

City of Ham Lake
2040 Comprehensive Plan Update

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Introduction and Community Background

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A. Purpose of the Comprehensive Plan

A Comprehensive Plan is the adopted official statement of a local government for future development and conservation. It analyzes existing conditions and trends; describes and illustrates a vision for the physical social and economic characteristics of the community; and outlines goals, objectives and policies to implement that vision. The most important function of a Comprehensive Plan is to provide guidance to those in the public and private sector on decisions affecting the quality of life of existing and future residents.

B. Regional Planning Context

The power to create and implement Comprehensive Plans comes from State Law. Minnesota Statutes (462 and 473) grants the power to conduct and implement comprehensive planning to cities. All cities in the seven-County metropolitan region must coordinate their planning with the Metropolitan Council and update their Comprehensive Plans every ten years to meet the requirements of the Metropolitan Council to plan for regional facilities and services. The Ham Lake Comprehensive Plan update has two functions. One is to create policies and plans to implement its own vision for growth. The other is to coordinate with the regional planning needs of the Metropolitan Council and implement specific policies to address regional planning issues.

The City last updated its Comprehensive Plan in 2008 which addressed the Metropolitan Council's 2030 Regional Development Framework.

Ham Lake is required to coordinate its 2040 Comprehensive Plan in a manner consistent with Thrive MSP 2040, a long-range plan that creates a vision for the seven-County metro region for the next 22 years.

Thrive MSP 2040 was adopted by the Metropolitan Council on May 28, 2014. The seven-County area is the central Minneapolis-St. Paul-Bloomington metropolitan statistical area. Although the federal government added nine additional counties to the core seven that are under the purview of the Metropolitan Council because of interconnected commuting patterns the Metropolitan Council's jurisdiction is defined in Minnesota Chapter 473 and is limited to the 7-county metropolitan area. Ham Lake is in Anoka County, one of the Twin Cities core seven. Ham Lake has been classified as a Rural Residential community within the Thrive MSP 2040 Community Designations (Figure 1.1).

As a Rural Residential community as defined by the previous version of Thrive MSP, growth is expected to occur at residential densities of 1 acre to 2½ acres per dwelling unit and 1 unit/10 acres where possible. The Thrive MSP 2040 has redefined Rural Residential as 1-2.5 acre lots existing, 1 unit/10 acres where possible. The City of Ham Lake is continuing the policy of 1 acre to 2½ acres lots for any future development as there are no plans for transitioning into Future Urbanization. The Metropolitan Council has established broad policy directions for Rural

Residential Communities which are to limit unsustainable growth patterns. The following is a comprehensive although not exhaustive list:

- Implement conservation subdivision ordinances, cluster development ordinances and environmental protection provisions in local land use ordinances, consistent with the Metropolitan Council's flexible residential development guidelines.
- Promote best management practices for stormwater management, habitat restoration and natural resource conservation in development plans and projects.
- Encourage the placement of housing that protects natural resources.
- Protect the rural environment through local oversight of the management and maintenance of subsurface sewage treatment systems (SSTS) to avoid the environmental and economic costs of failed systems. Proactively explore options to address failing septic systems.
- Adopt SSTS management ordinances and implement maintenance programs, consistent with current Minnesota Pollution Control Agency requirements. Minnesota Rules 7080-7083.
- Plan for and construct local transportation infrastructure, including trails, sufficient to meet local needs.
- Plan and develop an interconnected local street system.
- Adopt improved design techniques for access management that meets access and mobility needs.

The City of Ham Lake is bounded by four Metro Area communities: City of East Bethel to the north, City of Andover to the west, City of Columbus to the east and the largest adjacent community is the City of Blaine, which is located directly to the south.

- Blaine's community designation is Suburban Edge, a community managing rapid growth and change. Their growth shall be at net densities of at least 3 to 5 dwelling units per acre.

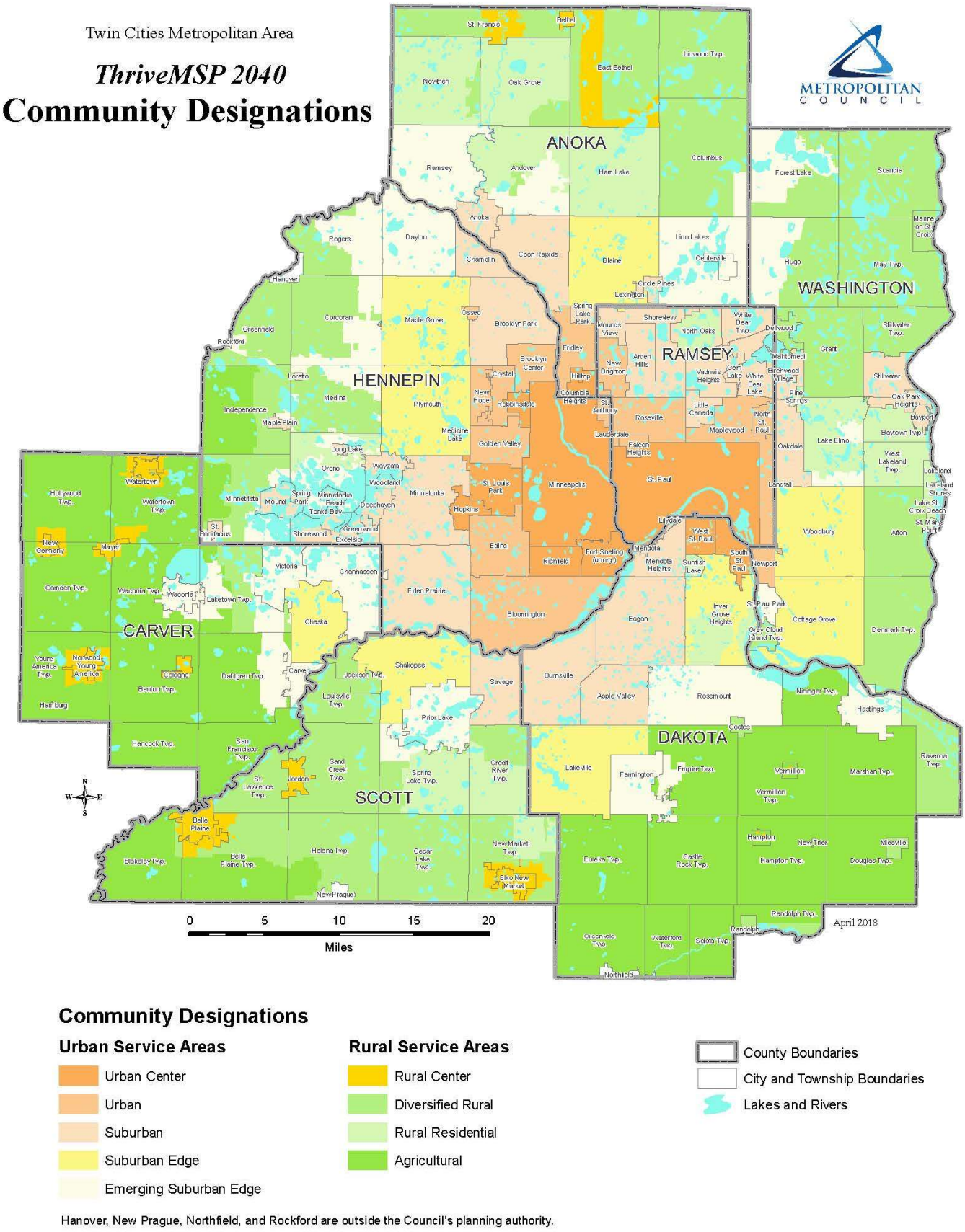
  Growth shall target higher-intensity developments in areas with better access to regional sewer and transportation infrastructure, connections to local commercial activity centers, transit facilities and recreational amenities.

- East Bethel has a split community designation of Rural Center and Diversified Rural. Rural Centers serve the rural area as small town centers of commerce. Diversified Rural communities protect land for rural lifestyles and long-term urbanization. Rural Center growth is at densities of at least 3 to 5 units per acre. They shall strive for higher-density commercial uses and compatible higher-density residential land uses in the community's commercial core to ensure efficient uses of existing infrastructure investments. The Diversified Rural growth is not to exceed forecasts and in patterns that exceeds 4 units per 40 acres. In August 2008, the Metropolitan Council adopted Flexible Residential Development Ordinance Guidelines. One of the six guidelines is to encourage the use of community wastewater treatment systems to serve the temporary cluster. Cluster ordinances could be developed depending on whether at the edge of the urbanizing area or when communities are considering densities greater than 4 units per 40 acres. The Metropolitan Council agreed to own and operate a sewage treatment facility in the southwestern area of the City during the 2030 Comprehensive Plan period.

- Andover is split 3-way as Diversified Rural, Rural Residential and Emerging Suburban Edge. Rural Residential and Diversified Rural densities are described in Ham Lake and East Bethel sections. Emerging Suburban Edge areas are located between Suburban Edge and Rural communities. The average net densities are at least 3-5 dwelling units per acre. They are to target higher-intensity developments in areas with better access to regional sewer and transportation infrastructure, connections to local commercial activity centers, transit facilities and recreational amenities.

- Columbus is designated partially as Diversified Rural (4 units per 40 acres) and partially as Emerging Suburban Edge with growth at densities of 3 to 5 dwelling units per acre.

Figure 1.1 Thrive MSP 2040 Community Designations



C. Recent Planning Initiatives

This planning process refined and clarified the goals and objectives of the 2008 Plan and validated the community's commitment to the existing development pattern including a one acre minimum lot size. The following Plans were consulted in the development of this planning document:

- 2008 Natural Resource Inventory
- 2012 Storm Water Pollution Prevention Plan/Local Surface Water Management Plan
- 2005 Feasibility Study for Public Sanitary sewer and Water Supply
- 2013 Park and Tree Commission Master Plan
- 2008 Comprehensive Plan
- 2011 Community Assessment Report for the Hiawatha Beach/Comfort Resort area

D. Planning Process

This Plan was developed over a four-year period beginning in March 2017.

E. Plan Organization

This Plan is organized into chapters that deal with a variety of planning topic areas.

Chapter 2: Social and Economic Profile – describes general population and household characteristics including age, income, employment and housing, as well as projections for future population and household growth.

Chapter 3: Environmental Resources – outlines the natural or ecological communities and resources as well as documents the ground and surface water and soil resources. Resources are discussed within the context of potential for preservation and development.

Chapter 4: Community Identity – documents the specific physical elements and cultural values that create a sense of place and identity for Ham Lake's residents. These elements and values form the foundational basis on which other policies in this Plan are based.

Chapter 5: Land Use – discusses the range of issues affecting future growth and development of the physical landscape. Past patterns of development are examined and are analyzed in terms of future growth projections as well as identified community assets and development needs and expressed values to create a Future Land Use Map and development policies.

Chapter 6: Transportation – discusses how the road system in Ham Lake functions as part of the regional transportation system and the role that City and regional trails play in that system.

Chapter 7: Water Resources– covers waste water management, water supply and surface water quality. These issues are highly interdependent in Ham Lake. Maintaining ground and surface water quality is especially important because the majority of properties rely on individual wells for drinking water and individual septic systems for waste water treatment.

Chapter 8: Parks, Trails and Open Space – are key elements in the City's identity and occupy a large area of the City. This section addresses the function of this system and strategies for funding and maintenance.

Chapter 9: Housing – is a significant component of the City's land use. This Chapter describes the housing stock and discusses plans for needed housing as it relates to housing needs throughout the region.

Chapter 10: Implementation – is the action plan for implementing the identified goals, objectives and strategies. A prioritized list of steps is provided to guide city leaders on actions needed to move towards the vision outlined in this Plan.

F. Plan Highlights/Summary

This Plan reaffirms the current one acre lot development pattern supported by individual sewer and water well systems documented in the 2008 Comprehensive Plan. In this Plan, additional land is guided for commercial and industrial development to diversify the tax base and policies are added to clarify how land around sod field areas may be developed.

Social and Economic Profile 2

Contents

Purpose

The purpose of this Social and Economic Profile Chapter is to understand the current and projected population and socio-economic makeup so as to better plan for Ham Lake's future.

A. Introduction

A review of social and economic information is included to help establish a basic understanding of the community and serves as a foundation for planning the City's growth. Population projections will be evaluated as well as information on household types, income, housing, education, employment and income information.

B. Population and Household Growth Projections

The following discussion reviews past and forecasted growth in households, household sizes and population for Ham Lake. The information is based on data collected from the 2010 U.S. Census, updates for 2016 and projections through 2040 made by the Metropolitan Council.

Population Growth

Population growth is a function of the number of households and persons per household. The number of persons per household is typically lower for older communities that are more fully developed. New fast growing communities on the metropolitan growth edge are often dominated by young families with larger household sizes. Additionally, general demographic trends show declining household size, due to increasing numbers of single person households. As a result, the population growth rate generally lags behind the household growth rate. These trends are evident in Ham Lake.

The City's population is expected to grow from 15,891 in 2018 to 18,665 in 2040 (Table 2.1). While this is a 17.45 percent increase over the 22 year planning horizon, it only represents an average annual increase of 0.79 percent. By contrast, the number of households is expected to grow by 3 1 . 3 percent over the planning horizon at an average annual rate of 1.42 percent. While significant, these rates are much lower compared to the City's earlier growth phases. In comparison, the City's population grew 360 percent from 3,327 in 1970 to 15,278 in 2010 representing an average annual rate of 9.0 percent.

In order to understand other measures of demographic change that are based on the 2000 and 2010 census, the City's population growth rate during this period is a good base for comparison. During this period, the City grew 20.2 percent at an annual rate of 2.02 percent.

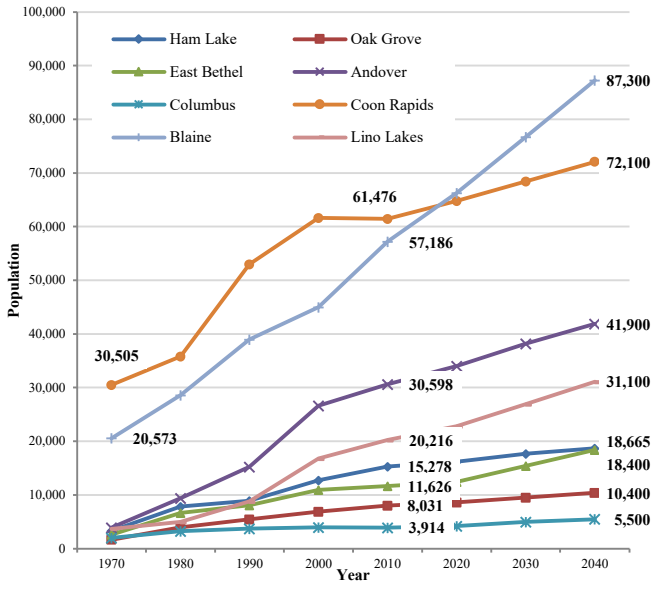
Table 2.1
Growth Projections for Ham Lake: 1970 - 2040

Year	Household	Household Size	Population
1970	865	3.85	3,327
1980	2,226	3.52	7,832
1990	2,720	3.28	8,924
2000	4,139	3.07	12,710
2010	5,171	2.95	15,278
2018	5,673	2.94	15,891
2020	5,800	2.79	16,166
2030	6,598	2.68	17,666
2040	7,099	2.63	18,665

Source: Metropolitan Council; 2010 Census

The City's projected 17.5 percent growth is relatively modest compared to some other cities in the area which are expected to grow significantly faster due to large amounts of developable land and more aggressive development policies. Only Ham Lake, Columbus and Oak Grove are expected to have modest growth rates (Figure 2.1).

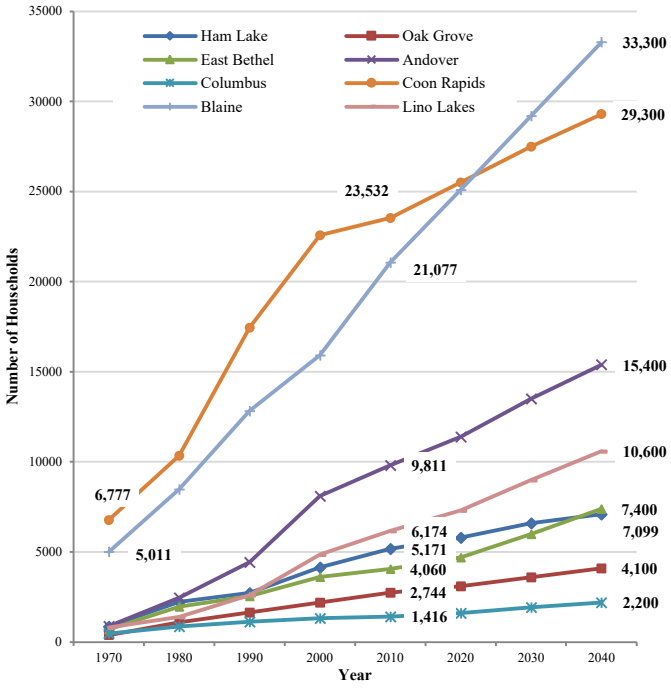
Figure 2.1
Population Growth Trends: Ham Lake and Area Communities 1970-2040
Source: Metropolitan Council & RFC Engineering, Inc.



Household Growth

The number of households is directly related to developable land and land use policies. Household growth in Ham Lake is projected to grow by 31.3 percent from 5,673 units in 2018 to 7,099 in 2040. Figure 2.2 illustrates past and projected trends in the number of households for Ham Lake and its surrounding communities from 1970 through 2040. All of the communities are expected to experience growth in their number of households.

Figure 2.2
Household Growth Trends: Ham Lake and Area Communities 1970-2040
Source: Metropolitan Council & RFC Engineering, Inc.



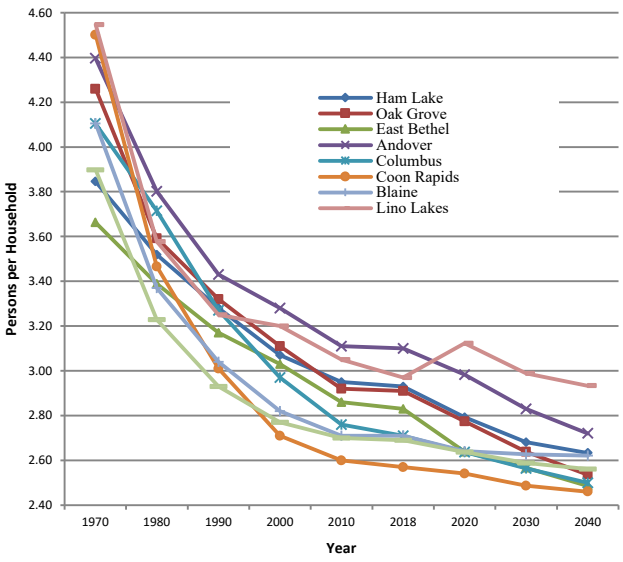
Available building permit data between 2008 and 2018 is also useful for estimating future growth trends for the City (Table 2.2). During this period, Ham Lake added 502 new residential dwelling units, most of which were single family homes. The number of building permits peaked in 2016, with 67 permits being issued. There was a trend of permits in the upper teens to low twenties until 2012. Between 2012 and 2018 the growth reflected an annual range between 56 and 67 permits. Future growth is likely to be modest with around 50 to 90 new units per year after assuming continuation of past land use policies.

Table 2.2: Ham Lake Building Permits Issued For New Residential Dwelling Units

Year	Number of Permits	Annual Change	Percent Change
2008	18		
2009	17	-1	-5.6%
2010	19	2	11.8%
2011	23	4	21.1%
2012	61	38	165.2%
2013	57	-4	-6.6%
2014	56	-1	-1.8%
2015	56	0	0.0%
2016	67	11	19.6%
2017	61	-6	-9.0%
2018	67	6	9.0%

Source: City of Ham Lake

Figure 2.3
Household Size: Ham Lake, Area Communities and Anoka County
Sources: 2000 and 2010 U.S. Census, Metropolitan Council and RFC Engineering, Inc.



Household Size

The Metropolitan Council has projected average household sizes for metro area communities and counties to the year 2040. Household size has been declining and this trend is expected to continue for Ham Lake and other nearby cities (Figure 2.3). Lino Lakes experienced an increase in average household size between 2010 and 2020; future household size after 2020 is expected to decrease again.

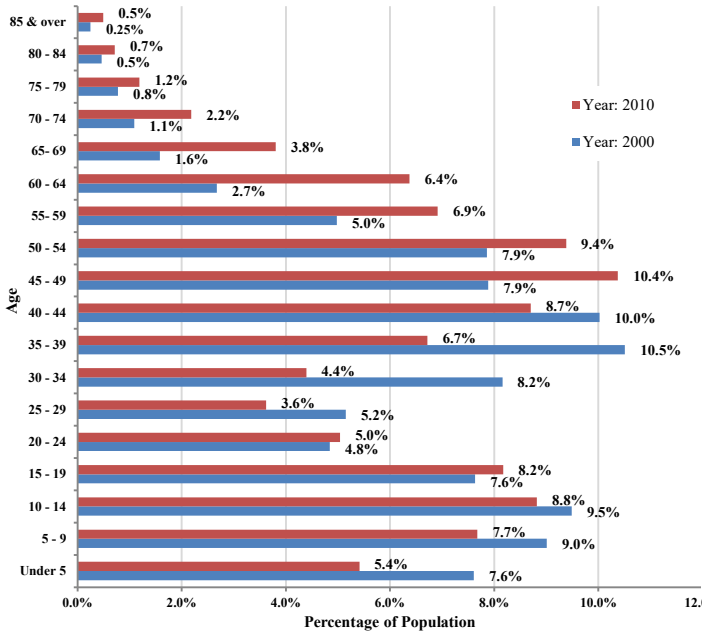
While the average household size in Ham Lake has been declining over the years, the rate has declined less, and is projected to decline less, compared to other north metro communities (Figure 2.3). By 2030, Ham Lake is projected to have the third highest average household size in this comparison group, whereas, in 1970 Ham Lake had the eighth highest average household size. Lino Lakes and Andover are projected to have larger household sizes than the comparable cities. This trend indicates that Ham Lake is, and will continue to be, an attractive place for relatively large families.

The decreasing household size trend is reflective of the dynamics of the modern family. Key factors over the last few decades influencing this trend include: an increase in dual-earning households, an aging population, people postponing marriage, fewer children, the rise in divorce rates and the rise in life expectancy.

C. Age of Population

The distribution of Ham Lake's population also reflects trends seen in Anoka County population. Census data for 2000 and 2010 shows that Ham Lake's overall average age is increasing for all years over 45. In 2000 the largest population group was the 35-39 year old age group representing approximately 10.5 percent of the City's population. In 2010, the 45 to 49 year old age group is the largest population subgroup in the City, representing approximately 10.4 percent of the City's population. With the exception of age groups 15-24 years, all age groups younger than 45 years decreased in population between 2000 to 2010 (Figure 2.4).

Figure 2.4
Age Characteristics: Ham Lake
Sources: 2000 and 2010 U.S. Census and Metropolitan Council



D. Household Characteristics

Two types of households are distinguished in the 2000 and 2010 U.S. Census: family and non-family households. A family household is one where there is more than one person related by birth, marriage, or adoption. A non-family household is comprised of a single person or unrelated persons living together. According to the U.S. Census, the number of households in Ham Lake grew by 24.9 percent from 4,139 in 2000 to 5,171 in 2010 (Table 2.3). Over 81 percent of the households in Ham Lake are family households. There was a 41 percent increase in non-family households from 2000 to 2010. The percentage of the number of households with children decreased from 2000 to 2010. In 2000, 50.6 percent of the households had individuals under 18 years old. By 2010, only 42.5 percent did.

Table 2.3: 2000 and 2010 Household Types: Ham Lake

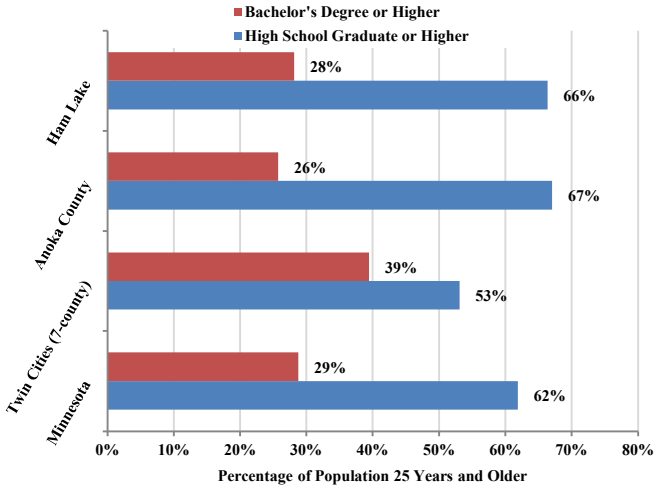
Household Type	Total Households		With Individuals Under 18		No Individuals Under 18	
	2000	2010	2000	2010	2000	2010
Family Households	**3,471**	**4,228**	**1,901**	**1,949**	**1,570**	**2,279**
Married Couple	3,061	3,689	1,644	1,667	1,417	2,022
Male Head of Household	163	218	107	106	56	112
Female Head of Household	247	321	150	176	97	145
Non-Family Households	**668**	**943**	**195**	**247**	**473**	**696**
Male Head of Household	433	540	no data	169	no data	371
Female Head of Household	235	403	no data	78	no data	325
Total Households	**4,139**	**5,171**	**2,096**	**2,196**	**2,043**	**2,975**

Source: U.S. Census 2000, 2010

E. Education

Compared to 2010 populations in Anoka County, the metro area and the State of Minnesota, Ham Lake has the second highest percentage of residents who have earned a high school degree. Ham Lake is reflective of State and Anoka County area populations ranging between 26 and 29 percent for obtaining higher levels of education. Only the Metro Area exceeded the trend at 39 percent (Figure 2.5).

Figure 2.5: Educational Attainment
Sources: 2006-2010 American Community Survey/Summary 5-Year and Metropolitan Council



F. Employment Characteristics

According to the Minnesota State Demographic Center, Minnesota's labor force fell 0.9 percent between 2000 and 2010. The decline in the labor force is attributed largely to the Baby Boomer generation exiting the workforce and by the exhaustion of the peaking of women entering the work force phenomena between 1950 and 1990. In contrast, the labor force in Ham Lake declined by 8 percent while its population grew by 20 percent. During this period, the percentage of Ham Lake's population in the 35 – 64 age group increased nearly 33 percent based on Decennial Census SF1 data, Ham Lake's employment numbers decreased even though population growth increased during the same period.

The City of Ham Lake saw an even larger increase in employment in the 1980's, with growth of nearly 600 percent. Ham Lake's period of rapid growth has changed to one of modest growth in the 1990s and then sharply declined in 2000s. By 2020, employment is expected to increase. The growth trend for the 2030s and 2040s is for modest increases. These changes reflect the number of residents expected to retire and exit the labor force. Looking into the future, the rate of employment growth is expected to be near the metro area rates (Table 2.4).

Table 2.4: Ham Lake & Twin Cities (7-County) Employment: 1980 - 2040

	1980	1990	2000	2010	2020	2030	2040
Ham Lake	262	1,820	3,194	2,931	4,032	4,302	4,601
% Change		595%	75%	-8%	38%	7%	7%
Metro Area	1,040,000	1,272,773	1,607,916	1,544,613	1,828,000	1,910,000	2,039,000
% Change		22%	26%	-4%	18%	4%	7%

Source: Metropolitan Council & MN State Demographic Center

Data from the U.S. Census Bureau – 2017 American Community Survey show that there were 8,493 Ham Lake residents employed in civilian jobs at the time the survey was taken. The data shows that there are significantly higher percentages of Ham Lake residents employed in Manufacturing and Construction compared to residents of the Twin Cities (7-County) area (Figures 2.6 and 2.7).

Figure 2.6 Employment by Industry
2017 Employed Ham Lake Residents
Source: U.S. Census Bureau and 2013-2017 American Community Survey

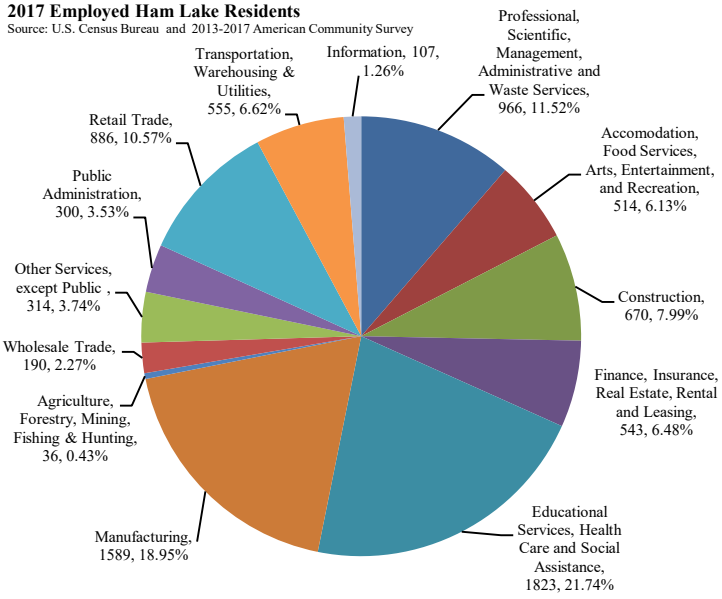
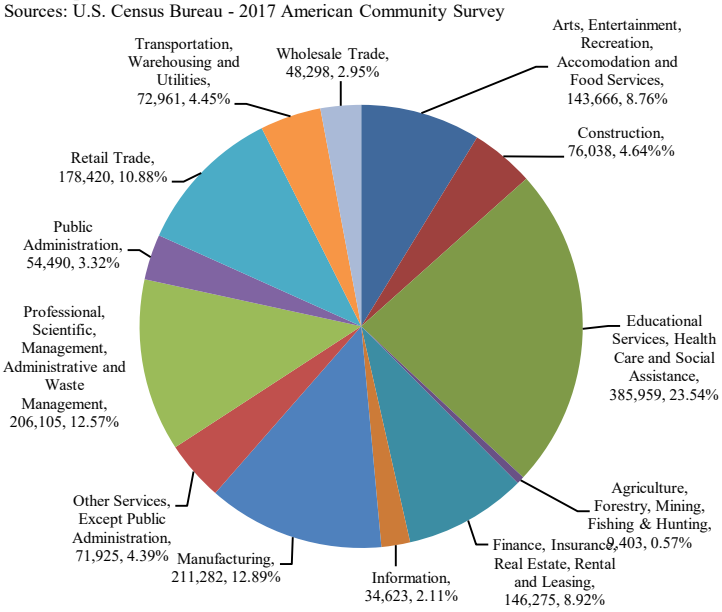


Figure 2.7. Employment by Industry:
2017 Employed Twin Cities (7-County) Area Residents
Sources: U.S. Census Bureau - 2017 American Community Survey



G. Income

Ham Lake has a relatively high median household income and has seen a significant increase in median household income. The median household income in Ham Lake was $67,800 in 2000 and $89,500 in 2010, higher than Anoka County, the metro region and the state in both years (Figure 2.8). The median household income for Ham Lake also increased 32 percent over the ten year period, a rate higher than Anoka County, the metro area and Minnesota. Figure 2.9 shows that 63 percent of Ham Lake households are at incomes ranging from $50,000 to $149,999.

