City of Big Lake
Comprehensive Plan
2018

City of Big Lake Comprehensive Plan

City Council
Raeanne Danielowski , Mayor
Dick Backlund
Seth Hansen
Duane Langsdorf
Mike Wallen

City Planning Commission
Scott Marotz, Chair
Ketti Green
Seth Hansen
Alan Heidemann
Jennifer Joseph
Larry Sundberg
Scott Zettervall

City Staff
Clay Wilfahrt, City Administrator
Michael Healy, City Planner
Hanna Klimmek, Community Development Director
Layne Otteson, City Engineer
Mike Goebel, Public Works Director
Gina Wolbeck, City Clerk
Joel Scharf, Chief of Police
Deb Wegeleben, Finance Director
Katy Stelzner, Minnesota Greencorps member
Sandy Petrowski, Administrative Assistant
Trisha Lindahl, Administrative Assistant

Citizens Advisory Committee
Arnold Bergsten
Beverly Anderson
Cain Murray
Chris DeLorenzo
Denny Hansen
Henry Bochenski III
Jim Herzig
Jon Durst
Judy Wilts
Karla Bergsten
Kelly Stromberg
Ken Geroux
Kristy Kunerth
Linda Fuhrman
Lisa Odens
Meg Ciccateri
Paul Knier
Paul Seefeld
Philip Rondeau
Ramona Voight
Ross Priest
Scott Zettervall
Steve Westerberg
Teri Dickinson
Tim Suchy
Britta Nordberg, Big Lake High School Student

Planning Consultants
William Weber, Weber Community Planning
William Smith, Biko Associates
Janna King, Economic Development Services, Inc.

Adopted 2018

City of Big Lake Comprehensive Plan

Volume One – Assessment of Conditions and Issues

Volume Two – Policy Plan

Appendices

List of Figures

City of Big Lake
Comprehensive Plan
2018

Volume One: Conditions and Issues

CITY OF Big Lake

Summary of Major Planning Issues

This volume of the *Comprehensive Plan* summarizes the major conditions and planning issues that were identified through the analyses of the various subjects.

Issues are defined as questions that should be discussed and debated during the comprehensive planning process and resolved in light of other issues.

Subsequent chapters of Volume One present the analyses of conditions and a more detailed discussion of issues for each planning topic. This information will help citizens and officials understand these and other issues and how they are interrelated.

Major Planning Issues

Each of the following issues – and others – are explained in their respective chapters of this Assessment of Conditions.

Demographics

1. **Household Income and Employment:** What, if anything, should the City do to promote the growth of living-wage jobs, help raise average incomes and reduce the rate of unemployment or under-employment among Big Lake residents, particularly households with children?
2. **Age Structure:** What should the City do to attract and retain more people in the 35 to 64-year-old age group, those in their prime earning years who are looking for move-up housing?
3. **Regional and City Growth:** What additional steps should the City take, if any, to attempt to capture a portion of the projected population growth in the region?
4. **Household Size and Housing Choices:** How should the Land Use Plan respond to the shrinking average size of households and the increased demand for multiple-family housing?
5. **Growing Diversity:** What should the community do to successfully accommodate the expected increase in population diversity?

Natural Resources

1. **Wetland Protection:** Can or should degraded or destroyed wetlands be restored and used as amenities in future neighborhoods?
2. **Floodplain Use:** Should some portion of the Elk River floodplain be acquired for linear public park and trail? If so, which unit of government should lead in that effort, the County or the City? What should be their respective roles?
3. **Protection during Development:** Can a sustainable balance be found between land development and natural resource protection?
4. **Resource Stewardship:** How should we use what we have?

Land Use and Development

1. **Protecting the Ability of the City to Grow Outward:** Will the County and Big Lake Township continue to cooperate with the City to protect the City's ability to growth outward in an efficient and economic fashion?
2. **Annexation of Town Peninsulas:** What should be done, if anything, to encourage land owners in the several Township "peninsulas" to petition for annexation of their land to the City?
3. **Fringe Development Pattern:** What should be the pattern of land use on the City's perimeter?

4. **Favored Locations for Perimeter Growth:** What are the most efficient and beneficial locations for perimeter growth?
5. **Locations for Multiple-Family Housing:** What are the best types of locations for multiple-family housing?
6. **Types of New Housing:** Should the plan try to guide development towards or away from certain types of housing or let the market make that decision?
7. **Appearance of New Multiple-Family Housing:** Should the City adopt design guidelines, or regulations, that help make attached housing more compatible with detached (single-family) housing?
8. **New Neighborhood Design:** Should the City require that new residential areas be designed with many of the features of the older neighborhoods such as sidewalks, street trees, a mixture of housing types, narrower streets, short front setbacks and garages set back further than the façade of the house? Should there be regulations to soften the appearance of garage doors?
9. **Downtown:** To what degree should the City promote and assist redevelopment that conforms with the recommendations of the downtown design guidelines for retail, offices, housing and mixed-use buildings? What should be the next major step forward for the downtown?
10. **Waterfront Greenways:** Should the City acquire land for a linear public park and trail plus protected open space along the Elk River?
11. **Economic Development, Jobs and Income:** What land use, zoning and development policy changes, if any, should be made to help promote economic development in Big Lake?
12. **Commercial Growth:** How much land should be planned and zoned for retail business development? Should multiple-family housing be allowed in certain commercially-zoned locations?

Transportation System

1. **Mississippi River bridges:** Should there be another bridge over the Mississippi River near Big Lake?
2. **Potential rail yard-truck transfer facility:** How should Big Lake adjust its road system if a rail park emerges?
3. **Direct access to and from US 10:** Should the City urge the Minnesota Department of Transportation to reduce the number of direct access driveways and intersections along Highway 10 in favor of a more complete frontage road system?
4. **Lack of reasonably continuous travel routes across the city:** Can Big Lake adopt and follow a plan to require developers build a system of collector and minor arterial roads that connect across the city?
5. **Local street design:** Should minor residential streets be built narrower than they have been in the past?
6. **Sidewalks:** Should sidewalks be built on both sides of some future residential streets?
7. **Trails:** How active should the City be in planning and building an interconnected system of off-road asphalt paths?

Parks and Trails Systems

1. **Athletics Complex:** Should the City acquire land for and build an outdoor athletics complex for organized team sports? If so, where should it be and what should it include?
2. **School Facilities:** Should the City forge a closer working relationship with the School District for shared facility use?
3. **Neighborhood Parks:** Should there be more mid-sized, neighborhood parks in the 5 to 10-acre range?
4. **Sidewalks:** Should there be more sidewalks in all parts of the city as an integral element of the walking and bicycling network, which would be supplemented by off-road, multiple-use paths? Should the City work to retrofit established neighborhoods with sidewalks?
5. **Trails:** How aggressive should the City be in extending the many disconnected off-road paths?

Public Utilities and Surface Water

Sanitary Sewer Issues

1. **Growth Locations**: Where are the most suitable locations to expand the sanitary waste system (and the city) based on cost, engineering feasibility, and environmental effects?
2. **High-Demand Users:** Should system improvements be made to accommodate the high demand of a very small number of industrial users? How will this decision affect the city's economic development strategy?

Water Supply and Distribution Issues

1. **Growth Locations**: Where are the most logical locations to expand the sanitary waste system based on cost, engineering feasibility, and environmental impacts?
2. **System Improvements**: What enhancements to the existing water treatment and supply system would be required to serve all areas of the city today and/or future areas of the city as it grows with additional residential, commercial, industrial, or institutional land uses?

Surface Water Management Issues

1. **Planning:** Should the city prepare a comprehensive surface water management plan?

Economic Development

1. **Economic Development, Transportation and Land Use:** Which areas should be developed, planned or preserved for business or industrial parks based on 9-ton or 10-ton access, rail development potential and reasonable access to sewer and water? What can the city do to avoid conflicting land use or transportation-related problems for business and industrial park tenants?
2. **Business development:** What types of businesses does the city want to help grow? Attract? What actions and policies are needed to support business development?
3. **Tax Base Development:** What, if anything, should the City do to strengthen its tax base and fiscal health? Should the city seek to strengthen its commercial/industrial tax base? What policies or strategies could the City use to enhance its tax base and fiscal health?
4. **Workforce and talent attraction:** What strategies can the City use to create a community that attracts and retains talent attractive to area employers?
5. **Redevelopment:** What role does redevelopment play in strengthening Big Lake? Which locations have priority for redevelopment during the next decade? What policies, tools or actions are needed to support redevelopment?
6. **Transit oriented development:** What strategies will enable Big Lake to maximize the potential benefits of the Northstar Commuter Rail and Northstar CommuterLink service?

Housing

1. **Move-Up Housing:** What should be done, if anything, to encourage the construction in the city of more for-sale housing in the "move-up" range of quality and cost?
2. **Multiple-Family Housing:** Should the City encourage the construction of additional multiple-family housing? If so, where?
3. **Housing Compatibility: S**hould he City adopt design regulations to improve the visual compatibility between detached houses and townhouses or apartment buildings?
4. **Full Range of Housing Prices:** What should be done to encourage the private market to provide decent and affordable housing for all families, households and individuals?

Demographic Assessment

This chapter presents a profile of the people who make up the Big Lake community and identifies major demographic trends that may affect city planning over the next 20 years. Included are population and housing, race and ethnicity, age, household composition, income and employment.

Figures

Major Demographic Issues

The following are the major demographic issues identified through the analysis of conditions. Issues are questions to be discussed, debated and resolved during the planning process in light of other issues. The subsequent analysis of conditions has been prepared to help readers understand why these are issues and why they should be considered.

1. **Household Income and Employment:** What, if anything, should the City do to promote the growth of living-wage jobs, help raise average incomes and reduce the rate of unemployment or under-employment among Big Lake residents, particularly households with children?

2. **Age Structure:** What should the City do to attract and retain more people in the 35 to 64 year-old age group, those in their prime earning years who are looking for move-up housing?

3. **Regional and City Growth:** What additional steps should the City take, if any, to attempt to capture a portion of the projected population growth in the region?

4. **Household Size and Housing Choices:** How should the Land Use Plan respond to the shrinking average size of households and the increased demand for multiple-family housing?

5. **Growing Diversity:** What, if anything, should the community do to successfully accommodate an expected increase in population diversity?

   By 2040, the Seven County Metro Area is forecast to be 40 percent "people of color." Big Lake will likely experience some of that change.

Major Demographic Findings

The following are the major demographic finding and trends that should be considered in the update of the *Comprehensive Plan*.

- Big Lake grew rapidly from the mid-90s through the mid 2000s but has slowed since that time.
- The Minnesota Demographer issued a revised population forecast for Sherburne County in mid-2017. That forecast showed an increase in the county's 2040 population of approximately 10 percent over the 2015 estimate instead of the 40 percent increase forecast in 2014.
- The population in 2015 was approximately 10,285. It is forecast to grow by approximately 2,850 to 13,100 people by year 2040.
- The number of households in 2015 was approximately 3,660. It is forecast to grow by 1,115 to 4,775 by year 2040.
- Big Lake Township has experienced considerable residential growth. The township has increased by 5,910 people since 1970 to approximately 7,618 in year 2015. The rate of growth in the township has slowed since year 2000 compared to the three preceding decades.
- It is assumed that Big Lake will grow slightly faster than Sherburne County during the next 25 years.
- Approximately 1,115 additional households are forecast in Big Lake between 2015 and 2040. This would be an average of 45 households per year. This estimate should be checked every five years using local data and forecasts by the Minnesota Demographer. Please refer to the Land Use and Development Assessment for an estimate of how this household growth may translate into demand for land development.
- The rate of growth in households exceeds the rate of growth in population because the average household size is declining slightly.

There were an estimated 3,660 households in the city in 2015. Of those:

- 74 percent were families
- 60 percent included married couples
- 43 percent had children in the home
- 9 percent were headed by a woman
- 6 percent were headed by a woman and had children at home
- 8 percent were headed by someone 65 years of age or older.
- The average household size was 3.05 people; the average family size 3.5

Demographic Characteristics

Population

The City of Big Lake has been one of the fastest-growing counties in Minnesota. Its location along US Highway 10 between the Twin Cities metropolitan area and the City of St. Cloud has made it an attractive location for business and housing. Big Lake competes regionally with Elk River, Becker, Monticello, and to a lesser extent, Albertville, for population and jobs. Other competition comes from growth in unincorporated locations in the Highway 10 corridor, including Big Lake Township. The bridge over the Mississippi River at Minnesota Highway 25 provides access by I-94 on the south side of the river.

As with Sherburne County, the Big Lake population grew rapidly between the years 1990 and 2010, but the 2015 count reached "only" 10,285. The 2008 recession and the many associated housing mortgage foreclosures in the city and the county were a setback to growth. The County's population is forecast by the Minnesota Demographer to slow substantially out to 2040.

It is assumed that the City's rate of growth will continue to slightly exceed that of the County. Supporting that trend are its highway access, public utilities, rail service and developable land.

Table 2-1: City and County Population

Year	Sherburne County	Ratio of City to County	City of Big Lake	Change per Decade	City Rate of Change
1970	18,344	0.07	1,215		
1980	29,908	0.07	2,210	995	82%
1990	41,945	0.07	3,113	903	41%
2000	64,417	0.09	6,063	2,950	95%
2010	88,499	0.11	10,060	3,997	66%
2015	91,705	0.11	10,285		
2020	94,258	0.12	11,311	1,251	10%
2030	98,248	0.13	12,281	970	9%
2040	101,005	0.13	13,131	850	7%

Sources: US Census; Minnesota Demographer counties forecast
Forecast of ratio by Weber Community Planning

Figure 2-1
City Population, 1970 – 2040

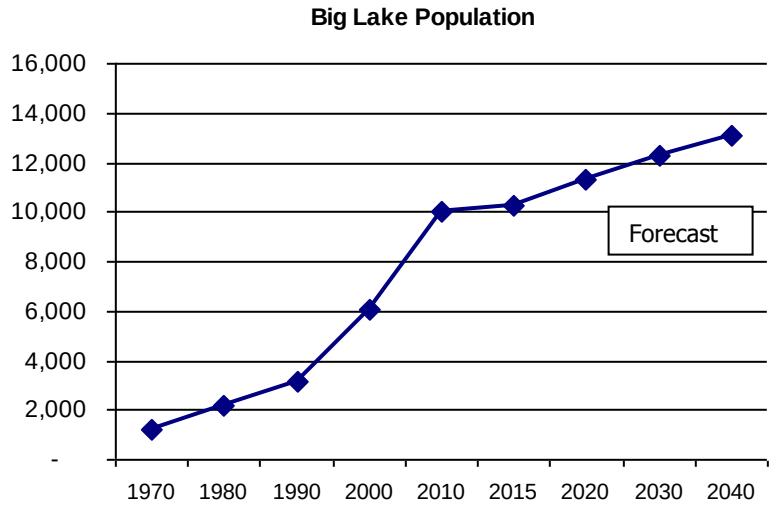
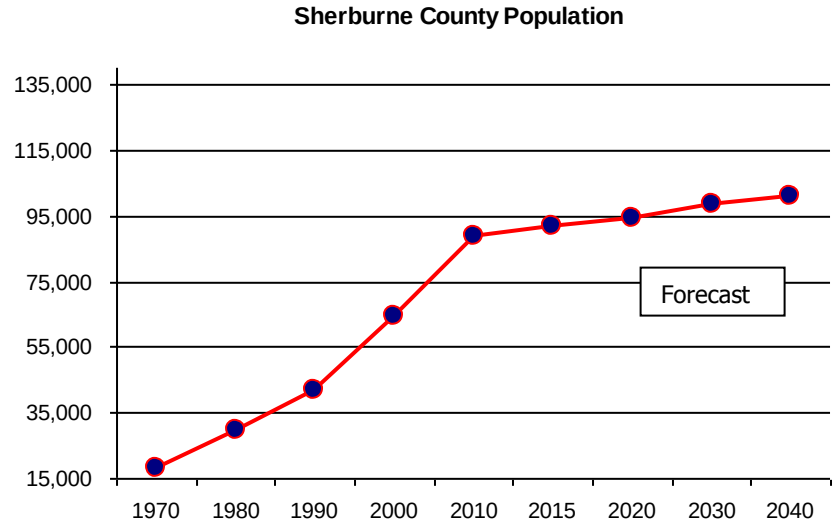


Figure 2-2
County Population, 1970 – 2040



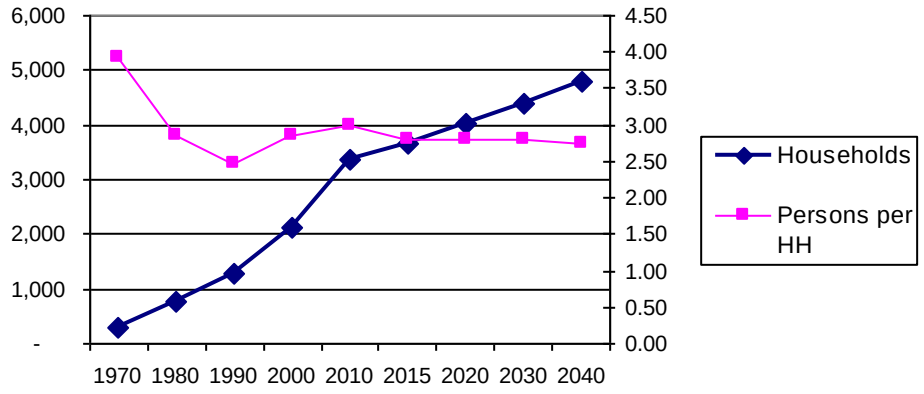
Households

The number of households in the City of Big Lake during prior years was obtained from the US Census. The forecast of households is based on the forecast of population shown in Table 2-1 divided by a forecast of persons per household. The rate of change for the number of persons per household was based on the trend forecast for Sherburne County by the Minnesota Demographer. As the percentage of attached housing units increases in the city, a trend observed in other small, growing towns, the average household size will decrease.

Table 2-2
Big Lake Households and Persons per Household, 1970 to 2040

Year	Big Lake Population	Persons per H'hold	Big Lake Households	Change per Decade	Rate Per Decade
1970	1,215	3.92	310		
1980	2,210	2.86	774	464	150%
1990	3,113	2.46	1,264	490	63%
2000	6,063	2.86	2,117	853	67%
2010	10,060	2.98	3,377	1,260	60%
2015	10,285	2.81	3,660		
2020	11,311	2.80	4,040	663	20%
2030	12,281	2.80	4,386	346	9%
2040	13,131	2.75	4,775	389	9%

Source: US Census; Weber Community Planning.



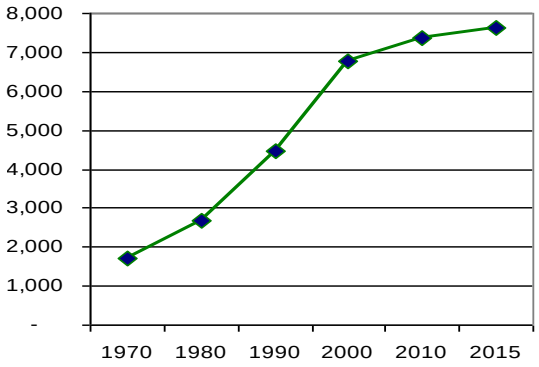
Growth in Big Lake Township

The City is surrounded by Big Lake Township, whose population grew most rapidly in-between years 1980 to 2000 but has slowed since then. Still, the population of the Township is three-quarters as big as that of the City, with Township residents living almost entirely in single-family detached houses on large lots with individual wastewater systems and wells.

Table 2-3
Big Lake Township Population

Year	Population	Numeric Change by Decade	Rate of Change by Decade
1970	1,708		
1980	2,679	971	57%
1990	4,452	1,773	66%
2000	6,785	2,333	52%
2010	7,386	601	9%
2015	7,618	232	

Figure 2-3
Big Lake Township Population



Households and Families

There were an estimated 3,369 households in the city in 2015. Of those:

- 74 percent were families
- 60 percent included married couples
- 43 percent had children in the home
- 9 percent were headed by a woman
- 6 percent were headed by a woman and had children at home
- 8 percent were headed by someone 65 years of age or older.
- The average household size was 3.05 people; the average family size 3.5

The number of households fell slightly from year 2000 to 2015 even as the population rose slightly. This indicates a slight increase in housing vacancy (likely temporary as a hang-over from the recession) and a rising average number of people per household.

Average Household Size

The average number of people in a household across the city (and state) has been declining for many years, and that trend is forecast to continue, mirroring statewide and national trends. This has implications for the type and size of housing units to be built. In general, families are having fewer children and more people are choosing to live independently.

Age of the Population

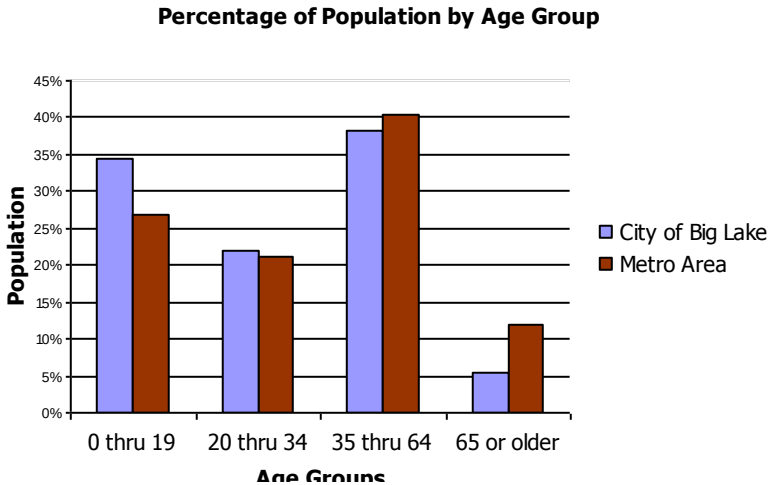
Compared to the Seven County Metropolitan Area, Big Lake has a higher percentage of children and a lower percentage of seniors. The City and the Metro Area populations are quite close in their proportions in the 20 through 34 and the 35 through 64 age groups.

The median ages of Big Lake and the Metro Area were 31.5 and 36.6, respectively.

Source: American Community Survey, US Department of the Census, 2015.

Table 2-5
Population by Age Group

	Percentages	
Age Group	**City**	**Metro Area**
0 thru 19	35%	27%
20 thru 34	22%	21%
35 thru 64	38%	40%
65 or older	5%	12%
	100%	100%



Occupation and Industry

The labor force populations of Big Lake and Sherburne County are quite similar in their occupations and industrial employment. However, compared to the Metropolitan Area, Big Lake is lower in management but higher is transportation and production occupations. Compared to the Metro Area, Big Lake is slightly higher in manufacturing and retail trade but slightly lower in professional, scientific, education and health care.

Table 2-6: Occupation and Industry, by Percentage

	Big Lake	County	Metro
Management	28	34	43
Service	17	16	16
Sales and office	23	23	24
Construction; natural resources	8	11	6
Transportation; production	23	16	11
Industry			
Manufacturing	16	15	14
Retail trade	15	12	11
Professional; scientific	10	8	12
Education; health care	21	22	23

Source: American Community Survey

Table 2-7: Travel Mode and Place of Work, by Percentage

Means of Transporation to Work	Percent
Car, truck, or van	94
Drove alone	82
Carpooled	12
Public transportation (excluding taxicab)	2
Walked	1
Bicycle	0
Taxicab, motorcycle, or other	0.3
Worked at home	3
Place of Work	
Worked in county of residence	21
Worked outside county of residence	79

Other Demographic Comparisons

Table 2-8
Other Demographic Characteristics

	Big Lake Is in Comparison to:	
Characteristic / Big Lake	**Sherburne Co.**	**Twin Cities Metro**
Families as a % of h'holds / 74 %	3 percent lower	9 percent higher
Married couples, % of h'holds / 60 %	3 percent lower	9 percent higher
Children in the home / 43 %	4 percent higher	11 percent higher
H'hold headed by a woman / 9 %	0.5 percent higher	1 percent lower
H'hold headed by 65+ person / 8 %	1 percent higher	2 percent lower
Average h'hold size / 3.06	0.15 person larger	0.5 person larger
Median age / 31.5 years	4 years younger	5 years younger
Children as a % of total / 38 %	3 percent higher	7 percent higher
High school graduate / 27 %	1 percent higher	5 percent higher
Bachelor's degree / 16 %	3 percent lower	9 percent lower
Native born US / 94 %	3 percent lower	4 percent higher
Language other than English / 9 %	4 percent higher	4 percent lower
Unemployment rate / 4.8 %	0.4 percent lower	1 percent lower
Mean travel time to work / 33 min.	I minute longer	8 minutes longer
Median household income	$12,000 lower	$6,000 lower
Median family income	$17,000 lower	$19,000 lower
Median earning per worker	$4,000 lower	$5,000 lower
White race / 94 %	1 percent higher	14 percent higher
Hispanic ethnicity / 9 %	7 percent higher	4 percent higher
Cash public assistance / 6 %	4 percent higher	3 percent higher
Families, income < poverty / 7 %	2 percent higher	1 percent higher

Source: American Community Survey of the US Department of the Census.
Numbers rounded for understanding and to reflect the range of error in the source data.

Natural, Cultural and Agricultural Resources Assessment

This chapter summarizes the key natural resource elements of Big lake and its region and describes programs and regulations being used for their protection. Natural resources are the foundation of this comprehensive plan.

Figures

Major Natural and Cultural Resource Issues

1. **Wetland Protection:** Can or should degraded or destroyed wetlands be restored and used as amenities in future neighborhoods?

   Some wetlands in urban growth locations have been plowed and drained for farming.

2. **Floodplain Use:** Should some portion of the Elk River floodplain be acquired for linear public park and trail? If so, which unit of government should lead in that effort, the County or the City? What should be their respective roles?

   This idea was raised in the prior Park System Plan and 2009 Comprehensive Plan.

3. **Protection during Development:** Can a sustainable balance be found between land development and natural resource protection?

4. **Resource Stewardship:** How should we use what we have?

Protecting natural resources is a key element of community development.

Natural Resources

Big Lake is set among a wealth of natural resources including rivers, lakes, wetlands, productive soils and wildlife refuges. The location, extent and design of land development will be major subjects for this plan. Proper enforcement of existing regulations will help the community protect its water and soil resources as it grows. Capturing regional growth in a compact pattern in the city will help preserve land for farming. In the surrounding Township, a concern related to unsewered development is the highly permeable soils, which is explained below.

The major natural resources in and around Big Lake are depicted on Figure 3-1.

Watershed

Big Lake is in the Mississippi River-St. Cloud Watershed. Rivers and creeks in the watershed drain surface water to the Mississippi River. Thus, land use, including farming and urban development, affect the water quality in all of the streams, lakes and wetlands of the watershed.

Soils

Most of the soils in and around Big Lake are very sandy, which allows surface water to drain easily to the aquifer. An aquifer is an underground layer of rock and gravel that holds water and may be tapped for drinking or crop irrigation. Near Big Lake, the aquifer may be as close as 50 feet to the surface and easily produces large amounts of water.

Because of that geology, the groundwater in the vicinity of Big Lake is rated by the Minnesota Department of Natural Resources (DNR) as being Highly to Very Highly Sensitive to pollution from surface sources.

In contrast, soils near the Elk River and to the north of that stream tend to be "hydric," meaning that they hold much water. This is a result of their geologic history and the high ground water level. Many such locations are mapped as wetlands on Figure 3-1.

Until 1981, all of the housing and businesses in Big Lake used on-site, private wastewater treatment systems. These systems, in combination with small lots and soils that are either too well or too poorly drained, (particularly near the lakes and in the north), may have posed health risks. Now, a municipal sanitary sewer system has mitigated most of that problem. However, there are still some small areas without public sewer lines.

Streams

Near Big Lake are the Mississippi River and the Elk River, two valuable and influential resources.

Both have several layers of public regulatory protection but both also have some measure of degradation caused by human activity in their drainage basins.

Shoreland zoning regulations, administered by the County and the City and based on a state law and model ordinance, address land within 300 feet of the certain streams, including the Mississippi and Elk. This zoning "overlay" sets standards for minimum lot size and width, and setbacks for buildings or wastewater treatment systems from the top of the "ordinary high water mark." They also prohibit certain visual or ecological harms such as clear-cutting vegetation or excessive paving.

Floodplain zoning regulations limit the type and density of development, require elevating and/or flood-proofing buildings, and generally reduce damage from flood waters in the locality and up or down stream. The floodplain is divided into Floodway and a Flood Fringe sub-districts, and different standards apply to each. The approximate extent of so-called 100-year and 500-year floodplains are calculated by the Federal Emergency Management Agency and depicted on Figure 3-1.

Mississippi River: Land use along the Mississippi River near Big Lake is mostly residential except near the Highway 25 bridge, where there is some industrial or commercial development.

The Mississippi River near Big Lake is part of the larger Mississippi Wild and Scenic River, which was designated by the State in 1973. The land use regulations adopted in 1976 designated this reach of the river as "Recreational," and set a minimum house lot size of 2 acres. A small area near the Highway 25 bridge was designated Special Use, allowing by special permit certain non-residential development that existed prior to 1979.

The Mississippi River flows through a defined gorge, which minimizes the number of nearby wetlands and confines the floodplain mostly to locations beneath the bluff.

Elk River: The Elk River winds across the relatively flat sand plain from Palmer Township to the Mississippi River at the City of Elk River. Because of the flat topography of its watershed, the Elk is lined in many locations with wetlands, and the forested floodplain often extends well beyond its banks. Please refer to Figure 3-1 for general locations. These conditions are evident all along the northern side of Big Lake.

For the sake of water quality, fish, animals and other natural resources, it will be important for the City and Township of Big Lake, along with Sherburne County, to enforce existing regulations for the protection of wetlands, shorelands and floodplains as land development occurs near the river and throughout the river watershed.

The Minnesota DNR has classified the Elk River above Eagle Lake Road as Impaired. That means that water quality has been reduced, usually by increased nutrients from fertilizers, petroleum products and/or soil erosion. The management emphasis is on capturing such pollutants before they reach the stream by using buffer strips, cleansing ponds and/or better land use practices.

The Snake and St. Francis Rivers joins the Elk just north of the city.

The Elk River above County Highway 43

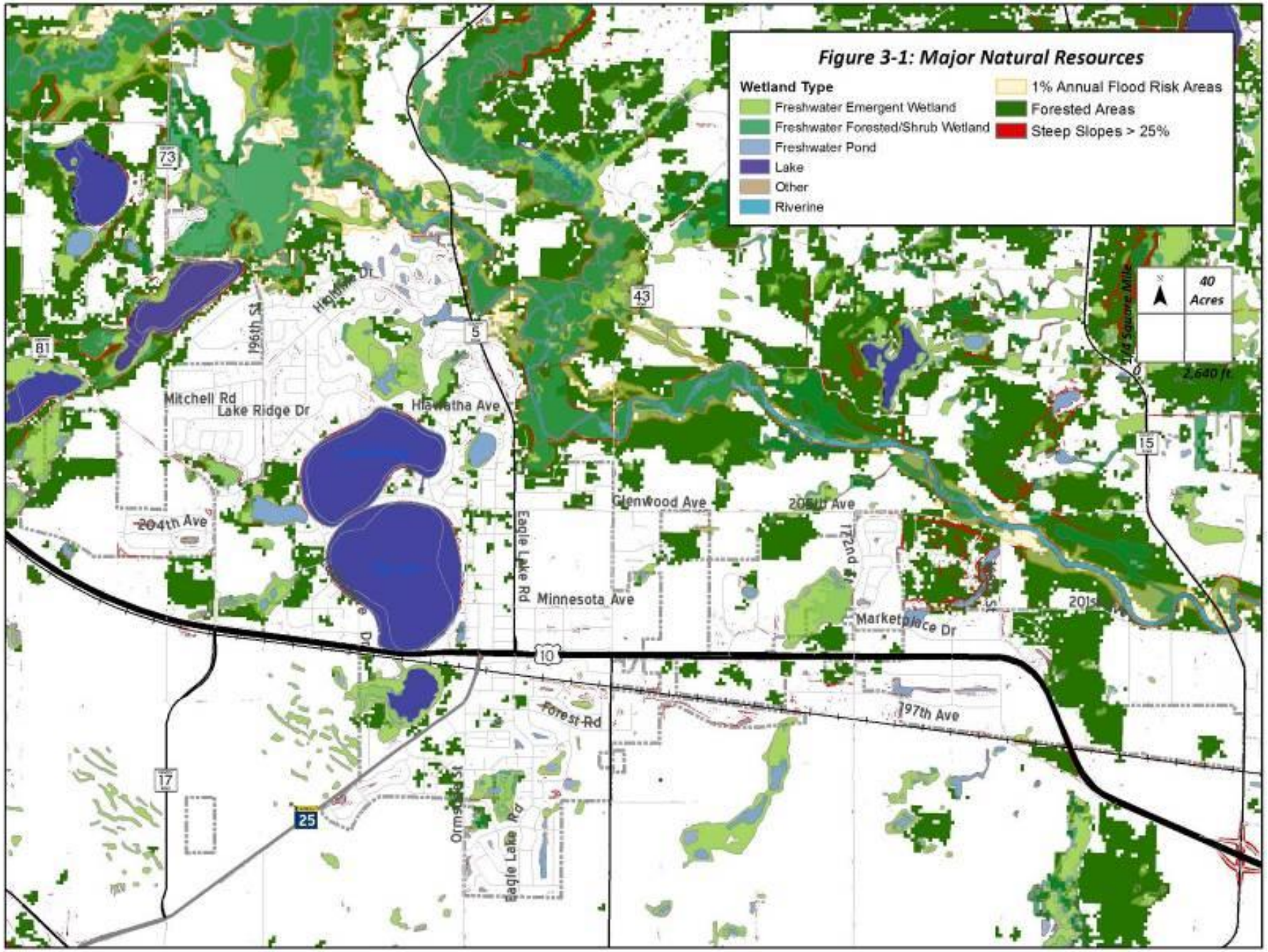


Figure 3-1: Major Natural Resources
Wetland Type
Freshwater Emergent Wetland
Freshwater Forested/Shrub Wetland
Freshwater Pond
Lake
Other
Riverine
1% Annual Flood Risk Areas
Forested Areas
Steep Slopes > 25%
40 Acres
2,640 ft
Mitchell Rd
Lake Ridge Dr
Hiawatha Ave
Glenwood Ave
Minnesota Ave
Eagle Lake Rd
Marketplace Dr
Forest Rd
197th Ave
204th Ave
73
81
43
5
15
10
17
25

Lakes

Big Lake includes twelve lakes recognized by the Minnesota Department of Natural Resources and protected by the City's shoreland management overlay zoning district. Eight are classified as Natural Environment Lakes and receive the highest level of protection, one (Black's) is classified as Recreational and three (Big, Mitchell and Keller) as General Development. The shoreland zoning for lakes extends 1,000 feet back from the defined ordinary high water level. The same features are regulated for lakes as for streams.

The Natural Environment lakes are Beaudry, Beulah, Landia, Preusse, Thompson, Kerber, McDowell and one large but unnamed wetland.

Big and Mitchell Lakes are "seepage lakes," meaning that they get their water from the ground or from surface runoff in their relatively small drainage areas. There are many storm sewers that drain to these lakes without being filtered by intermediary ponds. These features make them highly susceptible to pollution.

In 1986, the City connected Big Lake and Lake Mitchell to the Elk River via a pipe in order to control their levels and reduce the high groundwater levels nearby.

Wetlands

Numerous wetlands exist in and around the city. These surface features have many benefits such as providing wildlife habitat, reducing flooding, recharging groundwater aquifers and cleansing runoff.

As indicated by Figure 3-1, most but not all of these are near the Elk River, as the sandy soils elsewhere do not usually suspend water and support wetland vegetation. There is a large wetland southeast of the Northstar rail station and several lesser sites also south of the railroad track.

The City administers a wetland overlay zoning district, Section 1006 of the City Code. This ordinance, based on the Minnesota Wetland Conservation Act of 1991, requires that land developers find and record the boundary and quality of any wetland on or near their property through field tests conducted by a certified professional.

An undisturbed buffer strip of 30 to 50 feet, depending on the quality of the wetland, must be preserved around each. An additional building setback from the buffer is required.

Wellhead Protection Areas

Minnesota law requires that local governments that operate public water wells must regulate and limit the types of land use that can occur near those wells. The danger is that surface pollutants could enter the wells and drain easily to the aquifer.

In Big Lake, there are several municipal wells. The City has adopted zoning regulations that apply near those wells for that purpose. The sandy, well-drained soils make these regulations especially important.

The Minnesota DNR has mapped many private wells in or near Big Lake as being polluted from agricultural or on-site wastewater sources. (Refer to the 2010 Sherburne County Comprehensive Plan, page 36.) The municipal wells of Big Lake have not shown those problems and provide water that is safe for drinking.

Ecosystem and Wildlife

Much of the native ecosystem, vegetation and wildlife habitat in or around Big Lake has been altered or lost through human activity. The original vegetation consisted or prairie, cedar openings or wet prairie.

Sherburne County is within the Anoka Sand Plain subsection of the Eastern Broadleaf Forest. The Anoka Sand Plain is well-known for sand hill cranes, trumpeter swans, bald eagles, bobolinks, and lark sparrows. Other important species are badgers, Blanding's turtles, and gopher snakes.

Important habitats include dry prairie associated with scattered wetlands, rivers, and streams which provide excellent habitat for Blanding's turtles, both species of hognose snakes, and bull snakes. Some of the best examples of dry oak savanna in the state occur in this subsection. The Sherburne national Wildlife Refuge is an important stopover site for migratory birds.

The Minnesota DNR has identified 97 Species in Greatest Conservation Need known or predicted to inhabit the Anoka Sand Plain, most commonly found in proximity of the Sherburne National Wildlife Refuge and the Sand Dunes State Forest. Of these, 34 species within Sherburne County have been designated: 4 as endangered, 7 as threatened and 23 of special concern. Endangered species include the insect; Uncas Skipper, and vascular plants; Tubercled Rein-Orchid, Cross-leaved Milkwort, and Tall Nut-rush. Endangered and threatened species have certain protections under state laws.

Wildlife Refuges

Three major natural conservation areas exist approximately five miles northeast of Big Lake in central Sherburne County. See Figure 3-2.

- The Sherburne National Wildlife Refuge (31,000 acres)
- The Sand Dunes State Forest (8,900 acres)
- Uncas Dunes State Scientific and Natural Area.

These refuges are celebrated both for their wildlife and extraordinary opportunities provided to visitors. The upland habitats are dynamic, ranging from grasslands to oak savanna to forest. These are interspersed with a variety of wetland and river habitats ranging from sedge meadow to deep water marsh. Today, visitors may still discover the excitement that might have been felt over 100 years ago, as early pioneers stepped out of the "Big Woods" and onto the edge of Minnesota's magnificent tall grass prairie.

The Sand Dunes and Uncas Dunes contain relic dune fields associated with Glacial Lake Grantsburg.

Species and features of particular interest include the sand hill crane, Blanding's turtle, oak savanna, wet meadows, lakes, marshes, pine plantations (restoration projects) and the pristine St. Francis River.

Recreational opportunities include hunting, fishing, hiking, bird watching, photography, wildlife observation, horseback riding and nature study.

Each is undergoing some form of long-term habitat restoration.

Cultural Resources

There are two properties in Big Lake that are eligible to be listed on the National Register of Historic Places but for which nominations have not been formally submitted:

- **Big Lake Public School**
  Northwest corner of US Highway 10 and Powell Street
- **Hanson House**
  Northwest corner of Pleasant Avenue East and Eagle Lake Road

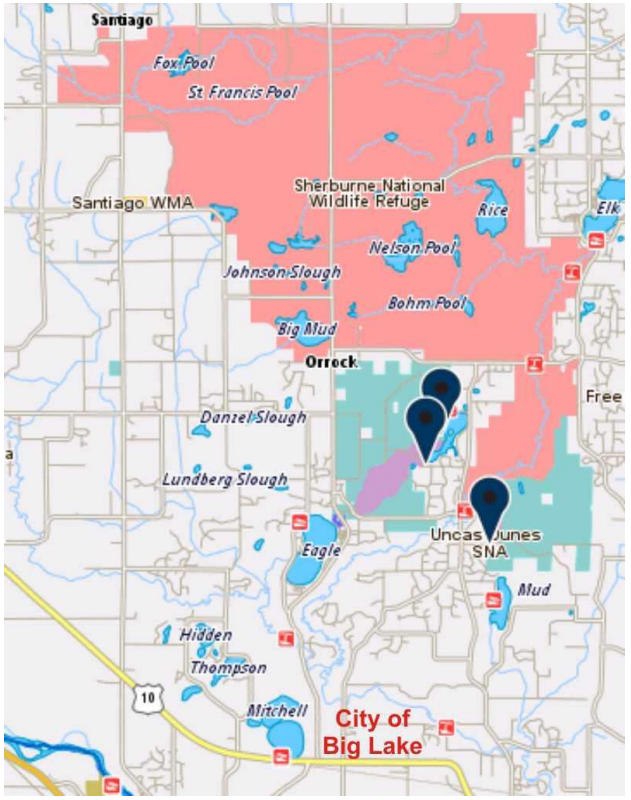


Figure 3-2: Major Conservation Areas

Soils for Farming

South of the urbanized area are large tracts of land currently in cultivation. According to the Crop Productivity Index of the US Department of Agriculture, soils there are generally only of moderate quality for agriculture. They are not rated as "prime for agriculture."

These soils are level but very sandy, moderately to excessively well drained, and low in nutrients, all of which diminish their crop productivity. Nonetheless, they can be highly productive if irrigated and given supplemental nutrients.

Some land owners have invested in field irrigation systems that draw large amounts of water from the aquifer to produce specialty or other crops.

Solar Energy

In 2016, the City approved the private development of 5-megawatt solar garden on approximately 27 acres of land just between Highways 17 and 25. The City previously owned the land and had used it for spreading sewage sludge, which is a common and normally safe practice.

The "community solar garden" creates enough power during an average year to offset the electricity consumed by approximately 875 typical Minnesota houses in a year.

Green Step City

Big Lake became a Green Step City in 2016.

Green Step Cities is a free and voluntary program designed to help Minnesota cities achieve their environmental sustainability goals through any of 29 best practices. There are now 106 cities and two tribal nations in Minnesota that have completed one or more participation steps since the program began in 2010. Forty-nine cities are in Step One.

Each of the Green Step Cities program's 29 best practices can be implemented by completing one or more specific actions from a list of four to eight actions in the areas of transportation, buildings and lighting, environmental management, land use, and economic and community development. The actions are tailored to all types of Minnesota cities, and they focus on cost savings, energy use reduction, and encouraging innovation.

Cities achieve Step One recognition by passing a resolution to become a Green Step City. Cities designated Step Two have applied up to eight of the program's best practices, and Step Three-designated cities have implemented up to 16 of the best practices. Some cities have completed more than one of the three steps in a year.

Land Use and Development Assessment

This chapter describes the major trends and forces related to land use, development and growth management in and around the City of Big Lake.

Figures

A portion of the original Big Lake commercial center

Major Land Use and Development Issues

The following are the major issues in the topic of land use and development identified through the analysis of conditions. Issues are questions to be discussed, debated and resolved during the planning process in light of other issues. The subsequent analysis of conditions has been prepared to help readers understand why these are issues and why they should be considered.

1. **Protecting the Ability of the City to Grow Outward:** Will the County and Big Lake Township continue to cooperate with the City to protect the City's ability to growth outward in an efficient and economic fashion?

   The County zoning on the perimeter of the City is Urban Reserve, Agriculture or General Rural. The General Rural district allows problematic 2.5 acre lots. However, the Township and County recognize the need to protect the City's ability to grow outward. Consequently, the County land use plan guides the area between the City and the Elk River as "Urban Reserve Residential." See Figure 4-2 on page 4-6.

2. **Annexation of Town Peninsulas:** What should be done, if anything, to encourage land owners in the several Township "peninsulas" to petition for annexation of their land to the City?

   These linear patterns of lands in the Township are the result of successful annexation petitions that have enlarged the City in an irregular pattern. It would be efficient to eventually consolidate those locations into the City through petitions by the owners.

3. **Fringe Development Pattern:** What should be the pattern of land use on the City's perimeter?

   Should there be a large industrial area in the southwest in the vicinity of County Highway 17 as shown on the Big Lake Township Comprehensive Plan map, Figure 4-3? Should there be corridor of commercial development along Highway 25 between Big Lake and Monticello. and along Highway 10 to the west, as shown in the 1999 plan (Figure 4-1)?

4. **Favored Locations for Perimeter Growth:** What are the most efficient and beneficial locations for perimeter growth?

   Should the City forever remain south of the Elk River? Should the lakes to the northwest be regarded as the limit to growth in that direction? Should the City fill in the land up to the Elk River? Should the City actively discourage, through planning, zoning and capital improvements, the expansion of the urban area into the farm fields to the south in favor of long-term preservation of that area for farming?

5. **Locations for Multiple-Family Housing:** What are the best types of locations for multiple-family housing?

   Multiple-family housing is sometimes relegated to the least attractive locations in some cities. However, to take advantage of that increasingly popular housing form, some cities integrate various types of attached housing into neighborhoods of detached housing. Extra care is sometimes needed in housing design to make this successful, but the results are often a more interesting and sustainable city.

6. **Types of New Housing:** Should the plan try to guide development toward or away from certain types of housing or let the market make that decision?

   Some Cities steer the market by narrowly zoning locations for limited types of housing. Other Cities have broader and more inclusive zoning districts and let market forces prevail.

7. **Appearance of New Multiple-Family Housing:** Should the City adopt design guidelines, or regulations, that help make attached housing more compatible with detached (single-family) housing?

   Some people have expressed a concern that some of the attached housing built in Big Lake in recent years is either unattractive or not sufficiently compatible with the appearance of detached (single-family) housing. Some cities have adopted design guidelines or requirements for attached housing to help it emulate the single-family house. Of special concern is the appearance of "garage-forward" townhouses.

8. **New Neighborhood Design:** Should the City require that new residential areas be designed with many of the features of the older neighborhoods such as sidewalks, street trees, a mixture of housing types, narrow streets, short front setbacks and garages set back further than the façade of the house? Should there be regulations to soften the appearance of garage doors?

   The City can guide the design of new neighborhoods through its zoning and subdivision ordinances. The visual appearance and function of the residential pattern will affect long-term property values and quality of life. Some planners advocate narrower streets, use of sidewalks and street trees, interconnected streets, and reduced visual effects from garage doors.

9. **Downtown:** To what degree should the City promote and assist redevelopment that conforms with the recommendations of the downtown design guidelines for retail, offices, housing and mixed-use buildings? What should be the next major step forward for the downtown?

   Those design guidelines are summarized on page 4-13. There are obstacles to creating a "city center" in Big Lake, including Highway 10, the railroad tracks and existing development.

10. **Waterfront Greenways:** Should the City acquire land for a linear public park and trail plus protected open space along the Elk River?

    The idea of a linear park and walking-biking trail along the river has great appeal and has been promoted in prior plans. Nearly all of the land along the Elk River is privately owned. Some of it has been divided into residential parcels and developed. For it were to be most useful, it would run from Becker to Elk River, thus probably requiring some County leadership and money. At a minimum, natural protection of the floodplain forest and habitat would seem to be wise.

11. **Economic Development, Jobs and Income:** What land use, zoning and development policy changes, if any, should be made to help promote economic development in Big Lake?

    This should be guided by market opportunities and preferences, which will be summarized in the Economic Development chapter of this comprehensive plan.
    Should the City plan a location for the coordinated development of industry and offices?

12. **Commercial Growth:** How much land should be planned and zoned for retail business development? Should multiple-family housing be allowed in certain commercially-zoned locations?

    An insufficient amount of land zoned for retail business may lead to the loss of potential tax base and excessive driving to shops. On the other hand, over-zoning for business, a common occurrence, would cause land to be underutilized or stand vacant. Should certain Downtown locations be redeveloped as apartments?

13. **General Redevelopment:** How proactive should the City be in encouraging redevelopment?

    In some key locations, redevelopment occurs only with the involvement of a public agency, as site acquisition and preparation is very expensive. It is a matter of public policy as to the level of risk that the City or its Economic Development Authority are willing to take to effect changes in critical locations.

14. **Lakefront Land Ownership and Use:** Can or should public access to the lakes be improved?

    Most locations along the edges of Mitchell and Big Lakes are privately owned, even where there is a public street along the lake. Consequently, there is very little public access to the lakes except at the City parks.

15. **Role of the Plan:** How strong should the Comprehensive Plan be in setting City policy, ordinances and budgeting?

    Ideally, the comprehensive plan should be the central decision-making reference document for all departments of the City and for elected and appointed officials, leading to coordinated decisions supporting common goals.

A typical Big Lake residential street scene

Prior Plans

Big Lake Comprehensive Plan, 1999; updated 2009

It is useful to look back at prior plans because some continuity in policy is beneficial and also to realize that changes in course are sometimes advisable as the community navigates the swirl of events.

The preceding *Big Lake Comprehensive Plan* was adopted in 1999, during a period of robust growth across the county but before the acceleration and crash of the 2000s. The land use plan map was amended in 2009. Some of identified issues are still facing the community, some of its recommendations have been accomplished and other worthy objectives simply need updating.

1999 Issues: Here are a few of the major planning issue subjects of 1999: :

- How to protect the City's **fringe growth** potential?
- How to achieve orderly, **compact** growth that is fiscally sustainable?
- How to **compete** with unsewered, rural locations for development?
- How to approve **annexation** petitions while minimizing conflict?
- Which **directions** should the City plan to grow?
- How to address the trend of the city becoming very **linear**?
- How to **coordinate** the sanitary sewer system and land development?
- How to **diversify housing** type and cost?
- How to protect **water quality** in lakes and streams?
- How to improve the quality of the **aging housing** stock?
- How to build a compact, identifiable and viable **"city center"**?
- How to attract **industries** that provide well-paying jobs and a good image?
- How to improve **street** continuity?
- How to deal with the negative effects of **Highway 10**?
- How to grow according to a **plan**? Should the City and Township **merge**? Should they continue to share some facilities and finances?

Major 1999 Planning Initiatives: In response to those and other identified planning issues, the plan offered these and other recommendations:

- Build a US Highway 10 **bypass** route south of the present urban area; line it with businesses. This idea is now dead, and the associated land use plan map, shown below, is infeasible.
- Map and adopt a small municipal **Urban Expansion Area** into which sewered housing growth would be guided and limited
- Plan for continued semi-rural, **unsewered housing** south of the Elk River
- Plan for **industry** along Highway 10 to the east and west
- Plan for businesses along **Highway 25**, starting at the Mississippi River and moving north
- Limit **mid- or high-density housing** to a few locations near the commercial center or next to the schools campus
- Create a public-private "**greenway**" along the Elk River in the Township
- Expect a **Northstar** station near Lake Street. (Was built near CR 4)
- Continue to protect **wetlands** and **floodplains**

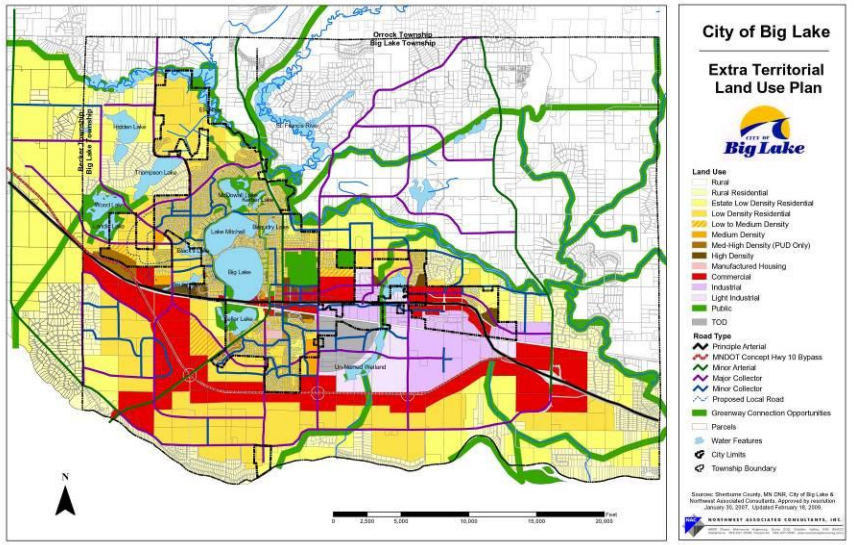


Figure 4-1: Big Lake Land Use Plan Map, 2009

Big Lake Township Land Use Plan

Sherburne County updated its county-wide land use plan in 2010. The Big Lake Township portion of that plan, illustrated by Figure 4-2, calls for:

- Urban Reserve north and west of the city up to the Elk River and near the Northstar commuter rail station; this implies urban, sewered development in locations either under an Orderly Annexation Agreement or identified by the Town Board as likely to be annexed by 2030 (red on the map)
- Agriculture south of the city (green)
- Industry (purple):
  - Around the intersection of Highway 10 and County Highway 15
  - Along US Highway 10 west of the city
  - Along County Highway 17
  - Along State Highway 25
- Semi-rural, large-lot housing north of the Elk River (gray on the map)
- Housing with nature conservancy along the Mississippi River (blue)

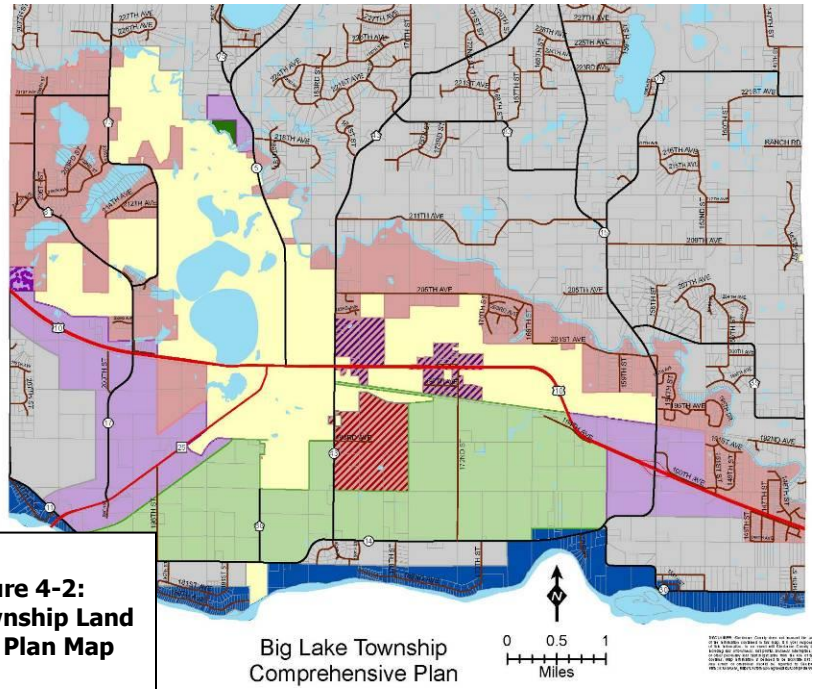


Figure 4-2: Township Land Use Plan Map

Big Lake Township Zoning Map

Sherburne County administers zoning for Big Lake Township, as it does for eight other townships. Note that some locations have not been rezoned to conform to the Land Use Plan map. The Agriculture zoning district should prevent semi-rural lots that are difficult to resubdivide and serve with City utilities. However, the General Rural district poses a potential problem.

