Lakefield was flooded. Okabena and the community of Bergen were also affected.

Development activity in flood-prone areas should be avoided. Some communities across the country have adopted a No Adverse Impact (NAI) floodplain management approach, which extends beyond the floodplain to manage development in the watersheds where flood waters originate. NAI requires new development to mitigate potential impacts before disaster strikes.

The *Jackson County All Hazards Mitigation Plan* (2008) provides specific goals, objectives and strategies to address the risks of floods and dam failure. These include:

- Flood plain mapping and zoning
- Buffer systems along creeks and streams
- Working with DNR on all development applications in areas prone to flooding
- Discouraging zoning variances in identified flood hazard areas.
- Identification of structures in floodplains for inclusion in acquisition, relation and elevation projects to reduce flooding risk.

Groundwater

The County's water plan addresses both the quality and quantity of groundwater supplies, primarily aimed at preventing groundwater contamination and protecting long-term supplies..

In Jackson County, groundwater is not as reliable resource as in other parts of the region. Aquifers may be accessed from a deep Paleozoic bedrock unit, the Cretaceous groundwater system, and from the hard Precambrian basement rock. Little information is available about the deep Paleozoic aquifer as it is reached by a few deep-water wells. Within the Cretaceous groundwater system lie localized and regional aquifers. The main water-yielding unit of the Precambrian basement rock is Sioux Quartzite. A bedrock aquifer is a geologic formation or unit capable of storing and yielding fresh water in usable quantities. The Cretaceous groundwater system may be either a connected set of aquifers that act hydrologically as a single unit, or a set of independent aquifers that act similarly. The Sioux Quartzite yields water through cracks and fractures.

There is concern nationwide about contamination of groundwater, particularly from nitrates. Wellhead protection programs coordinated with the Minnesota Department of Health (MDH) can help protect drinking water from becoming polluted. While lack of population growth relieves some pressure for future water supply, there is no reason to believe the demand for water will decline.

3.3. HISTORICAL AND NATURAL AREAS

Jackson County was established by the Territorial Legislature on 23 May 1857. The new county was taken out of Brown County along with several other new counties at the same time. According to the Minnesota Historical Society (MHS), the county was named in honor of Henry Jackson of Virginia, the first merchant to set up shop at St. Paul in 1842 and later a founder of Mankato. The Historical Society website notes that others attribute the name to Andrew Jackson, the seventh president of the United States.

The county seat, the City of Jackson, was founded in the summer of 1857 as Springfield. On 26 March 1857 several anglo-american settlers were killed by a band of Dakota under the leadership of Inkpaduta. The financial panic of 1857 discouraged further settlement—there were only 181 residents counted in Jackson County by the Census of 1860—until after the Civil War. Other communities in the county include:

- Alpha, founded 1895 on the Chicago, Milwaukee, St. Paul and Pacific Railroad.
- Bergen, in Christiania Township, had a post office from 1889-1900.
- Belmont, originally called Frog Point, in Belmont Township. It was named in honor of Anders Olson Slaabakken, who was also known as Anders Belmont. Anders was one of a group of Norwegian immigrants who settled there in 1860. He was killed along with a dozen other pioneers in the Sioux Uprising on 24 August 1862. A post office operated intermittently between 1872 and 1886.
- Heron Lake, established 1870; platted 1872 by the Sioux City and St. Paul Railroad.
- Lakefield, founded 1879 by Anders R. Kilen, on the Southern Minnesota Railroad.

- Miloma, in LaCrosse Township, had a station at the intersection of the Chicago, Milwaukee and St. Paul and Chicago, St. Paul, Minneapolis and Omaha railways, Established in 1879, for about 25 years it was called Prairie Junction.
- Okabena, founded 1879 on the Southern Minnesota Railroad, taking the Dakota name for the Lake Heron.
- Petersberg, in the township of the same name, was organized in 1866 and had a post office until 1967.
- Sioux Valley, in the township of the same name, had a post office from 1879 to 1906.
- Wilder, platted in 1886 by the Sioux City and St. Paul Railroad.

The State Historic Preservation Office (SHPO) offers technical assistance to community organizations seeking to protect, reuse and restore historic structures. The National Register of Historic Places is the official list of the nation's historic places worthy of preservation. The National Park Service compiles the Register as part of a national program to coordinate and support public and private efforts to identify, evaluate and protect America's historic resources. A property must meet certain criteria for the voluntary listing, such as age and integrity (generally at least 50 years old) and significance. Benefits of listing include potential eligibility for federal preservation grants, federal investment tax credits, preservation easements, possible building code alternatives, and recognition of a property's significance.

As the National Park Service website makes clear, "National Register listing places no obligations on private property owners."

The following properties in Jackson County are currently listed on the National Register of Historic Places:

- Church of the Sacred Heart (Catholic), Heron Lake, Classical Revival/Baroque, 1920-21; MHS has featured this church on their website: "Patterned on Catholic churches in Germany and Austria, this magnificent Neo-Baroque church was built with a basilica plan and twin bell towers that soar above the flat prairie of southwestern Minnesota. Its massive scale and elaborate interior decorations reflect the vision of church members, who raised the funds to construct this imposing structure."
- District No. 92 School, County Highway 9 in Middletown Twp, Octagon structure, 1906.
- Jackson Commercial Historic District, with several structures constructed 1880-1944.
- Jackson County Courthouse, Jackson, Classical Revival, 1908.
- George M. Moore Farmhouse, Off County Highway 4 in Middletown Twp, Craftsman bungalow, office building and garage, 1917.
- Robertson Park Site, Minneota Twp, archeological site.

Full records of these listings are being digitized and may become available online at the National Register page of the National Park Service website, <http://nps.gov>. The Jackson County Historical Society is located in Lakefield, and should be consulted in the case of any development or land use changes potentially affecting historic properties.

Conservation and Working Lands

The conservation of land and wildlife habitat is and will continue to be important to the citizens and land owners of Jackson County, today and into the future. The benefits of stewardship are innumerable—benefits such as cleaner water and air, improved soils and abundant wildlife habitat. [See Map 3-4: Parks & Natural Areas.]

Kilen Woods State Park, owned and operated by the DNR, is located between Windom and Lakefield on the Des Moines River. County State Aid Highway (CSAH) 24 dead-ends at the park entrance, five miles east of Trunk Highway 86. The State Park, created in 1945, features 200 acres of oak savannah and prairie habitat laced with all-season trails, with over 100 feet of elevation change dropping down to the river bottom. CSAH 19/County Road 79 bisects the east side of the park, providing a popular canoe access point to the river. There are 33 developed campsites with modern facilities and a number of walk-in, semi-developed campsites.

The Jackson County Park Board was established in 1966, and has assisted with acquisition, development and management of 200 acres of parkland in 8 county parks:

- **Anderson County Park.** Located on the west shore of Pearl Lake, north of Iowa's Spirit Lake in southern Jackson County, this 25-acre park has a 25-unit campground.
- **Belmont Park.** This 80-acre park was the site of one of the earliest farms in Jackson County. It is located on the east bank of the Des Moines River north of the city of Jackson. The park has developed rest rooms, picnic tables and a canoe-access campsite.
- **Brown Park.** Historical surveys indicate this 31-acre site located on the shores of both Pearl and Loon lakes was inhabited during the woodland cultural period dating back to 200 B.C. There are 30 trailer campsites in the park.
- **Community Point County Park.** Located on five-acres on the east shore of South Heron Lake, this park features rest rooms and picnic facilities.
- **Obie Knutson Park.** This small park is located on the south side of Fish Lake, southeast of Windom. The park has rest rooms and picnic facilities.
- **Robertson County Park.** On the east shore of Loon Lake, this 46-acre park is completely wooded and includes 22 trailer campsites.
- **Sandy Point.** This 24-acre park is located on the west shore of South Heron Lake, northwest of Lakefield. There are 12 developed campsites.
- **Sparks Environmental Park.** Home to the Prairie Ecology Bus Center, this 40-acre park is located in Lakefield.
- **Clear Lake.** There is also a small day use public access area west of Jackson.

Each park has unique qualities and opportunities for recreation and the enjoyment of the great outdoors. The county also has a number of special management areas which attract local and regional users:

- 33 Wildlife Management Areas (WMAs): part of DNR's outdoor recreation system established to protect those lands and waters that have a high potential for wildlife production, public hunting, trapping, fishing, and other compatible recreational uses.

- 23 Waterfowl Production Areas (WPAs): acquired as public land, or protected through perpetual easement, as part of the U.S. Fish and Wildlife Service's National Wildlife Refuge System; managed by the Windom Wetland Management District.
- 3 Scientific and Natural Area (SNAs): preserve natural features and rare resources of exceptional scientific and educational value; managed by DNR for nature observation and education with little to no infrastructure or facilities.
- Nature Conservancy's Lindgren-Traeger Bird Sanctuary on North Heron Lake, a 91-acre private site open to the public for limited use.

DNR's Natural Heritage Information System provides further information on Minnesota's rare plants, animals, native plant communities, and other rare features. Any new development should provide for open space and recreational opportunities for residents, as well as protecting the county's natural heritage. In addition, any changes in land use near state and county parks and natural areas should very carefully minimize their impacts.

Private working lands, of course, make up the majority of land in the county. Voluntary conservation practices for agriculture are essential to achieve broad conservation goals. Partnerships of federal, state and local organizations are often able to achieve multiple goals simply by making existing programs more attractive and accessible.

Conservation overlay zoning districts have been used in a variety of settings and could help the County protect important wildlife areas that are threatened by development and other changes in land use. An overlay zoning district could, for example, buffer a riparian corridor with a sliding setback for new structures along creeks and wetlands, protecting water from development and the development from flooding while leaving the underlying zoning district in place.

The County should actively monitor management plans for conservation areas to minimize the potential for land use conflicts. Wildlife management areas, for example, require isolation from residential development to preserve hunting opportunities. WMAs are attractive to housing development, since they provide open scenic areas and buffers from other development.

Finally, the County may need to consider conducting a dedicated Parks and Open Space plan, to adequately manage conservation and recreation needs across county, state, federal and private facilities in the area. A dedicated parks plan would examine in more detail how all parks and open space in the county is currently used and gauge future demand, examine opportunities for future development. While a specific Capital Improvements Plan for County parks and open space is required by Minnesota Statutes §394.25 Subd 7(c) for subdivision dedications for parks and open space, a detailed plan may also prove necessary to take advantage of future grant funding opportunities.

CHAPTER IV. WHAT WE HAVE BUILT

INFRASTRUCTURE AND DEVELOPMENT

Infrastructure provides the framework of facilities and services needed to sustain all land-use activities. Infrastructure includes streets and roads, communications, water and sewer and other utilities, schools and public safety facilities such as fire, ambulance and police.

This chapter provides information on infrastructure in Jackson County, including transportation and public and semi-public facilities and utilities. The chapter also discusses standards for development and land use in Jackson County.

4.1. TRANSPORTATION

A safe, efficient and sustainable transportation system is essential for the long-term productivity, growth and development of any community. Jackson County's transportation system is made up of many modes, including highways, transit, trails, rail, and aviation. As the Minnesota Department of Transportation (MnDOT) *Minnesota Statewide Transportation Plan 2009* (Draft) states: "the efficient and effective movement of people and goods requires a balanced transportation system offering a variety of transportation modes." While roadways are the primary transportation support system, each mode must work together to assure the best return on the County's investment in infrastructure.

Multi-modal Systems

Jackson County's transportation system is designed to serve all residents, business and industry, agriculture activities, and tourism by a variety of modes, including both vehicles and pedestrians. [See Map 4-1: Transportation.]

Roads. Different public entities have responsibility for road construction and maintenance.

1. **Trunk Highway System.** Statewide, 70 routes were established under a 1920 constitutional amendment (6,877 miles). In Jackson County, these include: TH 60, US 71, TH 86, I-90, and TH 264.
2. **County State Aid Highways (CSAH).** These are roads or streets established and designated under county jurisdiction in accordance with Minnesota Statutes Chapter 162. The State provides funding assistance to maintain the CSAH system.
3. **County Roads (CR).** These roads are established, constructed, and maintained by the County. They are under the sole authority of the County Board.
4. **Township Roads.** A road established by and under the authority of the township board, or reverted back to township jurisdiction by the County Board. The roads are constructed and maintained by township board.
5. **City Streets.** Any street/road under the jurisdiction of a municipality not otherwise designated as a Trunk Highway, County State Aid Street/Highway, or County Highway.