Figure 2.8
Median Household Income: 2000 vs. 2010
Sources: 2000 U.S. Census (reported in 1999 dollars), 2010 U.S. Census and 2006-2010 American Community Survey (Reported in 2010 inflation adjusted dollars)

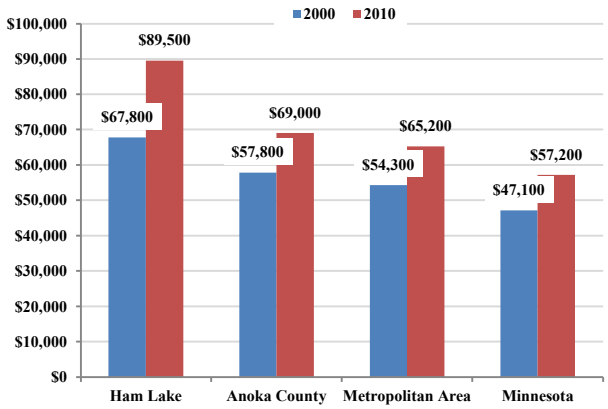
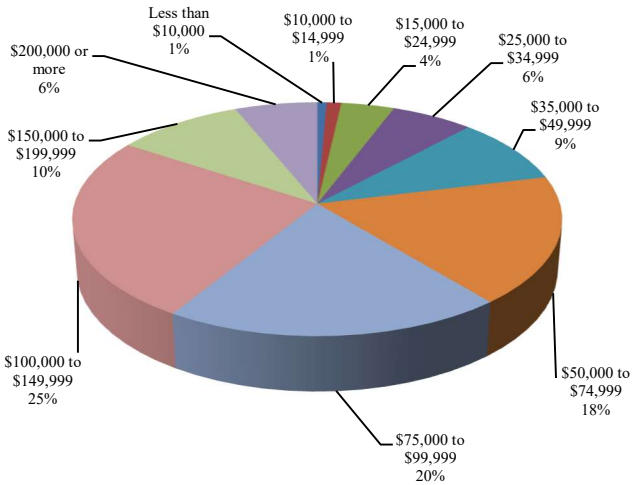


Figure 2.9
Ham Lake: Household Income Ranges
Sources: 2010 U.S. Census and 2006-2010 American Community Survey



Poverty Rates

According to the U.S. Census and other data sources, the number of individuals and families below poverty in Ham Lake has increased from 2000 to 2010 (Table 2.5). In 2000, there were 267 individuals below poverty, which represented 2.1 percent of the population. By 2010, 291 individuals were considered below poverty, representing 1.9 percent of the population. In 2000, 41 families (1.2%) were considered below poverty; by 2010, 42 (1.0%) families were considered below poverty.

Table 2.5: Individual and Family Poverty Rates

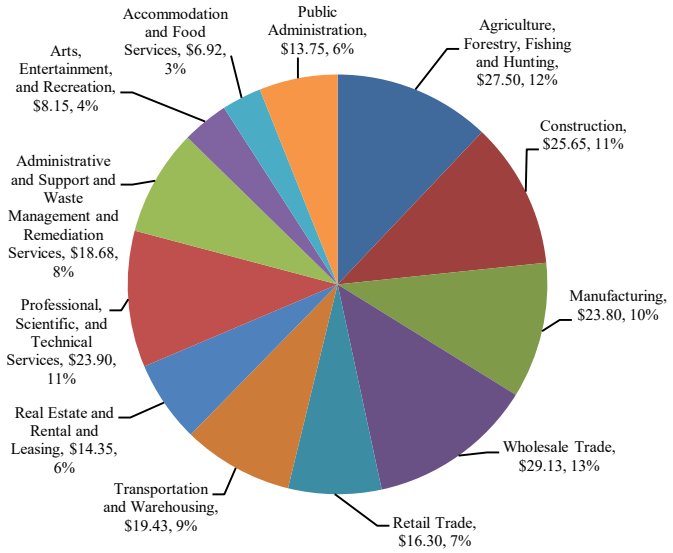
Sources: 2000 U.S. Census, 2010 U.S. Census, Metropolitan Council and American Community Survey 5-Yr Summary File

	2000		2010	
	Below Poverty Level in		Below Poverty Level in	
	Number	%	Number	%
Individuals	267	2.1	291	1.9
Families	41	1.2	42	1.0

H. Jobs and Wages

Ham Lake has seen strong job growth in recent years. In the first quarter of 2017 there were 3,257 jobs at approximately 332 employers in the City. The number of jobs in Ham Lake increased from 2,565 in 2010 or 27 percent. During this same time period, job growth in the Twin Cities (7-County) area was approximately 11 percent. The average weekly wage for jobs in Ham Lake was $758 compared to $1,468 for the Twin Cities (7-County) area and $930 for Anoka County. Figure 2.10 shows the distribution of hourly wages for Ham Lake jobs in the first quarter of 2017.

Figure 2.10
Ham Lake: 2017 Average Hourly Wages by Industry
Sources: MN Employment and Economic Development, Quarterly Census of Employment and Wages (reported in the Frst Quarter) and Data reported as average weekly wage converted to hourly by anssumeed



I. Economic Development

The Ham Lake Development Corporation (HLDC) is a non-profit (501C3) organization that encourages economic development in the City by offering low interest loans to businesses moving into Ham Lake or for expansion of current businesses. HLDC also provides grants to improve the aesthetic appearance of the Trunk Highway 65 corridor as well as in commercial and industrial developments. HLDC helps to improve the local economy while creating new jobs with livable wages. To date, the HLDC has helped over 40 businesses with loans totaling over one million dollars. 58 businesses have taken advantage of the beautification grant program.

Environmental Resources 3

Contents

Purpose

The purpose of this Environmental Resources Chapter is to define environmentally significant areas and establish objectives and strategies for their preservation, protection, enhancement and utilization.

A. Overview

An important part of Ham Lake's future vision is the preservation and enhancement of the community's environmental resources. The community has an abundance of wetlands and wooded areas. Surface drainage and hydrological functioning of the soils are influenced by the generally flat landscape and significant areas of hydric and peaty-mucky soils. During the planning process, the following principles were emphasized:

- The community's wetlands, wooded areas and open spaces are defining elements of the City's rural character and should be protected.
- Specific vegetative and soil resources have significant importance for aesthetic, environmental and hydrological purposes and greater measures are needed to protect these elements.
- Environmentally-sensitive and sustainable development practices should be integrated into new developments within the high quality resource areas.

B. Goal

A goal is a policy statement that states a desired outcome in general terms. The goal was developed by considering key findings and reviewing data and trends as part of the Plan update. The goal for environmental resources is provided below.

Environmentally significant areas will be evaluated to determine how they are protected, utilized, enhanced and better integrated into the community.

This goal is ongoing, and is incorporated into all development reviews. The Minnesota Biological Survey of Natural Communities and Rare Species publication and the Anoka Conservation District Natural Resources Inventory and Analysis (2008) are incorporated into all proposed development reviews.

C. Key Findings and Themes

Ham Lake's character reflects a number of unique environmental qualities. This chapter of the Comprehensive Plan will identify many of those features and establish objectives and strategies for the

preservation, protection and enhancement of Ham Lake's natural environment. The City has completed key documents that provide direction on the identification, enhancement and protection of the area's natural resources. These documents are the Storm Water Pollution Prevention Plan and the Surface Water Management Plan and the Natural Resources Inventory (NRI), completed in 2008. These documents will be referenced throughout this chapter.

The information and recommendations contained in the NRI report do not constitute any official policy or guidelines for future development in the City of Ham Lake and neither the approval nor the acceptance of that report by the City Council shall infer anything to the contrary. Future and current development policies in the City are the exclusive domain of the City's Comprehensive Plan and adopted City Code, subject to the right of all future City Council's to amend in the manner provided by law. Entities contemplating particular land uses or activities should not rely on the contents of the NRI report in anticipating or interpreting the City's policies regarding natural recourse or any other subject of that report.

Environmentally Significant Areas

The general topography, along with the soils, bedrock, water features and other natural communities, are a defining element of the overall community. These areas are described below.

General Topography: The City is characterized by gently rolling hills with patches of forest surrounded by low wetland and marshy areas. The land relief is approximately 40 feet, between 880 feet in the southwest to 920 feet in the northwest.

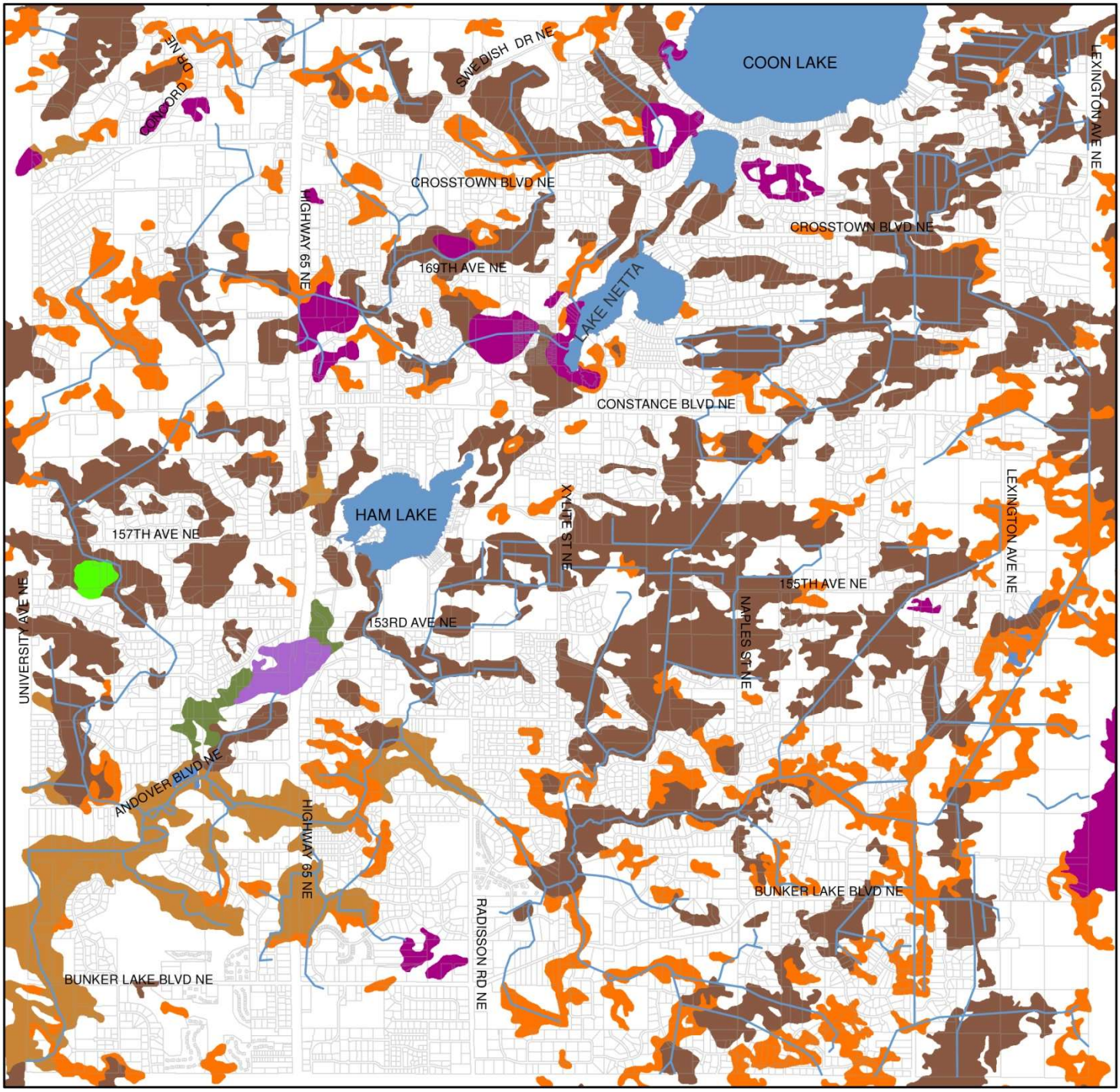
Surficial Geology and Bedrock: Ham Lake is located in the Anoka sand plain. This area is a sand outwash plain formed by the retreat of the Des Moines lobe and the Grantsburg sublobe of the Superior lobe glacier. Areas of upland represent till left from previous ice movements that were not buried by the outwash sand. Other features of positive relief are patches of sand dunes, formed by southwesterly winds after the sand plain was abandoned by the outwash streams. Landscape features of negative relief include numerous lakes and marshes which formed from ice blocks, originally buried by the outwash sand, melted to create the depressions, which are now filled with water and/or organic soils. As a result of the glacial actions, glacial outwash is the predominate surficial geologic formation in the City.

The Anoka sand plain is characterized by medium grain size sand. These sands range from 15 to 80 feet deep and are generally underlain by 100 feet of consolidated red-brown sandy till. This relatively impermeable layer of till traps the groundwater above it, keeping the groundwater table high and readily available. Below the glacial till and drift are bedrock formations of sandstone, dolomite and shale. Depth to the first layer of bedrock in Ham Lake ranges from 80 to 370 feet.

Soils: There are two different soil associations located within the City. These are the Zimmerman- Isanti-Lino Association and the Rifle-Isanti Association. For Zimmerman-Isanti-Lino soils, the topography is level to undulating. The naturally occurring high water table is at or near the surface in most depressed areas. These soils are dominated by fine sands and drainage ranges from excessively drained to very poorly drained. These soils are normally good for urban development because they generally provide excellent drainage and have good bearing capacity. The soil has limited cropland use due to low fertility and high permeability.

For Rifle-Isanti Association soils, the topography is nearly level. This soil group is a series of large level bogs dominated by organic soils and small, sandy, island-like features that rise above the general level of the surround bogs. This hydric soils group is very poorly drained and has very slow infiltration rates. The organic content is very high and has a high water storage capacity. Unless drained, the water table is at or near the surface. These areas have been extensively ditched in the past to allow for drainage and have been used for agricultural uses. Due to the high organic content, these hydric soils are generally unsuitable for standard subsurface septic treatment systems. The Hydric Soils Map (Figure 3.1) indicates generally where development is highly constrained. Peaty/mucky soils encompass 8,383 acres or approximately 37 percent of the City.

Figure 3.1 Hydric Soils



Hydric Soil Type

- Markey Muck (Ma)
- Marsh (Mc)
- Millerville Mucky Peat (Mk)
- Rifle Mucky Peat (Rf)
- Rifle Muck, Woody (Rg)
- Rondeau Muck (Ru)
- Seelyeville Muck (Se)

- Streams and Ditches
- Lakes
- Ham Lake Parcels

Comprehensive Plan 2018 Update

0 2,500 5,000 10,000 Feet

MAP DATE: 6/1/2019

Sources:
Natural Resource Conservation Service (USDA)
City of Ham Lake
RFC Engineering, Inc.
Coon Creek Watershed District
Anoka County
Minnesota Dept. of Natural Resources

HAM LAKE, MINNESOTA

RFC Engineering, Inc. Consulting Engineers

Groundwater: There are four primary aquifers found throughout Anoka County. These are, from shallowest to deepest, the glacial drift aquifer, the Ironton-Galesville aquifer, the Franconia aquifer and the Mt. Simon-Hinckley aquifer. Wells in the "confined" glacial drift aquifer range in depths from 30 to 300 feet. In general, the Des Moines glacial till layer is discontinuous and cannot be relied upon to act as a confining barrier to downward movement of water and is thus susceptible to contamination. Throughout most of the County the Franconia formation is the first bedrock aquifer. Although the Franconia unit yields relatively low volumes of water, it is an adequate aquifer for private domestic wells pumping approximately 12 gpm. Most residential wells use the Franconia aquifer.

The City of Ham Lake will cooperate with the Minnesota Department of Natural Resources-Ground Water Level Monitoring Program to monitor groundwater levels and establish municipal baseline groundwater level information. Through the collection and analysis of this groundwater information, the City will play an active part in monitoring its water resources and addressing groundwater sustainability and future water supply concerns.

Wetlands and Surface Waters: Ham Lake is characterized by abundant wetlands, lakes, creeks and other drainage ways. These wetlands and surface waters are widely distributed and cover 7,261 acres representing approximately 32 percent of the City (Figure 3.2). These water features contributed significantly to the aesthetics of the community and provide recreational opportunities and/or function as natural stormwater management facilities. These wetlands and surface waters along with soils with poor suitability for development are responsible for the dispersed development of housing throughout the City.

Wetlands - Wetlands affect local water quality. The aquatic plants present in a healthy wetland will slow and filter water moving through the wetland, taking up nitrogen and phosphorus as nutrients and purifying the water through increased settling. The purified water then seeps into the groundwater supply or flows into the surface drainage system.

Wetlands affect the amount of water in the floodplain. In most areas, the wetlands and organic (peaty) soils hold water during droughts and acts as natural storage ponds during periods of flooding, thus making storm water runoff more manageable.

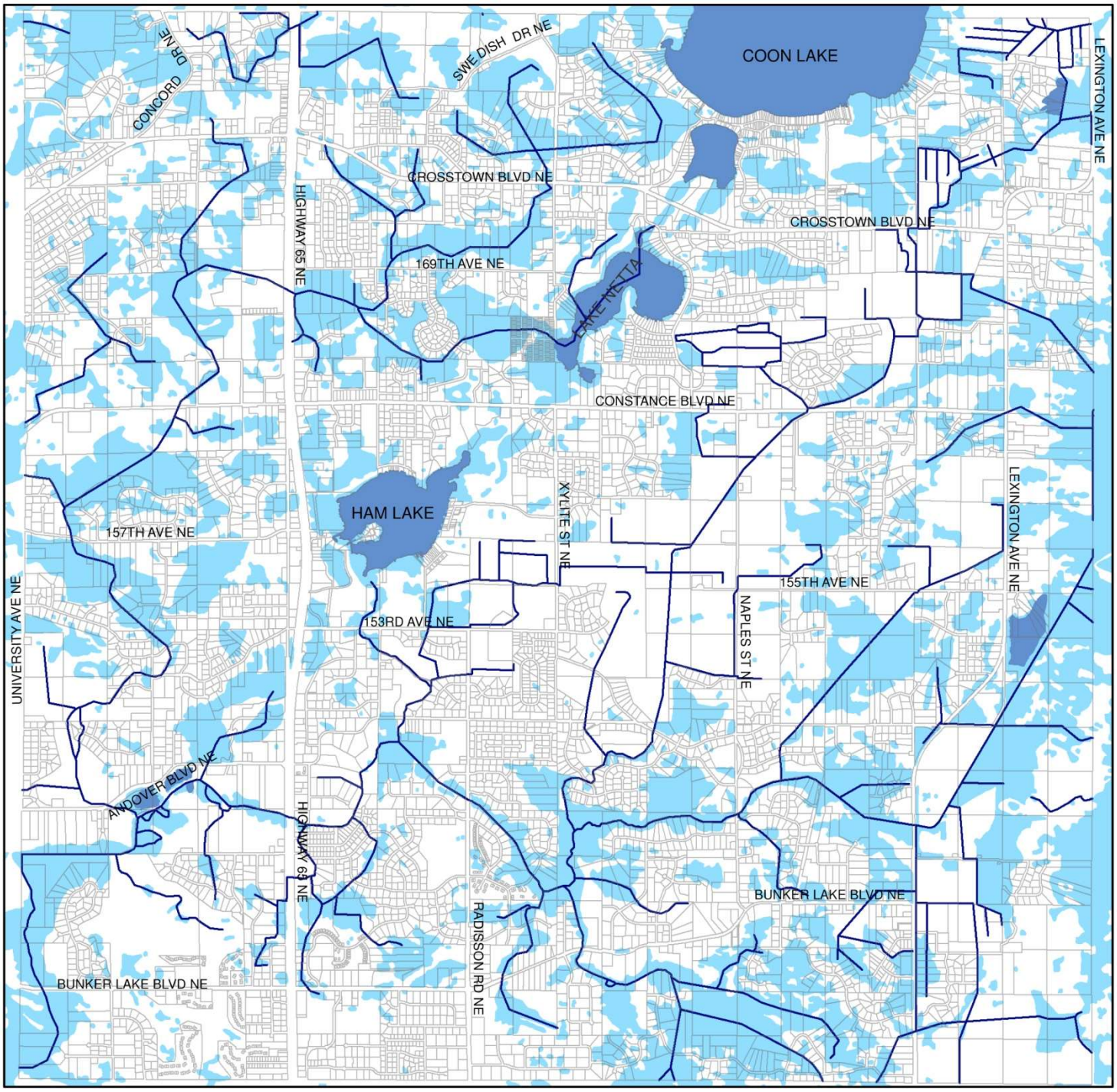
Lakes – Ham Lake, Lake Netta and Little Coon Lake (also known as South Coon Lake) are located entirely within the City. Coon Lake is located in portions of Ham Lake, East Bethel and Columbus. All lakes are slightly eutrophic. Ham Lake is aerated in the winter to prevent winter kill of fish. It also has a State-owned spawning area and is a fish breeding stock source. Shoreline management practices including the removal of aquatic and riparian zone vegetation and use of lawn fertilizers are also factors affecting water quality.

Drainage System – Coon Creek has been modified to drain parts of the City and is part of a larger man- made drainage system that allows much of the largely flat landscape to be used for agricultural purposes. Coon Creek runs from Northeast to Southwest through the City and is the surface water outlet for Ham Lake and Lake Netta. The slope of Coon Creek is approximately 2.5 feet per mile through Ham Lake. The City contains a complex network of State, County, City and private ditches dating to 1900. Much of the ditches are silted in, overgrown with trees and brush and are generally in poor condition. This has raised concerns with stormwater management and flooding as agricultural land is converted to urban uses.

Watershed - Most of Ham Lake (32.27 square miles or 90.2 percent of the City) is located within the Coon Creek Watershed District (CCWD). Small portions of the northern part of Ham Lake are located in the Sunrise River Watershed Management Organization (SRWMO) (1.82 square miles or 5.1 percent) and the Upper Rum River Watershed Management Organization (URRWMO) (1.70 square miles or 4.7 percent).

The mission of the CCWD is to manage groundwater and the surface water drainage system to prevent property damage, maintain hydrologic balance and protect water quality for the safety and enjoyment of citizens and the preservation and enhancement of wildlife habitat. The District implements its mission through its Comprehensive Plan and water quality plan. The SWPPP and SWMP protect surface and groundwater resources through goals and requirements that supplement the Coon Creek Watershed District Rules and SWPPP.

Figure 3.2 Water Resources



Comprehensive Plan 2018 Update

Legend

- Streams and Ditches
- Ham Lake Parcels
- Lakes
- NWI Wetlands

0 2,500 5,000 10,000 Feet

N W E S

MAP DATE: 6/1/2019

Sources:
Minnesota Department of Natural Resources
City of Ham Lake
RFC Engineering, Inc.
Coon Creek Watershed District
Anoka County

HAM LAKE, MINNESOTA

RFC Engineering, Inc. Consulting Engineers

Natural Communities: The Anoka Conservation District conducted a Natural Resource Inventory (NRI) of the City to identify remaining high quality resources (Figure 3.3). Individual forest, grassland and wetland models were integrated to identify and rank the Regionally Significant Natural Resource Areas. The Regionally Significant Natural Resource Area scores are determined by examining important ecological attributes of the natural resource patches, including size, shape, cover type diversity and adjacent land use.

Additional Environmental Issues

One Acre Lot Size is Critical in addition to other environmental protection measures: Protection of open space through maintaining the one acre lot minimums is a critical element in preserving the City's rural character. However, additional measures are needed to ensure the City's remaining high quality resources are protected from negative impacts.

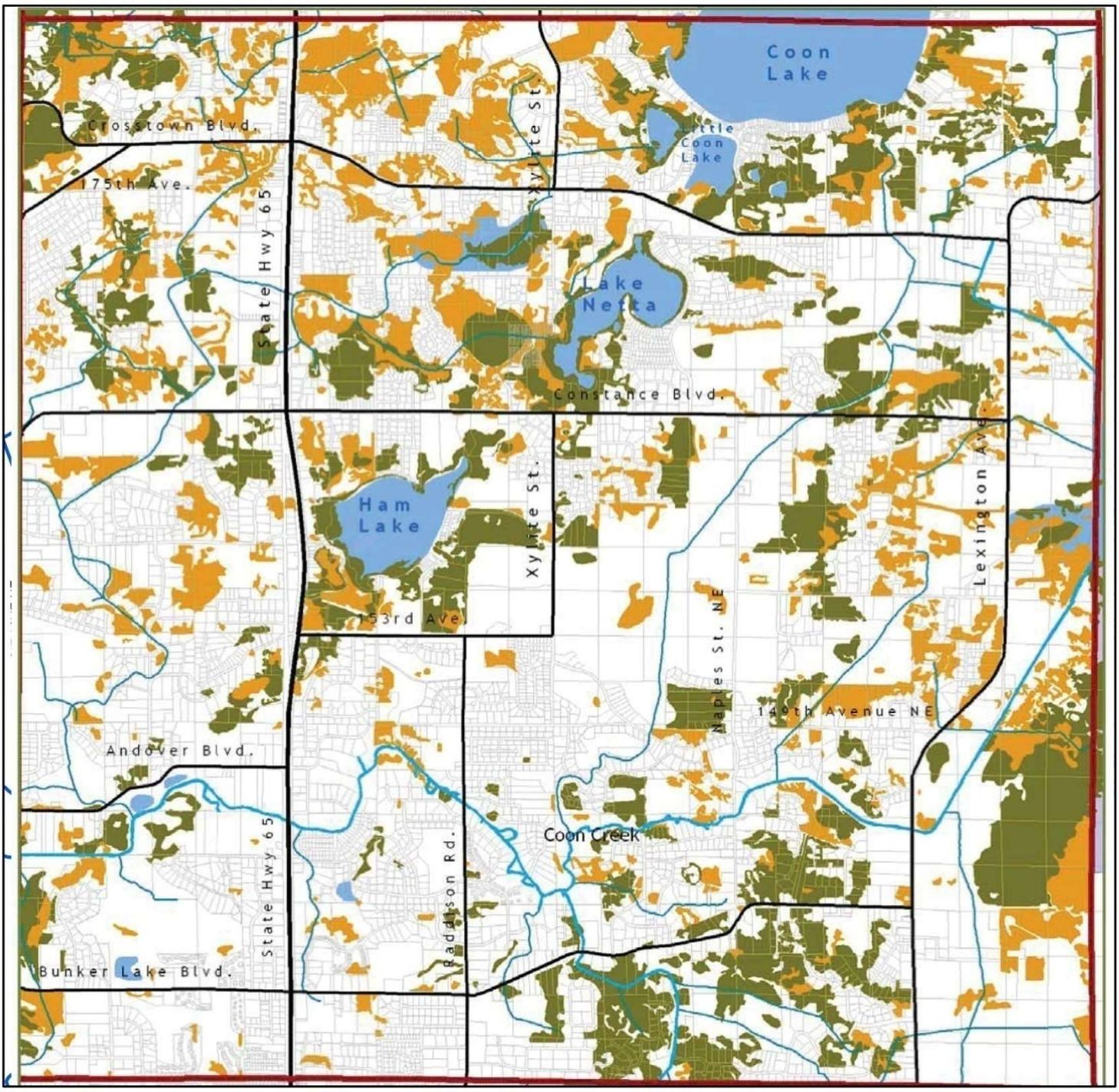
Sodfield Development, Wetlands & Peat Soils: Sod fields provide the City with a unique and valuable open space amenity. As soils in these areas become depleted and land values rise, pressure to develop sod fields will increase. Some sod fields are located on peat soils (Figure 3.1). Others may be located on wetlands, while others may be located over both peat soils and wetlands. Prior to development, regulations require that wetlands be identified and delineated. The presence of wetlands and the depth of peat soils will affect development, feasibility, potential and pattern.

Development on peat soils would require the excavation and replacement of such soils. Peat soils have an important hydrological function and merit special attention in the development process. It is estimated that the peat layer ranges from 4 to 25 feet. Peat soils store and filter a significant amount of water. The high water table in much of the City continues to saturate this layer. The cumulative effect of soil mining in multiple locations could result in a lower overall water table similar to what has already occurred from the use of canal drainage systems. A lower water table may negatively affect native plants. The loss of the water holding capacity of peat soils along with surface soil compaction due to development activity can also increase the volume and rate of surface water runoff.

Current Protection Programs

Reduction of Waste Materials: The City has a comprehensive recycling program to encourage the reduction of waste materials. Normal curbside pickup of refuse is supplemented with curbside recycling. The following materials are currently accepted for recycling curbside: aluminum cans, brown paper bags, glass bottles and jars, newspapers, small-mouth plastic bottles and jugs, tin and steel cans as well as catalogs, magazines, phone books, cardboard boxes and mixed-use paper. The City and its contracted waste haulers also pick-up and dispose of a wide variety of electronic and large appliances according to a fee schedule. The City's pricing schedule is also structured to reward households that produce less garbage with lower fees. The City also sponsors Spring and Fall Recycle Days along with quarterly Green Lights Recycling Days in Blaine where residents can bring in tires, appliances, etc. for recycling. A fee is charged for this service.