Table 4-1: Big Lake Township Zoning Districts

District	Allowed Uses	Minimum Lot Size
Agricultural	Farms; houses	5 acres if "wooded"; otherwise, 1 house per 40 acres
General Rural	Farms; houses	2.5 acres
Industrial	Farms; houses	30,000 square feet
Commercial	Farms; houses	22,500 square feet
Urban Expansion	Farms; houses	City dimensions
Recreational River	Houses	22,500 square feet

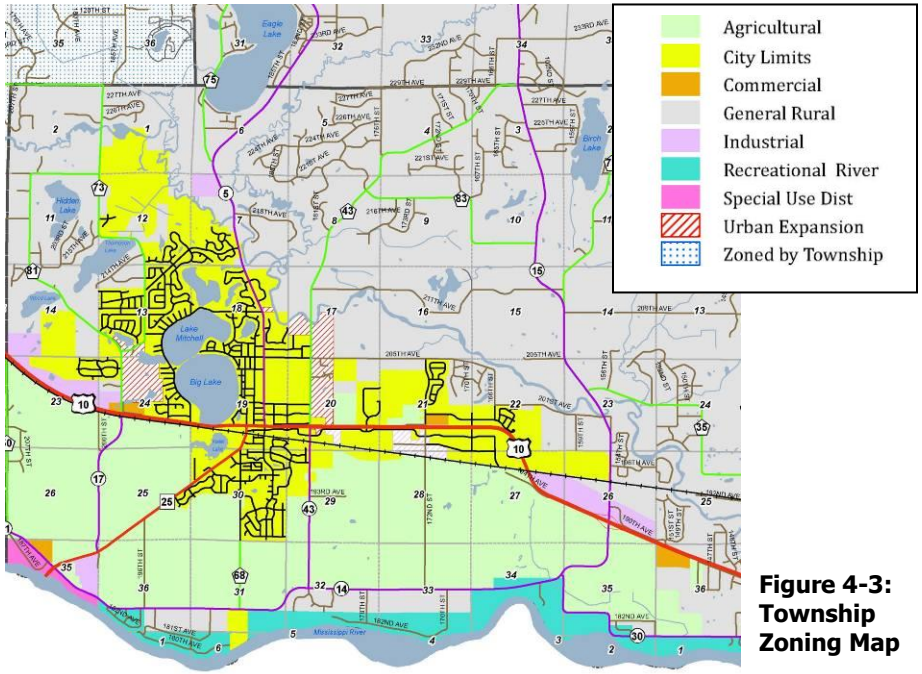


Figure 4-3: Township Zoning Map

Existing Pattern of Land Use

The pattern of land use as of 2016 is illustrated by Figure 4-11, below.

Many Eras Represented

Being an old community, Big Lake has a variety of development styles that reflect many eras:

- The remnants of the Lake Street commercial center near the railroad tracks and now-gone station
- The early lake cabins, now mostly remodeled or replaced
- A scattering of traditional houses with Victorian or American four-square designs and front porches
- Small post-War housing
- Houses from the 1960s through the present with increasing degrees of garage-forward design
- Auto-oriented commercial buildings ranging from early gasoline stations to more recent linear centers and "big boxes"
- The magnificent former high school building
- A small but growing number of townhouse or apartment designs.

Observations and Forces

These are observations about the pattern of land use:

- **East-West Pattern:** The City has become stretched along Highway 10, which is inefficient for utility and road services, and diminishes the city's sense of place or center
- **Infill Opportunities:** There are many opportunities for infill development along the eastern Highway 10 corridor between Glenwood Avenue (205th Street) and the railroad tracks
- **Railroad Divider:** The Burlington Northern - Santa Fe Railroad tracks are a major community divider, and the frequent freight trains are a major nuisance
- **Northwest:** Thompson Lake and the adjacent large-lot, unsewered housing are a barrier to municipal expansion on the northwest side
- **North and Northeast:** The Elk River would seem to be a logical northeastern limit to municipal growth as it would be costly to bridge; further northeast are extensive tracts of semi-rural, unsewered residential subdivisions that would work against annexation and serviced development
- **Northeast:** Land between the Elk River and Glenwood Avenue has natural features that are conducive to attracting better-quality housing development; this location remains largely unaffected by prior residential plats that would be difficult or impossible to resubdivide and serve
- **South:** Land to the southwest, south and southeast of the present urban area is easily developable because it is flat, sandy, unencumbered by prior development, and easily served by sanitary sewer, which drains south toward the treatment plant near the river; however, the flat and treeless landscape offers little natural amenity for housing, meaning that developers would be wise to create interest through design and improvements
- **Northstar Vicinity:** The vicinity of the Northstar commuter rail station may eventually become a location of intensive and varied housing but it remains to be seen how long that will require and what effect the train service will play. See below for a further description of the plan for the station area.
- **Business Locations:** Retail and industrial locations are strongly oriented to the east along Highway 10; there are three industrial locations along Highway 10 west and none along Highway 25; this may be the result of the historic trend and a business desire to separate from the Monticello commercial
- **Shared Business Parks:** The City shares with the Township ownership of one industrial park and one mixed retail-industrial area along Highway 10 east

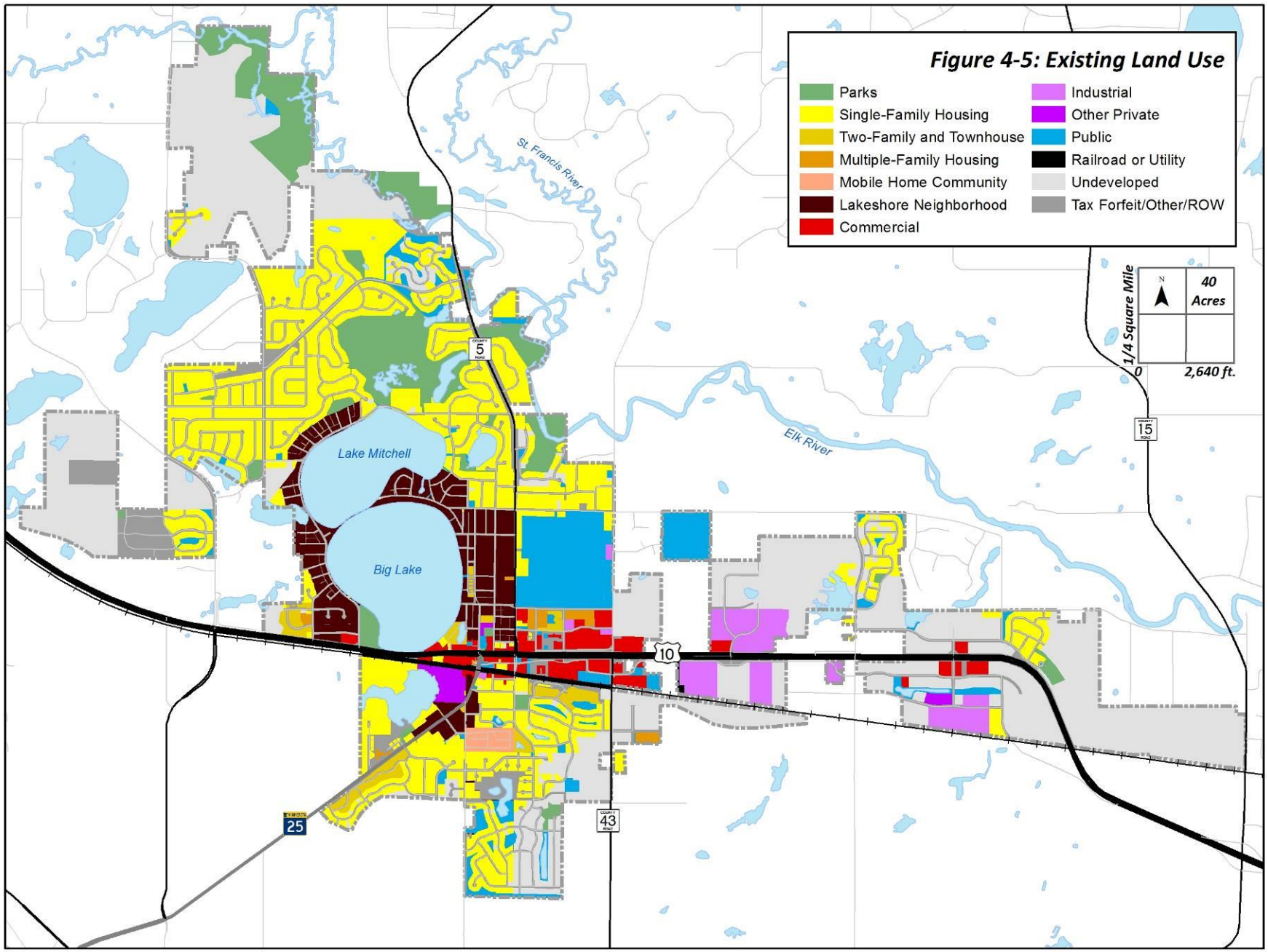


Figure 4-5: Existing Land Use
Parks
Single-Family Housing
Two-Family and Townhouse
Multiple-Family Housing
Mobile Home Community
Lakeshore Neighborhood
Commercial
Industrial
Other Private
Public
Railroad or Utility
Undeveloped
Tax Forfeit/Other/ROW
St. Francis River
Elk River
Lake Mitchell
Big Lake
1/4 Square Mile
40 Acres
0
2,640 ft.
5
15
10
25
43

- **Lakeshore Neighborhoods:** The lake cabins and older housing near Big and Mitchell Lakes form a distinct and interesting portion of the community that links it to its 19th Century roots; refer to the description of early settlement in Chapter 10, Introduction and Summary
- **Industrial Proposal:** It is significant that the Township land use plan map shows a large industrial area along County Highway 17 southwest of the city; in that vicinity there was a development proposal in the early discussion and study stage in 2017 to build a major distribution center of several hundred acres served by railroad and trucks; the Highway 25 Coalition was conducting a traffic study on that subject; see below for further description
- **Housing Diversity:** There seems to be a need to diversify the housing stock in terms of type and tenure (own vs. rent); approximately 83 percent of the housing in Big Lake is single-family detached; approximately 86 percent is owner-occupied; there are many "starter" homes and fewer move-up or luxury homes compared to the county or the metro area
- **Housing Infill:** There are approximately 240 unbuilt housing lots that have been platted and in some cases served with streets and utilities; see the subsequent section titled, Acreage Needed to Accommodate Growth, for further detail
- **School Campus:** Two public elementary schools, one middle and one high school are clustered in the northeast quadrant near County Road 43
- **Wetlands and Floodplains:** Wetlands and floodplains are confined mostly to the Elk River corridor; some high groundwater levels are also found there; other locations tend to be sandy and well-drained
- **Greenway Potential:** The natural features along the Elk River provide an opportunity to possibly create a band of undeveloped or open land along it banks of some width; this corridor may be owned privately and publicly; it could include a public "trail" for walking and bicycling if ownership and easements allowed; it would certainly help with natural protection and wildlife movement; because it is entirely outside the City at this time and cross-county connections would be desired, the County would need to be involved, probably in a leadership role
- **Fringe Growth Protection:** Safeguarding the ability of the City to grow in a compact and cost-efficient manner is probably its greatest planning challenge; creating housing lots immediately outside the City in the range of 2 to 5 acres could erect a barrier to future resubdivision and service with City utilities.

  Fortunately, the County-Township land use plan designates as Urban Reserve the gap between the City and the Elk River, and guides as Agriculture large tracts to the south of the City; this protection will save the public money, provide development opportunities and reduce the loss of prime farm land Unfortunately, the County's zoning does not fully align with the land use plan and many areas guided for urban reserve continue to be zoned general rural. Additionally, the urban reserve district allows some types of development that may be undesirable such as small lot housing with well and septic systems and different street design than what is required by the City.

Current Zoning

The Big Lake zoning ordinance is summarized below and the zoning map is shown on the next page. Observations about the ordinance:

- Housing types in the Mid and High-Density zones should be allocated differently
- The R-5 district, for the old cottage areas, is a useful idea
- Shoreland standards are conveniently shown in each residential district
- Downtown Overlay is a good attempt to create an identifiable center
- Several houses north and south of "downtown" (e.g., near Pleasant Avenue) became non-conforming, and thus limited for expansion, because they were zoned R-3.
- Other districts are typical for a small town

Table 4-1
Big Lake Zoning Districts

	Major Types of Land Uses Allowed		
District	**Permitted**	**Conditional**	**Minimum Lot Sizes**
Future Development / Agriculture	Detached houses; farming	Home occupations; solar farms; others	5 acres
R-1E Single-Family Estate	Detached houses	Day care, schools, home occupations	100 ft wide 15,000 sf area
R-1 Single-Family Housing	Detached houses	Day care, schools, home occupations	85 ft wide 12,000 sf area
R-2 Medium Density Housing	One- and two-family houses	Seniors' housing Planned-unit development (PUD)	80 ft wide 10,000 sf area
R-3 High-Density Housing	Two-family, townhouse and apartment buildings	Certain businesses in a planned-unit project, long-term care, PUD	Density transition to R-1 required.
R-4 Manufactured housing	Mobile homes	Day care, home occupations	20 ft separation
R-5 Residential Redevelop't Purpose: To promote re-use of old cabin lots	Detached houses	Two-family or townhouse buildings	20 ft from local street; Shoreland setbacks from water; 35 % impervious surface limit; Existing lot or 10 to 12,000 sf; Townhouses: not on lakeshore and 25 % open
B-1 Business Campus	Offices, personal services	Extended stay hotels, accessory retail or manufacturing	100 ft wide 1 acre area
B-2 Community Business	Retail or service businesses, offices	Retail, service, office, civic, cultural and entertainment uses, R-C mixed-use, conference centers, convenience stores, brew pubs, day care, motels, long-term care, auto repair, theatres	100 ft wide 20,000 sf area 35 ft tall
B-3 General Business District	Retail or service businesses that draw from the region	Same as B-2 plus breweries, hospitals, auto sales, PUD, manufacturing, shopping centers, transit stations	100 ft wide; 20,000 sf area; 30 ft front setback; > 35 ft tall by permit
I-1 Industrial Park	Manufacturing, warehousing, accessory offices, gyms, auto repair or sales	Animal hospitals, distribution centers, hospitals, offices, PUD, accessory retail	150 ft wide; 40,000 sf area; 50 % building coverage; 40 ft front setback. Screening requirements.
I-2 General Industrial	Same as I-1 plus processing raw materials; industries needing isolation	Same as I-1 plus radio antennas, shooting range, incineration	100 ft wide; 40,000 sf area; 50 % building coverage; 40 ft front setback. Screening requirements.
I-3 Isolated Industrial	Same as I-3; industries needing strict isolation or special protection	Same as I-2 plus satellite dishes, oil storage, outdoor storage, freight terminals, trash disposal	Same as I-2. Screening requirements.
Downtown Design Overlay	Adopts the 2008 design manual. Coordinates themes for site design, architecture, parking, pedestrian and bicycle access, environment, and utilities for all properties in the City within the DD, Downtown Design Overlay District. Approximate boundaries: Lake to County Road 43 and Eagle Lake Road to Pleasant Avenue. Includes voluntary guidelines and mandatory standards. Includes an easterly transition zone where standards are merely guidelines.		
Shoreland Overlay	Requires larger lots and protects environmental and scenic values within 300 feet of Elk River and 1,000 feet of eight lakes.		
Floodplain Overlay	Requires larger lots and reduced coverage. Restricts land uses. Requires flood-proofing or elevation. Based on state model.		
Mississippi River	Regulates lot size and setbacks. Protect environmental and scenic values along Mississippi River. State requirement.		

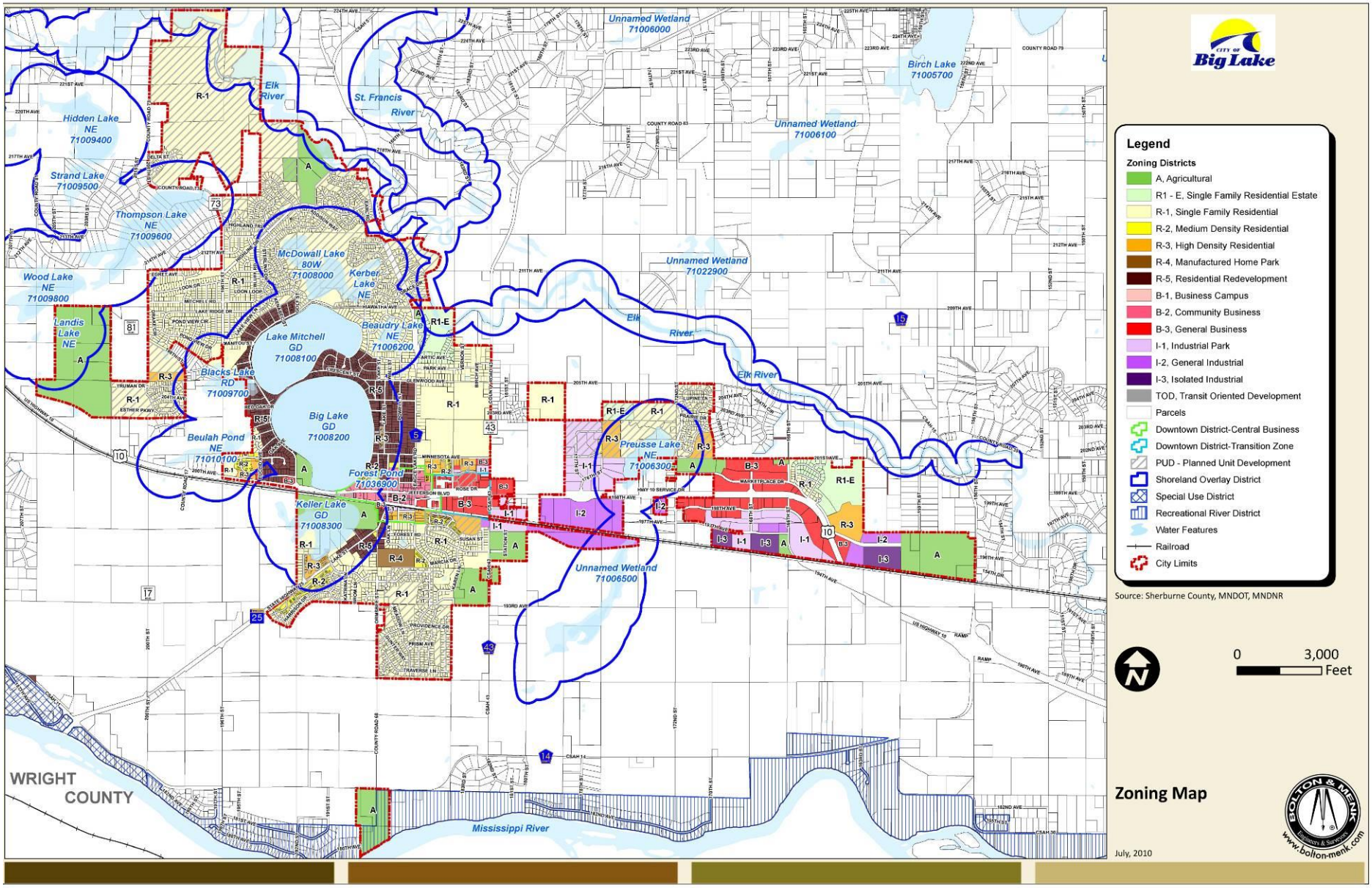


Figure 4-5: Big Lake Zoning Map, 2016

Plan for the Vicinity of the Northstar Station

Prior to the opening of the Northstar commuter rail service and Big Lake station in 2009, the City prepared and adopted guidance for land development and urban design near the station. Included were a design guidelines manual, an illustrative development map (Figure 4- 5) and a zoning ordinance.

Generally, the plan calls for an intensive, mixed and walkable pattern of development aimed at supporting train ridership and taking advantage of the improved regional access. Three zones near the station, each about ¼ mile wide, were conceived. Closest to the station were to be offices and retail or service businesses catering to the transit riders. Next would be large apartment buildings, mixed commercial and residential buildings, and restaurants. The third zone would allow B-1 Business Campus zoning district uses, which were mainly offices and manufacturing.

The Zoning ordinance for the transit area also prescribed maximum parking ratios, maximum building setbacks, minimum lot coverage, minimum building heights, and standards for streetscape, building facades and signs.

Figure 4-6: Transit Area Master Plan Graphic

Distribution Center Proposal

In 2016, a developer began discussions to build a large "distribution center" in Big Lake Township along the County Highway 17 corridor. This facility would include multiple buildings and would be served by rail and truck. In 2017, the Highway 25 Coalition and Sherburne County began a study of how to improve highway access to the site, including a new Mississippi River bridge. Sherburne County has the area planned as Industrial but zoned as Agriculture.

Orderly Annexation Agreements

The City has or is in the process of annexing three locations from the Township under the Orderly Annexation procedures prescribed by state law:

- The vicinity of Remmele Manufacturing on the south side of Highway 10
- The Industrial Park on the north side of Highway 10
- Properties at Highways 25 and 14 near the Mississippi River bridge.

The Remmele annexation began in 1992, with additional tracts being added as property owners have petitioned for City utilities. This agreement called for the City and the Township to share costs and local property tax revenues equally.

The Industrial Park agreement, signed in 1996, provided for joint approval of utility extensions, land sales, road construction, zoning and development applications along with equal sharing of property taxes, infrastructure construction costs and land sale revenue. The City owns and maintains the public utilities and maintains them at its cost.

The Highway 14 agreement from 2007 allowed annexation to occur when petitioned by the property owner(s). The Township would continue to receive all property tax revenue until one year after City sanitary sewer service is provided, then taxes would revert to the City in four annual steps. The City will control the zoning upon annexation.

Site Appearance Standards

General Landscaping

The City's zoning ordinance requires a landscaping plan with every commercial, industrial or multiple-family residential development application. The ordinance prescribes reasonable and typical quantities and sizes of plants. Also, a visual screen consisting of a planted buffer or a fence and berm is required between any non-residential land use and an abutting residential development.

Business Parks Standards

The I-1, Industrial Park, I-2, General Industry, and I-3, Isolated Industry, zoning districts each have requirements for site development above and beyond the normal landscaping and screening. These include:

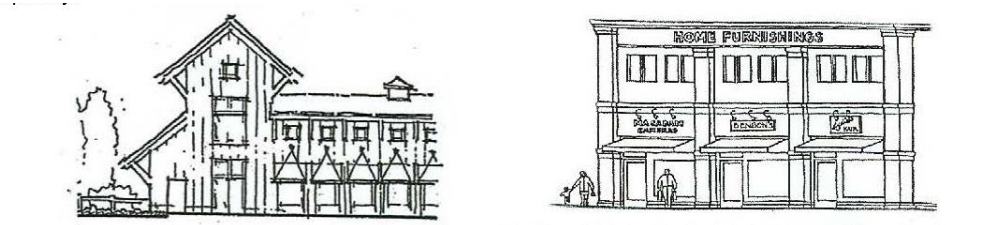
- Screening of service facilities and outdoor storage
- Underground utilities
- Paved driveways, parking and loading areas
- Controlled lighting
- Screened mechanical equipment
- Pedestrian walkways.

Downtown

In 2005 and 2008, the City adopted design guidelines and applied them in the Downtown Design Overlay zoning district. The boundaries of that district are Lake to County Road 43 and Eagle Lake Road to Pleasant Avenue. The district includes an easterly transition zone where standards are merely guidelines. These statements are voluntary guidelines as well as mandatory standards.

The document and related zoning ordinance call for:

- Vertical mixture of businesses and housing
- Retail, restaurant or entertainment businesses
- No auto-oriented development such as drive-through service windows
- Use of "Main Street" or "Prairie Style" architecture
- Compatibility with neighboring buildings
- Buildings located close to the front sidewalk
- Façade variations
- Widows and doors facing the street
- The appearance of narrow buildings
- Brick and glass exterior materials
- Rear or alley entrances
- Parking behind or along side the building
- Landscaped parking areas
- Small public or private plazas or green spaces
- Public and private walkways.



Prairie Style: roofs are hipped, low and spreading with deep overhangs and eaves.

Traditional Main Street style building: flat roofs, often an extended or false parapet on "front" side.

Figure 4-6: Downtown Architectural Styles

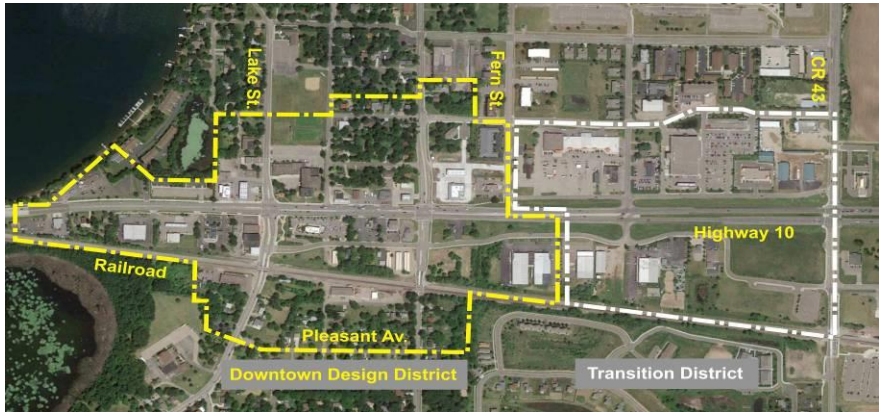


Figure 4-7: Downtown Design Overlay District

Acreage Needed to Accommodate Growth

Estimated Number of Housing Units and Population

The number of households in Big Lake has been forecast in ten-year increments from 2000 to 2040, as shown in Table 4-3. Please refer to the Demographic Assessment chapter for a forecast of population and households growth in Big Lake to year 2040.

Table 4-3
Forecast Number of Households and Persons per Household to 2040

Year	Big Lake Population	Persons per H'hold	Big Lake Households	Change per Decade
1970	1,215	3.92	310	
1980	2,210	2.86	774	464
1990	3,113	2.46	1,264	490
2000	6,063	2.86	2,117	853
2010	10,060	2.98	3,377	1,260
2015	10,285	2.81	3,660	
2020	11,311	2.80	4,040	663
2030	12,281	2.80	4,386	346
2040	13,131	2.75	4,775	389

Source: US Census; Weber Community Planning.

Housing Acreage Needed

It is estimated that approximately 383 acres of land will be needed to accommodate forecast growth in housing from 2015 to 2040, including land for streets, parks and other normal, associated development. This is based on the forecast of additional households and housing units from the Demographic Assessment.

Total Acreage Needed

Assuming that housing will comprise 65 percent of the total land needs, a typical figure, then another 206 acres may be needed for commercial and industrial needs. This is, obviously, a rough estimate not based on a market study. Thus, the total residential plus commercial-industrial land demand is estimated at approximately 589 acres. See Table 4-2, below.

Surplus or Deficit within the City

At the end of 2016, there were 1,184 acres of land zoned for residential, commercial, industrial or agricultural use but not yet developed. This total is minus wetlands and floodplains. The locations of the undeveloped land are illustrated by Figure 4-4.

Comparing that figure to the estimated total need between 2015 and 2040 (589 acres) yields a surplus of 595 acres inside the 2016 City borders.

Considering only housing needs, there is an estimated surplus of 473 acres, as shown in Table 4-2.

Figure 4-7 and Table 4-3 present the distribution of undeveloped land by zoning district. Note that undeveloped land zoned Agricultural was assumed to be available for rezoning and development as housing.

Please refer to the second page down for an explanation of why petitions for land annexation may still occur.

Table 4-2
Additional Gross Acreage Needed to Accommodate Growth, 2015 to 2040

Additional households	1,115
Additional housing units	1,148
Average units per gross acre	3.0
Additional acres needed	
Residential (65 % of total)	383
Other (35 % of total)	206
Total R, C, I or Ag	589
Undeveloped in City - zoned R, C, I or Ag	1,184
Undeveloped in City - zoned R or Ag	856
Net annexation acreage needed - total	(595)
Net annexation acreage needed in R and Ag zones	(473)

Using numbers from the Table 4-3, "Undeveloped Land by Zoning"

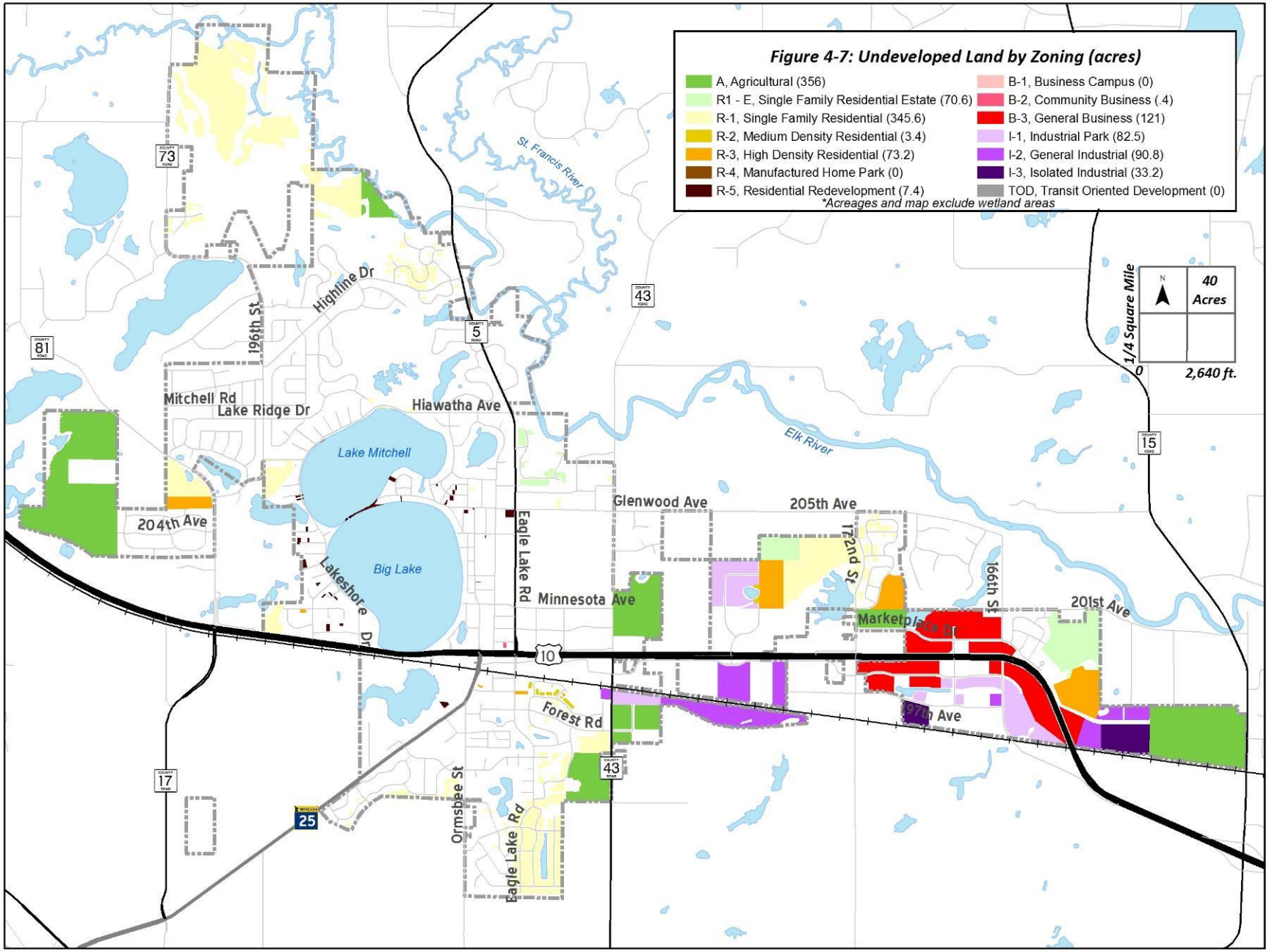


Figure 4-7: Undeveloped Land by Zoning (acres)
A, Agricultural (356)
R1 - E, Single Family Residential Estate (70.6)
R-1, Single Family Residential (345.6)
R-2, Medium Density Residential (3.4)
R-3, High Density Residential (73.2)
R-4, Manufactured Home Park (0)
R-5, Residential Redevelopment (7.4)
B-1, Business Campus (0)
B-2, Community Business (.4)
B-3, General Business (121)
I-1, Industrial Park (82.5)
I-2, General Industrial (90.8)
I-3, Isolated Industrial (33.2)
TOD, Transit Oriented Development (0)
*Acreages and map exclude wetland areas
St. Francis River
Elk River
Lake Mitchell
Big Lake
Highline Dr
196th St
Mitchell Rd
Lake Ridge Dr
Hiawatha Ave
Eagle Lake Rd
Glenwood Ave
205th Ave
172nd St
166th St
201st Ave
Marketplace Dr
Minnesota Ave
Lakeshore Dr
204th Ave
Forest Rd
197th Ave
Ormsbee St
Eagle Lake Rd
1/4 Square Mile
40 Acres
0
2,640 ft.
73
81
5
43
15
10
17
25

Table 4-3
Undeveloped Land outside of Wetlands or Floodplains, 2016

Zone	Acres
A	356
B2	0
B3	121
I1	83
I2	91
I3	33
R1	346
R1E	71
R2	3
R3	73
R5	7
	1,184

Platted but Undeveloped Residential Lots

In early 2017, there were approximately 240 platted but undeveloped parcels zoned for housing, including lots designated for single-family detached houses and attached townhouses. Approximately 20 more lots are being platted annually in the Norland Park neighborhood.

On the other hand, approximately 160 lots are expected to be built upon during 2017-18.

So, by 2019, the supply of lots should be down to approximately 100, which is equal to about 1.5 years of demand in Big Lake. That would be approaching an appropriate inventory. Thus, the over-supply of lot created during the recession will have been brought nearly into equilibrium with the demand.

Land Needed for Other Uses

It is estimated that approximately 206 acres of land will be needed to accommodate commercial, industrial and public land needs between 2015 and 2040, using the assumptions shown above. Those three categories comprise the "Other" in Table 4-2, above.

There are 328 undeveloped acres zoned as commercial or industrial that could accommodate those types of development. This leaves a surplus of 122 acres of undeveloped land zoned in the "Other" districts for the 2015 to 2040 time period.

Annexation May Still Be Desired

Note that even though there is an apparent surplus of developable land within the 2017 City borders out to year 2040, this does not mean that there will not be a market demand for other land to be annexed to the City. There are attractive residential locations just outside of the city where owners might petition the City for annexation. And, some of the undeveloped locations within the current City limits are fairly remote, such as east of the Hudson Woods neighborhood or north of Sweetwater Bend neighborhood.

It is important to have enough land zoned and serviced for development so that land prices are not artificially inflated.

State Laws Relevant to Growth Management

Annexation

Land cannot usually be annexed to a city from a township unilaterally, it usually requires cooperative action. There are a few very limited instances when a city can act on its own, known as annexation by ordinance.

Minnesota annexation laws are summarized at more length in Appendix B.

Three basic conditions must exist for annexation to occur:

- The land must adjoin the corporate limits of the annexing city.
- The Municipal Boundary Adjustment Unit may approve an annexation if it finds city governance of the area is necessary to protect the public health, safety, and welfare; if annexation is found to be in the best interests of the city and the territory to be annexed; or, if land is, or is about to become, suburban or urban in character. This generally refers to land in close proximity to the city, of limited size, suburban in character, and with a community of interest so it will adapt to city government.
- The land may not already be part of another city.

There are two major ways that annexation typically occurs:

Annexation by Ordinance

Cities may annex by ordinance when any of the following conditions exist:

- The city owns the land to be annexed.
- The land is completely surrounded by land already within city limits.
- The land abuts the city and the area to be annexed is 120 acres or less, not presently served or capable of being served by available public wastewater facilities, and all the landowners petition the city for annexation.
- The land is within two miles of the city and has been approved for platting after Aug. 1, 1995, and the platted lots average 21,780 square feet or less.

Orderly Annexation

A city and a township may agree to allow annexation of a specified area according to terms to which they agree, including timing or other conditions.

Intergovernmental Joint Powers

Cities, townships and counties may enter into a wide variety of agreements for the sharing of facilities or services.

Likewise, they may enter into agreements to shoreland use planning or zoning.

A city may not extend its zoning regulations beyond its borders if the surrounding county has adopted zoning regulations. (Sherburne County administers zoning throughout Big Lake Township.)

However, a city may extend its subdivision regulations beyond its borders if the adjoining township has not adopted such regulations. (Sherburne County administers subdivision regulations throughout Big Lake Township.)

When subdivision or zoning regulations are extended into unincorporated land outside the city boundary, any affected city council, county board, or town board may petition the county auditor to establish a joint planning board.

Please refer to Appendix C for a further description of this topic.

Public Facilities and Growth Management

The availability of public services and facilities is an important factor in encouraging and guiding land development. Described below are several public or private facilities or services that may or may not be available to residents and businesses in both the city and the adjacent townships.

The City's ability to attract new residential, commercial or industrial development is diminished to the extent that these services are available at an equal cost to locations in the townships. However, two important services, water supply and wastewater disposal, are only available to properties in the city.

School District

The Big Lake School District operates a high school, middle school and two elementary schools. Its service area includes the city, Big Lake Township and part of Orrock Township, located to the north.

Public Utilities

Public sewer and water services are only available to properties in the City of Big Lake.

Fire and Rescue Protection

The Fire Department is owned jointly by the city and the township.

Ambulance Service

Emergency medical and ambulance services are provided across the vicinity by CentraCare Health Emergency Medical Services.

Police Protection

The City of Big Lake Police Department normally only works only within the city but assists in other jurisdictions if needed. The Sherburne County Sheriff provides law enforcement in the Township.

Economic Development

The Big Lake Economic Development Authority is composed of representatives from both the city and the township and advances the interest of both communities.

Library

The Great River Regional Library has 31 locations in Sherburne, Wright, Stearns and Benton Counties.

Recreation

Parks in the city are open to anyone.

Transportation System Assessment

This chapter describes the City of Big Lake's current transportation system, facilities and services and defines existing, base-level transportation conditions and issues.

The system will be evaluated against future land use plans to determine how it should be improved to provide movement and help realize plans for growth and quality of life.

Figures

Big Lake is the northern terminus of the Northstar commuter rail system

Major Transportation Issues

These are the major transportation planning questions that should be discussed, debated and resolved during the course of this process:

1. **Mississippi River bridges:** What should be the City's position regarding the need for and location of another bridge over the Mississippi River in this vicinity?

   There are only four Mississippi River crossings that connect Wright and Sherburne Counties: Minnesota 25, one of the four, crosses the river and links Big Lake to Monticello and I-94. Over the past five years, population and employment in the region has increased, placing additional travel demand pressure on the Minnesota 25 Bridge. As the region grows, traffic volumes will rise, perhaps requiring an additional river crossing in the vicinity of Big Lake.

2. **Potential rail yard-truck transfer facility:** Should Big Lake plan for a rail-served industrial park on its western side?

   A large rail-served industrial district near Big Lake has been discussed for a number of years and was under study in 2018. It is likely that a significant percentage of the traffic generated would seek to access I-94.

3. **Lack of reasonably continuous travel routes across the city:** Can Big Lake adopt and follow a plan to require developers build a system of collector and minor arterial roads that connect across the city?

   Big Lake is generally oriented east and west. The number of reasonably continuous east-west collector roads is inadequate given the length of the city. North-south movement is better but still inadequate. There are two reasons for this problem: 1) the many lakes and wetlands and 2) non-adjacent annexations that have prevented the logical extensions of roads.

4. **Local street design:** Should minor residential streets be built narrower than they have been in the past?

   Some residential streets have been built 36 feet wide between curb faces. Local streets need not be wider than 29 feet to 32 feet. Excessive widths contribute to higher speeds on neighborhood streets and increased construction and maintenance costs.

5. **Sidewalks:** Should sidewalks be built on both sides of future residential streets?

   The current policy the Big Lake is that sidewalks should be installed on at least one side of the street in all residential neighborhoods.
   - Are there some neighborhood characteristics and features that should warrant consideration of sidewalks on both sides of the street?
   - Should the City retroactively install sidewalks in certain locations?
   - Should sidewalks be planned or built in commercial or industrial locations, such as along US 10 frontage roads or in industrial areas?

6. **Trails:** How active should the City be in planning and building an interconnected system of off-road asphalt paths?

   The network of sidewalks and paved, off-street paths is not continuous and inter-connected. Trail systems not only provide residents with respite from the hardscape of concrete and asphalt, they also provide cities with:
   - A physical feature around which growth and development can occur
   - An amenity that increases desirability of land
   - Public accessibility to parks and open spaces
   - Facilities for non-motorized transportation for both recreation and commuter travel.

7. **Off-Street Parking.:** Should the City amend its zoning ordinance to reduce or eliminate the requirements for off-street parking for businesses and industries?

   Many businesses have been required to build more off-street parking than they will ever need. Over-parking contributes to business costs, land use inefficiency, water runoff, heat increases, auto dependence and general unattractiveness. Most businesses have a good idea of how much parking they need.

Introduction

Transportation Planning: Local, Regional, and State Systems

In keeping with the overall intent of a 'comprehensive' plan, the transportation element will consider **all** modes of transportation currently serving the City of Big Lake and the relationships and connections between the city's transportation system and the regional and state systems. The modes that will be addressed include:

- Highways
- Streets
- Transit and para-transit
- Bicycles and pedestrians
- Freight systems
- Aviation systems.

The following Transportation Assessment is the first of two documents. It has been prepared to: 1) report findings from an inventory and evaluation of the current transportation system and 2) identify the system's assets as well as it shortcomings and deficiencies. A second document will recommend policies, goals, objectives, and programs to guide the development of the city's future transportation system.

Big Lake's Transportation Geography

The City of Big Lake is located in east-central Minnesota along US 10 and within ten miles from Interstate Highway 94. Big Lake is linked to other communities in the region by US 10 and Minnesota Trunk Highway (TH) 25. I-94 and US 10 also link Big Lake to the Twin Cities.

Road Ownership and Responsibilities

The road system in Big Lake is comprised of federal, state and county highways plus City streets. Each of those levels of government is responsible for the design, construction and maintenance of the roads that it owns. The state of Minnesota is responsible for the US highways, using federal standards and money. This pattern of ownership is shown by Figure 5-1. The pattern of City streets is shown by Figure 5-2.

US and State of Minnesota Routes

Important federal and state highway facilities serving the City of Big Lake's transportation system are I-94, US 10, and Minnesota 25, three arterial roads that function to accommodate interregional travel demand across long distances. Figure 5-1 shows the federal, state, and county routes.

The Minnesota 25 and I-94 interchange is less than 10 miles from Big Lake, across the Mississippi River in Monticello, Minnesota.

US 10 is divided by a either a grassy median or a raised concrete median along most of its course through the city. The segment of US 10 that is not divided is the more urbanized area of the city. This area extends west from Lake Street for approximately 1,400 feet, and left-turning vehicles in this segment can find refuge in a two-way left-turn channel. US 10 operates as an expressway in Big Lake, with both traffic signals and stop signs providing intersection control.

Some but not all segments of US 10 have east-west frontage roads on both sides or along one of the two sides. Along with the lack of a complete frontage road system is a high frequency of driveways with direct access to and from US 10. Direct access between adjacent land uses and US 10 is a safety concern.

This particular problem, however, is less of a serious concern where the volume of traffic entering and exiting US 10 would be comparatively lower. This occurs west of County 17 (200th Street) which has a more rural setting. East of that point, however, the volume of housing and business suggests that existing and future trips are comparatively high. In situations like this, a safer

system is one where access to and from and across US 10 would be controlled by frontage roads and where existing direct access would be eliminated.

Minnesota 25 links Big Lake and Monticello where I-94 can be accessed.

In Big Lake, Minnesota 25 runs from County 14 along the Mississippi River to US 10. It is then co-aligned with US 10, west from Big Lake to Becker. It is routed as a north-south facility from Becker to Brainerd.

Sherburne County Routes

Two types of Sherburne County roads provide access to and through Big Lake. The first is the County Roads (CRs), which are fully under the jurisdiction of Sherburne County. Included are County Roads 43, 50, 68, 73 and 81. These roads were constructed by and are maintained by Sherburne County. While they are important links in the city's overall transportation system, they are even more important in the townships.

The second group is the County State-Aid Highways (CSAHs). These are Sherburne County roads that play an important role in the state's highway system, collecting and distributing traffic driving to or away from the state routes identified above. For this reason, the state helps the county with the costs of maintenance and reconstruction. State design standards must be followed for the CSAHs.

The CSAHs that serve the City of Big Lake are 5, 14, 15, 17 and 43.

City of Big Lake Local Streets

The core of Big Lake's transportation system is its network of municipal streets and intersections. Figure 5-2 illustrates the city's street system.

Big Lake's street system is built on two distinct patterns. The section of Big Lake that is north of US 10, east of Big Lake, south of Hiawatha Avenue, and west of County 43 can generally be defined as an area where the street system is built on a grid; where north-south streets and east-west avenues define urban-scale blocks. In turn, each block consists of urban-scale lots, and some blocks have sidewalks on at least one side of the street.

Outside this area the street system is built on a suburban pattern where:

- Blocks do not exist or are not sharply defined
- The orientation of streets deviates from the grid described above, and
- Streets are looped and are often discontinuous ending in cul-de-sacs, and the drive route between two points, which may be in close proximity, is circuitous
- Roads respond well to natural features
- Interesting views and changes are provided.

According to some urban designers, there are some aspects of the traditional grid system that are superior to those of the suburban pattern. A traditional street pattern:

1. Provides predictable and regular lot shapes and sizes that are easy to build and rebuild
2. Facilitates more efficient use of land
3. Allows easy navigation, especially for those new to the city
4. Is redundant, so if one street is blocked, traffic can easily reroute to the next street over
5. Offers the most efficient travel routes between two points for walkers, bikers, and drivers
6. Permits efficient and cost-effective framework for implementing utilities such as sewer and water
7. Is comparatively more sustainable in that costs to build and maintain are lower and
8. Fosters more frequent occasions for social interaction among neighbors.

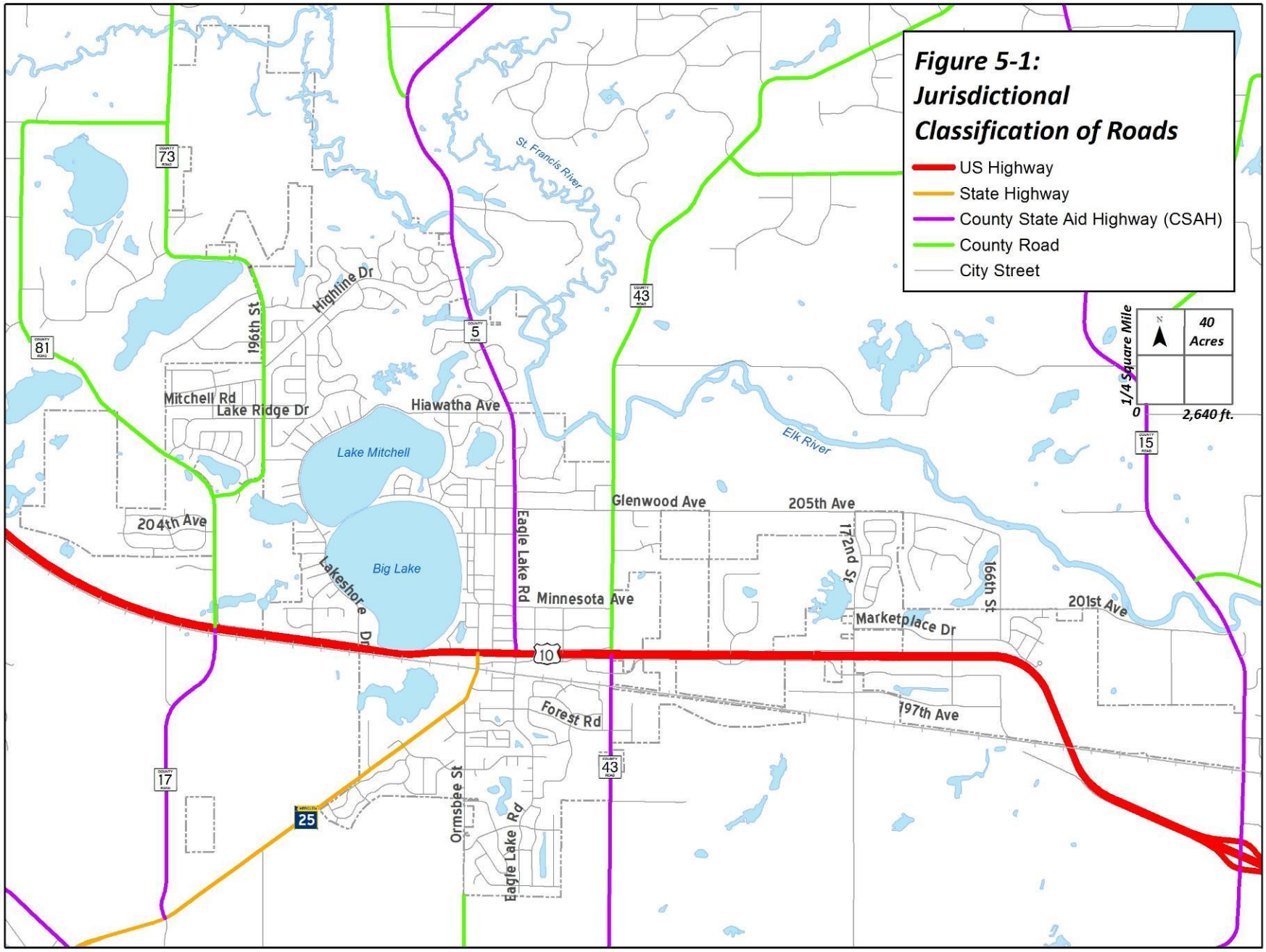


Figure 5-1:
Jurisdictional
Classification of Roads
US Highway
State Highway
County State Aid Highway (CSAH)
County Road
City Street
1/4 Square Mile
40
Acres
0
2,640 ft.
St. Francis River
Elk River
Lake Mitchell
Big Lake
Highline Dr
196th St
Mitchell Rd
Lake Ridge Dr
Hiawatha Ave
204th Ave
Lakeshore Dr
Eagle Lake Rd
Glenwood Ave
205th Ave
172nd St
166th St
201st Ave
Marketplace Dr
Minnesota Ave
Forest Rd
197th Ave
Ormsbee St
Eagle Lake Rd
73
81
5
43
15
10
17
25

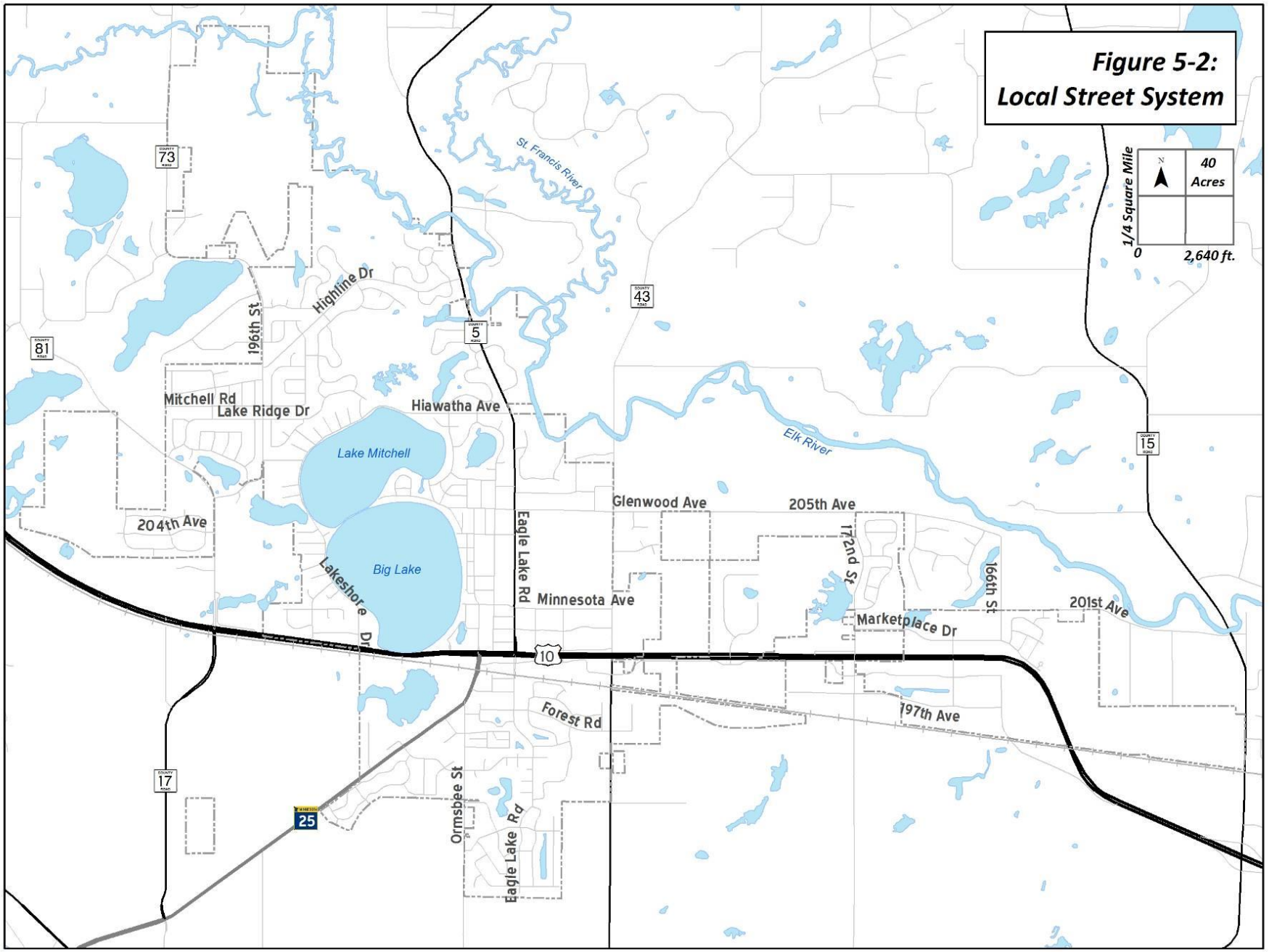


Figure 5-2:
Local Street System
1/4 Square Mile
40 Acres
0
2,640 ft.
St. Francis River
Elk River
Lake Mitchell
Big Lake
Highline Dr
196th St
Mitchell Rd
Lake Ridge Dr
Hiawatha Ave
Eagle Lake Rd
Glenwood Ave
205th Ave
204th Ave
Lakeshore Dr
Minnesota Ave
172nd St
166th St
201st Ave
Marketplace Dr
Forest Rd
197th Ave
Ormsbee St
Eagle Lake Rd
73
81
5
43
15
10
17
25

Road Function

Roads provide some combination of mobility and access. As shown in Figure 5-3, mobility and land access are at two ends of a spectrum, where higher level roads function to provide mobility and lower level facilities (local streets) function to provide accessibility to land uses that are adjacent to the roads.