MnDOT assigns all roads in the state to different categories in a process called functional classification. [See Map 4-2: MnDOT Functional Classification.] All roads in Minnesota were evaluated and re-classified in 2008. Each road is categorized, as the name suggests, by how it functions:

1. **Principal Arterial.** Serve as statewide and interstate corridors, movements having trip lengths and travel density characteristics indicative of statewide or interstate travel. In Jackson County these include I-90, US 71 and TH 60.. According to the MnDOT Transportation Information System (TIS) database there are 77 miles of Principal Arterial highways in Jackson County.
2. **Minor Arterial.** Link cities, larger towns, and other traffic generators like major resort areas. Consistent with population density, and are spaced so that all developed areas of the state are within a reasonable distance of an arterial highway. There are 23 miles of Minor Arterial highways in the county.
3. **Major Collector.** The workhorse of the rural transportation system, these routes provide service to the larger towns not served by higher systems, and other traffic generation of equivalent intra-county importance such as consolidated schools and county parks. They also link these places with nearby large communities or with other arterials and serve as important intra-county travel corridors. There are 228 miles of Major Collectors in the county.
4. **Minor Collector.** At intervals consistent with population density, these routes collect traffic from local roads and bring all developed areas within a reasonable distance to a collector road and provide service to the remaining smaller communities. There are 135 miles of Minor Collectors in the county.
5. **Local.** These roads serve as access roads to and from Minor Collectors, but they also serve as access to Collectors and Arterial roads. Most often these roads are under township jurisdiction. These are roads not classified as arterial or collectors, and include some county roads and most township roadways. MnDOT's TIS has inventoried 933 miles of local roads in Jackson County.

All roads should provide adequate sidewalks or trails for pedestrians. Development on long dead-end local roads—a hazard for emergency response—should be avoided. If necessary a second point of access should be provided for public safety. The Jackson County Engineer should be consulted early in the process for any development accessing arterial or collector roads.

Railroads. The Union Pacific and Canadian Pacific railroads have rail lines within Jackson County, an important element in the county's transportation system. Railroads continue to provide a significant amount of service in the movement of freight to and between ports and other major urban areas.

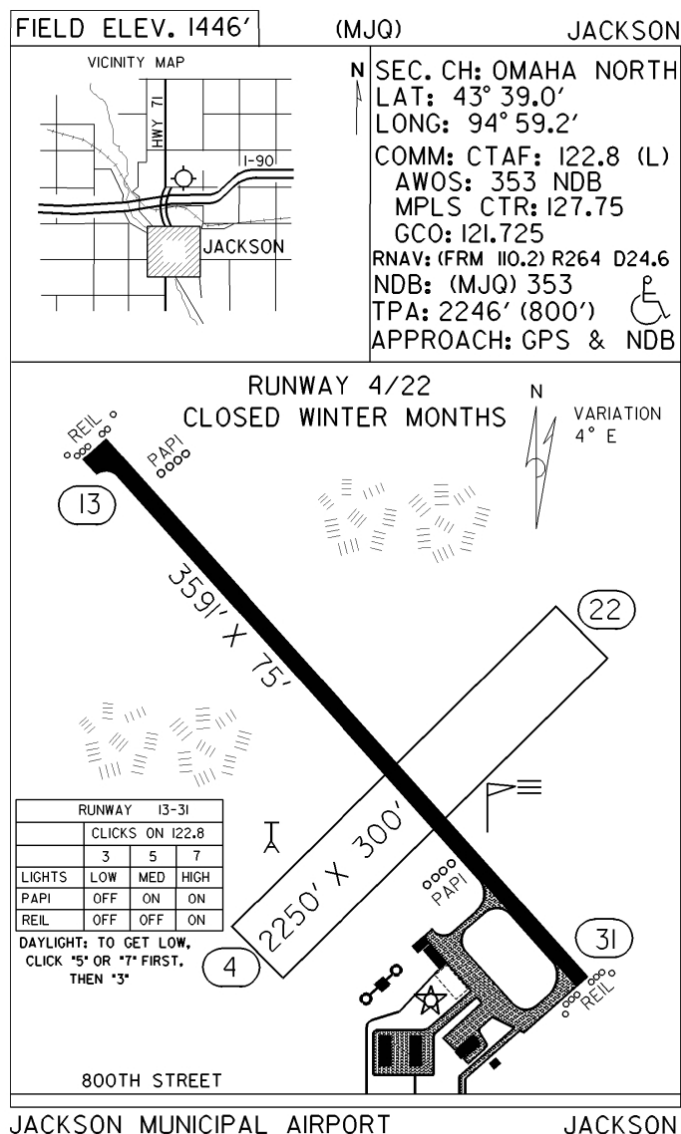
The Union Pacific railroad operates two main corridors within Minnesota, constituting 724 miles of track. One of these runs from the Twin Cities through Jackson County and continues through Sioux City, IA, and Omaha, NE. While this rail line hauls coal it also serves unit train shippers located in prime agricultural areas, which produce large amounts of corn and soybeans.

The Canadian Pacific (CP Rail or Soo Line) recently purchased the Dakota, Minnesota & Eastern railroad, which operated the Iowa, Chicago & Eastern line from the City of Jackson east through Alpha.

There are numerous rail crossings on both lines. Future development proposals may need to consider mitigating increases in traffic by working with the county, townships and railroads to consolidate crossings.

Aviation. The Jackson Municipal Airport is a general aviation airport established in 1944, located north of Jackson near US 71 & I-90. The Jackson Airport has two runways. Runway 13-31 is 3,591 feet long and 75 feet wide, and is aligned NW/SE. Runway 4-22 is 2,274 feet long and 300 feet wide, and is aligned NE/SW. Runway 13-31 has lights and RNAV approach has been added, but the Jackson Municipal Airport does not have a control tower. There is a hanger for aircraft.

Figure 4-1: Jackson Municipal Airport

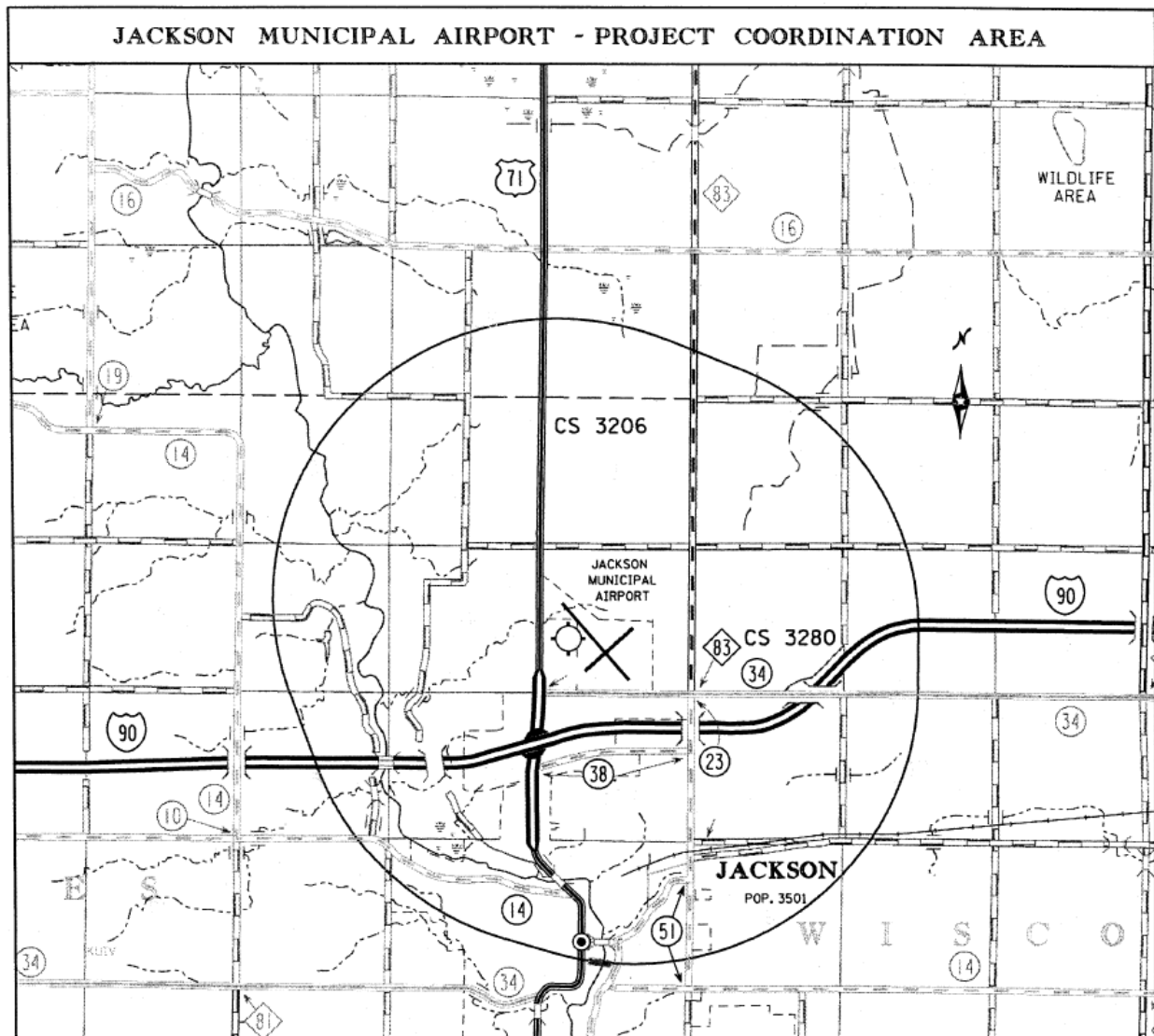


Source: MnDOT

Jackson Municipal Airport is under the ownership and jurisdiction of the City of Jackson. MnDOT also reviews applications within a certain distance of and airport to reduce the chance of future use conflicts. The airport affects land use in the adjacent townships as well as inside the city limits.

The City of Jackson Airport Commission is pursuing action to rezone the airport in order to construct a new 4,995 foot long runway north and east of the current 3,591 foot runway. This rezoning will serve to protect the area around the airport so the City can construct this longer runway if/when the need arises and comply with FAA regulations. Discussions are being held with farmers and property owners in the area who would be directly impacted by rezoning.

Figure 4-2



Source: MnDOT Office of Aeronautics

Transit. Public transportation opportunities in Jackson County are typical for a rural community. Transit is an essential service for many people, providing access to jobs, healthcare, education, shopping and numerous other activities. Western Community Action provides transit services for residents of Jackson County and several other counties in Southwest Minnesota. Public transit buses, available only in certain communities, are lift accessible. Volunteer drivers operate their own personal vehicles and are available for certain trips. The Veterans Service Office also coordinates certain rides for veterans.

As the demographic profile of Jackson County ages, mobility and accessibility will be of increasing concern to all residents of the county. New development should provide adequate provisions for transit accessibility, in addition to meeting all requirements of the federal Americans with Disabilities Act (ADA).

Trails. While trails offer popular opportunities for recreation and enjoyment of the natural environment and open spaces, they are also an important part of a fully-functional multi-modal transportation system. Too often pedestrian and trail facilities are not only left out of new developments, but the way we design buildings, parking lots, and subdivisions actively work against anything other than automobile travel.

The *Southwest Minnesota Regional Trails Plan* (2000) describes different types of trails, such as bikeways, bike lanes and off-road paths, and different trail users, such as bicyclists and skaters, walkers and hikers, equestrians and snowmobilers. Different sets of users use trails differently—some users will prefer hard surfaced trails, while others prefer more natural surfaces.

The *Regional Trails Plan* identified broad corridors throughout the region for future trailhead and trail development. Potential corridors for multi-use trails in Jackson County included:

- Jackson to Spirit Lake via the Des Moines River and / or existing sidewalks on the south end of Jackson.
- Jackson to Worthington
- Jackson to Kilen Woods State Park
- Kilen Woods to Heron Lake Complex
- Heron Lake Complex to Talcot Lake, Fulda and Graham Lakes

The Friends of Jackson County Trails is an active volunteer group working to establish a system of trails in the county. As of 2009, trails have been completed around the City of Jackson, and an interstate-trail extending from Dickinson County, Iowa's Spirit Lake to Loon Lake. Possible connections to the Casey Jones State Trail, which runs through Pipestone and Murray counties, are also under study.

Access Management

Roads serve a variety of purposes in a multi-modal transportation system. Some roads, like the interstate, are designed to move people and freight from one state to another in the least amount of time. Other roads are designed to move people and their groceries to an individual's front door. Too many cul-de-sacs, driveways and closely-spaced intersections along major roads cause too many problems.

Access management provides a systematic approach to balancing these different needs. MnDOT promotes access management as “the planning, design, and implementation of land use and transportation strategies in an effort to maintain a safe flow of traffic while accommodating the access needs of adjacent development.” According to the National Transportation Research Board, successful access management programs are safer for vehicles and pedestrians, allow motorists to operate with fewer delays, provide reasonable access to property, maintain the functional integrity of highways (saving taxpayer dollars) and reflect coordination of land use and transportation decisions.