Figure 3.3 Natural Communities



Comprehensive Plan 2018 Update

- High Quality Natural Resource Patch
- Other Quality Natural Resource Patch
- Creeks & Drainageways
- Lakes
- City Boundary

0 2,500 5,000 10,000 Feet

N W E S

MAP DATE: 6/1/2019

Sources:
Anoka Conservation District
Minnesota Department of Natural Resources
City of Ham Lake
Anoka County

HAM LAKE, MINNESOTA

RFC Engineering, Inc. Consulting Engineers

Anoka County has two compost sites available to County residents: Bunker Hills Compost Site in Coon Rapids and Rice Creek Chain of Lakes Compost Site in Lino Lakes. Both sites provide a good option for residents who have large quantities of leaves or grass clippings that are unable to be composted at home.

Prevention of contamination of the environment, whether its water, soil or air pollution, is a priority. Practices within the community can have both a local and regional effect on the environment. Locally there are a number of facilities that store and use hazardous materials that have the potential to pollute the environment. Federal and State regulations require these facilities to address storage and handling of these materials and develop a plan of action in the unlikely event that these harmful substances are released to the environment. The City, along with the other required authorities, should be notified in the event of a regulated release that could potentially be harmful.

There is also the potential that these materials are disposed of in an illegal matter such as dumping in the storm sewer system. As part of the City's NPDES Phase II permit, the City is developing and implementing an education program on the proper disposal of household hazardous materials.

Anoka County operates a hazardous waste disposal site in Blaine. All County residents may dispose of hazardous wastes at no charge at this site.

Noise Pollution: The City has adopted and enforces noise regulations as established by the Minnesota Pollution Control Agency.

Light Pollution: Current regulations limit the amount of light trespass from business areas into residential area. The City does require that all new subdivisions include the installation of one street light at intersections, at the end of each cul-de-sac, on sharp curves and at periodic intervals. All lights must use at least a semi-cutoff design to help limit the amount of light pollution.

Park and Tree Commission: The City maintains a citizen advisory board called the Park and Tree Commission. This volunteer board advises the City Council on the creation of appropriate policies, programs and regulations for the protection and preservation of the community's natural resources.

Tree Preservation: The City has also adopted tree preservation regulations that require the identification of important trees and establishes regulations to protect such trees from construction impacts. For custom graded lots, this policy also requires land owners to submit a tree protection plan prior to lot grading and prohibits the removal of trees prior to grading. The Shade Tree Damage ordinance does not allow cutting of red oak species between April 1st and July 15th.

NPDES Permit: The MPCA implemented the National Pollutant Discharge Elimination System (NPDES) Phase II Stormwater Program in March 2003. Phase II requires (as amended in 2013) municipal separate storm sewer systems (MS4s) in urban areas with a population over 10,000 to obtain an NPDES permit. Permits for construction sites greater than one acre are also required as part of the Phase II requirements. More information about the permit can be found in the SWPPP and the SWMP.

D. Objectives and Strategies

The objectives and strategies identified below are broad statements regarding the motivation and intent of this Plan. The strategies that follow individual objectives are specific items that promote attainment of the objective. Strategies may be a program, regulation or a project.

Objective 1: Protect and enhance environmentally significant areas.

ER 1.1 Evaluate development proposals as to how they impact groundwater and require such development to protect and enhance the quality of groundwater to minimize the potential of contamination to the drinking water supply.

ER 1.2 Evaluate development proposals as to how they impact surface waters and require such development to protect and enhance the quality of surface waters including the City's lakes, wetlands and drainage system. The SWPPP and the SWMP, identify current strategies that should be updated periodically to remain current with regulations and acceptable practices.

ER 1.3 Consider preservation of native vegetation and development of habitat (such as native species, trees and grasses with deep root structures) within buffer areas along lakes, wetlands and waterways.

ER 1.4 Design subdivisions (i.e., street layout, lot configuration and building placement) in a manner that is least disruptive to the land's natural features and drainage patterns.

ER 1.5 The NRI is available for consultation when development is proposed to assist in identifying the presence of any significant natural resources. The quality of the resource, as described in the NRI, should be taken into account to determine whether the resource should be protected, restored, or allowed to be altered.

Objective 2: Promote the reduction of solid waste generated.

ER 2.1 Promote programs to reduce the amount of solid waste generated in the City and to increase the use of recyclable, reusable or biodegradable materials.

ER 2.2 The City will continue to work with its contracted waste haulers to provide volume pricing that encourages the reduction of waste.

Objective 3: Minimize the negative consequences of hazardous materials.

ER 3.1 The City will review its use of hazardous materials and substitute safer alternatives wherever possible.

ER 3.2 Encourage Ham Lake businesses and residents to utilize Anoka County hazardous waste programs.

Objective 4: Collaborate with residents to implement key environmental policies.

ER 4.1 Conduct coordination meetings with neighboring jurisdictions on protecting and linking open space. For example, working with the City of Andover concerning the Coon Creek corridor.

ER 4.2 Work with Coon Lake area residents to develop strategies for stabilizing and/or improving water quality through initiatives that address aquatic and shoreline vegetation management, resident education, water quality monitoring and stormwater management.

ER 4.3 Facilitate repair and replacement of septic systems for all residents and businesses through City loan programs.

Community Identity 4

Contents

Purpose

The purpose of this Community Identity Chapter is to address how the community can enhance its character and sense of place.

A. Overview

This chapter addresses the community's identity, including the physical environment and the activities, institutions and culture that produce Ham Lake's character. It provides guidance for the preservation and enhancement of the community's identity.

The community is recognized for its abundant wetlands and attractive large lot neighborhoods dispersed in and around the wooded, wetland landscape. Residents have a very positive image of Ham Lake, describing it as a friendly community that offers a convenient rural environment characterized by large lots and natural open space. Residents have a strong interest in, and take an active role in, issues affecting development and quality of life. The community has a strong desire to maintain its large lot rural character. This desire implies that future development should be considerate of the elements that perpetuate the character including existing wetlands and vegetation, a one acre minimum lot size, individual well and septic systems and an existing development pattern that responds to wetland and soil conditions.

Much of the commercial development on Trunk Highway 65 contrasts with the character and quality of the City's residential development. Much of this development is relatively low intensity commercial development.

The land use concepts including the goals, objectives and policies outlined in the Land Use Chapter provide a baseline for development practices that will foster and strengthen the community's rural character identity throughout the City. These land use concepts are supplemented by the concepts presented in this chapter.

B. Goal

A goal is a policy statement that states a desired outcome in general terms. The goal was developed by reviewing data and trends as part of the Plan update. The Community Identity goal is provided below.

The rural character of the community as reflected in the City's physical landform, wetlands and environmentally significant resources should be projected throughout all new development to create a distinctive sense of place.

C. Key Findings and Themes

Information was compiled from a variety of sources including the existing Thrive MSP 2040 Plan. Outlined below is a summary of key findings related to Ham Lake's identity.

Sense of Place and Identity Connected to the Natural Environment: The City offers a diverse natural environment including lakes, creeks, wetlands, woodlands and active sod fields that contribute to the aesthetic open space of the City. The natural environment and abundant wildlife are viewed by many as the main contributor to the City's rural character and why they chose to live in Ham Lake.

Autonomy, Independence and Small Efficient Government: Residents feel a sense of independence and autonomy that is supported by large lots and individual septic and water systems. Protection of individual property rights and autonomy are important values affecting land use and growth. Residents are proud of their local government and generally happy with its cost effective and limited delivery of services.

Neighborhood and Home as Quiet Refuge: Neighborhoods are safe, quiet and dark. The large lots with ample "elbow room" provide a quiet and welcoming refuge to most residents who work outside the City and enjoy coming home to the relaxed atmosphere of Ham Lake. The lack of street and commercial lighting provides a dark sky at night that contributes to a sense of relaxation and well- being.

Highly Rated Physical Characteristics: City Staff for the 2030 Regional Framework Comprehensive Plan took many photos of highly desirable physical elements that describe Ham Lake or what Ham Lake should look like. They evaluated these photos to identify those images that best conveyed the desired character for future development. The knowledge from this visual quality assessment helps to identify specific physical elements that should be included in proposed future developments. The results of this exercise may be used to visually communicate desired physical character to prospective developers as well as to evaluate proposed developments.

Highly Rated Physical Characteristics include:

- Abundant, expansive, open green space.
- Views of water
- Travel corridors with significant vegetation and few or no structures
- Ample space between structures
- Natural landscapes
- Human created well maintained landscapes
- Human scaled contemporary architecture with quality materials and architectural detailing
- Commercial site design that provides circulation that balances both human and vehicle needs

Public access to natural resource amenities.

Broad expanses and vistas with no structures contribute to openness and sense of space.

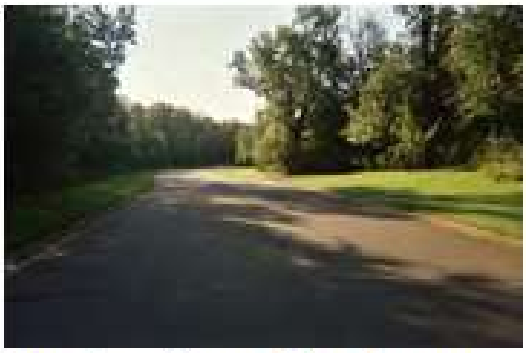
Native grasses and plants used for landscaping and restoration.

Natural resources protected and preserved for public enjoyment.

Trails and greenway corridors used to connect neighborhoods and habitat patches.

Natural drainage ways protected; integrated with trails.

Area history important; integrate physical and cultural history into new development.



Travel corridors with no human structures, significant vegetation to screen view, increase privacy.

Local "vernacular" architecture; design inspiration for new development.

Significant use of landscape buffers to mitigate traffic/noise impacts.

Older structures maintained & retained; link to the past.

Open space integrated into new subdivision development. Residents like it.

Trees protected and preserved trees in new development; respecting natural environment.

High quality materials & construction; Unique architecture contributes to strong neighborhoods.

Large lots, open space, access to natural resources define high quality residential development.

Custom graded lots used to preserve trees and keep rural character.

D. Objectives and Strategies

The objectives and strategies identified below are broad statements regarding the motivation and intent of this Plan. The strategies that follow individual objectives are specific items that promote attainment of the objective. Strategies may be a program, regulation or a project.

Objective 1: Continue the existing development pattern and enhance the City's rural character.

CI 1.1 Guide new residential development to be compatible with existing residential development patterns.

CI 1.2 Guide new commercial and industrial development patterns to be complementary to residential patterns and increase the use of natural vegetation and/or landscaping to create substantial buffers and improve overall visual quality.

CI 1.3 Strengthen exterior lighting policies and regulations to protect dark sky qualities and to prevent light intrusion into neighborhoods from new commercial and industrial development.

CI 1.4 Preserve the scenic quality of the rural landscape by defining the edge of the community and maintain the rural character of roadways throughout the community.

CI 1.5 Evaluate development proposals as to how they impact community character and require the addition of physical design elements needed to meet community standards for character.

Objective 2: Improve the entry points (gateways) into the community.

CI 2.1 Introduce attractive signage and landscaping at identified gateways.

CI 2.2 Introduce overlay zoning districts targeted at gateways and the Trunk Highway 65 corridor to create a defined rural character streetscape.

CI 2.3 Develop landscaping standards for the Trunk Highway 65 corridor.

Land Use 5

Contents

Purpose

The purpose of the Land Use Chapter is to address how to maintain the rural large lot pattern of residential development, protect environmental resources and

integrate new and redeveloped commercial and industrial land uses that respect and enhance the rural character, existing pattern of development and environmental resources while diversifying and developing the tax base.

A. Overview

Ham Lake occupies 36 square miles in north-central Anoka County. Ham Lake was incorporated in 1974 and operates as a home-rule charter City. The City Charter was adopted in 1982. The 2018 population of 15,891 is spread throughout the City on large lots and dispersed among the many wetlands and lakes. There is no municipal sewer system in the City and homes and businesses are served by individual or community septic systems. Trunk Highway 65 is a major north south arterial that provides the major transportation connection to the metro area and is a significant economic catalyst for most of the City's businesses.

The City of Ham Lake saw substantial growth in new housing units and population during the 1970's, 1990's and through 2018. Much of this growth was driven by the City's relatively convenient location for large housing sites. The City has finite borders and its growth potential is limited by both its borders and land suitable for development. With limited amounts of land available for new development, the City is entering a more mature stage where the rate of growth will decline.

Approximately six square miles of developable land remain in the City. This represents about 16 percent of the City's 36 square miles. The six square miles includes portions of platted subdivisions that cannot be further subdivided. This remaining land that can be developed is expected to be so by 2040, the planning horizon for this Plan. Refer to the Density Calculations section in this Chapter for net developable acreage for each land use. How new growth and development occurs on this remaining land will affect the long-term tax base and financial position of the City. The remaining new growth will also affect the overall character of the City and its continued attractiveness as a place to live, work and play. Residents have made it clear that protecting the existing character and development pattern is important. Land use decision should be made considering their fiscal impacts on the tax base, opportunities for public investment and influence on the built and natural environments. In order to make balanced decisions and implement the vision, the City needs to follow through on the objectives and strategies contained in the Plan.

This chapter outlines the recommendations for addressing land use and the built environment. The goal, objectives and strategies reflect key findings that were gathered as part of the Ham Lake Comprehensive Plan update planning process. It is important to note that the community's vision for the future has evolved since the completion of the 2008 update.

B. Goal

A goal is a policy statement that states a desired outcome in general terms. The following goal was developed from key findings related to existing land use conditions generated as part of the Plan update.

The City will diversify and develop the tax base while maintaining the rural character of the community and protecting its remaining environmental resources.

The goal of diversifying and developing the tax base is ongoing. The City, Chamber of Commerce and Anoka County Economic Development Specialist work together in pursuing commercial businesses for development and redevelopment of commercially zoned properties. The rural character of the community and protection of environmental resources is ongoing, and is incorporated into all proposed development review.

C. Key Findings and Themes

Information was compiled from a variety of sources including the U.S. Census Bureau, Anoka County, State of Minnesota GIS data, GIS land analyses, previous plans and codes, including the 2008 Comprehensive Plan. Outlined below is a summary of key findings themes that affect land use policy development.

Pace of Growth is Steady: The number of new housing units built increased from the low in 2009 thru 2012 and has since leveled off. The average number of new residential building permits between 2012 and 2018 is 61 per year.

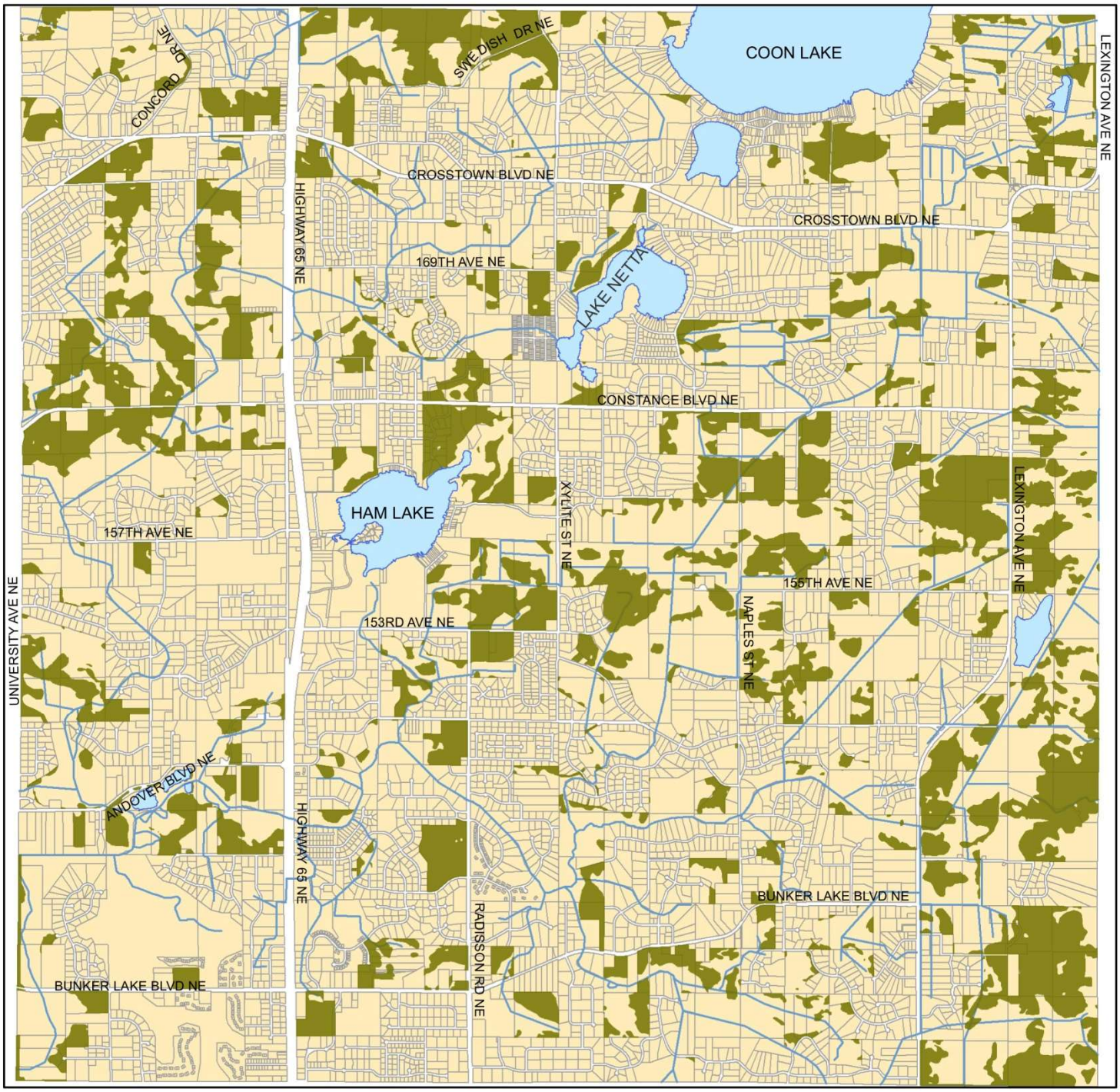
Tax Base is Highly Dependent on Residential Uses: Ninety percent of the City's taxable market value is derived from residential uses. This is significantly higher than Anoka County where 73 percent of the taxable market value is from residential uses. Heavy dependence on one land use sector makes the City more vulnerable to economic variability and fluctuations.

A Significant Portion of the City is Not Suitable For Development: Nearly one third (32%) of the City is not suitable for development due to wetlands and poor soils (hydric or peaty/mucky soils). Approximately 37 percent of the land area of the City has been developed (according to Anoka County tax assessment records). The remaining 16 percent of the City, or approximately 3,541 acres, is undeveloped and suitable for development (Figure 5.1). About half of this land could potentially be developed after accounting for access and drainage easements and fragmented areas too small to be developed.

Surface and Groundwater Quality: Gradual degradation of water quality in Coon Lake is a concern to many. Invasive plants and shoreland management practices are probable causes of degrading water quality.

Varying types of development Characterize Trunk Highway 65: Land uses along Trunk Highway 65 are characterized by a wide mix of businesses and quality of development. Uses range from restaurants and commercial services to light industrial and recreational equipment/vehicle sales lots. Many older structures remain and contrast with recently built facilities that meet upgraded performance standards.

Figure 5.1 Developable Land



Comprehensive Plan 2018 Update

Legend

- Gross Developable Land
- Lakes
- Streams and Ditches

0 2,500 5,000 10,000 Feet

N W E S

MAP DATE: 6/1/2019

Sources:
Minnesota Department of Natural Resources
City of Ham Lake
RFC Engineering, Inc.
Coon Creek Watershed District
Anoka County

HAM LAKE, MINNESOTA

RFC Engineering, Inc. Consulting Engineers

Disconnect Between Rural Character and Commercial Development: Much of the commercial development on Trunk Highway 65 is poorly maintained and aging and presents an image that conflicts with the housing quality and rural residential character experienced throughout most of the City. There is also a concern that as new development or redevelopment occurs; it should project an image consistent with the local rural vernacular and not be franchise architecture.

Housing Choices: A large portion of the City's housing stock is single family residential homes. Residents take pride in the City's housing stock which is of overall high quality and has the highest overall housing value in Anoka County. The City does contain a wide range of affordable single family housing units ranging from mobile homes to a large stock of houses built in the 1960s and 1970s.

Limited Commercial Services: Ham Lake is largely a low density bedroom suburb. Ham Lake residents rely on commercial services in Blaine and Andover for much of their daily service needs. Commercial services in Ham Lake are mostly centered along Trunk Highway 65. Some of these businesses are Anytime Fitness, Fitaholic Fitness, Jam Hops Gymnastics, O'Reilly Auto Parts and Rapid Sport Marine. Some Crosstown Boulevard area commercial businesses are Holiday Gas Station and Dairy Queen. The physical character and building quality of the Trunk Highway 65 commercial area businesses are in general decline and not representative of the general high quality housing in the City.

Some of these businesses are experiencing significant costs to maintain their septic systems due to frequent pumping. High costs to maintain these systems and competition from new commercial businesses in Blaine and elsewhere raise concerns for the on-going viability of this commercial area.

Waste Treatment Facilities and New Options for Growth: The decision by the Metropolitan Council to build and operate waste water treatment facilities in East Bethel presented an option to bring municipal sewer service to the City and establish new land use and development patterns in the northern part of the City. Municipal sewer and water service could support higher intensity commercial, industrial and residential uses.

The 2008 planning process included significant deliberation on new options for growth that various sewer and water systems options could offer. An area along the northern border with East Bethel representing about ten percent of the City's land area was the focus of this study. Some of the examined alternative growth alternatives represented significant change in how the community views itself and had implications on a variety of City policies and choices, not the least of which is community character and identity. The sewered options were ultimately rejected.

Growing Pressure to Develop Sod Fields: Existing sod fields are highly valued open spaces and offer the potential to restore wetlands and create greenway corridors and trails when sod farming ceases. There is widespread concern with peat and sand excavations required to prepare sod field areas (or other areas) for development. Such activities create the potential for negative impacts on hydrological functioning of soils and ground water quality as well as a resulting landform at odds with the natural landscape of Ham Lake. Landowner rights to develop these areas need to be balanced with environmental concerns.

High Quality, Fragmented Natural Resources: The Anoka Conservation District, in 2008, documented the remaining high quality natural resources left in Ham Lake (Figure 3.3 in Environmental Resources). These areas are generally fragmented small patches dispersed throughout the City. Many of these patches, if protected, will help maintain the rural character as described and defined in Community Identity - Chapter 4. Opportunities exist to connect some of these areas as part of a strategy of wetland restoration that may be possible with the potential development of sod field areas.

Additionally, through replanting and restoration practices, these fragmented resource patches could be better strengthened and protected.

Regional Density Requirements: Ham Lake is designated by the Metropolitan Council as a "rural residential" community. In 2012, such communities were required to maintain a net density of 1 acre to 2½ acres per dwelling unit. The City of Ham Lake has no plans to provide urban infrastructure such as centralized wastewater treatment and will continue this density requirement.

Aggregate Resources: Maintaining aggregate resources are important for cost effective construction of

infrastructure associated with metropolitan growth. Communities with aggregate resources need to protect these resources from development until the resource has been used. Ham Lake does not contain any "higher grade" aggregate resources identified by the Metropolitan Council for regional growth. Although sand from the Anoka County Sand Plain is not classified by the Minnesota Geological Survey Information Circular 46, published in 2000, there have been prior sand mining projects within the City. There has not been any sand mining since July 2012. There are no approved but inactive sand mining locations and the City is not aware of any planned sand mining.

Solar Access Protection and Development: Ensuring that all properties have adequate access to sunlight is a priority not only for potential solar energy systems, but for the protection of property and aesthetic values as well. Solar access protection is provided for by the uniform implementation of lot and building performance standards listed in the Ham Lake Zoning Ordinance. Please see page 5-16 for Figure 5.4 Solar Resource Map and Table 5.5 Solar Resource Potential Calculations for more detail.

Historic Preservation: Ham Lake does not have any structures listed on the Register of National Historic Places or that have been identified by the Minnesota Historical Society as being eligible for the National Register. A NRHP Inventory Nomination Form was submitted in 1979 for the Swedish Evangelical Lutheran Church. The Gothic Revival-style Church was constructed in 1872, a Bell Tower added in 1891 and building expansion in 1947. The property is represented in existing surveys at the Statewide Survey of Historic Resources depository at the Minnesota Historical Society, St. Paul. Furthermore, it is included in NRHP's Digital Archives Gallery. Nonetheless, the City is committed to preservation of its history and as opportunities arise, the City will take the appropriate steps to ensure preservation.

D. Existing Land Use

Ham Lake occupies approximately 36 square miles. Excluding 2,774 acres of Lakes and rights-of-way there are approximately 20,144 acres in various land uses (Table 5.1 and Figure 5.2). Currently, the primary existing land use in the City is Residential Single Family lots consuming nearly 54.4 percent of the total area. The remainder of the City is devoted to a small amount of other residential uses, commercial and industrial land as well as 509 acres of existing Parks. The Existing Land Use Map shows the distribution and location of various uses as the land is being used today. This Map was created based on County tax assessment classifications for each parcel and examination of aerial maps.

Table 5.1 - Existing Land Use
Sources: Metropolitan Council, City of Ham Lake, Anoka County, RFC Engineering, Inc. and MN Department of Natural Resources

Category	Acres	Percent
Utility	1	0.1%
Seasonal Recreational	7	0.1%
Government	19	0.1%
Agricultural	3,505	1.%
Commercial	284	1.2%
Farmstead	132	0.7%
Golf Course	346	1.5%
Industrial	399	1.6%
Institutional	258	1.1%
Manufactured Housing Park	41	0.2%
Park, Open Space	509	2.2%
Open Water	1,003	4.3%
Major Highway	223	1.0%
Residential Multi-Family	22	0.1%
Residential Single Family	12,452	54.4%
Residential Townhome	146	0.6%
Undeveloped	3,541	15.5%
Total	22,888	100.0%

Residential

Residential Single Family homes are the dominant land use in the City and distributed throughout the entire City. Lot sizes range from less than 5,000 square feet to large acreage lots. Many of the smaller lots were originally platted for cabin or Seasonal Recreational uses. Most have now been converted to permanent residences. Most Residential Single Family lots range from 1 acre to 2½ acres reflecting land use policies over the past 40 years. Residential Single Family homes in Ham Lake have a high value compared to other cities in Anoka County.

Residential Townhome developments were constructed between 1992 and 2004, primarily in the southwest quadrant of the City. Other higher density housing areas included the Flamingo Terrace Mobile Home Park off of Trunk Highway 65 in the northern part of the City, a motel turned into an apartment complex in the west central part of the City and senior housing units in the

southwest quadrant. The breakdown of housing units are estimated as follows:

Residential Single Family	4,884	(86.1%)
Residential Townhome	272	(4.7%)
Manufactured Housing Park	295	(5.1%)
Residential Multi-Family	222	(3.8%)
Total	5,673	

With 5,673 housing units, the overall gross density for the entire City (36 square miles) is 4.26 acres per dwelling unit or 0.23 units per acre. The net density (total area less wetlands and steep slopes) is 4.09 acres per dwelling unit or 0.24 units per acres. As a Rural Residential community as defined by the previous version of Thrive MSP, growth is expected to occur at residential densities of 1 acre to 2½ acres per dwelling unit and 1 unit/10 acres where possible. The Thrive MSP 2040 has redefined Rural Residential as 1-2.5 acre lots existing, 1 unit/10 acres where possible. The City of Ham Lake is continuing the policy of 1 acre to 2½ acres lots for any future development as there are no plans for transitioning into Future Urbanization

Commercial and Industrial

Most of the Commercial and Industrial land uses in the City are located within 2,000 feet on either side of Trunk Highway 65. There are 284 acres of Commercial land in active use. There are approximately 172 acres zoned for Commercial use but are vacant and available for development. There are 356 acres of Industrial and Utility land in active use. There are 44 acres zoned for Industrial use, but are vacant and available for development.

There are eight platted Commercial Parks in Ham Lake. The Bunker Lake Commercial Park (18 lots), Christensen Commercial Park 1st and 2nd Additions (6 lots), Enterprise Plaza 1st and 2nd Additions (11 lots), Larsen's Commercial Park (1 lot) Majestic Oaks Commercial Center 1st and 2nd Additions (15 lots), Rosewood Commons (7 lots), Willowstone Commercial Center (8 lots) and Wybrite Commercial Park (11 lots) flank either side of Trunk Highway 65 north of Bunker Lake Boulevard. All eight Commercial Parks maintain high standards of building construction and are occupied by concrete block buildings.

There are two platted Industrial Parks in Ham Lake. The Ham Lake Industrial Park (1st Addition thru 4th Addition) was developed by the City beginning in 1978, which is fully developed, houses twenty-two light industrial businesses ranging from machine shops to construction companies. The 2002 Landborg Industrial Park houses twelve light industrial businesses. Both Industrial Parks maintain high standards of building construction and are occupied by concrete block buildings. Other major Commercial/Industrial facilities include CoPart (automobile salvage), Lightning Express, Majestic Oaks Golf Course, Morken Trucking (a truck terminal) and Rapid Sports (new boat and snowmobile retailer). There is a concentration of a mixture of Commercial and Industrial buildings on either side of Trunk Highway 65 south of Bunker Lake Boulevard, including retail, light industry and a motel. Major companies represented by retail facilities in various locations along the Trunk Highway 65 corridor include Abra Auto Body, AmericInn, BP, Burger King, Casey's General Store, Hardware Hank, Holiday Stationstore, Mickman Brothers, Minnesota Equipment, North Suburban Rental, O'Reilly Auto Parts and Super America.

Agricultural and Farmstead

At present, there are no active animal feedlots of significance in the City. There are numerous sod farms, occupying about three square miles of space. There are approximately 3,637 acres of land that are presently either actively farmed for crops, used as pasture, or remain wooded. In terms of contiguous tracts suitable for conventional agriculture, there are nine sites containing as much as 160 contiguous acres of land suitable for such purposes. As with other land uses, the Agricultural lands are scattered throughout the City, although the eastern portion of the City contains the greatest amount of suitable Farmstead land.