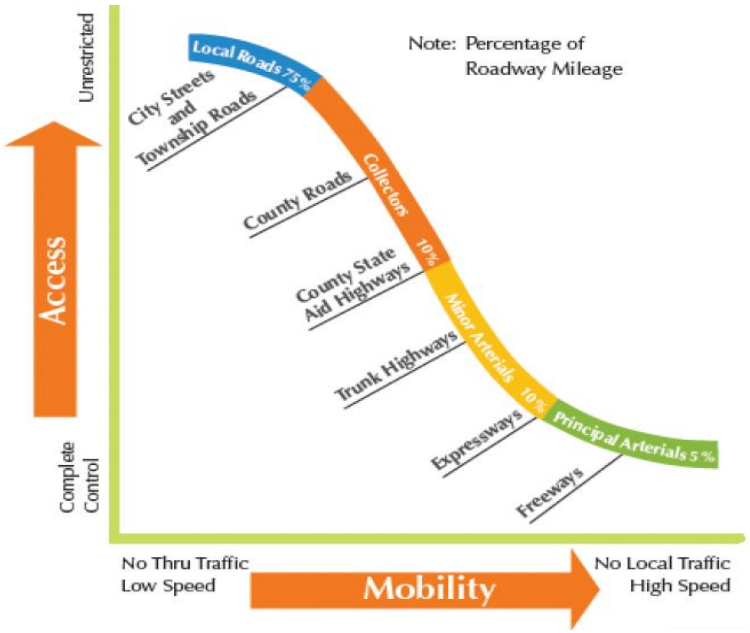


Figure 5-3: Relationship between Access and Mobility

Arterials are primarily intended to move traffic and access to these roads and should be highly managed to optimize efficiency and safety. These include US 10 and Minnesota Highway 25.

Minor arterials and **collectors** have to serve the dual functions of moving traffic and land access. A moderate level of access management, including features such as turning lanes, medians, minimum driveway separations is appropriate to mitigate the adverse effects associated with closely spaced driveways and high levels of turning traffic.

County Highways in Minnesota are typically classified as either Minor Arterials or Collectors. They link communities, economic activity centers, and distant neighborhoods and districts and while also providing land access. Providing both movement and access is difficult, and these roads are where problems are often created. In Minnesota they are typically two- to four lanes wide.

Local Streets, which fall under city jurisdiction, are spaced and designed to provide access to adjacent land parcels. They carry comparatively lower traffic volumes and are designed to accommodate average speeds of 30 miles per hour or less. Local streets should be designed to minimize speeds, volumes, and through traffic with only minor access-related restrictions.

Generally, roads that provide high levels of mobility do not provide high levels of accessibility, and local streets that provide high levels of accessibility do not provide high levels of mobility.

Figure 5-4 shows road functional classification for the highways and streets serving Big Lake.

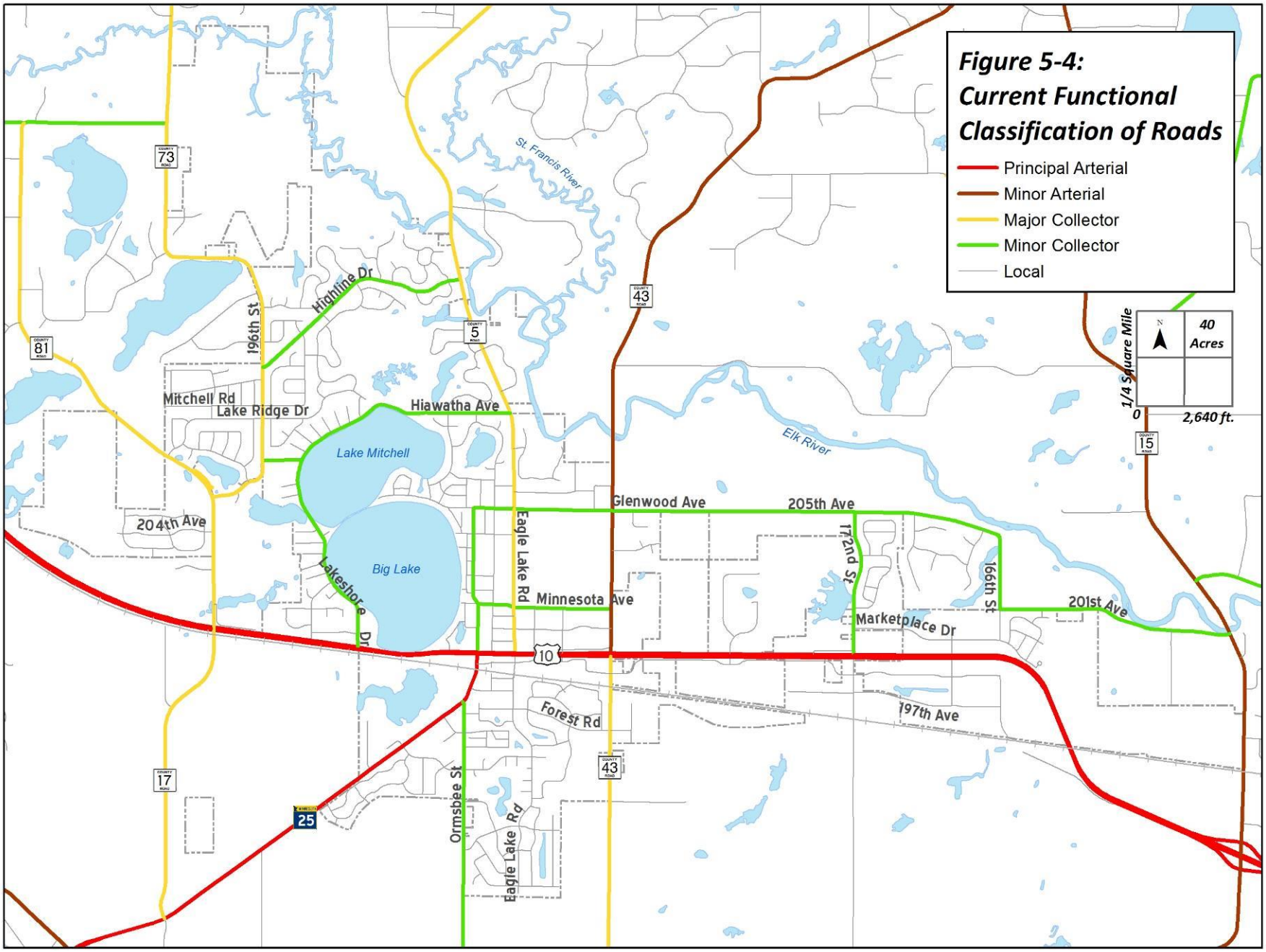


Figure 5-4:
Current Functional
Classification of Roads
Principal Arterial
Minor Arterial
Major Collector
Minor Collector
Local
1/4 Square Mile
40
Acres
0
2,640 ft.
St. Francis River
Elk River
Lake Mitchell
Big Lake
Highline Dr
196th St
Mitchell Rd
Lake Ridge Dr
Hiawatha Ave
204th Ave
Lakeshore Dr
Eagle Lake Rd
Glenwood Ave
205th Ave
172nd St
166th St
201st Ave
Minnesota Ave
Marketplace Dr
Forest Rd
197th Ave
Ormsbee St
Eagle Lake Rd
73
81
5
43
15
10
17
25

Table 5-1
Design Features by Type of Road

This table summarizes how the various types of roads often are designed and used. Note that Sherburne County has adopted access management guidelines.

	Principal Arterial	**Minor Arterial**	**Collector – Major or Minor**	**Local**
Examples	US Highway 10	County Highways 43 and 15	Glenwood, Minnesota, Hiawatha	Many
Definition and Purpose	Partial access control and high priority for traffic flow with at-grade signalized intersections for major roads. High-volume, moderate-to-high speed movement across metro areas with minimal access to adjacent land. *May be designed as a highway with separation from adjacent land uses or as a street with controlled access to adjacent land uses.*	Augments and feeds the primary arterial system and intended for moderate-volume, moderate-speed traffic movement. Access to abutting property is partially controlled.	Collects and distributes traffic between arterial streets and local streets. Intended for short trips wile providing access to abutting properties. *Design varies depending on the character and intensity of traffic generated by land development.*	Provides direct access to abutting property. Intended for low-speed, low-volume movement and shot trips. *Design varies depending on the character and intensity of traffic generated by land development.*
Traffic Flow and Access Priority	Flow : Access 90 : 10 At-grade intersections with arterial and collector street. Signals are uniformly spaced for optimum flow. Driveway and street intersections designed for maximum decrease of 10 mph in thru-lane for turns.	Flow : Access 60 : 40 210 feet spacing for accesses. Safety is higher priority than traffic flow in determining signal spacing.	Flow : Access 40 : 60 160 feet spacing for non-residential driveways	Flow : Access 10:90 No restrictions. 40 feet between access
Spacing	3 to 10 miles	½ to 1 mile	¼ to ½ mile	As required
Trip Length	Across metro areas and between major activity centers	Between and within activity centers	Local street to arterial street (1/2 to 2 miles)	Access to individual property; less than ½ mile
Traffic Volume	20,000 to 50,000 vehicles per day	6,000 to 20,000 vpd	1,500 to 8,000 vpd	Typically under 1,000 vehicles per day
Traffic Speed	Under 65 mph	Under 35 mph	Under 35 mph	Under 30 mph
Pedestrian Provisions	Pedestrians prohibited	Sidewalks on one or both sides	Sidewalks on one or both sides	Sidewalks on one or both sides
Bicycle Provisions	Bicycles prohibited	Shared outside lanes, striped lanes or paved shoulders.	Shared outside lanes or striped lanes	Interconnected street system. Cars and bicycles share the road.
Trees in public right-of-way	Rare	Occasional	Typical	Typical
Bus Provisions	No stops. Express routes only	Scheduled buses, taxis and dial-a-ride service	Scheduled buses, taxis and dial-a-ride service	Rare scheduled buses. Taxis and dial-a-ride

Locations of Traffic Congestion

The ability of a road to handle traffic can be assessed by comparing its average number of daily vehicles to the capacity of the road. Capacity is determined by the number of lanes, spacing and intersections, use of signals and other physical characteristics. This is called the **volume-to-capacity ratio.** When the ratio is greater than 1.0, there is more demand than capacity, generally speaking.

The average annual daily traffic (AADT) or volume of vehicles per day on major roads is listed on Table 5-2 and shown by Figure 5-3.

Traffic flow along a road segment or through an intersection can also be described in terms of **"level of service"** (LOS), ranked as A through F. In a city such as Big Lake, only Levels A, B and C are considered acceptable. Roads with levels of service D, E or F are a problem.

Table 5-2 summaries how the major roads are functioning in Big Lake. It shows the volume-to-capacity ratio and the Level of Service.

Minnesota 25 is the only road where the daily traffic volume exceeds daily capacity. County 5 has a Level of Service of D and E. Adding more traffic to County 5 without also adding capacity could lead to future congestion and a degradation of traffic operations and compromises to safety.[1]

By identifying road segments with congestion, improvements can be planned. In addition, corridors that display high volume-to-capacity ratios and poor Level of Service should be studied for access controls and other ways to improve their operation until major improvements can be built.

Table 5-2
Volume-to-Capacity Ratios and Levels of Service

Road Link	Most Current AADT (vpd)	Threshold Capacity (vpd)	V/C Ratio	LOS
US 10 west of County 17	13,400	45,000	**0.30**	**C**
US 10 between County 17 and Minnesota 25	16,200	35,000	**0.46**	**C**
US 10 between Minnesota 25 and County 5	23,100	35,000	**0.66**	**C**
US 10 between County 5 and County 43	20,090	35,000	**0.57**	**C**
US 10 east of County 43	17,700	35,000	**0.51**	**C**
Minnesota 25 southwest of County 17	16,100	14,000	1.15	F
Minnesota 25 south of US 10	10,800	10,000	1.08	F
Minnesota 25 northeast of County 17	9,700	14,000	**0.69**	**C**
County 5 north of US 10	7,600	10,000	**0.76**	**D**
County 5 north of Glenwood	9,400	10,000	**0.94**	**E**
County 5 north of Highline Dr	7,500	10,000	**0.75**	**D**
County 43 north of US 10	5,500	10,000	**0.55**	**C**
County 43 south of US 10	2,600	10,000	**0.26**	**B**
County 43 north of County 14	1,150	14,000	**0.10**	**A**

[1] *Uncongested* – the existing volume is less than 80 percent of the threshold volume, indicating a low probability of operational problems due to volume of traffic on the facility.
Approaching Capacity – the existing volume is between 81 percent and 100 percent of threshold volumes, suggesting a moderate probability of operational problems due to traffic volume on the facility.
Over Capacity – the existing volume exceeds 100 percent of the threshold volume, indicating a high probability of operational problems due to the volume of traffic on the facility.

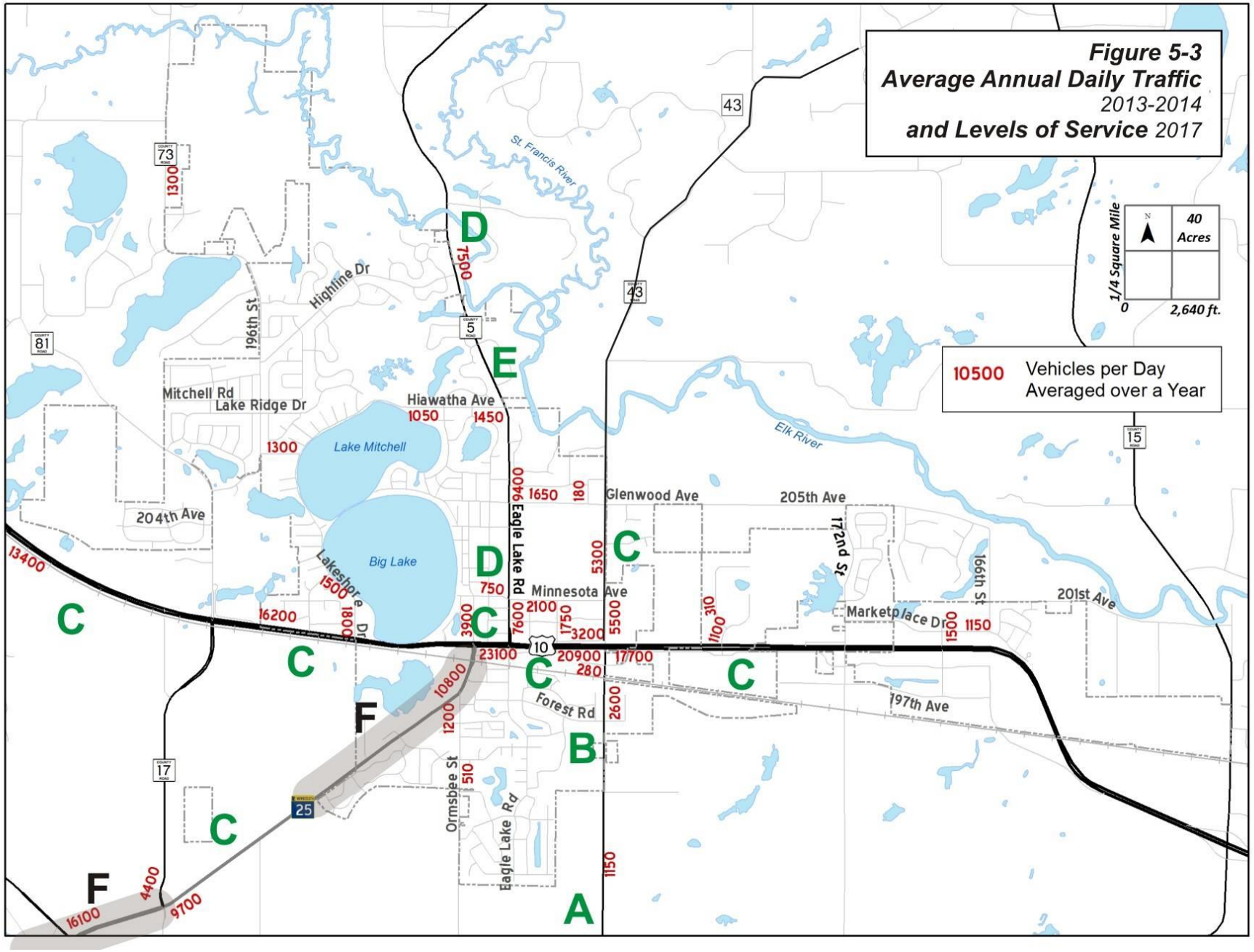


Figure 5-3
Average Annual Daily Traffic
2013-2014
and Levels of Service 2017
10500 Vehicles per Day
Averaged over a Year
1/4 Square Mile
40 Acres
0
2,640 ft.
St. Francis River
Elk River
Lake Mitchell
Big Lake
Highfine Dr
196th St
Mitchell Rd
Lake Ridge Dr
Hiawatha Ave
Eagle Lake Rd
Glenwood Ave
205th Ave
204th Ave
Lakeshore Dr
Minnesota Ave
172nd St
166th St
201st Ave
Marketplace Dr
Forest Rd
197th Ave
Ormsbee St
Eagle Lake Rd
73
81
5
43
15
17
25
10
1300
7500
1050
1450
1300
9400
1650
180
13400
1500
16200
1800
750
3900
7600
2100
1750
3200
5300
5500
310
1100
1500
1150
23100
20900
17700
280
10800
1200
2600
510
1150
4400
9700
16100
A
B
C
D
E
F

US Highway 10 Safety and Access Management

US Highway 10 is important to commerce, commuting, tourism and livability in Minnesota. The segment through Sherburne County has been designated a *Medium Priority Interregional Corridor* for the purposes of identifying appropriate access management policies and practices.

Highway 10, a divided highway for most of its 275 mile route across Minnesota, generally follows the alignment of the BNSF railroad and runs from Moorhead to Cottage Grove. As it passes through the Big Lake, it carries 13,000 and 23,000 vehicles per day, and its posted speed is 65 mph.

Two segments of Highway 10 in Big Lake have been identified as High-Crash Segments[2]. The four intersections in Big Lake were among the nine with the highest crash frequency in Sherburne County between 2001 and 2005.

Access management. one of several ways to improve traffic safety and flow, is important along US Highway 10 as well as along every County and City road.

Access management is the planning, design, and implementation of land use and transportation strategies in to maintain a safe flow of traffic while accommodating the access needs of adjacent development. Access management guidelines provide a means for transportation engineers and planners to balance private property concerns with the need to provide for a safe and efficient transportation system.

Sherburne County has adopted access management guidelines.

The Purpose of Access Management

Traffic flow and safety problems are caused by too many driveways, intersections and closely-spaced traffic signals along major roads:

- Crashes increase as vehicles cross and turn along the road in an uncoordinated manner
- Stop and go conditions frustrate commuters and local residents
- Adjacent businesses suffer when customers have trouble turning into their sites
- Freight and delivery trucks lose time and money when stuck in traffic
- Pedestrians can't find a safe spot to cross the road
- Overall community livability suffers

Benefits of Access Management

Effective access management will:

- Reduce congestion and crashes
- Preserve road capacity and postpone the need for roadway widening
- Improve travel times for the delivery of goods and services
- Ease movement between destinations
- Support local economic development

[2] Source: MnDOT Crash Data: A High Crash Rate Segment is any roadway segment that has a crash rate greater than 1.5 times the average crash rate for that design type. A High Frequency Segment is any roadway segment that has experienced more than four crashes per mile per year. A Low Frequency Segment is any segment with four or fewer crashes per mile per year.

Transit and Para-Transit Facilities and Services

Dial-a-ride, curb-to-curb bus service is provided to residents of Big Lake through Tri-CAP, a transit service program provided by Sherburne, Benton, Morrison, and Stearns Counties along with the Cities of Big Lake, Albany, Sauk Centre, Melrose, Paynesville, Little Falls, and Elk River. The service is offered five days per week.

The bus service is available to the general public with no age or income requirements, and all buses are handicapped accessible. Bus reservations can be made up to two weeks in advance. Advance reservation bus fares, made 24+ hours in advance are $1.25 per boarding within communities and $3.00 per boarding for rural to community trips. Same day reservation fares are $2.00 per boarding within communities and $3.75 per boarding for rural to community trips.

Tri-CAP also offers a program through its dispatch center where volunteers can provide rides, using their own vehicles, to residents of Sherburne, Benton, Stearns, and Morrison Counties. Passengers are assigned to volunteers by the Tri-CAP dispatch center and may be traveling to medical appointments or a variety of other destinations. Volunteer drivers are reimbursed at the Federal IRS rate and may also be eligible for some meal reimbursements.

The City of Big Lake is the northwestern terminus of the Northstar Commuter Rail line, which runs southeast to downtown Minneapolis, stopping at stations in Elk River, Ramsey, Anoka, Coon Rapids and Fridley. The Big Lake commuter rail station is located at the intersection of 198th Avenue and County 43. The station features bicycle lockers and a park and ride lot with capacity for 518 vehicles. Commute time to downtown Minneapolis from this station is about 51 minutes.

This station is the northbound terminus until funding for an extension to St. Cloud is secured. In the meantime, a commuter bus, the Northstar Link (Route 887) connects Big Lake with St. Cloud. The Northstar Link stops at the Metro Bus downtown transit center, St. Cloud State University, a commuter parking lot at Lincoln Avenue and US 10, and the Coffee Cup Cafe in Becker. The bus is operated by St. Cloud Metro Bus.

Bicycle and Pedestrian Systems

Bicycling

The map on the following page shows sidewalk and off-road asphalt paths (trails). As shown, gaps exist in the path system, and not all areas of the city have sidewalks.

The western shorelines of Big Lake (Lakeside Park) and McDowell Lake and McDowell Park are served with trails. Other parks with trails are Highline Park and Hidden Rivers Park. Other parks in the city are without trails.

There are only a few residential development areas that have access to a trail. Notable exceptions are:

- A short trail on Sandbar Lane in the northwest corner of the city; this trail does not connect to any other trails.
- The residential areas north and northeast of McDowell Park.
- Some of the neighborhoods between Minnesota Avenue and Rose Drive.
- There is a north-south trail that runs along CR 43 between Irvine Avenue and Rose Drive.
- A trail along CR 81; this trail does not connect to any other trails.
- A trail along Eagle Lake Road leading to Big Lake Township Lion's Park.
- A trail along 172nd Street; this trail does not connect to any other trails.

Walking

Sidewalks are an essential element of the public infrastructure that provide a number of functions in growing, family-oriented communities. First, they provide a protected and safe environment for pedestrian circulation. Secondly, they provide a clear definable border between public and private property and define what is referred to as a property owner's "defensible space." A sense of "defensible space" contributes to property owners' sense of responsibility, and, as a result, property owners take better care of their yards and take steps to ensure cleanliness and a safe environment.

The buffer that sidewalks provide between the pedestrian and automobile realms is not only physical; it is also a psychological buffer. Consider the lack of comfort a pedestrian may experience walking along a county road or city street in Big Lake where there are no parked cars and no sidewalks.

It was observed that some areas of the City are supplied with sidewalks and others are not.

The map on the following page illustrates locations in the city where the condition of sidewalks is poor and hazards for pedestrians can be found.

Safe Routes to School

The City of Big Lake participated in a MnDOT-funded Safe Routes to School (SRTS) program in 2015. The purpose of the program was to identify factors that prevent school-aged children from walking and biking to school. Each of the city's three schools was included in the study. The study resulted in the creation of a SRTS plan for the Big Lake School District.

Safe Routes to School (SRTS) is a program with a simple goal: helping more children get to school by walking and bicycling.

The City was awarded a Transportation Alternatives Grant from MnDOT in 2017 to implement three of the improvements called for in the SRTS plan. The City and the School District will continue to partner together to increase safe pedestrian access to local schools.

Safe Routes to School programs use a variety of strategies to make it easy, fun and safe for children to walk and bike to school. These strategies are often called the "Five Es."

- **Education**: programs designed to teach children about traffic safety, bicycle and pedestrian skills, and traffic decision-making.
- **Encouragement**: programs that make it fun for kids to walk and bike. These programs may be challenges, incentive programs, regular events (e.g., "Walk and Bike Wednesdays") or classroom activities.
- **Engineering**: physical projects that are built to improve walking and bicycling conditions.
- **Enforcement**: law enforcement strategies to improve driver behavior near schools
- **Evaluation**: strategies to help understand program effectiveness, identify improvements, and ensure program sustainability.

The City of Big Lake adopted a Complete Streets policy resolution in 2010 that states "streets and roads should be designed and operated to be safe and accessible for all transportation users." The specific policy recommendation states "bicyclist and pedestrian transportation users shall be included in street construction, re-construction, re-paving and re-habilitation projects." The policy goes on to explain that significant destinations, such as schools, be given high priority for project development.

The Big Lake School District is committed to encouraging students to engage in physical activity, as is described in the district-wide wellness policy. The wellness policy, adopted in 2006, states "it is the goal of Big Lake School District to ensure that the students of Big Lake receive the nationally recommended amount of daily physical activity (at least 60 minutes per day) and for students to understand that regular physical activity is a personal behavior and that they need physical activity beyond physical education class."

The policy also states the importance of encouraging parents to understand the benefits of an active lifestyle, stating "schools should provide information to parents to help them promote and incorporate physical activity and healthy eating into their children's lives."

The District currently has a one-mile walk zone for elementary schools, and a two-mile walk zone for its middle and high schools. Walking Route Maps for students interested in walking to school are available on school websites.

In 2015, Sherburne County selected various strategies for implementing the Minnesota Statewide Health Improvement Program (SHIP). One strategy is Active Schools, a framework for implementing policies and practices that increase opportunities for physical activity throughout the school day. Included in this strategy is the promotion of active transportation to and from school through the implementation of an SRTS program.

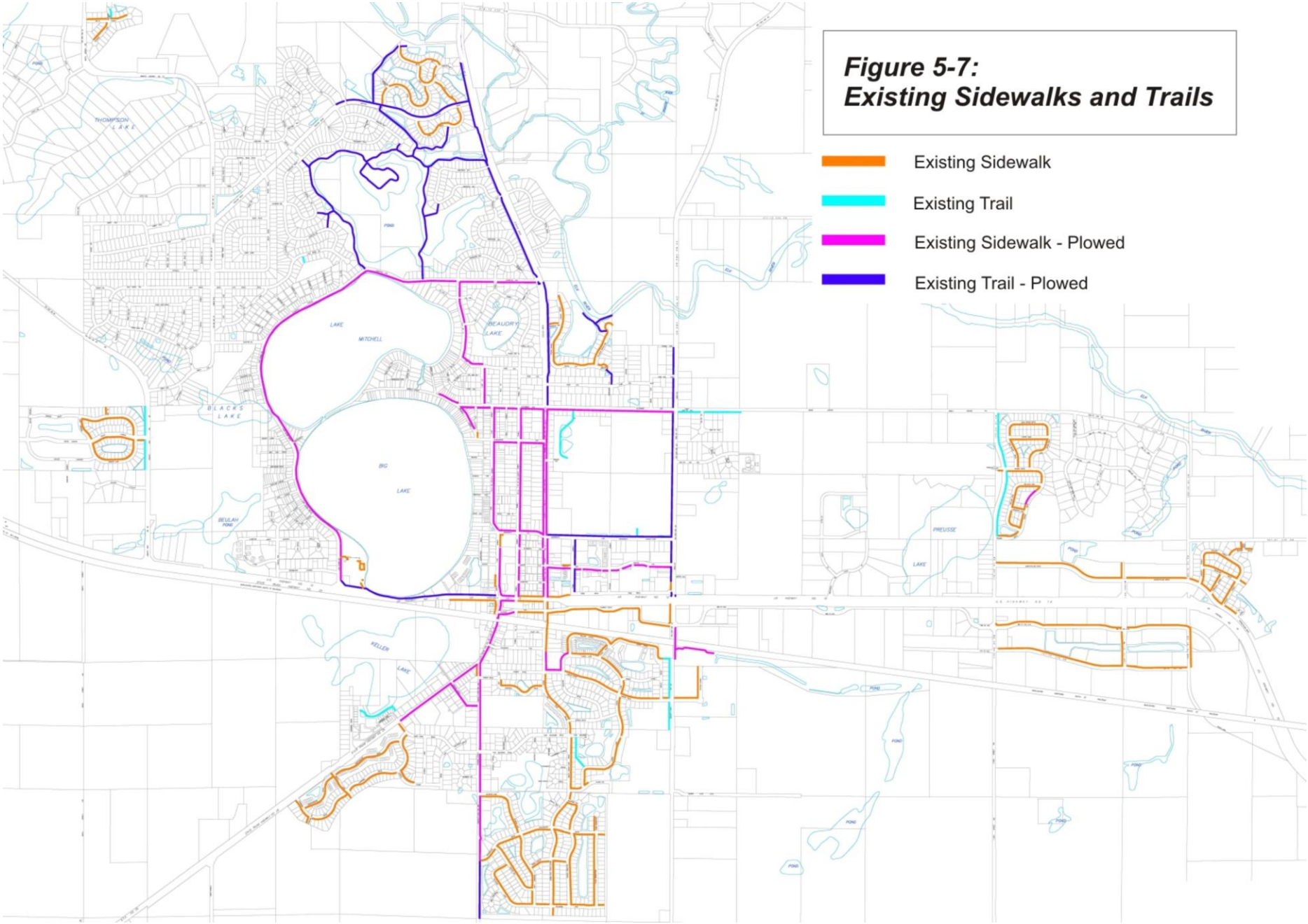


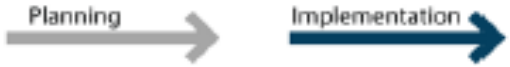
Figure 5-7:
Existing Sidewalks and Trails
Existing Sidewalk
Existing Trail
Existing Sidewalk - Plowed
Existing Trail - Plowed
THOMPSON LAKE
LAKE MITCHELL
BEAUDRY LAKE
BLACKS LAKE
BIG LAKE
BELGIAN POND
PREUSSE LAKE
KELLER LAKE
POND

Factors Preventing Cycling and Walking to School

Parent surveys conducted during the SRTS study asked specifically about barriers to biking and walking to school. More than half of respondents who do not allow their children to walk or bike to school reported that the following issues affected their decision: distance; speed of traffic along the route; amount of traffic along the route; weather or climate; safety of intersections and crossings; and lack of and/or condition of sidewalks or paths.

Engineering solutions are but one category of SRTS recommendations. Some engineering recommendations for the main schools campus from the 2015 plan are outlined below; additional recommendations were provided for the vicinity of Liberty Elementary School. The City would serve as the lead agency on some of the recommendations.

Project #	Solution/ Recommendation	Lead Agency	Priority	Year 1	Year 2	Year 3	Year 4	Year 5
A	Construct a median refuge island, curb extension and marked crossing of Minnesota Avenue.	City of Big Lake	Medium					
B	Construct an ADA compliant landing at the SE corner of Phyllis and Minnesota. Perform an engineering study to determine if the corner radius should be adjusted. If needed, do not enlarge corner radius more than is absolutely necessary.	City of Big Lake	High					
C	Install sidewalk on East side of Phyllis street from Martin Ave to Minnesota Ave. Also consider a marked crossing of Martin Ave to complete the connection.	City of Big Lake	Medium					
D	Complete the sidewalk on the south side of Minnesota Avenue.	City of Big Lake	High					
E	Construct a path to the school drive access along County Rd 43 and install an enhanced crossing to make crossing to the west side safe and comfortable.	Sherburne County	Low					
F	Construct a median refuge island and marked crossing on the south side of the intersection of County Rd 43 and the school bus drive to connect to the proposed path.	Sherburne County	High					
G	Construct a path on the south side of the school bus drive to create a back route connecting all schools.	Big Lake Schools	Low					
H	Implement a time or beacon based school zone speed limit on Minnesota Ave.	City of Big Lake	High					
I	Change to a time-based school speed zone system along Co Rd 5.	Sherburne County	Medium					



Freight or Goods Movement

Trucking

Trucking accounts for deliveries of raw materials to Big Lake and shipments of products from Big Lake. In recent years there has been interest in the development of a rail-truck intermodal transfer facility. This idea is being studied by the Highway 25 Corridor Coalition, which includes Sherburne and Wright Counties and the Cities of Big Lake and Monticello, among others. A candidate location for the facility is south of the Burlington Northern-Santa Fe Railroad right-of-way near County Highway 17.

Factors to be considered in the facility's feasibility are:

- Availability of land; 200 or more acres might be needed
- Engineering feasibility; tracks to and from the BNSF mainline would need to be constructed, and the ability to construct these linkages within design parameters will be critical
- Volume of freight; in order to make the development worthwhile, a minimum required volume of freight would be needed
- Truck operations on County 17 and Minnesota 25. As of today, Minnesota 25 is the obvious route trucks would use to cross the Mississippi River and gain access to I-94. Minnesota 25 is already carrying more daily vehicles than it was designed to accommodate. There is not good freight connectivity between US Highway 10 and Interstate Highway 94.

Rail

The Burlington Northern-Santa Fe Railroad owns the railroad right-of-way that passes through Big Lake. The chief concern of BNSF is the movement of freight, and today over 60 trains per day pass through Big Lake. Each train can be up to a mile long.

The railroad right-of-way is located south of US 10. Minnesota 25 crosses the railroad right-of-way, and traffic back-ups can spill over to US 10, with eastbound right-turns and westbound left-turns from the highway being blocked until the train has cleared the crossing.

BNSF leases track to MnDOT, the agency that operates the Northstar Commuter Rail. A commuter rail station is located south of US 10 and east of County 43.

Off-Street Parking

The City of Big Lake, like nearly every municipality, requires through its zoning ordinance a minimum number of off-street, paved parking spaces for every type of land development, whether residential, commercial, industrial or non-profit. Section 1030.11 of the City Code lists the requirements.

These numbers or ratios were usually adopted in the distant past, often derived from generic, national studies, sometimes based on other Cities' practices, and often out of date with current needs. Consequently, many businesses have been required to build more off-street parking than they will ever need. The disparity appears to be less for residential parking.

Most businesses usually have a close estimate of what their parking needs are, and no auto-dependent business would forego on-site parking altogether.

Over-parking is a national problem and contributes to business costs, barrier to small-business entry, land use and tax base inefficiency, water runoff, heat increases, less walkability and general unattractiveness.

This subject should be addressed in the plan, at least for non-residential parking requirements.

Aviation

The nearest major airport is St. Cloud Regional Airport. This airport has domestic flights from Saint Cloud and is 23 miles from Big Lake.

There is a private, grass landing strip parallel to County 17.

Parks and Trails System Assessment

This chapter describes the existing system of parks and trails, presents a system for classifying the parks, lists existing facilities for each park, and summarizes prior plans for the parks and trails.

Figures

Major Parks and Trails Issues

The following are the major issues in the topic of parks and trails identified through the analysis of conditions.

1. **Athletics Complex:** Should the City acquire land for and build an outdoor athletics complex for organized team sports? If so, where should it be and what should it include?
2. **School Facilities:** Should the City forge a closer working relationship with the School District for shared facility use?
3. **Neighborhood Parks:** Should there be more mid-sized, neighborhood parks in the 5 to 10-acre range?
4. **Sidewalks:** Should there be more sidewalks in all parts of the city as an integral element of the walking and bicycling network, which would be supplemented by off-road, multiple-use paths? Should the City work to retrofit established neighborhoods with sidewalks?
5. **Trails:** How aggressive should the City be in extending the many disconnected off-road paths?

The playground at McDowell Park

Parks and Trails Inventory

The existing system of parks and off-road paths is illustrated by Figure 6-1 on the next page. Table 6-1 lists all of the parks and indicates their classification, acreage and facilities.

The city has 18 parks, totaling 246 acres. McDowell Park is the largest at 146 acres. Supplementing this land are two public school sites that have athletic fields and playgrounds, totaling 167 acres. It was decided during the process of writing the Master Plan that the public school facilities should be included in the analysis.

Among the 18 parks, there are six designated as Open Space, totaling 194 acres: Beaudry, Kellerwood, Norland, Sanford Select Acres, Sweetwater Bend, Lions Township Park.

Please refer to the 2016 *Parks, Trails and Open System Master Plan* for photos and location maps of each park.

It is notable that of the six Neighborhood Parks, only one, Highline, is larger than 5 acres, which is considered the lower threshold for that type of park. Highline is 6 acres. See Table 6-1.

There are 12 segments or loops of off-road, multiple-use paved paths, also known as trails, totaling 16 miles. Approximately half are located in street rights-of-way and the others are in parks. The system is scattered and disjointed. Please refer to Figure 6-1 for their locations.

It is very helpful to have a network of sidewalks across the city to lead to and from the off-road path system. However, there is a relative shortage of sidewalks in Big Lake. Sidewalks were not addressed in the 2016 Master Plan.

The 2016 value of the park and trail system has been estimated at $11,000,000. It was estimated in the 2016 *Parks, Trails and Open System Master Plan* that another $8,000,000 will be needed to expand and improve the system by year 2030.

Park Classification

The City has categorized its public recreation areas to provide for active use in community and neighborhood parks, and passive use in nature areas. The National Recreation and Park Association suggests that parks may be classified as follows:

Neighborhood Parks – Active area designed for intensive use by children and family groups close to home and affording opportunities for informal recreation and possibly some scheduled activities for all ages.

Community Parks – Larger, active play area providing for a greater variety of play experiences and activities.

Special Use Facilities – Include play lots, squares and plazas, public beaches, swimming pools, parkway systems, golf course facilities, greenbelts, drainage ways, trails and any other facilities for which standards are difficult to formulate. The number, location, and distribution of Special Use Facilities depend on several factors, including: physical conditions, natural amenities, opportunities for acquisition, and public demand. Their location and size is variable and dependent on specific use.

Open Space / Nature Areas – Public land set aside for preservation of natural resources and visual aesthetics or buffering, which may include areas for trails and other passive recreation uses.

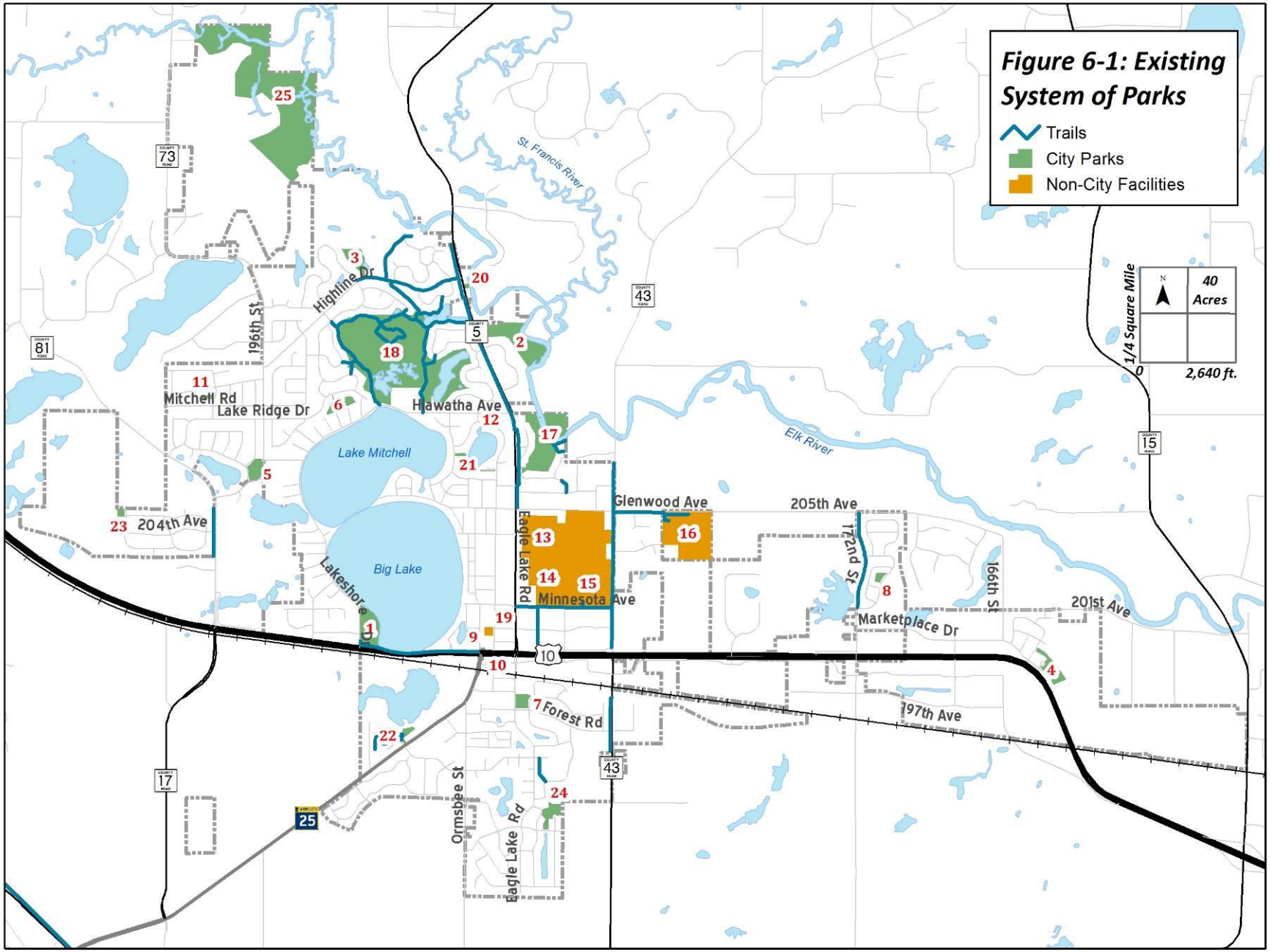


Figure 6-1: Existing System of Parks
Trails
City Parks
Non-City Facilities
1/4 Square Mile
40 Acres
0
2,640 ft.
St. Francis River
Elk River
Lake Mitchell
Big Lake
Highline Dr
196th St
Mitchell Rd
Lake Ridge Dr
Hiawatha Ave
Lakeshore
Eagle Lake Rd
Glenwood Ave
Minnesota Ave
205th Ave
172nd St
166th St
201st Ave
Marketplace Dr
197th Ave
204th Ave
7 Forest Rd
Ormsbee St
Eagle Lake Rd
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
73
81
5
43
15
10
17
25

Table 6-1: Existing Park System

Park Name	Map Refer.	Usable Acreage	Class	Baseball / softball	Basketball	Bathrooms	Boat dock	Fishing	Frisbee golf	Ice skating	Lighting	Memorial	Open space	Parking	Picnicking	Play equipment	Shelter	Skate park	Soccer / multi-use	Swimming	Tennis	Trails	Volleyball
Highline	3	6	N	✓									✓	✓	✓	✓						✓	
Hudson Woods	4	6.4	N	✓					✓					✓		✓							
Lake Ridge	5	4.4	N	✓										✓	✓	✓							
Shores of L. Mitchell	6	4.5	N	✓	✓									✓	✓				✓				
Wright's Crossing	7	3.1	N											✓	✓	✓	✓					✓	✓
Bluff Park	8	1.25	N										✓			✓							
Lakeside	1	11	C		✓	✓	✓	✓						✓	✓	✓	✓	✓		✓			✓
River Oaks	2	12	C						✓						✓								
Brown's	9	0.3	M												✓		✓						
Jefferson Square	10	0.3	M									✓											
Mitchell Farms	11	0.8	M												✓	✓							
Powell	12	0.5	M													✓							
High-Middle-Elemen.	13-16	87	S	✓	✓						✓			✓					✓		✓		
Liberty Elementary	16	12	S	✓	✓											✓			✓				
Hidden Rivers	17	2	S																			✓	
McDowell	18	62	S										✓									✓	
Lady of Lake Church	19	4.4	S							✓				✓		✓							
Riverside Landing	20	0.25	S				✓																
Beaudry	21	2	O																				
Kellerwood	22	2	O											✓									
Norland	23	1	O																				
Sanford Select Acres	24	2.5	O											✓									
Sweetwater Bend	25	22	O																				

Classifications: N: Neighborhood C: Community M: Mini S: Special Use O: Open Space

Park System Evaluation

The 2016 *Parks, Trails and Open System Master Plan* analyzed the park system using guidelines provided by the National Recreation and Parks Association. Those guidelines were national, generic and numeric and did not account for local preferences, natural resources, nearby regional parks, private facilities, or residential density. Nevertheless, they are a useful and quick measure of a system and a guide for planning. The NRPA guidelines were supplemented by local public opinions gained through meetings and a survey during the planning process.

The Big Lake system measured up as shown by Table 6-2. It should be noted that the analysis used gross park acreage and counted wetlands.

Table 6-2
Comparison of Big Lake Parks and Trails to NRPA Guidelines

		Big Lake		
Type	**NRPA Guideline**	**Number**	**Recommended**	**Comparison**
Neighborhood Park	2 acres per 1,000 people	19 acres	21 acres	- 1.2 acres
Community Park	5 acres per 1,000 people	23 acres	51 acres	- 28 acres
Total Parks	10 acres per 1,000 people	42 acres	103 acres	- 61 acres
Trails (miles)	1 mile per 1,000 people	16 miles	10 miles	+ 5.7 miles
Other Open Space (acres)	1.5 acres per 1,000 people	144 acres	15 acres	+ 129 acres

During the *Master Plan* process, many ideas were generated by members of the public regarding the quality of the system and how it could be improved. Here is a summary.

- **Barriers:** Highway 10 and the railroad tracks are a major physical and psychological barrier dividing the city and hindering movement to parks
- **Mid-Sized Parks:** There seems to be a need for more mid-sized parks (5 to 10 acres) serving neighborhoods or districts to supplement the many small and the few very large sites
- **Trails:** The off-road paved paths are disconnected; extend and link them, including to County trails
- **Water Access:** More access is desired to water, particularly the rivers
- **School Facilities:** The school fields are not under City control and cannot be programmed independently of the schools' needs. There is no agreement for mutual use of facilities
- **Athletics:** A large, multi-sport site is needed for organized athletics.

Strengths

- Nice local parks
- Lakeside Park
- Lakes, in general
- Nice tot lot parks and playgrounds
- Much potential
- Natural parks (e.g., McDowell)
- Young population

Weaknesses

- Trails do not connect
- Need more parks on the south side
- No money
- Need more space for large events
- Limited Community involvement

Opportunities

- Potential access to extended parks areas such as Hidden Rivers
- River access; water access
- Bring people to Big Lake
- Regional connections, especially to wildlife areas
- Strengthen partnerships with County
- Connections with "specialty trails"

Threats

- Hazardous pedestrian or bicyclist crossings of major roads
- People leaving Big Lake because of a lack of parks or recreation
- No money
- Strength of development is down, which translates to less money
- Limited Community involvement

Park Location Analysis

The 2016 *Master Plan* included an analysis of the location of Community, Neighborhood and Mini parks relative to residential development. Thus, Special Use and Open Space parks were not included. The Special Use Parks included the public school athletic sites.

On a map of the park system, radii of one-quarter, one-half and 2 miles were drawn around each of those parks. The results are shown by Figure 6-2. That map illustrates that all but one of those parks are located north of the barrier created by Highway 10 and the BNSF Railroad tracks. The south side park is Wright's Crossing, at only 3 acres.

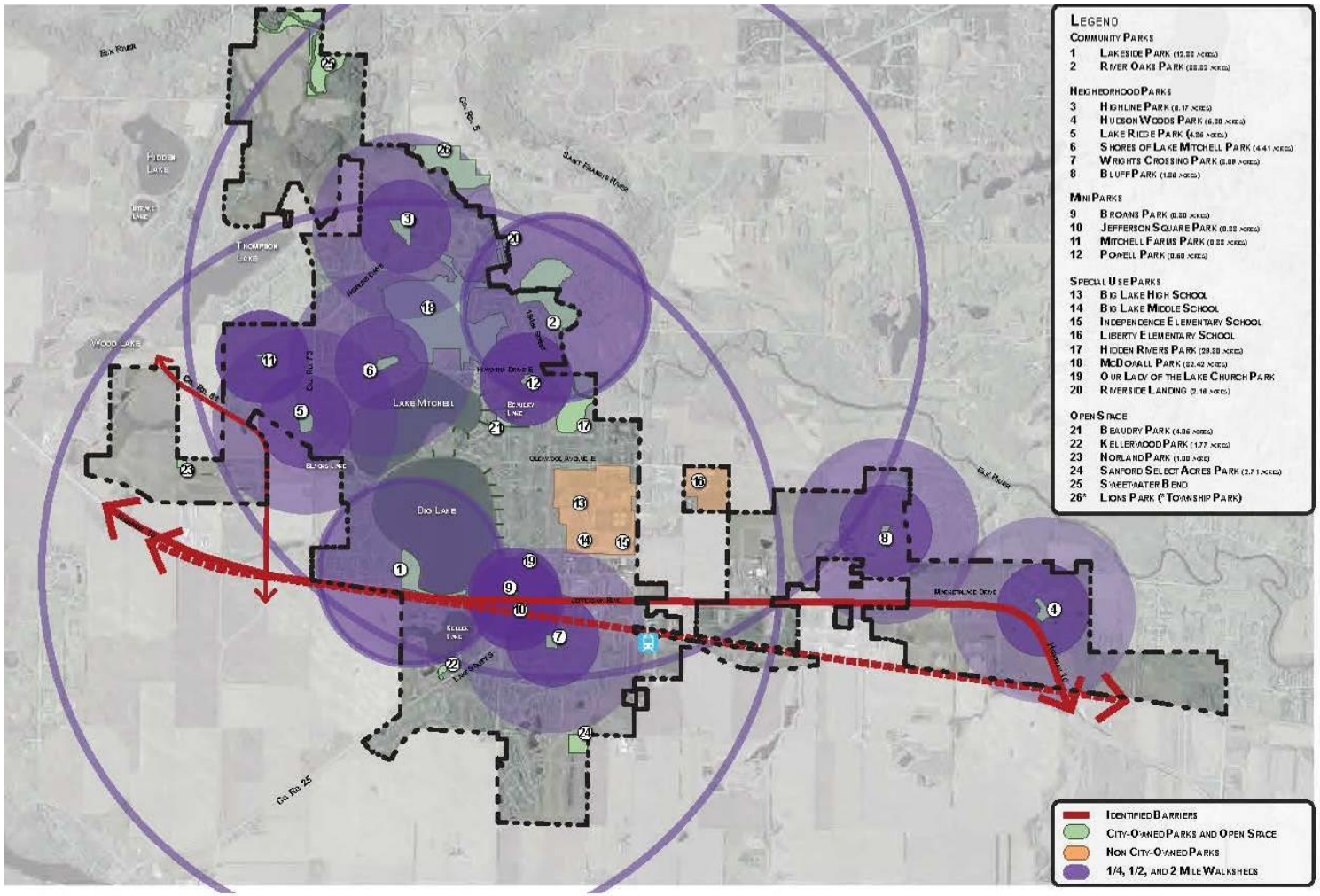


Figure 6-2:
Park Location Analysis

2005 Parks and Trails Plan

The system plan adopted in 2005 emphasized the location of future parks and trails as compared to the 2016 plan, which focused on specific improvements for each park. The plan map, shown below, called for:

- Three new **Neighborhood Parks** – two in the northeast and one in the southwest. No park is shown in the southeast quadrant but the text noted the need for a community athletic field and the possibility of coordinating that with a potential future school site there. Also, in 2005, the land use plan for that area was unresolved, and the thought was that it could guide the area for industrial development; the 2009 land use plan showed Northstar transit-oriented development and light industry.
- **Off-road paved paths**, either in linear parks along streams ("greenways") or in the right-of-way of major roads, leading to regional destinations such as County parks or state conservation lands. The linear parks would be acquired in fee title and used for natural protection, trails and public access to the streams. This would be ambitious and difficult but highly beneficial to the public. The County would have to lead and coordinate as the alignments would be outside the City.
- **Multi-use paved paths** within the city or its future growth areas.

Note that the 2005 plan included the now-defunct idea of building a Highway 10 bypass route, which influenced thinking about future land use and parks.

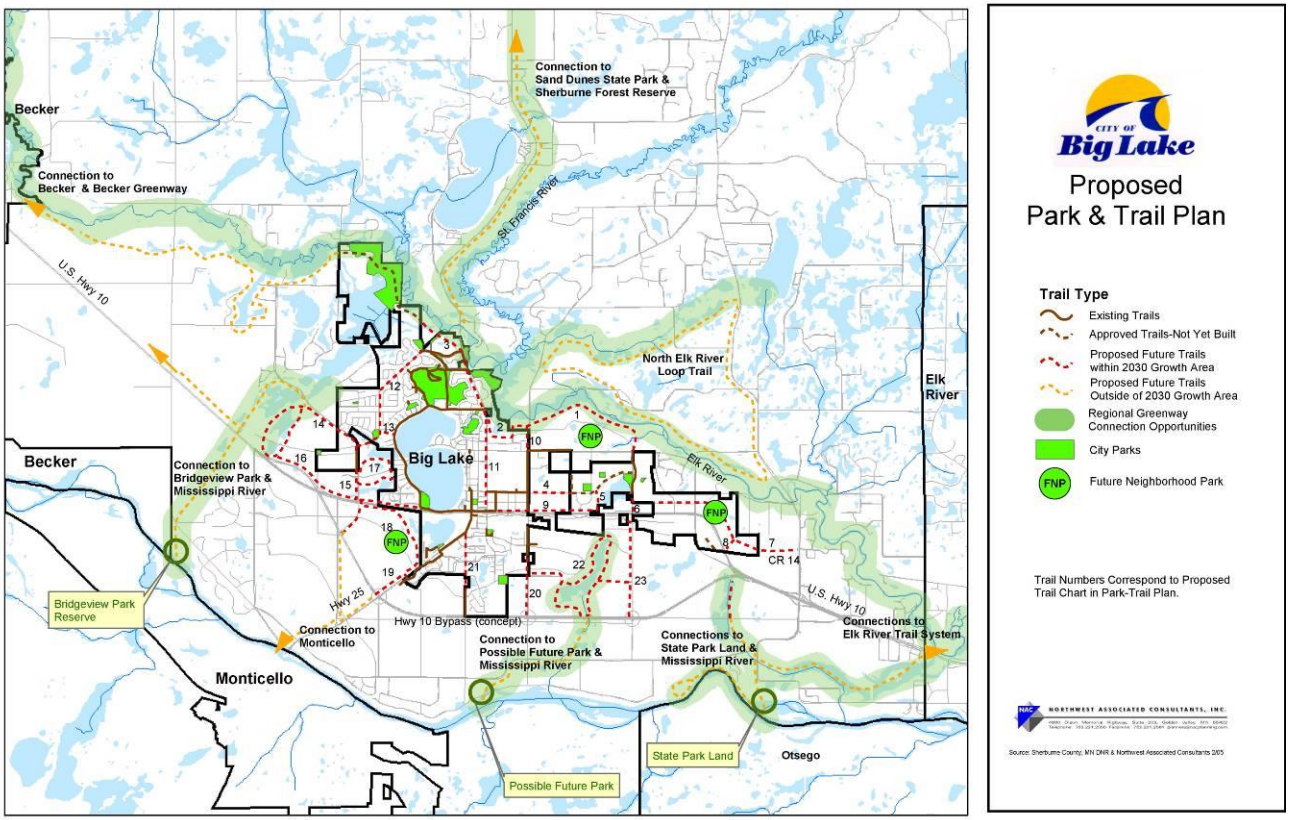


Figure 6-3:
2005 Parks and Trails Plan

System Master Plan, 2016

The **2016 *Parks, Trails and Open Space Master Plan*** included a detailed, illustrated description of each park followed by a plan for improvements in specific parks over the next ten years.