MnDOT suggests that strip development be avoided and roads connect between developments, through shared drives or reservation of future access to undeveloped land. Access should be less restrictive the less traffic uses a particular road. In Jackson County, TH 60 is considered an Inter-Regional Corridor with the greatest limits on local access, followed by US71 (a Regional Corridor) and TH 86 (a Minor Arterial). In particular, MnDOT access management guidelines limit intersections in urbanizing areas (at the edge of existing cities) to 1/8, 1/4 or 1/2 mile increments. Access to homes and businesses should be provided from local supporting streets, not state highways. In rural areas, intersections should be limited to 1/4, 1/2 or 1 mile increments. Direct access to homes and farms should be provided by local roads whenever possible. The MnDOT District 7 office in Mankato should be consulted well in advance before any new development in close proximity to any state highway. Jackson County may also want to consider access management techniques to protect investments in the county highway system.

4.2. PUBLIC FACILITIES

Local government provides a broad variety of services to citizens and residents. Community services require a significant expenditure of public funds and have a tremendous impact on residents’ quality of life. It is essential that adequate public facilities are available to support development, and that new development only occur where and when it can be demonstrated that adequate public facilities are available.

Jackson County’s primary public facility is the historic Jackson County Courthouse at 405-4th Street in the city of Jackson. The Courthouse is home to several county departments, including the County Coordinator, County Commissioners, County Auditor/Treasurer, County Recorder, and Court Administration. Other offices:

- Resource Center, a former school building behind the courthouse at 407-5th Street. The County Parks, Planning and Environmental Services office is located in the Resource Center.
- Jackson County Department of Human Services is located at 310 Sherman St., a block east of the courthouse.
- The Jackson County Highway Department’s Highway Shop, a 1940s-era structure, is located at 53053 780th St, on the old US 16 (CSAH 34) just west of Jackson.

Public Safety

New development should be located close to existing public safety facilities to ensure adequate response times.

Law Enforcement. The Jackson County Sheriff's Office is located in the Law Enforcement Center at 400 Sherman St. in the city of Jackson. The City of Jackson and the City of Lakefield have independent police departments, while the Sheriff provides law enforcement in the rest of the county. The County Law Enforcement Center currently serves as the County Emergency Operations Center (EOC).

Public Health. Cottonwood-Jackson Community Health Service has offices in Windom, and at 407-5th Street in Jackson. Sanford Jackson Medical Center is a combined 20-bed hospital and clinic located in the city of Jackson, with an additional clinic site in Lakefield. The Windom Area Hospital, just north of Jackson County in the city of Windom, is designated a Level IV Trauma Center. A Level III Trauma Center is located in Mankato, Level II Trauma Centers are located in Sioux Falls, and a Level Trauma Center is located in Minneapolis.

Fire Districts. Jackson County is covered by all or part of 14 fire districts. All fire departments all operate with volunteers; there are no paid firefighters on staff. Typically, each fire department is located at or near the city hall. [See Map 4-3: Fire Districts.]

Ambulance. Jackson County is covered by all or part of 14 ambulance response zones. Sanford Jackson Medical Center also provides air/ground ambulance services. [See Map 4-4: Ambulance Districts.]

Education

Educational facilities include public day care centers, elementary schools, secondary schools, parochial schools, and post-high school education. Jackson County Central School District covers the county from the Iowa and Martin County borders through much of the southeast and central portions of the county, with schools located in the cities of Jackson and Lakefield. Heron Lake-Okabena School District, operating as Southwest Star Concept, has school facilities in the cities of Heron Lake and Okabena. Private schools are located in Lakefield.

Children from Jackson County also attend school in Martin County (Martin County West School District), Cottonwood County (Windom School District), Dickinson County, IA, (Spirit Lake School District), and Nobles County (Round Lake-Brewster School District). Minnesota West Community and Technical College has a campus on the west side of the city of Jackson.

Electrical Generation and Utilities

Telecommunications infrastructure is an essential resource for local response to any hazard situation. There are many local service providers for voice and data telephone service in today's competitive telecommunications environment. Qwest Corporation is the incumbent local exchange carrier (ILEC) providing fixed line services in the Jackson, Windom areas, as well as two exchanges based in Iowa. Frontier Communications serves the Lakefield area and the northeast corner of the county. CenturyTel provides service in the western part of the county. Cellular coverage is provided by Verizon and UniceL.

Federated Rural Electric Co-Op, based in the city of Jackson, and South Central Electric Association from St. James provide electric service in rural Jackson County and to the cities of Wilder and Alpha. Both cooperatives are members of the Great River Energy system. The cities of Jackson and Lakefield have municipal utilities. The cities of Heron Lake and Okabena are served by Alliant Energy. A 345kv Alternating Current electrical transmission line crosses the

county from northeast to southwest. New power lines will likely be proposed to serve growing wind generation.

Jackson County has become an attractive location for wind energy development with growth of the industry along Southwest Minnesota's Buffalo Ridge. The center of the county has been measured as a good wind resource, with average wind speed of 13.5-14.5 miles per hour at 30 meters. Small scale individual windmills have been used on the prairie since settlement, providing widely distributed generation capacity to farms and individual homes. Today, large-scale commercial scale wind energy projects with towers up to 100 meters tall typically produce greater than 100 kW of power. The Trimont and Elm Creek projects in the northeast section of the county were permitted through the Minnesota Public Utilities Commission. The Ewington wind farm near I-90 west of Lakefield was permitted locally. A number of other proposed projects are being reviewed by the Midwest Independent System Operator (MISO) to connect to the electrical grid.

There are many factors to consider to properly site Wind Energy Conversion Systems (WECS), such as average wind speed, proximity/access to electrical transmission facilities, state and federal incentives, and the market price for power. Reasonable buffers between wind turbines must be considered. These buffers protect neighbors somewhat in the unlikely event of a fire, and also can reduce impacts from shadow flicker, which occurs when the blades of the turbine rotor cast shadows that move across the ground and nearby structures. Careful attention must be paid to shadow flicker where it might interfere with drivers' vision. Buffers also protect wildlife habitat and help to avoid disrupting wind rights on neighboring properties.

Jackson County will want to monitor the rapidly changing regulatory and technical environment for WECS, distributed energy and electrical distribution systems. While it may be cost-prohibitive to bury higher capacity electrical transmission lines, as many lines should be located under ground as possible to eliminate future hazards and reduce impacts on property owners.

Solid Waste

Jackson County closed its EPA/MPCA-identified sanitary landfill in 1990. Jackson County has implemented recycling programs in order to limit the solid waste going to the Dickinson County (IA) landfill. Jackson County has seven known historic dumpsites: the Alpha Dump (Wisconsin Twp), Heron Lake Dump (Weimer Twp), Jackson City Dump (Des Moines Twp), Lakefield-north (Heron Lake Twp), Lakefield-south (Hunter Twp), Loon Lake Golf Club (Minneota Twp), and Okabena Dump (West Heron Lake Twp).

Water and Sewer

Two-thirds of Minnesotans—almost 100% in Southwest Minnesota—get their drinking water from ground water. Each municipality in Jackson County maintains their own water service, except for the City of Wilder which is served by Red Rock Rural Water System (RRRWS). RRRWS provides water to many rural residents in northern Jackson County, and has an interconnection agreement with the City of Jackson. Clay County Rural Water out of Iowa provides rural water to residents in southern Jackson County. Lincoln-Pipestone Rural Water System (LPRWS) is beginning a multi-stage expansion which will serve portions of southwest Jackson County from water sources in Iowa through new facilities in Nobles County. [See Map 4-5 Public Water Supply Wells and Map 4-6 Rural Water Service Areas.]

Seven communities within Jackson County currently have centralized wastewater treatment facilities, including Jackson, Lakefield, Okabena, Heron Lake, and Alpha.

Many households still rely on Subsurface Sewage Treatment Systems (SSTS, also known as ISTS or Individual Septic Treatment Systems). These septic systems often can provide a high degree of sewage treatment if properly sited, installed and maintained. However, failing and nonconforming sewage treatment systems are considered an imminent threat to public health. State legislation governing SSTS is implemented at the county level. In 2008, MPCA revised SSTS rules which will require all local units of government to update their ordinances to be compliant. Development should be discouraged in areas where poor soil characteristics may not support SSTS systems.

Another option for treatment is a regional sewer district, which functions in a similar manner as rural water systems. A central entity organizes construction of sewer collection and treatment facilities and provides annual maintenance, and in return collects payment on a utility fee-for-service basis. Jackson County has been working for several years with residents of the Loon Lake and Fish Lake areas to study such an option for their unincorporated communities. [See Map 4-7: Community Sanitary Sewer Service Areas.]

4.3. DEVELOPMENT STANDARDS

Best practices in land use planning, regulation and development provide many ideas to build the best community that we can. Development standards indicate a preferred future land use development pattern, and are intended to serve as a guide to property owners and the County when considering development applications and amendments to official controls.

Protecting Agriculture

Rural land is predominately used for agriculture and a certain few commercial uses that may not fit into an urban environment. Space is an important ingredient in the success of modern agriculture. Farms can be more productive with room to spread out and take advantage of economies of scale. Some counties have a dedicated Agricultural zone, excluding commercial and industrial uses, for property owners who desire more protection of production agriculture. Jackson County may want to look at this option in the future.

At the same time, animal agriculture creates certain challenges for the environment and other land uses. While Jackson County does not have the large numbers of livestock seen in many other areas of the region, current efforts to reach out to producers can prevent many issues before they become intractable conflicts or cause lasting harm to the environment.

Rural Residential Land Use

Many homes located outside of developed cities are part of active agricultural operations. Non-farm rural residents may be retired farmers, people with non-farm home occupations, or others employed in town who enjoy the country lifestyle. The county also has a growing number of seasonal homes, typically on lakes.

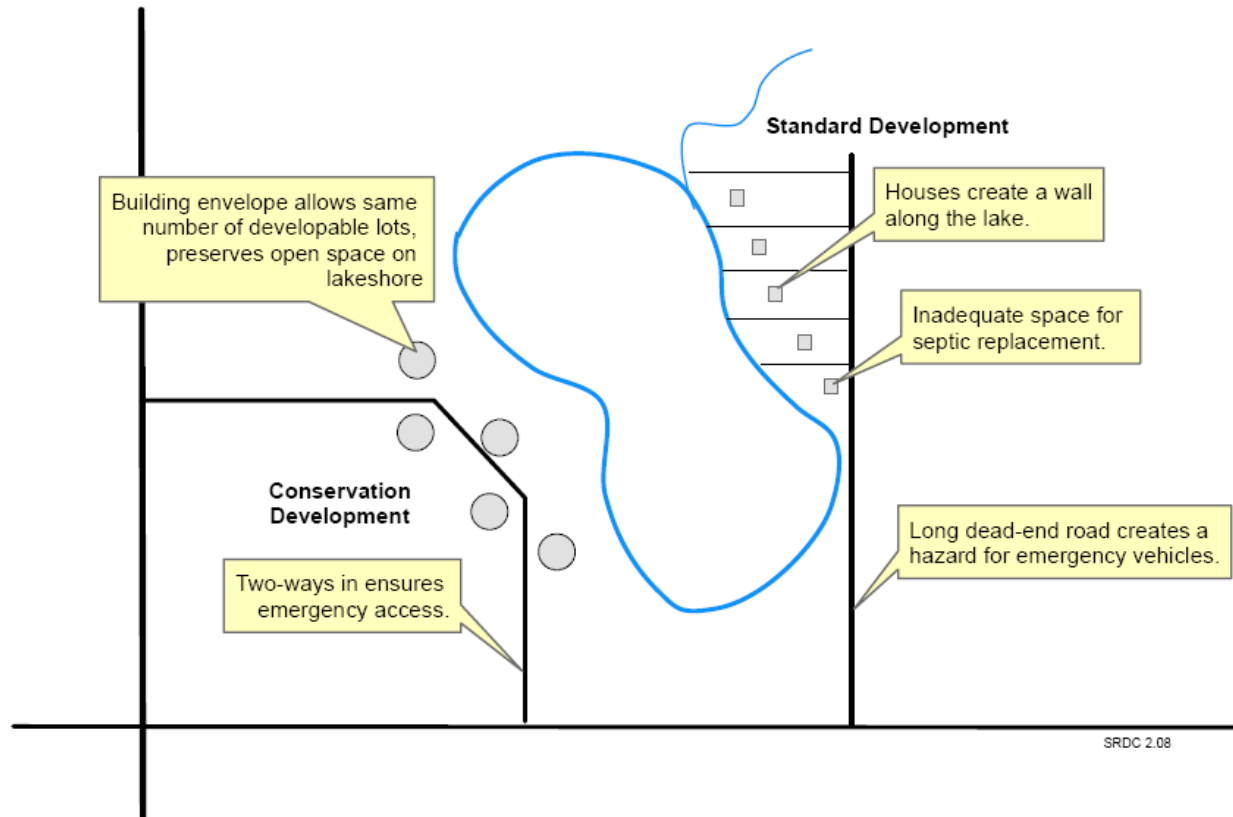
It is in the County's interest to prevent sprawl. Urban development spilling out into the countryside—sometimes termed “leap-frog” development—increases the County's costs of

providing services and creates potential conflicts with agricultural operations. As noted in Chapter 1 of this plan, Minnesota State Statutes encourage development close to places of employment and services, reducing impacts on taxpayers.