Park, Open Space

Ham Lake Park, located on Ham Lake, is a 174 acre park with multiple active and passive recreational facilities and the centerpiece of the City's park system. There are two other major City Parks, containing ball fields and/or picnic facilities, in the Trunk Highway 65/Crosstown area and in Lions Park in the City Hall complex. A number of neighborhood parks are scattered throughout the City. With the exception of the southerly 1.25 miles, the Carlos Avery game refuge borders the City's easterly corporate limit line.

Private recreational facilities include the Majestic OaksGolf Course, which maintains two eighteen hole and one nine-hole golf courses open to the public. There is one bowling alley, five on-sale liquor establishments, one campground, one clay target range and one youth gymnastics/dance/cheerleading instructional facility.

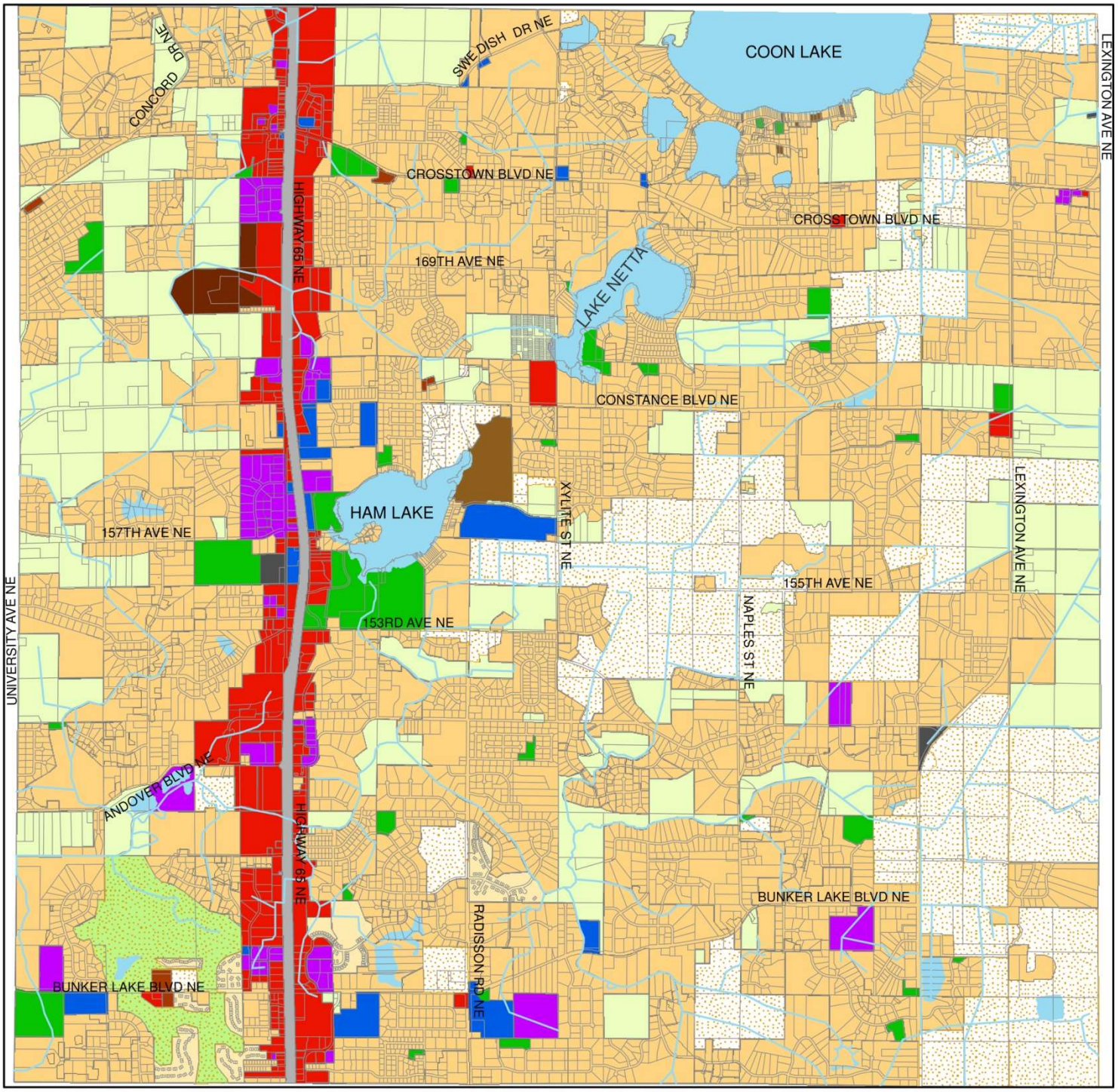
A partial trail system has been established, which presently has several miles developed. There are two Lakes served by public boat accesses and three recreational Lakes; Ham Lake, Lake Netta and Coon Lake. There is a public fishing pier on Ham Lake, and Ham Lake is also the location of an annual aeration program to enhance the survival of the fish population.

Wetlands, including the area of three lakes, comprise a tremendous portion of the City. Of the 36 square miles in the City, eight square miles are wetland and another three square miles are occupied by sod fields. The wetlands are scattered throughout the City. There is literally no single Section of the 36 Sections that does not contain at least 20% wetland or sodfields. Eleven square miles or 32% of all the land in the City is comprised of surface waters.

Institutional and Government

There are eleven churches in the City. These are scattered throughout the City. There are three active cemeteries: Soderville Cemetery near Crosstown Boulevard and Trunk Highway 65 and two that are maintained by churches, Glen Cary Lutheran and Swedish Evangelical Lutheran. There are two smaller, inactive cemeteries also located in the City. The City has one public school, McKinley Elementary, with nearly 800 students. The DaVinci Academy, a K-8 Charter School, enrolls approximately 759 students.

Figure 5.2 Existing Land Use



- Streams and Ditches
- Ham Lake Parcel
- Utility
- Seasonal Recreational
- Government
- Agriculture
- Commercial
- Farmstead
- Golf Course
- Industrial
- Institutional
- Manufactured Housing Park
- Park, Open Space
- Open Water
- Major Highway
- Residential Multi-Family
- Residential Single Family
- Residential Townhome
- Undeveloped

Comprehensive Plan 2018 Update

0 2,500 5,000 10,000 Feet

MAP DATE: 6/1/2019

Sources:
RFC Engineering, Inc.
Coon Creek Watershed District
Anoka County
Metropolitan Council

HAM LAKE, MINNESOTA

RFC Engineering, Inc. Consulting Engineers

E. Objectives and Strategies

The objectives and strategies identified below are broad statements regarding the motivation and intent of this Plan. The strategies that follow individual objectives are specific items that promote attainment of the objective. Strategies may be a program, regulation or a project.

Objective 1: Maintain existing development patterns and density and enhance rural character and identity.

LU 1.1 Maintain the one-acre lot as the minimum lot size for single-family residential development for most of the City.

LU 1.2 Protect open spaces in the City by maintaining and encouraging opportunities for continued crop production, sod farming, vegetable farming and compatible animal husbandry.

LU 1.3 Create guidelines to improve the appearance of the Trunk Highway 65 corridor through design standards, lighting, landscaping, signage and other tools that build on rural character elements described in Community Development - Chapter 4.

LU 1.4 Create guidelines that yield commercial and office structures that reflect local vernacular.

LU 1.5 Discourage continuous strip development along Trunk Highway 65 by encouraging the development and re-development of land around major intersections for retail and commercial services that require high visibility. Encourage the development and redevelopment of land between major intersections on Trunk Highway 65 with commercial and industrial uses needing less visibility by completing the proposed network of frontage roads. Encourage increased setbacks along with vegetative and landform screening for such uses to decrease visibility from Trunk Highway 65.

Objective 2: Increase the Commercial and Industrial Tax base by increasing the amount of land for these uses and redeveloping existing business areas.

LU 2.1 Guide land development along Lexington Avenue in the eastern part of the City for commercial use/Business-Campus.

LU 2.2 Continue to guide significant quantities of land in the Crosstown Boulevard area for a mix of compatible commercial and industrial land uses.

Objective 3: Allow residential development in sod field areas with existing peat soils where peat soil excavation and replacement can be accommodated without negative impacts to ground and surface waters, flood control management and natural habitat.

LU 3.1 All lots shall be at least one acre.

LU 3.2 Existing standards for lot design including required buildable/yard areas and drain field/septic siting will guide development on suitable soils.

LU 3.3 The City will develop standards for excavation depth and procedures that protect ground and surface waters, prevent flooding, protect habitat and maintain aesthetic character.

Objective 4: Support the orderly growth of all development.

LU 4.1 Plan for development that accommodates growth forecasts at appropriate densities.

LU 4.2 Plan and develop interconnected local streets, adequate solar access and managed individual sewage treatment systems to accommodate local growth forecasts.

LU 4.3 Plan land use patterns that will facilitate groundwater recharge to protect the region's water supply.

LU 4.4 Ensure that all developments have more than one access point, where possible, to provide transportation route options.

LU 4.5 Examine requested land use changes and rezoning in relation to adjoining land uses, site accessibility and consistency with the City's Comprehensive Plan and policies.

LU 4.6 Continue to require adequate standards for buildable lots to ensure sufficient room for building pads along with the safe placement of private wells and independent sewage treatment systems.

LU 4.7 Approve and permit proposed housing developments in light of population forecasts, existing housing stock and current and future community and regional needs, as appropriate.

Objective 5: Plan land uses and implement standards to minimize land use conflicts.

LU 5.1 Recognize legitimate issues and concerns regarding jurisdictions and collaborate with the adjacent cities, Anoka County and the Metropolitan Council through joint planning and other cooperative measures to efficiently address community needs.

LU 5.2 Prepare and adopt a land use plan that designates land use areas and guides development to appropriate areas in order to ensure desirable land use patterns and minimize conflicts.

LU 5.3 Complete a review and update, if necessary, of the City's Official Zoning Map and Ordinances to ensure consistency with the Comprehensive Plan.

LU 5.4 Require adequate transitions between different land uses through appropriate land use planning and zoning standards. This may include site design, separation and buffering or screening between distinctly different types of land uses.

LU 5.5 Encourage the location of commercial and industrial development in areas that avoid adverse impacts on residential areas. Design and locate industrial and commercial developments to avoid routing traffic through residential areas.

F. Future Land Use Plan

This section of the Plan identifies specific land use types and designations for managing future growth and development in Ham Lake. These land use categories are the foundations upon which the City's regulatory controls such as zoning and subdivision ordinances are based. This portion of the Plan describes new concepts for residential growth and environmental protection as well as all categories of land use.

Inconsistencies between Existing Land Use and the Future Land Use Map do not imply that every land use will eventually conform to these designations or that all land will be developed. However, the City will tailor regulations to implement this Plan as much as is practical, balancing the needs and interests of both individuals and the community as a whole.

The City intends to build upon and preserve the existing character of the community. The 2040 Future Land Use Map identifies the location of specific land uses that will guide the development of the City through the year 2040 (Figure 5.3). Note that Land use categories set the stage for implementation strategies including amendments to the zoning and subdivision ordinances. The majority of the land is designated as residential single family, with a maximum density of one unit per acre, while appropriate portions of the community are designated for commercial and industrial opportunities. The City may choose to amend the Future Land Use Map or the description of these designations if community needs or goals change prior to the year 2040.

Widespread wetland areas, as well as peat soils, complicate land division and render the provision of central wastewater services infeasible for most of the City. As a result, the City intends to maintain its past policy of one acre lots served by subsurface sewage treatment systems (SSTS) and believes that regional wastewater service would not be appropriate in the City.

2030 Future Land Use

In 2008, the City submitted its 2030 Future Land Use Plan to the Metropolitan Council for approval. This Plan used the City's existing zoning districts to categorize land uses. This Plan was revised to classify land with generalized land use categories used by the Metropolitan Council for purposes of the current Plan update. In doing so, zoning districts were "interpreted" as generalized land use categories. Distribution of land in each category is listed in Table 5.2.

Table 5.2 – 2030 Future Land Use
Sources: Metropolitan Council, City of Ham Lake, RFC Engineering, Inc. and MN Natural Resources

Category	Acres	Percent
Utility	1	0.1%
Seasonal/Recreational	7	0.1%
Multiple Use Option	523	2.3%
Commercial	314	
Residential	209	
Government	19	0.1%
Agriculture	3,007	13.2%
Commercial	284	1.2%
Farmstead	105	0.5%
Golf Course	346	1.5%
Industrial	461	2.0%
Institutional	394	1.7%
Manufactured Housing Park	41	0.2%
Park, Open Space	509	2.2%
Open Water	1,003	4.3%
Major Highway	223	1.0%
Residential Multi-Family	22	0.1%
Residential Single Family	13,750	60.0%
Residential Townhome	146	0.6%
Undeveloped	2,047	8.9%
Total	22,888	100.0%

2040 Future Land Use Plan

The purpose of a future land use map is to guide the decision-making process for the City on development proposals and rezoning requests. It is broad in nature and represents the general intended use of the land in 2040. The Zoning Map should be consistent with the Future Land Use Map. Inconsistencies between Existing Land Use and the Future Land Use Maps do not imply that every land use will eventually conform to these designations or that all land will be developed. However, the purpose of land use planning is that the City will develop regulations to implement this future land use plan as much as is practical, balancing the needs and interests of both individuals and the community as a whole.

Table 5.3 and Figure 5.3 describe the future land uses for Ham Lake during the time horizon of this Plan. The City is projected to continue its development pattern dominated by low density single family uses with a minimum lot size of one acre. In looking to the future, it is anticipated that residential growth pressure will result in further reductions in active farm lands. The Future Land Use Map does not show any agricultural land. Based on growth projections, it is likely that most agricultural land will convert to other uses by 2040. Given this assumption, most existing agricultural land was guided for single family residential or commercial. While this changing land use trend will be accommodated, the City will protect active farms from the premature encroachment of residential development through appropriate zoning districts and subdivision regulations. The City's Rural Single Family Residential (R-A) zoning district would continue to be an appropriate zoning district.

Land Use Categories

The Existing and Future Land Use Maps use a set of specific categories to guide land use in Ham Lake. These categories meet the Metropolitan Council's definitional needs for planning consistently throughout the metro area. The ability to use the Comprehensive Plan as an effective land use management tool requires a definition of each land use. These definitions provide a common understanding of the basic characteristics of each category used in the Plan. The following sections describe the characteristics for each category.

Residential Single Family – Residential Single Family use provides areas for neighborhoods of primarily single family housing. Single family housing can be described as a building intended to serve as a dwelling for one person or family unit. The traditional freestanding (detached) home provides the most common example of single family housing.

Table 5.3 – 2040 Land Use
Sources: Metropolitan Council, City of Ham Lake RFC Engineering, Inc. and MN Natural Resources,

Category	Acres	Percent
Utility	37	0.1%
Seasonal Recreational	7	0.1%
Multiple Use Option	959	4.2%
Commercial	575	
Residential	384	
Government	19	0.1%
Agriculture	2,582	11.3%
Commercial	284	1.2%
Farmstead	83	0.3%
Golf Course	346	1.5%
Industrial	512	2.4%
Institutional	508	2.2%
Manufactured Housing Park	41	0.2%
Park, Open Space	509	2.2%
Open Water	1,003	4.4%
Major Highway	223	1.0%
Residential Multi-Family	22	0.1%
Residential Single Family	14,510	63.4%
Residential Townhome	146	0.6%
Undeveloped	1,097	4.7%
Total	22,888	100.0%

This designation applies to both older and developing neighborhoods in the City including Shoreland and Seasonal Recreational lots. This category also includes land in active farming, but over time will convert to this land use category. Density for new growth in this class should not exceed one unit per acre. This land use category is currently implemented by the following zoning districts:

R-1 Single Family Residential
R-A Rural Single Family Residential
RS-1 General Shoreland Residential
RS-2 Recreational Shoreland Residential
PUD Planned Unit Development

Residential Townhome - This use provides areas for single family housing units that are attached to one another. This land use could also include a mixture of attached housing and detached housing units in an integrated neighborhood. Buildings should not be more than two stories in height. Density should not exceed more than one unit per acre. This zoning is currently implemented with PUD – Planned Unit Development.

Residential Multi-Family – This category is intended to provide a place for multi-story apartment and condominium buildings for occupancy by persons aged 55 or older or persons having low or moderate incomes. Density is typically 4 – 20 dwelling units per acre when considering the required septic drain fields and the height of the structure. This use is currently implemented with the R-AH – Residential-Affordable Housing District and the R-2 - Multiple Family Residential District zoning.

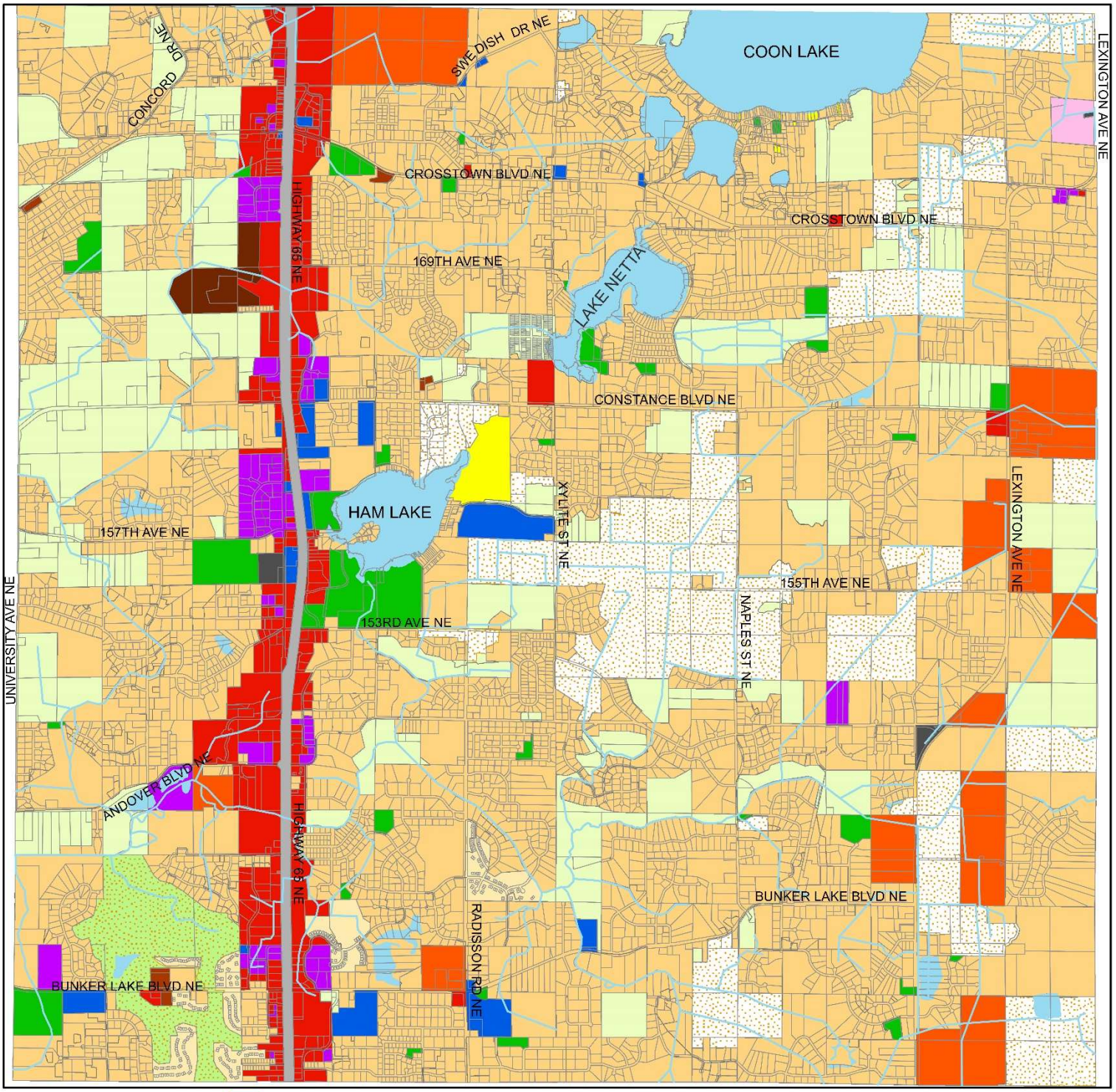
Manufactured Housing Park – This land use class designates areas for manufactured housing units that are not permanently fixed to a foundation. These areas do not consist of individually owned lots, but of single lots with "pads" rented for each housing unit. Each unit is intended for occupancy by a single housekeeping unit. The density is greater than other areas of single family detached housing, with a density of 7.2 units per acre in the one Manufactured Housing Park in the City. This use is implemented by the R-M – Residential/Manufactured Mobile Home District.

Commercial - The intent of this designation is to provide for convenient commercial services that serve the needs of the surrounding neighborhood with minimal traffic impact. Commercial uses are located on major collector roads to take advantage of the regional network and to minimize impacts on neighborhoods.

Land uses in this category span a wide range of commercial and light industrial services. Commercial areas include those that serve the highway traveling public as well as serve the needs of the people who live or work in and around the City. Industrial uses may include light manufacturing and warehousing with no outdoor storage. Most land in this class is adjacent to Trunk Highway 65 to take advantage of the regional transportation network. Lot sizes are large enough to accommodate typical highway commercial uses which include retail stores. This land use category is currently implemented by the following zoning districts:

CD-1 Commercial Development Tier 1
CD-2 Commercial Development Tier 2
CD-3 Commercial Development Tier 3
CD-4 Commercial Development Tier 4

Figure 5.3 2040 Future Land Use



- Streams and Ditches
- Ham Lake Parcel
- Utility
- Seasonal Recreational
- Multiple Use Option
- Government
- Agriculture
- Commercial
- Farmstead
- Golf Course
- Industrial
- Institutional
- Manufactured Housing Park
- Park, Open Space
- Open Water
- Major Highway
- Residential Multi-Family
- Residential Single Family
- Residential Townhome
- Undeveloped

Comprehensive Plan 2018 Update

0 2,500 5,000 10,000 Feet

MAP DATE: 6/1/2019

Sources:
RFC Engineering, Inc.
Coon Creek Watershed District
Anoka County
Metropolitan Council

HAM LAKE, MINNESOTA

RFC Engineering, Inc. Consulting Engineers

Industrial – The industrial land use refers to a wide range of businesses primarily oriented to the creation or processing of goods and for the limited manufacturing purposes involving frequent truck traffic for the pick-up and delivery of materials and goods. Industrial land uses should be located on collector or arterial streets to accommodate traffic from employees and shipping. They should be separated or buffered from residential areas. This use is implemented through the I-P Industrial Park District and the I-1 – Light Industry District.

Government– Land used by all levels of government for all uses other than parks.

Institutional – Land intended for public and private uses including churches and educational facilities.

Park, Open Space – A designation for publicly owned lands to be used for active and passive recreational activities.

Golf Course – Lands used for public or privately operated golf courses.

Utility - These areas are used by public and private utilities for the operations and maintenance facilities.

Agricultural and Farmstead – The Agricultural and Farmstead land uses are cultivated land for raising crops and farming, including the farmstead.

Seasonal Recreational – This land use is for public or privately operated resorts, which include cabins and campers.

Multiple Use Option – The ultimate land use of these undeveloped properties could be commercial, residential or a combination of the two. The market will dictate the ultimate land use. The City foresees the breakout of the of these land uses as 60% commercial and 40% residential, but the City will not deny any developer from using these designated land areas based on these assumptions. Any proposed development will be required to conform and rezone the property for the use desired to their respective code and density requirements of the proposed land use whether commercial or residential. For example, if a developer wishes to use a property for residential use, the property must be rezoned to R-1 and all proposed lots must conform to the R-1 rules, such as 1-acre minimum as designated in Article 10 in City Code. This land use is primarily located adjacent to Lexington Avenue, and also near the Bunker Lake Boulevard and Radisson Road intersection and the northerly City limits on the east side of Trunk Highway 65. This land use option is the primary difference from the 2008 Comprehensive Plan.

Projected Growth and Density

Forecasts for household and population growth estimate that there will be 7,099 households and 18,665 residents by 2040, at which time the City is likely to be nearly built-out (see Social and Economic Profile - Chapter 2). With these growth estimates, the projected net density (total area less surface waters and steep slopes) is anticipated to be 3.08 acres per dwelling unit or 0.32 units per acre by 2040.

Net Density Calculation	
Total Acres	22,888
Less surface waters, wetlands, Parks and arterial R/W	1,735
Net land area	21,153

21,153 acres/7,099 projected households = 2.98 acres per dwelling unit or 0.34 units per acre.

As a rural residential community, as defined by the Metropolitan Council, net densities are expected to be 1 acre to 2.5 acres per dwelling unit or less. Projected development in Ham Lake may slightly exceed this density definition for Rural Residential at full build out.

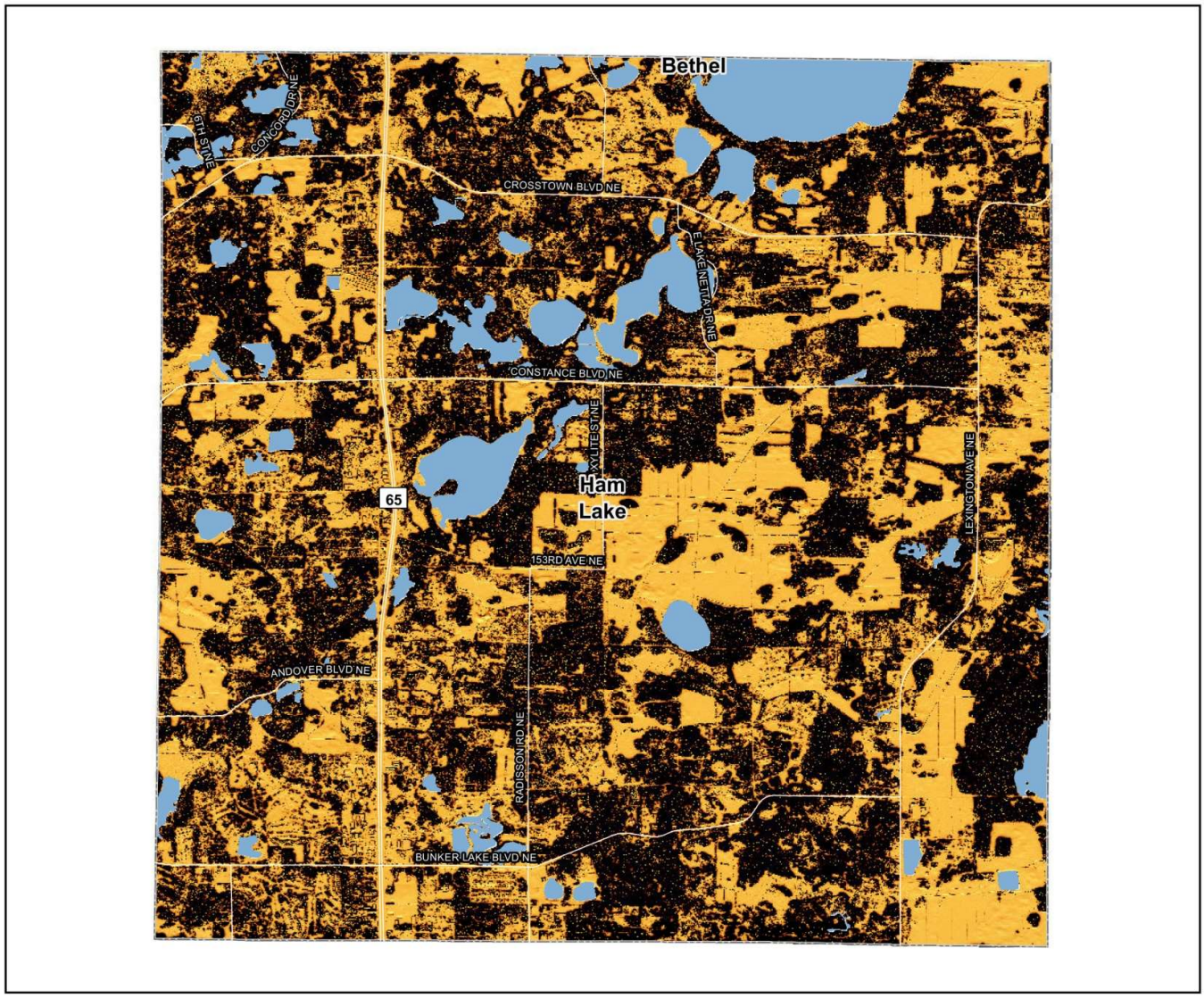
Estimates for land uses are projected in ten-year increments (Table 5.4). Note that acreage estimates for actual land uses in 2040 are not always the same as those mapped on the 2040 Future Land Use Map. For example, the 2040 Future Land Use Map contains 793 acres for Commercial and Industrial land uses. This large inventory of Commercial land is expected to provide growth opportunities well beyond 2040. By 2040, only 284 acres are estimated to be in actual use for Commercial purposes. Estimates of actual land needed for Commercial and Industrial uses employ assumptions based on historical job growth rates and the number of jobs per acre. Over the past seven years, the average annual growth rate for jobs in Ham Lake has been 0.9%. The number of jobs per acre ranges between 6 and 6.5 jobs per Commercial and Industrial acre.