The plan presented a guide for the spacing, size and function of parks according to the classifications shown above.

Specific ideas and alignments were presented for future off-road paved paths, also called trails (refined from the 2005 plan), and also included detailed maps of existing park, trail and sidewalk locations.

Other recommendations addressed partnerships, funding, and priority.

The plan noted the location and type of park or trail deficiency or surplus but did not address where future parks should be located.

That plan will be the basis of the Parks and Trails chapter of this comprehensive plan, but recommendations will be added for the location and type of future parks.

Sports Complex: Five alternative locations were presented and evaluated for a potential "sports complex," which would include several athletic fields. Detailed layouts were included for each alternative site.

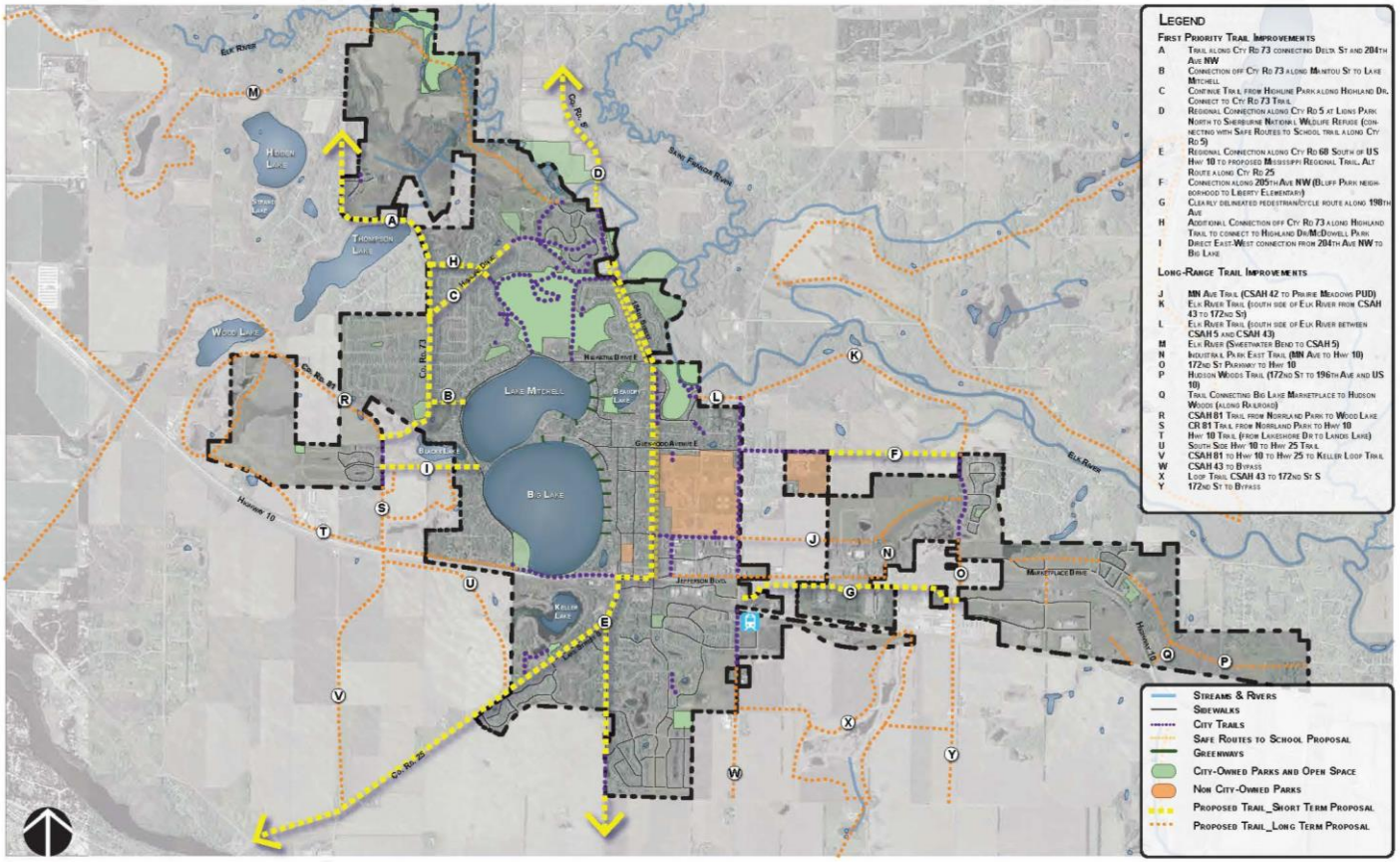


Figure 6-4:
2015 Trails Plan

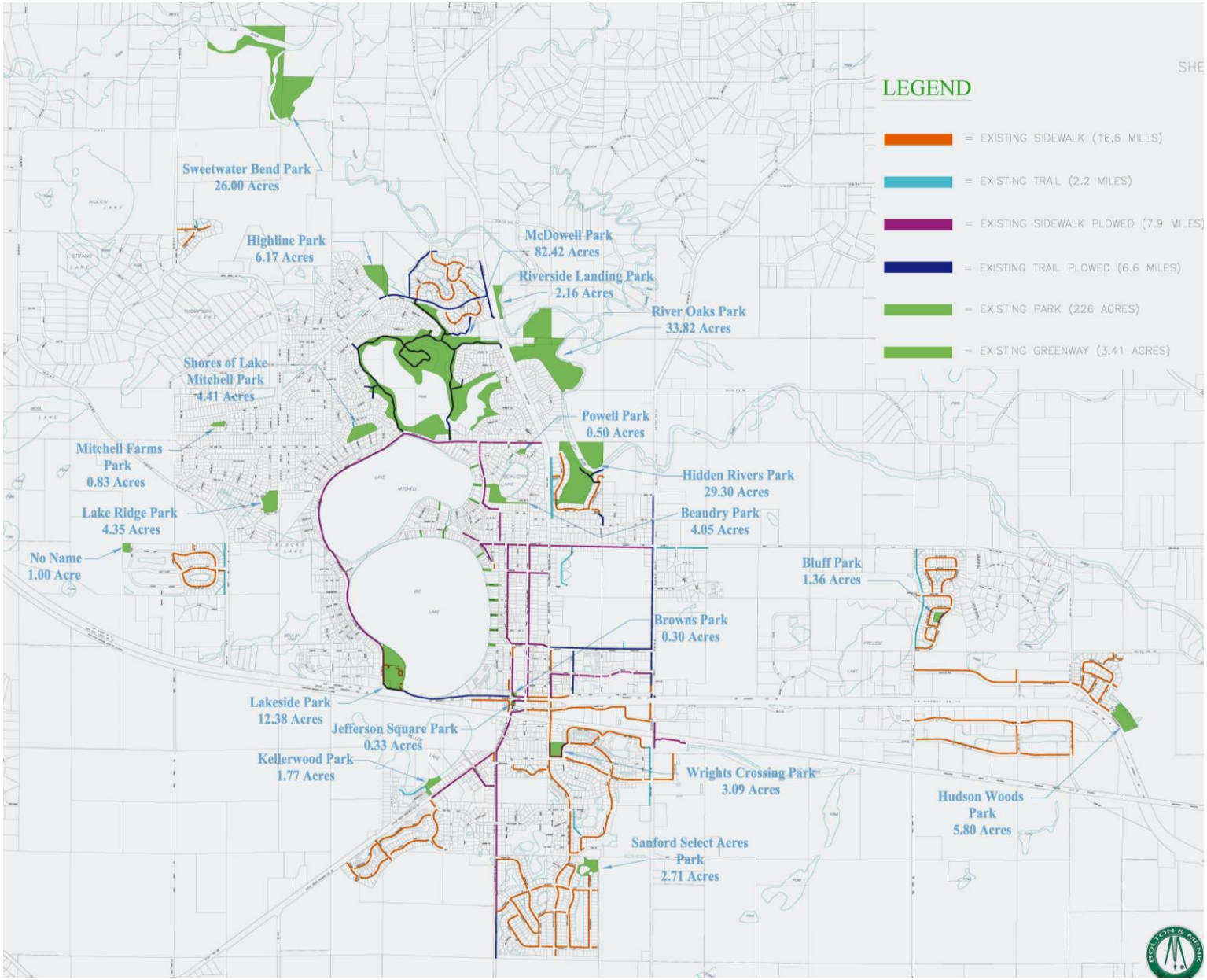


Figure 6-5: Existing Parks, Trails and Sidewalks, 2015

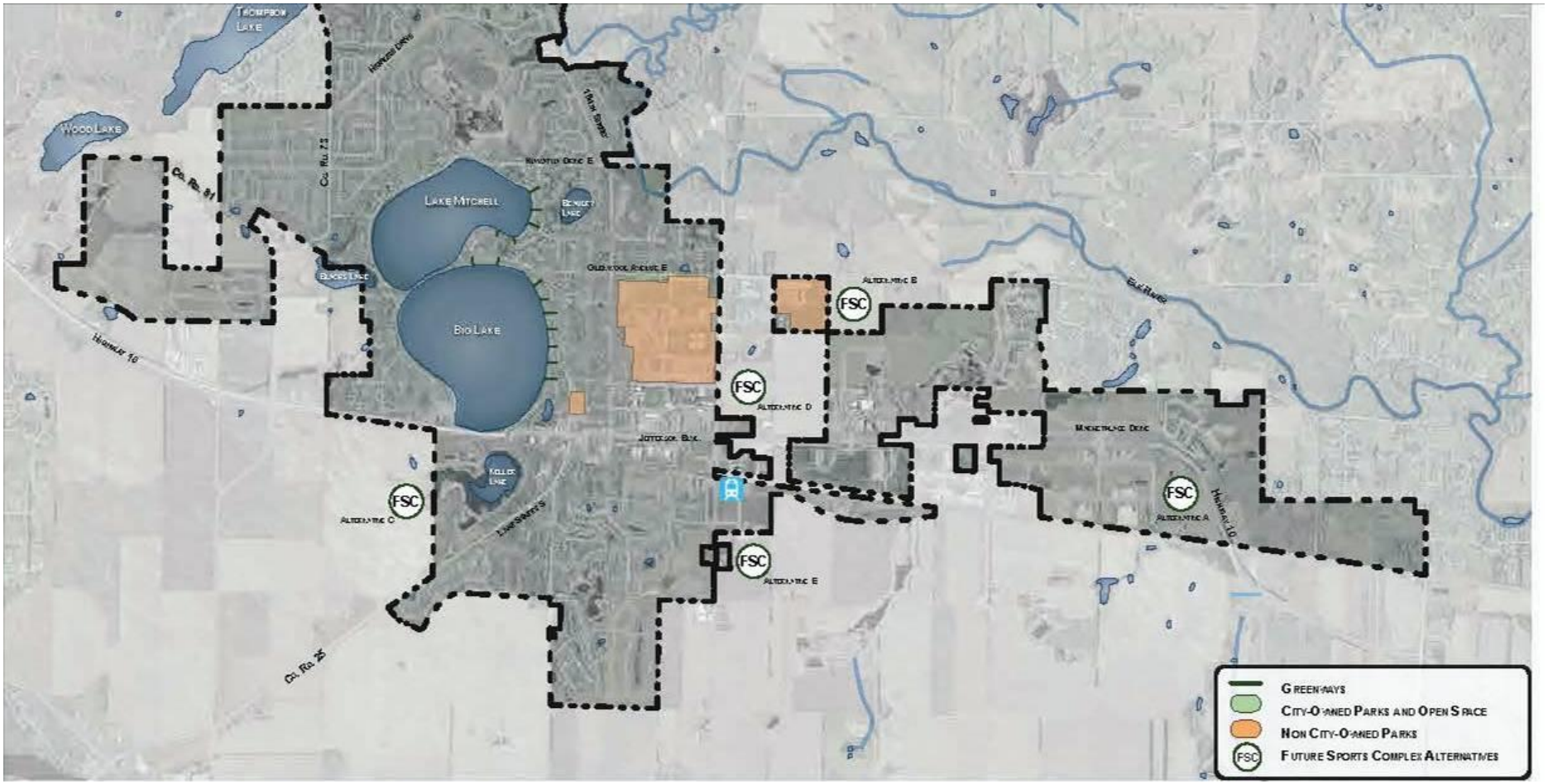


Figure 6-6: Alternative Locations for a Sports Complex, 2015

River Oaks Park Master Plan

In 2014, the City prepared a plan for the undeveloped River Oaks Park, which is located between County Road 5 and the Elk River. The plan, shown by Figure 6-3, calls for a major disc golf course, picnic facilities, paths, RV and tent camping, a wetland boardwalk and a playground. The City hopes River Oaks becomes a "destination" park.

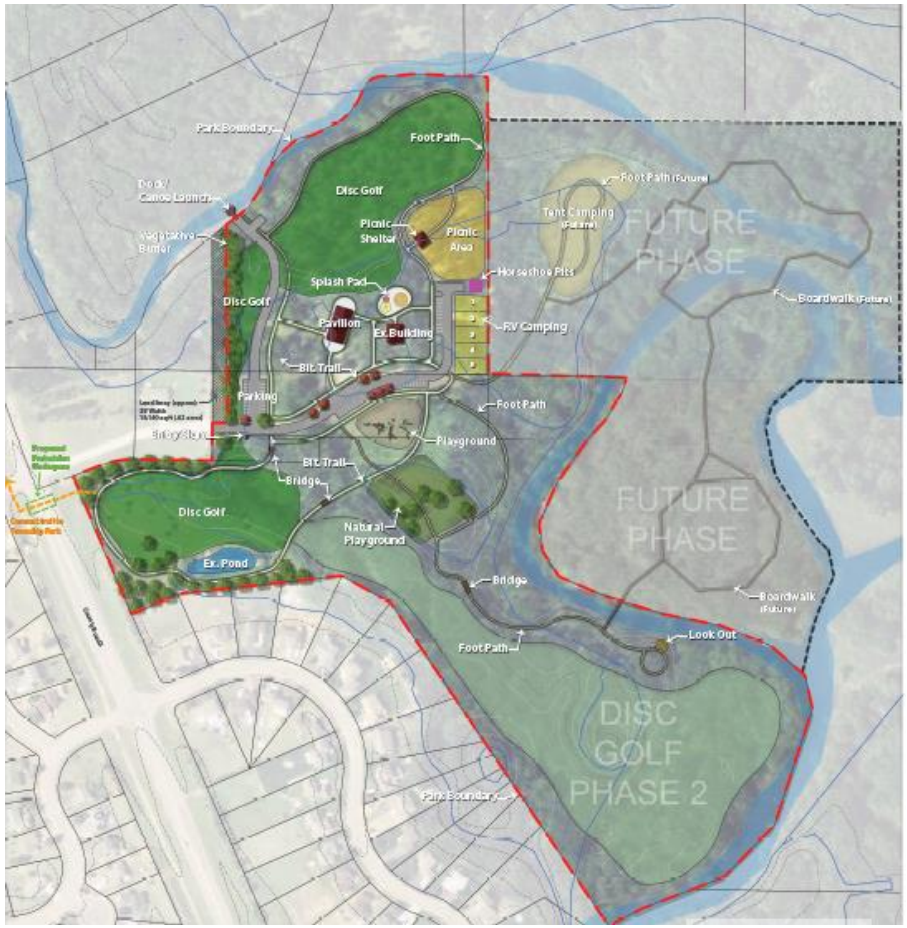


Figure 6-7: River Oaks Park Master Plan

Greenways

There are 13 short segments of publicly-owned land that lead to the lakes Mitchell and Big from neighborhood streets, as shown by Figure 6-3.

Figure 6-8: Existing Greenways

Park Dedication Requirements

The City of Big Lake requires that those who subdivide land for residential development give to the City either 10 percent of the land for use as a park or trail or a cash contribution based on a formula. Subdivisions for commercial or industrial development require a park dedication of either 4% of the land or a cash contribution. This requirement is tied to the act of dividing parcels, according to state law. The amount of dedication is expected to be roughly proportionate to the demand created for parks or trails. This is the most common means of acquiring land for future parks and is employed by most cities.

The amount of land required to be given for parks or trails, 10 percent, is typical of most cities and has been judged roughly proportionate to the need. The 4 percent park dedication requirement for industrial and commercial subdivisions was adopted in 2017 after a survey of the region showed that most of Big Lake's peer communities have similar requirements. Prior to 2017, industrial and commercial subdivisions were exempt.

The City has the option of taking either land or cash. The decision is based on whether the park system plan shows a park in the subject location, whether the natural conditions are suitable for a park, and whether a site can be combined with adjacent land acquired previously or in the future.

It is important to have an adopted plan showing desired, future park or trail locations and that those locations be naturally suitable. This is because very large parks usually cannot be assembled piecemeal through the subdivision process. In that case, the City would have to purchase land through negotiated sale. The power of eminent domain may be used to compel sales at a fair market price for public facilities such as parks or roads.

Some Cities' plans show a general location for a future park and negotiate the exact location with the land developer based on the design of the neighborhood. Section 1108.1 of the Subdivision portion of the City Code establishes these requirements.

Courts have determined that there are two basic tests that a local park (or other public facility) dedication ordinance must pass:

1. The City must establish that the proposed development will create a need for additional park facilities; and
2. The dedication amount requested by the City must be roughly proportionate to the impact from the development.

The Elk River – an underutilized natural recreational asset

Utilities Systems Assessment

The City of Big Lake's public utilities systems exist to ensure the safe and efficient delivery of drinking water, the treatment and disposal of waste water, and the management of surface water.

The role of the public utilities element in the Comprehensive Plan is to

- Ensure that these systems can properly accommodate the forecast growth
- Promote cost-effective engineering and spending decisions
- Help protect public health and property.

Figures

Major Utility Systems Issues

Sanitary Sewer Issues

1. **Growth Locations**: Where are the most suitable locations to expand the sanitary waste system (and the city) based on cost, engineering feasibility, and environmental effects?
2. **High-Demand Users:** Should system improvements be made to accommodate the high demand of a very small number of industrial users? How will this decision affect the city's economic development strategy?

Water Supply and Distribution Issues

1. **Growth Locations**: Where are the most logical locations to expand the sanitary waste system based on cost, engineering feasibility, and environmental impacts?
2. **System Improvements**: What enhancements to the existing water treatment and supply system would be required to serve all areas of the city today and/or future areas of the city as it grows with additional residential, commercial, industrial, or institutional land uses?

Surface Water Management Issues

1. **Planning:** Should the city prepare a comprehensive surface water management plan?

Sanitary Sewer System

The city's sanitary sewer and treatment system consists of:

Gravity Collection Lines. Wastewater from residences, businesses, industrial parks and other land uses is collected by 60 miles of gravity collection pipes, including 7.5 miles of force (pumped) main. Figure 7-1 illustrates that nearly every building in the city is served.

Lift Stations. The collected waste water flows by gravity to collection points where 14 lift stations (pumps) with over 7.5 miles of force-main piping help to move the wastewater toward the wastewater treatment plant, which is located along the Mississippi River. These pumps are needed to compensate for low areas or old, shallow pipes that cannot be effectively drained by gravity. The flat landscape of the city worsens this situation. All of the wastewater eventually reaches a point at the southern end of the city, where it is pumped south to the treatment plant along the river.

Wastewater Treatment Plant. Sewage treatment is the process of removing contaminants from wastewater, primarily from household sewage but also industrial wastewater. It includes physical, chemical, and biological processes to remove contaminants and produce water that is environmentally safe to discharge to a stream.

The treatment plant was constructed in 1981 and updated in 1996 and 1999. The upgrades were completed because the 1981 facility did not have the capacity to meet demand associated with anticipated growth. Because of the economic recession, the growth that was anticipated in 1996 and 1999 has not yet fully occurred.

There is some remaining capacity in the City's existing system but additional investments will likely be needed depending on the level of growth that occurs.

Please refer to the City's Website for a description of improvements made to the City's wastewater treatment plant in the past ten years.

Some industries treat their wastewater before emptying it into the sewer system in order to reduce the pollutant load before industrial effluent mixes with household sewage and arrives at the treatment plant.

A few industries (in Big Lake and other cities) produce so much wastewater that the city has to negotiate a limit in order to protect the system, or else design the system to accommodate those high flows.

Extending the City's Sanitary Sewer System

At this time, it appears that city growth will not cause problems for either the wastewater collection or the treatment system.

The major wastewater collection lines all have sufficient unused capacity, and secondary lines have been stubbed to the perimeter of the city in all directions. These and other sizing decisions were based on a system plan sketched in 1999 by the City's engineering consultant. Therefore, it should be feasible to accommodate city growth into logical perimeter locations without excessive costs. An exception to this would be growth to the extreme eastern or western ends of the city along Highway 10.

For example, the collection system for Sweetwater Bend (in the northwestern corner of the city) was sized for a development is only partially complete. The open area north of Glenwood Avenue is a logical growth area where the sanitary sewer system is appropriately sized. Likewise, the area east of Hudson Woods is supplied with a system that was sized for district growth.

Another area that is not as favorable for growth is near the Mississippi River at Highway 25 where an annexation agreement is in place. It is anticipated that major upgrades to the sewage collection system would be required to serve that location.

On-Site Wastewater Systems

There are 40 to 50 such on-site wastewater systems left in the city. Most are north of the school campus, but there are a few other locations, also. These buildings will be required to hook-up to the City's sewer system when a sewer line is constructed in front of each property.

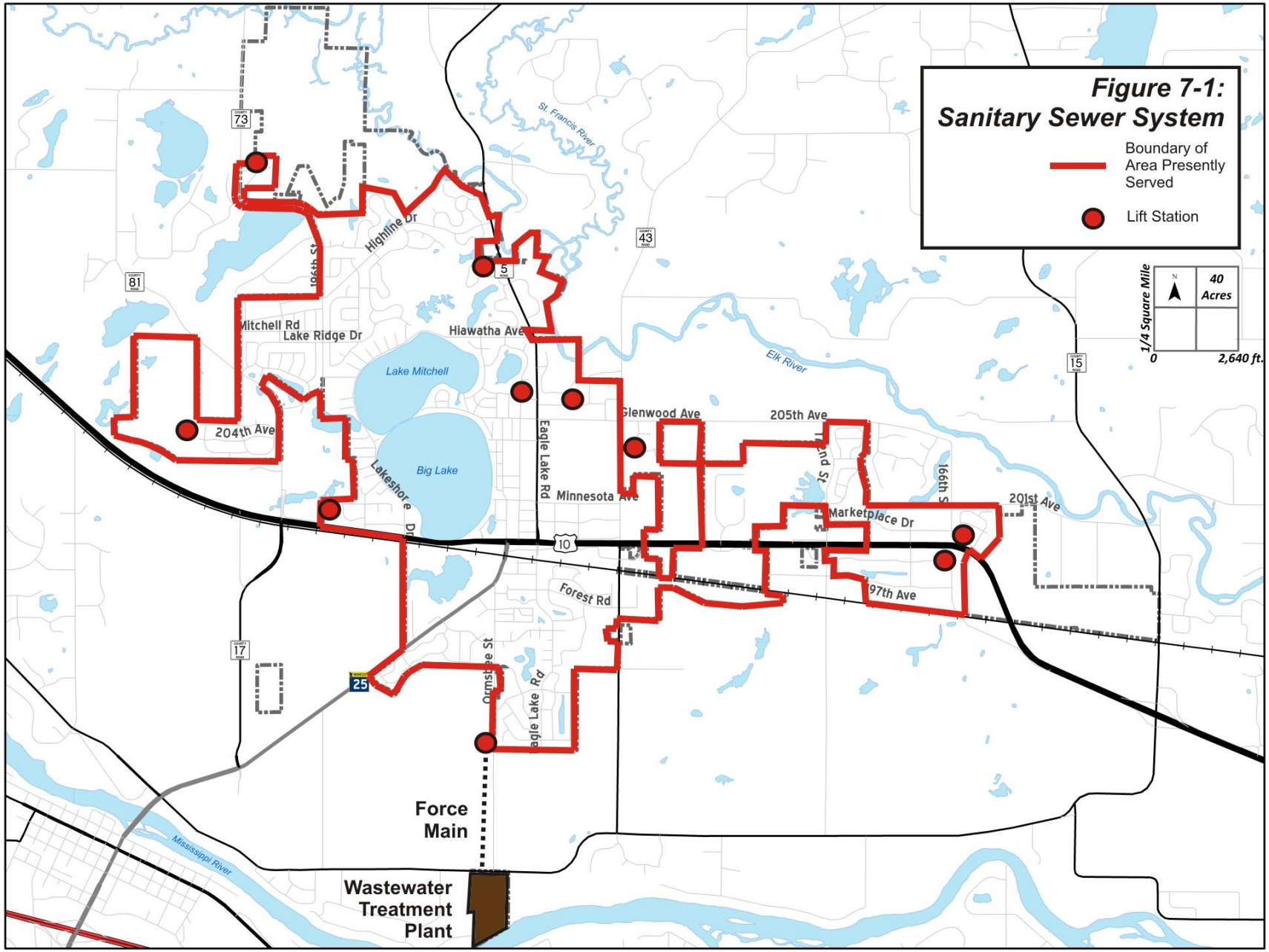


Figure 7-1:
Sanitary Sewer System
Boundary of Area Presently Served
Lift Station
1/4 Square Mile
40 Acres
0
2,640 ft.
St. Francis River
Elk River
Lake Mitchell
Big Lake
Highline Dr
Mitchell Rd
Lake Ridge Dr
Hiawatha Ave
204th Ave
Lakeshore Dr
Eagle Lake Rd
Glenwood Ave
Minnesota Ave
205th Ave
Marketplace Dr
201st Ave
97th Ave
Forest Rd
Force Main
Wastewater Treatment Plant
Mississippi River

Water Supply and Distribution

Water Source

The city gets its drinking water from seven wells that tap an aquifer that lies under parts of Sherburne, Benton, Stearns and Wright Counties.

Usage records show that the demand for water continues to grow from urban and agricultural users. Based on a 2013 study by the US Geological Survey, the study area's aquifer could support additional withdrawals but caution should be exercised. The study cautioned that lowering ground-water levels will have a domino effect on lake levels and stream flows, and in some locations within the study area, aquifer dewatering would reduce individual well yields.

In some areas the aquifer is shallow, 50 to 80 feet thick. It consists of unconsolidated sand enclosed by layers of limestone, sandstone or clay, and the water can be extracted for agricultural and urban use. Being shallow, these areas of the aquifer are susceptible to contamination from the surface.

The portion of the aquifer the city relies on for drinking water is referred to as the Hinckley - Mt. Simon Aquifer, which is a deep aquifer. The city's seven wells extend to a depth of 178 feet to 297 feet, and, at these depths, threats from surface contamination are comparatively low.

As with other cities that rely on groundwater, the City of Big Lake must document its need for additional wells and steps it is taking to conserve water use before it is granted permission to extract more water. The Department of Natural Resources is the regulatory agency that approves wells for municipalities.

Big Lake has adopted a water use conservation plan that focuses on: user fees; education; and ensuring that its water collection, storage, and distributions systems are operating at a high level of efficiency. For example, the City of Big Lake focuses some of its resources on fixing leaks in the system in order to ensure that water is conserved and not wasted.

Water Filtration and Supply Plant

The city must follow all federal and state regulations to supply safe drinking water.

For examples, the city must remove the radionuclides present in the aquifer. Radionuclides are carcinogens that are regulated by the US Environmental Protection Agency and the Minnesota Pollution Control Agency.

In addition, the City's water supply has concentrations of iron and manganese higher than allowable limits. It was, therefore, determined that an iron and manganese removal plant should be constructed and the radionuclides removed with the oxidized manganese, thereby meeting the necessary treatment standards. The plant has been thus improved. The filtration plant is located south of Glenwood Avenue and east of County Road 43.

Please refer to the City's Website for an informational video about the City's water filtration plant.

Distribution, Storage and Pressure

Potable water is pumped from the treatment plant to main distribution lines, which fill the city's three water towers. Secondary lines, usually located under streets and ranging in size from 6 to 12 inches, deliver water from the water towers to districts and neighborhoods. Supply lines (called laterals) run from the main lines to individual properties.

Neighborhoods and districts on the periphery of the city have been built with stubs for extending the system.

The filtration plant has an average design capacity of 4.8 million gallons per day and a maximum capacity of 5.7 million gallons per day. Figure 7-2 illustrates that nearly every building in the city and some undeveloped properties are served by city water.

Expansion Potential

There are no immediate limitations on the expansion of the water system to accommodate forecast growth in housing or businesses. There are sizable supply lines stubbed in all directions, and the filtration plant has ample unused capacity.

Normal caution should be exercised when serving very large industrial users.

The long-term health of the aquifer should be monitored on a regional basis. Alternative water sources include the Mississippi and Elk Rivers, so supply should not be a problem even if there are additional costs to convert from wells.

Figure 7-2 on the following page illustrates the Big Lake drinking water system and pinpoints the locations of the city's seven wells, three water towers, and water treatment plant. Figure 7-2 shows the boundary which defines areas of the community that are served by the system.

The City's water filtration plant

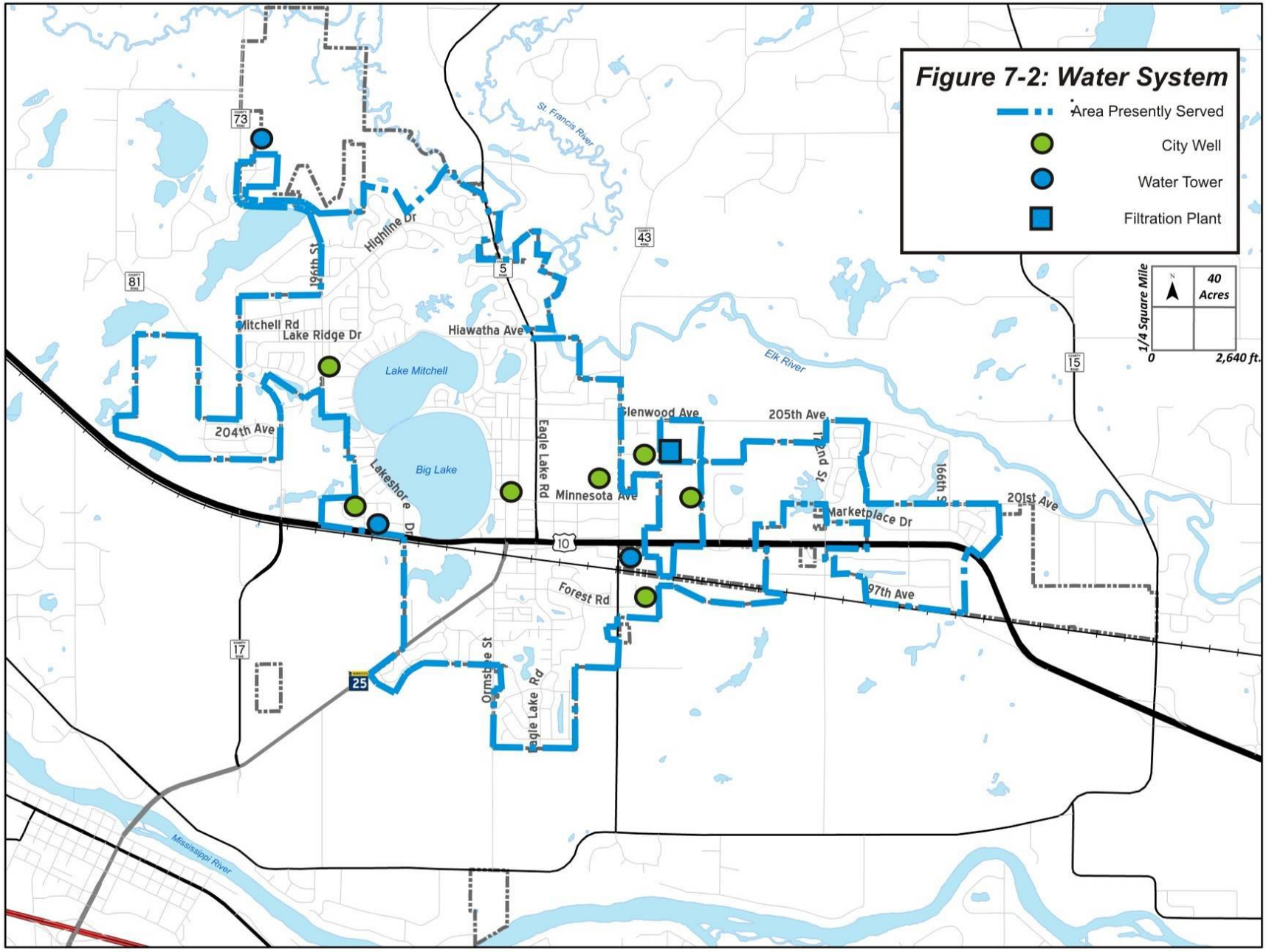


Figure 7-2: Water System
Area Presently Served
City Well
Water Tower
Filtration Plant
1/4 Square Mile
40 Acres
0
2,640 ft.
St. Francis River
Elk River
Lake Mitchell
Big Lake
Mississippi River
Highline Dr
196th St
Mitchell Rd
Lake Ridge Dr
Hiawatha Ave
204th Ave
Lakeshore Dr
Eagle Lake Rd
Glenwood Ave
205th Ave
Minnesota Ave
Marketplace Dr
201st Ave
97th Ave
Forest Rd
Ormsbee St
73
81
5
43
15
10
17
25

Surface Water Management

Big Lake is responsible for storm water management and has studied various management options. However, the city has not yet adopted a comprehensive storm water management plan. Instead, specific problems are managed case-by-case.

The Big Lake System

Surface water management in Big Lake consists primarily of a network of pipes, usually located under streets, that convey runoff to many lakes, ponds, wetlands, and the Elk River. In a few locations, more natural means such as swales or ditches are used to convey water. Man-made ponds have been introduced in recent decades to cleanse water before it gets to a natural water body. The man-made ponds cleanse water by letting it soak into the ground where it is filtered before it finds its way to larger water bodies. The sandy soils of the region readily accommodate such infiltration. Consequently, the ponds do not have water standing in them at all times.

The overall approach to surface water management in Big Lake (and across the nation) has evolved from piping water away as fast as possible to hybrid systems that combine short runs of pipe and overland conveyance, in combination with infiltrating surface water near its source.

Big Lake and Mitchell Lake serve as the primary retention ponds. Both are land-locked, meaning that they do not have natural outlets, and have small watersheds of approximately 938 combined acres, as illustrated by Figure 7-4. The primary inlets to these lakes are 20 storm sewers that capture water from the surrounding area, including Highway 10 and the surrounding city streets. These two lakes have a man-made outlet that drains from Mitchell to Beaudry Lake and ultimately to the Elk River.

To minimize costs and improve water quality, Big Lake has been using alternative measures such as infiltration, swales, narrower streets, street sweeping and “rain gardens.” Where natural controls are insufficient, problems are addressed during (re)development or street work.

As the community continues to develop, careful attention to storm water management will be needed to prevent problems before they occur and to fix those that exist. The goal of storm water management planning should be to minimize the pollution reaching the lakes and to minimize the flooding.

Water Quality in Big and Mitchell Lakes

Recent studies have found that the water quality of Big and Mitchell Lakes is good compared to other lakes in the region.

However, these are "seepage lakes," which are sensitive to changes in their small watersheds (catchment areas). They also tend to retain most of phosphorus that enters them. Therefore; it is essential to minimize the use of phosphorus in those watersheds. The City can help with this through public improvements, regulations and education.

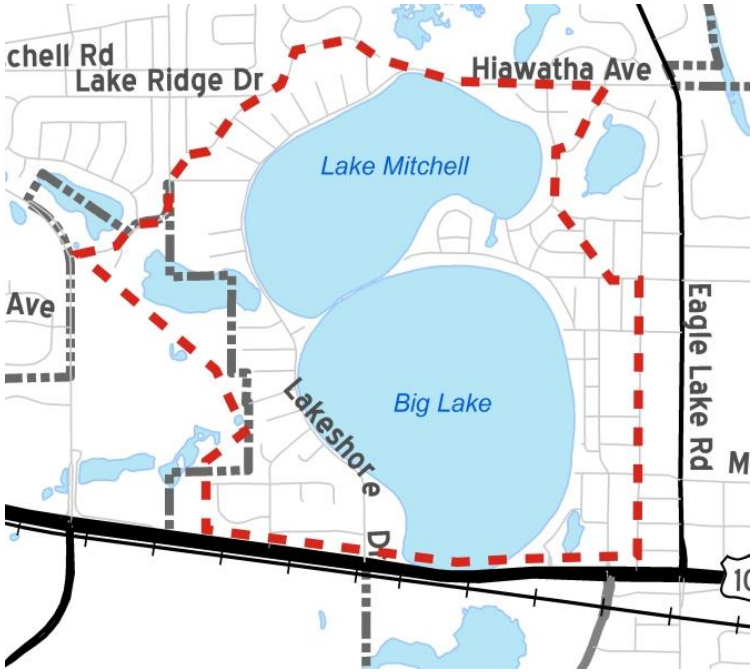


Figure 7-3: Approximate Boundary of the Watershed of Big and Mitchell Lakes

Periodic Flooding

Today, flooding is very isolated in the City of Big Lake and usually occurs in only in a handful of specific areas in the spring. These isolated areas are along roads that do not have storm sewers. There is no flooding in the cottage neighborhoods around Big Lake and Mitchell Lake, but basements may be wet if sump pumps are not used.

The city's lakes and ponds were high in 2017 because of recurrent rains, causing some encroachments and erosion, and some nearby storm sewers were partially filled with lake water. The man-made outlet built in 1986 for Big Lake and Mitchell Lake has overflowed because of heavy rainfall.

There is no overflow system to direct storm water to the Mississippi River on the southern end of the city.

The northern parts of the city drain to the Elk River at several locations.

Each of the city's newer neighborhoods has one or more storm water ponds or swales that hold water and allow it to infiltrate into the soil.

The Challenges of Surface Water Management

Surface water management consists of flood and urban runoff control and water quality management. Surface water is generated from rain and snow that flows over land or impervious surfaces, such as paved streets, parking lots and building rooftops, and does not soak into the ground. The runoff picks up pollutants such as trash, chemicals and soil that can harm streams and lakes.

To protect natural resources, controls called best management practices (BMPs) are used to filter pollutants or prevent pollution by controlling it at its source.

Urban development is a major generator of water pollution and affects the volume and rate of runoff. It can result in habitat change or loss, increased flooding, decreased biological diversity, increased sediment and erosion.

The benefits of effective storm water runoff management include:

- Protection of wetlands and aquatic ecosystems
- Improved quality of receiving water bodies
- Conservation of water resources
- Protection of public health, and
- Flood control.

Storm water management is a regional as well as a local issue. Approximately 90 percent of Sherburne County is drained by the Elk River, St. Francis River and their tributaries. These rivers enter Sherburne County from the north, flow southeastward, and empty into the Mississippi River near Elk River. Regionally, ground water moves toward the Mississippi River; locally it moves toward tributary streams and lakes.

Economic Development Assessment

This chapter presents information on the Big Lake economy, its role in the region and factors that affect its economic competitiveness.

Major Economic Development Issues

The following are the major economic development issues identified through the analysis of conditions. Issues are questions to be discussed, debated and resolved during the planning process in the context of other aspects of the comprehensive plan. The subsequent analysis of conditions provides the reader with information to better understand these issues and why they should be considered.

1. **Economic Development, Transportation and Land Use:** Which areas should be developed, planned or preserved for business or industrial parks based on 9-ton or 10-ton access, rail development potential and reasonable access to sewer and water? What can the city do to avoid conflicting land use or transportation-related problems for business and industrial park tenants?
2. **Business development:** What types of businesses does the city want to help grow? Attract? What actions and policies are needed to support business development?
3. **Tax Base Development:** What, if anything, should the City do to strengthen its tax base and fiscal health? Should the city seek to strengthen its commercial/industrial tax base? What policies or strategies could the City use to enhance its tax base and fiscal health?
4. **Workforce and talent attraction:** What strategies can the City use to create a community that attracts and retains talent attractive to area employers?
5. **Redevelopment:** What role does redevelopment play in strengthening Big Lake? Which locations have priority for redevelopment during the next decade? What policies, tools or actions are needed to support redevelopment?
6. **Transit oriented development:** What strategies will enable Big Lake to maximize the potential benefits of the Northstar Commuter Rail and Northstar CommuterLink service?

Major Economic Development Findings

Employment

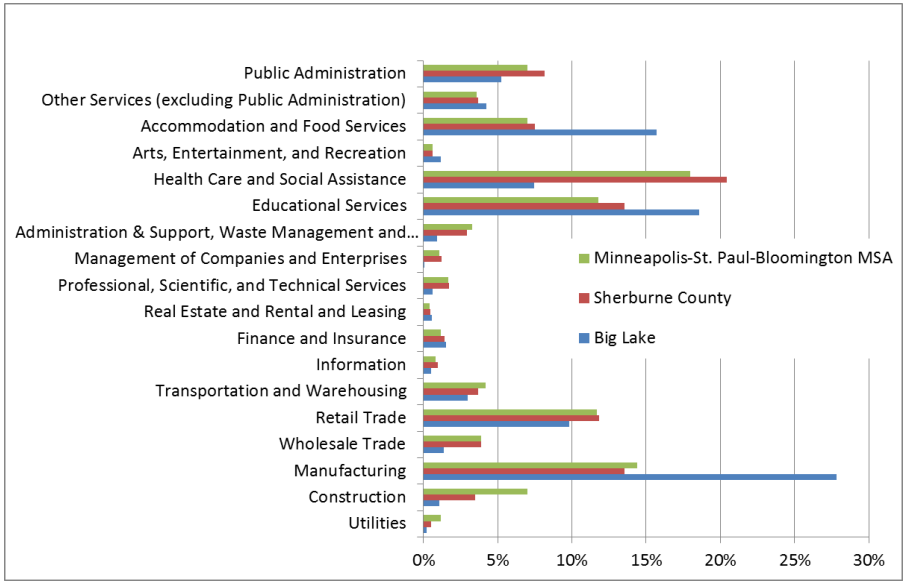
Big Lake has an exceptional concentration of employment in manufacturing (27.8 %), nearly double the concentration in Sherburne County (13.5 %) and the Minneapolis-St. Paul-Bloomington MSA (14.4 %). Accommodation and food services is another sector where Big Lake shows an employment concentration (15.7 %) that is double the county's share (7.5 %) or the MSA's share (7 %). Employment in educational services is high in Big Lake (18.6 %), compared to the county (13.6 %) and the MSA (11.8 %). Employment is low in health care and social assistance (7.5 %) compared to the county (20.4 % and the MSA (18 %). Retail trade in Big Lake is somewhat light (9.8 %) compared to the county (11.9 %) and the MSA (11.7 %).

These numbers likely reflect

- The city's heritage in hospitality and traffic on US 10
- The historic presence of Remmele Engineering in the community
- The city/township development of the industrial park
- The impact of young families and children on the school district
- The location of the former Monticello-Big Lake Hospital (now CentraCare) in Monticello, and
- The strong concentrations of retail businesses in Monticello, Elk River, St. Cloud and the metro area.

Concentrations of employment can be viewed as a competitive strength on which the community can continue to build. Areas where employment lags can be viewed as possible opportunities for the community, provided that economic conditions in the community and surrounding areas create sufficient demand.

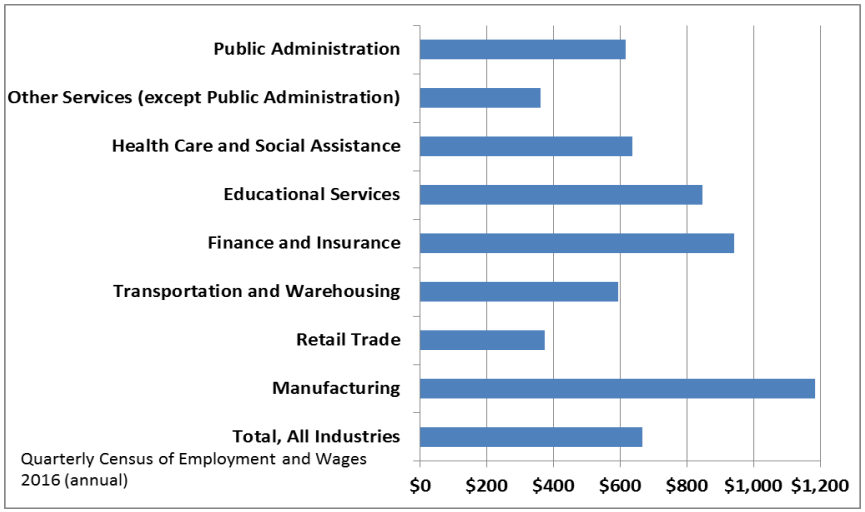
Figure 8-1
Employment by Industry, 2014



U.S. Census Bureau. 2016. OnTheMap Application. Longitudinal-Employer Household Dynamics Program. http://onthemap.ces.census.gov/

Big Lake's concentration in manufacturing boosts income for area residents and spending power in the region. The average weekly wage in manufacturing is $1,184 compared with an average weekly wage in all industries of $666. The retail and service sectors have the lowest weekly wage, $375 and $362 per week respectively.

Figure 8-2
Average Weekly Wage, City of Big Lake, 2016



A recent analysis by Brigid Tuck, University of MN Extension, for Sherburne County's Futures Workshop documented a concentration of manufacturing employment in the Fabricated Metal sector— 4,041 jobs in the county. This sector includes machine shops, architectural and structural materials, metal containers, forging and stamping, coating, engraving and heat treatment businesses.

Tuck noted the competitiveness of this sector in Sherburne County: "The number of jobs in fabricated metal product grew by about 15 percent between 2001 & 2016 in Sherburne County. Meanwhile the same sector nationally has experienced decline in the number of jobs by 15 %." She also documented that this sector has a significant positive effect on other businesses in the area including trucking firms, restaurants, employment services, and others resulting in 43 additional jobs in the area for every 100 jobs created in fabricated metal manufacturing.

Workforce

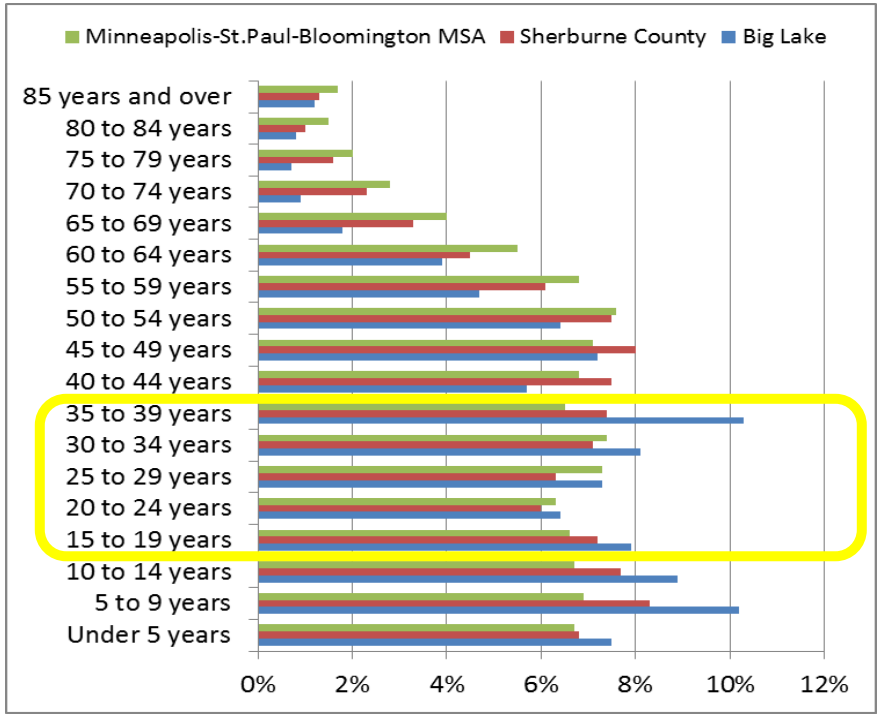
The availability and skills of the workforce is one of the top considerations for employers considering where to locate businesses. As the baby boomer generation retires, this factor is expected to become even more important in certain business site location decisions. Big Lake is well-positioned to attract manufacturing firms from a workforce perspective because:

- The workforce is relatively young
- A significant percentage of residents currently commute over 25 miles to work
- Compared to the 17-county MSA, residents of Big Lake are twice as likely to be employed in a production, transportation or material moving occupation.

Age

Compared to the 17-county MSA, Sherburne County and especially Big Lake have a young population. The population of 20 – 39 year olds is attractive to many employers.

Figure 8-3
Age of Big Lake Residents, 2015

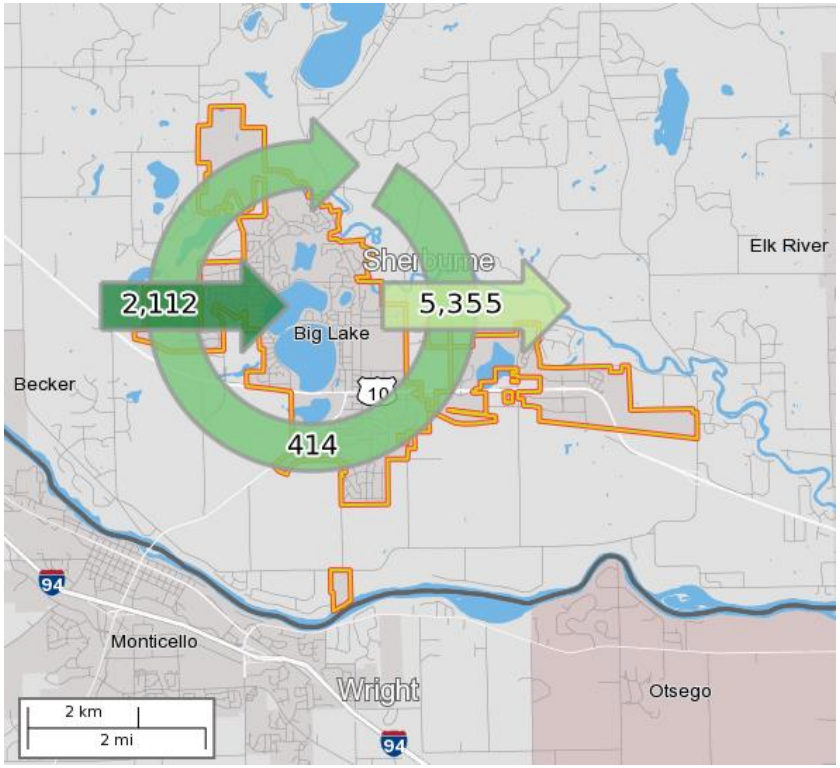


American Community Survey Population Estimates, 2015

Commuting Patterns

Big Lake residents who are employed are likely to leave the community for employment – 92.8 % leave the community. The most recent data available (2014, US Census Bureau, CES) indicates that 5,769 workers reside in Big Lake but only 2,526 people were employed in the city. 5,350 workers residing in Big Lake leave the community each day to work; 414 live and work in the community and 2,112 people who reside outside the community work in Big Lake.

Figure 8-3
Inflow and Outflow of Jobs



U.S. Census Bureau. 2016. OnTheMap Application. Longitudinal-Employer Household Dynamics Program. http://onthemap.ces.census.gov/

Table 8-1
Inflow and Outflow Job Counts (All Jobs), 2014

Employed in the Selection Area	2,526	100.0 %
Employed and Living in the Selection Area	414	16.4 %
Employed in the Selection Area but Living Outside	2,112	83.6 %
Living in the Selection Area	5,769	100.0 %
Living and Employed in the Selection Area	414	7.2 %
Living in the Selection Area but Employed Outside	5,355	92.8 %

Seventy-five percent of workers commute more than 10 miles to work, with 47.4 % commuting more than 25 miles to work.

Table 8-2
Workers by Distance to Employment Location (linear)

	Count	Share
Less than 10 miles	1,344	25.4 %
10 to 24 miles	1,442	27.2 %
25 to 50 miles	2,300	43.4 %
Greater than 50 miles	211	4.0 %

MN Compass, US Census Bureau Longitudinal Employer Data, 2nd Qtr. 2014

Big Lake and its close neighbors, Elk River and Monticello, provided employment opportunities for 23.3 % of Big Lake residents in early 2014.