Homes have been built on lakes in Minnesota since there has been a Minnesota. Traditionally these have been seasonal cabins, used only a few weeks in the summer. As baby boomers reach their prime earnings years, many people are realizing the dream of a second home fronting a lake, or secluded out in the country with a view of prairie grasslands. However, more of these second homes are becoming year-round residences. It will become more important in rural developments to stress the need for infrastructure and utility services such as roads, water, sewage treatment, stormwater control and garbage collection.

This is not to say that Jackson County should shut the door on any new development in the county. To the contrary, there are many opportunities to utilize innovative development patterns such as conservation design or Low Impact Development, as discussed in Section 3.2 above. According to the Minnesota Land Trust, “Developers using conservation development techniques often realize reduced capital costs and increased sales thanks to the preserved open space. the open space benefits of conservation development can be further enhanced by more advanced storm water management techniques, by restoring areas to native habitat and by minimizing the amount of soil disturbance during construction.” Conservation design can also be attractive for shoreland development where it can provide shared lakefront access to many more potential homeowners than individual cookie-cutter lots at DNR’s mandated minimum widths.

Figure 4-3: Conservation Development



A Conservation Development approach can be implemented by modifying existing zoning and subdivision regulations, such as performance zoning standards using building envelopes to cluster structures. Another approach is a dedicated, flexible Planned Unit Development (PUD) option with design guidelines. Conservation Development is typically a voluntary option, and may have incentives for additional features. For example, there may be a density bonus for public water access, or if more than 80% of a development is set-aside as permanent open space.

It is important that new development of all types demonstrate how it meets the goals and objectives of the Comprehensive Plan, compatibility with existing land use and the availability of public services at no additional burden to existing taxpayers.

Annexation

In most cases, new development should occur inside cities, to assure adequate and cost effective provision of urban services. When parcels are adjacent to city limits, state statutes outline methods for cities to annex that land into their municipal boundaries, including by petition (typically of landowners), by ordinance of the municipality, or with an “orderly annexation” agreement between a city and affected township. This process is more likely to work well if the City, County and adjacent property owners work cooperatively to define expectations for growth areas, extension of infrastructure, and responsibility for costs and benefits related to future growth.

CHAPTER V. WHERE WE GO FROM HERE

LAND USE GOALS AND GROWTH POLICIES

A County's growth policies set the direction for land use in the county. Goals and policies were developed and revised by the Jackson County Planning Commission, with assistance from County Staff. These goals are oriented towards protecting viable agricultural areas in the county and encouraging urban growth to take place adjacent to existing cities where urban services can easily be extended or provided. The intention is to minimize urban-rural conflicts, allow urban growth near the cities and protect prime agricultural land in the county.

5.1. OVERALL GROWTH

Goals

1. Preservation of commercial agriculture as a viable, permanent land use and an essential long-term permanent activity in the county.
2. Protection of major natural resource areas in the county to serve as a basis for recreation and tourism in the county.
3. Location of urban density development near the cities where urban services can easily be provided and extended.

Policies

- a. Enact programs to preserve the viable agricultural areas in the county from scattered urban development.
- b. Locate rural housing development away from recognized commercial agricultural areas and into areas with marginal agricultural soil, woodland areas and areas adjacent to existing cities where urban services can easily be extended.
- c. Allow rural housing, which is not scheduled to receive central sewage disposal service only in areas where the soil, topography and water table is such that the individual sewage systems can properly function.
- d. Concentrate urban, residential, commercial and industrial land uses adjacent to existing cities where urban services can easily be extended.
- e. Carefully, regulate development in the shorelands, woodlands, etc. so as to preserve the natural resource areas as attractive recreation and tourism areas.
- f. Enact programs to preserve and protect historically significant areas throughout the county.
- g. Enact programs to protect the natural resources in the county. Use natural resource information as a basis for determining future areas for urban expansion.

- h. Encourage the maintenance and expansion of housing for all income groups who reside in the county.
- i. Encourage transportation facilities and programs to improve general accessibility and reinforce the county development program.
- j. Adopt utility standards and programs (sewer and water) that will minimize pollution problems and reinforce the county development policies.

5.2. AGRICULTURE

Goals

- 1. Preservation of commercial agriculture as a viable, permanent land use and as a significant economic activity in the county.

Policies

- a. Limit rural housing development in prime agricultural areas in the southern part of the county.
- b. Promote county and state legislation which will retain and promote agriculture as significant economic activity and land use in the county.
- c. Encourage governmental units to avoid locating major public facilities, roads, and developments in good agricultural land areas.
- d. Encourage farmers to adopt and maintain sound soil erosion control practices such as contour-plowing, strip cropping, minimum tillage, shelter-belts, etc.
- e. Carefully control the location of feedlots and other animal confinement areas in the county to minimize pollution and nuisance problems.

5.3. ECONOMIC DEVELOPMENT

Goals

- 1. Promotion of diversified economic development in the county which will provide for continued employment opportunities for citizens.
- 2. Continued expansion of trade and service industries in the county.
- 3. Location of commercial facilities so as to provide reasonable access for the citizens to an adequate supply of goods and services.
- 4. Continued expansion of industrial development in the county to provide employment opportunities for the citizens.
- 5. Location of commercial and industrial development to minimize conflict with surrounding land uses.

Policies

- a. Encourage programs that will promote diversified economic development in the county, including industrial, retail, trade, and service industries.
- b. Encourage industrial development in such a way as to enhance the tax base and increase employment opportunities while at the same time place minimal demands on the environment.
- c. Allow only "clean" type, non-polluting industry in areas adjacent to existing residential development to minimize land use conflicts.
- d. Encourage major industrial developments to locate in or near existing cities where public services (city sewer and water) can easily be extended and near places of good accessibility.
- e. Encourage major commercial developments (shopping centers) to locate in or near existing cities where public services (sewer and water) can easily be extended and near places of good accessibility.
- f. Discourage unplanned and scattered commercial development that will have an adverse effect on existing commercial development.

5.4. NATURAL RESOURCE PROTECTION

Goals

1. Protection and enhancement of the air, water, and land resources in the county as a vital ingredient of the living environment.

Policies

- a. Promote land management practices that protect the natural resources in the county.
- b. Carefully control development in environmentally sensitive areas, i.e., wetlands, floodplains, shorelands, woodlands, and natural water aquifers areas.
- c. Promote the preservation and improvement of all lakes, rivers and streams in an unpolluted state enacting floodplains and shoreland ordinances.
- d. Promote soil conservation and erosion control practices in both urbanized and rural portions of the county.
- e. Encourage subdivisions and urban development to conform to the natural limitations presented by topography and soils so as to create the least potential for soil erosion.
- f. Carefully control the location of feedlots and other animal confinement areas in the county to minimize pollution and nuisance problems.
- g. Carefully regulate the location of solid waste disposal sites to minimize pollution and nuisance problems.

- h. Inventory and manage the aggregate resources within the county by utilizing sustainable resource management principals.
- i. Promote the orderly development of our wind energy resources in a manner that does not diminish neighboring property values or have a negative impact on our natural resources in the area.

5.5. RESIDENTIAL DEVELOPMENT

Goals

- 1. A broad choice of housing types for all income groups.
- 2. A convenient access for housing to public and private facilities.
- 3. Safe, healthful and blight-free residences and residential developments.

Policies

- a. Encourage the location of residential subdivisions and major developments near existing cities where urban services can easily be provided.
- b. Discourage scattered and "leap-frog" residential development in commercial agricultural areas.
- c. Encourage the use of natural resource information such as soils, topography, ground water, etc., in residential site designs.
- d. Prohibit the location of rural housing with septic tanks and drainfields in areas of high bedrock or water table to minimize pollution problems.
- e. Use soils and other natural resource information as a basis for establishing minimum lot sizes for rural housing with septic tanks and drainfields.
- f. Encourage the location of manufactured homes within manufactured homes parks where adequate services can be provided.
- g. Encourage the location of mobile home parks in urban residential or mobile home residential districts which are served by central sewer and water services.
- h. Only allow the location of multi-family residential development in areas where community sewer and water facilities are available.
- i. Develop and adopt provisions in development ordinances which encourage innovative site and housing unit designs.
- j. Enact programs to encourage the rehabilitation of existing older homes.

5.6. OPEN SPACE AND RECREATION

Goals

1. Sufficient parks and open space to meet the recreation needs of the citizens in the county.
2. Recreation facilities and programs in the existing parks to meet the needs of all income and age groups.

Policies

- a. Avoid duplicating already existing State and Federal park lands and facilities.
- b. Discourage incompatible or unsafe development adjacent to park and recreation areas.
- c. Provide sufficient recreation facilities in the existing parks to maximize the use of the parks.
- d. Encourage the protection of natural resource areas (wetlands, floodplains, woodland, steep slopes) through public acquisition for both active and passive recreation uses.

5.7. PUBLIC FACILITIES

Goals

1. Provision of public facilities in a manner that maximizes public health, safety and welfare.
2. Financing of public facilities in such a manner that it is equitable to all county residences.

Policies

- a. Discourage development in areas where on-site sewer systems are likely to malfunction due to poor soil characteristics.
- b. Enforce the Minnesota Pollution Control Agency's standards concerning on-site sewer systems.
- c. Discourage extension of public utilities over large undeveloped parcels to serve small pockets of scattered development.
- d. Concentrate major residential, commercial and industrial land uses near cities which have city sewer routes and water systems.
- e. Encourage complete use of existing public utilities and services before extending or expanding such use.

5.8. TRANSPORTATION

Goals

1. A transportation system which compliments land use development and land use policies throughout the county.

2. A transportation system which maximizes accessibility for all income groups to places of employment, recreation, shopping and entertainment.

Policies

- a. Develop a transportation system which reinforces the County's growth policies.
- b. Integrate land use and transportation plans to minimize the adverse effects of transportation systems (noise, air pollution) on the adjacent development.
- c. To the extent possible, avoid locating transportation facilities so as to adversely affect the natural resources of the county.
- d. Encourage the development of a transportation system which properly balances considerations of safety, accessibility, environmental protection and cost.
- e. Carefully control land use developments at the major transportation intersections and interchanges to avoid compromising safety, accessibility and functions of the highways.
- f. Encourage the development of a transportation system which properly integrates the various types and levels of highways (state, county and local) to maximize safety and accessibility.

5.9. IMPLEMENTATION STRATEGIES

Goals

1. Implementation of goals and policies.

Policies

- a. Develop and adopt methods that will effectively implement the county's policies.
- b. Encourage effective and coordinated implementation methods that properly balance private incentives and protection of the public interest.
- c. Effectively coordinate the various public implementation tools such as regulatory devices (Zoning ordinance, subdivision regulations, etc.) public acquisition, utility extensions (sewer, water, highways), and property tax policies.
- d. Periodically review and update the development ordinances.

CHAPTER VI. IMPLEMENTATION

This plan is not intended to sit on a shelf. A comprehensive plan is a long-term guide for decision-makers to use in evaluating development proposals, and to take action supporting long-term growth in the county. This chapter briefly outlines several tools that are useful to implement the goals and objectives of the *Jackson County Comprehensive Plan*.

6.1 AREA PLANS, SPECIFIC PLANS AND CAPITAL IMPROVEMENT PLANS

A comprehensive plan looks broadly at many aspects of the county. Sometimes more detail is required to truly understand an area or issue and provide useful guidance. We are all familiar with specific plans such as Transportation plans, that specifically outline the needs of a certain sector. The *All Hazards Mitigation Plan*, and the *Local Water Management Plan*, for example, have significant land use components related to this comprehensive plan. FEMA requires that jurisdictions applying for funding demonstrate how hazard mitigation planning has been incorporated into other plans and projects.

Area plans take a neighborhood or corridor and examine that area in more detail. For example, an area plan might look at the needs of a lake (or group of lakes) on a scale more typical of a village or small city, including a land use inventory by parcel, traffic generators, water and sewer needs, etc. In many places the county will participate in joint area planning with cities and townships to prevent sprawl and promote orderly development and phased annexation of growth areas.