Table 5.4: Existing and Planned Land Use (Acres)

Land Use Category	Existing 2018	2020	2030	2040
Undeveloped/Vacant				
Agricultural	3,505	3,422	3,007	2,592
Farmstead	132	128	105	83
Undeveloped	3,541	3,407	2,047	1,097
Total - Undeveloped/Vacant	7,178	6,957	5,159	3,772
Residential				
Residential Single Family	12,452	12,554	13,750	14,500
Residential Townhome	146	146	146	146
Residential Multi-Family	22	22	22	22
Manufactured Housing Park	41	41	41	41
Seasonal Recreational	7	7	7	7
Total Residential	12,668	12,770	13,966	14,716
Commercial and Industrial				
Commercial	284	284	284	284
Industrial	399	409	461	512
Total Commercial and Industrial	683	693	745	796
Public/Semi Public				
Institutional	258	281	394	508
Government	19	19	19	19
Golf Course	346	346	346	346
Park, Open Space	509	509	509	509
Utility	1	1	1	37
Major Highway	223	223	223	223
Open Water	1,003	1,003	1,003	1,003
Total Public/Semi Public	2,359	2,382	2,495	2,645
Multiple Use Option				
Commercial	0	52	314	575
Residential	0	34	209	384
Total Multiple Use Option	0	86	523	959
Total-All Uses	**22,888**	**22,888**	**22,888**	**22,888**

Gross Solar Potential
City of Ham Lake, Anoka County

Figure 5.4 Solar Resource Map



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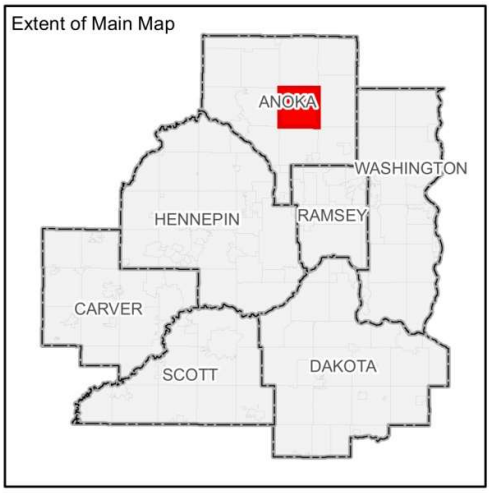
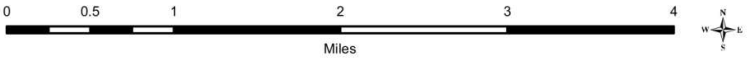




Gross Solar Potential
(Watt-hours per Year)

High : 1264588

Low : 900001

Solar Potential under 900,000 watt-hours per year

County Boundaries

City and Township Boundaries

Wetlands and Open Water Features

Source: University of Minnesota U-Spatial Statewide Solar Raster.

Table 5.5 Solar Resource Potential Calculations (Megwatt hours per year)

Community[1]	Gross Potential (Mwh/yr	Rooftop Potential (Mwh/yr)	Gross Generation Potential (Mwh/yr)[2]	Rooftop Generation Potential (Mwh/yr)[2]
Ham Lake	48,615,591	882,275	4,861,559	88,227

Transportation 6

Content

Purpose

The purpose of this Chapter is to discuss how the road system in Ham Lake functions as part of the regional transportation system and the role that City and regional trails play in that system.

A. Overview

The Transportation Plan is based on a total transportation system and how it relates to, and serves, the land use patterns of the community. The transportation system encompasses several modes which include the automobile, pedestrian and bicycle.

The transportation system serves to tie together, and in some cases separate, the various land use activities in the community. The Transportation Plan will present the basis for programming and planning the extension of the transportation system to undeveloped areas of the City and surrounding communities.

B. Goal

A goal is a policy statement that states a desired outcome in general terms. The following goal was established in the 2020 Comprehensive Plan and remains important to the City.

To achieve a balanced transportation network that implements the City's land use plan and supports Anoka County and regional transportation needs.

This goal is ongoing, thru coordinated efforts with MnDOT and the Anoka County Highway Department.

C. Key Findings and Themes

Information was compiled from the existing Thrive MSP 2040 Comprehensive Plan and Anoka County's 2040 Transportation Plan. Development densities around transit is consistent with density expectations established in Chapter 3 – Land Use and Local Planning of the Metropolitan Council's 2040 Transportation Policy Plan (2040 TPP).

Land Use Plan – Implications for Land Use

A recurring theme in the Ham Lake Comprehensive Plan is that the City wishes to preserve its rural character and natural amenities including woodlands, wetlands, lakes and streams. The 2040 Future Land Use - Figure 5.3 depicts future land uses in the City. According to anticipated land use patterns, future commercial and industrial development will occur primarily along the Trunk Highway 65 corridor, whereas, residential development will be dispersed throughout the City.

Roadway Jurisdictional classification

Roadways are classified on the basis of which level of government owns or has jurisdiction over them. For Ham Lake, the levels of government are the State of Minnesota (MnDOT), Anoka County, the City and private associations. MnDOT maintains the interstate and Trunk Highway System. Anoka County maintains the County State Aid Highway (CSAH) and County Road (CR) Systems. The City maintains local roads including the Municipal State Aid (MSA) roads. There are some private roads maintained by homeowner associations. The Road Jurisdiction Map (Figure 6.1) depicts the existing jurisdictional classification.

Functional Class

The functional classification system is the creation of a roadway and street network which collects and distributes traffic from neighborhood streets to collector roadways to arterials and ultimately, the Metropolitan Highway System. Roads are placed into categories based on the degree to which they provide access to adjacent land or provide mobility for "through" traffic. Within this approach, roads are designed to perform their designated function and are located to best serve the type of travel needed.

The existing functional classification system used in the City of Ham Lake, as described below and shown in the Existing Roadway Functional Classification Map (Figure 6.2) conforms to the Metropolitan Council standards. The Metropolitan Council has published the criteria in the 2040 Transportation Policy Plan. This guide separates roadways into five street classifications: principal arterials, minor arterials, other arterials, collector roads and local streets. These classifications address the function of State, County and City streets from a standpoint of the safe and efficient movement of traffic through the City while providing satisfactory access to residents and businesses located within the City.

Principal Arterials

Principal arterials have the highest traffic volume and capacity. They are considered part of the Metropolitan Highway System. They are intended to connect the Metropolitan Centers with one another and connect major business concentrations, important transportation terminals and large institutional facilities. They are typically spaced 2-6 miles apart in developing areas and 6-12 miles apart in commercial/agricultural and general rural areas. Interchanges on principal arterials are usually spaced at least one mile apart in urban areas.

- The only principal arterial in Ham Lake is Trunk Highway 65

Trunk Highway 65 contains two lanes for northbound traffic and two lanes for southbound traffic. MnDOT projections are that Trunk Highway 65 will be converted to a freeway at some point in the future, and there will not be an increase to the number of traffic lanes.

Minor Arterials

Minor arterials connect important locations within the City to the Metropolitan Highway System and with other locations in the region. Minor arterial roadways and highways serve less concentrated traffic generating areas, such as neighborhood shopping centers and schools. Minor arterials roadways serve as boundaries to neighborhoods and distribute traffic from collector streets. Although the predominant function of minor arterial streets is the movement of through traffic, they also serve considerable local traffic that originates or is destined to points along specific corridors.

Metropolitan Council subdivided the minor arterials into A Minors and Other Arterials (formerly called B-minor arterials). The Metropolitan Council has identified A Minor arterials as streets intended to supplement the capacity of the Principal Arterials and can compete for regionally allocated federal funds. The A Minor Arterials in Ham Lake are:

- Lexington Avenue (CSAH 17)
- Bunker Lake Boulevard (CSAH 116)
- Crosstown Boulevard (CSAH 18)
- Radisson Road (CSAH 52) south of Bunker Lake Boulevard

Lexington Avenue from 500 feet north of Bunker Lake Boulevard to the south City limits was constructed with two lanes in each direction with SAP 02-617-018. It is anticipated that the Anoka County Highway Department will be upgrading the existing two lane segment to the north City limits to two lanes in each direction at some point in the future.

Bunker Lake Boulevard from the east City limits to 800 feet east of Jefferson Street was constructed with two lanes in each direction with SAP 02-715-15. The Bunker Lake Boulevard from 800 feet east of Jefferson Street to Highway 65 is scheduled by the Anoka County Highway Department to be reconstructed with two lanes in each direction in 2022. Bunker Lake Boulevard from Trunk Highway 65 to 500 feet east of Radisson Road was constructed with two lanes in each direction with SAP 02-652-05. It is anticipated that the Anoka County Highway Department will be upgrading the existing two lane segment of Bunker Lake Boulevard from 500 feet of Radisson Road to Lexington Avenue to two lanes in each direction at some point in the future.

It is anticipated that the Anoka County Highway Department will be upgrading the existing two lane Crosstown Boulevard to two lanes in each direction at some point in the future.

Radisson Road from Bunker Lake Boulevard to the south City limits was constructed with two lanes in each direction with SAP 02-652-05.

Other Arterials in Ham Lake are:

- Radisson Road (CR 52) from Bunker Lake Boulevard to 153rd Avenue
- 153rd Avenue (CR 61) from Radisson Road to Xylite Street
- Xylite Street (CR 61) from 153rd Avenue to Constance Boulevard

Collectors (Major)

Collector streets provide direct service to residential areas, commercial and industrial areas, local parks, churches, etc. In order to preserve the amenities of neighborhoods while still providing direct access to business areas, these streets are usually spaced at one- half mile intervals. This spacing allows for the collection of local traffic and conveyance of that traffic to higher use streets. Collector streets may also serve as local through routes. Parking and traffic controls are usually necessary to ensure safe and efficient through movement of moderate and low traffic volumes. These streets are usually included in the City's Municipal State Aid System. Major collector roads in the City include:

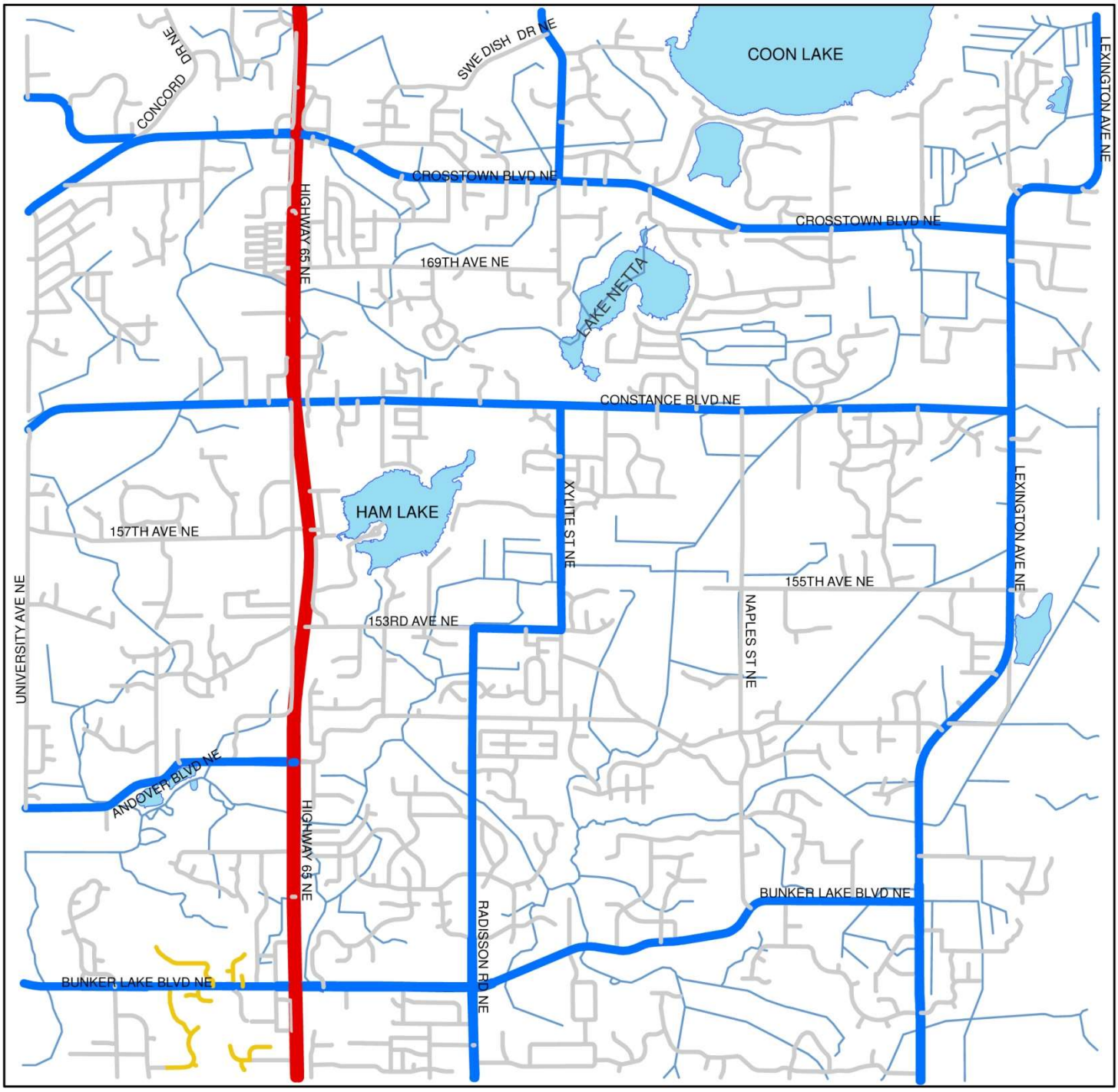
- 147th Avenue/Baltimore Street/149th Avenue from Trunk Highway 65 to Lexington Avenue
- 153rd Avenue from Trunk Highway 65 to Radisson Road
- 157th Avenue from University Avenue to Trunk Highway 65
- 169th Avenue from Trunk Highway 65 to Xylite Street
- 177th Avenue, 6th Street and 175th Avenue (CSAH 58)
- Andover Boulevard west of Trunk Highway 65
- Central Avenue from 153rd Avenue to 157th Avenue
- Concord Drive
- Constance Boulevard (CR 60)
- East Lake Netta Drive
- Jefferson Street south of Bunker Lake Boulevard
- Naples Street from Bunker Lake Boulevard to 149th Avenue
- University Avenue from Andover Boulevard to Constance Boulevard
- W frontage Road/136th Lane/Johnson Street
- Xylite Street from 169th Avenue to Crosstown Boulevard
- Xylite Street north of Crosstown Boulevard

It is anticipated that no City streets will elevate their function to collector status by 2040 (Figure 6.7 Future Roadway Functional Classification).

Local Streets

Local streets provide the most access and the least mobility within the overall functional classification system. They allow access to individual homes, shops and similar traffic destinations. Through traffic should be discouraged by using appropriate geometric designs and traffic control devices.

Figure 6.1 Road Jurisdiction



Legend

- MnDOT
- Anoka County
- City of Ham Lake
- Private
- Streams_and_Ditches
- Lakes

0 2,500 5,000 10,000 Feet

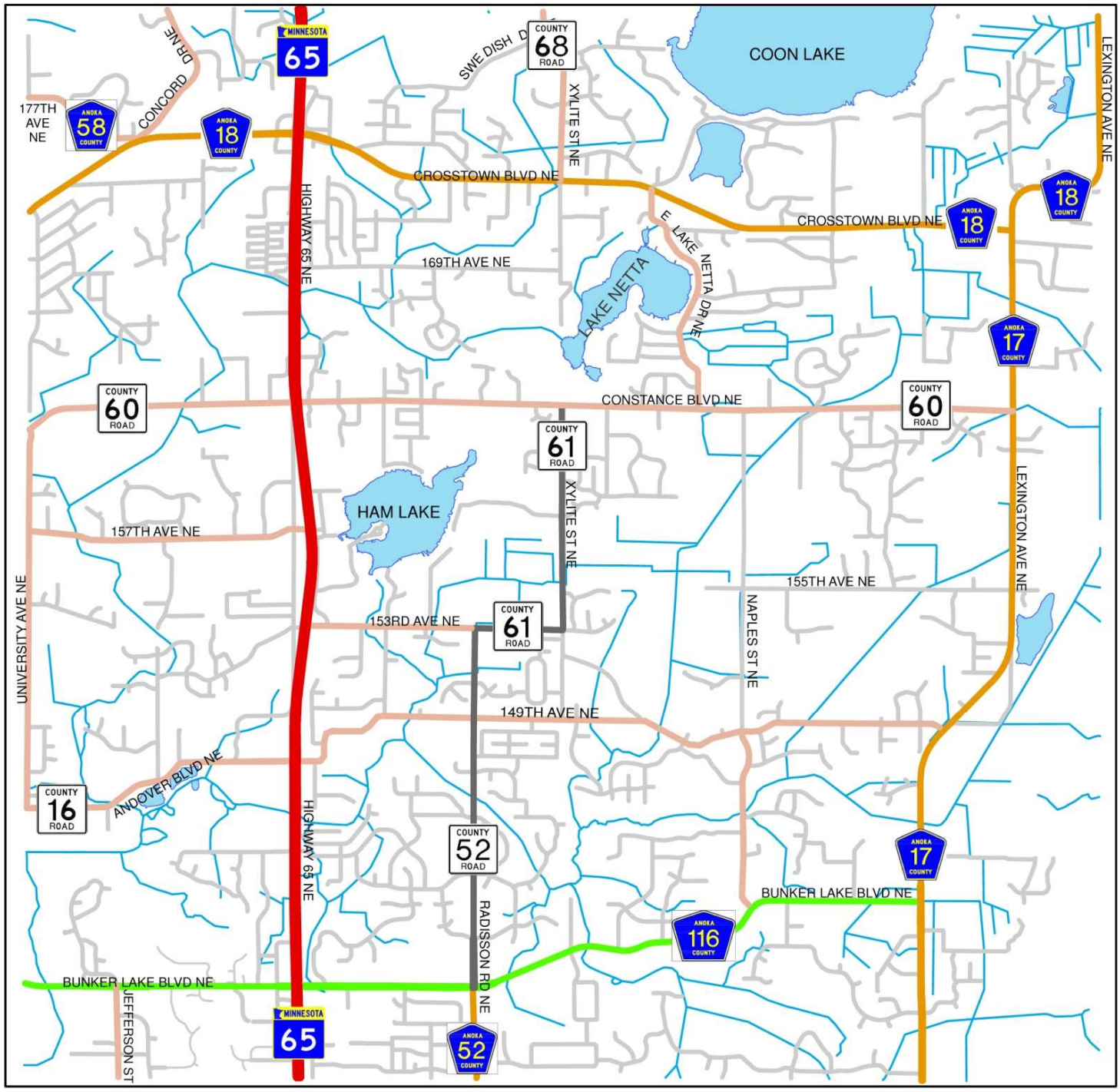
MAP DATE: 6/1/2019

Sources:
City of Ham Lake
RFC Engineering, Inc.
Anoka County
Coon Creek Watershed District

HAM LAKE, MINNESOTA

RFC Engineering, Inc. Consulting Engineers

Figure 6.2 Existing Roadway Functional Classification



Legend

- Principal Arterial
- A Minor Reliever
- A Minor Expander
- Other Arterial
- Major Collector
- Lakes
- Streams and Ditches

0 2,500 5,000 10,000 Feet

MAP DATE: 6/1/2019

Sources:
City of Ham Lake
RFC Engineering, Inc.
Anoka County
Coon Creek Watershed District
Metropolitan Council

HAM LAKE, MINNESOTA

RFC Engineering, Inc.
Consulting Engineers

Traffic Analysis Zones

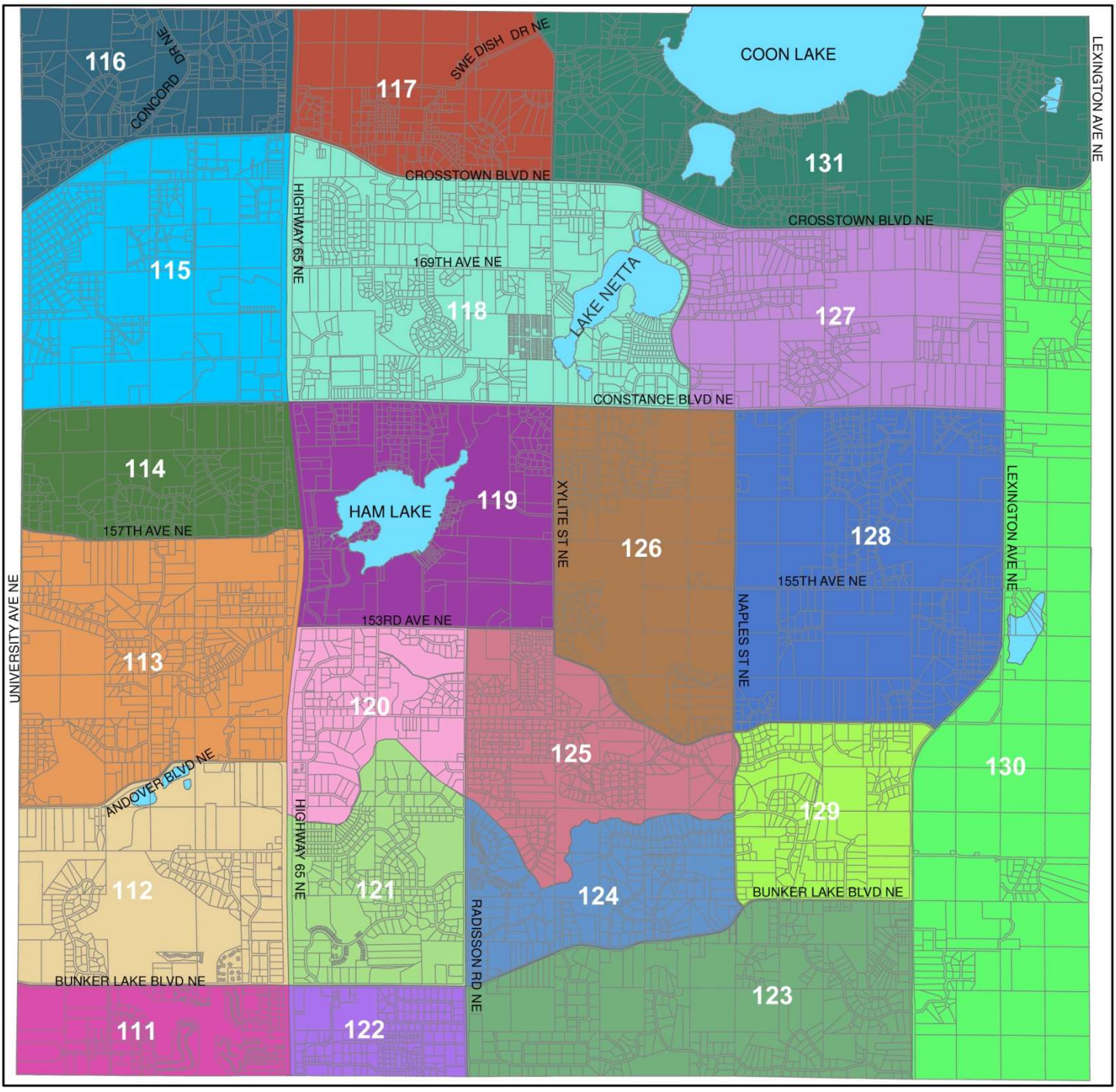
Households, population and employment have been forecasted and allocated by traffic analysis zone based on the 2040 Future Land Use Map discussed in Land Use - Chapter 5. Figure 6.3 shows the location of the Traffic Analysis Zones.

ALLOCATION OF FORECAST TO TRAFFIC ANALYSIS ZONES												
	Population				Households				Employment			
TAZ	**2010**	**2020**	**2030**	**2040**	**2010**	**2020**	**2030**	**2040**	**2010**	**2020**	**2030**	**2040**
111	627	682	718	749	284	300	326	336	146	119	132	148
112	587	573	625	679	236	252	283	304	764	839	861	889
113	1,127	1,176	1,301	1,382	374	413	474	511	242	343	379	415
114	407	411	467	511	130	145	170	189	451	750	811	872
115	1,184	1,382	1,547	1,658	474	552	640	694	164	276	279	286
116	308	333	391	444	114	133	162	186	79	101	111	124
117	341	438	473	489	136	156	176	187	209	139	164	195
118	1,626	1,806	1,909	1,924	565	643	713	736	252	331	385	452
119	503	579	603	611	181	197	213	221	131	129	132	133
120	464	466	483	487	146	158	171	176	118	460	467	470
121	870	848	868	862	267	288	306	311	96	161	167	171
122	578	507	528	536	157	171	185	191	59	82	92	103
123	952	958	1,009	1,038	296	322	352	369	28	42	43	44
124	739	782	800	796	246	265	283	287	7	28	30	31
125	1,121	1,098	1,126	1,121	345	373	398	405	21	21	22	23
126	529	539	598	648	165	183	211	234	6	34	34	34
127	575	629	735	833	190	224	275	319	21	19	22	26
128	892	844	921	981	260	287	325	354	80	89	92	93
129	516	502	523	530	157	170	184	191	4	4	6	8
130	366	528	798	1,007	118	182	287	370	31	47	52	58
131	966	1,085	1,243	1,379	330	386	464	528	22	18	21	26
Total	15,278	16,166	17,666	18,665	5,171	5,800	6,598	7,099	2,931	4,032	4,302	4,601

Traffic Volumes

Existing and projected Average Daily Traffic (ADT) and Heavy Commercial Average Daily Traffic (HCADT) volumes on the most important roads in Ham Lake are depicted on the Traffic Volumes Map (Figure 6.4) and Heavy Commercial Traffic Volumes (Figure 6.5). The existing ADT volumes represent the total traffic carried on the average 24-hour day for the year as gathered by MnDOT for 2017. The Map's legend color coding for volume values indicate the most recent "current year" of volume counts. The projected ADT volumes represent the average daily weekday travel demand forecasts developed by the Metropolitan Council for 2040.

Figure 6.3 Traffic Analysis Zones



Legend

- Ham Lake Parcels
- Lakes

TAZ

111 112 113 114 115 116 117 118 119 120 121 122 123 124 125 126 127 128 129 130 131

Comprehensive Plan 2018 Update

0 2,500 5,000 10,000 Feet

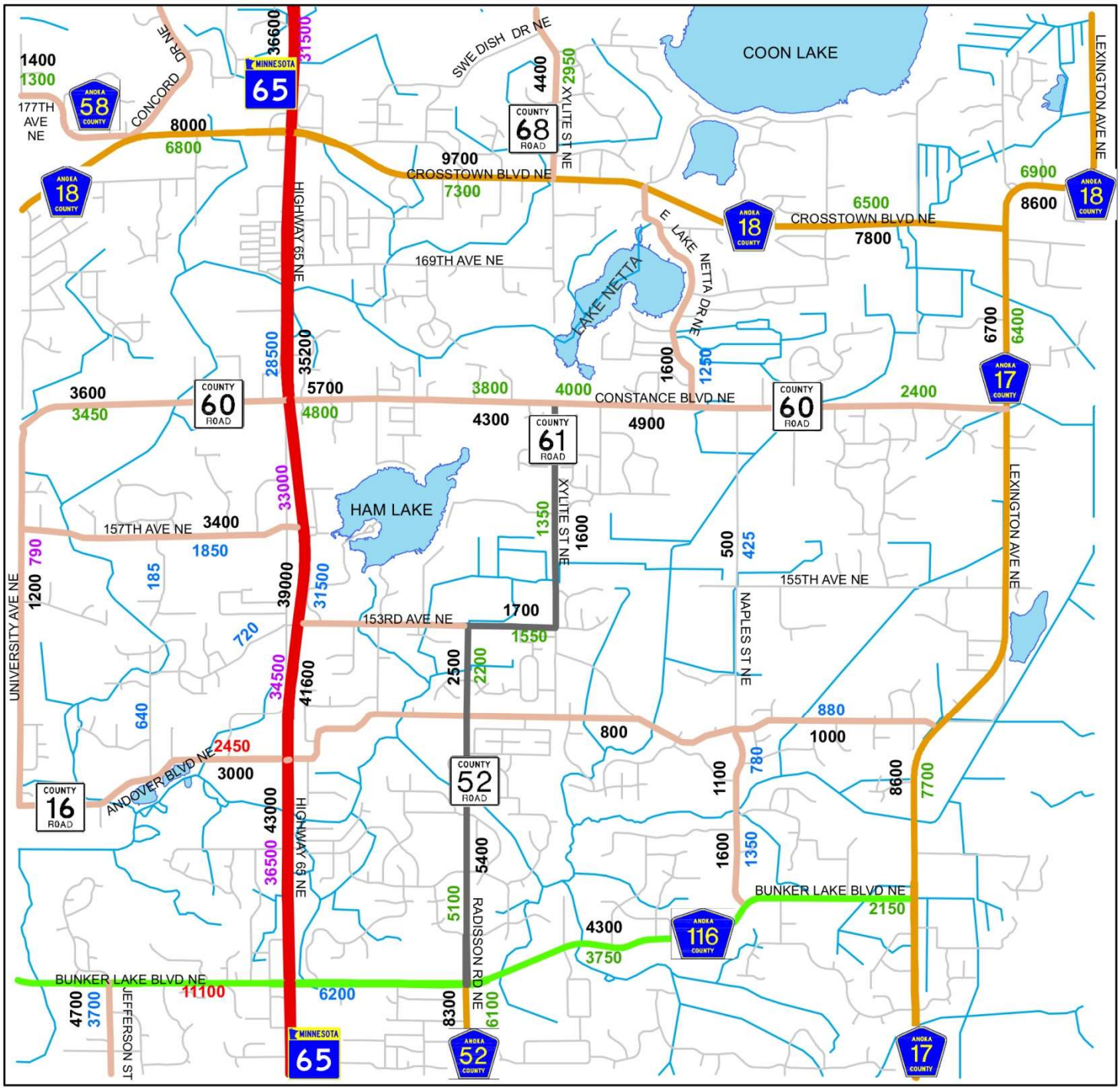
MAP DATE: 6/1/2019

Sources:
RFC Engineering, Inc.
Anoka County
Metropolitan Council
Minnesota Department of Transportation

HAM LAKE, MINNESOTA

RFC Engineering, Inc. Consulting Engineers

Figure 6.4 Traffic Volumes



XXXX 2040 Projected AADT Traffic Volumes
XXXX 2018 AADT Traffic Volumes
XXXX 2017 AADT Traffic Volumes
XXXX 2016 AADT Traffic Volumes
XXXX 2015 AADT Traffic Volumes

Existing Functional Classification

- Principal Arterial
- A Minor Reliever
- A Minor Expander
- Other Arterial
- Major Collector
- Streams and Ditches
- Lakes

0 2,500 5,000 10,000 Feet

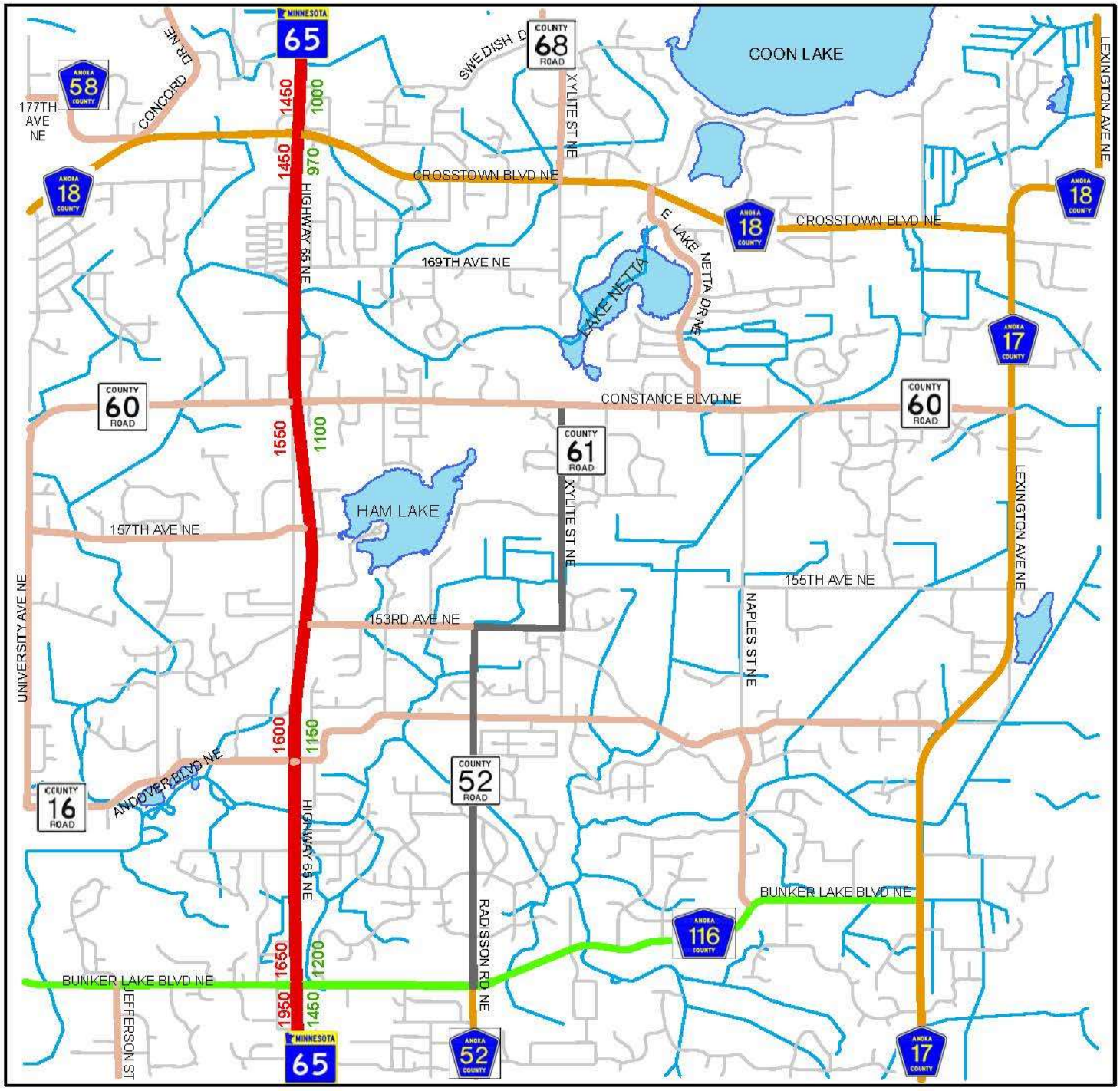
MAP DATE: 6/1/2019

Sources:
MN Department of Transportation
City of Ham Lake
RFC Engineering, Inc.
Anoka County
Coon Creek Watershed District
Metropolitan Council

HAM LAKE, MINNESOTA

RFC Engineering, Inc.
Consulting Engineers

Figure 6.5 Heavy Commercial Traffic Volumes



Heavy Commercial Average Daily Volumes

XXXX 2016 Heavy Commercial Traffic Volume

XXXX 2017 Heavy Commercial Traffic Volume

Existing Functional Classification

- Principal Arterial
- A Minor Reliever
- A Minor Expander
- Other Arterial
- Major Collector
- Streams and Ditches
- Lakes

0 2,500 5,000 10,000 Feet

MAP DATE: 6/1/2019

Sources:
MN Department of Transportation
City of Ham Lake
RFC Engineering, Inc.
Anoka County
Coon Creek Watershed District
Metropolitan Council

HAM LAKE, MINNESOTA

RFC Engineering, Inc. Consulting Engineers

Safety and Capacity

Streetlights: The City desires to keep its rural quality and limit the number of streetlights. The City requires that all new subdivisions include the installation of one street light at intersections, at the end of each cul-de-sac, on sharp curves and at 300-foot maximum spacing. All lights must use at least a semi-cutoff design to help limit the amount of light pollution.