Table 8-3
Workers by Employment Location – Second Quarter 2014

	Count	Share
Big Lake Workers with an Identified Employer Location	5,297	
Elk River	466	8.8 %
Monticello	412	7.8 %
Minneapolis	390	7.4 %
Big Lake	357	6.7 %
St. Cloud	229	4.3 %
Rogers	211	4.0 %
Plymouth	210	4.0 %
Maple Grove	157	3.0 %
Coon Rapids	146	2.8 %
St. Paul	118	2.2 %
All other	2,601	49.1 %

MN Compass, US Census Bureau Longitudinal Employer Data, 2nd Qtr. 2014

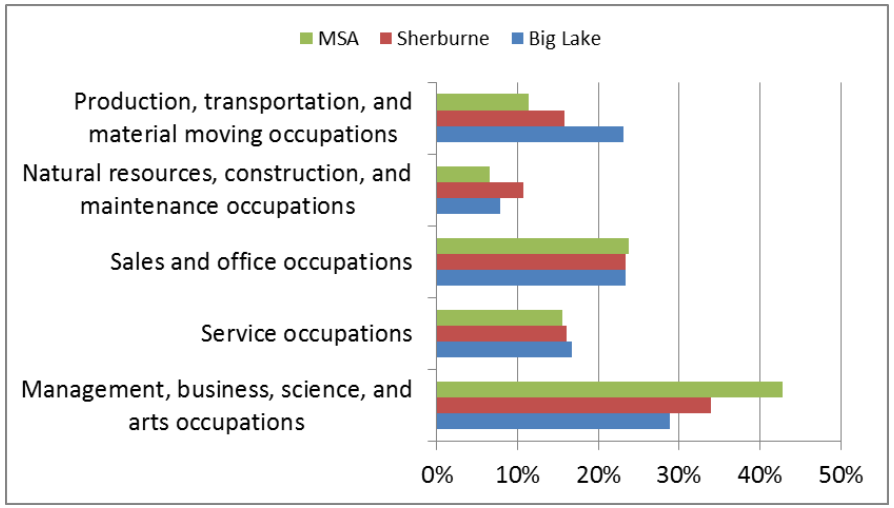
Occupation and Educational Attainment

Residents of Big Lake generally follow the occupational profile of the MSA with two exceptions: residents are less inclined to be employed in management, business, science and arts occupations (Big Lake 29 %; Sherburne County 34 % and the MSA 43 %) and are more likely to be involved in production, transportation and material moving occupations (Big Lake 23 %; Sherburne County 16 % and the MSA 11 %). From an educational perspective, residents of Big Lake have greater levels of "higher education beyond high school" than persons employed in Big Lake.

The combination of a younger population and an occupational concentration in production, transportation and material moving occupations would be viewed positively by most manufacturers in evaluating a potential production location.

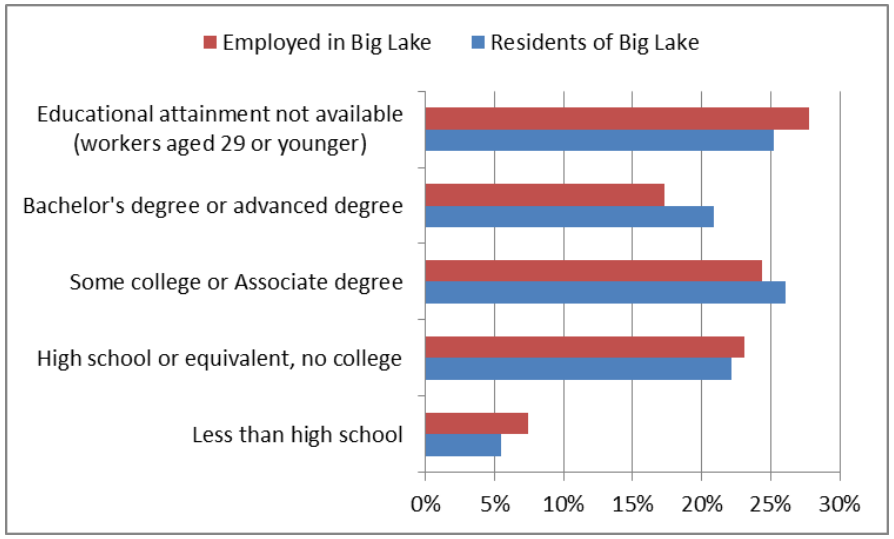
Source: U.S. Census Bureau. 2016. OnTheMap Application. Longitudinal-Employer Household Dynamics Program. http://onthemap.ces.census.gov/

Figure 8-4
Occupation of Residents, 2015



(2011-2015 American Community Survey 5-yr Estimates)

Figure 8-5
Educational Attainment of Residents and Employees, 2014



Transportation and Economic Development

Big Lake's location on the growth corridor along US10 between Minneapolis-St. Paul area and the St. Cloud area is a competitive strength from an economic development perspective.

The intersection of US 10 and MN25 in downtown Big Lake is located less than 4 miles north of I-94, but congestion occurs at the Mississippi River bridge crossing and as MN 25 passes through downtown Monticello. A new Mississippi bridge crossing is being explored, which could improve access to I-94 and strengthen Big Lake's attractiveness to firms interested in better access to the transportation network around the metro area.

The BNSF mainline, connecting Chicago, Minneapolis-St. Paul and west coast ports in Seattle and Portland, passes through Big Lake. There is minimal local service via a spur to a lumberyard in Big Lake Township, southeast of the city. The community first seriously explored a rail park in a study funded jointly by the city and the county in 2009. Several long-term trends are likely to support increased interest in rail transportation – it provides global access, especially to west coast ports, and is notably energy efficient.

Big Lake offers the first and only large tract of land accessible for freight operations along the BNSF mainline connecting to Portland/Seattle between the core of the Minneapolis-St. Paul metro area and Big Lake. Within the I-494/I-694 loop, sites are much smaller and more expensive; may be contaminated, and typically require redevelopment. Becker also has large tracts of land available near the Sherco plant. Becker owns the rail spur with a single switch into the industrial park, which provides service to the T.J. Potter Trucking and Liberty Paper and could serve other customers in the park.

Throughout its system, BNSF is working to keep the main line clear. This means that two switches off the mainline are now required to avoid situations where a train must stop and back up. Large sites, often in the neighborhood of 500 acres, are the trend in order to distribute the high capital cost of track and switches off the main line over more land and more users.

There is also an increased emphasis on service as part of rail-served industrial parks. A logistics provider is actively engaged in meeting the shipping needs of rail park tenants and other potential shippers up to 40-miles from a regional rail park. This more fully utilizes the value of the large capital investment required for a rail-served park because the private sector is actively engaged in providing the most competitive transportation option to manufacturers and distributors throughout the region.

Two sites with potential have been identified in/adjacent to the community, one a 199-acre site, which lies north of US Highway 10 and the BNSF rail line on the east side of Big Lake. The other, a larger site, lies to the west of Big Lake, near County Road 17, the BNSF rail line and US Highway 10. Efficient access to I-94 from a rail park is likely to be important to investors in a rail park.

The Northstar Commuter Rail service between Big Lake and downtown is an important asset to the community. The Northstar CommuterLink Bus provides connecting service between the Big Lake Northstar Commuter Rail station and the Metro Bus Transit Center in downtown St. Cloud.

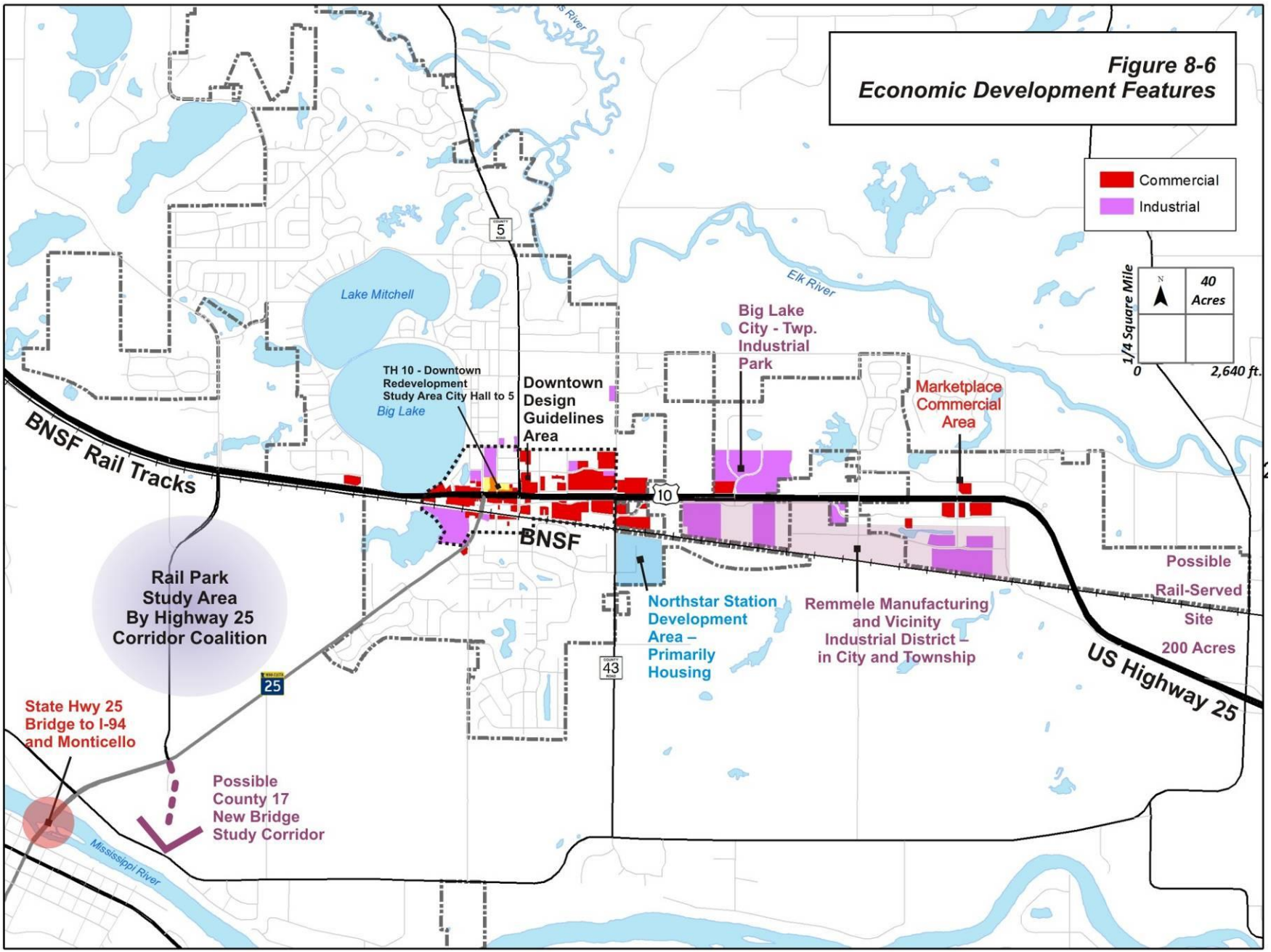


Figure 8-6
Economic Development Features
Commercial
Industrial
1/4 Square Mile
40 Acres
0
2,640 ft.
Lake Mitchell
Big Lake
Elk River
TH 10 - Downtown Redevelopment Study Area City Hall to 5
Downtown Design Guidelines Area
Big Lake City - Twp. Industrial Park
Marketplace Commercial Area
BNSF Rail Tracks
BNSF
Rail Park Study Area By Highway 25 Corridor Coalition
Northstar Station Development Area – Primarily Housing
Remmele Manufacturing and Vicinity Industrial District – in City and Township
Possible Rail-Served Site 200 Acres
US Highway 25
State Hwy 25 Bridge to I-94 and Monticello
Possible County 17 New Bridge Study Corridor
Mississippi River
5
10
43
25

Commercial and Industrial Development Sites

The City of Big Lake and Big Lake Township jointly developed the Big Lake Industrial Park. Phase 1 and 2 of the industrial park were established with covenants that require face brick, natural stone, decorative concrete block, precast concrete or other materials approved by the Architectural Review Board. Buildings may cover up to 50% of the total area of the site; buildings and paved surfaces may cover up to 85% of the site.

The 50-acre development is fully built out and roads and utilities are installed in a second phase with 28.6 developable acres. Building values in Phase 1 range from $27.77 psf to $43.03 psf, depending on construction characteristics, ceiling height, amount of office space, etc. The building coverage (building size/lot size) varies from a low of 5.4 % to a high of 37.9 %. The variance in lot coverage accounts for most of the difference in tax density per acre. The parcel with the lowest building coverage yielded $5,848 in total tax (2017 to all jurisdictions) per acre compared to the parcel with the highest coverage - $22,956 per acre – a nearly 4-fold difference.

While it is not likely or possible to always achieve the highest tax base density, it is important for communities to understand and consider the implications of choices in lot coverage and building finish, which influence tax base density per acre when establishing design standards.

The following illustration shows how a 50-acre industrial park built at the highest density that currently exists in the Big Lake industrial park ($22,956/acre) would yield significantly more tax revenue for the community than a 50-acre industrial park built out at the lowest density ($5,848/acre).

Table 8-4
Tax base density illustration for 50-acre industrial park

	2017 property taxes to all jurisdictions	2017 property taxes to Big Lake
Highest tax base density	$ 1,147,800	$ 314,956
Lowest tax base density	292,400	79,824
Annual difference for 50-acre industrial park	$ 855,400	$ 235,132

Big Lake is currently considering two possible business/industrial park opportunities. The rail park mentioned earlier and a business park that accommodates small businesses by reducing the design standards established in Phase 1 of the Big Lake Industrial Park.

Sherburne County approached the City of Big Lake recently inquiring about the possibility of creating an industrial park with lower design standards for businesses that want to grow out of their locations in garages or on farms, and prefer to locate in the city. An analysis of potential projects for three prospective companies revealed the following:

- The projects were construction or automotive service-related, and therefore serve a more local market compared to most manufacturers in the industrial park that sell into national markets
- The projects were relatively small ranging from 7,000 sf to 15,500 sf compared to current industrial park tenants, which are typically in the 20,000 – 50,000 sf range.
- The businesses were seeking to build a pole barn, which is less expensive wood frame construction with a steel skin, than is allowed in Phase 1 of the industrial park.

If the City is interested in creating a space for these types of businesses, the design should include smaller lot sizes so that density and tax base yield per acre can be maintained.

If the city establishes a business park designed for these types of businesses, policies should be developed to address outside storage, parking, landscaping, aesthetic considerations, visibility and clarify the city's role in encouraging or supporting such a development. Although such an area could be eligible for tax abatement – tax increment finance could only be used if the business was in one of the following sectors: manufacturing, warehousing, research and development, telemarketing or tourism (MN Statutes 469.176 Subd 4c).

Utilities

The existing industrial park is well served with sewer and a looped water system. Engineering studies are currently underway to help the city understand water and sewer capacity. Electric utility services are competitive with regard to capacity, rates and reliability.

Broadband internet service is critical for many businesses, particularly industrial fabrication businesses that must transfer large files. In early 2017 the City received a grant from the State of Minnesota's Border to Border Broadband program to bring fiber into the industrial park. The service will be provided by Palmer Wireless and will include a fiber connection as well as wireless back-up.

Talent Attraction and Quality of Life Factors

Access to an available and appropriately skilled workforce is a critical part of site location decisions for businesses with statewide, national or international markets. Greater MSP, the regional economic development organization and its partners, project that the region will experience a labor force shortage of approximately 114,200 workers by 2020, due to GDP growth and the retirement of the baby boomers. This is also a global challenge; the McKinsey Global Institute projects that "by 2020 there will be a global shortfall of 85 million high- and middle-skilled workers." Talent attraction and retention is important for all communities. Big Lake's 2016 Strategic Plan establishes a vision that will help the community attract talent with its strong emphasis on family-oriented recreation, parks, exceptional schools and cultural events and festivals.

Taxes

Property taxes in Big Lake are high relative to neighboring communities. While the magnitude of the difference is not likely to be the critical factor in a specific business site location decision, a position "in the middle of the pack" can be important for a community's reputation.

Table 8-5
Commercial property tax comparison

	Est. Market Value		
	$750,000	**$1,200,000**	**$2,000,000**
Becker	$ 14,912	$ 23,860	$ 39,766
Big Lake	**$ 18,855**	**$ 30,167**	**$ 50,279**
Elk River	$ 17,444	$ 27,910	$ 46,517
Monticello	$ 12,163	$ 19,461	$ 32,434
Otsego	$ 14,496	$ 23,194	$ 38,656
Rogers	$ 16,128	$ 25,806	$ 43,009
Saint Cloud (Stearns portion*)	$ 15,947	$ 25,515	$ 42,525
Average	**$ 15,706**	**$ 25,130**	**$ 41,884**

(League of MN Cities; based on 2016 MN Department of Revenue data)

The tax base in Big Lake is distributed as follows among the following classes of property: 22% of tax base is commercial/industrial – 76% is residential; then remaining 2% is public utility, railroad operating and all other property. Big Lake may want to explore strategies to strengthen its commercial/ industrial tax base, because the cost of serving households typically exceeds the tax revenue they generate, and commercial/industrial properties typically demand less in services than they generate in revenue.

Sherco, Xcel Energy's coal-fired power plant located in nearby Becker, is the state's largest electric generation facility. It has had a significant impact on property tax rates in Sherburne since it was built in the late 1970s. Sherco is scheduled for closure but will be replaced on-site by natural gas fired generating capacity. While the loss of approximately 150 jobs is anticipated, minimal impact on property taxes is expected.

Economic Development Financing Tools and Incentives

The City of Big Lake and its partners – Sherburne County, the Initiative Foundation and utilities offer competitive financing tools and incentives. The City of Big Lake policies for Tax Abatement, Tax Increment Financing and Sewer/Water Access Charges Payment Incentive are up-to-date, enabling the city to respond promptly and professionally to inquiries. Financing tools provided by the Initiative Foundation can provide a competitive advantage to locations in Sherburne County, because such tools are not available in the 7-county metro area.

Housing Assessment

This chapter of the Assessment of Conditions summarizes pertinent facts about the housing stock and housing assistance programs in Big Lake. It should be considered in combination with the Demographic Assessment, which focused on the city's population, and the Land Use and Growth Management Assessment, which studied physical development. Sources for this chapter include the US Census, information provided by public agencies, and the *Comprehensive Housing Needs Analysis, City of Big Lake*, Maxfield Research and Consulting, 2016.

Major Housing Issues

The major issues related to the housing stock in Big Lake are:

1. **Move-Up Housing:** What should be done, if anything, to encourage the construction in the city of more for-sale housing in the "move-up" range of quality and cost?
2. **Multiple-Family Housing:** Should the City encourage the construction of additional multiple-family housing? If so, where?
3. **Housing Compatibility:** Should he City adopt design regulations to improve the visual compatibility between detached houses and townhouses or apartment buildings?
4. **Full Range of Housing Prices:** What should be done to encourage the private market to provide decent and affordable housing for all families, households and individuals?

An attractive house in a newer neighborhood of Big Lake

Major Housing Findings

The major findings of this chapter are summarized below. This information was summarized from the *Comprehensive Housing Needs Analysis, City of Big Lake*, Maxfield Research and Consulting, 2016, the US Census, and American Community Survey of the US Census. Please note that some of the data used in the Maxfield report was compiled in 2015 or 2016 and is already slightly out of date as of 2018.

Demographic Analysis

- As of the 2010 Census, the City of Big Lake had 10,060 people and 3,377 households. The City of Big Lake is forecast to grow by 2,000 people and 657 households between 2010 and 2025.
- The 25 to 44-year-old age cohorts are accounting for a significant percentage of the total population (35 percent as of 2010, and 32 percent by 2026) in the Market Area. Baby Boomers (comprising the age groups 45 to 54 and 55 to 64 in 2010), accounted for an estimated 16 percent of the Market Area's population. Between 2010 and 2025, the age 65 to 74 cohort will have the highest growth by percentage growing by 261 people, or 82 percent). The growth in this age cohort can be primarily attributed to the Baby Boom generation aging into their young senior years.
- The Big Lake Market Area had an estimated median household income of $78,971 in 2016. Non-senior household median incomes peak in the 45 to 54 age group at $91,610. The median income for seniors age 65 or older is $38,806.
- In 2016, the Big Lake Market Area had an average net worth of $712,255 and a median net worth of $238,404.
- Between 2000 and 2010, homeownership rates decreased from 92 percent to 89 percent in the Big Lake Market Area and decreased from 84 percent to 82 percent in the City of Big Lake.
- Married with children households accounted for the highest household type percentage in 2010 at 35 percent.
- Compared to peer cities in 2014, the City of Big Lake had the highest percentage of owner-occupied households (82 percent), but the lowest median home value ($152,500).
- Compared to peer cities from 2004 to 2015, the City of Big Lake was similar in that it had 703 single and multi-family building permits, while Becker had the lowest number (313 building permits) and Elk River had the most (1,608 building permits) single and multifamily building permits.

Employment Analysis

- Sherburne County had an unemployment rate of 3.4 percent in May 2016 which is similar to the State of Minnesota (3.3 percent).
- Of the roughly 4,025 workers who work in the Primary Market Area, 7 percent live in Big Lake. The remaining workers are commuting from mostly Elk River (8 percent) and Monticello (7 percent).

Housing Characteristics

- The City of Big Lake issued permits for the construction of 1,669 new residential units from 2000 to May 2016. Beginning in 2007, building permits declined rapidly, and averaged 25 units per year from 2007 to 2015.
- The majority of the homes in Big Lake were built in the 2000's (roughly 40 percent) while 47 percent of the Market Area's housing stock was built in the 1990's.
- Approximately 87 percent of Big Lake homeowners have a mortgage, compared to 70 percent of Minnesota homeowners. About 22 percent of homeowners with mortgages also have a second mortgage or home equity loan.
- The median owner-occupied home in the City of Big Lake is $152,500 in 2014. Approximately 78 percent of the owner-occupied housing stock in the City of Big Lake was estimated to be valued between $100,000 and $199,999.

- The median contract rent in Big Lake was $870 in 2014. Based on a 30 percent allocation of income to housing, a household would need an income of about $34,800 to afford the median contract rent in Big Lake.

Rental Housing Market Analysis

- In total, Maxfield Research inventoried 311 general occupancy market rate rental units in the Market Area spread across 12 multiple family developments (8 units and larger). At the time of the survey, there were only two vacant units, resulting in an overall vacancy rate of 0.6 percent. Typically, a healthy rental market maintains a vacancy rate of roughly 5 percent, which promotes competitive rates, ensures adequate consumer choice, and allows for unit turnover.
- Market-rate projects comprise 210 units, and only two vacant units were found, resulting in a market rate rental project vacancy rate of 1.0 percent.
- Affordable or subsidized projects make-up 101 units and posted no vacant units.

Senior Housing Market Analysis

- There are five senior housing developments located in the Big Lake Market Area with a total of 162 units. There were only two vacancies identified in the housing developments, posting a vacancy rate of 1.2 percent. Generally, healthy senior housing vacancy rates range from 5 percent to 7 percent, depending on their level of services.

For-Sale Housing Market Analysis

- The average and median resale price of homes in the Big Lake Market Area was approximately $200,670 and $182,000, respectively, as of 2015.
- An average of 363 homes has been sold annually in the Market Area since 2011.
- The median list price of single-family homes for sale in Big Lake was roughly $225,000 as of June 2016. Based on the median list price, a household would need an income of about $56,000 assuming a 10 percent down payment, 3.75 percent 30-year fixed rate mortgage. About 75 percent of Big Lake's non-senior households have annual incomes at or above $56,000.
- In 2015, there were approximately 548 lots available for new construction. The lot supply benchmark for growing communities is a three- to five-year lot supply. The past year there were 70 housing starts among inventoried subdivisions.

Housing Demand Analysis

- In 2016, demand existed in the Big Lake Market Area for these general occupancy product types between 2016 and 2025:
  - Market rate rental 99 units
  - Affordable rental 61 units
  - Subsidized rental 30 units
  - For-sale single-family 140 units
  - For-sale multifamily 168 units
- In addition, there was demand in 2016 for these types of seniors housing. By 2021, demand in the Big Lake Market Area for seniors housing is forecast as:
  - Active adult ownership 30 units
  - Active adult affordable 41 units
  - Congregate 45 units
  - Assisted Living 18 units
  - Memory care 29 units

Housing Demand Summary

Table 9-1 provides a summary of the recommended development concepts by product type for the City of Big Lake through year 2025.

RECOMMENDED HOUSING DEVELOPMENT
CITY OF BIG LAKE
2016 to 2025

	Purchase Price/ Monthly Rent Range[1]	No. of Units	Pct. of Total	Development Timing
Owner-Occupied Homes				
Single Family [2]				
Entry-level	Under $225,000	225 - 250	46%	2016+
Move-up	$250,000 - $325,000	150 - 175	32%	2016+
Executive	$325,000+	100 - 125	22%	2016+
Total		**475 - 550**	**100%**	
Townhomes/Detached Townhomes/Twinhomes [2]				
Entry-level	>$225,000	80 - 100	44%	2016+
Move-up	$225,000-$300,000	80 - 100	44%	2017+
Executive	$300,000+	20 - 25	11%	2018+
Total		**180 - 225**	**100%**	
Total Owner-Occupied		**655 - 775**		
General Occupancy Rental Housing				
Market Rate Rental Housing				
Apartment-style	$900/1BR - $1,300/3BR	50 - 60	67%	2016+
Townhomes	$1,150/2BR - $1,400/3BR	25 - 30	33%	2016+
Total		**75 - 90**	**100%**	
Affordable Rental Housing				
Apartment-style	Moderate Income[3]	35 - 40	68%	2016+
Townhomes	Moderate Income[3]	15 - 20	32%	2016+
Total		**50 - 60**	**100%**	
Total Renter-Occupied		**125 - 150**		
Senior Housing (i.e. Age Restricted)				
Active Adult Affordable Rental	Moderate Income[3]	30 - 40	25%	2016+
Active Adult Senior Coop	$75,000+	28 - 30	21%	2017+
Independent Living (Congregate)	$1,750/1BR - $1,950/2BR	30 - 40	25%	2017+
Assisted Living	$2,750/EFF - $4,000/2BR	18 - 20	14%	2020+
Memory Care	$4,000/EFF - $5,000/2BR	20 - 24	16%	2017+
Total		**126 - 154**	**100%**	
Total - All Units		**906 - 1,079**		

[1] Pricing in 2016 dollars. Pricing can be adjusted to account for inflation.

[2] Recommendations include the absorption of some existing previously platted lots.

[3] Affordablity subject to income guidelines per MHFA. See Appendix for Sherburne County Income limits.

[4] Alternative development concept is to combine active adult affordable and market rate active adult into mixed-income senior community

Note - Recommended development does not coincide with total demand. Big Lake may not be able to accommodate all recommended housing types based on a variety of factors (i.e. development constraints, land availability, etc.)

Source: Maxfield Research & Consulting, LLC

Publicly-Assisted Housing

There are presently two types of publicly-assisted housing in Big Lake.

Federal Rent Assistance

There are no specific housing units reserved for use in the federal Section 8 Rent Assistance Program in Big Lake.

However, some households have received Section 8 Program "vouchers" that they can use for assistance in any rental housing unit that qualifies under the program's rent limitations. The number of these vouchers used in Big Lake varies over time as the voucher-holders move or lose their eligibility. This program is administered in Sherburne County by the City of St. Cloud Housing Authority.

Publicly-Owned Housing

There is no publicly-owned housing in Big Lake.

Private Reduced-Cost Housing for Families or Seniors

There are three apartment buildings in Big Lake that offer rental housing at monthly costs lower than the general market rate. The construction of these housing units was subsidized through either the federal Low Income Housing Tax Credit program or the federal Rural Rental Housing program. A total of 81 housing units out of the 152 units in those three buildings have below-market rate monthly costs. The buildings are:

- School View Square 680 Minnesota Avenue
- Woodland Square 750 Minnesota Avenue
- Leighton's Landing 220 Maple Lane.
- The Crossing at Big Lake Station 115 Henry Road

The Crossing at Big Lake Station townhouses were built privately with assistance from the federal tax credit housing program and, consequently, offer below-market rate rents.

City-Wide Housing Characteristics

Selected housing characteristics are presented in Table 9-1 with corresponding data for the county and the Twin Cities metropolitan area. All data were from the 2010 US Census to enable comparison among locations. Here are a few highlights:

Table 9-1

Selected Housing Characteristics

	Big Lake		Big Lake Township		Sherburne County		MSP Metro Area	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
HOUSING OCCUPANCY								
Total housing units	3,616		2,651		32,743		1,408,224	
Occupied housing units	3,369	93	2,491	94	30,574	94	1,334,395	95
Vacant housing units	247	7	160	7	2,169	7	73,829	5
UNITS IN STRUCTURE								
Total housing units	3,616		2,651		32,743		1,408,224	
1 unit	3,194	86	2,620	99	28,653	88	1,013,075	72
2 units	0	0	0	0	177	1	35,468	3
3 to 9 units	93	3	0	0	468	1	62,226	4
10 or more units	229	6	0	0	3,053	9	274,068	19
Mobile home	100	3	31	0	371	1	22,918	2
STRUCTURES BUILT TO 2000	2,180	60	2,254	1	22,853	70	1,176,450	84
HOUSING TENURE								
Occupied housing units	3,369		2,491		30,574		1,334,395	
Owner-occupied	2,884	86	2,430	98	24,721	81	932,769	70
Renter-occupied	485	14	61	3	2.00	19	401,626	30
AVERAGE HOUSEHOLD SIZE								
Owner-occupied units	3.13		3.00		2.96		2.66	
Renter-occupied units	2.52		3.95		2.60		2.27	
YEAR MOVED INTO UNIT								
Prior to 2000	863	26	1,508	61	10,120	33	444,183	33
NO VEHICLES AVAILABLE	192	6	48	2	1,042	3	100,220	8
VALUE								
Owner-occupied units	2,884		2,430		24,721		932,769	
Less than $100,000	270	9	175	7	1,948	8	86,482	9
$100,000 to 199,999	2,186	76	865	36	11,617	47	336,245	36
$200,000 to $299,999	271	9	926	38	7,357	30	267,327	29
$300,000 to $499,999	109	4	393	16	3,228	13	175,403	19
$500,000 or more	48	2	71	3	571	2	67,312	7
Median (dollars)	154,700		217,200		190,600		213,900	

Table 9-1
Selected Housing Characteristics (Continued)

MONTHLY COSTS								
Housing units with a mortgage	2,469		1,939		19,816		687,174	
Median (dollars)	$1,388		$1,616		$1,573		$1,640	
Housing units without a mortgage	415		491		4,905		245,595	
Median (dollars)	$547		$522		$490		$535	
SELECTED MONTHLY OWNER								
With a mortgage	2,457		1,925		19,707		685,265	
35 percent or more	594	24	230	12	3,680	19	129,987	19
Without a mortgage	415		491		4,873		243,660	
35 percent or more	115	28	16	3	351	7	23,394	10
GROSS RENT								
Occupied units paying rent	433		47		5,611		389,559	
Median (dollars)	$837		-		$925		$931	
GROSS RENT AS % OF INCOME								
Occupied units paying rent	433		47		5,552		384,784	
35 percent or more	212	49	47	1	2,435	44	151,046	39

New housing near the Northstar commuter rail station has added needed diversity to the market and promises to create an interesting new neighborhood.

Recent Housing Development

During the easy-money days before 2008, an extraordinarily high number of subdivisions were platted and housing units built all across the nation, and Big Lake was no exception. In fact, locations such as Sherburne County saw some of the highest rates of new housing construction.

The number of new housing units permitted for construction in Big Lake from 1998 through 2016 – a period of ups and downs -- is shown by Table 4-4.

Housing development slowed greatly after 2006 and has not regained the pace shown from 1998 to 2006.

Consequently, perhaps, in 2017 there were still lots that had been platted but not improved with infrastructure and lots that had been improved with streets and utility lines but not built upon.

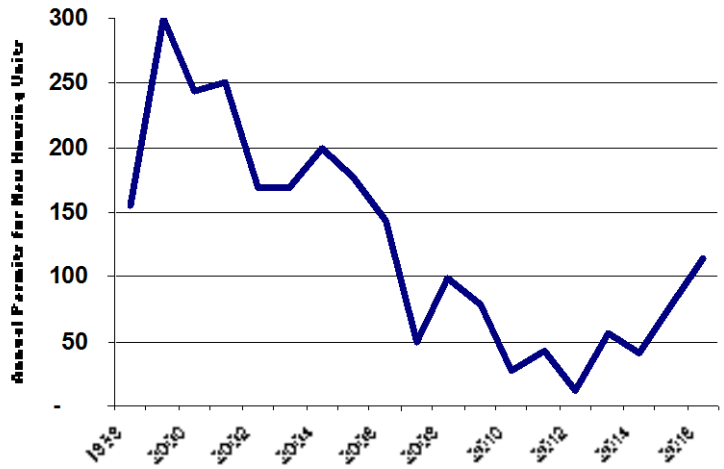
These available building sites are included when estimating the additional residential development acreage that may be needed during the horizon of this plan.

By 2017, the pace of new housing construction in Big Lake had moved closer to past norms, including new neighborhoods that were partially completed before the recession.

Table 4-4

Annual Number of Housing Units Permitted, 1998 through 2016

	Singles	Duplex	Towns	4 - 6 - 8	Apts	Total
1998	155					155
1999	298	2				300
2000	243					243
2001	251					251
2002	165		4			169
2003	165		4			169
2004	118			58	23	199
2005	118			58	1	177
2006	141			2		143
2007	50					50
2008	99					99
2009	78					78
2010	28					28
2011	6		36			42
2012	6				6	12
2013	20				36	56
2014	41					41
2015	48				29	77
2016	76		1		38	115
Totals	2,106	2	45	118	133	2,404



Housing Aspects of the Big Lake Zoning Ordinance

Local zoning regulations have a powerful effect on housing production, design and cost. The following tables describe the districts that allow housing and indicate the review process of the various types of housing by zoning district.

Table 9-3
Zoning Districts that Allow Housing

District	Characteristics
R-1E Single-Family Residential Estate	Detached houses Minimum lot size: 15,000 square feet
R-1 Single-Family Residential	Detached housing Minimum lot size of 12,000 square feet
R-2 Medium Density Residential	One-and two-unit buildings; townhouses Minimum lot size of 7,500 sf per unit for sf / 2f
R-3 High Density Residential	Two-family buildings; townhouses; apartment buildings Density is negotiated through the planned-unit development process.
R-4 Manufactured Home Park	Mobile homes Lot sizes are determined by setbacks.
R-5 Residential Redevelopment District	One- and two-family buildings and townhouses in the Shoreland Management Overlay districts of Big, Mitchell and Keller Lakes. The intention is to generally increase setbacks and lots sizes and to reduce the percentage of impervious coverage as redevelopment occurs.
TOD Transit-Oriented Development	High-density attached housing; retail businesses; office buildings; mixed-use buildings. Three rings of intensity. A walkable public realm. Guided by the TOD Design Manual and Master Plan.
B-2 Community Business	Vertically-mixed commercial and residential buildings.

Each of the following types of development applications must be reviewed by both the Planning Commission and the City Council. Many minor features (e.g., antennas) can be approved by City staff alone. This process is typical of most cities in Minnesota.

- Rezonings
- Land subdivisions – plats or certified surveys
- Site plans
- Conditional use permits
- Interim use permits
- Variances

Landscaping plans prepared by a professional are required for all multiple-family housing, commercial or industrial developments.

Some features of the Big Lake zoning ordinance could use improvement. These features seem worthy of examination:

- Lots sizes in the R-1E and R-1 districts
- Specifics about density for townhouses in the R-2 district
- Specifics about density in the R-3 district
- Setbacks and fenestration for garages on one- or two-family buildings and townhouses.

.

City of Big Lake
Comprehensive Plan
2018

Volume Two: Policies and Actions

CITY OF Big Lake

Introduction and Summary

Scope and Purpose

This plan replaces the 1999 version as a guide for decisions about the growth of the City of Big Lake through 2040. The plan addresses all locations that may be part of Big Lake in 2040 plus the public facilities and services that support private investment.

The plan shows a sound and responsible pattern of growth and is meant to coordinate public and private development decisions.

The *Comprehensive Plan* is the basis for the City's subdivision regulations, official maps and amendments to the zoning ordinance and zoning map. The plan is a guide for the Council, Planning Commission and other advisors when they review development proposals and budget for improvements. The plan also guides public spending for roads, utilities, parks, housing and business growth.

Planning Process

This plan was drafted by City staff with advice from a small team of consultants.

A committee of 24 citizens appointed by the City Council helped discover issues, verify the analysis, generate ideas and refine the recommendations. That group met monthly from May 2017 through March 2018. All of their meetings were open to the public. In addition, city-wide review and comment meetings were held in April, May and June of 2018.

Document Organization

The central elements of the Big Lake Comprehensive Plan are the policies in each of the plan chapters.

The plan consists of two volumes:

- **The Assessment of Conditions and Issues**
- **Plans and Policies.**

A "concept plan" was prepared to make key decisions at the mid-point of the process. That document included general objectives or desired outcomes of the plan plus a very general map of future development. The Concept Plan is included as Appendix A.

The plan chapters, which each include policies, maps and action steps, provide policy direction on:

- Land use
- Transportation
- Natural and cultural resources
- Parks, trails and greenways
- Public utilities
- Economic development
- Plan implementation

Goals and Objectives

These are desired outcomes of the application of the *Comprehensive Plan* over time.

General

1. Big Lake will be a **desirable** place to live, work and play.
2. Big Lake will provide **safety and security** for all, especially families and children.
3. **City government** will be very competent at delivering normal municipal services and does not over-reach.
4. The **property tax rate** will be comparable with those in peer cities.
5. The property tax base will grow with more industrial and commercial development plus more highly valued housing.
6. **Private developers** will have more freedom to **innovate** while achieving updated minimum municipal standards.

Land Use, Growth Management and Urban Design

7. Big Lake will retain its **small-town charm** without limiting its ability to grow.
8. **Growth** will occur in a cost-effective manner.
9. Big Lake will **respond to the market** by accommodating developers' requests within reasonable limits.
10. The city will have a **visual center** and arrival point.
11. **Highway 10** will be a more attractive feature and one that unites the community.

Economic Development

12. Big Lake will **attract jobs** by maintaining a business-friendly environment and promoting its competitive advantages compared to other cities.
13. There will be many **well-paying job**s locally.

Transportation

14. Drivers, bicyclists and pedestrians will move about the city **safely and conveniently**.

Parks and Trails

15. Parks and trails will continue to be an **important element** in providing quality of life and attracting residents.

Neighborhood Design

16. **Desirable residential neighborhoods** will be created by incorporating natural amenities and by building attractive public features where nature has not provided.

Housing

17. Big Lake will **attract housing** by encouraging and supporting employment development and by investing in schools, streets, parks, trees and sidewalks.
18. Residents who want to own a **"move-up" house** will be attracted and retained.
19. There is a wide variety of **housing options** for people in all stages of life.

Plan Policies and Actions

These are the major policies or actions recommended by the Comprehensive Plan.

Population and Demographics

- Expect growth to slow from the pace of 1990 through 2008
- The 2015 population was approximately 10,300 while the 2040 forecast population is 13,100
- Expect a high proportion of young families
- Anticipate that many types of housing will be needed

Land Use and Growth Management

- Achieve compact growth; reduce costs and preserve farm land
- Seek infill development
- Emphasize single-family housing
- Develop the Northstar neighborhood intensely
- Protect the lakeshore cottage district
- Create a "Town center" through redevelopment
- Expect to receive some petitions for annexation
- Extend sewer and water lines in the City only
- Coordinate land development with parks and trails
- Study a potential new industrial district on the west side
- Take a fiscally responsible approach.

Transportation System

- Build a parkway system
- Build future local residential streets slightly narrower than what was done in the early 2000's
- Require sidewalks on one side of future residential streets
- Extend the bicycle path system
- Add some bicycling lanes
- Plant trees along Highway 10
- Greatly reduce or eliminate minimum off-street parking requirements for commercial and industrial development.

Economic Development

- Plan and protect industrial areas
- Use commercial and industrial land efficiently
- Site a district for small industries and start-ups
- Use quality of life initiatives to attract a skilled workforce
- Offer competitive incentives

Natural Resources

- Infiltrate and cleanse surface water runoff
- Protect surface water during development
- Keep portions of the parks natural
- Provide public access to the Elk River
- Work with County and private groups
- Protect wetlands and flood plains
- Limit the loss of trees and forest

Parks and Trails

- Plan three more future parks along the Elk River
- Plan one neighborhood park in the south and two in the west
- Expand Hudson Woods Park, located on the eastern end of the city
- Plan for a major community park southeast of the Northstar station (100+ acres)
- Complete the improvements to River Oaks Park.

Regional Location and Early Settlement

Big Lake is a free-standing city located along US Highway 10 in southeastern Sherburne County. It is not considered a suburb of Minneapolis as it is physically separated from the suburbs by undeveloped farmland but it is within the economic sphere of both the Twin Cities and the St. Cloud metropolitan areas. The city benefits from the State Highway 25 bridge over the Mississippi River at Monticello which gives it regional access by I-94 as well as Highway 10. Of the three cities between St. Cloud and Elk River – Clear Lake, Becker and Big Lake -- only Clear Lake has another such cross-river link.

Big Lake is entirely surrounded by Big Lake Township, as shown by Figure 10-1.

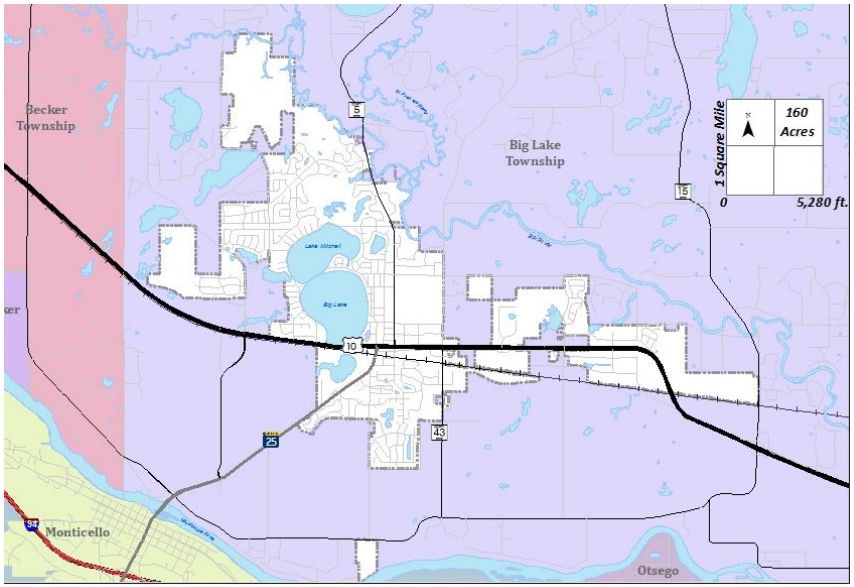


Figure 10-1: Regional Location of the City of Big Lake

Big Lake began as the settlement of Humboldt which was founded in the 1840's. The settlement benefited from its location along the Red River Ox Cart Trail, a route for southbound furs and hides from Winnipeg to St. Paul and northbound manufactured goods and supplies to the frontier.

One of the rest stops was Bailey Station, located near the present-day US Highway 10 and Sherburne County Highway 15. After Sherburne County was surveyed, the first land claim in Big Lake Township was in Section 26, near Bailey Station, by Andrew Chapman in 1851.

Early Big Lake benefited from a series of transportation improvements as the Military Road and later James J. Hill's Great Northern Railroad were constructed and provided access to the town. US Highway 10 was first known as Jefferson Highway and was originally a simple dirt path. Its paving in the early 1920's was a huge benefit for early automobile users and allowed for easy day trips from the Twin Cities.

Joseph Brown built a hotel at the present site of the city in the late 1840s, an institution that his family operated through several fires until the 1950s.

In the early 1900's, Mr. Brown's son George subdivided and sold his property on the shores of Big Lake for the development of vacation cabins. Other landowners soon followed suit which attracted many visitors and accelerated the growth of the town.

Fortunately for the community, a local group raised $3,000 to purchase land for what is now Lakeside Park. Groups and families would travel by train or auto to Big Lake for a day or more of picknicking, swimming, baseball, dancing in the pavilion or vacationing on the shores of Big Lake. Big Lake was definitely on the map as a place to go for fun and relaxation in the country.

The settlement went by the name Humboldt until 1867. The City was incorporated in 1898, forty years after Minnesota became a state. (Stillwater, Minnesota's first city, was incorporated in 1854.) Big Lake's population in 1900 was just 177 people.

Other local history can be found in *A History of Big Lake*, which is available for reference at the Big Lake branch of the Great River Regional Library, located at 790 Minnesota Avenue, Big Lake.

Land Use and Growth Management Plan

This chapter guides the City's regulation of perimeter growth and the general pattern of land use across the community. It includes design guidelines for residential neighborhoods and the proposed "town center." Finally, the land use plan policies are coordinated with municipal and private actions in economic development and natural resource protection.

Figures

Major Land Use and Growth Management Issues

The following are the major issues in the topic of land use and development identified through the analysis of conditions.

1. **Protecting the Ability of the City to Grow Outward:** Will the County and Big Lake Township continue to cooperate with the City to protect the City's ability to growth outward in an efficient and economic fashion?
2. **Annexation of Town Peninsulas and Islands:** What should be done, if anything, to encourage land owners in the several Township "peninsulas" and "islands" that are surrounded by City land to petition for annexation of their land to the City?
3. **Fringe Development Pattern:** What should be the pattern of land use on the City's perimeter?
4. **Favored Locations for Perimeter Growth:** What are the most efficient and beneficial locations for perimeter growth?
5. **Locations for Multiple-Family Housing:** What are the best types of locations for multiple-family housing?
6. **Types of New Housing:** Should the plan try to guide development toward or away from certain types of housing or let the market make that decision?
7. **Appearance of New Multiple-Family Housing:** Should the City adopt design guidelines, or regulations, that help make attached housing more compatible with detached (single-family) housing?

8. **New Neighborhood Design:** Should the City require that new residential areas be designed with many of the features of the older neighborhoods such as sidewalks, street trees, a mixture of housing types, narrow streets, short front setbacks and garages set back further than the façade of the house? Should there be regulations to soften the appearance of garage doors?

9. **Downtown:** To what degree should the City promote and assist redevelopment that conforms to the recommendations of the downtown design guidelines for retail, offices, housing and mixed-use buildings? What should be the next major step forward for the downtown?

10. **Waterfront Greenways:** Should the City acquire land for a linear public park and trail plus protected open space along the Elk River?

11. **Economic Development, Jobs and Income:** What land use, zoning and development policy changes, if any, should be made to help promote economic development in Big Lake?

12. **Commercial Growth:** How much land should be planned and zoned for retail business development? Should multiple-family housing be allowed in certain commercially-zoned locations?

13. **General Redevelopment:** How proactive should the City be in encouraging redevelopment?

14. **Lakefront Land Ownership and Use:** Can or should public access to the lakes be improved?

15. **Role of the Plan:** How strong should the Comprehensive Plan be in setting City policy, ordinances and budgeting?

An example of housing in Big Lake

Sustainable Growth

Grow by investing in established neighborhoods, carefully planning new districts, providing attractive public amenities and protecting environmental resources.

A central idea in this Comprehensive Plan is that existing neighborhoods and established business areas should be maintained or renewed as new investments occur in perimeter locations. Growth on the edge of the City should be compact and adjacent to prior development, and some new housing or business should occur as redevelopment.

1. Compact and Contiguous Growth

Guide growth in Big Lake to locations either adjacent to or within presently urbanized areas. Land use should be either urban and compact or rural and very low density to preserve options for future development. This would:

- Create a stronger sense of Big Lake as a small town.
- Promote efficient use of serviced land
- Promote continued investment in older areas
- Limit public and private expenses
- Protect sensitive environmental resources
- Preserve rural character and prime farmland
- Conserve nearby fringe areas for future urbanization when public sewer and water service become available
- Reduce driving and enable increased walking and bicycling
- Preserve the distinction between urban and rural areas.

2. Spread with a Center

Develop a combination of spread or low-density neighborhoods surrounding a higher density center. There will be a town center but also some large lots.

3. New Neighborhoods

New neighborhoods should include a variety of types of housing, local streets sized to encourage appropriately slow traffic speeds, street trees and sidewalks, and parks or parkways within easy walking distance.

4. Infill and Redevelopment

Provide various incentives for the re-use or more intensive use of locations that were not previously developed, locations that have been built upon but cleared, and locations that are underused or highly deteriorated. Some part of the future growth in jobs and housing will be captured in the older parts of the City to keep those areas vital and to use prior public investments. Incentives may include planning and zoning, buying, preparing and reselling property, and improving roads, utilities, and parks.

Prime locations for infill and redevelopment include the original downtown along Lake Street and the northern frontage of Highway 10 between Lake Street and Eagle Lake Road.

5. Guiding Growth with Public Infrastructure

Use modest public investments to support new growth and encourage continuous reinvestment in established areas.

Depend on private land developers to carry the great majority of the cost of new streets or utility lines. Limit public spending to those features that cannot legally be assigned to private investors or that must be spread across a wide area. Examples might include the additional cost of a parkway street compared to a standard street, a sewage lift station or a water tower.

Across the City, the parks, parkways and street improvements will be used to help keep neighborhoods attractive and sustain property values. (Refer also to the Parks System and the Utilities Chapters for further policy direction.)

6. Role of the City and Developers

Allow developers to lead in the design of new development, including lot sizes. Establish minimal standards, such as street widths, and a framework of essential features for the private sector to work within. Essential features include major roads and utilities, commercial or industrial locations, environmental protection and public safety. Continue to require developers to improve or extend local and collector streets, minor utility lines, and participate in the cost of improving arterial roads and trunk utility lines.

Land Use Plan Map

Regulate land use to ensure consistency with the Land Use Plan map and the objectives and policies of this Comprehensive Plan.

The Land Use Plan Map, Figure 11-1, is intended to serve as a guide to the zoning map and to identify sufficient areas for future land development in order to accommodate at least 20 years of forecast growth.

The Land Use Plan Map provides sufficient land both within the current City limits and nearby to meet the growth needs of the community through 2040 and beyond. More area is guided on Figure 11-1 than is probably needed by 2040 so as to provide market choice. Development decisions regarding specific tracts and parcels will be initiated through the workings of the development market and driven primarily by private investors.

Please refer to Table 11-1 for a description of the land use plan categories and their potential zoning districts.

1. Planned Land Use Map and Categories

Use the Land Use Plan Map shown by Figure 11-1 and the land use categories further defined in Table 11-1 as the general pattern of future continued physical development for the City of Big Lake. Table 11-1 provides a more detailed description of each category, along with criteria to evaluate the appropriateness of specific uses relative to each land use category.

The land use patterns shown on Figure 11-1 are generalized and do not represent precise demarcations on the ground or specific sites. For areas within existing developed neighborhoods, the Land Use Plan Map shows areas based on streets, blocks or existing use. For areas that are undeveloped, the Land Use Plan Map shows transitions from one land use category to another and is not based on defined boundaries. Likewise, locations shown for future parks or other public facilities are approximations or search areas.

Consequently, the City will use the Land Use Plan Map in conjunction with related objectives and policies in the Comprehensive Plan in reviewing rezoning and development proposals, plats, site plans, annexation petitions and other requests regarding future land use.

However, major departures from the Land Use Plan Map will be considered only in the context of an amendment to the *Comprehensive Plan*. The City will generally allow rezonings to more intensive land uses consistent with the plan provided that adequate safeguards are made to ensure that the more intense development will not adversely affect the use and enjoyment of nearby land uses as a result of excessive traffic, noise or light, inappropriate site planning or excessive or unwarranted impact on the natural environment.

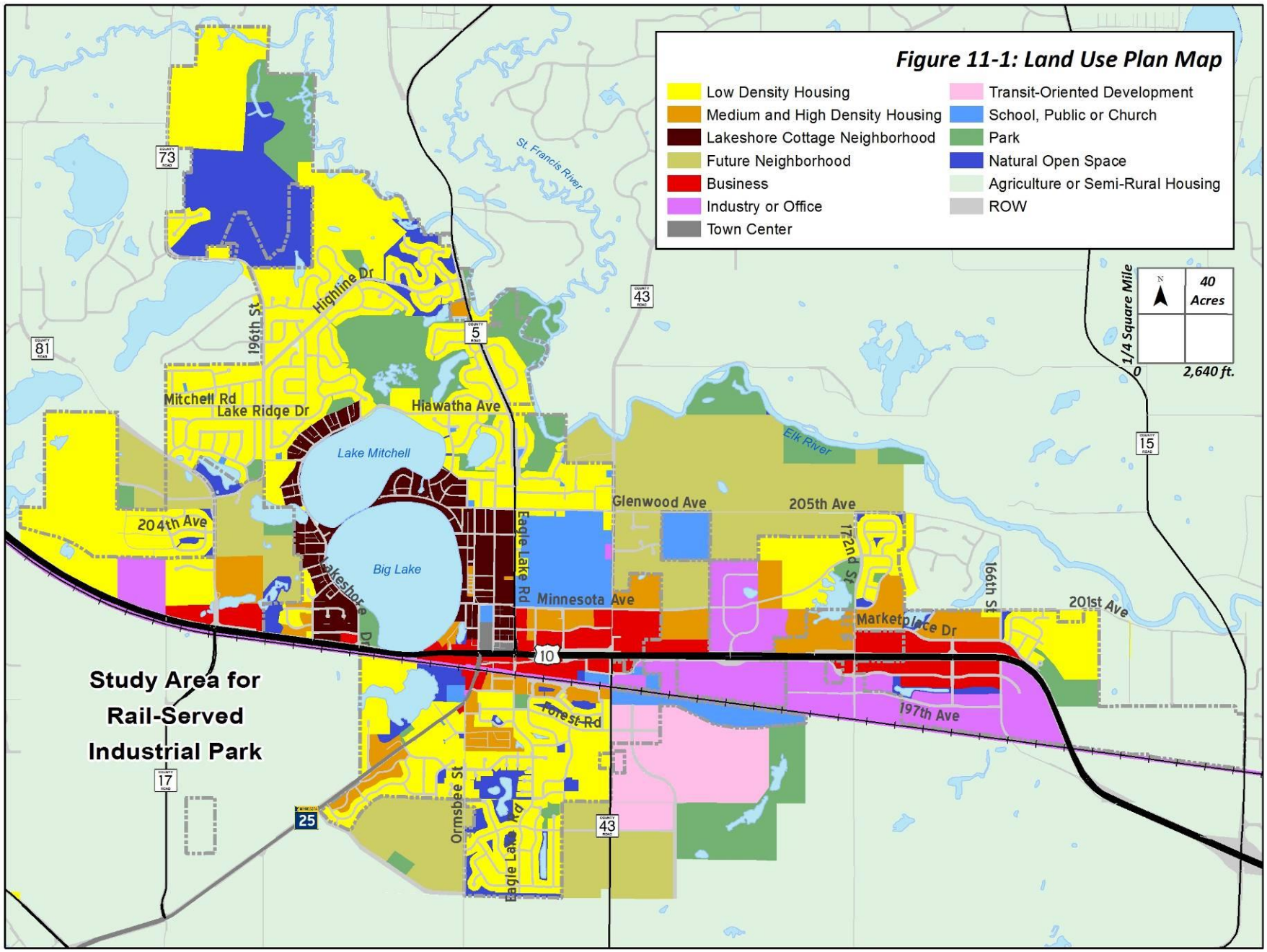


Figure 11-1: Land Use Plan Map
Low Density Housing
Medium and High Density Housing
Lakeshore Cottage Neighborhood
Future Neighborhood
Business
Industry or Office
Town Center
Transit-Oriented Development
School, Public or Church
Park
Natural Open Space
Agriculture or Semi-Rural Housing
ROW
1/4 Square Mile
40 Acres
0
2,640 ft.
St. Francis River
Highline Dr
196th St
Mitchell Rd
Lake Ridge Dr
Hiawatha Ave
Lake Mitchell
Big Lake
Elk River
Glenwood Ave
205th Ave
204th Ave
Eagle Lake Rd
Minnesota Ave
172nd St
166th St
201st Ave
Marketplace Dr
197th Ave
Forest Rd
Ormsbee St
Eagle Lake Dr
Study Area for Rail-Served Industrial Park

Table 11-1
Land Use Plan Map Categories and Proposed Zoning Map Districts

Plan Map Categories	Land Uses	Potential Zoning Districts
Low Density Housing	Includes single-family housing and two-family housing. Allowable densities range from approximately 2.5 to 4 housing units per gross acre, with lot sizes in the range of 8000 square feet and larger. Includes places of worship.	R-1E, R-1 and R-2
Medium and High Density Housing	Included in this category are small-lot single-family houses, duplexes, townhouses, 4- to 12-unit buildings that typically have individual exterior entrances, and apartment buildings, which have interior corridors. The housing is located where there is good traffic access, between Low-Density Housing and non-residential land uses, and at high-amenity locations. The density is expected to be in the range of 4 to 8 units per gross acre for the duplex, townhouse and similar buildings and up to 25 units per gross acre for apartment buildings. Locations and site plans should conform to the guidelines in this plan. Includes places of worship.	R-2, R-3 and R-4
Lakeshore Cottage Neighborhood	Allows single-family, two-unit and townhome residential development and redevelopment. Located primarily in the Shoreland Management areas adjacent to Big, Mitchell and Keller Lakes and encompasses very small lots dating from the 1890s to the 1950s. Subject to the conditions listed in the R-5 zoning district.	R-5, Residential Redevelopment District
Future Neighborhood	Future Neighborhood indicates locations where housing and supportive development are expected to occur. The exact arrangement of residential densities and types will be determined through negotiation with land development applicants. The City intends that there be a mixture of types of housing in these locations.	Agriculture district or a district determined upon annexation.
Business	Businesses providing retail trade or services for individuals or businesses. May also include professional offices.	B-1, B-2 or B-3
Industry or Office	Allows a wide range of assembly, fabrication, processing, research, warehouse, logistics or corporate office businesses. The type and intensity of allowed uses vary with the zoning district.	I-1, I-2 or I-3
Town Center	This land use category allows and promotes office, retail, housing, hospitality and civic land uses, preferably in mixed-use buildings with pedestrian orientations. May be subject to the Downtown District design guidelines.	R-3 and B-2
Transit-Oriented Development	Mid- or high-density housing and supportive public space design, all consistent with the principles of the Transit-Oriented Development Design Manual, 2008. See recommendations for amendments to the TOD Master Plan in this chapter.	Transit-Oriented Development (TOD)
Schools and Public Buildings	Includes public and private schools, City Hall and municipal public works facilities.	R-1
Park	Public parks. Locations of future parks shown on Figure 1-1, Planned Land Use, are approximate.	Any district
Open Space	Protective open space; ponds, wetlands, floodplains.	Any; Overlay district
Agricultural	Farming or very low density housing without City utilities. Housing should be no denser than 1 house per 10 acres unless planned for future City utilities. May be a transitional area for future sewered development.	A, Agricultural

Perimeter Growth

Achieve long-term, compact and cost-effective perimeter growth.