A capital improvement program (CIP) will outline the timing and nature of a community's major investments in infrastructure and public facilities. All of these investments have ongoing operation and maintenance costs, in addition to initial capital costs. The criteria used in making these investments may significantly affect the total lifetime costs they impose. The scope of a CIP can range from the minimal requirements for borrowing funds to detailed strategic analysis and investment schedules for public facilities. Coordinating the CIP with the comprehensive plan can help coordinate and prevent conflicts between public and private investments.

6.2 LAND USE CODES

The *Comprehensive Plan* serves as the basis for the County's zoning ordinance and other official controls such as subdivision regulations, building and housing codes, and special purpose ordinances. While typically very detailed and complex, these legal regulations translate the framework of this plan into guidelines for future growth.

Land use codes do a better job when they are written clearly and concisely, and enforced consistently and fairly. The existing development code's zoning ordinance, zoning map and subdivision regulations should be periodically reviewed (typically at minimum every five years) to ensure consistency with the comprehensive plan and state statute. Regular review can also

help assure land owners that the County is carefully examining best practices in land use regulation.

6.3 DEVELOPMENT REVIEW

Development review is the process to confirm that new buildings and development proposals are in compliance with the *Comprehensive Plan* and *Development Code*, including building permits, conditional use permits, requests for variance, and divisions of land. Applicants for development review should clearly explain in their written application how their proposals meet the goals and policies of this *Comprehensive Plan*, the *Development Code*, and other applicable regulations and standards.

A conditional use is a permitted use that is compatible with by-right other uses in a zoning district only with additional conditions. For example, a church is generally considered a permitted use in any area, but may require conditions on parking, lighting, screening, etc, to fit into a neighborhood of single family homes. Conditions in a Conditional Use Permit should address specific impacts, be specific to that project and run with the land, not with ownership. If the Planning Commission finds that many similar projects are being proposed with the same conditions, it may be more fair and efficient to write appropriate performance standards into the *Development Code*.

No matter how well written, no zoning regulation can anticipate every circumstance faced in building on property. The Board of Adjustment, notes a book by the same name², is a body intended as a “safety valve in the application of zoning regulations.” Over the years property has developed in many ways that were never anticipated, through no fault of current land owners and occupants. Even so, requests for variance from the requirements of the *Development Code* should be granted sparingly.

The Board of Adjustment (BOA) hearings are a court-like, “quasi-judicial” function, in which all property owners are assured their rights of equal protection and due process under the law. The BOA must find that certain criteria are met under state law to grant a site design variance, including statutes and case law. Typically, the BOA will consider questions such as:

- Do special circumstances apply to the property?
- Do special circumstances render the property undevelopable?
- Is the hardship created by somebody other than the applicant?
- Will the variance be compatible with the character of the neighborhood?
- Will the variance be the minimum that will afford relief?
- Can conditions be assigned to meet the purpose of development regulations?

A variance runs with the land, not with ownership. The County Attorney should be consulted regularly for legal advice on all land use matters.

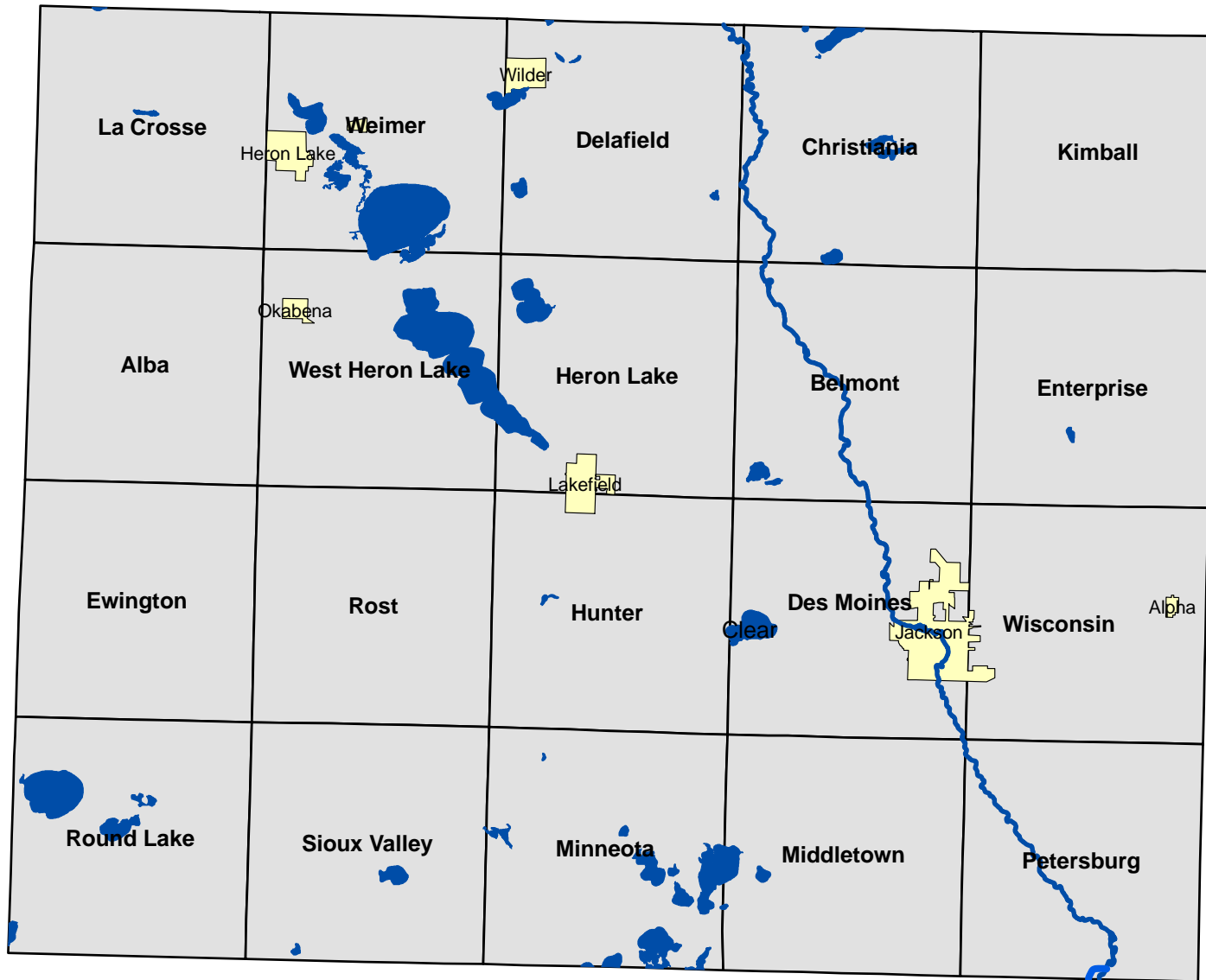
² V. Gail Easley, FAICP, and David A. Theriaque, Chicago: American Planning Association, 2005

Very rarely is a parcel so unique that it can not be used in the same way as any other parcel in a zoning district. When this is the case, the area should be carefully examined as a candidate for rezoning to a more appropriate zone designation, or amendment of the zone requirements to more accurately reflect the needs of residents and property owners.

Whether through more specific planning, clarification of codes and ordinances, or through careful review of development proposals, the comprehensive plan is intended to help decision makers provide for a bright, prosperous future for the citizens of Jackson County.

#

Jackson County Civil Divisions



Legend

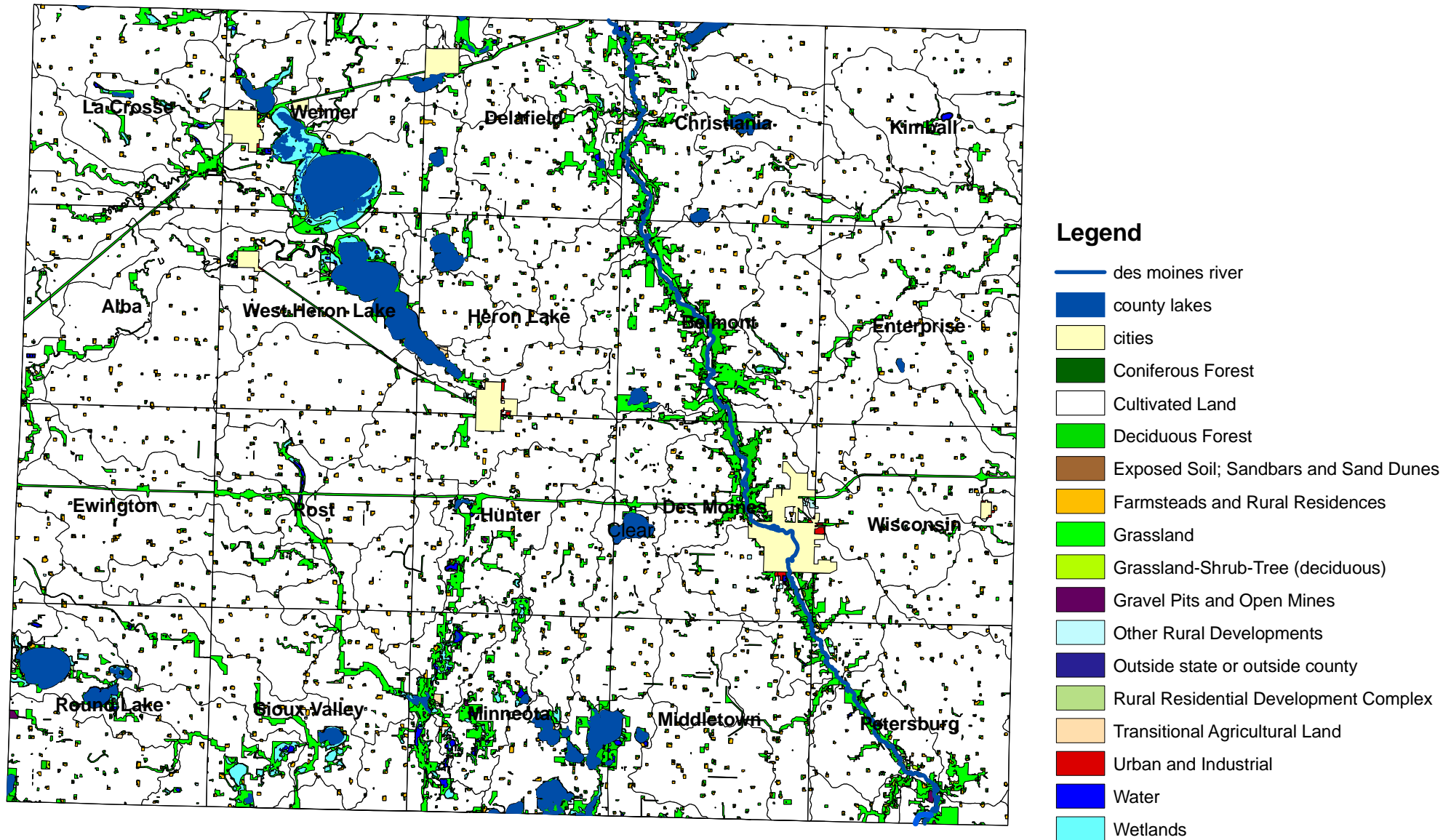
- county lakes
- cities
- township
- des moines river