Access Management Guidelines:
Access management guidelines are developed to maintain traffic flow on the network so each roadway can provide its functional duties, while providing adequate access for private properties to the transportation network. This harmonization of access and mobility is the keystone to effective access management and illustrated below (Figure 6.6).

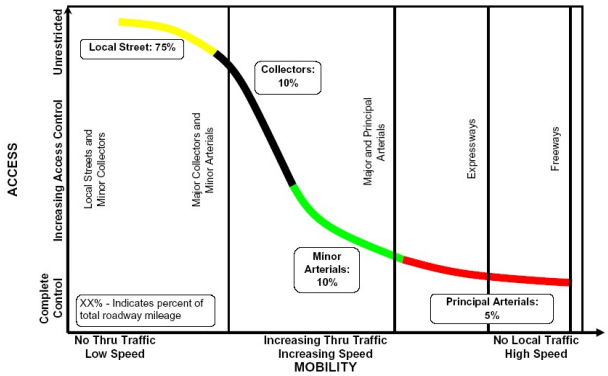


Figure 6.6 Relationship of Access and Mobility

Mobility is the ability to move people, goods and services via a transportation system component from one place to another. The degree of mobility depends on a number of factors, including the ability of the roadway system to perform its functional duty, the capacity of the roadway and the operation level of service on the roadway system.

Access, is the relationship between local land use and the transportation system. There is an inverse relationship between the amount of access provided and the ability to move through-traffic on a roadway. As higher levels of access are provided, the ability to move traffic is reduced.

Each access location (i.e. driveway and/or intersection) creates a potential point of conflict between vehicles moving through an area and vehicles entering and exiting the roadway. These conflicts can result from the slowing effects of merging and weaving that takes place as vehicles accelerate from a stop turning onto the roadway, or deceleration to make a turn to leave the roadway. At signalized intersections, the potential for conflicts between vehicles is increased due to the greater likelihood that the through movement vehicles may be required to stop at the signals. If the amount of traffic moving through an area on the roadway is high and/or the speed of traffic on the roadway is high, the number and nature of vehicle conflicts are also increased.

Accordingly, the safe speed of a road, the ability to move traffic on that road and safe access to cross streets and properties adjacent to the roadway all diminish as the number of access points increase along a specific segment of roadway. Because of these effects, there must be a balance between the level of access provided and the desired function of the roadway.

In Ham Lake, access standards and spacing guidelines are established in City Code to effectively manage existing ingress/egress onto City streets and to provide access controls for new development and redevelopment. The proposed access standards (driveway dimensions) are based on Minnesota Department of Transportation (MnDOT) State-Aid design standards. It should be noted that the City of Ham Lake has access authority for those roadways under their jurisdiction. Likewise, Anoka County has access authority for roadways under their jurisdiction. To further the relationship of access and mobility throughout Ham Lake, the City supports managing access consistent with the roadway mobility and access relationship figure above and supports the access spacing guidelines of the County and State.

The Table 6.1 Access Management represents the Anoka County Highway Department guidelines for controlling access to collector and local streets under the City's jurisdiction. The access spacing guidelines are used for all plat and site plan reviews. In that these guidelines are used as part of a plan and not an ordinance, reasonable discretion could be applied to each site.

Access to the transportation network serving the City is controlled in terms of driveway openings and side street intersections. The spacing of intersections and driveways is controlled based on roadway functional class and traffic volumes. This approach limits the impact of intersections and driveways on average speeds and levels of service.

Table 6.1 Access Management

ANOKA COUNTY HIGHWAY DEPARTMENT ACCESS SPACING GUIDELINES						
Functional Classification	Route Speed (mph)	Area or Facility Type	Intersection Spacing: Primary Full Movement Intersection	Intersection Spacing: Conditional Secondary Intersection	Signal Spacing	Private Access
Principal Arterials	50-55	Rural	1 mile	1/2 mile	1 mile	By Deviation Only
	40-45	Urbanizing	1/2 mile	1/4 mile	1/2 mile	By Exception or Deviation
	<40	Urban Core	1/8 mile	300-660 feet*	1/4 mile	Subject to Conditions
A Minor Arterials	50-55	Rural	1/2 mile	1/4 mile	1/2 mile	Subject to Conditions
	40-45	Urbanizing	1/4 mile	1/8 mile	1/4 mile	By Exception or Deviation
	<40	Urban Core	1/8 mile	300-660 feet*	1/4 mile	Subject to Conditions
Other Arterials	50-55	Rural	1/2 mile	1/4 mile	1/2 mile	Subject to Conditions
	40-45	Urbanizing	1/4 mile	1/8 mile	1/4 mile	By Exception or Deviation
	<40	Urban Core	1/8 mile	300-660 feet*	1/4 mile	Subject to Conditions
Collectors	50-55	Rural	1/2 mile	1/4 mile	1/2 mile	Subject to Conditions
	40-45	Urbanizing	1/8 mile	N/A	1/4 mile	Subject to Conditions
	<40	Urban Core	1/8 mile	300-660 feet*	1/8 mile	Subject to Conditions
Local	50-55	Rural	1/2 mile	1/4 mile	1/2 mile	Subject to Conditions
	40-45	Urbanizing	1/8 mile	N/A	1/2 mile	Subject to Conditions
	<40	Urban Core	1/8 mile	300-660 feet*	1/8 mile	Subject to Conditions
Specific Access Plan		All	By Adopted Plan/Agreement/Covenant on Land			
B Minor Arterial was revised to Other Arterial to match Metropolitan Council categories in Thrive MSP 2040						
* Dependent upon block length						

Planned Improvements to Roads

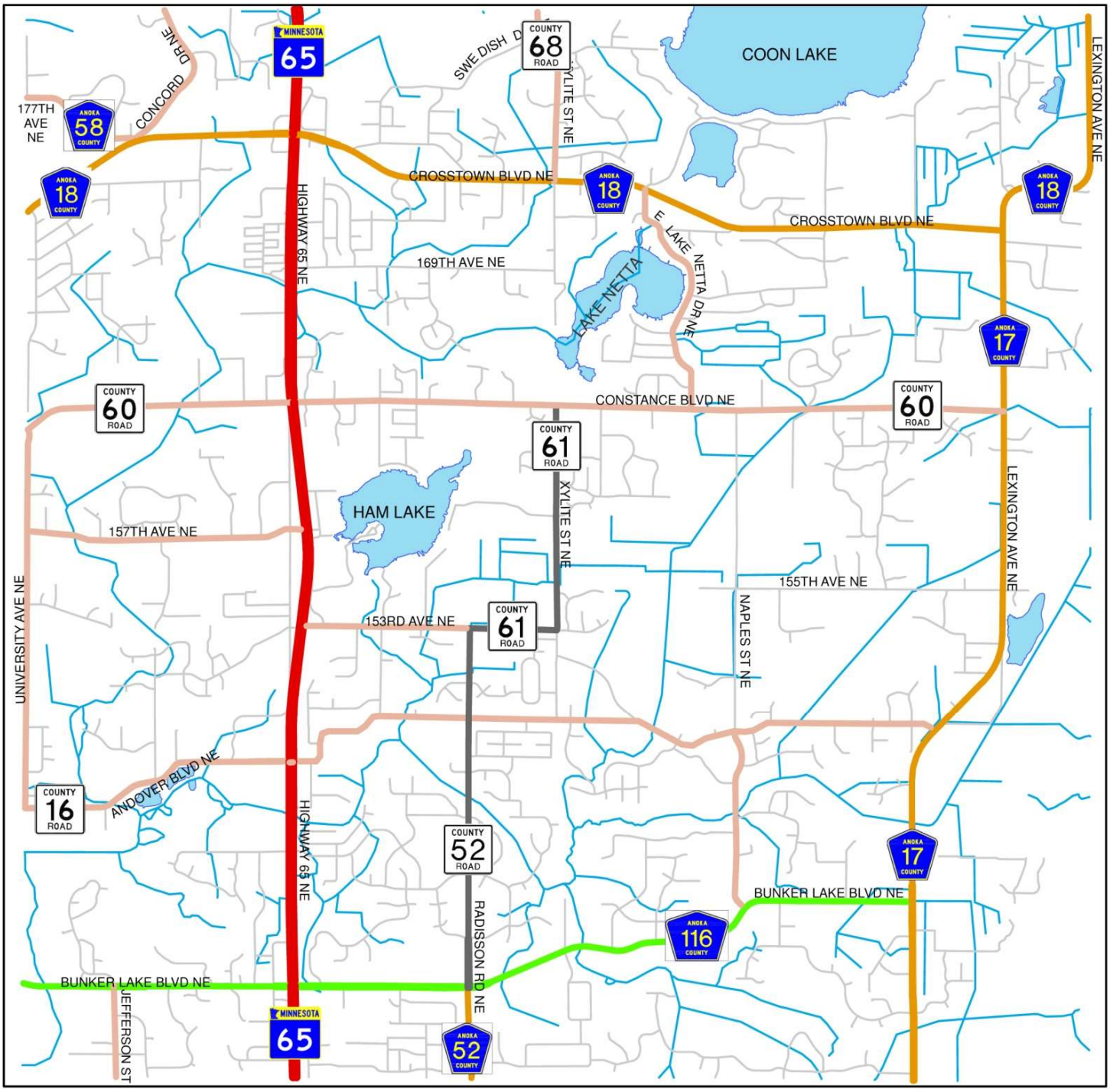
Relative to the mileage of existing Principal Arterials, Minor Arterials, Other Arterials and Collector Roads, very little additional mileage for such facilities is planned. The completion of the service or frontage road system parallel to Trunk Highway 65 is the primary future transportation need. Figure 6.2 illustrates Existing Roadway Functional Classifications and Figure 6.7 illustrates the Future Roadway Functional Classifications.

Metropolitan Highway System: There are planned improvements to the Metropolitan Highway System within the City of Ham Lake along Trunk Highway 65. The improvements include bridge and pavement projects planned between the years of 2018 and 2024.

The 2017 Principal Arterial Intersection Conversion Study, prepared by the Metropolitan Council and MnDOT, includes the intersection of Bunker Lake Boulevard within the TH-65B focus area. The Study states that planning for an interchange has been proposed in previous planning documents and is classified as a high intersection priority.

The March 2005 Environmental Assessment for the Trunk Highway 65 and Trunk Highway 242/County State Aid Highway 14 Corridor Improvements concluded that an interchange will be needed at Bunker Lake Boulevard prior to 2025. MnDOT has indicated, that it intends to attempt closure of most driveway accesses to Trunk Highway 65, and further, that closures of most median cuts will also occur. Fully directional access to Trunk Highway 65 will primarily be at the four existing signalized intersections (Bunker Lake Boulevard, Andover Boulevard, Constance Boulevard and Crosstown Boulevard). The 2018 improvements to Trunk Highway 65 in the City were the installation of Reduced Conflict Intersections at 143rd Avenue, 153rd Avenue, 157th Avenue and 181st Avenue.

Figure 6.7 Future Roadway Functional Classification



Legend

- Principal Arterial
- A Minor Reliever
- A Minor Expander
- Other Arterial
- Major Collector
- Streams and Ditches
- Lakes

0 2,500 5,000 10,000 Feet

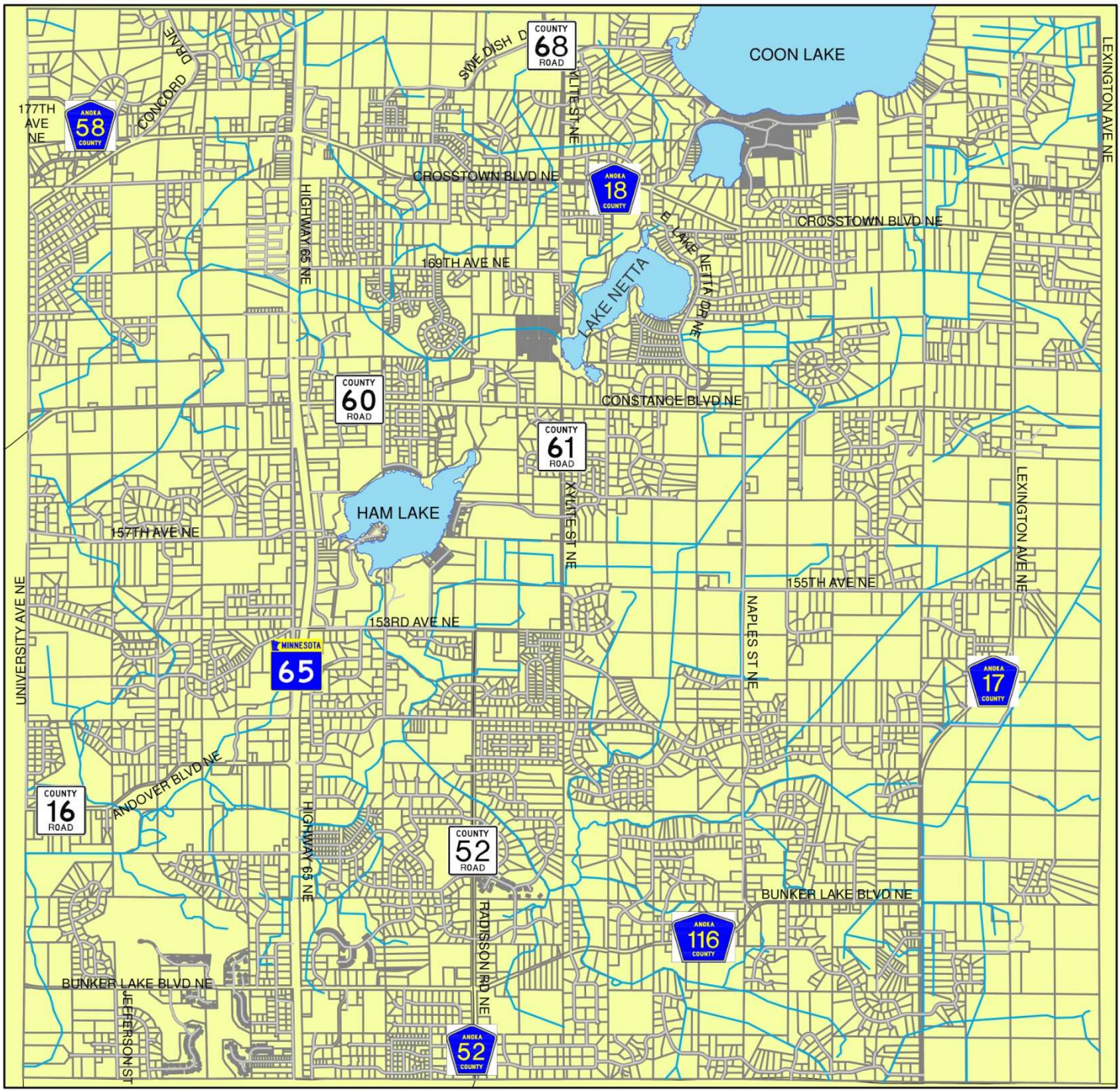
MAP DATE: 6/1/2019

Sources:
City of Ham Lake
RFC Engineering, Inc.
Anoka County
Coon Creek Watershed District
Metropolitan Council

HAM LAKE, MINNESOTA

RFC Engineering, Inc.
Consulting Engineers

Figure 6.8 TransitLink Service Area



Legend

- TransitLink Service Area
- Ham Lake Parcels
- Streams and Ditches
- Lakes

0 2,500 5,000 10,000 Feet

MAP DATE: 6/1/2019

Sources:
City of Ham Lake
RFC Engineering, Inc.
Anoka County
Coon Creek Watershed District
Metropolitan Council

HAM LAKE, MINNESOTA

RFC Engineering, Inc.
Consulting Engineers

Local Roads: The City has the following significant future projects to complete.

1. Naples Street: The unpaved portion from 151st Avenue to Constance Boulevard will be paved.

2. 155th Avenue: 155th Avenue is scheduled to be paved in 2020 between its current termini of Lexington Avenue and Naples Street. Eventually, 155th Avenue will be extended to the west, to connect with 153rd Avenue at Xylite Street. This connection will provide an east-west route combining 153rd Avenue/155th Avenue, McKay Drive/Jackson Street and Andover Boulevard, completely traversing the City from Lexington Avenue to the west corporate limit.

3. 181st Avenue: The segment from Trunk Highway 65 to Baltimore Street was constructed in 2000. The non-existing municipal state aid designated connection is to the east and south, connecting Swedish Drive.

Frontage Roads: The purpose of a service or frontage road system along Trunk Highway 65 will be to provide a north-south connection between the roads having signalized intersections with Trunk Highway 65. Major incomplete links in this system and the anticipated means of completing these connections are as follows:

1. East side of Trunk Highway 65 between Bunker Lake Boulevard and 147th Avenue: 0.62 miles of the 1.58 mile stretch is complete, and private development of commercial land and State funding are expected to complete these links. Construction of the 0.14 mile segment of Aberdeen Street from 144th Avenue to 145th Avenue is scheduled for 2020 – SP 0208-143.

2. East side of Trunk Highway 65 between 147th Avenue and Constance Boulevard: Topography will likely preclude completion of this entire link.

3. East side of Trunk Highway 65 between Constance Boulevard and Crosstown Boulevard: A Municipal State Aid designation is in place from 169th Avenue to Crosstown Boulevard. Wetlands south of 169th Avenue may interrupt this link. The 0.25 mile segment from 169th Avenue to 171st Avenue has been completed. The remaining 0.53 mile segment from 171st Avenue to Crosstown Boulevard will be completed through private development.

4. East side of Trunk Highway 65 from Crosstown Boulevard to 181st Avenue: The southerly 0.23 mile segment was constructed in 1979 with the Crosstown Shopping Center. The remaining 0.51 segment from 176th Lane to 181st Avenue will be completed through private development.

5. West side of Trunk Highway 65 between 143rd Avenue and Andover Boulevard: The 0.58 segment will be constructed through private development and/or City utilization of municipal state aid funds.

6. West side of Trunk Highway 65 between Andover Boulevard and Constance Boulevard: The entire segment is constructed. The intersection with Constance Boulevard is hazardous and needs to be realigned to the west. Private development and Municipal State Aid funding are expected to be used for completion of the realignment.

7. West side of Trunk Highway 65 between Constance Boulevard and Crosstown Boulevard: The southerly 0.25 mile segment and the northerly 0.25 mile segment were constructed in 2003 and 2001 respectively. The remaining 1.12 mile segment will be completed thru private development.

8. West side of Trunk Highway from Crosstown Boulevard to 181st Avenue: This 0.81 mile segment has been constructed. The intersection with Crosstown Boulevard was realigned in 2012.

Transit Service

Ham Lake is primarily in Transit Market Area V, with a portion of the southwest corner in Transit Market Area IV. The only feasibly type of transit service is dial-a –ride transit. The City is outside the Transit Capital Levy district. Additional transit services, in collaboration with a transit provider, would require that the City pay the regional transit capital levy as defined in Minnesota Statutes 473.446 and 473.4461.

There currently is no scheduled transit service in Ham Lake. Ham Lake residents have relatively direct access to express service terminating in downtown Minneapolis on Metro Transit Routes 250 and 865 and Metro Transit Routes 250 express service terminating in downtown St. Paul on Route 262. The express services for Route 250 and 262 are available at the Park & Ride lot at 95th Avenue and Interstate 35W in Blaine. The express

service for Route 865 is available at the Paul Parkway Park and Ride in Blaine.

These are commuter routes, with service approximately every half hour during the morning and afternoon peak travel times. A map of the existing transit areas is in Figure 6.8 TransitLink Service Area Map.

There are six transit link locations in the County, which are the Anoka County Government Center, Northtown Transit Center, Columbia Heights Transit Center, Rosedale Transit Center, Little Canada Transit Center and the Foley Boulevard Park and Ride. Although there are no fixed routes available in Ham Lake, other services are available through the Anoka County Traveler-Transit Link (Dial-a-Ride), Anoka County Medlink and Anoka County Commute Solutions.

Traveler Transit Link is a dial-a-ride transit service that requires advanced reservations. Transit Link is public transportation that operates where regular fixed-route transit is unavailable. This service operates using accessible buses. Medlink is available to veterans, citizens over the age of 60 and clients of Anoka County. Commute Solutions is a free commuter resource with a mission of achieving reductions in traffic congestion, improving mobility and air quality, and educating employers and their employees about transportation options. The Anoka County Transit Unit web site is www.anokacounty.us/3636/Transit.

Scheduled transit service is most efficiently provided in conditions of dense land use. At this point, there does not appear to be significant potential for expanding such service into Ham Lake, given the rural nature and project growth patterns of the community. However, as the northern areas of Anoka County develop, the demand for transit should be assessed on an ongoing basis. Future park and ride lot service could potentially be provided along Trunk Highway 65. Land has been reserved for one such facility.

Future Regional Bike Trails

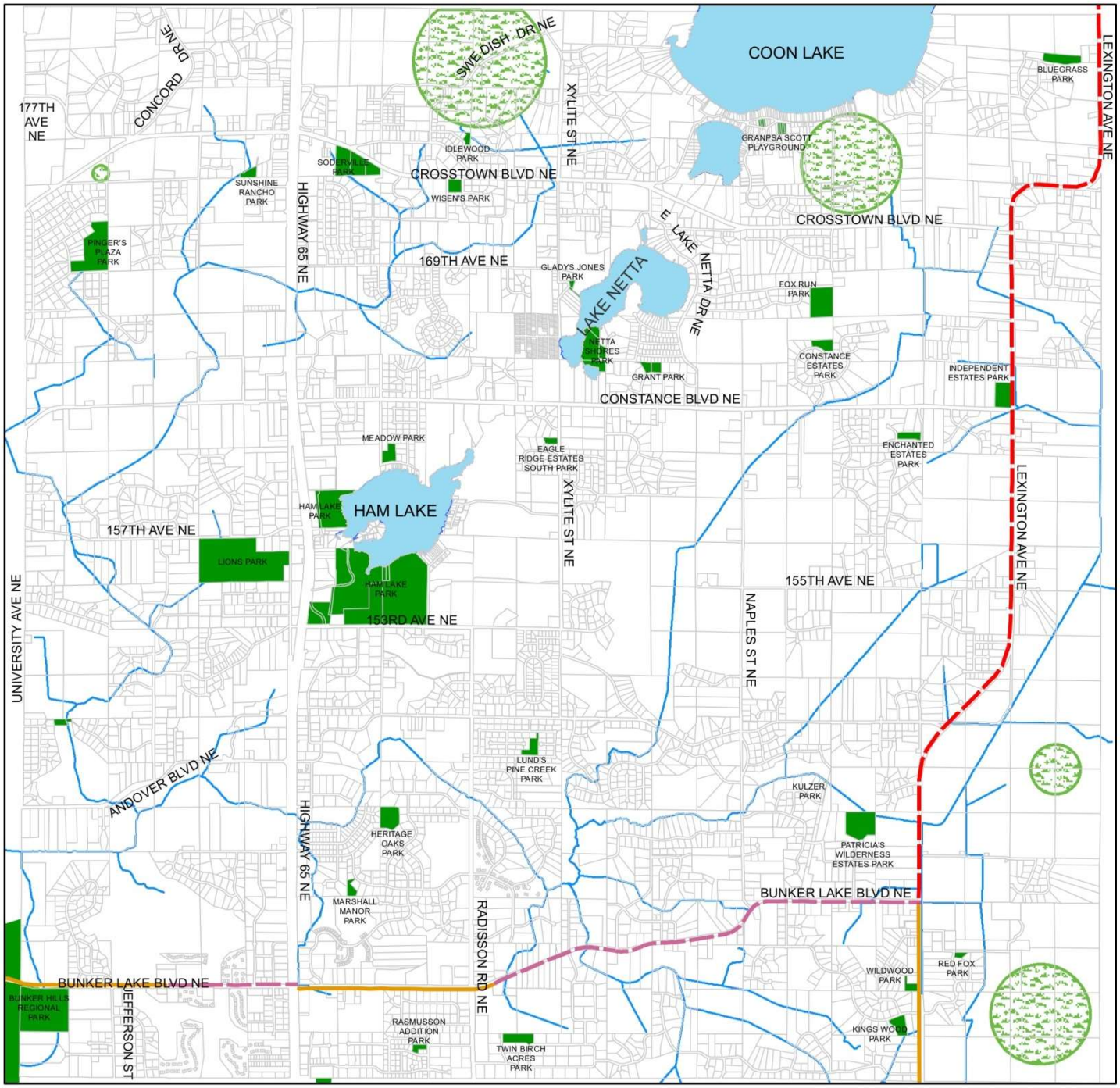
Two Metropolitan Commission designated regional trails, per the Regional Bicycle Transportation Network (RBTN), are within Ham Lake. These RBTN trails are located within or directly adjacent to Anoka County State Aid Highway right-of-way. Both trails have the Metropolitan Council classification as Tier 2, as shown on the Regional Bicycle Transportation Network Figure 6.9. After the fact grant funding is available thru the Metropolitan Council for up to 50% of the regional trail construction costs and federal funding is available for up to 80% thru the biennial Regional Solicitation process conducted by the Metropolitan Council's Transportation Advisory Board.

The "Central Anoka County Regional Trail" is an east-west trail that will connect the Bunker Hills Regional Park to the west with the East Anoka County trail on the east side of the City. The Central Anoka County Regional Trail is adjacent to Bunker Lake Boulevard and may be constructed at the time of road improvements made by Anoka County. Per the Anoka County Highway Department Cost Sharing Policy the cost for construction is the responsibility of the City. The City policy is to construct trails of sufficient width such that they function as combination bike/pedestrian pathways. Portions of this trail were constructed with SAP 002-652-005 and 002-716-015.

The "East Anoka County Regional Trail" will connect Rice Creek Chain of Lakes Park Reserve on the south to the Central Anoka County Regional Trail. The portion of the East Anoka County Regional Trail within Ham Lake was constructed in 2014 with SAP 02-617-020.