1. Strive for Adjacent Development

Only approve residential or commercial plats that are adjacent to or very near other, existing urban development even if all of the development costs are borne privately. Do not bond for and carry the cost of new utilities or streets that do not meet that condition.

2. County and Township Cooperation

The Town of Big Lake and Sherburne County agree that there is mutual benefit in staged, orderly utility extensions, annexation and compact urban growth into territory planned and regulated for that purpose.

Urge Sherburne County and Big Lake Township to rezone the land between Glenwood Avenue and the Elk River to Agriculture from General Rural. This would protect the City's ability to grow compactly by preventing that property from being divided into 2.5-acre residential parcels, which would be too small to easily re-divide into City-sized lots yet too big to economically serve with City utilities.

3. Protect Adjacent Lands for Urban Development

Petition Sherburne County and Big Lake Township to increase the minimum residential lot size to at least 5 but ideally 10 acres in the areas planned as Urban Reserve near the City.

Some of these locations are zoned General Rural, which allows houses on 2.5 acre lots. Five acres, or preferably 10, is considered the minimum practical size to allow for future re-subdivision to sewered, City-sized residential lots.

Likewise, the County's Agricultural zoning district south of the City requires a minimum lot size of only 5 acres, which is not quite adequate to safeguard the growth potential of the City. That also should be set to a minimum of 10 acres. If the City becomes ringed with houses on parcels that cannot be easily divided for lots and streets, the public and private costs of City growth will be increased and the City will need to consume more land more quickly.

4. City Services and Annexation

Require annexation or an annexation agreement to extend and connect to City sewer and water lines.

Extend the City's corporate boundaries by approving annexations consistent with this *Comprehensive Plan* and State law. Prior annexations have occurred only through petitions initiated by the individual landowners.

Use these criteria to evaluate annexation petitions so that policies on growth management, fiscal health and land use are furthered.

- Maintain a compact and regular pattern of growth and boundary expansion
- Incorporate "peninsulas" of township that abut the City on three sides
- Extend City streets and utilities cost-effectively.
- Deliver public services cost-effectively.
- Foster neighborhood development patterns with connecting streets and walkways
- Address a market demand for development
- Capture nearby growth in a compact and efficient pattern rather than a fragmented, costly, semi-rural pattern.

Municipal services are required for sustainable and cost-effective growth, and the City of Big Lake is most capable of providing those services.

5. Environmental Protection

On land annexed to the City or proposed for development, protect or restore sensitive or special natural resources such as flood plains, streams, wetlands, water quality, shorelines, riverbanks or major wooded areas through regulation and/or City investment. Follow this *Comprehensive Plan* and the land use regulations of the City's zoning and subdivision ordinances.

6. Prime Farmland

Minimize the loss of productive farmland from premature conversion to non-agricultural uses. Protect areas identified as productive farmland by promoting compact urban development and discouraging semi-rural large-lots outside its borders.

Residential Neighborhoods

Reinforce or create new neighborhoods with a diversity of housing, attractive public spaces, compatible land uses, and identity.

1. Residential Mixture

Plan and create a mixture of lot sizes, housing sizes, housing types and housing styles across the city. Mix housing types, with small areas of multiple-family housing.

Within some neighborhoods, have a mixture of housing types and styles, depending on the strategy of the land developer. Plan and zone locations for townhouses and apartments. However, ensure that the value and livability of single-family, detached housing is not harmed when trying to accommodate the need for other housing types. No additional "manufactured home park" zoning is recommended.

2. Street Corridor Design

Combine improved garage setbacks and garage design with narrower streets, driveways and street trees for an overall visual enhancement.

Study amendments to garage front setback requirements in the R-1 and R-2 zoning districts to improve the relationship of the house to the street. The intent would be to improve small-town charm, soften the appearance of the garage door, heighten the visual prominence of the house entry and encourage porches.

For example, a shorter front setback for the garage might be allowed if:

- The garage door is even with the front porch
- The door has windows
- The façade above the garage has second-story windows
- The garage has a turned entrance
- The third stall is set further back and the first two
- The maximum driveway width at the street is no more than 16 feet.

Exceptions may be made for narrow or small lots.

The façade-to-façade design of local residential street corridors is vitally important to the appearance of any city. See Appendix E.

3. Street Connections

Allow some cul-de-sac streets, particularly where necessary to serve difficult locations or to protect natural resources. However, interconnect most local residential streets for the sake of driving, walking and bicycling.

4. Links to Adjacent Neighborhoods

Link new neighborhoods visually and functionally to the established portions of Big Lake via street connections, bicycle facilities, pedestrian connections and, where possible, the parkway system.

5. Context-Sensitive Redevelopment and Infill

In older neighborhoods, encourage infill development that respects the characteristics of those neighborhoods and is consistent with the prevalent housing styles in each neighborhood.

This principle does not imply that all housing will be of the same type (i.e., detached or duplex) but that older and newer housing will share many design elements. Redevelopment and infill are keys to strengthening older neighborhoods and will always be done in a manner that responds to and builds on the strengths of those neighborhoods.

6. Older Neighborhoods

Continue to review zoning regulations that apply to the older neighborhoods so as to accommodate the nonconforming status of dwellings that were caused by setback or area requirements.

7. Northstar Neighborhood

Amend the Northstar transit-oriented development plan to allow more housing and accept less retail and office business in that vicinity.

8. Lakeshore Cottage Neighborhoods

Continue to administer the R-5, Residential Redevelopment, zoning district in those locations shown on the Land Use Plan Map as Lakeshore Cottage Neighborhoods. That zoning district is designed to encourage consolidation of small parcels, to protect existing houses through reasonable setback of new buildings, and to mitigate harmful surface water runoff to the lakes.

Town Center

Re-Create a center of the community that is walkable and identifiable

Evolve a "town center" that includes a walkable mixture of businesses, multiple-family housing, civic buildings and public space. Allow and encourage housing above commercial spaces if proposed by the applicant. The Town Center should be created primarily through the actions of the private sector but guided by the vision of Big Lake residents.

1. Town Center Zoning District

Rezone the area shown on the Land Use Plan Map as Town Center to a new district by the same name because the existing B-2, Community Business, district is not quite suited for this purpose.

The design guidelines of the "Central Business District Overlay" could continue to be used as supplementary regulations or they could be abolished and written directly into the new Town Center zoning district.

The proposed Town Center zoning district should:

- Allow housing over commercial spaces as a Permitted Use
- Allow multiple-family residential buildings without the requirement of the housing being above commercial space
- Allow the uses listed for the B-2 district except auto repair, drive-through lanes, convenience stores with gasoline, motor fuel stations, car washes and sexually-oriented businesses.
- Allow a higher density and greater building height than the R-3 District
- Reduce the building setbacks, minimum lot size and minimum lot width compared to the B-2 and R-3 Districts
- Require that buildings be located close to the sidewalk with doors and windows facing the street.
- Require that parking be under the buildings or to the rear and shared to the extent possible.

2. Downtown Design Guidelines

Reduce the area covered by the "Central Business District Overlay" portion of the *Downtown Design Guidelines* (2008) to only cover the area shown as Town Center on the Land Use Plan Map. Enlarge the "Transition Zone" portion of the Downtown Design Guidelines to address the area removed from the "Central Business District Overlay."

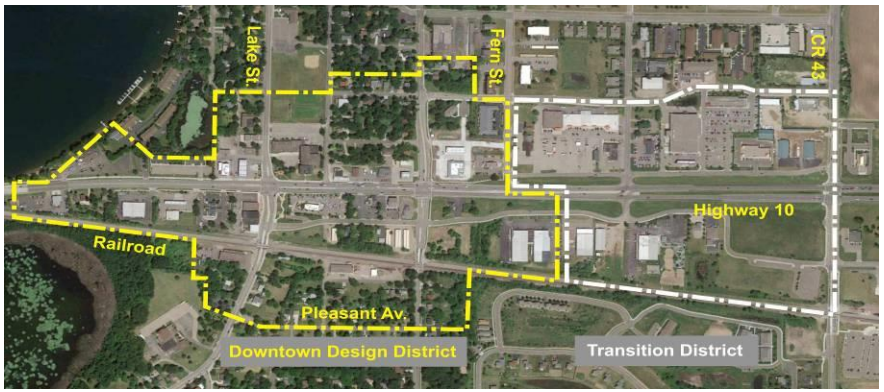


Figure 11-2: Boundaries of the Downtown Design Districts, 2017

3. Original Downtown

Try to protect and retain the four buildings that remain from the city's original commercial area, located along the western side of Highway 25 at Highway 10.

That small, triangular block is zoned B-2 Community Business. It should be rezoned to the proposed new Town Center district.

Studying those buildings for their potential listing on the State's historic register may lead to tax credit financial assistance for maintenance and appropriate façade renovation.

Major Road Corridors

Plan land use along the major road corridors in a manner supportive of the functional classification of the road.

1. US Highway 10 Beautification

Work with the Minnesota Department of Transportation to plant trees in the right-of-way of Highway 10. Supplement those trees with the plantings normally required on private land as redevelopment occurs.

2. US Highway 10 Corridor Land Uses

Continue to plan the edges of the Highway 10 corridor mostly for commercial or industrial land uses rather than housing.

3. US Highway 10 Corridor Site Design

Strive to ensure that new plats and site development provide for access via parallel public roads or private driveways that are separated from the Highway 10 right-of-way by at least 200 feet.

4. Minnesota Highway 25 Corridor Land Uses

During the time horizon of this plan (approximately 2040), limit the southwesterly growth of the City along Highway 25 to the intersection with the proposed parkway road. Refer to the Land Use or Road Functional Classification plan maps for that location.

5. Minnesota Highway 25 Corridor Site Design

If redevelopment occurs among the many houses that have individual driveways onto Highway 25, work with the Minnesota Department of Transportation to consolidate those access points, preferably to public street intersections or at least to fewer private driveways.

6. Access Management during Land Development

Along all roads, from Local to Principal Arterial in the classification scale, ensure that the access management guidelines found in the Transportation chapter of this plan are followed during site (re)development.

7. Redevelopment of Incompatible or Obsolete Land Uses

Pursue over the long-term the redevelopment of existing inappropriate land use and vehicle access along arterial roads. The City will give priority to addressing inappropriate land uses through the following strategies:

Rezoning

Rezone areas with inappropriate land use or access to allow alternative uses such as office, multi-family housing, small shopping centers, or similar uses that offer potential for improved site design and access control.

While this option has little direct cost to the City, it also depends on a willing and aggressive private sector for implementation. Small office buildings for professionals or corporations have often succeeded in these settings and can be compatible neighbors with an adjacent residential neighborhood.

Physical Improvements

Make or require physical site improvements that reduce the conflict between housing and a major road. For example, housing may be protected from the negative effects of traffic, parking lots and commercial buildings by landscaping, setback, building orientation and size. The City, in conjunction with the County or the State, could protect a road function by combining or closing access points and/or changing the access design.

Economic Development

Provide an adequate and balanced inventory of planned and zoned locations for future growth needs for industry, office and retail businesses.

1. Land Use Plan Map

Ensure that the City's zoning map conforms to the pattern illustrated by Figure 11-1, Land Use Plan Map.

Encourage industrially zoned locations to be developed intensively while requiring appropriate building orientation, landscaping, screening, signage and paved parking.

2. Municipal Industrial Park

Extend Minnesota Avenue between County Highway 43 and 172nd Street via either the Minnesota Avenue right-of-way that is already platted across the municipal industrial park or via the 177th Avenue alignment.

The 177th Avenue alignment would require replatting Outlot A of Big Lake Industrial Park East Plat Five and acquiring approximately 200 linear feet of street right-of-way.

3. Start-Up Industrial Business District

Designate and zone an area for smaller, start-up industrial businesses that need affordable spaces, whether in building trades, services or start-up manufacturing.

For the selected location, prepare and adopt a new zoning district that allows lower standards of building façade materials, site landscaping, screening, lighting and building setbacks than those of Section 1061.07 of the I-2, General Industrial District. The permitted uses may be the same as in the I-2 district.

4. Rail-Served Industrial Park

Use a high degree of caution and skepticism when reviewing any proposal for a new rail-served industrial park.

Recognize that Big Lake is well positioned with rail-served land that could serve to connect the Minneapolis-Saint Paul region with the global economy. Explore the benefits and challenges that a rail served industrial park might present to the community and the region and learn about best practices for designing such facilities to manage traffic, noise and other factors.

In the near future, establish the parameters and conditions that any such development must meet in order to gain City approval, annexation and utility service. Protect current and future housing, traffic flow, public safety, growth options, community image, water, air and City fiscal health.

5. Separate Industry and Housing

Separate industrial and residential traffic and other effects for the benefit of both land uses.

6. Redevelopment and More Productive Land Use

Ensure that land is in city is appropriately used and productive. This will help private owners, will make better use of public infrastructure and will reduce unnecessary growth in other locations.

Identify locations that appear to need new life as commercial, industrial or multiple-family residential projects. Encourage and assist redevelopment through land use planning, zoning and site plan application review.

Some properties in the proposed Town Center location fit this description. A few other sites that were developed in an earlier era with different regulations, economic forces and assumptions have now reached the end of their useful life and become economically obsolete and ripe for change.

Environmental Resource Protection during Development

Safeguard and improve environmental features as a means of promoting sustainable development, adding quality of life, and minimizing public and private costs.

The Natural Resources chapter of this *Comprehensive Plan* contains recommendations for the management of surface water, ground water, soil, and wildlife habitat. Some of those recommendations are also included in this chapter and the Parks System chapter.

1. Wetlands

Continue to protect wetlands by following the regulations of Section 1066 of the zoning ordinance, Wetlands Protection Overlay, and the guidelines of the Sherburne Soil and Water Conservation District.

2. Flood Plains

Protect flood plains and floodways by continuing to enforce the regulations of Section 1064 of the zoning ordinance, Floodplain Protection Overlay, and the guidelines of the Sherburne Soil and Water Conservation District.

3. Forest Areas

Protect largely intact key forested areas by using large lot sizes, building setbacks, plat design and, if necessary, public acquisition.

Key locations include the Elk River corridor forest and the remainder of Hudson Woods. Some of the woods along the river are in floodplain, which should aid their protection. Some of Hudson Woods is proposed in this plan to be acquired as park, while other portions are zoned for larger lots under the R-1 Estate district.

4. Productive Agricultural Lands

Seek to minimize the loss of highly productive agricultural lands to development by promoting compact, contiguous and sewered urban development, and reducing incentives for semi-rural development on multiple-acre residential lots.

Avoiding premature development on prime farmland is an important consideration in planning for future land use and development on the City's urban fringe. The City will consider the following criteria in seeking the appropriate balance between encouraging orderly and cost-effective development and protecting prime agricultural areas:

- Maintaining a compact and regular pattern of growth and boundaries;
- Minimizing infrastructure and service costs;
- Designing neighborhoods with connecting streets and pedestrian walkways;
- Responding to market demands for development.

The City recognizes that compact urban development on farmland close to presently built-up and sewered areas can help avoid the loss of productive farmland elsewhere.

Site Plan Review

Continue to improve the appearance, function and compatibility of commercial, industrial and multiple-family residential development

1. Site Landscaping and Screening

Continue to apply the requirements of Section 1027 of the zoning code, which requires landscaping and screening of site perimeters, parking lots and transitions to residential development.

Improve the appearance of the major road corridors within the City by requiring better private landscaping, installing better public landscaping, reducing the size and number of signs, limiting the number of additional billboards, locating some parking lots beside or behind buildings, encouraging better building design, providing pedestrian and bicycle circulation to and within the site, and providing other site planning and building design improvements.

2. Application Review

Consider these factors when reviewing development proposals for medium- or high-density housing:

- Consistency with Figure 11-1, Land Use Plan Map, the zoning map and the zoning regulations
- Screening and transition to adjacent development; visual compatibility with adjacent development
- Traffic safety and flow
- Pedestrian and bicycle connectivity
- Parking for residents and visitors
- Utility capacity
- Surface water management consistent with the City's plan and the requirements of the Sherburne Soil and Water Conservation District.

3. Zoning Ordinance Amendments

R-1 and R-2 Districts

- Study and reduce slightly the minimum lot size for single- and two-family houses in the R-1 and R-2 zoning districts. See Appendix D.

R-3 District

- Allow duplexes, townhouses and apartment buildings
- Specify the minimum square footage of land per dwelling unit based on the number of bedrooms per unit
- Specify the maximum building height at 3 stories. Building height in combination with setbacks, parking and ponding requirements will limit the density to approximately 20 units per net acre.

Town Center District

Write and adopt this new zoning district. Map it as shown by the Land Use Plan Map.

- Allow housing over commercial spaces as a Permitted Use
- Allow multiple-family residential buildings without the requirement of the housing being above commercial space
- Allow the uses listed for the B-2 district except drive-through lanes, convenience stores with gasoline, auto repair, motor fuel stations, car washes and sexually-oriented businesses.
- Allow a higher density and greater building height than the R-3 District
- Reduce the building setbacks, minimum lot size and minimum lot width compared to the B-2 and R-3 Districts
- Require that buildings be located close to the sidewalk with doors and windows facing the street.
- Require that parking be under buildings or to rear and shared as possible.

B-2 and B-3 Districts

- Consider the removal of manufacturing as a conditional use.

Collector and Minor Arterial Road Setbacks

- Amend principal front setback for Principal Arterials: 50; Minor Arterials: 40; Collectors: 30 feet.

Minimum Off-Street Parking Requirements for Businesses

- Amend the zoning ordinance to greatly reduce or eliminate minimum off-street parking requirements for businesses and industries. See also the policy on page 12-14 of the Transportation Plan.

Plan Action Steps

The City will take the following steps to implement the recommendations of the Land Use, Design and Growth Management Plan.

Table 11-2
Land Use, Design and Growth Management Plan Actions

Action	Timing
Use the *Comprehensive Plan* when reviewing land development or zoning **applications**.	Continuous
Urge Sherburne County and Big Lake Township to set a minimum **residential lot size** of at least 5 acres but ideally 10 acres in areas of Big Lake Township **south of the Elk River** to protect the ability of land near the City to be subdivided and served with sewer and water lines, and to protect agriculture and rural character.	2018
Consider **annexation** applications that are consistent with the Land Use Plan Map and Policy 5 under Perimeter Growth.	Continuous
Amend the **zoning ordinance** as described on page 11-13 ▪ R-1 and R-2 districts ▪ R-3 district ▪ Town Center district ▪ B-2 and B-3 districts ▪ Collector and minor arterial road setbacks ▪ Minimum off-street parking requirements for businesses.	2018 – 2019
Study and consider amending the **zoning map** in locations that are planned for land uses that are distinctly different than their current use and which contain buildings or activities that appear to be harmful to adjacent land development. Discuss land use prospects and zoning requirements with the owner before proceeding.	Continuous
Work with Internet providers to integrate improved system components into existing and future development projects.	Continuous
Continue to advocate for the expansion of a state-wide Freight Rail Economic Development program, which could benefit the region.	As needed

Transportation Plan

Figures

Major Transportation Issues

These are the major transportation planning questions that should be discussed, debated and resolved during the course of this plan:

1. **Mississippi River bridges:** Should there be another bridge over the Mississippi River near Big Lake?

   There are only four Mississippi River crossings that connect Wright and Sherburne Counties: Minnesota 25, one of the four, crosses the river and links Big Lake to Monticello and I-94. Over the past five years, population and employment in the region has increased, placing additional travel demand pressure on the Minnesota 25 Bridge. As the region grows, traffic volumes will rise, perhaps requiring an additional river crossing in the vicinity of Big Lake.

2. **Potential rail-served industrial park:** How should Big Lake adjust its road system if a rail-served industrial park emerges?

   A large industrial district on the western side of the city has been discussed for a number of years. The potential for this facility becoming a reality was under study in 2018. This district could have major implications for traffic on County Highway 17, Minnesota Highway 25 and even a second bridge over the Mississippi River.

3. **Direct access to and from US 10:** Should the City urge the Minnesota Department of Transportation to reduce the number of direct access driveways and intersections along Highway 10 in favor of a more complete frontage road system?

4. **Lack of reasonably continuous travel routes across the city:** Can Big Lake adopt and follow a plan to require developers build a system of collector and minor arterial roads that connect across the city?

   Big Lake is generally oriented east and west. The number of reasonably continuous east-west collector roads is inadequate given the length of the city. North-south movement is better but still inadequate. There are two reasons for this problem: 1) the many lakes and wetlands and 2) non-adjacent annexations that have prevented the logical extensions of roads.

5. **Local street design:** Should minor residential streets be built narrower than they have been in the past?

   Some residential streets have been built 36 feet wide between curb faces. Local streets need not be wider than 29 feet to 32 feet. Excessive widths contribute to higher speeds on neighborhood streets and increased construction and maintenance costs.

6. **Sidewalks:** Should sidewalks be built on both sides of future residential streets?

   The current policy the Big Lake is that sidewalks should be installed on at least one side of the street in all residential neighborhoods.
   a. Are there some neighborhood characteristics and features that should warrant consideration of sidewalks on both sides of the street?
   b. Should the City retroactively install sidewalks in certain locations?
   c. Should sidewalks be planned or built in commercial or industrial locations, such as along US 10 frontage roads or in industrial areas?

7. **Trails:** How active should the City be in planning and building an interconnected system of off-road asphalt paths?

   The network of sidewalks and paved, off-street paths is not continuous and inter-connected. Trail systems not only provide residents with respite from the hardscape of concrete and asphalt, they also provide cities with:
   - A physical feature around which growth and development can occur
   - An amenity that increases desirability of land
   - Public accessibility to parks and open spaces
   - Facilities for non-motorized transportation for both recreation and commuter travel

Functional Classification Plan

Classify and build roads so that they support land development and provide a safe and efficient network for driving, walking and bicycling.

1. Street Network

Adopt a plan for a network of collector and minor arterial roads that is coordinated with the land use plan.

2. Road Functional Classification System

Reserve land and build roads that follow an orderly pattern with appropriate spacing, access controls, traffic capacity and speeds to accommodate planned land uses as well as space for walking and bicycling.

During the land subdivision process, require that developers dedicate land for public right-of-way and build streets according to the widths and other standards adopted by the City.

When a proposed plat abuts a county, state or federal road, ensure that the appropriate agency has a chance to comment on the plat before it is approved and ensure that any planned additional land is dedicated on the plat.

Coordinate with Sherburne County to plan and implement possible changes to the functional classification of certain arterial roads and to upgrade those County roads appropriately.

Figure 12-1 illustrates the proposed functional classification plan for Big Lake.

Table 12-1 describes the various road functional classes and their characteristics.

A Local Street serving a neighborhood of attached housing in Big Lake.

A view of US Highway 10, which primarily serves regional traffic and has limited parcel access

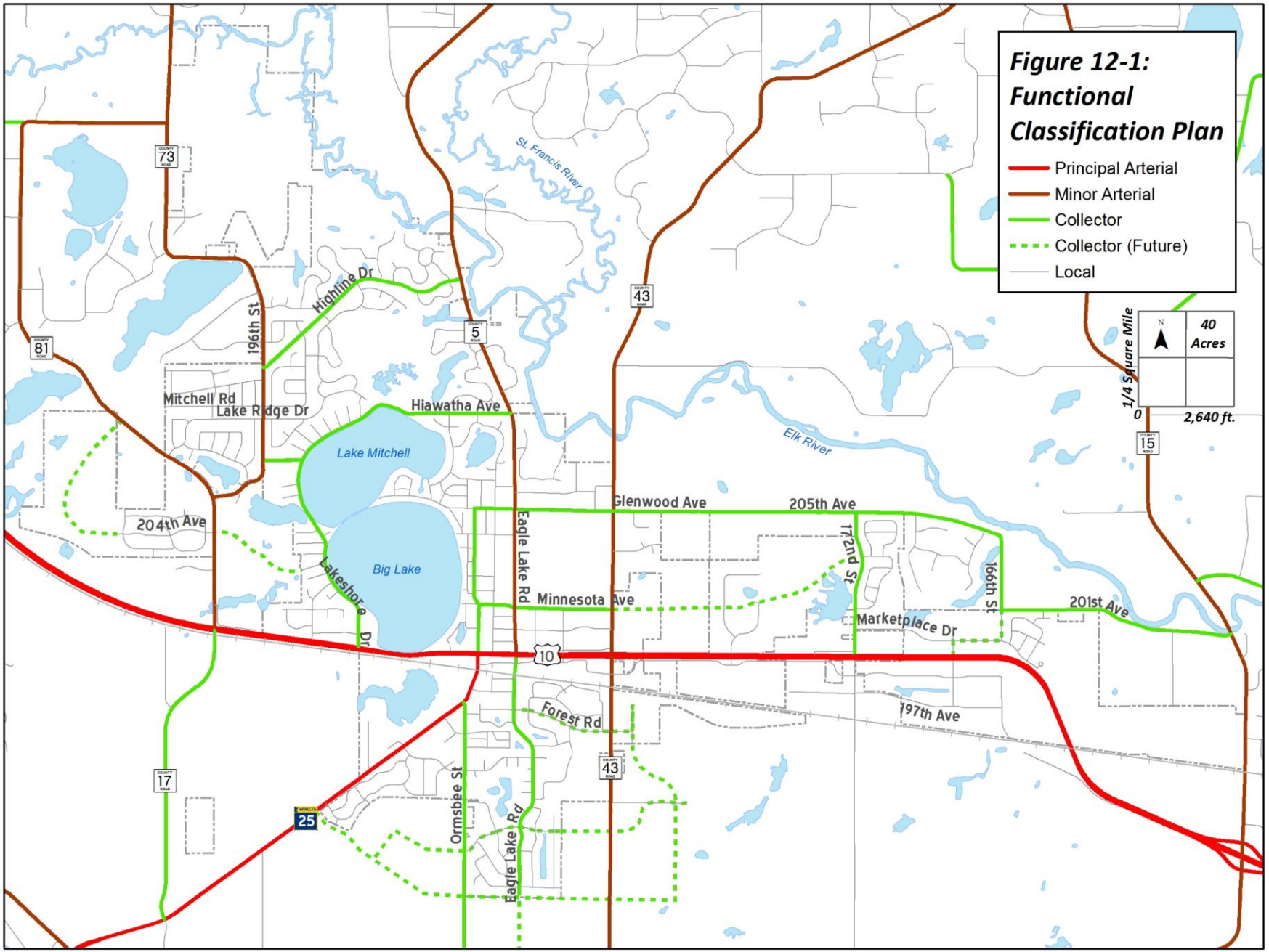


Figure 12-1:
Functional
Classification Plan
Principal Arterial
Minor Arterial
Collector
Collector (Future)
Local
1/4 Square Mile
40
Acres
0
2,640 ft.
St. Francis River
Elk River
Highline Dr
196th St
Mitchell Rd
Lake Ridge Dr
Hiawatha Ave
Lake Mitchell
Big Lake
204th Ave
Lakeshore Dr
Eagle Lake Rd
Glenwood Ave
205th Ave
172nd St
166th St
Minnesota Ave
Marketplace Dr
201st Ave
197th Ave
Forest Rd
Ormsbee St
Eagle Lake Rd
73
81
5
43
15
10
17
25

Table 12-1
Descriptions of Road Functional Classes

	Principal Arterial	**Minor Arterial**	**Collector – Major or Minor**	**Local**
Examples	US Highway 10	County Highways 43 and 15	Glenwood, Minnesota, Hiawatha	Many
Definition and Purpose	Partial access control and high priority for traffic flow with at-grade signalized intersections for major roads. High-volume, moderate-to-high speed movement across metro areas with minimal access to adjacent land.	Augments and feeds the primary arterial system and intended for moderate-volume, moderate-speed traffic movement. Access to abutting property is partially controlled.	Collects and distributes traffic between arterial streets and local streets. Intended for short trips while providing access to abutting properties. Design varies depending on the character and intensity of traffic generated by land development.	Provides direct access to abutting property. Intended for low-speed, low-volume movement and short trips. Design varies depending on the character and intensity of traffic generated by land development.
Traffic Flow and Access Priority	Flow : Access 90 : 10 At-grade intersections with arterial and collector streets. Signals are uniformly spaced for optimum flow. Driveway and street intersections designed for maximum decrease of 10 mph in thru-lane for turns.	Flow : Access 60 : 40 Safety is higher priority than traffic flow in determining signal spacing.	Flow : Access 40 : 60 160 feet spacing recommended for non-residential driveways	Flow : Access 10:90 No restrictions. 40 feet between access
Spacing	3 to 10 miles	½ to 1 mile	¼ to ½ mile	As required
Trip Length	Across metro areas and between major activity centers	Between and within activity centers	Local street to arterial street (1/2 to 2 miles)	Access to individual property; less than ½ mile
Typical Traffic Speeds	65 mph and under	55 mph and under	Under 35 mph	Under 30 mph

Local and Collector Street Design

Design and build streets to accommodate all modes of movement, provide safety and support land development.

1. Interconnect Local Streets

During the plat review process, ensure that local streets are interconnected when feasible. Allow some cul-de-sacs, especially where necessary to serve difficult locations or protect natural resources, but interconnect most local residential streets for efficient driving, walking and bicycling.

2. Municipal Road Design Standards

Adopt and use slightly narrower standards for the width of Local and Collector roads, as shown in Table 12-3.

3. Plan for Complete Streets

Obtain enough land during the subdivision process to include sidewalks, bike paths, bike lanes and trees on local or collector streets where supported by City plan, policy or ordinance. Ensure that the ability to circulate by automobile is protected.

4. Adjust Local and Collector Road Width Standards

Study and adopt slightly narrower standards for the paved width of future Local Residential Streets as shown by Figure 12-2 and Table 12-3. Adopt a preferred standard width but allow some deviation in either direction upon staff agreement and Council approval.

Current Width Standards for Local and Collector Roads

The currently adopted width standards for Local and Collector Streets in Big Lake are shown in Table 12-2.

Table 12-2
Current Functional Classification and Roadway Design Standards

Classification	Face-to-Face Width	Right of Way Width	Number of Parking Lanes
Local Residential	32'	60'	0
Service Roads	28′	50′	0
Cull-de-Sac	32′	60′	0
Minor Collector	Determined by City Engineer	80'	0
Major Collector	Determined by City Engineer	100′	2

Source: City Code Section 1108, Design Standards

Most recently-built residential streets in Big Lake measure 32 feet between curb faces; a few measure 36 feet or more. A more appropriate, and more commonly used, width for Local Residential Streets would be **29 feet** measured to the face of the curbs, with parking on both sides. Streets with very low volumes and speeds could be 26 feet with parking only on one side.

Studies have shown that excessive pavement widths contribute to higher speeds, reduced safety and increased construction and maintenance costs.

Conversely, there are several benefits of narrower residential streets: (1) reduced costs, (2) more green space, (3) less stormwater runoff, (4) appropriately slower traffic and (5) greater safety for bicyclists, pedestrians, and children at play.

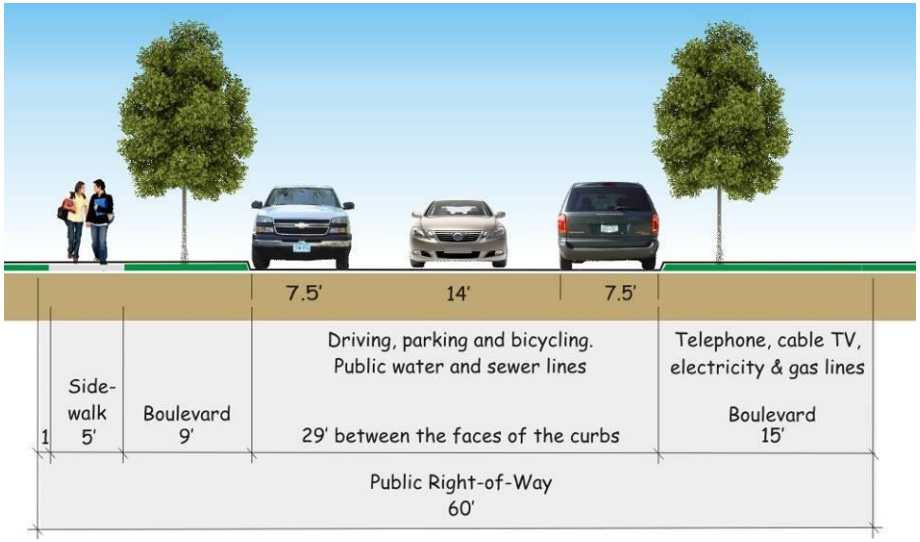


Figure 12-2: Recommended Local Residential Street Design

Table 12-3
Road Design Standards (Typical) by Classification

	Jurisdiction	Average Vehicles / Day	Road Width incl Turn Lanes	Right-of Way Width	Travel Lanes	Turning Lanes	On-Street Parking	Design Speed	Sidewalks
Principal Arterial (Expressway)	Federal or State	> 15,000	Varies	160' - 200'	4	Yes	No	55 – 70	No
Minor Arterial	County	2,000 - 10,000	24 – 58	80 – 100	2	Yes	No	35 – 50	One or both sides in urban locations
Parkway Collector	City	1,000 - 4,000	34 – 48	100	2	Yes	In Bays	35 - 45	Sidewalk and bike path
Collector	City	1,000 - 3,000	34 – 36	66 - 100	2	Yes	Yes	30 – 45	One side or both sides
Local Residential	City	300 - 1,000	29	60′	--	No	Yes	30	One side
Local Residential or Cul-de-Sac	City	< 300	**26 – 29**	58 - 60'	--	No	One side	25	Varies based on conditions

-- Table dimensions are preferred standards. Built dimensions may vary up or down from the standards with City staff and Council approval.
-- Standards apply to new construction. Rebuilt streets may vary based upon conditions.
-- Road widths are measured to the face of the surmountable curbs.
-- Road width, particularly for collector streets, may be increased to accommodate striped bicycling lanes.
-- Narrow streets may have parking restricted to one side only.
-- Shaded cells in the table show the streets and roads fall under City jurisdiction.

Typical Local Street in Big Lake. 32 feet wide. Sidewalk on one side. No street trees.

Recommended Local Street example with street trees.

Collector Street example.

Collector Street Network

Plan and build a system of Collector Streets for efficient movement across and between neighborhoods.

1. Connections across the City

Expand the current system of Collector streets that provide movement across and among neighborhoods. Follow the pattern suggested by Figure 12-1, Functional Classification Plan.

Collector Streets are intended to carry traffic entirely across one or more neighborhoods. They function in between Local and Arterial Streets in that they have fewer driveways than a Local but wider pavement, more continuity, more directional alignment and slightly higher speeds. They might also include bicycle lanes and sidewalks on both sides. Local Streets should also be planned for continuity and connections but may have more curves and shorter runs.

To the extent possible, the new collector streets should be located approximately one-quarter to one-half mile apart. That would form a strong foundation for a logical and economically efficient street system.

Most of the Collector Streets needed to accommodate planned growth already exist, so the City can build upon that framework. The primary additional Collector Streets would be:

Minnesota Avenue

Minnesota Avenue should be extended from County Highway 43 to 177th Street. This alignment will relieve some intra-city traffic from Highway 10, which is not intended for short local trips. It will also serve bicyclists and pedestrians.

This route will cross the Big Lake Industrial Park either where a segment has already been built or on a new alignment one block north. The northerly alignment would require platting an additional segment of street right-of-way but would allow business expansion over part of the original alignment. The future residential neighborhood to the east has planned for this route.

Minnesota Avenue should be improved to "parkway" standards, as described below.

Southern Parkway

A Collector Street designed as a "parkway" is planned to run from Minnesota Highway 25 east to County Highway 43 then swing north to the NorthStar commuter rail station. Ultimately, this route should loop further east to meet 172nd Street at Highway 10.

204th Avenue

As the far western part of the city develops, 204th Street should be extended with Collector standards to loop back to County Highway 81.

Traffic Benefits

Big Lake is generally oriented east and west, and the number of reasonably continuous east-west collector roads is inadequate given the length of the city. North-south movement across the city is better but still inadequate. The lack of continuous (or even semi-continuous) east-west routes requires drivers to use Highway 10 as a crosstown travel route, which, as traffic volumes grow, is an ever-increasing issue in terms of safety, convenience, and sustainability.

As comparatively more orderly development occurs in the future, where planned neighborhoods are contiguous to previously developed areas, east-west and north-south Collector routes should be identified early in the platting process to provide a framework on which the planned neighborhoods will be designed.

Parkway Collector Street System

Create a system of landscaped collector streets called parkways.

1. Collector Street System

Designate certain existing or future Collector Streets as "parkways" and improve them with trees, sidewalks, off-road bicycling paths and/or bicycle lanes. Refer to Figure 12-2, for recommended streets.

Streets do more than move traffic, they also provide structure, identity and, sometimes, beauty to a city. Because Big Lake is on a flat, treeless sand plain, streets can be used to do all of that. The parkway system would be an element of a broader effort to use public facilities to accomplish these objectives from the Concept Plan:

- Raise housing values and attract move-up housing
- Create small-town charm and character
- Attract jobs and economic development
- Enhance quality of life
- Sustain the property tax base.

These existing or future streets should be retro-fitted or newly built with some or all of these features:

- Regularly spaced trees behind the curb in the public road right-of-way
- Landscaped median
- A sidewalk on one or both sides
- A ten-foot wide asphalt bicycling path on one side
- Five-foot wide bicycling lanes striped on the road
- Two travel lanes; possibly also a left-turn lane at major intersections.
- A reduced number of street and driveway intersections
- Decorative lighting, a step up from the standard street lighting.

The best opportunity for a new parkway would be the Collector Street planned on the southern perimeter of the City. Right-of-way would be acquired either during the platting process or through direct purchase in advance of platting; some is already owned.

A 100-foot right-of-way for the southern parkway would provide sufficient land for two travel lanes, green space and bicycling or walking facilities.

Existing streets that are upgraded to parkway standards would work within the existing right-of-way. In the very distant future, there may need to be four travel lanes in a few segments, something the 100-foot right-of-way could accommodate.

The additional cost of the parkway standards cannot be assessed only to the abutting property owners but would have to be spread across a much wider area and/or come from the General Fund. The relatively modest additional cost of a "parkway" compared to a normal Collector Street will benefit the broader neighborhood and have a positive effect on housing values deep into the neighborhood.

Examples of parkway streets.
Many design options are possible.

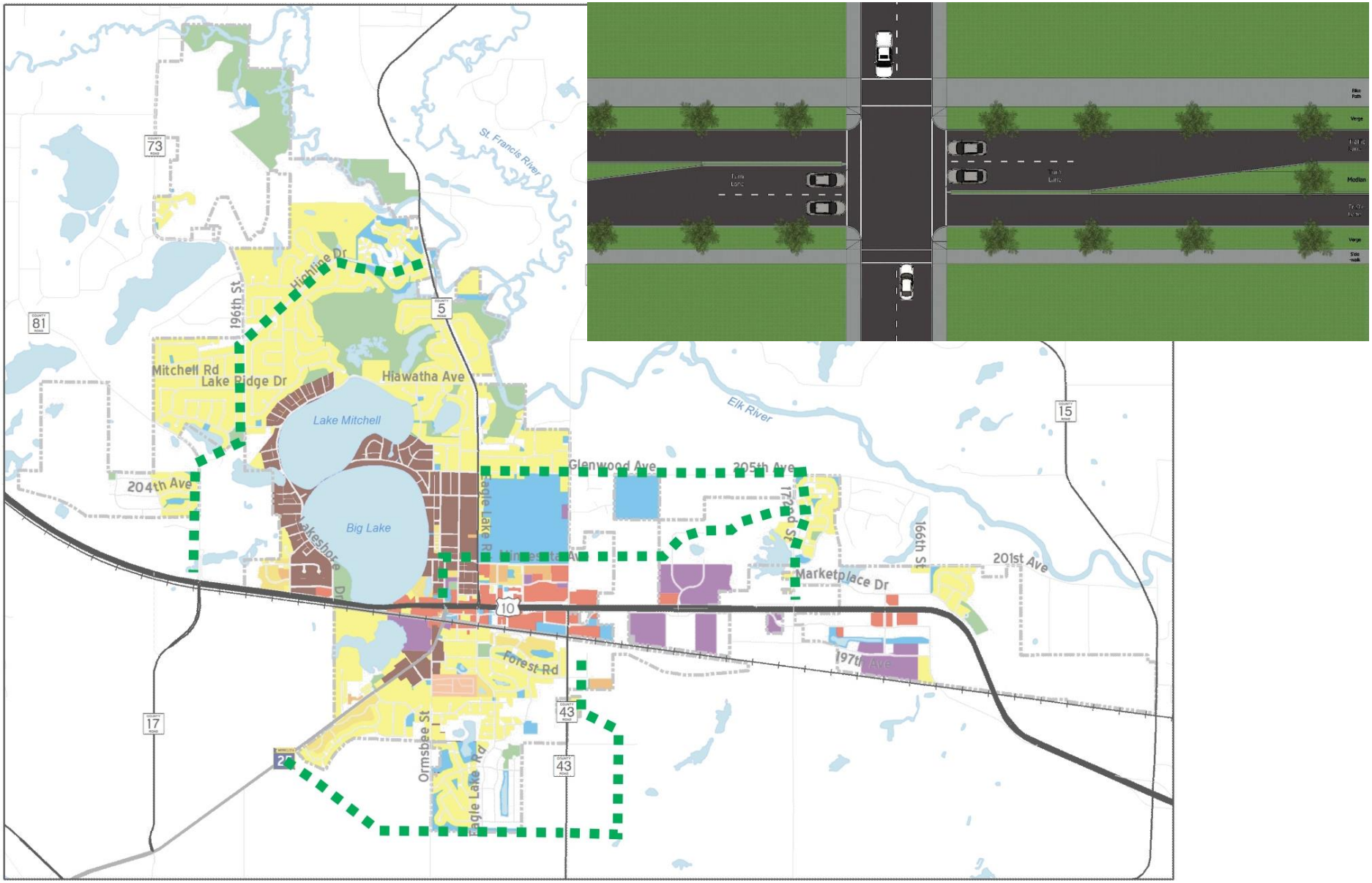


Figure 12-3: Planned Parkway Roads

Inset: Typical parkway plan view, including left-turn lanes at a major intersection, sidewalk, bicycling path and trees.

Mississippi River Bridge Study

Support a second Mississippi River bridge for the sake of regional, county and local development.

History of Studies

Analysis of the feasibility of constructing an additional Mississippi River crossing in the vicinity of Big Lake first began in 1996 when MnDOT conducted the *Mississippi River Crossing Study*. Three additional studies conducted since 1996 include:

- Cumulative Impact Study for the Mississippi Scenic Riverway (2003, MnDOT)
- I-94 – Highway 10 Interregional Connection Final EIS (2006 MnDOT)
- Second Mississippi River Crossing Preliminary Review (2011 City of Monticello)

Each of the four previous studies identified a need for additional capacity across the Mississippi River and evaluated potential crossing locations. Today, the issue is being studied by the Highway 25 Coalition, which comprises representatives from the Cities of Becker, Big Lake, and Monticello; the Towns of Becker and Big Lake; Sherburne and Wright Counties; and MnDOT. The Coalition's comprehensive study, which began in spring 2017, recognizes that the Mississippi River in this location is classified as a Wild and Scenic River and any new crossing of the Mississippi River would need to be fully justified through an environmental review process in order to obtain the necessary approvals. The Coalition's current study is the first step in that process.

Coalition Goals

The Coalition has established three transportation-related goals that support a long-term vision for the TH 25 corridor area. The three goals include improving safety, reducing congestion, and improving freight mobility while encouraging economic development.

Although the study began in 2017, alternative approaches for achieving the goals were analyzed, including some that were previously developed plus new ones. The analysis will work toward identifying a locally preferred alternative, which may or may not include a new bridge.

Implementation Plan

A key component of the Coalition's study will be to develop an implementation plan that identifies next steps and an associated schedule as alternatives move forward from this study through the environmental evaluation (preferred alternative selection), preliminary design, final design and construction. This plan will also identify ways in which the Coalition can: 1) involve and gain support from the public and elected officials and 2) identify potential funding programs and the process to pursue these funding sources.

Possible Time Schedule

The Coalition's study was expected to be completed in 2019, and the process for obtaining Congressional approval and identifying funding for a new river bridge is a long one. In other words, identifying the bridge location is just the beginning of another process that must take place before construction occurs. With this level of uncertainty, if there is a demonstrated need for a new river bridge, it may or may not touch down near Big Lake and, if it does, it will not be built before 2028.

1. Mississippi Bridge Study

Participate in the study for a possible second bridge over the Mississippi River and the related approach roads. Advocate for a result that serves economic development in Big Lake and the Sherburne-Wright County region.

Walking

Improve the network of sidewalks and multi-use paths for walking.

1. Complete Streets

Work toward a street system that more fully accommodates walking and bicycling. Ensure that each neighborhood or district has viable options for safe bicycling. Follow the City's 2010 Complete Streets policy.

In prior decades, development of Big Lake accommodated mostly cars and gave little or no attention to walking and bicycling. That has begun to change as people realize the many benefits of walking and bicycling.

The City of Big Lake adopted a Complete Streets policy resolution in 2010 that states "streets and roads should be designed and operated to be safe and accessible for all transportation users." The specific policy recommendation states "bicyclist and pedestrian transportation users shall be included in street construction, re-construction, re-paving and re-habilitation projects" but provides some exceptions. The policy goes on to explain that significant destinations, such as schools, be given high priority for project development.

"Complete Streets" means that walking and bicycling should be considered and implemented on a neighborhood or district basis, using a variety of techniques.

2. Residential Sidewalks

Continue to apply the practice, as written in the Subdivisions chapter of the City Code, of requiring land developers who install streets for future residential neighborhoods to build a six-foot concrete sidewalk along at least one side of all Local and Collector Streets in their plats.

A sidewalk will be added to at least one side of an existing neighborhood street when the street is completely rebuilt unless the project falls under one or more of the exceptions listed in the City's Complete Streets policy.

3. Safe Routes to Schools

Build sidewalks along certain existing streets as needed to implement the City's 2015 Safe Routes to School Plan. The means of paying for those improvements will be determined by the City Council.

4. Commercial and Industrial District Roads

Require concrete sidewalks along at least one side of future streets in industrial parks and commercial areas. Existing streets in those areas may have sidewalks installed if property owners express an interest.

In existing commercial or industrial districts that are undergoing redevelopment, sidewalks should be required on at least one side of the street.

5. Town Center

The planned Town Center should be easily walkable and have a sidewalk in front of each new development.

6. Arterial Roads

Build sidewalks along segments of US Highway 10, Minnesota Highway 25, County State-Aid Highway 43 and County Roads 43, 73, 81 and 68 on a case-by-case basis. Sidewalks will be built only in those road segments where it has been determined that a sufficient demand for walking has been demonstrated. In some cases, walking will be accommodated on asphalt paths that are shared with bicyclists.

Frontage roads of Highway 10 should have a sidewalk or asphalt path on at least one side.

Bicycling

Continue to improve the network of streets, striped lanes and off-road multi-use paths for bicycling.

1. Complete Streets

Work toward a street system that more fully accommodates bicycling and walking throughout the city. Ensure that each neighborhood or district has viable options for safe bicycling. Follow the City's 2010 Complete Streets policy.

2. Off-Street Paths Network

Continue to expand the system of off-street bicycling facilities as shown by Figure 14-2, 2016 Trails Plan, in the Parks and Trails Plan and listed below. See also Appendix B of the 2016 *Parks, Trails and Open Space Master Plan.*

First Priority Trail Improvements

- Build a trail along **County Highway 73** (196th Street) connecting Delta Street and 204th Avenue Northwest
- Build an additional connection from **County Highway 73** along Manitou Street (Lake Ridge Park to Lake Mitchell)
- Continue the trail from Highline Park along **Highland Drive; c**onnect it to County Road 73 Trail
- Create a regional connection along **County Highway 5** (Eagle Lake Road) at Lions Park North to Sherburne National Wildlife Refuge
- Build a connection along **205th Ave NW** (Bluff Park neighborhood to Liberty Elementary)
- More clearly delineated pedestrian/cycle route along **198th Avenue**
- Build an additional connection from **County Highway 73** along Highland Trail to connect to Highland Drive/to McDowell Park
- Create a **direct east-west connection** from 204th Avenue NW to Big Lake (a trail easement will potentially be required).

Long-Range Trail Improvements

- **Elk River Trail** (south side of Elk River from CSAH 43 to 172nd Street)
- Elk River **Trail** (south side of Elk River between CSAH 5 and CSAH 43)
- **Elk River** (Sweetwater Bend to CSAH 5)
- **Industrial Park East Trail** (Minnesota Avenue to Highway 10)
- **172nd Street** Parkway to Highway 10
- **Hudson Woods Trail** (172nd Street to 196th Ave and US 10)
- Trail Connecting **Big Lake Marketplace to Hudson Woods** (along Railroad)
- CSAH 81 Trail from **Norland Park to Wood Lake**
- CR 81 Trail from **Norland Park to Highway 10**
- Highway 10 Trail (from **Lakeshore Drive to Landis Lake**)
- South Side **Highway 10 to Highway 25** Trail
- CSAH 81 to Highway 10 to Highway 25 to Keller Loop Trail
- **Loop Trail** CSAH 43 to 172nd Street South
- **Minnesota Avenue Trail** (CSAH 43 to Prairie Meadows PUD)

Bicycling on a path along 172nd Street

3. Local Streets

Continue to require that most local and collector residential streets are interconnected to the extent feasible and linked to the framework of arterial streets. This is the most effective and least costly way to accommodate and encourage bicycling. No special treatments such as street markings or signing are needed in many cases.

These streets are generally low-volume, low-speed local residential streets or streets having direct access to the off-street pathway network.

4. Future Local and Collector Streets

Require future local and collector streets to be interconnected to the maximum extent possible so that all can become part of the bicycling and walking network. New collector and minor arterial roads should be built with bicycle lanes or paved shoulders that meet MnDOT guidelines for width, striping and signage. Use bike-safe sewer grates.

5. Site Design

Require that major commercial developments, tourist attractions, public buildings, or Town Center buildings include bicycle parking near the entrance. Design safe routes between streets and storefronts.

Parking

Off-Street Parking for Business or Industry

1. Amend the zoning ordinance to greatly reduce or eliminate minimum off-street parking requirements for businesses and industries. Allow more business discretion in setting parking quantities. Encourage and facilitate negotiations between site owners about shared parking.

   Businesses usually have a very good idea of what their parking needs are, and no auto-dependent business would forego on-site parking altogether. In Big Lake and other cities, excessive minimum parking requirements have often resulted in many unused spaces, even at peak periods. Reducing unneeded parking pavement will help create a more attractive and walkable city. This amendment would be consistent with the plan objective of giving more discretion to the private market.

Goods Movement and Rail Lines

Trucking accounts for deliveries and shipments of much or most raw materials to and from Big Lake. Three local industries have rail spurs from the Burlington Northern-Santa Fe Railroad (BNSF) track.

In recent years there has been private interest in the development of a rail-served, industrial district. This idea is an element in the study by the Highway 25 Corridor Coalition for a possible second bridge over the Mississippi River. A candidate location for the facility is south of the BNSF right-of-way near CSAH 17. This location has a "place-holder" on Figure 11-1, Land Use Plan Map.