6/25/09



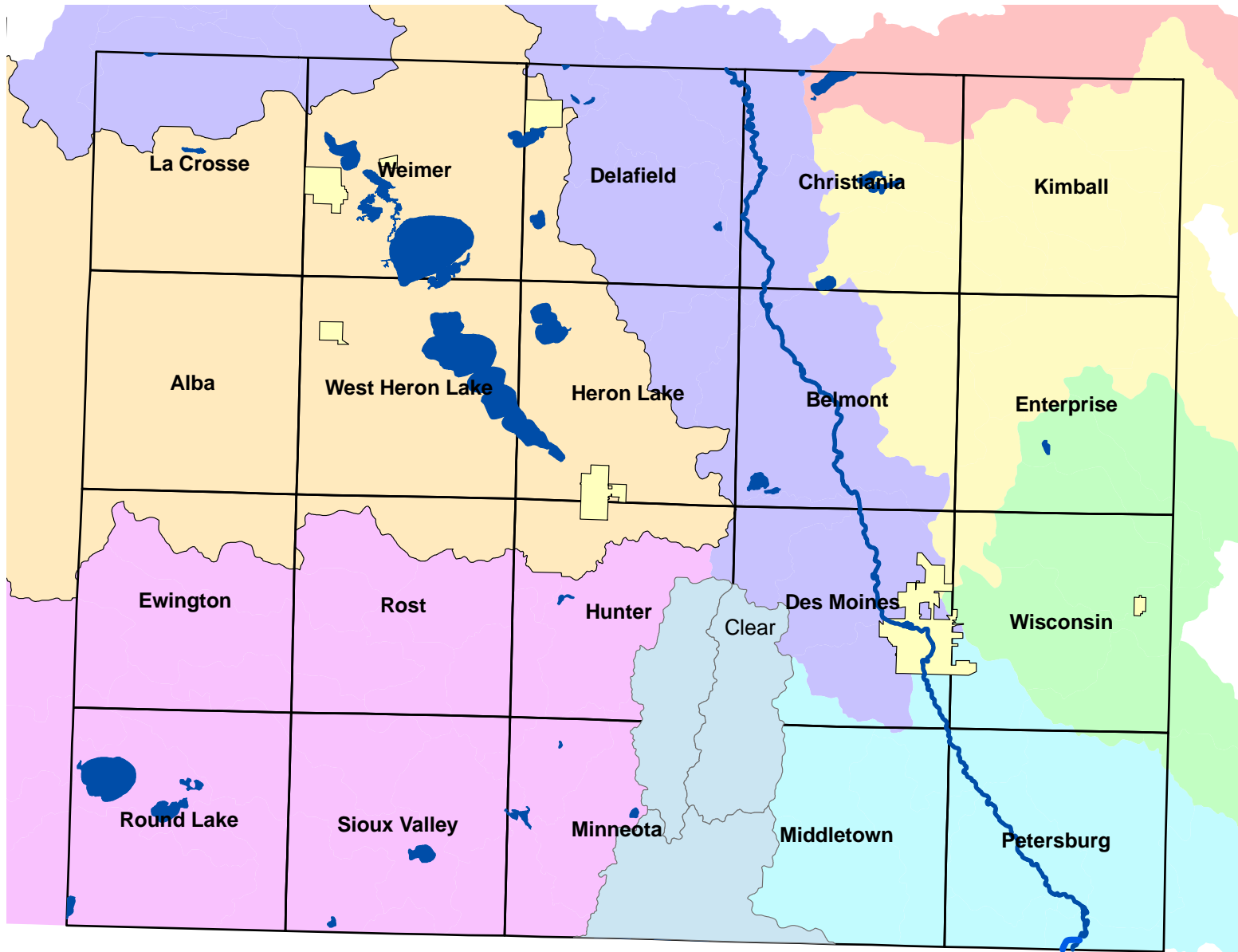
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Jackson County Land Use 2000



6/25/09

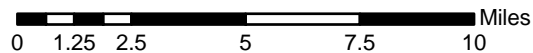
Jackson County Watersheds



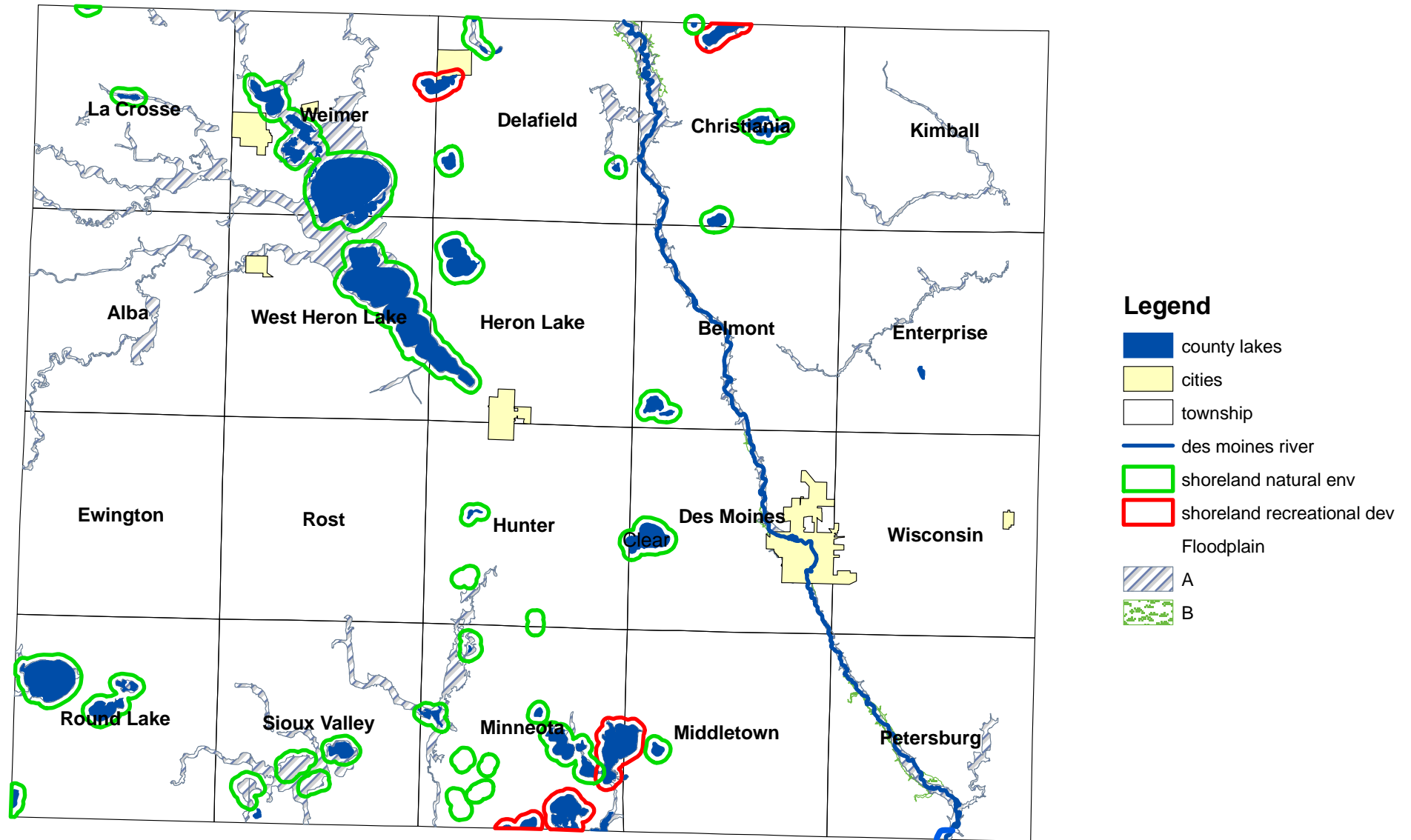
Legend

- county lakes
- cities
- township
- des moines river
- Blue Earth River
- East Fork Des Moines River
- Little Sioux River
- Lower W Fork Des Moines River
- Watonwan River
- West Fork Des Moines River
- HLWS Boundry
- IGLWatershed

6/25/09



Jackson County Shoreland & Floodplain

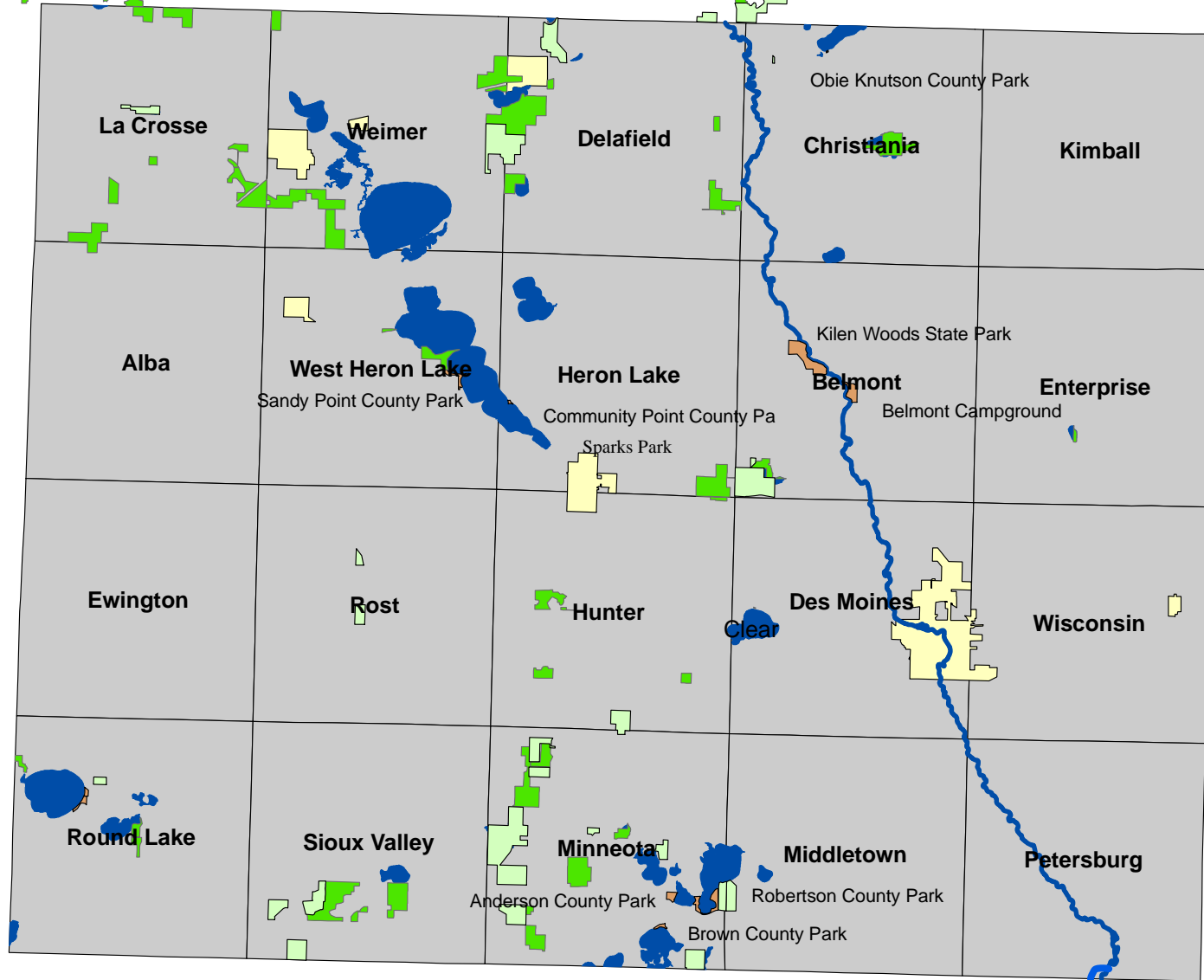


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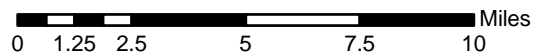