The Anoka County Department of Parks and Recreation has designated both RBTN trails as Anoka County Regional Trails. In addition, the Anoka County Department of Parks and Recreation has designated a regional trail north of the East Anoka County RBTN trail. This regional trail will extend to the Martin Island-Linwood Lakes Regional Park in the northeast part of Anoka County.

Figure 6.9 Regional Bicycle Transportation Network



Legend

- East Anoka County Regional Trail - Non-Existing
- Regional Bicycle Transportation Network - Non-Existing
- Regional Bicycle Transportation Network - Existing
- Existing Park
- Potential Future Park
- Streams and Ditches
- Lakes

0 2,500 5,000 10,000 Feet

MAP DATE: 6/1/2019

Sources:
City of Ham Lake
RFC Engineering, Inc.
Anoka County
Coon Creek Watershed District
Metropolitan Council

HAM LAKE, MINNESOTA

RFC Engineering, Inc.
Consulting Engineers

Airspace Protection

There are no existing or planned aviation facilities, or other related facilities, located within Ham Lake. The City is not within the airport influence area of any regional airports. The City is generally served by the Blaine Airport and the Minneapolis-St. Paul International Airport.

The City recognizes its responsibility to include airspace protection in its Comprehensive Plan. The protection is for potential hazards to air navigation including electronic interference. Airspace protection should be included in local codes/ordinances to control height of structures, especially when conditional use permits would apply. Land use regulations should also include requirements for notification to the FAA, as defined under code of federal regulations CFR - Part 77, using the FAA Form 7460-1 "Notice of Proposed Construction or Alteration".

The City of Ham Lake has taken the necessary steps to protect navigable air space. All municipalities must protect air space from potential electric interference and obstacles to air navigation. The Zoning Ordinance limits heights of structures within the City to less than 45 feet.

Freight

According to the 2040 Transportation Policy Plan there are no railroads or freight terminals such as Air/Truck, Barge/Truck or Rail/Truck located in Ham Lake. Trunk Highway 65 is the Principal Arterial Highway in Ham Lake carrying Heavy Commercial Vehicles. Morken Companies Trucking (truck terminal) and Lightning Express provide transportation and freight services. Important nodes located along Trunk Highway 65 generating freight movement are industrial parks like Christensen Commercial Park, Ham Lake Industrial Park, Landborg Industrial Park, Larson Commercial Park and Wybrite Commercial Park. In addition, large commercial centers such as Enterprise Plaza, Majestic Oaks Commercial Center and The Bunker Lake Commercial Park generate freight movement. Refer to the Traffic Volumes section for information about heavy commercial annual daily traffic. There are no known issues for goods movement such as road or bridge weight-restrictions, bridges with insufficient height or width clearances, or intersections with inadequate turning radii.

D. Objectives and Strategies

The objectives and strategies identified below are broad statements regarding the motivation and intent of this Plan. The strategies that follow individual objectives are specific items that promote attainment of the objective. Strategies may be a program, regulation or a project.

Objective 1: Approach transportation in a comprehensive manner, giving attention to all modes while providing safe and convenient movement of all persons and vehicles.

T 1.1 Consider all modes of transportation and related facilities as a system to be coordinated and related on a comprehensive basis.

T 1.2 Plan transportation facilities to function in a manner compatible with adjacent land use.

T 1.3 Consider the mobility needs of all persons in the planning and development of the transportation system.

T 1.4 Encourage citizen involvement in transportation planning and implementation projects.

Objective 2: Coordinate transportation planning and implementation with State, County and other local jurisdictions.

T 2.1 Work with Anoka County, the Minnesota Department of Transportation (MnDOT) and the Metropolitan Council to discuss the ways and means by which their long term transportation planning goals can be met to satisfy both regional and local needs.

T 2.2 Cooperate with neighboring jurisdictions on coordination of street and roadway extensions and improvements.

T 2.3 Plan for a highway and local road system that complements and facilitates local movement provided by local streets, bicycle trails and pedestrian facilities.

T 2.4 Continue to maintain a line of communication with County and State highway officials in order to ensure that planned improvements are consistent with the goals and objectives of the community.

Objective 3: Develop a system of priorities for improving the various elements of the transportation network emphasizing the highest possible standards of safety and efficiency.

T 3.1 Continue to update the Capital Improvement Plan for transportation facilities.

T 3.2 Maintain a functional classification system for the street system in Ham Lake using the classification system in the Metropolitan Council's Transportation Policy Plan.

T 3.3 Eliminate and prevent any on-street parking which conflicts with moving traffic or creates hazards.

T 3.4 Relate street improvements to area land development in order to minimize interrupted or inadequate access.

T 3.5 Require design and control of all intersections to promote proper visibility and safety.

T 3.6 Develop a uniform system and policy regarding public signage which eliminates unnecessary signs and replaces outdated, inappropriate and confusing public signs.

T 3.7 Correct traffic safety hazards within the community as these are identified.

T 3.8 Reserve required rights-of-way as part of the City's platting process.

T 3.9 Where feasible and practical, consider establishing pedestrian and bicycle trails in conjunction with development subdivision and street and highway improvements.

T 3.10 Continue to complete the service or frontage road program through private development and City Street reconstruction efforts.

Objective 4: Provide enhanced mass transit options for the residents of Ham Lake.

T 4.1 Work with the Metropolitan Council and State representatives on development of enhanced transit systems for Ham Lake.

T 4.2 Encourage options for increased ride share programs and park and ride facilities.

T 4.3 Participate in ongoing feasibility studies for mass transit and rail options.

T 4.4 Encourage express bus service between Ham Lake and other cities.

Water Resources 7

Contents

Purpose

This chapter covers waste water management, water supply and surface water quality. These issues are highly interdependent in Ham Lake. Maintaining ground and surface water quality is especially important because all properties rely on individual wells for drinking water and individual septic systems for waste water treatment.

A. Overview

Management of the region's water supply, protection of the surface water resources and treatment of its sewage directly affect the health of citizens of all municipalities. For this reason, State Statutes and Metropolitan Council policies specify exact standards and requirements that must be met in a city's Comprehensive Plan. This chapter summarizes existing policies contained in the City Code and existing plans and documents as they pertain to Metropolitan Council requirements. It does not attempt to create any new policies.

B. Goal

A goal is a policy statement that states a desired outcome in general terms.

To protect the City's ground and surface water resources so that the City's population will continue to have a safe and adequate water supply.

This goal is ongoing, with coordination with the Anoka Conservation District and Coon Creek Watershed District, thru plan review and MS4 responsibilities in the MPCA's municipal separate storm sewer system General Permit.

C. Waste Water-Key Findings and Themes

Information was compiled from the existing Thrive MSP 2040 Comprehensive Plan, the Ham Lake Zoning Code and the Metropolitan Council.

Metropolitan Council Wastewater Policies

The Metropolitan Council currently provides wastewater collection and treatment services to 2.6 million people in 110 communities, which represents about 85 percent of the seven-county metropolitan area's population. The Metropolitan Council owns and operates the Metropolitan Disposal System (MDS). The MDS includes nine wastewater treatment plants: Metropolitan, Empire, Rosemount, Blue Lake, Seneca, Eagles Point, Hastings, St. Croix Valley and East Bethel; it also includes approximately 630 miles of regional interceptors that connect flow from 5,000 miles of sewers owned by local communities. The system treats up to 250 million gallons per day of wastewater from homes, industries and commercial businesses. The system is operated through the Metropolitan Council's Environmental Services Division (MCES).

The Thrive MSP 2040 and the regional system plans comprise the Metropolitan Council's Metropolitan Development Guide, which is the region's plan to ensure orderly, coordinated and economic development of the region. Local Comprehensive Plans and plan amendments that have substantial impacts on or contain substantial departures from the metropolitan wastewater system plan affect how the Metropolitan Council constructs, operates and maintains the Metropolitan Disposal System (MDS) and can result in system inefficiencies if the nonconforming plans are permitted to occur. The Metropolitan Council does not plan to extend the MDS to Ham Lake. The City's reliance on SSTS is consistent with the Metropolitan Council's designation of Ham Lake as a "Rural Residential" community.

Alternatives to SSTS

After careful consideration, the City Council reaffirmed past policies supporting decentralized approaches as the main strategy for waste water treatment. The City of Ham Lake does not intend to connect to the Metropolitan Disposal System within the 2040 planning period. Ham Lake may construct or operate a public wastewater collection, treatment and disposal system for specific targeted areas of the City.

Subsurface Sewage Treatment Systems

Subsurface Sewage Treatment Systems mean a sewage treatment system, or part thereof, which uses subsurface soil treatment and disposal, or holding tank, serving a dwelling, or other establishment, or a group thereof, and that does not require a State permit. Subsurface sewage treatment system includes a building sewer connected to a subsurface sewage treatment system.

The majority of the City will continue to be served by SSTS. These systems have provided and continue to provide very reliable service to the citizens of Ham Lake. The vast amount of wetland in the City dictates the policy favoring the indefinite usage of SSTS systems.

In terms of the long-term effects and expectations of permanent reliance on SSTS, the City's engineering staff has studied such long-term effects. In consultations with staff at the Minnesota Pollution Control Agency, University of Minnesota Extension Service and review of several publications on the subject matter, the City's engineering staff has reached the following general conclusions regarding the permanent reliance in SSTS:

a) The federal Environmental Protection Agency (EPA) recommends that SSTS be relied upon where there are less than fifty households per mile of sewer. With approximately a third of the length of extending sewer lines allocated to traversing low areas with no dwellings, these fifty units per mile figure is not considered attainable.

b) The EPA has also concluded that a properly constructed SSTS is as effective a method of treating individually produced waste as a conventional centralized plant.

c) University of Minnesota studies have determined that a properly maintained SSTS can have a useful lifetime ranging between 40 and 60 years. The City of Ham Lake has always required that each dwelling site possess sufficient area of suitable soil for the construction of a secondary SSTS on the site. According to the University studies, a site abandoned in favor of a secondary SSTS can be reclaimed within this life expectancy, such that by alternating between two sites, and assuming proper construction and maintenance, a single-family lot can in fact operate with SSTS indefinitely.

The City will continue to follow its existing policy of requiring the following physical characteristics for single-family home construction:

A. The lot must contain 29,500 contiguous square feet of land which lies at a suitable elevation above mottled soils.

   The lot must contain at least 7,500 square feet of natural, undisturbed soils at least one (1) foot above mottled or unsuitable soils for primary and secondary septic systems. The septic systems can be detached.

B. Of the 29,500 square feet mentioned above, 10,000 square feet finished grade must be at least one foot above unsuitable soils for a building pad and an additional 12,000 contiguous square feet must be one foot above unsuitable soils for "yard area".

These requirements are designed to ensure that there is sufficient space on each lot to allow at least one complete replacement of the drain field. All septic systems must meet City adopted standards and Minnesota Pollution Control Agency Rules Chapter 7080. By Ordinance, each private residential system is required to undergo an inspection to ensure that systems are properly maintained. The City maintains a database of all SSTS, and sends a mailed notice to each homeowner advising of the need to comply with the inspection ordinance. Non- compliant homeowners are subject to civil and criminal sanction for failing to comply with the inspection requirements. In addition, the City has adopted an Administrative Search Warrant ordinance to assist in identifying suspected non-compliant systems. Commercial or industrial systems have similar requirements, but will fluctuate according to the particular effluent generation of each business.

The City will continue to require compliance with the Minnesota Rules Chapter 7080 for the design, installation, maintenance, expansion and repair of private on-site sewage treatment systems. Sewage treatment systems will be designed to eliminate infiltration of flood waters into the systems and discharges from the systems into flood waters. Sewer systems will be designed per State and local code and protected from flooding up to a 100-year, 24-hour event.

SSTS are currently inspected for compliance with MPCA Standards when the new systems are installed, when additions are added to existing buildings and when system failure is reported to the City. Most lending agencies also require SSTS inspection at time of sale of the property.

Figure 7.3 Locations of Subsurface Sewage Treatment Systems shows the locations of all of the individual systems in Ham Lake. The Map also identifies locations of non-conforming systems and systems with known problems.

Existing and Proposed Community-Group Treatment Systems

At present, there is one central sewage treatment system. The Flamingo Terrace Mobile Home Park, with 295 dwellings, has maintained its own treatment system for over forty years. This plant will continue to be privately maintained. This park is fully developed, and no adjoining land is zoned to allow expansion of the park. Therefore, the sewage treatment system, which contains average daily household flow from 295 single-family units, is considered to be at capacity.

McKinley School (elementary school), the DaVinci Academy (K-8 charter school), the AmericInn (a motel) and Ham Lake Apartments (approximately 50 units) the Willows (senior housing with 50 units) and the Majestic Greens (senior housing with 50 units) maintain large septic systems. Group septic systems are located in several townhouse developments. These are Cottages of Heritage Oaks, Majestic Oaks 2nd Addition, Townhomes of Majestic Oaks 2nd, 3rd, 4th, 5th, 6th, 7th and 8th Additions, Townhomes of Heritage Oaks, Townhomes of Highland Bluffs and Townhomes of Highland Bluffs 2nd, 3rd, 4th and 5th Additions. The private owners will continue to maintain these systems.

A map of the locations of the private central sewage treatment system, privately-owned large septic systems, privately-owned group septic systems and the individual septic systems are shown in Figure 7-4.

Future Community Systems

The City has to-date rejected the use of community treatment systems for new and existing housing developments. The reason for this position is a concern that such a policy will only increase pressure on the City to allow development of urban- sized lots. The City is committed to holding to its current policy of one-acre minimum lot sizes but will review proposed privately owned and operated community wastewater treatment options in the Coon Lake area.

The City of Ham Lake may evaluate and allow privately owned and operated community wastewater systems that are in compliance with regulatory agency and discharge permit requirements. All development and redevelopment proposals will be required to evaluate and select the best alternatives to treat and dispose of their own wastewater while following all permitting and disposal rules of the regulatory agencies. Discussion about sewer connectivity is in Land Use - Chapter 5, Sections D and E Commercial/Industrial subsections.

Existing Neighborhood Sewer Project Potential

Coon Lake/Little Coon Lake, Lake Netta and Ham Lake each have numerous lakeshore and other residences nearby. Some of these lots have been in existence for nearly ninety years. Some failures in septic systems serving these lots, mainly near Coon Lake, have been discovered. Many of these lots do not contain sufficient land area to allow replacement of any systems which do subsequently fail. Each of these neighborhoods could be served by a localized community based central sewer system. A 2003 Study by North American Wetland Engineering (NAWE) attempted to inventory the status of SSTS in the Coon Lake/Little Coon Lakes area, and the Study did find a need for addressing this issue in the near future. Any systems proposed for these areas will be privately owned and operated in compliance with all standards and requirements of the MPCA and the City of Ham Lake. The NAWE study findings were validated by the May 31, 2011 Community Assessment Report (CAR) by Ellingson Companies.

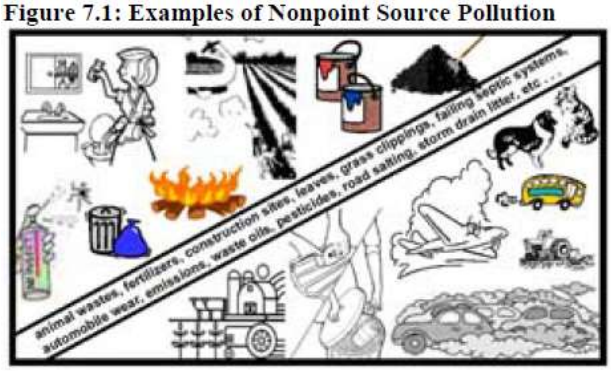
D. Surface Water Management – Key Findings and Themes

This section includes a summary of the City of Ham Lake's Stormwater Pollution Prevention Plan (SWPPP) and Surface Water Management Plan (SWMP). The Surface Water Management Plan was written in accordance with the Metropolitan Council and local watershed management organizations requirements. The SWMP is attached in Appendix C.

Metropolitan Council Policies

Metropolitan Council surface water management programs deal with broad land runoff ("nonpoint" source) and specific wastewater ("point" source) pollution. Point source pollution includes the discharge of treated wastewater effluent through a pipe. Nonpoint sources of pollution result from many of the everyday activities and actions of people (Figure 7.1). These include applying fertilizer to lawns in an amount that exceeds what the grass can use, plowing an agricultural field such that erosion results, blowing grass clippings into the street, or driving a car that exhausts improperly burned hydrocarbons or leaks oil. All these add up to major nonpoint source pollution loading of our receiving waters.

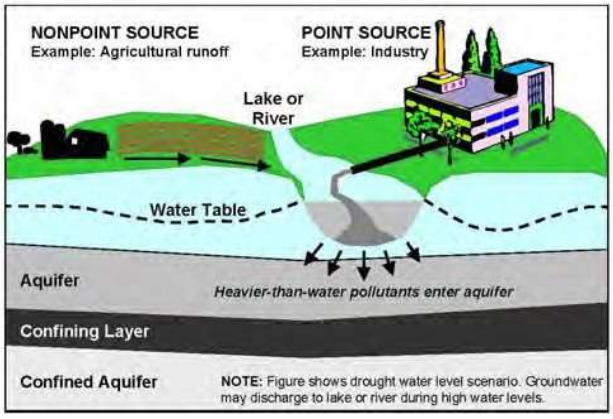
Figure 7.1: Examples of Nonpoint Source Pollution



Nonpoint Sources of Pollution

Nonpoint source pollution begins with the alteration of the landscape caused by agricultural production and urban development (Figure 7.2). The natural vegetative and drainage systems provide a low- impact course for water to follow. Alteration of these systems increases both the volume and rate of water runoff, and introduces polluting materials that can be transported by the runoff into receiving water bodies. This makes it harder to clearly identify the pollution source and effectively manage it.

Figure 7.2 Point vs. Nonpoint Source Pollution



Protecting the quality of the region's water resources cannot be achieved in a cost effective manner without addressing point *and* nonpoint sources of pollution.

The region has spent several decades and made great strides in improving water quality by reducing point sources of pollution. The region has begun to make progress in improving water quality by reducing nonpoint sources of pollution as well, but it is apparent that nonpoint sources of pollution far exceed point

sources of pollution to the Region's and State's water resources.

Local governmental units also have a role. They need to address the impacts from increased stormwater runoff as a result of increased imperviousness related to additional growth. Without local actions, projects and permits for future wastewater treatment plant expansions may be required to meet higher standards, making them more expensive.

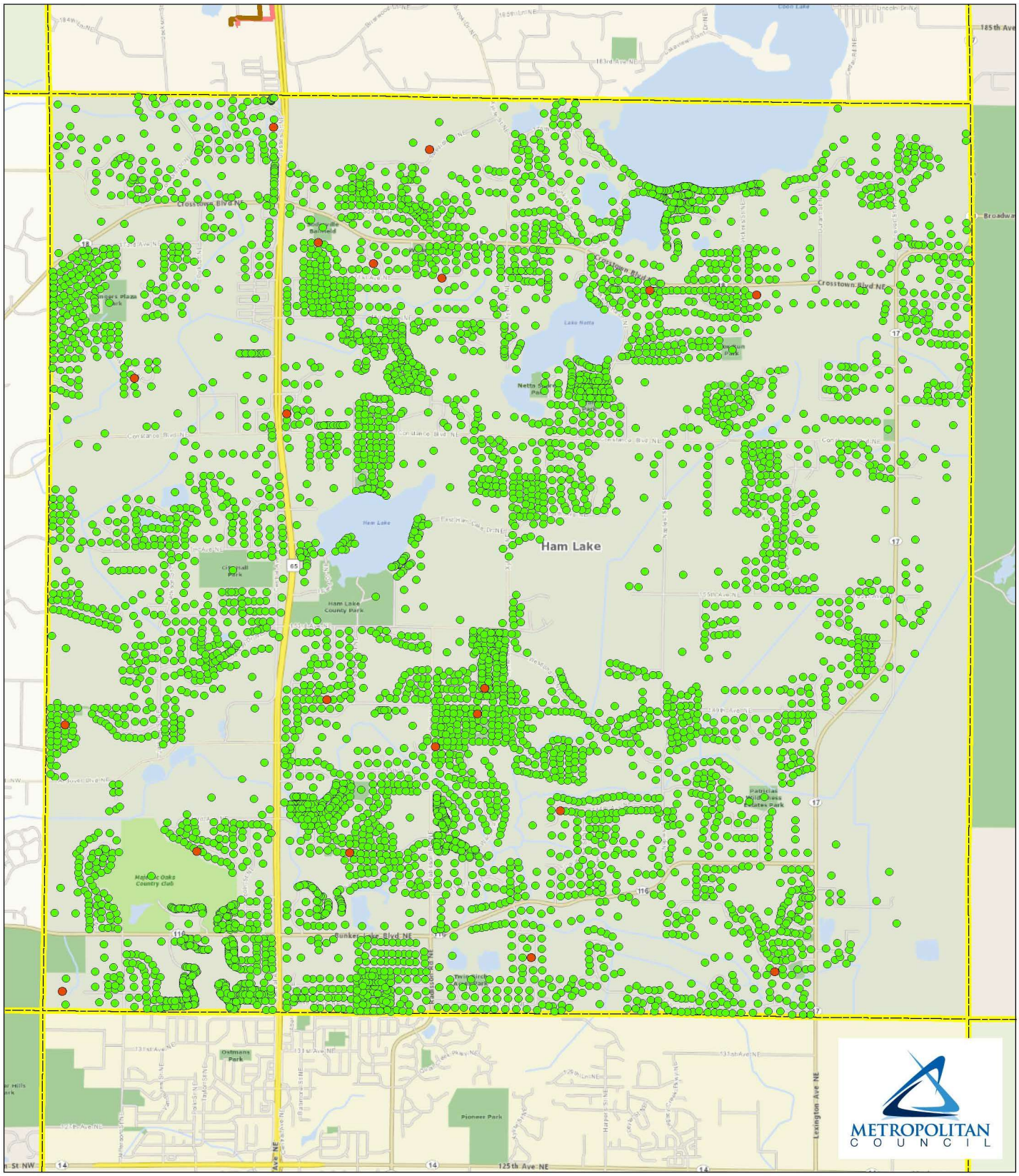
The Metropolitan Council will provide technical assistance and resource assessment information to assist others in their efforts to implement practices that will protect water resources (wetlands, lakes, streams, rivers and natural drainage courses). Best management practices help to maintain and improve water quality, control runoff rates and volumes to reduce stream bank erosion and flooding and preserve designated beneficial uses.

The Metropolitan Council will review local Comprehensive Plans, watershed management plans, local surface water management plans, local stormwater ordinances, environmental permits and other environmental documents to ensure that the local units of government are fulfilling their nonpoint source reduction requirements and therefore not impacting the metropolitan disposal system.

Established Ham Lake Surface Water Management Plan Goals & Policies

The City of Ham Lake has developed a number of goals and policies that conform to the overall purpose that is specified in the Permit and Minnesota Statute 103B.201. Surface water management programs required by The Metropolitan Surface Water Management Act are per Minnesota Statute 103B.201 thru 103B.253. The Storm Water Pollution Prevention Plan and Surface Water Management Programs purpose is to minimize the discharge of pollutants, protect and improve water quality, satisfy the appropriate water quality requirements of the Wetlands Conservation Act (WCA), preserve and use natural water storage and retention systems in order to reduce, to the greatest practical extent, the public capital expenditures necessary to control excessive volumes and rates of runoff, prevent flooding and erosion from surface flows, promote groundwater recharge, protect and enhance fish and wildlife habitat and water recreational facilities and secure other benefits associated with the proper management of surface water. The City's goals and policies have been developed to compliment the Watershed Districts, Watershed Management Organizations, County, Regional, State and Federal goals and policies.

Figure 7.3 Locations of all Subsurface Sewage Treatment Systems



Individual Sewer Treatment Systems (ISTS)
City of Ham Lake

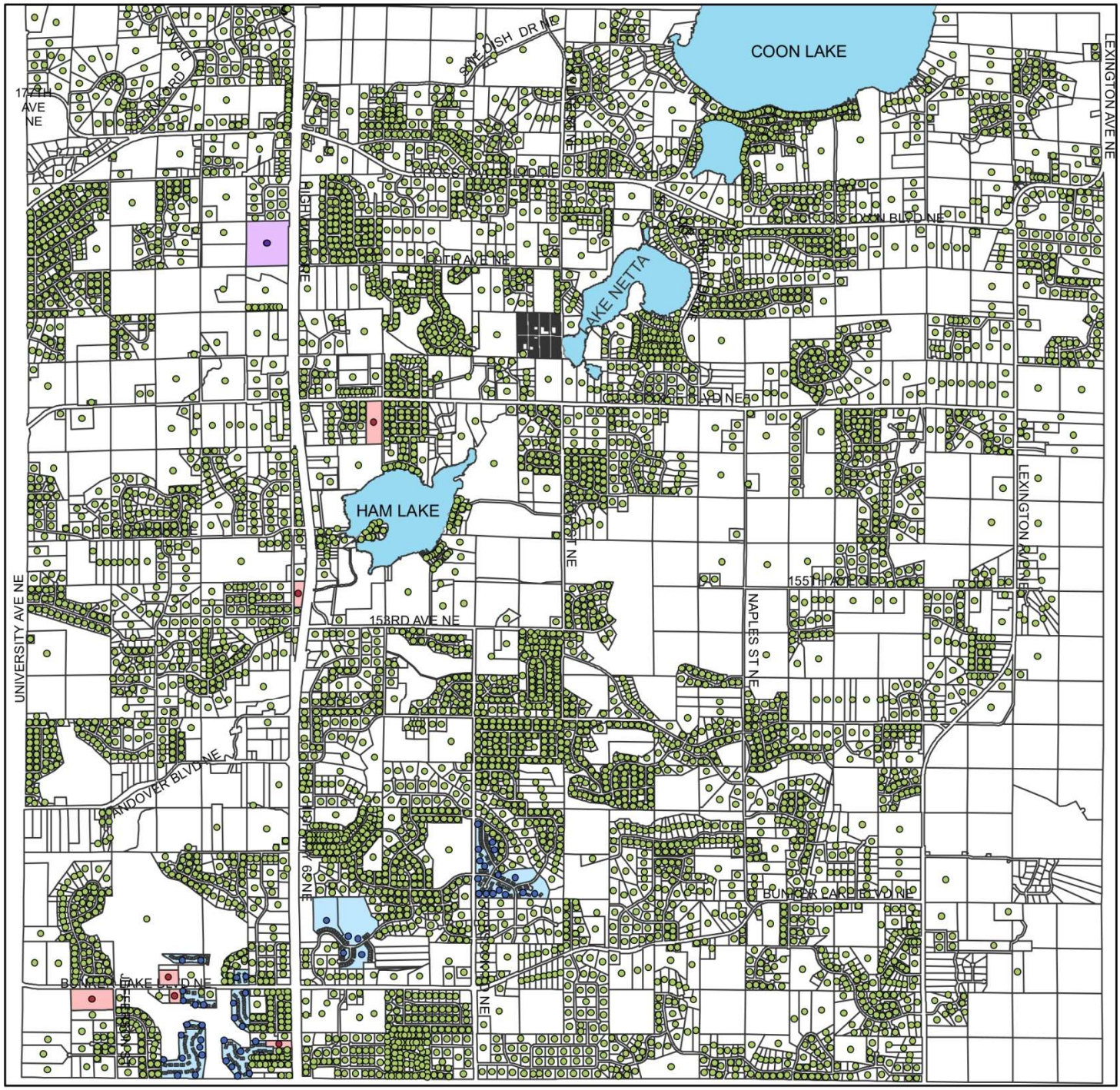
Source Data: SSTS, (ISTS) City of Ham Lake (April 2017), MCES
Map created by MCES.

City of Ham Lake's SSTS
- Compliant (Approx. 6,234 Systems)
- Non-Compliant (Approx. 21 Systems)
- City & Township Boundaries

- MCES Gravity Interceptor
- MCES Effluent Pipe

0 0.25 0.5 1 Miles

Figure 7.4 Existing Locations of Private Septic Treatment Systems



Legend

- Individual Septic System
- Central Sewage Treatment System
- Group Septic System
- Large Septic System
- Lakes
- Central Septic Service Area
- Group Septic Service Area
- Large Septic Service Area

0 2,500 5,000 10,000 Feet

MAP DATE: 6/1/2019

Sources:
City of Ham Lake
RFC Engineering, Inc.
Anoka County
Coon Creek Watershed District
Metropolitan Council

HAM LAKE, MINNESOTA

RFC Engineering, Inc.
Consulting Engineers

Executive Summary, Water Resource Management Related Agreements and Amendment Process

Following is a summary of the goals contained in the City's Surface Water Management Plan. For detailed goals and policies, please refer to the Local Surface Water Management Plan.

1. Minimize, to the greatest extent, the public expenditures necessary to control excessive volumes and rates of runoff.
2. Prevent flooding from surface water flows.
3. Maintain or improve the quality of water in lakes and streams located within or immediately downstream of the City.
4. Prevent erosion and sedimentation.
5. Protect wetlands in conformance with the requirements of the Wetland Conservation Act (WCA), or as amended.
6. Protect and enhance fish and wildlife habitat and water recreation.
7. Promote quality groundwater recharge.
8. Educate and inform the public on pertinent water resource management issues and increase public participation in water management activities.
9. Provide a mechanism through which City public and private ditch systems can be managed.

Amendment procedures to the City SWPPP are found in that document's Section IX Modifications to the SWPPP. The amendment procedures are consistent with the amendment procedures of the Coon Creek Watershed District and the Sunrise River and Upper Rum River Watershed Management Organizations.

The water resource management related agreements that have been entered into by the City includes joint powers agreements with Sunrise River Water Management Organization and the Upper Rum River Water Management Organization. More information is available for these and the Coon Creek Watershed District agreement in the SWPPP and the SWMP.

Coon Creek Watershed District has oversight in the majority of Ham Lake through their SWPPP and the Coon Creek Watershed District Ham Lake Management Plan (2017-2022). Refer to the Coon Creek Watershed District Comprehensive Plan 2013-2023 Appendix E Amendment Procedure for the process by which their agreement may be amended. The Anoka Conservation District partners with the City for technical assistance, educational workshops and conservation practices.