Factors to be considered in the facility's feasibility are:

- Availability of land; 200 or more acres might be needed
- Engineering feasibility; tracks to and from the BNSF mainline would need to be constructed, and the ability to construct these linkages within design parameters will be critical
- Volume of freight; in order to make the development worthwhile, a minimum required volume of freight would be needed
- Truck operations on CSAH 17 and TH 25.

Transit and Para-Transit

2. Tri-Cap

Continue to support Tri-Cap, which provides bus service on an on-demand, dial-a-ride basis.

Tri-Cap is a way to move to or from any destination in Big Lake city limits, including the Northstar commuter rail station. There is no other local bus service in Big Lake. Please refer to Chapter 5, Transportation System Assessment, for a further description of this program.

3. Northstar Commuter Rail

Continue to support the Northstar commuter rail service by planning and zoning for attached housing near the station and the extension of a parkway street from the station. Please refer to the Transportation System Assessment for a further description of the Northstar system.

Road Access Management

Protect traffic flow and safety along roads in Big Lake during land development and road planning.

1. Access Management Guidelines

Follow access management guidelines for City, County and State roads when reviewing plats and site plans. Coordinate with Sherburne County and the Minnesota Department of Transportation to help protect the flow and safety of their roads.

Access management is 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. Access management guidelines provide a means for transportation engineers and planners to balance private property concerns with the need to provide for a safe and efficient transportation system.

Access management criteria by the state and the county are shown on tables 12-4 and 12-5 on the next page.

Please refer to Chapter 5, Transportation System Assessment, for a further description of the purpose and benefits of road access management, especially along US Highway 10.

2. Federal, State and County Highways

Follow access management guidelines published by MnDOT for *Medium Priority Interregional Corridors* along US Highway 10. Coordinate with MnDOT to ensure that access between Highway 10 and any adjacent and development is in compliance with those criteria. (Refer to Chapter 5, Transportation System Assessment, for a description of the Highway 10 corridor and its crash rates.)

Complying with MnDOT's access management criteria may require the eventual consolidation of certain driveways during redevelopment and building parallel City streets, such as Minnesota Avenue.

3. City Streets

Follow the City's current access management guidelines for streets under its control.

The City's criteria for local streets are outlined in Chapter 11 of the City's Subdivision Ordinance and describe driveway design, driveway spacing along City blocks and driveway corner clearance.

The City's approach to access management indicates that new commercial, industrial or multiple family housing fronting on an arterial or major collector street shall be designed to minimize the number of direct access points through the following methods, which are listed in order of preference. If the highest preference is not possible, the next preference shall be used until an access method is possible:

1 Access from a local street
2. Frontage road serving multiple properties.
3. Frontage driveway or connected parking lot with cross easements serving multiple properties.
4. Shared driveways.
5. One driveway access, no closer than two hundred (200) feet to another driveway and that meets the City's minimum spacing standards from a street intersection.

Aviation

There is a privately-owned, grass landing strip parallel to CSAH 17 west of the solar farm. That facility may remain or eventually re-purposed as farm land or urban development.

The nearest major airport is St. Cloud Regional Airport. This airport has domestic flights from Saint Cloud and is 23 miles from Big Lake.

Table 12-4
MnDOT Access Management Criteria for US Highway 10

Category	Area or Facility Type	Typical Functional Class	Intersection Spacing		Signal Spacing	Private Access	Turn Lanes
			Primary Full Movement Intersection	Conditional Secondary Intersection			
2	**Medium Priority Interregional Corridors** *(TH 10 from TH 169 to TH 24)*						
2B	Urbanizing	Principal Arterials	1/2 Mile	1/4 Mile	STRONGLY DISCOURAGED By Deviation Only	By Exception or Deviation Only	Yes
2C	Urban Core		300 – 600 depending on block length		1/4 Mile	Subject to Conditions	Yes

Table 12-5
Sherburne County Access Management Criteria

Area Type	Functional Class	Facility Type	Intersection Spacing		Signal Spacing	Private Access	Turn Lane
			Full Median Opening	Right-In/ Right-Out			
Minor Arterials							
Urbanizing	Minor Arterial	Divided	1/4 Mile	1/8 Mile	1/4 Mile	By exception or deviation only	Yes
		Undivided	1/4 Mile	1/8 Mile		660’ minimum or subject to conditions	Yes
Urban Core	Minor Arterial	All	300-660 feet dependent upon block length		1/4 Mile	Permitted subject to conditions	Yes
Collectors							
Urbanizing	Collectors	All	1/4 Mile	N/A	1/4 Mile	660’ minimum or subject to conditions	Yes
Urban Core	Collectors	All	300-660’ dependent upon block length		1/8 Mile	Permitted subject to conditions	Yes
Local							
Urban Rural	Local Road Local Road	All	300-660 feet dependent upon block length 1/4 Mile		warranted NA	Spacing from any intersection should be 330’	Yes

Source: Sherburne County 2007 Transportation Plan. Being revised in 2018 after the City of Big Lake Comprehensive Plan was adopted.

Plan Action Steps

The City will take the following major steps to implement the recommendations of the Transportation Plan.

Table 12-6
Major Transportation Plan Actions

Action	Timing
Adopt a **road functional classification system** and apply it to those streets and roads that are under municipal jurisdiction	2018 and ongoing
Continue involvement with TH 25 Coalition to advocate Big Lake's position on the possible second **river bridge** and the "rail served industrial park." Advance the discussion on the viability or feasibility of new roles for TH 25, CSAH 17 and CSAH 11.	Following strategy discussions among Big Lake City staff, other agencies and the City Council.
Conduct a study to determine the feasibility of the proposed **parkway system**: ▪ Obstacles and constraints? Opportunities? Costs? ▪ Conceptual-level designs? ▪ Means of land acquisition for the southern parkway ▪ Present Council with study conclusions and recommendations.	2019
Apply the **road access management guidelines** when building new streets or reviewing plats and site plans. Ensure that plans are sent to MnDOT or Sherburne County during the plan review period for their comment. Communicate with state and county staff to ensure that the access management criteria are understood.	Ongoing
Amend the zoning ordinance to greatly reduce or eliminate minimum off-street **parking requirements** for businesses and industry.	2019

Natural, Cultural and Agricultural Resources Plan

This chapter describes how the City will work to manage, protect and enhance its natural and cultural resources.

Being a good steward of our natural inheritance should be a consideration in all that the City does, from public works through site plan review. Surface and ground water are of particular importance because of the quality of the area's many lakes, rivers and wetlands and the sensitivity of the aquifer to pollution from the surface. The Elk River corridor is a special gem, as it includes water, forest and wildlife habitat in largely undisturbed conditions.

Please refer to the Natural, Cultural and Agricultural Resources Assessment, chapter 3 of this plan, for a description of the current features and conditions.

Major Natural Resources Issues

1. **Wetland Protection:** Can or should degraded or destroyed wetlands be restored and used as amenities in future neighborhoods?

   Some wetlands in urban growth locations have been plowed and drained for farming.

2. **Floodplain Use:** Should some portion of the Elk River floodplain be acquired for linear public park and trail? If so, which unit of government should lead in that effort, the County or the City? What should be their respective roles?

   This idea was raised in the prior Park System Plan and 2009 Comprehensive Plan. It would be an ambitious undertaking, as many locations along the river are developed for housing. For such as trail to be most useful, it should connect the neighboring cities of Becker and Elk River.

3. **Protection during Development:** Can a sustainable balance be found between land development and natural resource protection?

4. **Resource Stewardship:** How should we use what we have?

Surface Water

Protect the lakes, rivers and wetlands from pollution, soil erosion, invasive species and riparian vegetative loss.

The City has a high degree of control over the quality and flow of surface water as it owns the means of conveyance, enforces regulations pertaining to wetlands and floodplains, approves plans for land development, and enforces certain construction practices.

These and other methods are described in more detail in the Surface Water Management section of the Utilities Plan chapter of this document.

1. Storm Water Pollution Prevention Plan

Continue to follow the Big Lake *Storm Water Pollution Prevention Plan*, a multi-faceted approach to protecting the quality of surface runoff from widespread sources. That plan addresses Public involvement, public education, illegal discharges, land development and "good housekeeping." A few examples its tools are:

- Carefully engineered site plans
- Ponds to collect, detain and infiltrate water
- Soil erosion control blankets and fences
- Street sweeping during construction and several times each year thereafter
- Emphasis on conveying water through natural courses and infiltrating it on-site instead of draining it quickly through pipes to a natural wetlands or lake
- Protecting wetlands from excavation, filling, drainage, diking or soil erosion
- Requiring a building setback and vegetated buffer around each wetland
- Restoring degraded wetlands
- Controlling hazardous wastes
- Encouraging use of less lawn fertilizer and a movement toward low-nitrogen fertilizers
- Protecting City wells from surface contamination through land use controls

2. City Controls

Continue to enforce these and other City ordinances, which are briefly described in the Utilities Plan chapter:

- Shorelands (City Code section 1065)
- Wetlands (City Code section 1066)
- Floodplain (City Code section 1064)
- Mississippi Recreational River District
- Subdivision Code
  - Storm Water Management
  - Erosion Control
- Zoning Code

3. City Capital Improvements

Continue to apply the principles of the SWPPP and wise engineering practices when designing or reviewing public improvements, including streets, sewer or water pipes and parks.

4. City Operations

Continue to collaborate with the Sherburne Soil and Water Conservation District, the Big Lake Community Lakes Association and Sherburne County in research, remediation and educational work.

Continue to sweep streets on a regular basis, clean storm drains and maintain ditches.

5. Site Plan and Plat Review

Continue to apply the guidelines of the SWPPP and other sound design ideas when reviewing site plans and plats.

The Elk River Corridor

The Elk River corridor is the part of the region that is most rich in unspoiled natural resources. Consequently, it should be given a high level of protection and care.

1. Floodplain, Shoreland and Wetland Protections

As properties along the Elk River are brought into the City through successful annexation petitions, apply zoning designations that are consistent with the Land Use Plan Map, Figure 11-1, and related guidance; this would primarily be the R-1 zoning district.

In addition, apply the overlay zoning districts required by the presence of the river. Those are:

- Floodplain Overlay – in locations mapped by the Federal Emergency Management Agency
- Shoreland Overlay – within 300 feet of the ordinary high water mark along the river
- Wetland Overlay – on land delineated through on-site inspection as having wetland characteristics as defined by the Minnesota Board of Water Resources.

2. Habitat Protection

During the review of preliminary plats and site plans, strive to reduce the loss of riparian forest and related habitat through private open space set-asides, public park land acquisition, careful road location and custom grading of lots. Try to preserve the nearby windrows of trees for the beauty, intrinsic value and remembrance of past conservation practices.

3. Public Access to the Riverfront

Provide some level of public access to the riverfront through the acquisition of land for public parks and trails. The locations of public open space will be determined during the platting process, although two park locations are suggested on Figure 11-1, Land Use Plan Map, and Figure 14-1, Current and Future Parks.

4. Annexation Petitions

Look favorably upon annexation petitions along the river as a means of protecting these resources and because these are prime housing development locations.

Forests

1. Tree Protection

Continue to protect groves and forests across the city by enforcing the protective regulations in the zoning ordinance, Section 1027.06, and the subdivision ordinance, Section 1108.22 of the City Code. This will be particularly important in locations of mature forest, such as along the Elk River corridor and nearby.

The riverfront forest and historic windrows of trees in the Elk River corridor are valuable natural resources.

Parks

1. Natural Preservation and Stewardship

Identify, preserve, restore or enhance existing valuable natural areas, such as wetlands, major wooded areas and native prairies (if any) and provide for appropriate private or public use. Try to identify such lands prior to the neighborhood development process.

The community park planned in the southeastern quadrant of the city is an opportunity to ensure the protection of a major wetland while providing public recreation and access to open space.

Include quiet spaces in parks and playgrounds for strolling or sitting wherever the landscape allows. Some locations in the park system should be managed to retain their wooded or otherwise natural characteristics to invite exploration and discovery. Such places offer a small refuge from the bustle of the city and offer opportunities to connect with nature on a daily basis.

Parks and other public open spaces are a good way to protect key natural resources and provide public enjoyment, especially when adjacent to lakes or wetlands. This is an example from Kellerwood Park.

Cultural Resources

1. Protection Process

There are two properties in Big Lake that are eligible to be listed on the National Register of Historic Places but for which nominations have not been formally submitted yet:

- **Big Lake Public School**
  Northwest corner of US Highway 10 and Powell Street
- **Hanson House**
  Northwest corner of Pleasant Avenue East and Eagle Lake Road

Consult with experts and decide whether to submit nominations for a higher level of projection for these properties.

Continue to try to interest a private developer in re-using the historic school. This might be done a part of the large process of evolving a “town center” in this vicinity.

Agricultural Resources

1. Compact City Growth

Protect farm lands by properly managing the perimeter growth of the city.

The Land Use Plan chapter calls for future residential neighborhoods to be adjacent to existing neighborhoods and to have moderate densities. Additional recommendations include encouraging the County to zone nearby locations for a minimum non-farm lot size of at least 5 but preferably 10 acres to discourage semi-rural development and to enable future subdivision into city-sized lots with municipal sewer and water lines.

Plan Action Steps

The City will take the following steps to implement the recommendations of the Natural Resources Plan.

Table 13-1
Major Natural Resources Plan Actions

Action	Timing
Continue to follow the Big Lake ***Storm Water Pollution Prevention Plan***	Continuous
Continue to enforce these and other City **ordinances** to protect surface water: Shorelands, Wetlands, Floodplain, Mississippi Recreational River District, Subdivision Code (Storm Water Management and Erosion Control) and Zoning Code.	Continuous
Continue to apply the guidelines of the SWPPP and other sound design ideas when reviewing **site plans** and plats.	Continuous
Provide some level of **public access to the riverfront** through the acquisition of land for public parks and trails.	Continuous
Look favorably upon **annexation petitions** along the river as a means of protecting these resources and because these are prime housing development locations.	Continuous
Continue to protect groves and **forests** across the city by enforcing the protective regulations in the zoning ordinance, Section 1027.06, and the subdivision ordinance, Section 1108.22 of the City Code.	Continuous
Identify, preserve, restore or enhance existing **valuable natural areas**, such as wetlands, major wooded areas and native prairies (if any) and provide for appropriate private or public use. Try to identify such lands prior to the neighborhood development process.	Continuous
Consult with experts and decide whether to submit **historic designation nominations** for a higher level of projection for Big Lake Public School and Hanson House.	By 2020
Protect **farm lands** by properly managing the perimeter growth of the city.	Continuous

Parks, Trails and Protective Open Space Plan

This chapter summarizes previously-adopted plans for future multi-use off-road paths (trails) and proposes five new parks. Recommendations are also included for using parks to improve the appearance of the city, protect the environment, maintain the system and acquire additional park land.

Please refer to the Parks and Trails System Assessment, chapter 6 of this plan, for a description of the current facilities and needs.

Figures

Major Parks and Trails Issues

The following are the major issues in the topic of parks and trails identified through the analysis of conditions.

1. **Neighborhood Parks:** Should there be more mid-sized, neighborhood parks in the 5- to 10-acre range?
2. **Sidewalks:** Should there be more sidewalks in all parts of the city as an integral element of the walking and bicycling network, which would be supplemented by off-road, multiple-use paths? Should the City work to retrofit established neighborhoods with sidewalks?
3. **Trails:** How aggressive should the City be in extending the many disconnected off-road paths?
4. **Athletics Complex:** Should the City acquire land for and build an outdoor athletics complex for organized team sports? If so, where should it be and what should it include?
5. **School Facilities:** Should the City forge a closer working relationship with the School District for shared facility use?

Goals for the Park and Trail System

These are the overall goals for the park and trail system. They are based on the 2016 *Parks, Trails and Open Space Master Plan* and ideas generated during the process of preparing the Comprehensive Plan.

- **Increase recreation opportunities in Big Lake**
  - Plan and acquire land for new parks in future neighborhoods; please refer to Figure 14-1, Park System Plan for those locations
  - Plan and acquire land for a community park in the southeastern quadrant of the city, southeast of the Northstar rail neighborhood; see Figure 14-1 for the location
  - Create a park dedicated to athletic fields
  - Partner with the School District for more shared use of school facilities and City parks.
- **Improve existing parks and park land**
  - Continue to budget for and improve existing parks
  - Improve River Oaks Park according the its master plan
  - Continue to maintain the City's flagship park, Lakeside, as a local and regional attraction
  - Follow the detailed recommendations of the 2016 master plan.
- **Extend the system of off-road trails and sidewalks to improve walking and bicycling within neighborhoods, across the city and to parks, schools and to other destinations**
  - Link trails to provide local connections
  - Create new trails where necessary to link neighborhoods that lack access to the system
  - Coordinate with the sidewalk system
  - Make it safer to cross major roads
  - Improve wayfinding signs

Completing the planned improvements to River Oaks Park has high priority in this plan.

Parks and Protective Open Space System Plan

Plan, acquire and develop parks to help meet the outdoor recreation needs of the Big Lake population, protect environmentally sensitive areas, provide environmental education and improve urban design

Several new park sites are proposed in conjunction with the plan for future land use and the forecast growth of households and population.

1. Neighborhood Parks

The approximate locations of five future Neighborhood Parks are illustrated on Figure 14-1, Park System Plan, and on Figure 11-1, Land Use Plan Map. Exact locations will be determined by in-field examinations of land characteristics and negotiations with developers during neighborhood design. These approximate locations are recommended:

- **North:** Three sites in future neighborhoods north of Glenwood Avenue, near the Elk River. Each is approximately 20 to 25 acres and includes upland for active recreation and floodplain protective open space.
- **South:** One site in a future neighborhood along the proposed southern parkway. Approximately 5 acres.
- **West:** Two sites site in a future neighborhoods in the western sector of the city. Approximately 8 to 10 acres each.
- **East:** An addition to Hudson Woods Park in a beautiful, mature oak forest. A playfield and open space in the Prairie Meadows neighborhood, which has been platted but not improved yet. .

2. Community Parks

A future Community Park is proposed in the southeastern quadrant of the city. At 125 to 150 acres, this site would encompass a major wetland and include dry upland for active recreation. This land should be added to the list of candidate sites for a set of athletic fields. This idea was first raised in the City's 2005 park system plan and continued in the Northstar neighborhood plan.

Because of its size and location, the City would likely have to purchase this land as opposed to receiving for free it as part of a plat dedication.

3. The Elk River Corridor

The Elk River is a beautiful natural resource that is largely undamaged by nearby development. Consequently, it represents a major opportunity to allow residents to experience nature, launch a canoe or relax in a tranquil setting.

The three future Community Parks along the Elk River north of Glenwood Avenue would add to the established pattern of riverfront parks. The City's existing river parks are Sweetwater Bend, Riverside Landing, River Oaks and Hidden Rivers. Big Lake Township Lion's Park also sits on the Elk River. Longer term, there is potential for another riverfront park east of 166th Street.

Acquiring new park sites along the river is an opportunity that should not be missed, as it will add immeasurably to the quality of life in Big Lake and sustain the value of the nearby neighborhoods.

Locations next to the river instead of the middle of the neighborhood would maximize their value, provide public access to the river and protect the natural qualities of the riverfront.

These parks should include upland for active recreation, playgrounds and picnic sites as well as riverfront wetlands and floodplains. The protected open space will provide opportunities for appreciating nature, strolling, relaxing and water access.

Connections among all of the riverfront parks may be made in several ways:

- Via local streets, sidewalks, on-street bicycling lanes or off-street bicycling paths
- Via linear public open space along the riverfront.

4. River Oaks Park

The City will continue to improve River Oaks Park as recommended in its 2014 master plan, which is shown by Figure 6-3 in the Parks and Trails Assessment chapter. The master plan calls for a major disc golf course, picnic facilities, paths, recreational vehicle and tent camping, a wetland boardwalk and a playground. The City hopes that River Oaks becomes a "destination" park. This park is located between County Road 5 and the Elk River.

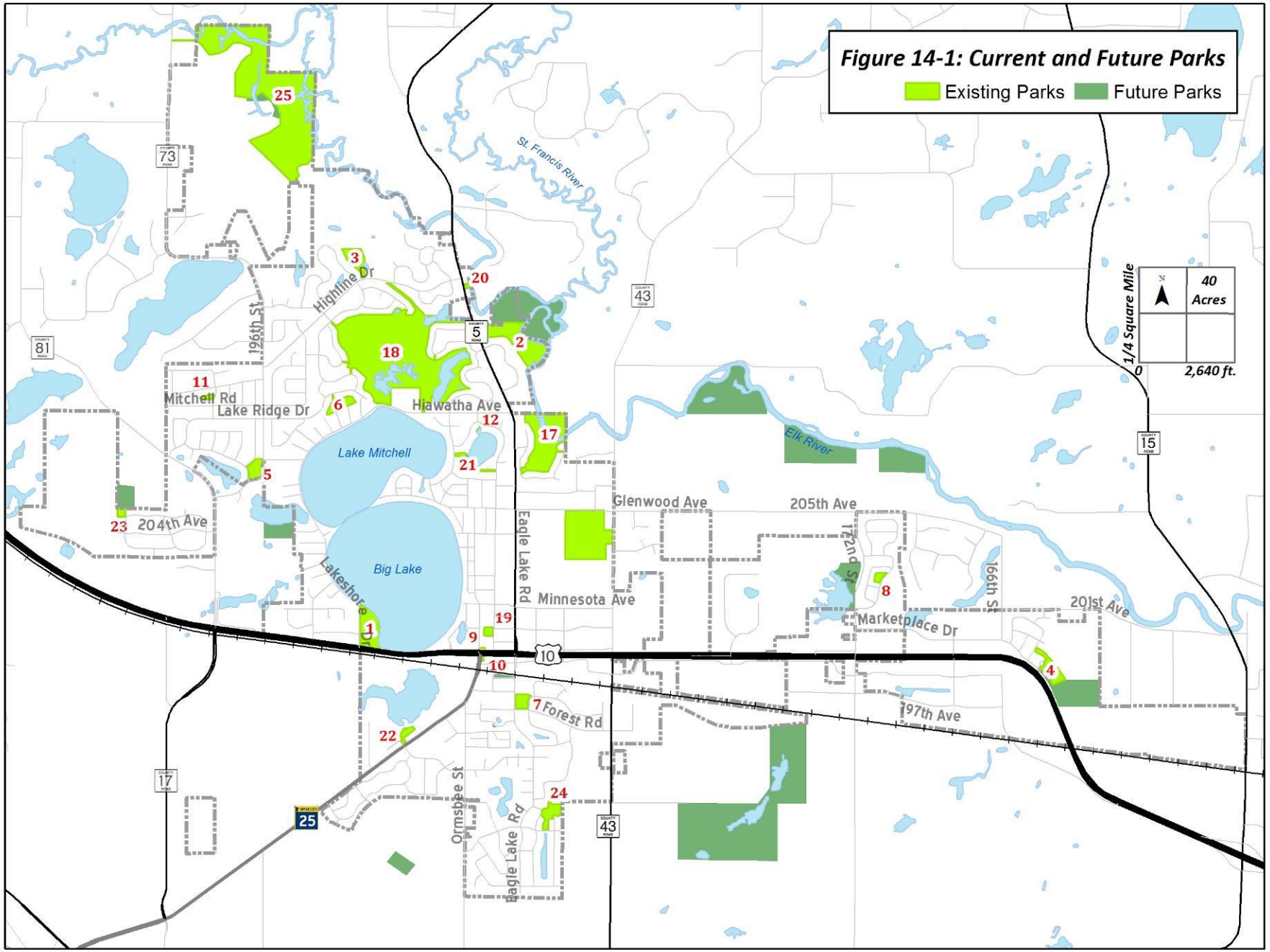


Figure 14-1: Current and Future Parks
Existing Parks
Future Parks
1/4 Square Mile
40 Acres
0
2,640 ft.
St. Francis River
Elk River
Lake Mitchell
Big Lake
Highline Dr
196th St
Mitchell Rd
Lake Ridge Dr
Hiawatha Ave
Eagle Lake Rd
Lakeshore Dr
Glenwood Ave
205th Ave
172nd St
166th St
201st Ave
Marketplace Dr
Minnesota Ave
197th Ave
Forest Rd
Ormsbee St
Eagle Lake Rd
204th Ave
73
81
5
43
15
17
10
25

Table 14-1: Park System, 2017

Park Name	Map Refer.	Usable Acreage	Class	Baseball / softball	Basketball	Bathrooms	Boat dock	Fishing	Frisbee golf	Ice skating	Lighting	Memorial	Open space	Parking	Picnicking	Play equipment	Shelter	Skate park	Soccer / multi-use	Swimming	Tennis	Trails	Volleyball
Highline	3	6	N	✓									✓	✓	✓	✓						✓	
Hudson Woods	4	6.4	N	✓					✓					✓		✓							
Lake Ridge	5	4.4	N	✓										✓	✓	✓							
Shores of L. Mitchell	6	4.5	N	✓	✓									✓	✓				✓				
Wright's Crossing	7	3.1	N											✓	✓	✓	✓					✓	✓
Bluff Park	8	1.25	N										✓			✓							
Lakeside	1	11	C		✓	✓	✓	✓						✓	✓	✓	✓	✓		✓			✓
River Oaks	2	12	C						✓						✓								
Brown's	9	0.3	M												✓		✓						
Jefferson Square	10	0.3	M									✓											
Mitchell Farms	11	0.8	M												✓	✓							
Powell	12	0.5	M													✓							
High-Middle-Elemen.	13-16	87	S	✓	✓						✓			✓					✓		✓		
Liberty Elementary	16	12	S	✓	✓											✓			✓				
Hidden Rivers	17	2	S																			✓	
McDowell	18	62	S										✓									✓	
Lady of Lake Church	19	4.4	S							✓				✓		✓							
Riverside Landing	20	0.25	S				✓																
Beaudry	21	2	O																				
Kellerwood	22	2	O											✓									
Norland	23	1	O																				
Sanford Select Acres	24	2.5	O											✓									
Sweetwater Bend	25	22	O																				

Classifications: N: Neighborhood C: Community M: Mini S: Special Use O: Open Space

5. Lakeside Park

The City will prepare a master plan for the continued improvement and maintenance of Lakeside Park, as recommended in the 2016 *Parks, Trails and Open Space Master Plan*.

6. Athletic Field Complex

The City will continue to consider the possibility of acquiring a large site to host several athletic fields. A 2015 location study recommended four locations, and they are illustrated by Figure 6-6 in the Parks and Trails Assessment chapter of this comprehensive plan. The proposed Community Park in the southeastern quadrant of the city may be considered also.

7. Park Land Acquisition

It is essential that the City acquires land for future parks or trails before it is developed for other uses. These and other methods will be used to acquire land.

Land Dedication during the Subdivision Process

The City will continue its practice of ensuring that each new residential land subdivision and all future commercial or industrial buildings help provide for future park or trail needs in proportion to the demand they generate. This is the primary method that the City will use to acquire land for future parks or trails. State law allows Cities to follow this practice.

Park land dedication should continue to be based on the park land need defined by this Comprehensive Plan or other adopted park system plan. Active park areas shall be exclusive of wetlands, slopes exceeding 12 percent, ponding areas, or other features unsuitable for active park development.

However, the City may choose to accept land not suited for active recreation but ideal for hiking, water access, nature study or solitude. The City Council will decide the location and characteristics of land desired for park in each plat based upon the policies and recommendations of the Park Committee and the appropriate park system plan.

Some plats may be in locations not suited or desired for future parks. In those instances, the Council can choose to accept money instead of land based on a formula previously adopted by resolution or ordinance. The City fund seeded with cash instead of land will be used when needed to purchase land in desired locations when land dedication is not sufficient there. It is essential that the City keep this cash formula sufficiently high that desired land can be purchased, and that developers are not compelled to always argue to give cash instead of land.

Other Means of Acquiring Land

Some of the future park lands proposed in this chapter may be too large to be acquired by requiring a land developer to dedicate to the City a percentage of this plat. (The 2018 figure was 10 percent.) In those cases, the Council will consider other means that will ensure that the proposed acreage and location are secured. One such means is direct purchase, as described above.

8. Sharing Facilities with the School District

The City will discuss and possibly negotiate more sharing of facilities with the Big Lake School District.

Trails System Plan

Link paths in City park land with on- and off-street facilities for bicyclists and pedestrians

Big Lake has a good start on a system of off-road, paved paths for bicycling and walking, commonly called trails. These paths are typically asphalt and are different from the concrete sidewalks located along certain streets in Big Lake. The trails and sidewalks work together to help walking and bicycling. Sidewalk policy is described in the Transportation Plan chapter of this plan.

This section outlines how the trails system should be extended and improved.

1. Previous System Planning

Use the 2016 *Parks, Trails and Open Space Master Plan* as the primary guidance for extending the trail system. This comprehensive plan summarizes the major recommendations of the 2016 master plan, but the master plan should be consulted for more specifics.

2. First Priority Trail Improvements

- Build a trail along **County Highway 73** (196th Street) connecting Delta Street and 204th Avenue Northwest
- Build an additional connection from **County Highway 73** along Manitou Street (Lake Ridge Park to Lake Mitchell)
- Continue the trail from Highline Park along **Highland Drive; c**onnect it to County Road 73 Trail
- Create a regional connection along **County Highway 5** (Eagle Lake Road) at Lions Park North to Sherburne National Wildlife Refuge
- Build a connection along **205th Ave NW** (Bluff Park neighborhood to Liberty Elementary)
- More clearly delineated pedestrian/cycle route along **198th Avenue**
- Build an additional connection from **County Highway 73** along Highland Trail to connect to Highland Drive/to McDowell Park
- Create a **direct east-west connection** from 204th Avenue NW to Big Lake (a trail easement will potentially be required).

3. Long-Range Trail Improvements

- **Elk River Trail** (south side of Elk River from CSAH 43 to 172nd Street)
- Elk River **Trail** (south side of Elk River between CSAH 5 and CSAH 43)
- **Elk River** (Sweetwater Bend to CSAH 5)
- **Industrial Park East Trail** (Minnesota Avenue to Highway 10)
- **172nd Street** Parkway to Highway 10
- **Hudson Woods Trail** (172nd Street to 196th Ave and US 10)
- Trail Connecting **Big Lake Marketplace to Hudson Woods** (along Railroad)
- CSAH 81 Trail from **Norland Park to Wood Lake**
- CR 81 Trail from **Norland Park to Highway 10**
- Highway 10 Trail (from **Lakeshore Drive to Landis Lake**)
- South Side **Highway 10 to Highway 25** Trail
- CSAH 81 to Highway 10 to Highway 25 to Keller Loop Trail
- **Loop Trail** CSAH 43 to 172nd Street South
- **Minnesota Avenue Trail** (CSAH 43 to Prairie Meadows PUD)

These planned trail segments are illustrated and numbered by Figure 14-2 on the next page and in Appendix B of the 2016 *Parks, Trails and Open Space Master Plan.*

Off-road paths are part of a system that includes sidewalks and quiet local streets.

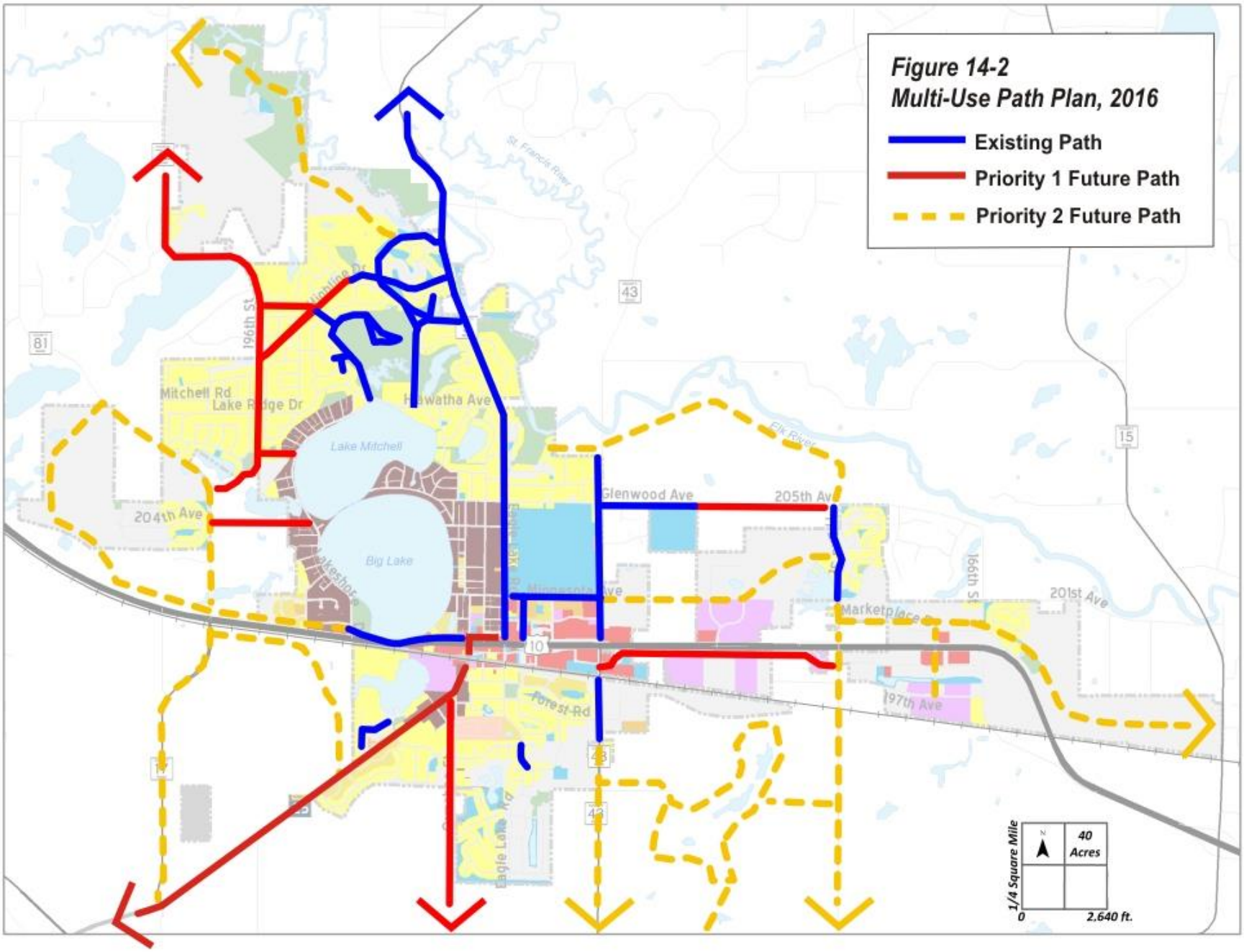


Figure 14-2
Multi-Use Path Plan, 2016
Existing Path
Priority 1 Future Path
Priority 2 Future Path
St Francis River
Elk River
Lake Mitchell
Big Lake
Mitchell Rd
Lake Ridge Dr
Hiawatha Ave
196th St
204th Ave
Glenwood Ave
205th Ave
166th St
201st Ave
Marketplace
197th Ave
Forest Rd
Eagle Lake Rd
81
43
15
10
1/4 Square Mile
40 Acres
0
2,640 ft.

The Role of Parks and Trails in Urban Design

Locate and design parks and trails to enhance the quality of residential neighborhoods and commercial districts, reflect the cultural heritage of Big Lake and honor civic life.

Parks are a major and highly visible public investment that can have a significant positive effect on the appearance of a community and its quality of life. Big Lake has several fine examples of how parks and greenways can be used to improve or sustain nearby private investment. This objective recommends ways that existing or future parks should be used to help create better neighborhoods, promote revitalization and build an attractive community

1. A Network of Green Spaces

Big Lake will continue to build a system of green open spaces for recreation, urban beauty and natural protection that are linked by trails, sidewalks and on-street bicycle lanes.

2. A System of Civic Spaces

The City will regard the park and trail system as one element of a larger system of civic spaces. Through a high quality of design and stewardship, these civic features will sustain the quality of life, private investment and economic competitiveness of Big Lake. The elements should be designed to complement one another visually and functionally, and should be interconnected for motorists, bicyclists and pedestrians. Elements include:

- Plazas
- Public schools
- Civic buildings such as City Hall and the library
- Local or collector residential streets, sidewalks and street trees
- The designated "parkway" streets
- Off-street trails and on-street bicycle lanes
- Wetlands and ponds
- The several lakes
- Wooded areas
- The Elk River and its wooded edges.

3. Neighborhood Quality

In addition to providing amenities for residents, parks should be used to improve the level of private investment in nearby housing and create lasting value in neighborhoods. These public spaces should be regarded as visual assets and designed as such. Each park should:

- Be open to the neighborhood on at least half of its perimeter
- Include generous amounts of landscaping to soften and direct views
- Provide both active spaces and quiet, natural areas
- Use civic buildings such as a gazebo or picnic shelter as a focal point
- In a school-park situation, be designed in coordination with the facilities provided by the school.

4. Quiet Spaces

Parks should include quiet spaces for strolling or sitting wherever the landscape allows. Some locations in the park system should be managed to retain their wooded or otherwise natural characteristics to invite exploration and discovery. Such places offer a small refuge from the bustle of the urban environment and offer opportunities to connect with nature on a daily basis.

5. Civic Pride and Local Heritage

The City will design and maintain parks and other public spaces as the highest expression of civic pride and local heritage. Parks should be beautiful as well as functional so that current generations will enjoy their use and future generations will appreciate what they represent. Parks and greenways should be inspiring and represent the best of Big Lake.

Ecology and Environment

Plan and design parks and trails to protect environmentally sensitive features, reduce negative environmental effects and serve as models of land stewardship

Parks can and should provide benefits in addition to outdoor recreation such as protecting environmentally sensitive areas and connecting people to nature on a daily basis. This section describes several ways that the City will manage its parks and trails in an ecologically responsible manner while meeting other objectives.

1. Natural Preservation and Stewardship

Identify, preserve and enhance existing valuable natural areas such as wetlands, major wooded areas and native prairies (if any) and provide for appropriate use. Identify such lands prior to the process of neighborhood platting and development.

As a primary land owner of open space and environmentally-sensitive areas, the City should set a good example of land stewardship and urban design with its parks and other public facilities.

2. Manage Drainageways Naturally

Drainage swales and creeks are important for their ability to provide wildlife habitat and movement paths, cost-effectively manage stormwater, reduce flooding and serve as visual amenities. Drainageways in parks should be identified and maintained in a natural state. Mowing should be discouraged, and environmentally sensitive methods of bank protection should be used rather than engineering approaches.

Incorporate neighborhood detention ponds into parks for the sake of park aesthetics, water quality and land efficiency. This should be done without losing the amount of land needed for active park uses, however.

3. Use Sustainable Plantings

Work to judiciously reduce the amount of park area devoted to mowed turf and introduce in its place plant species that require less maintenance, provide habitat for birds, small animals and insects, and that improve the quality of water runoff. Control invasive, non-native species.

4. Link Open Spaces

Link major intact natural areas by corridors of native woods and grasses for the sake of wildlife habitat and movement, and urban aesthetics. Landscape elements that can be used for such links include streams and stream edges, fencerows and hedgerows, drainage swales, roadside ditches with natural vegetation, floodplains and wetlands.

5. Retain Unmanaged Spaces

Keep a few wooded or other natural areas in the park system at a very low level of management in order to provide places for people to explore on their own and experience a rudimentary bit of wilderness.

6. Set a Good Example

As the major public landowner within the community, the City should set a good example of land stewardship for the private sector to emulate by following these and other principles of sustainable design.

7. Provide Educational Opportunities

Educate the general public and teach park users about the physical and natural environments existing within the City's parks through the use of interpretive displays, plaques, educational programs, etc. Such efforts should address topics such as vegetation, wildlife, aquatics and geology as well as highlight significant historical events associated with a particular park.

8. Work with other Organizations

The City will work with allied organizations (e.g., Sherburne County Parks) that are dedicated to protecting the local natural environment in order to leverage spending and volunteer help, marshal political support and evaluate resources.

Park Improvements and Maintenance

Continue to improve existing parks and trails so they meet current recreation needs, are visually appealing and sustain the natural environment

Many recent improvements have been made to the Big Lake parks. However, some deficiencies still exist. The challenge will be to sustain an adequate renewal effort during periods of budgetary retrenchment.

1. Five-Year Improvement Plans

The City will continue to prepare five-year programs directing the maintenance and operation of its parks and trails. The most recent example was the 2016 *Parks, Trails and Open Space Master Plan*, which included lists of short-term and longer-term improvements by location along with detailed cost estimates.

2. Other System-Wide Improvements

Other plans specific to sites or topics also be prepared as needed. Recent examples include the River Oaks Park Master Plan and the study of alternative locations for a possible athletic fields complex (found in Appendix A of the 2016 *Parks, Trails and Open Space Master Plan.*

Plan Action Steps

Table 12-2
Parks and Trails Plan Actions

Action	Timing
Acquire Park Land: Acquire land for new parks during the process of land subdivision. Require dedication of cash when the plat does not include a location planned for park. Use the money to acquire land in the proper location later.	Ongoing
Acquire Land for a Community Park: Acquire land for a new community park in the southeastern quadrant of the city. It is anticipated that most of this acquisition will have to be done through direct purchase because of the planned size of this park.	2018 - 2030
River Oaks Park: Continue to improve River Oaks Park according to the adopted master plan.	2018 - 2020
Lakeside Park: Prepare a master plan for continued improvement of Lakeside Park.	2020
Athletic Field Complex: Continue to consider acquiring a location for and building a site for several athletic fields.	2018 - 2025
Sharing with the School District: Discuss how the City and the School District could collaborate for mutual benefit.	Ongoing
Trail Extensions: Follow the 2016 Trails master Plan and build or extend off-road paved paths.	Ongoing
Neighborhood Design: Use parks as the centerpieces of future neighborhoods.	Ongoing
Ecological Stewardship: Manage parks and other City open spaces in a manner that protects their natural and educational qualities.	Ongoing
Maintenance: Follow the recommendations of the 2016 *Parks, Trails and Open Space Master Plan.* Update the program by 2021.	2018 – 2021

Public Utilities and Surface Water Plan

This chapter describes how the City will manage its infrastructure for wastewater conveyance and treatment, water supply and surface water management. It is essential that these major capital facilities are coordinated with other plans for land use, streets, parks and natural resource protection.

Please refer to the Utilities System Assessment, chapter 7 of this plan, for a description of the current facilities and needs.

Major Utility Systems Issues

Sanitary Sewer Issues

1. **Growth Locations**: Where are the most suitable locations to expand the sanitary waste system (and the city) based on cost, engineering feasibility, and environmental effects?
2. **High-Demand Users:** Should system improvements be made to accommodate the high demand of a very small number of industrial users? How will this decision affect the city's economic development strategy?

Water Supply and Distribution Issues

1. **Growth Locations**: Where are the most logical locations to expand the sanitary waste system based on cost, engineering feasibility, and environmental impacts?
2. **System Improvements**: What enhancements to the existing water treatment and supply system would be required to serve all areas of the city today and/or future areas of the city as it grows with additional residential, commercial, industrial, or institutional land uses?

Surface Water Management Issues

1. **Planning:** Should the city prepare a comprehensive surface water management plan?

Sanitary Sewer System

Ensure that the City's wastewater system reinforces the principle of compact growth while maintaining fees that are competitive with comparable cities.

1. Sewer Line Extension Plan

As new plats are approved, require that major lines are stubbed in each direction necessary to support continued urban expansion. Follow the system expansion plan prepared in 2004 by the City's consulting engineer. That plan will be updated as circumstances dictate to keep it relevant with the comprehensive land use and roads plans.

No major improvements to the existing system of trunk sewer lines are needed in the foreseeable future to accommodate forecast growth.

The need for additional lift (pump) stations will be determined through engineering studies as neighborhoods and districts are designed.

2. Service Only within the City

Require annexation or an annexation agreement to extend and connect to City sewer or water lines.

3. Annexation Petitions

It is the City's intention as stated in this plan to only approve residential or commercial plats that are adjacent to or very near other, existing urban development even if all of the development costs are borne privately. Consequently, each petitioner must demonstrate that sewer and water lines and local streets can be feasibly and economically extended from an adjacent neighborhood of the city.

4. Retiring On-Site Wastewater Systems

Require that building that discharge wastewater and that are on parcels abutted by a City wastewater line connect to the City's sewer system within 18 months. Refer to City Code section 810.02, Subdivisions 3 and 4. There are 40 to 50 parcels and buildings that are not served by the public sewer system but have their own on-site wastewater systems.

5. Maintaining Adequate Capacity in the Treatment Plant

Conduct a study of its wastewater treatment plant in 2018 or 2019 to ensure that it has adequate capacity for the foreseeable future for both the liquid volume and the biological loading of treatment demand.

6. Assessment Policy

Building and financing new sewer or water lines will be primarily the responsibility of the private land developers and builders. Any such improvements to the public sewer or water systems must be done in accordance with City standards and approved by the City before they are accepted.

Some extraordinary development costs, such as wastewater lift stations, may be spread beyond an immediate land development project and assessed according to Minnesota Statutes Chapter 429. The cost of rehabilitating City utilities or streets may also be financed through special assessments against benefiting properties.

7. Other Provisions of City Code

Continue to enforce its requirements related to the City wastewater collection system as presented in section 810 of the City Code. Those subjects include required use of public sewers, private sewage disposal, prohibited discharges, industrial wastes, sewer construction standards, practices and assessments, sump pumps, inspections and billing.

Water Supply System

Ensure that the City's water supply system supports land development while maintaining fees that are competitive with comparable cities.

1. Water Line Extension Plan

As new plats are approved, require that major lines are stubbed in each direction necessary to support continued urban expansion.

Some extended perimeter locations have been served with municipal water lines. Seek to annex, develop and serve intervening locations in order to recoup some of the cost of extending trunk water lines to those locations while maintaining consistency with the land use and growth management plan.

No major improvements are needed to the water source, filtration and storage system in the foreseeable future to support the forecast growth of the city.

2. Service Only within the City

Require annexation or an annexation agreement to extend and connect to City sewer or water lines.

Surface Water Management

Continue to manage surface water consistent with City, County and State regulations and guidelines for the protection of the environment and properties.

The City of Big Lake is rich in water resources, as it includes several high-quality lakes and seven miles of Elk River shoreline. At the same time, its sandy soils make the groundwater aquifer more susceptible to pollution from the surface. The City enforces State regulations and guidelines to protect water quality, control water flow and steward related natural resources.

The benefits of effective storm water runoff management include:

- Protection of wetlands and aquatic ecosystems
- Improved quality of receiving water bodies
- Conservation of water resources
- Protection of public health
- Flood control.

1. Storm Water Pollution Prevention Plan

Continue to regulate surface water runoff according to the City's *Storm Water Pollution Prevention Plan* (SWPPP).

The SWPPP includes six topics:

- Public education
- Public participation and involvement
- Illicit discharge detection and elimination
- Construction site storm water runoff control
- Post construction storm water management
- Pollution prevention / "good housekeeping".

These topics are addressed through City ordinances, City capital spending and City operations.

The current Big Lake SWPPP was required and re-authorized approved by the Minnesota Pollution Control Agency in 2013. That agency enforces the terms of the federal Clean Water Act as described in the State's Municipal Separate Storm Sewer System (MS4) permit.

Since 2013, the City has updated ordinances, mapping and inspection practices to fulfill the terms of the permit. In addition, the City coordinates with Sherburne County and the Sherburne Soil and Water Conservation District to accomplish this mission. A fee is assessed to every land parcel in the city to cover these costs.

2. Local Controls

Continue to enforce the following local ordinances to accomplish the objectives of its Storm Water Pollution Prevention Plan.

Shorelands

Continue to enforce the provisions of its Shorelands Overlay zoning district (City Code section 1065).

That ordinance applies to land within 1,000 feet of 12 identified lakes and 300 feet of the Elk, Snake and St. Frances Rivers. It supplements and limits the "underlying" zoning district by regulating land use, development, building setbacks, impervious coverage, roads, vegetative alteration, water supply and sewage treatment.

Shoreland regulations are required in cities and counties by the Minnesota Department of Natural Resources.

Wetlands

Continue to enforce the provisions of its Wetlands Overlay zoning district (City Code section 1066).

That ordinance includes a definition and general map of local wetlands. It requires that prior to grading or construction each site be inspected by a licensed professional for the presence of wetlands. Identified wetlands must not be harmed by construction or subsequent water runoff. A setback and vegetated buffer strip are required around each identified wetland. Some wetlands are not obvious from casual inspection of the surface.

The City is the Local Governmental Unit responsible for enforcing the federal Wetland Conservation Act within its borders.

Floodplains

Continue to enforce the provisions of its Floodplain Overlay zoning district (City Code section 1064).

The floodplain overlay zoning district supplements and limits the "underlying" zoning regulations. It has been adopted to maintain the community's eligibility in the national flood insurance program, to limit property damage from floods and to protect riparian natural resources. It applies to lands shown on the official flood insurance rate map prepared by the Federal Emergency Management Agency. A floodway and a flood fringe district are mapped, and regulations vary between the two.

The ordinance regulates the types of allowable land uses, the amount of impervious coverage, the minimum basement elevation of buildings, the placement and elevation of on-site sewage facilities, the protections for public utilities, railroads, roads and bridges.

Mississippi River Recreational River District

The City of Big Lake includes a small tract of land along the Mississippi River that is used for its wastewater treatment plant. Therefore, it was required to adopt an overlay zoning district to enforce the provisions of the state's management plan for the Mississippi River. It is intended to protect the natural and scenic values of the river.

As an overlay district, this ordinance supplements the "base" zoning. It applies to a narrow band of parcels near the river (in this case, just one City-owned parcel). The ordinance addresses lot size, structure setback from the bluff line, alterations of natural vegetation and topography, and protection for steep slopes.

Subdivision Code

The City's subdivision regulations include at least two sections that directly implement the Storm Water Pollution Prevention Plan:

- Storm Water Management, Section 1108.07
  Requires builders to submit a surface water management plan that complies with the SWPPP and describes how surface water will be managed during and after construction. It addresses water quality, volume and flow rate.
- Erosion and Sediment Control, Section 1108.08
  Requires builders to submit a plan for limiting and controlling erosion during and after construction.

Stormwater Discharge Fee

Section 820 of the Big Lake City Code establishes a Storm Water Drainage Utility for the purpose managing and funding the construction and maintenance of the drainage system. It allows the City to levy a fee as part of its utility billing system and establishes a formula to calculate the fee for each land parcel based on its size and zoning district.

3. Sherburne Soil and Water Conservation District

Continue to partner with the Sherburne Soil and Water Conservation District (SWCD) to accomplish projects related to public education, guidance or physical improvements related to conservation.

SWCDs have been established across the state for those and related purposes, including wetland delineation and evaluation. Some cost-share funding is available for projects of priority concern. Much of their work involves direct service to land owners such as assistance in natural resource planning or applying "best management practices."

The Sherburne SWCD was the primary author of the *Sherburne County Water Management Plan*, 2007 and 2018, with assistance from Sherburne County. That document identified subjects of highest concern and recommended responses by cities, the county, the SWCD, land owners, associations and state or federal agencies.

The three priority concerns of the 2018 plan were:

- **Surface water quality:** The cumulative impacts of land use in directly connected and/or riparian areas which have a direct impact on surface water quality.

  The City will help address this concern by following its multi-faceted Storm Water Pollution Prevention Plan.

  Prime examples are the use of ponds and swales to infiltrate and cleanse runoff, and regular street sweeping to remove debris from runoff. Salt in the lakes is an emerging problem; the use of storm ponds is a good way to catch that salt before it gets to the lakes. However, ponds are not always feasible in the small and highly developed watersheds of Big and Mitchell Lakes.

  Also, in 2016, the City, the SWCD and the Lakes Association (see below) collaborated on a study of shoreline habitat loss and erosion around Big and Mitchell Lakes.

- **Ground water quality and quantity:** High levels of nitrates in groundwater and quantity in areas identified as sensitive.

  Nitrate pollution is caused primarily by chemical fertilizers, so this is primarily an agricultural issue. However, Big Lake will help by promoting the use of low-nitrogen lawn fertilizers and by integrating practices such as rain gardens and trench drains.

- **Aquatic invasive species:** The introduction and spread of aquatic invasive species and their negative effect on water quality, navigation, recreation and fisheries.

  The City will continue to partner with the Big Lake Community Lake Association, Sherburne SWCD and Minnesota Department of Natural Resources to manage current aquatic invasive species infestations (AIS) and educate watercraft operators on AIS transport and laws.

The fact that the County and the local lakes association have prepared comprehensive water management plans indicates that there is probably not a need for the City of Big Lake to prepare its own plan.

4. Private Coordination

Continue to coordinate with the Big Lake Community Lake Association.

This voluntary group of riparian property owners has prepared a lake management plan and an invasive species response plan, tests water quality in the lakes, watches for invasive species and stocks walleyes.

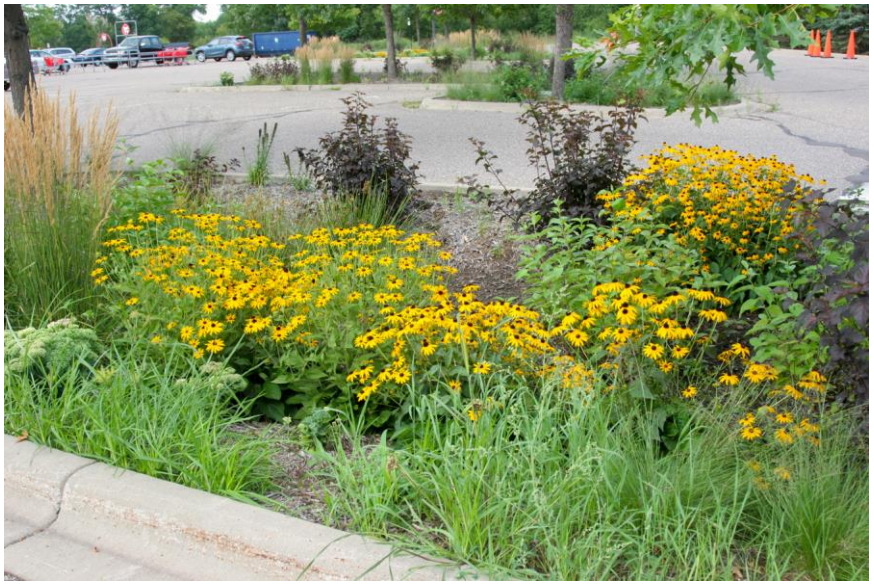
5. Overflow Routes

Study the feasibility of a man-made outlet to Big and Mitchell Lakes that is less prone to overflowing than the present structure.

Study the need for and feasibility of an overflow route to the Mississippi River from the southern part of the city.