0 1.25 2.5 5 7.5 10 Miles

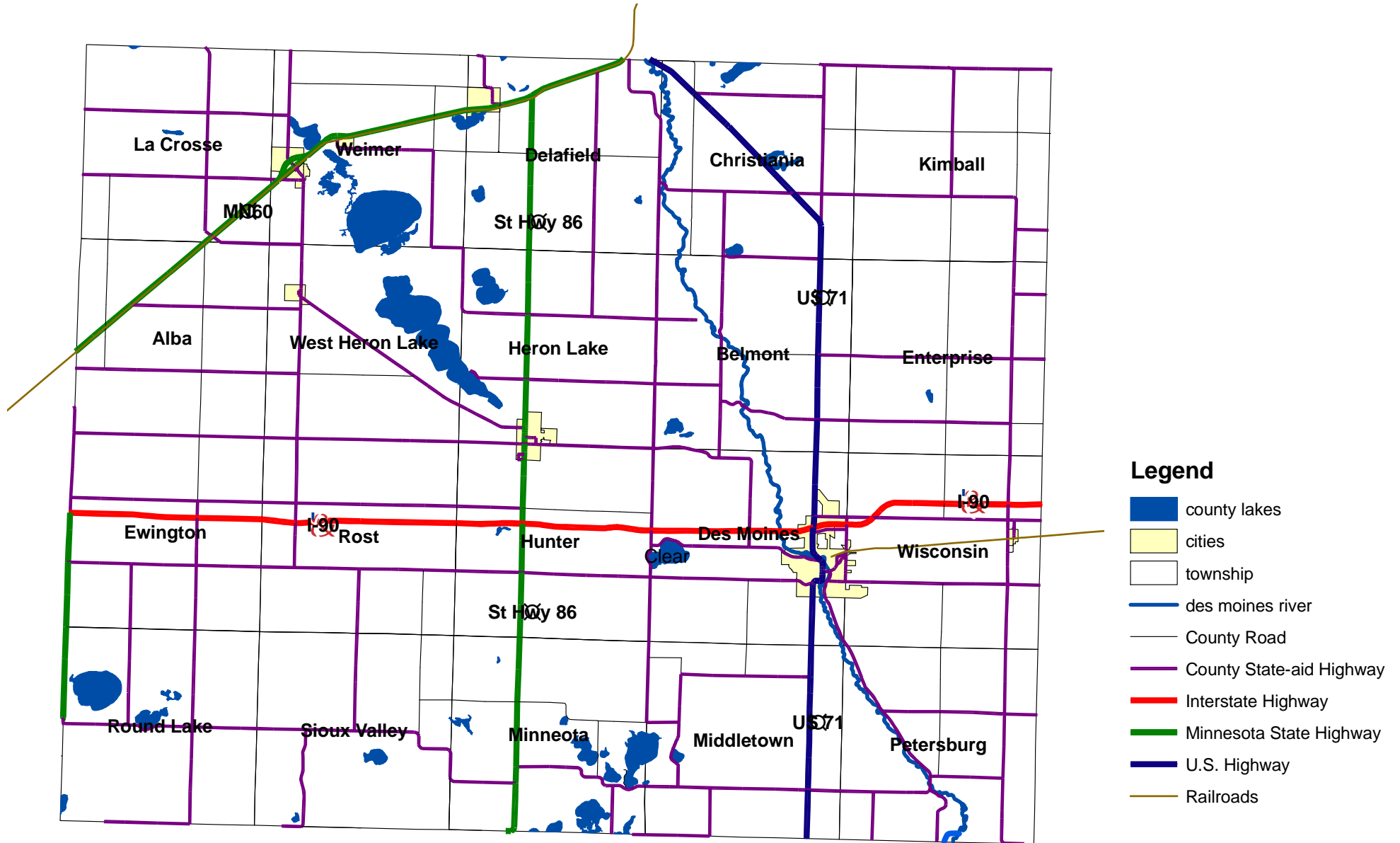
Jackson County Parks and Natural Areas



6/25/09



Jackson County Transportation

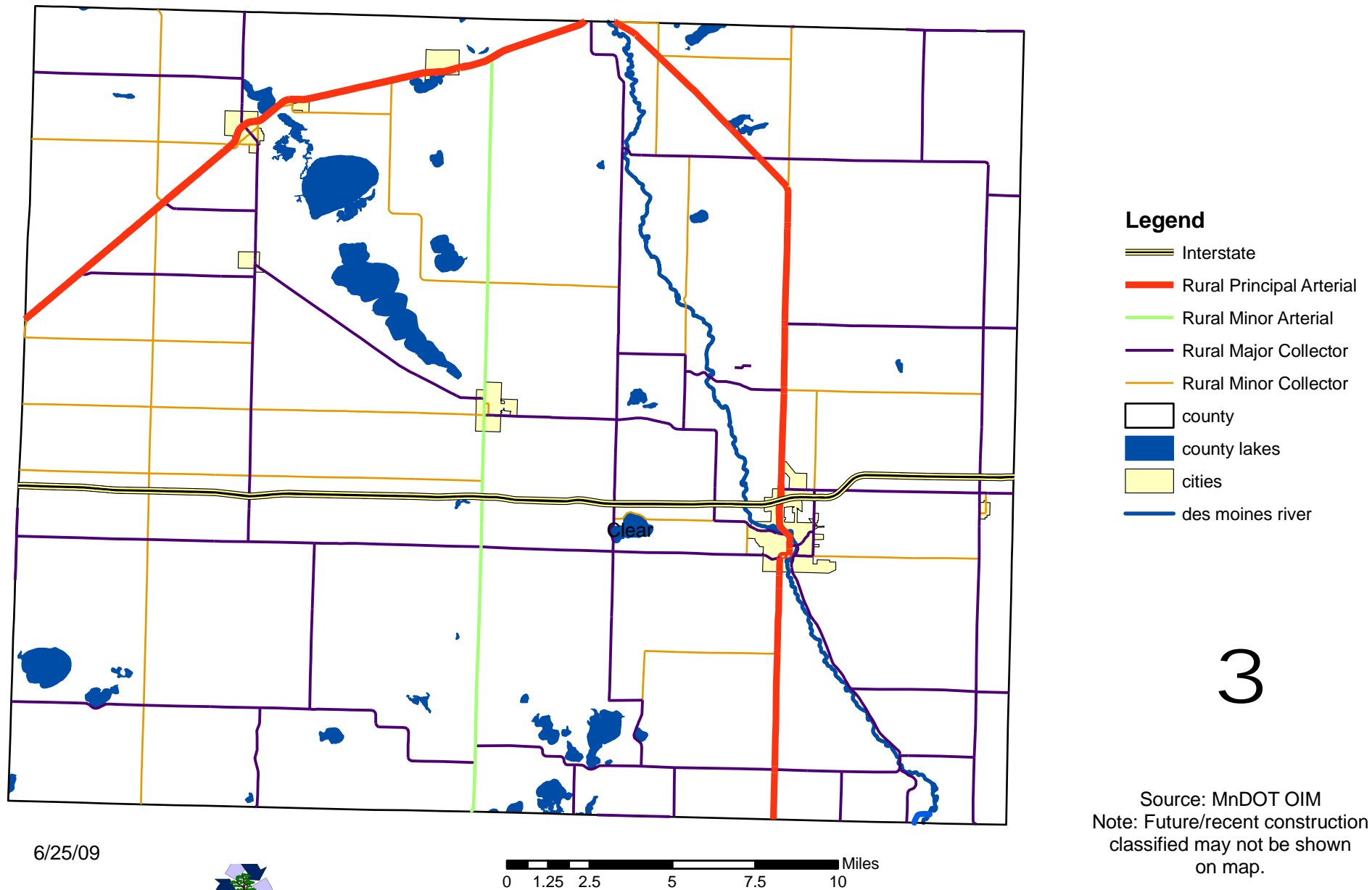


Legend

- county lakes
- cities
- township
- des moines river
- County Road
- County State-aid Highway
- Interstate Highway
- Minnesota State Highway
- U.S. Highway
- Railroads

6/25/09

Jackson County MnDOT Functional Classification 2009

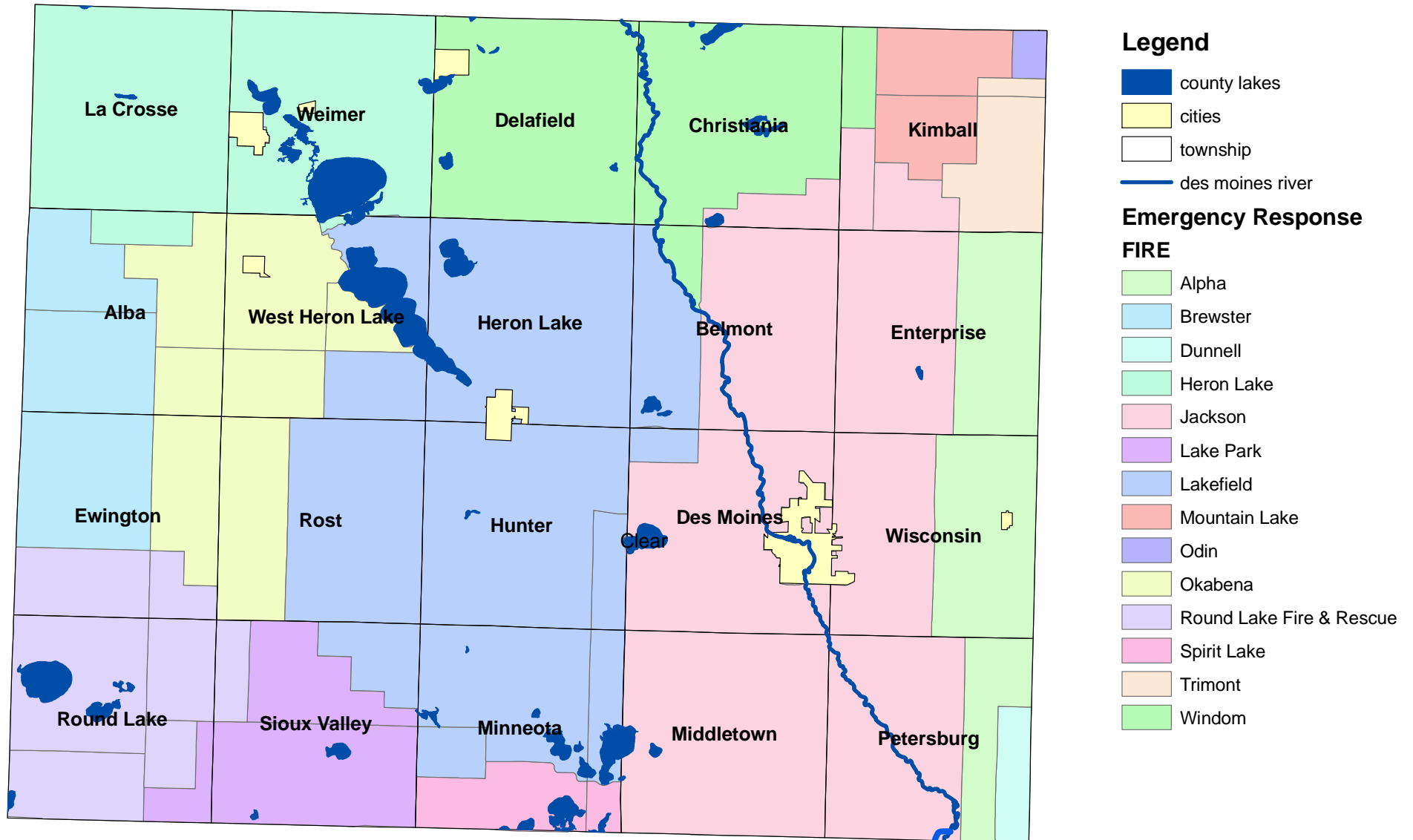


3

Source: MnDOT OIM
Note: Future/recent construction
classified may not be shown
on map.