6. Neighborhood Ponds

Consistent with the principles of the Storm Water Pollution Prevention Plan, aim to infiltrate surface water on-site to the extent feasible. Use ponds, swales and "rain gardens" to add beauty and interest to every type of development as they reduce the need for storm sewers and recharge the aquifer.



Small surface water catchments, sometimes called rain gardens, can be designed into commercial, industrial or residential areas to filter water and add beauty. Plants are used that can thrive during periods of both drought and flood.

This low area was preserved during the platting process to occasionally catch and infiltrate surface water while providing neighborhood open space.

Plan Action Steps

The City will take the following steps to implement the recommendations of the Public Utilities Plan.

Table 13-1
Major Public Utilities Plan Actions

Action	Timing
Follow the 2004 sanitary **sewer system expansion plan**.	Continuous
Require annexation or an **annexation agreement** to extend and connect to City sewer or water lines.	Continuous
Approve residential or commercial **plats** that are adjacent to or very near other, existing urban development.	Continuous
Seek to annex, develop and serve **intervening locations** in order to recoup some of the cost of extending trunk water lines to those locations while maintaining consistency with the land use and growth management plan	Continuous
Continue to **manage surface water** consistent with City, County and State regulations and guidelines for the protection of the environment and properties.	Continuous
Continue to **regulate surface water** runoff according to the City's *Storm Water Pollution Prevention Plan*	Continuous
Study the feasibility of a man-made **outlet to Big and Mitchell Lakes** that is less prone to overflowing than the present structure.	By 2022

Economic Development Plan

Corner Oaks Family Dentistry, a locally-owned business

Major Economic Development Issues

The following economic development issues were identified through the analysis of conditions and considered in the planning process.

1. **Economic Development, Transportation and Land Use:** Which areas should be developed, planned or preserved for business or industrial parks based on 9-ton or 10-ton access, rail development potential and reasonable access to sewer and water? What can the city do to avoid conflicting land use or transportation-related problems for business and industrial park tenants?
2. **Business Development:** What types of businesses does the city want to help grow or attract? What actions and policies are needed to support business development?
3. **Tax Base Development:** What, if anything, should the City do to strengthen its tax base and fiscal health? Should the city seek to strengthen its commercial/industrial tax base? What policies or strategies could the City use to enhance its tax base and fiscal health?
4. **Workforce and Talent Attraction:** What strategies can the City use to create a community that attracts and retains talent attractive to area employers?
5. **Redevelopment:** What role does redevelopment play in strengthening Big Lake? Which locations have priority for redevelopment during the next decade? What policies, tools or actions are needed to support redevelopment?
6. **Transit Oriented Development:** What strategies will enable Big Lake to maximize the potential benefits of the Northstar Commuter Rail and Northstar CommuterLink service?

Business and Industrial Parks

Build on Big Lake's competitive advantages for manufacturing by anticipating and supporting the development of business and industrial parks appropriate for Big Lake market conditions

1. Preserve Development Sites

Preserve land long-term for business and industrial park development in areas with good utility and 10-ton road access. Ensure that Big Lake expands its commercial and industrial tax base long-term through the preservation of well-located land for business and industrial park development and maintains its capacity to provide high quality employment opportunities.

2. Planning and Design

Ensure long-term success through thoughtful location and control of adjacent uses; excellent transportation access and design for trucks; design standards that support robust tax base density and reasonable opportunities for business expansion; and area amenities that support talent attraction and employee wellness. Work with the Township and the County to establish design standards for unincorporated locations along Highway 10 that further these aims.

3. Business Park for Small Businesses

Support the development of a business park in Big Lake that meets the need for facilities in the 7,000 to 20,000 square foot range by small businesses in the construction trades, repair, automotive service sectors and start-up manufacturing. Consider different design standards and a smaller lot configuration, so the city can maintain good tax base density while meeting a market need for smaller, affordable space for small businesses in these sectors.

4. Rail-Served Industrial Park

Participate in the 2018 study with Sherburne County, the City of Becker and Big Lake. Identify the appropriate niche for an industrial park in Big Lake along County Road 17 with access to Minnesota 25 and US 10. If the Big Lake site is the preferred site for a rail-oriented industrial or logistics park, explore the benefits and challenges that such a district might present to the community and region and learn about best practices for designing such facilities to manage traffic, noise and other factors.

Tax Base Development

Increase commercial and industrial tax base as a percentage of the total tax base in Big Lake over the long term

1. Tax Base

Consider commercial and industrial tax base as a percent of total tax base in the community when making planning, land-use and economic development decisions. Explore strategies to strengthen Big Lake's commercial and industrial tax base because the cost of serving households typically exceeds the tax revenue they generate, and commercial/industrial properties pay a higher property tax rate under state law and typically demand less in services than they generate in revenue. Over the long term, seek to increase the commercial and industrial tax base as a percent of total tax base to 30-35 percent from 22 percent.

Monitor tax base composition annually and integrate consideration of the fiscal implications of land use, planning and economic development decisions into city policies and decision-making processes.

Arconic Titanium and Engineered Products, a national corporation in advanced materials

Workforce Development and Talent Attraction

Actively support workforce development initiatives that strengthen Big Lake's competitiveness as a manufacturing location and quality of life initiatives that attract a skilled workforce to the community

Big Lake has an exceptional concentration of employment in manufacturing, nearly double the concentration of the county or the state, and a high concentration of residents employed in manufacturing. The City's concentration of employment in the Accommodation and Food Service sector is also double the concentration of the county and state.

1. Connect to Jobs

Partner with area organizations and employers to connect young people and area residents to the opportunities for skilled employment in manufacturing with good wages and benefits Build on partnerships with LISI MEDICAL Remmele, Wright Technical Center, Central Minnesota Jobs and Training, the Big Lake School District and others to connect young people and area residents to manufacturing jobs and build employee skill sets that enable area manufacturers to thrive. Tactics may include job fairs, apprenticeships, mentorships, customized training and other techniques.

2. Community and Quality of Life

Continue to build a strong sense of community and a highly regarded quality of life by providing recreational and cultural activities and events. Celebrate Big Lake assets, including parks, businesses and its history as a recreational area through events such as concerts, water sports festivals, art festivals, farmers markets, recreational competitions, food or wine festivals. Integrate with talent attraction and development of the hospitality industry.

3. Hospitality Sector

Build on Big Lake's heritage and concentration of employment in the hospitality sector. The visitor industry has several economic development benefits – it provides commercial and industrial tax base, introduces people to the community, provides amenities (e.g. dining and entertainment) that are attractive to visitors as well as area residents, while providing entry-level and part-time employment opportunities. The hospitality industry can also meet the needs of area employers for accommodations and meeting room space.

4. City Center

Create an attractive environment for small, locally owned businesses that meet the needs of area residents and visitors and provide a walkable area enjoyed by area residents and visitors.

CentraCare Health has a major clinic in Big Lake, offering family medicine, specialty and out-patient services.

Financing Tools and Incentives

Work with county, utility and regional partners to sustain and build competitive financing tools and incentives

1. Financing and Incentive Tools

The Big Lake Economic Development Authority will evaluate financing and incentive tools and seek to develop more competitive tools when specific gaps or opportunities are identified.

Review financing and incentive tools on an annual basis to identify gaps and opportunities to address Big Lake's economic development priorities. When gaps or opportunities are identified, work with state, regional, county and utility partners and local policy makers to create financing tools and incentives that enable Big Lake to be competitive and meet its economic development priorities.

Financing redevelopment has long been a challenge for communities because it is less expensive to purchase raw land than purchase and remove a building, possibly deal with soil contamination, and prepare the site for new development. However, without redevelopment, the core of many communities deteriorates, dragging down the community image and adjacent property values.

Another challenge in redevelopment is timing, especially when site assembly is needed. Thus, it is helpful for a community to have funds set aside to help with acquisition when parcels become available. The legislature did not provide funds for the Redevelopment Grant Program in 2017, increasing the pressure on local communities. (That program was administered by the Department of Employment and Economic Development.)

Marketing

Continue to pro-actively market Big Lake

1. Marketing Strategy

Regularly update and execute Big Lake's marketing strategy.

Update the marketing strategy annually to ensure that Big Lake is reaching its key audiences. Update key messages that the City wants to reinforce with these audiences. Determine the best tactics to reach these audiences, including the City's Website, print, trade shows and broker events, networking, tours, media placements, social media, etc.

Utilities and Public Safety

Regularly review public and private utility services in the community to ensure that the community remains competitive

1. City sewer and water and public safety

Ensure that municipal utilities and public safety are managed to provide adequate capacity, excellent service and competitive pricing for the current and emerging needs of business and industry.

2. Private utility services – electric, gas and broadband

As part of city business retention efforts, identify any concerns with private utility services. Work with utility partners to address issues and opportunities and ensure that utility services in the community meet current and emerging needs.

Northstar Commuter Rail Service

Build on Northstar commuter rail and CommuterLink bus service

1. Diverse Housing Options

Encourage housing development with ready access to the Northstar station that meet the needs of a broad range of ages and incomes and provides a variety of housing types, sizes and costs.

2. Bicycle and Pedestrian Connections

Create safe bicycle and pedestrian connections among the Northstar station and Big Lake neighborhoods and employment concentrations. Address the need for improved bicycle and pedestrian crossings of US Highway 10.

Plan Action Steps

The City will take the following steps to implement the recommendations of the Economic Development Plan

Table 16-1
Major Natural Resources Plan Actions

Action	Timing
Continue to apply the guidance of this **comprehensive plan** and the City's **zoning regulations** to ensure an adequate supply of well-designed and intensively developed industrial and commercial sites.	Continuous
Explore creating redevelopment financial assistance tools.	Continuous
Participate in the **2018 study** with Sherburne County and the City of Becker regarding a possible rail-served industrial park.	2018 and 2019
Continue to enhance **quality of life amenities** that help attract and retain competitive employers and a skilled workforce.	Continuous
Work with county, utility and regional **partners** on marketing, workforce attraction, and financial incentives.	Continuous
Build on the **Northstar** and CommuterLink services.	Continuous

A wayfinding sign at the Big Lake Northstar commuter rail station

Plan Action Steps

This section of the *City of Big Lake Comprehensive Plan* lists the major actions that the City expects to take to carry out the recommendations of the plan. This work plan should be updated annually.

The *Comprehensive Plan* must also respond to the continuous stream of changes that occur in the community. This chapter describes how the plan's usefulness will be monitored and how it may be amended.

Key Actions by Priority

The Big Lake City Council should establish a schedule of short-term and long-term actions as a targeted work program to guide the ongoing implementation of the plan.

The City should conduct the actions listed in the following table through annual and multiple-year assignments.

The City's actions should be consistent with the policies of the *Comprehensive Plan.* Those actions include but are not limited to:

- Review of development applications
- The City's capital improvements and operations budgets
- Any sub-area plans
- Plans of other agencies as they affect the city
- Officially-adopted plan maps that show the intended route for roads, sewer lines or similar public improvements
- Land development or changes in zoning
- Land subdivision.

Table 17-1
Major Plan Actions

Major Actions	Timing
Land Use and Development	
Use the *Comprehensive Plan* when reviewing land development or zoning **applications**.	Continuous
Strictly enforce the current **zoning regulations** for the **Shoreland Areas**.	Continuous
Urge Sherburne County and Big Lake Township to set a minimum **residential lot size** of at least 5 acres but ideally 10 acres in areas of Big Lake Township **south of the Elk River** to protect the ability of land near the City to be subdivided and served with sewer and water lines, and to protect agriculture and rural character.	Continuous
Consider **annexation** applications that are consistent with the Land Use Plan Map and Policy 5 under Perimeter Growth.	Continuous
Amend the **zoning ordinance** as described on page 11-14.	2018 – 2019
Study and consider amending the **zoning map** in locations that are planned for land uses that are distinctly different than their current use and which contain buildings or activities that appear to be harmful to adjacent land development. Discuss land use prospects and zoning requirements with the owner before proceeding.	Continuous

Major Actions	Timing
Transportation	
Adopt a **road functional classification system** and apply it to those streets and roads that are under municipal jurisdiction	2018 and ongoing
Continue involvement with TH 25 Coalition to advocate Big Lake's position on the possible second **river bridge** and the "rail served industrial park." Advance the discussion on the viability or feasibility of new roles for TH 25, CSAH 17 and CSAH 11.	Following discussions
Conduct a study to determine the feasibility of the proposed **parkway system**:	2019
Apply the **road access management guidelines** when building new streets or reviewing plats and site plans. Ensure that plans are sent to MnDOT or Sherburne County during the plan review period for their comment.	Ongoing
Amend the zoning ordinance to greatly reduce or eliminate minimum off-street **parking requirements** for businesses and industry.	2019
Natural Resources	
Provide some level of **public access to the riverfront** through the acquisition of land for public parks and trails.	Continuous
Look favorably upon **annexation petitions** along the river as a means of protecting these resources and because these are prime housing development locations.	Continuous
Continue to protect groves and **forests** across the city by enforcing the protective regulations in the zoning ordinance, Section 1027.06, and the subdivision ordinance, Section 1108.22 of the City Code.	Continuous

Major Actions	Timing
Consult with experts and decide whether to submit **historic designation nominations** for a higher level of projection for Big Lake Public School and the Hanson House.	By 2020
Protect **farm lands** by properly managing the perimeter growth of the city.	Continuous
Parks and Trails	
Acquire **land for new parks** during the process of land subdivision. Require dedication of cash when the plat does not include a location planned for park. Use the money to acquire land in the proper location later.	Ongoing
Acquire land for a **new community park** in the southeastern quadrant of the city. It is anticipated that most of this acquisition will have to be done through direct purchase because of the planned size of this park.	2018 - 2030
Continue to improve **River Oaks Park** according to the adopted master plan.	2018 - 2020
Prepare a master plan for continued improvement of **Lakeside Park**.	2020
Continue to consider acquiring a location for and building a site for several **athletic fields**.	2018 - 2025
Discuss how the City and the **School District** could collaborate for mutual benefit.	Ongoing
Follow the 2016 **Trails** M**aster Plan** and build or extend off-road paved paths.	Ongoing

Major Actions	Timing
Public Utilities	
Follow the 2004 sanitary **sewer system expansion plan**.	Continuous
Require annexation or an **annexation agreement** to extend and connect to City sewer or water lines.	Continuous
Approve residential or commercial **plats** that are adjacent to or very near other, existing urban development.	Continuous
Seek to annex, develop and serve **intervening locations** in order to recoup some of the cost of extending trunk water lines to those locations while maintaining consistency with the land use and growth management plan	Continuous
Continue to **manage surface water** consistent with City, County and State regulations and guidelines for the protection of the environment and properties, including the Big Lake Storm Water Pollution Prevention Plan (SWPPP).	Continuous
Continue to enforce these and other City **ordinances** to protect surface water: Shorelands, Wetlands, Floodplain, Mississippi Recreational River District, Subdivision Code (Storm Water Management and Erosion Control) and Zoning Code.	Continuous
Continue to apply the guidelines of the SWPPP and other sound design ideas when reviewing **site plans** and plats.	Continuous
Study the feasibility of a man-made **outlet to Big and Mitchell Lakes** that is less prone to overflowing than the present structure.	By 2022

Major Actions	Timing
Economic Development	
Continue to apply the guidance of this **comprehensive plan** and the City's **zoning regulations** to ensure an adequate supply of well-designed and intensively developed industrial and commercial sites.	Continuous
Explore creating redevelopment financial assistance tools.	Continuous
Participate in the **2018 study** with Sherburne County and the City of Becker regarding a possible rail-served industrial park.	2018 and 2019
Continue to enhance **quality of life amenities** that help attract and retain competitive employers and a skilled workforce.	Continuous
Work with county, utility and regional **partners** on marketing, workforce attraction and financial incentives.	Continuous
Build on the **Northstar** and CommuterLink services.	Continuous

Keeping the Plan Relevant and Fresh

The *Comprehensive Plan* should be considered a valuable, useful document. Ideally, it will become the central decision-making document for the City. The plan will be most effective in guiding decision-making if it is kept up-to-date and relevant. The physical condition of the city as well as the attitudes and thinking of its policymakers may change over time, and the comprehensive plan should be a living document designed to reflect that natural evolution and allow for the integration of new ideas.

The City can ensure that the comprehensive plan stays relevant by having staff give an annual report on the state of the plan, periodically making minor updates on an as-needed basis, and by conducting a full review of the plan with a possible major update once every 10 years.

Annual Report

Prepare an annual report describing how the plan has been used and what changes have occurred that may affect the relevance of the document. Every twelve months, City staff should prepare a brief report summarizing:

- How the plan was used to direct major spending, regulatory and construction decisions
- How development did or did not coincide with the guidance of the plan
- How the City has changed in ways that may call for amendments to the plan.

The report should be transmitted to the City Council and made available to the public. A brief verbal presentation at a workshop meeting should be conducted to call attention to the major findings of the annual report.

No plan amendments are required in conjunction with these reports, although such amendments may be appropriate depending on the reports' findings.

Periodic Amendments

Periodically propose amendments to the plan as conditions warrant.

It is appropriate that some parts of the plan would be amended quite rarely while others might be subject to much more frequent examination. Proposed changes to the plan maps, for instance, would depend on the magnitude of the revision, their relationship to the policies of the plan, and the nature of the changing circumstances that has led to the desire for amendments.

The City Planning Commission may propose amendments to the comprehensive plan from time to time as circumstances warrant. The public, including nearby cities, Big Lake Township, and Sherburne County, should be notified of any major proposed changes and given an opportunity to learn about the change and provide comment. The City will consider public opinion in evaluating how a proposed change would meet the above criteria. The City could consider soliciting public input through direct mail survey forms, neighborhood meetings, Planning Commission public meetings and through use of the internet.

Scheduled Reviews

The Planning Commission should conduct a formal review with a possible major update of the plan once every 10 years with the help of a citizens advisory committee.

Appendix A: Concept Plan

A Mid-Course Element of the City of Big Lake Comprehensive Plan

The Big Lake "concept plan" is an overview of the main ideas that will guide the preparation of the detailed plan elements of the City's comprehensive plan.

Purpose: This short document crystallizes the thinking that has occurred thus far in the planning process and, importantly, allows citizens, advisers and officials to determine whether the plan is on the right course. Included are plan objectives, preliminary policy ideas for the comprehensive plan, and a graphic expression of the concept.

Once a consensus is reached on this concept plan, the more detailed plan may be written with confidence that it has political and technical support.

Alternatives Reviewed: The Concept Plan is based on the findings of the Assessment of Conditions and Issues along with an evaluation of the two Conceptual Alternatives. The alternatives were titled:

- **Traditional and Compact**
- **Spread and Suburban**

The two alternatives, presented below, were proposed by the City staff and consulting team then ratified by the Advisory Committee. They were arranged along the topic of city form because that seemed to be the best way to encompass and test the previously identified issues.

The two conceptual alternatives were written to be deliberately extreme and different. The intention was never to choose one or the other, but to generate a discussion about what the community values; the concept plan was always expected to be some blend of the two.

Public Participation for the Concept Plan: Public participation included three meetings of the Citizens Advisory Committee, comments received during a presentation at a Coffee with the Mayor event on October 14, 2017, a survey of high school students by a local student, a survey of the Advisory Committee members, a survey of clients of the Big Lake Community Food Shelf.

Plan Objectives

These are desired outcomes of the application of the comprehensive plan over time.

General

1. Big Lake will be a **desirable** place to live, work and play.
2. Big Lake will provide **safety and security** for all, especially families and children.
3. **City government** will be very competent at delivering normal municipal services and does not over-reach.
4. The **property tax rate** will be comparable with those in peer cities.
5. The **property tax base** will grow with more industrial and commercial development plus more highly valued housing.
6. **Private developers** will have more freedom to **innovate** while achieving updated minimum municipal standards.

Land Use, Growth Management and Urban Design

7. Big Lake will retain its **small-town charm** without limiting its ability to grow.
8. **Growth** will occur in a cost-effective manner.
9. Big Lake will **respond to the market** by accommodating developers' requests within reasonable limits.
10. The city will have a **visual center** and arrival point.
11. **Highway 10** will be a more attractive feature and one that unites the community.

Economic Development

12. Big Lake will **attract jobs** by maintaining a business-friendly environment and promoting its competitive advantages compared to other cities.
13. There will be many **well-paying job**s locally.

Transportation

14. Drivers, bicyclists and pedestrians will move about the city **safely and conveniently**.

Parks and Trails

15. Parks and trails will continue to be an **important element** in providing quality of life and attracting residents.

Neighborhood Design

16. **Desirable residential neighborhoods** will be created by incorporating natural amenities and by building attractive public features where nature has not provided.

Housing

17. Big Lake will **attract housing** by encouraging and supporting employment development and by investing in schools, streets, parks, trees and sidewalks.
18. Residents who want to own a **"move-up" house** will be attracted and retained.
19. There is a wide variety of **housing options** for people in all stages of life.

Concept Plan

Land Use and Growth Management

- **Residential Mixture:** Plan and create a mixture of lot sizes, housing sizes and housing types across the city. Mix housing types, with small areas of multiple-family housing here and there. Within some neighborhoods, have a mixture of housing types, depending on the strategy of the land developer. Plan and zone locations for townhouses and apartments. However, ensure that the value and livability of single-family, detached housing is not harmed when trying to accommodate the need for other housing types.
- **Separate Incompatible Land Uses:** Separate residential and non-residential development outside of the "town center" in order to protect the function and value of each.
- **Spread with a Center:** Develop a combination of spread or low-density neighborhoods surrounding a higher density center. There will be a town center but also some large lots.
- **Compact and Contiguous:** Ensure that development is compact and contiguous to the extent practical.
- **Commercial-Industrial Pattern:** Plan for a pattern of commercial and industrial development in an east-west alignment along Highway 10 but guide the housing pattern to be more centered.
- **Role of the City and Developers:** Allow developers to lead in the design of new development, including lot sizes. Establish minimal standards, such as street widths, and a framework of essential features for the private sector to work within. Essential features include major roads and utilities, commercial or industrial locations, environmental protection and public safety.

  Continue to require land developers to improve or extend local and collector streets, minor utility lines, and participate in the cost of improving arterial roads and trunk utility lines.
- **Town Center:** Evolve a "town center," primarily through the actions of the private sector guided by the vision of the residents, which includes a walkable mixture of businesses, multiple-family housing, civic buildings and public space.
- **Annexation:** Adopt criteria for reviewing annexation petitions so City policies on growth management, fiscal health and land use are furthered. Require annexation or an annexation agreement to receive City sewer and water lines.
- **Utility Service Area:** Plan and enforce a compact area for the extension of City sewer and water lines. Ask Sherburne County to set a minimum residential lot size of 5 acres in Big Lake Township south of the Elk River in order to protect the ability of land near the City to be subdivided and served with sewer and water lines.
- **County Cooperation:** Gain an understanding with the adjacent Town of Big Lake and Sherburne County that there is mutual benefit in staged, orderly utility extensions, annexation and compact urban growth into territory planned and regulated for that purpose.
- **Highway 10 Beautification:** Work with the Minnesota Department of Transportation to plant trees either in the right-of-way of Highway 10 or on adjacent private land where right-of-way is insufficient.

Transportation, including Bicycling and Parking

- **Street Network:** Adopt a plan for a network of collector and minor arterial roads that is coordinated with the land use plan.
- **Plan for Complete Streets:** Obtain enough land during the subdivision process to include sidewalks, bike paths, bike lanes and trees on local or collector streets where supported by City plan, policy or ordinance. Ensure that the ability to circulate by automobile is protected.
- **Street Design Guidelines:** Adopt and enforce design guidelines for each type of road.
- **Street Connections:** Allow some cul-de-sac streets, particularly where necessary to serve difficult locations or protect natural resources, but interconnect most local residential streets for the sake of driving, walking and bicycling.
- **Bicycling:** Prepare and adopt a plan for a city-wide system of off-road bicycling paths, on-road striped lanes and signed routes. Connect and extend existing off-road bicycling paths, particularly to serve the parks.
- **Parkway Loop:** Plan a landscaped east-west parkway across the southern part of the city for the sake of traffic movement and to build lasting value in nearby neighborhoods. Add trees to major streets in the northeastern and northwestern parts of the city to make somewhat of a parkway ring.
- **Second Mississippi Bridge:** Support a second Mississippi River bridge at Monticello for the sake of regional, county and local development.
- **Parking:** Allow more business discretion in setting parking quantities; encourage and facilitate negotiations between site owners on shared parking.
- **Safe Routes to School:** Create routes for walking or bicycling to school.
- **Highway 10 Support Roads:** Plan and build a system of streets that complement and run parallel to Highway 10. Examples include Martin Avenue or Marketplace Drive.

Economic Development

- **Present Approach:** Continue the present approach to economic development, which is moderately aggressive.
- **Local Businesses:** Encourage locally-owned businesses and a farmers' market.
- **Start-Up Businesses:** Plan one or more locations dedicated to smaller, start-up businesses needing affordable spaces, whether in building trades, services or start-up manufacturing.
- **Separate Industry and Housing:** Separate industrial and residential traffic and other effects for the benefit of both land uses.
- **New Rail-Served Industrial Area:** Use a high degree of caution and skepticism when reviewing any proposal for a new rail-served industrial area. Establish in the immediate future stringent parameters and conditions that any such development must meet in order to gain City approval, annexation or utility service. Protect current and future housing, traffic flow, public safety, growth options, community image, water, air and City fiscal health.
- **Town Center:** Plan and zone for a walkable "town center" that includes retail, office, residential and civic elements.
- **Tax Base Density:** Achieve higher lot coverage for business or industry (and higher property tax revenue per acre).

Parks, Trails and Community Recreation

- **Park Diversity:** Plan a mixture of small, walk-in parks for neighborhood play and larger, drive-to parks for organized sports and community-wide or specialized activities. Continue to follow the 2005 *Parks and Trails Plan* and the 2016 *Parks, Trails and Open Space Master Plan*.
- **Elk River Access:** Provide access to and enjoyment of the Elk River by planning and developing one or more additional parks along the river. Link parks by public streets, sidewalks and/or paths in linear public open space.
- **Community Center:** Study the idea of building a community center for indoor recreation, exercise and meetings, but apply caution. Emphasize first using existing local facilities, including those owned by the School District or the City, and facilities in other cities. Evaluate the feasibility of constructing such a building without resorting to borrowing funds.

Neighborhood Design

- **Street Design:** During the planning process, the City will study the design of residential street corridors, including current regulations, pavement width, parking, boulevards, trees, sidewalks, house setbacks and garage setbacks. Local builders and emergency responders will be consulted. Policies will be determined at that time.
- **Street Connections**: Cul-de-sac streets will be allowed when necessary to serve difficult locations or protect natural resources, but most local residential streets will be interconnected for the sake of driving, walking and bicycling.
- **Housing Style Variety:** Promote variety in single-family housing styles in each neighborhood.
- **Northstar Neighborhood:** Amend the Northstar transit-oriented development plan to allow more housing and less retail business in that vicinity.

Housing

- **Guidelines for Multi-Family Housing**: Prepare and adopt voluntary guidelines for attached housing to promote visual compatibility with detached housing.
- **Housing Variety:** Plan for housing variety across the city to accommodate the needs of people in all stages of life and a wide range of incomes
- **Protect Single-Family Housing:** Ensure that the value and livability of single-family, detached housing is not harmed when trying to accommodate the need for other housing types.
- **Town Center Housing:** Allow housing above commercial spaces in the "town center."

Utilities

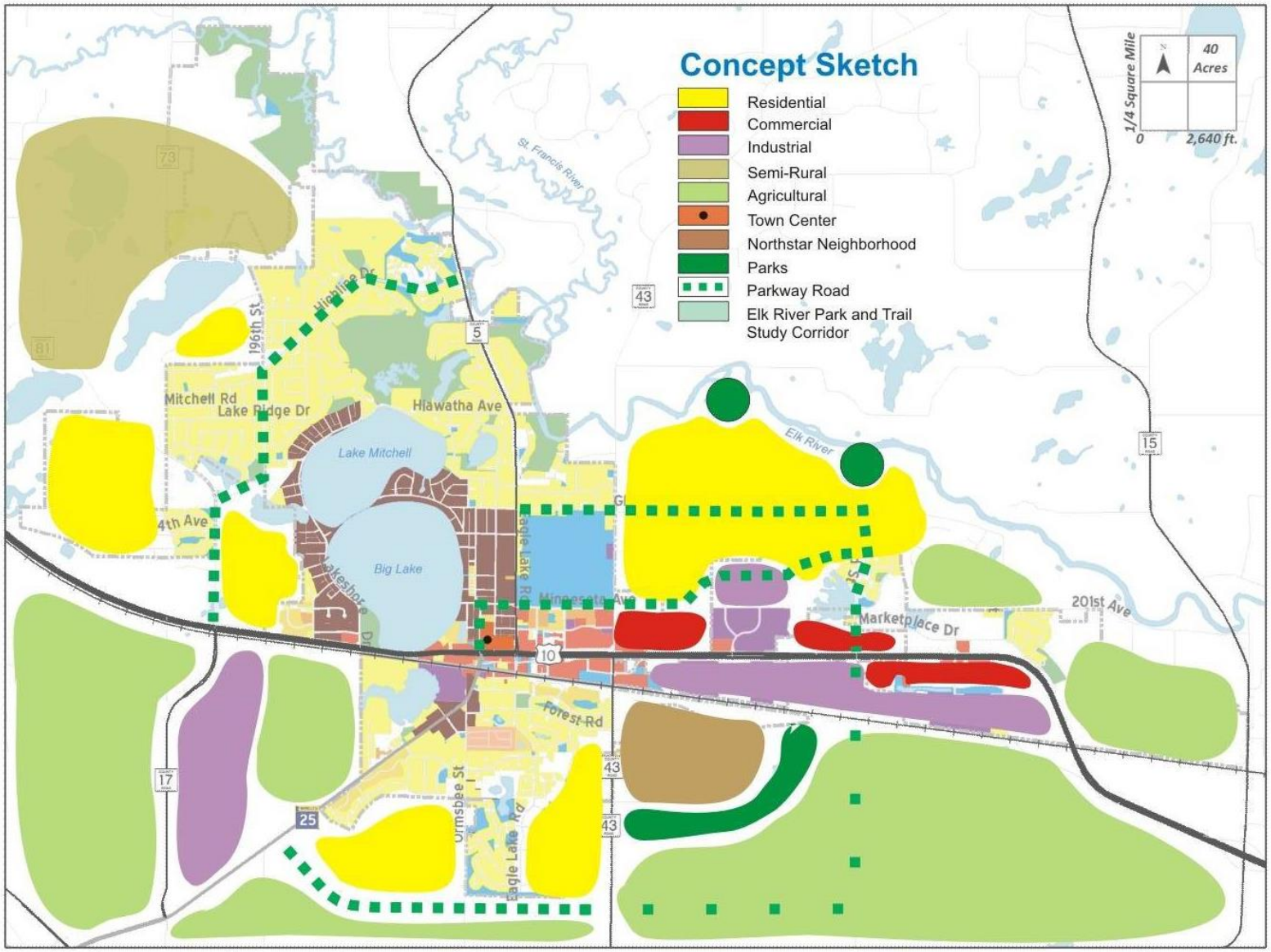
- **City Services:** Require annexation to receive City sewer or water service.
- **Surface Water:** Prepare a comprehensive surface water plan.
- **Treatment Plant:** Study upgrading the wastewater treatment plant to accommodate city growth.

Natural Features

- **Wetlands and Floodplains:** Continue to enforce regulations on wetlands and floodplains. Require the restoration during development of wetlands that have been degraded by farming or other activities.
- **Elk River Protection:** Protect key resources in the Elk River corridor.
- **Forest Protection:** Limit the cutting of mature forest. Preserve to the extent practical the mature oak woods located east of the Hudson Woods neighborhood.

Concept Sketch

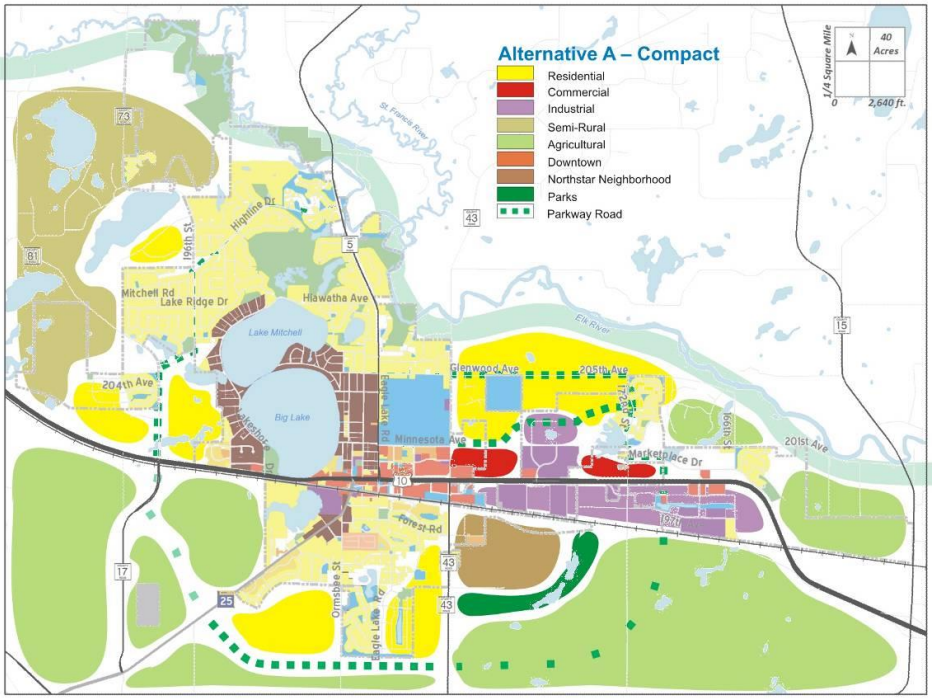
The sketch below page is an approximate graphic translation of the ideas embodied in this concept plan.

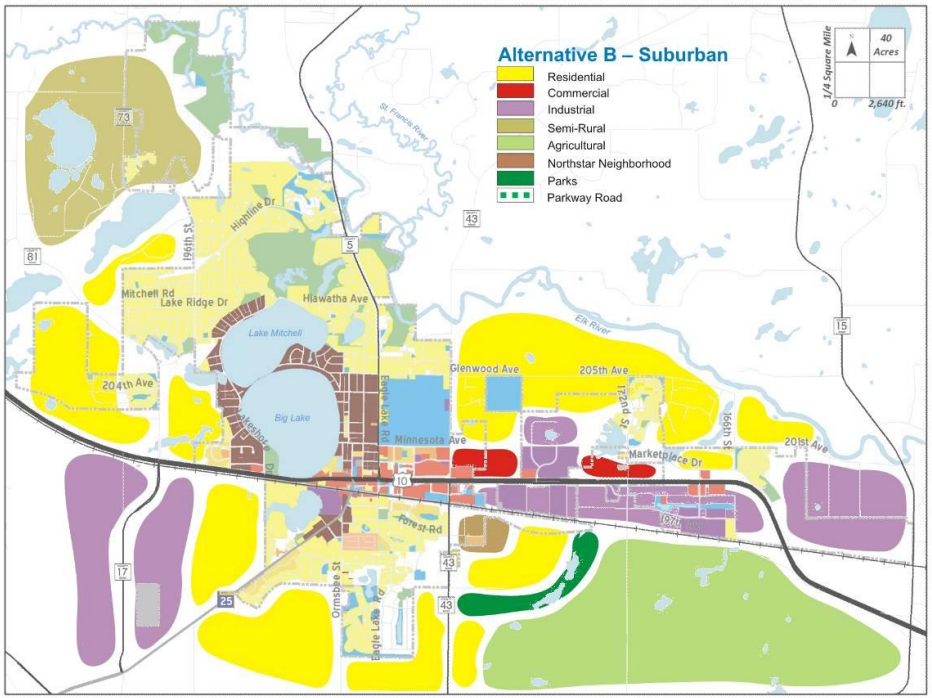


Conceptual Alternatives – Key Points

	Alternative A : Compact – Traditional	Alternative B: Spread - Suburban
Land Use and Growth Management	▪ Allow a mixture of **lot sizes**	▪ Require large minimum **lot sizes**
	▪ Adopt **annexation** review criteria; evaluate the risk of utility extension applications	▪ Accept all **annexation** petitions; approve all requests for utility extensions
	▪ Keep development **compact** and contiguous	▪ Keep **density low** and spread out
	▪ Plan a clustered and **compact commercial** pattern	▪ Emphasize continued **east-west linear** pattern of **C-I pattern**
	▪ Plan and zone locations for **townhouses** and **apartments**	▪ Minimize the development of townhouses and **apartments**
	▪ Plan a **town center** with intensive and walkable mix of business and housing	▪ Zone to **discourage overly concentrated** development
City Design	▪ Exercise tight **control** over design and development	▪ Allow **developers to lead** to lead in zoning, design and development; minimize City control
	▪ Require **sidewalks** along at least one side of all future streets; retrofit some areas	▪ Do not require **sidewalks**
	▪ Require narrower **residential streets**	▪ Continue the present width of **residential streets**
	▪ Require **street trees** in all new plats or other residential development	▪ Do not require **street trees**
	▪ Promote **housing variety** in most neighborhoods through zoning	▪ **Separate** all types of land use to the extent possible
	▪ Require **interconnected streets** and few cul-de-sacs	▪ Encourage **cul-de-sacs** and short loop streets
	▪ Driveways no more than 2 lanes wide at the property line	▪ Driveways as wide as the garage doors at the property line

	Alternative A : Compact – Traditional	Alternative B: Spread - Suburban
Streets and Parking	▪ Require **interconnected streets** and few cul-de-sacs	▪ Encourage **cul-de-sacs** and short looped streets
	▪ Allow more business discretion in setting **parking** quantities; allow more sharing	▪ Zone for generous amounts of **parking**
	▪ Facilitate neighborhood and cross-town **bicycling** through public works	▪ Accommodate **bicycling** in parks and on sidewalks
		▪ Plan a landscaped **parkway** across the southern part of the city for movement and amenity
Parks and Trails	▪ Build a **park** within walking distance of all homes	▪ Emphasize large, community-level parks for organized recreation
		▪ Develop a multi-jurisdictional park and trail plan generally along the Elk River corridor from Becker to Elk River
Economic Development	▪ The City plays an aggressive role in promoting commercial and industrial growth.	▪ The City plays a minimal role in promoting commercial and industrial growth.
	▪ Zone only for **offices**, small shops and attractive **industry** in a compact pattern	▪ Zone for all types and sizes of **business and industry** in all feasible locations
Housing	▪ Adopt design **guidelines** for attached housing	▪ Enforce only the **Building Code**
	▪ Plan for **housing variety** in every major neighborhood	
	▪ Allow, encourage or assist building **affordable housing** in Big Lake	
Natural Resources	▪ Protect key resources in the **Elk River corridor** ▪ Restore farmed **wetlands** during development ▪ Limit cutting of mature **forest** ▪ Continue to enforce regulations on **wetlands** and **floodplains**	


Alternative A – Compact
Residential
Commercial
Industrial
Semi-Rural
Agricultural
Downtown
Northstar Neighborhood
Parks
Parkway Road
1/4 Square Mile
40 Acres
0
2,640 ft.
St Francis River
Highline Dr
196th St
Mitchell Rd
Lake Ridge Dr
Hiawatha Ave
Lake Mitchell
Elk River
Glenwood Ave
205th Ave
204th Ave
Big Lake
Eagle Lake Rd
Minnesota Ave
Marketplace Dr
201st Ave
166th St
Forest Rd
Ormsbee St
Eagle Lake Rd


Alternative B – Suburban
Residential
Commercial
Industrial
Semi-Rural
Agricultural
Northstar Neighborhood
Parks
Parkway Road
1/4 Square Mile
40 Acres
0
2,640 ft.
St Francis River
Highline Dr
196th St
Mitchell Rd
Lake Ridge Dr
Hiawatha Ave
Lake Mitchell
Elk River
Glenwood Ave
205th Ave
204th Ave
Big Lake
Eagle Lake Rd
Minnesota Ave
Marketplace Dr
201st Ave
166th St
Forest Rd
Ormsbee St
Eagle Lake Rd

Appendix B: Summary of Minnesota Annexation Law

Three basic conditions must exist for annexation to occur:

- First, the land must adjoin the corporate limits of the annexing city.
- Second, the Municipal Boundary Adjustment Unit may approve an annexation if it finds city governance of the area is necessary to protect the public health, safety, and welfare; if annexation is found to be in the best interests of the city and the territory to be annexed; or, if land is, or is about to become, suburban or urban in character. This generally refers to land in close proximity to the city, of limited size, suburban in character, and with a community of interest so it will adapt to city government.
- Third, the land may not already be part of another city.

Annexation procedures

Although the statutes set out three different annexation procedures, only one procedure may apply in any given situation. The appropriate procedure depends on the ownership, size, and other characteristics of the land under consideration.

In some circumstances, a city may annex unincorporated property simply by passing an ordinance declaring the land as annexed to the city. Cities may annex by ordinance when any of the following conditions exist:

- The city owns the land to be annexed.
- The land is completely surrounded by land already within city limits.
- The land abuts the city and the area to be annexed is 120 acres or less, not presently served or capable of being served by available public wastewater facilities, and all the landowners petition the city for annexation.
- The land is within two miles of the city and has been approved for platting after Aug. 1, 1995, and the platted lots average 21,780 square feet or less.

The law considers land described above to be urban in character. The city can annex it merely by passing an ordinance in all these situations. The city must file copies of the ordinance with the Municipal Boundary Adjustment Unit, the town clerk, the county auditor, and the secretary of state. Annexation does not become effective until the Municipal Boundary Adjustment Unit approves the filing.

If 60 percent or more of the perimeter of the area to be annexed borders the city and the area is 40 acres or less, the city may annex it by ordinance. However, the city must serve notice of its intent upon the town board and wait 90 days for the town's objection. If the town board raises objections, the city may abandon the proceedings or the Municipal Boundary Adjustment Unit will hold hearings and order or deny the annexation.

Another type of annexation by ordinance can occur if land is platted, or if unplatted, does not exceed 200 acres, and a majority of the owners petition the council for annexation.

The town board or the governing body of another city can submit written objections to the annexation to the Municipal Boundary Adjustment Unit and to the city within 90 days of the filing of the petition. If either the town or the city files objections, the annexing city can take no further action on the petition. The petition automatically goes to the Municipal Boundary Adjustment Unit, which will hold a hearing and issue its order.

If no one files objections, and the council determines the property proposed for annexation is currently or is about to become urban or suburban in character, the council may pass an ordinance annexing the land. However, if all property owners involved do not sign the petition, a public hearing before the city council is necessary before the city can adopt the ordinance. All property owners in the affected area must receive a mailed notice at least 30 days before the hearing.

Orderly Annexation

One or more townships and one or more cities can initiate an orderly annexation process by passing a joint resolution designating an unincorporated area in need of orderly annexation. One or more cities, by joint resolution with the county, may also designate an unincorporated area in which there is no organized township government as in need of orderly annexation.

A designated area is any area which the signatories to a joint resolution for orderly annexation have identified as being appropriate for annexation, either currently or at some point in the future, pursuant to the negotiated terms and conditions set forth in the joint resolution. Land described as a designated area is not, by virtue of being so described, considered also to be annexed.

The Municipal Boundary Adjustment Unit promotes orderly annexation because it emphasizes negotiation and agreement.

An orderly annexation agreement is a binding contract upon all parties to the agreement and is enforceable in the district court in the county in which the unincorporated property in question is located.

If a city designates an urban-growth area based on a community-based comprehensive plan, an orderly annexation agreement must then be negotiated.

If the resolution allows for consideration by the Municipal Boundary Adjustment Unit, it may order the annexation if it makes any of the following findings:

- The area proposed for annexation is currently, or is about to become, urban or suburban in character, and the annexing city is capable of providing the needed services within a reasonable time.
- The existing town form of government is not adequate to protect public health, safety, and welfare.
- Annexation would be in the best interest of the proposed area.

In the area designated for orderly annexation, an orderly annexation agreement may provide for the establishment of a planning and land use control board under the Joint Powers Act. This board would have all of the powers contained in the Municipal Planning Act. It also would have the authority to adopt and enforce the uniform fire code. The orderly annexation agreement may provide that joint planning and land-use controls apply to any or all parts of the area designated for orderly annexation, as well as to any adjacent unincorporated or incorporated area described by the joint resolution.

Petition, Hearing and Order by Municipal Boundary Adjustments

If a city cannot annex land by ordinance or by orderly annexation, the annexing procedure is as outlined in this section.

Appendix C: Intergovernmental Joint Powers

Minnesota cities receive their authority to cooperate with other units of government from state law.

Under the Joint Powers Act (Act), any city may enter into an agreement with one or more governmental units to cooperatively exercise powers that are common to all parties. Local governments may enter into agreements whereby one entity provides services on behalf of all of the participating units of government. A wide range of programs and activities can be provided cooperatively.

Before exercising common powers, each governing body (e.g., city council) must formally approve the joint powers agreement. When an agreement creates a joint board to administer the program, the board must be representative of the parties to the agreement.

In addition to the Joint Powers Act, cities have specific statutory authorization to undertake certain joint programs with other units of government.

For example, cities also have the ability to enter into contracts. Contractual arrangements between governments, or contracts between governmental units and nonprofit and/or profit-making firms, may also be a way to keep costs to a minimum. Examples include: legal services, auto towing, trash collection, snowplowing, tree trimming or animal control.

Extra-territorial Powers of Cities

The term "extra-territorial powers" refers to the authority a city government can exercise over property located outside its city limits. In general, a city's jurisdiction is confined to its territorial limits. However, there are important exceptions to this rule.

Minnesota cities have no general or inherent authority to extend their police powers beyond city limits. The courts have said that city police power is limited to the area within the city's boundaries, even though exercising that power within these limits may affect land outside its boundaries. The same rule applies when a city owns property outside the city limits. A city may exercise all of the usual rights associated with land ownership, but may not exercise police powers, unless specifically authorized by state law.

Subdivisions and Zoning

Minnesota cities may extend their zoning and subdivision regulations to townships (or "unincorporated territories") within two miles of their city limits. When extended, zoning ordinances may be enforced in the same manner and to the same extent as within the city's limits.

A city may not extend its zoning regulations if the county (e.g., Sherburne) or town has adopted its own regulations. However, a city may extend its the application of its subdivision regulations to unincorporated territory located within two miles of its limits in any direction but not in a town which has adopted subdivision regulations.

When subdivision or zoning regulations are extended into unincorporated land outside the city boundary, any affected city council, county board, or town board may petition the county auditor to establish a joint planning board. The joint board will consist of an equal number of members appointed from each political subdivision. This joint board will adopt zoning and subdivision regulations under the Municipal Planning Act for the entire area within two miles of the city, and designate one of the governing bodies to serve as the governing body and board of appeals and adjustment. During the time before the joint board adopts subdivision regulations, the city's subdivision regulations apply.

WEBER
Community Planning

Appendix D:

Proposed Zoning Ordinance Amendments Regarding Minimum Lot Sizes

We perceive that the housing market desires smaller lots for single-family, detached housing than what is currently allowed by the Big Lake zoning ordinance. This perception is based on:

- Descriptions by City Planner Michael Healy of many prior requests for the use of the Planned-Unit Development feature in the zoning ordinance which has resulted in almost all recent neighborhoods being developed with smaller lots than what is technically allowed under the zoning code. The PUD process allows the City and the applicant to negotiate revised standards for a particular project in exchange for some demonstrable benefits to the community that would not otherwise be possible under the zoning regulations. In Big Lake, rather than creating innovative design, the PUD process seems to be a way to get around zoning regulations that the builders perceive as incompatible with what their buyers want.
- Our knowledge of zoning regulations and housing development practices in other cities.

The following tables present proposed **minimums**, not standards or maximums. Larger lot sizes may be created to satisfy market demand, **we are not proposing any type of maximum lot size.** Builders can make lots as large as they would like them to be with no restrictions.

3824 Huntington Avenue St. Louis Park, Minnesota 55416
952.920-1749 bill@weberplanning.com

Proposed Amendments Regarding Minimum Lot Size - Outside the Shoreland District

Feature	Current	Proposed
Minimum Lot Size – Single-Family Detached Houses – Interior Lots		
R-1 District (allows single-family, detached houses)	12,000	10,000
R-2 District (allows singles and doubles)	10,000	8,450
Minimum Lot Width – Single-Family Detached Houses		
R-1 District	85	75
R-2 District	80	65
Minimum Lot Depth – Single-Family Detached Houses		
R-1 District	Not specified	130
R-2 District	Not specified	130
Setbacks – Principal Building		
R-1 District (Front – Side – Rear)	30 – 10 – 30	25 - 10/6 - 40
R-2 District (Front – Side – Rear)	30 – 10 – 30	25 - 8/6 - 40

- Increase the minimum lot size by 20 percent for corner lots.
- The proposed reduction in front setback should be done only with changes to the garage setback, as described below.
- Side setbacks could be 10 feet on one side and 6 feet on the garage side.

Other Amendments to Consider

- Reduce the front setback from a collector street to 35 from 45 feet.
- Clarify setback for attached decks.
- Specify minimum land area per housing units for townhouses and for apartments.
- Define "detached townhome"
- Soften the visual impact of garage doors:
  - Amend the front yard setback to 25 feet from the present 30 feet as part of the amendments requiring greater garage setback
  - Require setback equal to or greater than the setback of the front porch, or the front façade if there is no porch
  - Require windows
  - Require second-story window or dormer above the garage door
  - Allow the garage to be closer than the front façade on narrow lots
  - Set the third garage door further back than the first two doors
  - Establish a maximum garage width; 32 feet or 55 percent of the entire building, whichever is less
- Reduce the minimum width for minor (local) residential streets to 30 feet from 36 feet (measured to the back of the curb). The minimum width of the street right-of-way (the public land) should stay at 60 feet. This regulation is part of the Subdivision Ordinance.
- Keep the R-1E Single Family Residential Estate zoning district standards as they are now. This district requires a minimum lot size of 15,000 square feet. The only location that it is mapped in the wooded portion of Hudson Woods, which is presently undeveloped.

Comparison with Nearby Cities

	Minimum Lot Size Detached House	Minimum Lot Width Detached House
Big Lake	12,000	85
Monticello	10,000	70
Becker	12,000	100
Elk River (R-1c)	11,000	80

All numbers are for non-shoreland locations and interior lots.

Illustrations of Parcels and Houses in Big Lake

Several houses and lots from newer neighborhoods around the city have are described below to give readers a sense of the size of various lot and house combinations and their 2017 assessed values. Each of these locations is zoned R-1.

Meadows of Big Lake Addition

18708 Traverse Lane 65-524-0612	14,180 square feet 80′ x 190′	30 – 15 – 18 – 110′ Front-side-side-rear setbacks
$156,700		Street: 32′ in a 60′ ROW

18988 Meadow Lane 65-524-0714	11,325 sf 84 x 135	30 – 20 – 20 – 55 Front-side-side-rear setbacks
$155,100		Street: 32′ in a 60′ ROW

Hudson Woods

19971 February Street 65-544-0615	12,200 sf 88 x 137	30 – 10 – 10 – 56 Front-side-side-rear setbacks
$289,000		Street: 32' in a 60' ROW

Sweetwater Bend

20072 Delta Street 65-545-0206	14,400 95 x 151	25 – 7 – 13 – 85 Front-side-side-rear setbacks
$251,300		Street: 33' in a 60' ROW

3824 Huntington Avenue St. Louis Park, Minnesota 55416
952.920-1749 bill@weberplanning.com

McDowall Oaks Addition

5580 Inverness Way 65-504-0210	12,200 80 x 146	30 – 12 – 10 – 72 Front-side-side-rear setbacks
$191,900		Street: 32' in a 60' ROW

Lake Ridge Third Addition (Northwest of Mitchell Lake)

4628 Pond View Drive 65-481-0334	12,200 sf 85x 141	30 – 21 – 14 – 65 Front-side-side-rear setbacks
$160,700		Street: 32' in a 60' ROW

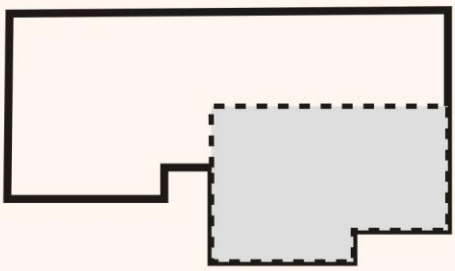
3824 Huntington Avenue St. Louis Park, Minnesota 55416
952.920-1749 bill@weberplanning.com

Prairie Meadwows Addition

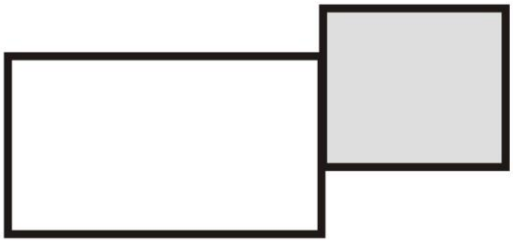
17119 Trillium Lane 65-529-0325	10,018 sf 80 x 125	30 – 12 – 8 – 46 Front-side-side-rear setbacks
$194,000		Street: 32’ in a 60’ ROW

Appendix E:
Garage Door Setbacks and Design

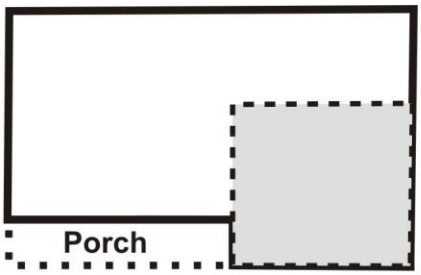
Conventional garage relationship. Door is visually dominant.



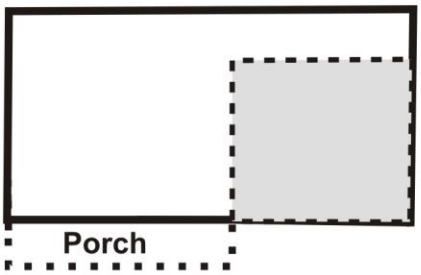
Set back without a porch



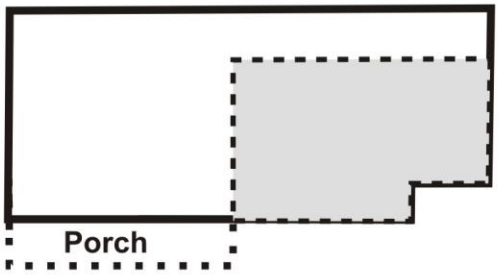
Set even with the porch to visually offset the garage door.



Set even with the facade, behind porch. Must include windows in the door, windows above or other.



Second door set back farther. Max width: 32' or 55% of building, whichever is less.



WEBER Community Planning