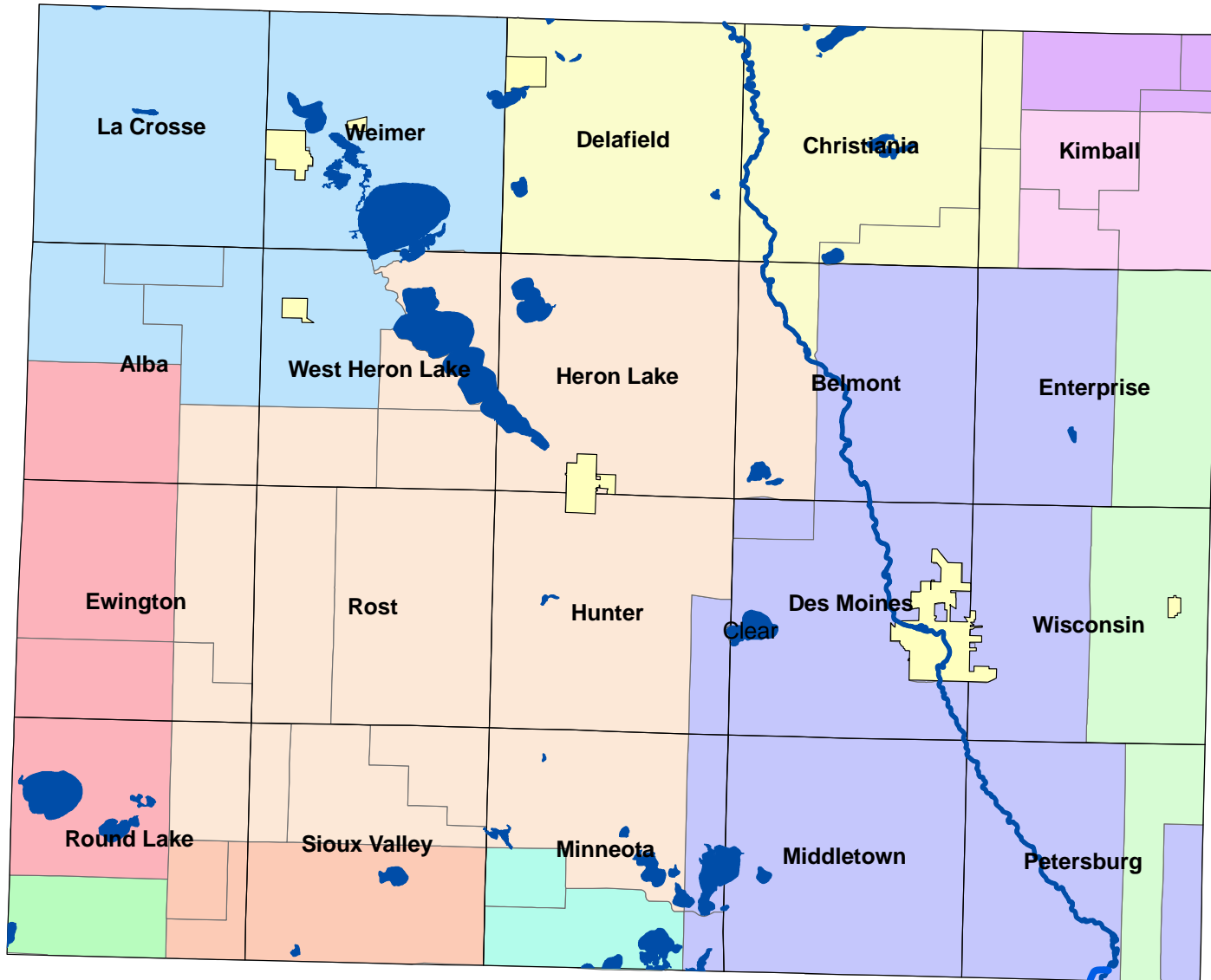
6/25/09

Jackson County Fire Service Area



6/25/09

Jackson County Ambulance Service Area



Legend

- county lakes
- cities
- township
- des moines river

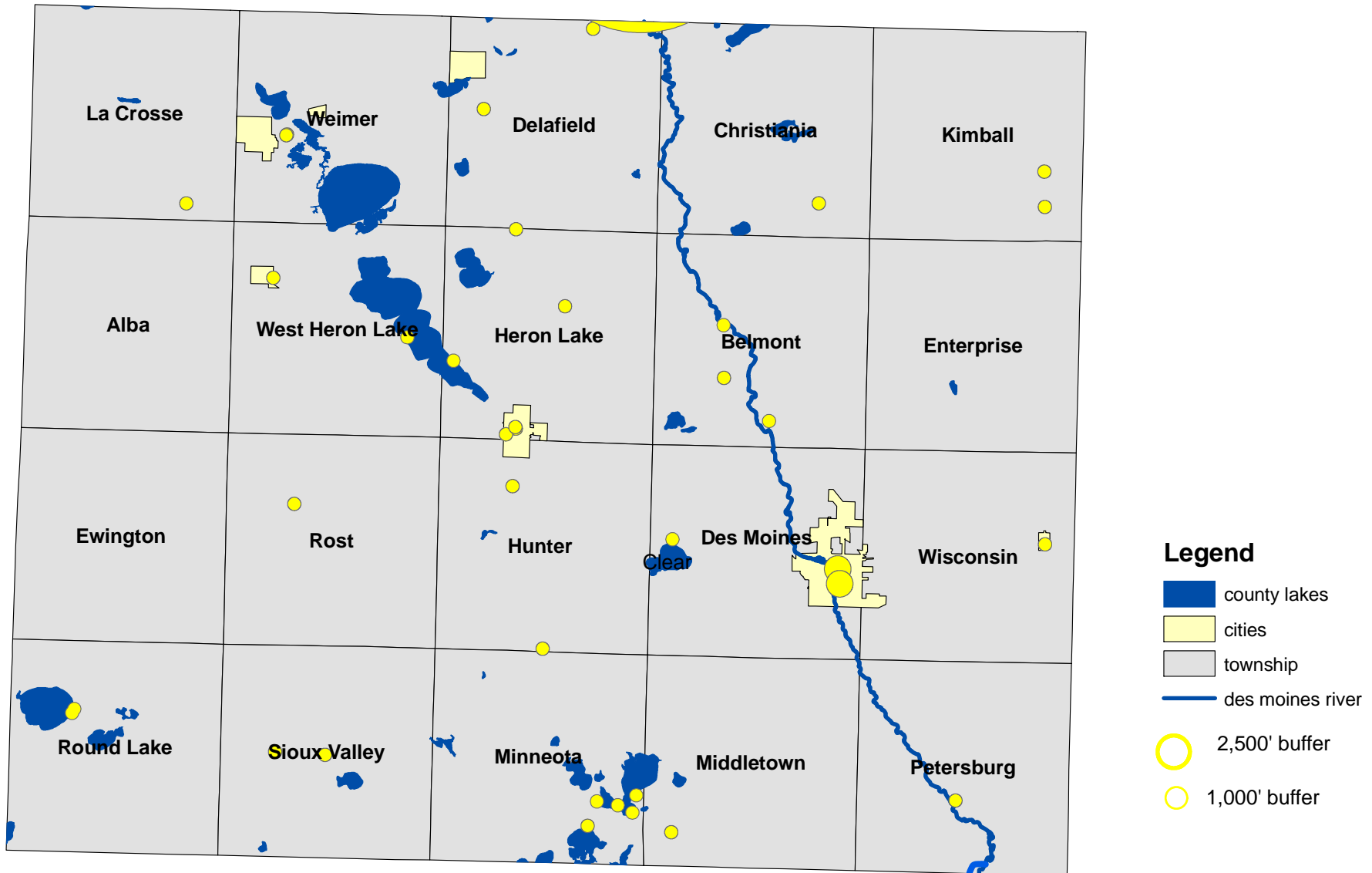
Emergency Response

AMBULANCE

- Heron Lake EMS
- Jackson
- Jackson Pmry / Alpha Fir
- Lakefield
- Lakefield-2nd Lake Park
- Lakefield-2nd Spirit Lake
- Mountain Lake
- Trimont
- Windom
- Worthington
- Worthington-2nd Lake Park

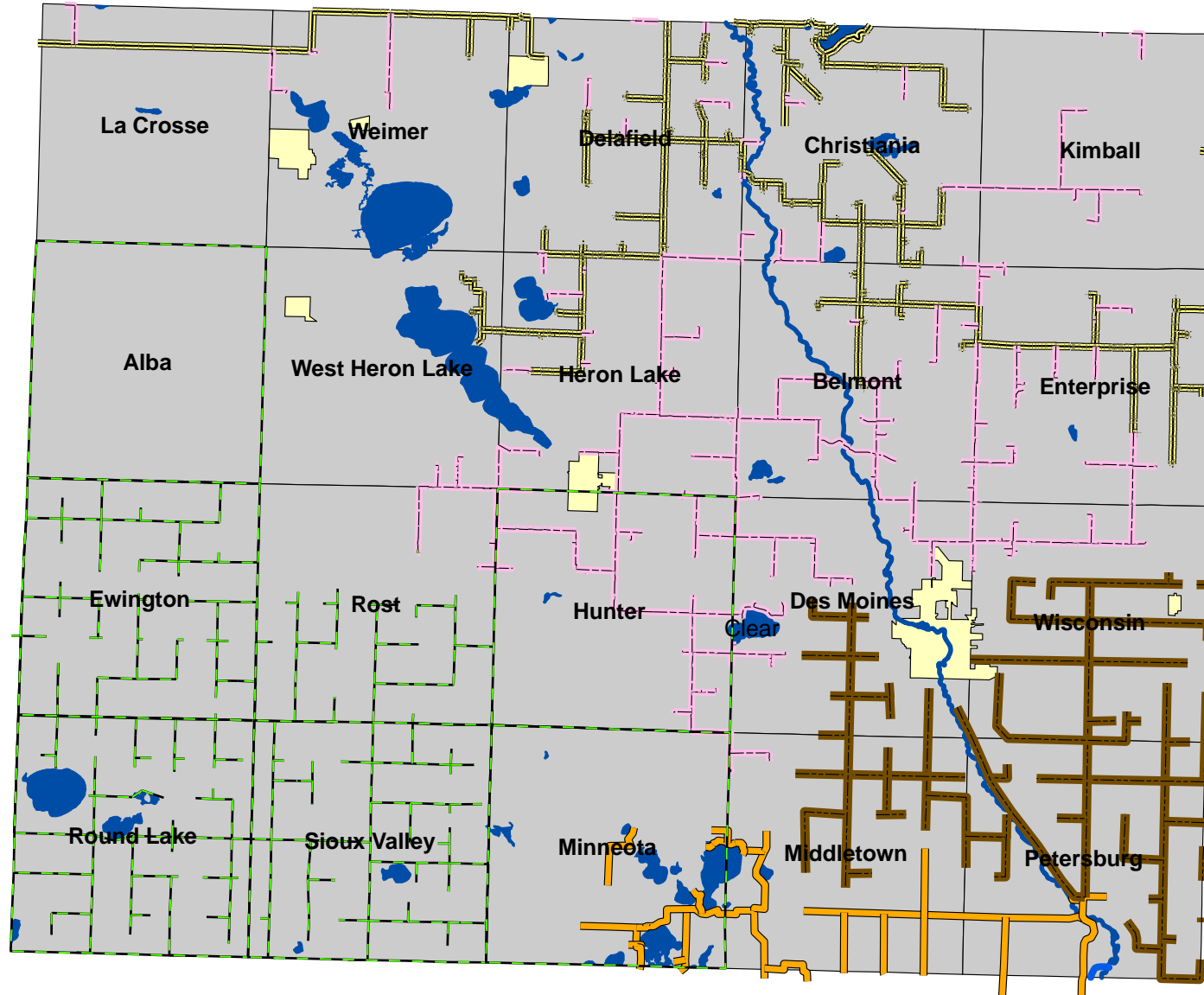
6/25/09

Jackson County Public Water Supplies



6/25/09

Jackson County Rural Water Service Areas



Legend

- des moines river
- county lakes
- cities
- proposed Lincoln-Pipestone Rural Water

Iowa Lakes Regional Water

Installed_

- Existing
- Proposed

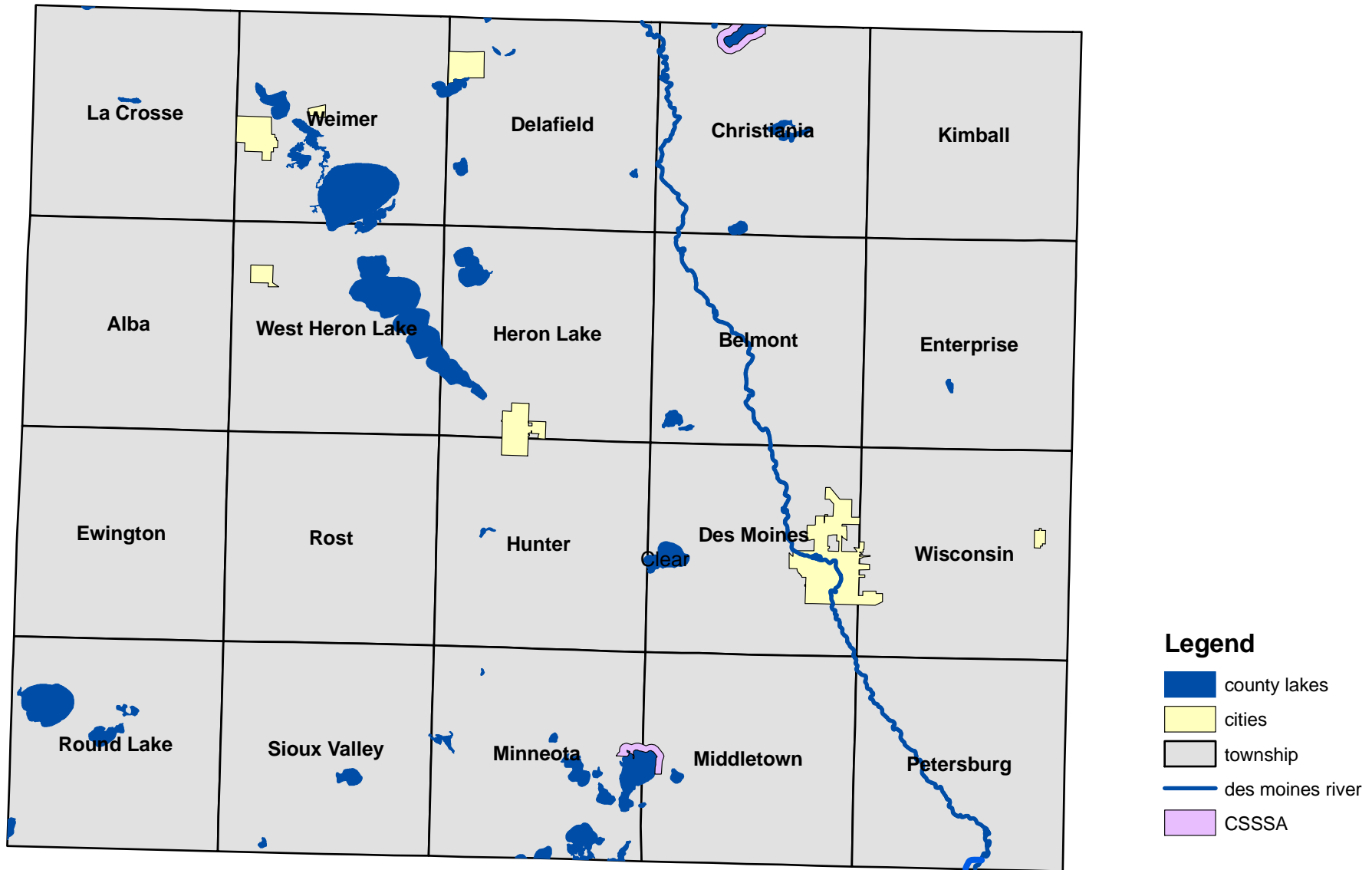
Red Rock Rural Water

Status as of 2006

- Existing
- Proposed

6/25/09

Jackson County Community Sanitary Sewer Service Areas



6/25/09