Shoreland Management is per the City's Shoreland Ordinance 92-35. The Zoning Officer is responsible for the administration and enforcement of this ordinance. Details are available in the SWPPP and the SWMP.

Physical Environment and Land Use

Descriptions of the physical environment (soils, surface waters and groundwater are in Environmental Resources - Chapter 3. Please refer to Chapter 3 for maps of drainage areas that includes path and flow directions of stormwater runoff and tabular data for volumes and rates of flow for those defined drainage areas. Descriptions of existing and future land use are in Land Use - Chapter 5.

Existing and Potential Water Resource-Related Problems

Some rural residences and commercial properties still make use of outdated and/or poorly maintained subsurface sewage treatment systems. These systems may have failing septic tanks, failing drain fields and/or sludge buildup. Tank deterioration or failure and drain field ponding can cause contamination of the area groundwater, lakes, streams and wetlands. Once failing systems have been reported to the City and to the Anoka County Public Health & Environmental Services, owners of the failing systems are required to bring their system into compliance with State statute.

The main environmental hazards in the City of Ham Lake are from non-point sources of pollution such as surface water runoff from agricultural, urban areas and construction areas. The surface water runoff from these areas can cause a degradation of water quality in lakes and wetlands due to overloading of sediment, nutrients, toxic chemicals and fecal coliform bacteria. Other potential water resource related problems include MPCA dump cleanup sites. There is additional information in the SWMP on these sites.

See a list of impaired waters and lakes on Table 7.1 Impaired Waters and the related mapped impaired waters on Figure 7.5 Impaired Waters.

Local Implementation Plan/Program

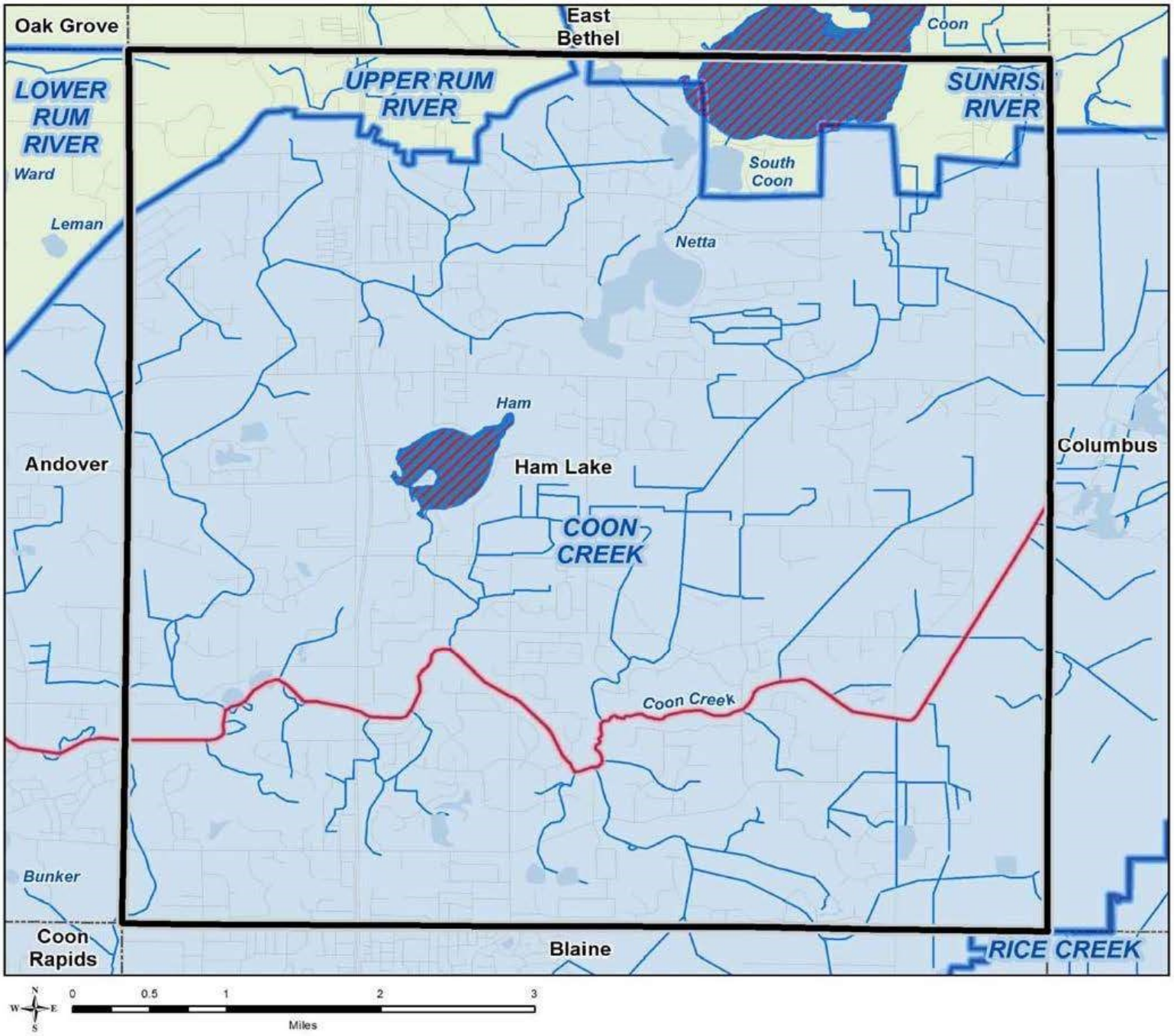
Existing and potential water resource-related problems are addressed on a case by case basis. The majority of the problems are addressed with reconstruction of adjacent streets. The City has utilized, and will continue to apply for, funding from the Coon Creek Watershed District Water Quality Cost Share Program. The City will also apply for applicable water quality grant funding thru both the Sunrise River and Upper Rum River Watershed Management Organizations.

All areas and elevations for stormwater storage have been designed to meet or exceed the requirements, performance standards and controls of the Coon Creek Watershed District and the MS4 General Permit. No changes are needed to official controls.

Table 7.1 Impaired Waters

Water Body Name	Year Added to List	AUID	Affected Designated Use	Pollutant or Stressor	TMDL Target Start/ Completion	EPA Category	Year TMDL Plan Ap-proved	Approved TMDL EPA ID#
Coon Creek	2006	07010206-530	Aquatic Life	Aquatic macro-inverte-brate bioassess-ments	Date to be determined/ Date to be determined	4A	2016	66382
Coon Creek	2014	07010206-530	Aquatic Recreation	Escherichia coli	Date to be determined/ Date to be determined	4A	2016	66382
Ham Lake	2008	02-0053-00	Aquatic Consump-tion	Mercury in fish tissue –Hg TMDL Region SW	Date to be determined/ Date to be determined	4A	2008	35500
Coon Lake*	2006	02-0042-00	Aquatic Consump-tion	Mercury in fish tissue-Hg TMDL Region SW	Date to be determined/ Date to be determined	4A	2008	35500

Figure 7.5 Impaired Waters



E. Water Supply Key Findings and Themes

Introduction

The City of Ham Lake does not own or operate a public water supply and distribution system. The community is served by individual, non-community public water supply or private wells.

Water System

Onsite wells serve residences, businesses and facilities within the City. The onsite wells serving single-family homes are private wells. The onsite wells serving public establishments are classified as non-community public water supply. Private and non-community water supply wells will continue to serve residences and businesses in the City. The soil and sub-soils in virtually all of the developed or developable areas are excellent filters and water quality in private wells is quite good.

All private wells shall be located, constructed and maintained in accordance with the Water Well Construction Code of the Minnesota Department of Health. The City requires all private wells to be located, constructed, maintained and sealed in accordance with the water well construction code of the Minnesota Department of Health.

Frequent and regular testing of wells is considered an important part of a policy which relies exclusively on private wells to supply water to commercial and private residence users. Anoka County's well testing program is a good resource for residents - (https://www.anokacounty.us/2009/Well-Water-Testing).

The City maintains a deep, high volume well in the municipal building complex, which was constructed to provide water for pumper trucks used by the City Fire Department. This well is at present used only for that purpose.

Consideration of Municipal Water Supply

During the planning process, a municipal water system was also considered along with a municipal sewer system in the northern area adjacent to East Bethel. The City Council rejected the idea of a municipal water system along with a sanitary sewer system. There is no plan to develop a public drinking water system in the City of Ham Lake in the 2040 planning period.

Water Supply Sources

Surface water features and their interaction with the regional groundwater system are provided in Figure 7.6 Surface Water and Groundwater Interaction. There are three types of regional screening of surface water by the Metropolitan Council in Ham Lake: Recharges aquifers, receives and discharges groundwater and supported by upwelling groundwater.

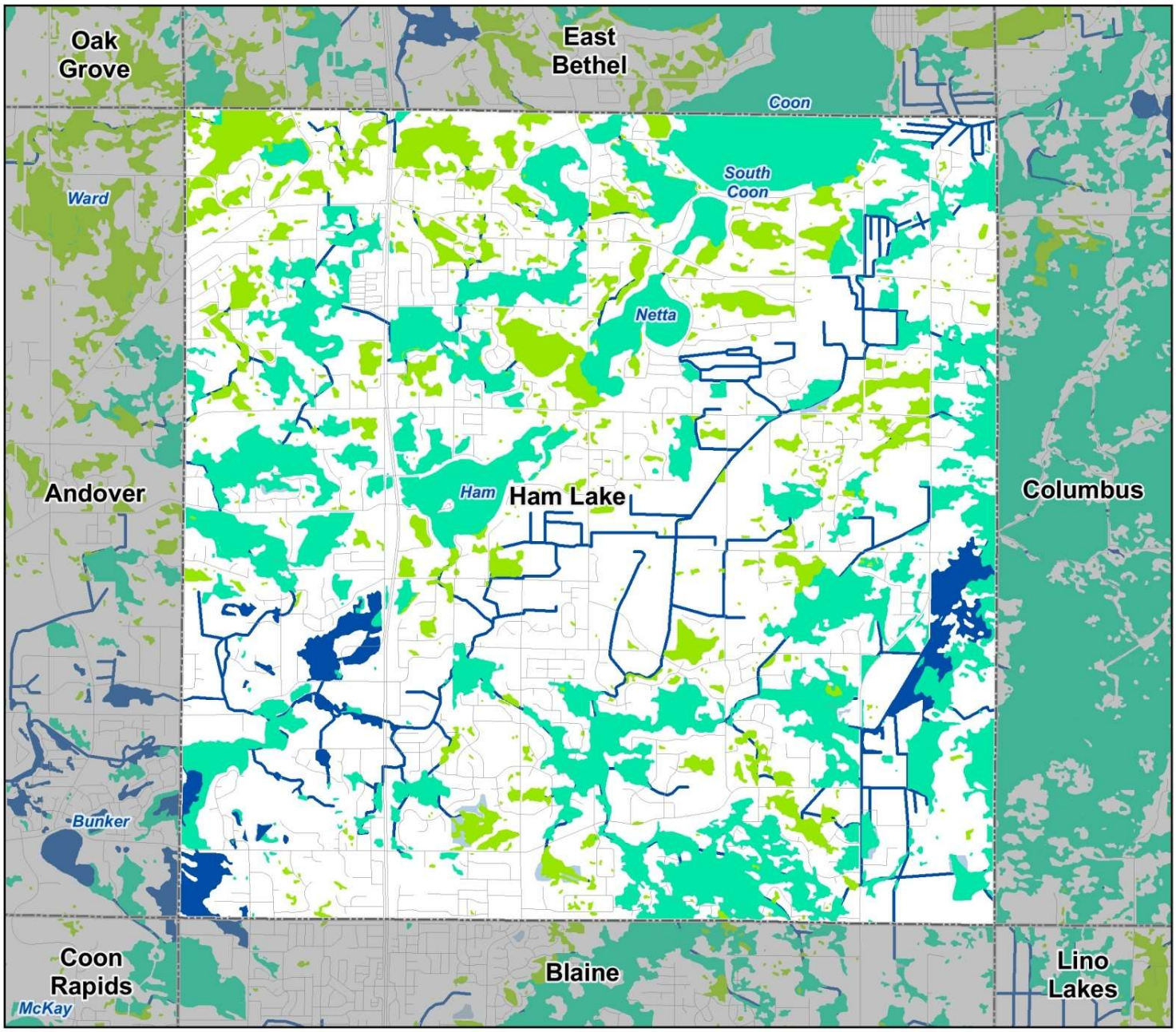
There are four primary aquifers found throughout Anoka County. These are, from shallowest to deepest, the glacial drift (surficial) aquifer, the Upper Tunnel City aquifer, the Wonewoc aquifer. The source water aquifers used for individual, non-community or private wells are hydrologically confined by clay and/or shale deposits.

The Anoka County resource of www.knowtheflow.us includes various grant opportunities that the owners of individual, non-community and private well owners can apply for. The web site includes information on how to protect drinking water wells and classes for educating well owners.

As shown on the Groundwater Monitoring and Aquifer Testing exhibit (Figure 7.7) there are no current groundwater monitoring or aquifer testing locations. The DNR did complete a groundwater study in 2015 and the results are in their 2016 Report - https://files.dnr.state.mn.us/waters/groundwater_section/mapping/cga/c27_anoka/report.pdf.

The City is within the Drinking Water Supply Management Area for Minneapolis/St. Paul as shown on Figure 7.8 Municipal Public Water Supply System Interconnections and Management Areas. There is one Drinking Water Supply Management Area (DWSMA) MN-00286 with low vulnerability that is shown in Figure 7.9 Drinking Water Supply Management Area-Low Vulnerability.

Figure 7.6 Surface Water and Groundwater Interaction



Karst Features (DNR)

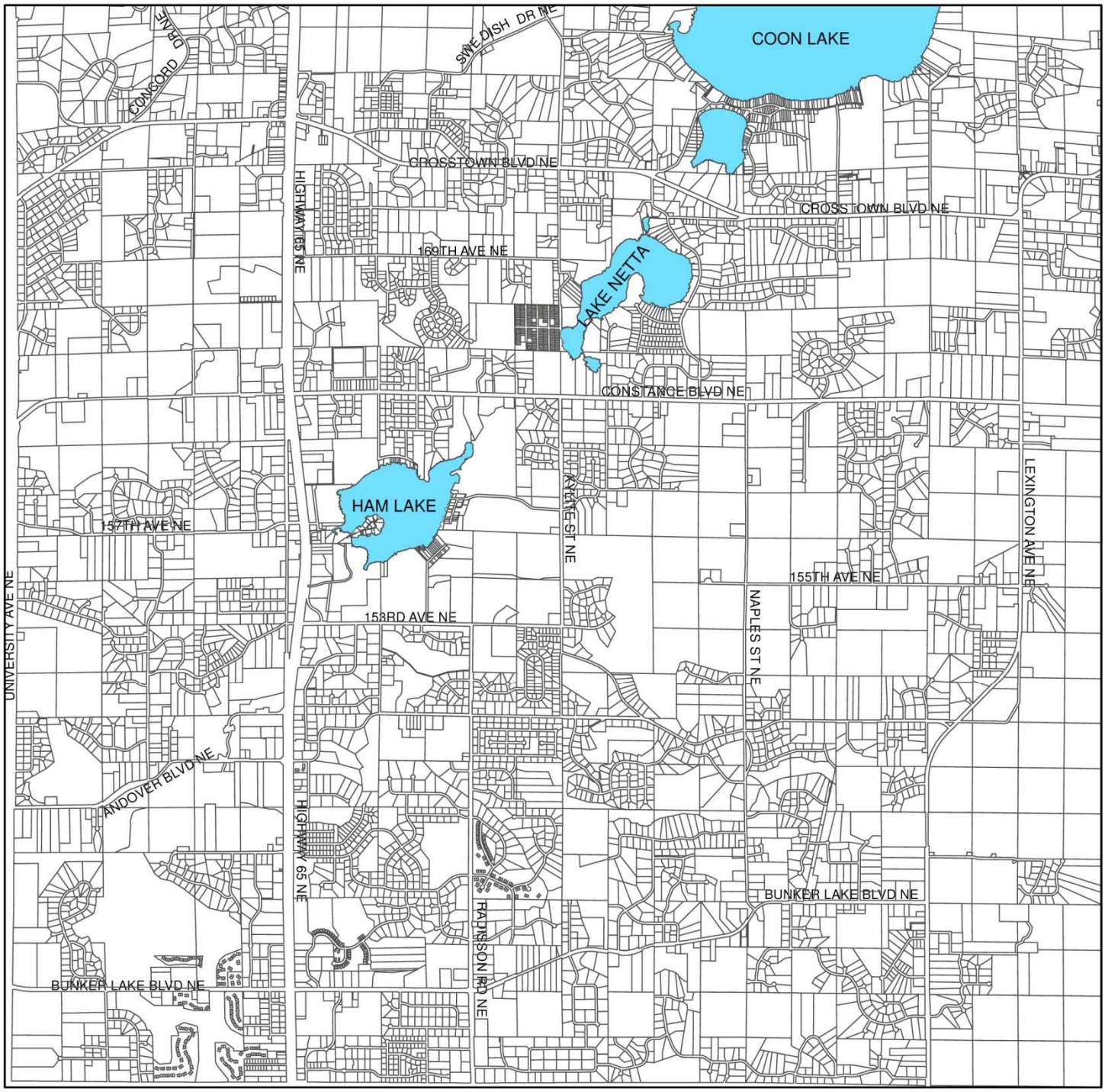
- Spring
- Sinkhole
- Calcareous Fens

Surface water type (regional screening by Met Council)

- Disconnected from the regional groundwater system
- Recharges aquifers
- Receives and discharges groundwater
- Supported by upwelling groundwater
- Trout Streams (DNR)

- County Boundaries
- City and Township Boundaries
- NCompass Street Centerlines
- Other Open Water Features

Figure 7.7 Groundwater Monitoring and Aquifer Testing



LEGEND

- Groundwater Monitoring and Aquifer Testing

Comprehensive Plan 2018 Update

0 2,500 5,000 10,000 Feet

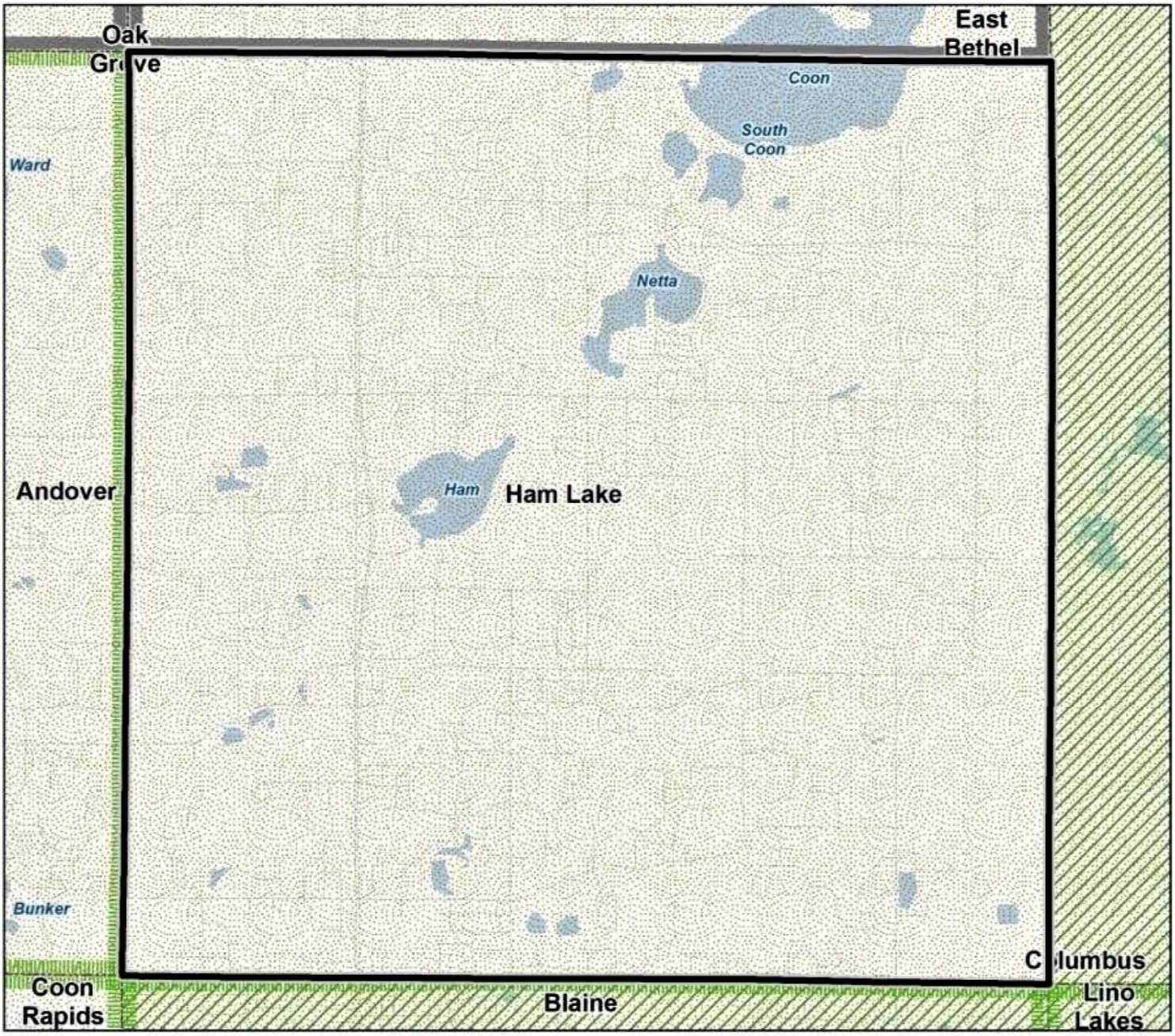
MAP DATE: 6/1/2019

N W E S

HAM LAKE, MINNESOTA

RFC Engineering, Inc. Consulting Engineers

Figure 7.8 Municipal Public Water Supply System Interconnections and Management Areas



Special Well and Boring Construction Areas (MDH)

The community's most recent local water supply plan reports that the public water supply system has no interconnections

The community's most recent local water supply plan reports that the public water supply system has one or more interconnections

North and East Metro Groundwater Management Area (DNR)

Drinking Water Supply Management Area for Minneapolis/St. Paul

Moderate to Highly Vulnerable Drinking Water Supply Management Areas (MDH)

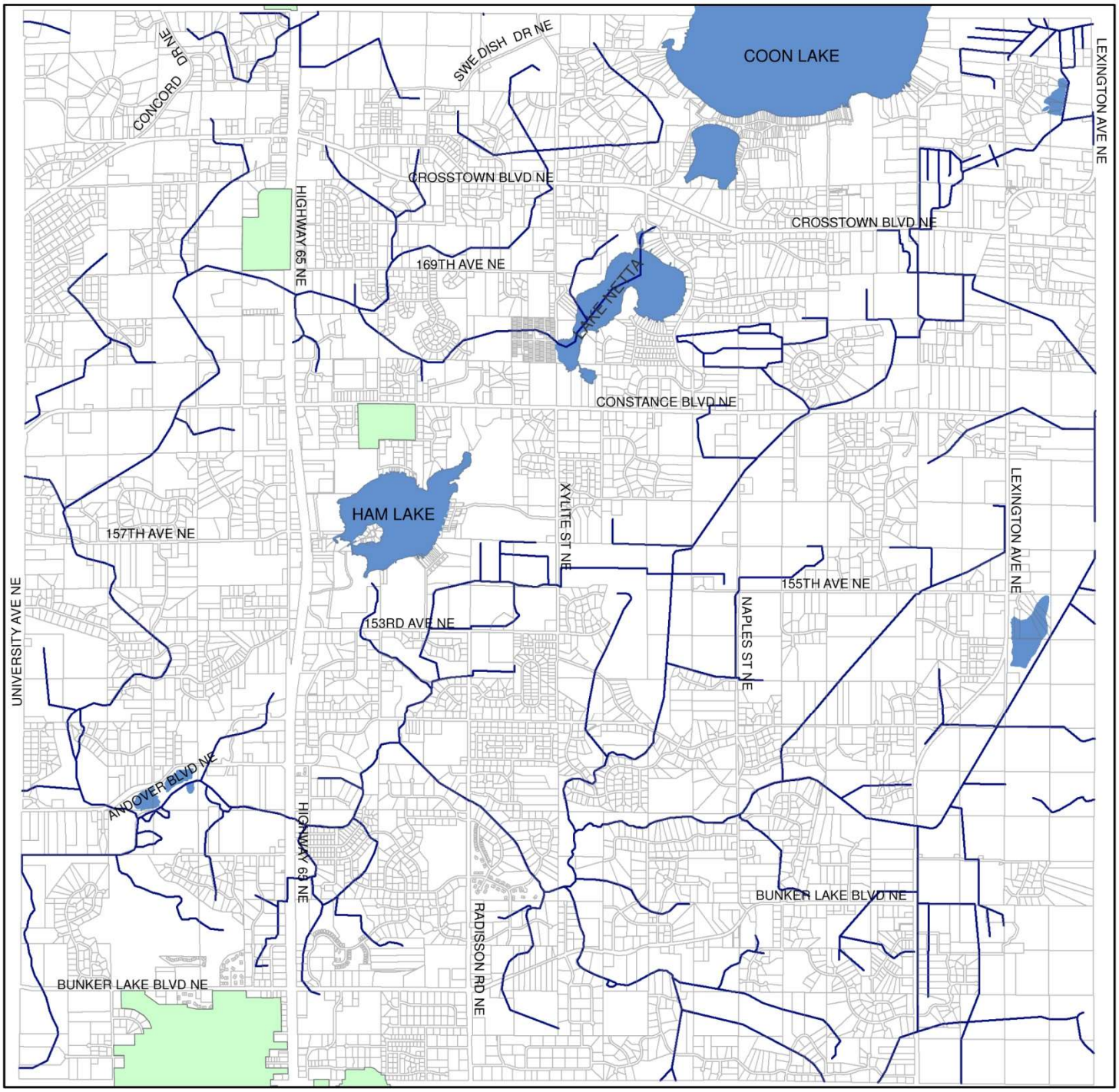
County Boundaries

City and Township Boundaries

Open Water Features

NCompass Street Centerlines

Figure 7.9 Drinking Water Supply Management Area



Comprehensive Plan 2018 Update

0 2,500 5,000 10,000 Feet

MAP DATE: 6/1/2019

Sources:
Minnesota Department of Health
City of Ham Lake
RFC Engineering, Inc.
Coon Creek Watershed District
Anoka County

HAM LAKE, MINNESOTA

Legend

- Low Vulnerability
- Streams and Ditches
- Ham Lake Parcels
- Lakes

RFC Engineering, Inc. Consulting Engineers

Parks, Trails & Open Space 8

Contents

Purpose

The purpose of this chapter is to summarize highlights from the 2013 Park and Tree Commission Master Plan and integrate regional trail components needed for regional planning purposes.

A. Overview

The City has 29 parks and a large golf course totaling 855 acres representing about 3.7 percent of the City. In addition, the northeasterly 40 acres of the Bunker Hills Regional Park is located in the southwest portion of the City. Bunker Hills Regional Park (www.anokacounty.us/721/Bunker-Hills-Regional-Park) is approximately 1,600 acres in size. Ham Lake also contains a large amount of private open space. The City has developed a portion of a comprehensive trail plan, which is designed to be multimodal for both pedestrians and bicyclists. Implementation of the trail system and future park improvements *is limited due to insufficient funding streams. The key challenge* will be to balance evolving City needs with funds available for implementation.

B. Goal

A goal is a policy statement that states a desired outcome in general terms. The following goal was established in the 2030 Comprehensive Plan and remains important to the City.

To align park and trail development needs with probable funding.

This goal is ongoing, thru the Park and Tree Commission recommendations on proposed residential development, thru construction and connection of trails within new development and construction of regional trails adjacent to Anoka County Highway Department County State Highway upgrades.

C. Key Findings and Themes

Information was compiled from the existing Thrive MSP 2040 Comprehensive Plan and the 2013 Park and Tree Commission Master Plan.

Park Land with limited Functionality

A number of parks that were acquired through the development process contain more wetland or low wet areas than dry upland, thus limiting their usefulness as recreational amenities. These parks provide attractive open space, but are not connected with other parks and trails. These areas require on- going maintenance by the City. With no clear function and an on-going cost responsibility, the long term value of these parcels to the City is open to question.

Large Regional Ball Fields

The City is a regional location for ball fields and area recreational leagues. The City maintains the large Lions Park multi-use facility near City Hall, as well as the large Ham Lake Park on the south shore of Ham Lake. The Soderville/Blaine Athletic Association (SBAA) manages recreation programs for City youth.

Private Facilities

A large privately owned recreational facility, the Majestic Oaks golf course, operates two championship 18-hole golf courses and a nine-hole short course. The Majestic Oaks golf course is open to the public.

Regional Indoor Facilities

The City does not maintain any indoor recreational facilities. However; the City operates two ice sheets in Ham Lake Park and a Frisbee golf course in Ham Lake Park. There are several publicly owned ice arenas nearby, in Blaine, Andover and East Bethel. Public lake accesses are maintained on Coon Lake, Ham Lake and Lake Netta by the Minnesota Department of Natural Resources. Nearby public schools also have indoor swimming facilities open to the public during certain hours. Although the City relies on outside sources to provide for indoor recreation, the City reciprocates in outdoor recreational activities. In cooperation with the City, the Soderville/Blaine Athletic Association serves several surrounding communities by providing league play on City maintained and operated ball fields. Approximately 1,500 children participate in these programs annually, with about 70 percent coming from surrounding cities. The City has no plans to construct indoor recreational facilities. Existing facilities in nearby communities are sufficient to meet the indoor recreational needs of the City's residents.

Open Space Legacy

The City contains a large amount of open space, much of it due to a "density transfer" policy employed during the 1990's. While no longer in effect, the policy encouraged developers to create permanent open space by allowing developers to include undeveloped land in the computation of density and the concentration of houses on smaller lots.

Focus on Centralized Multi-Use Facilities

Future park development policy is focused on developing larger multi-purpose facilities that serve the larger community. These facilities are more cost effective to maintain and serve more people. The City may consider new neighborhood parks where demand is justified, however, with the relatively low development density in the City, such facilities tend to serve relatively few residents and are costly to maintain.

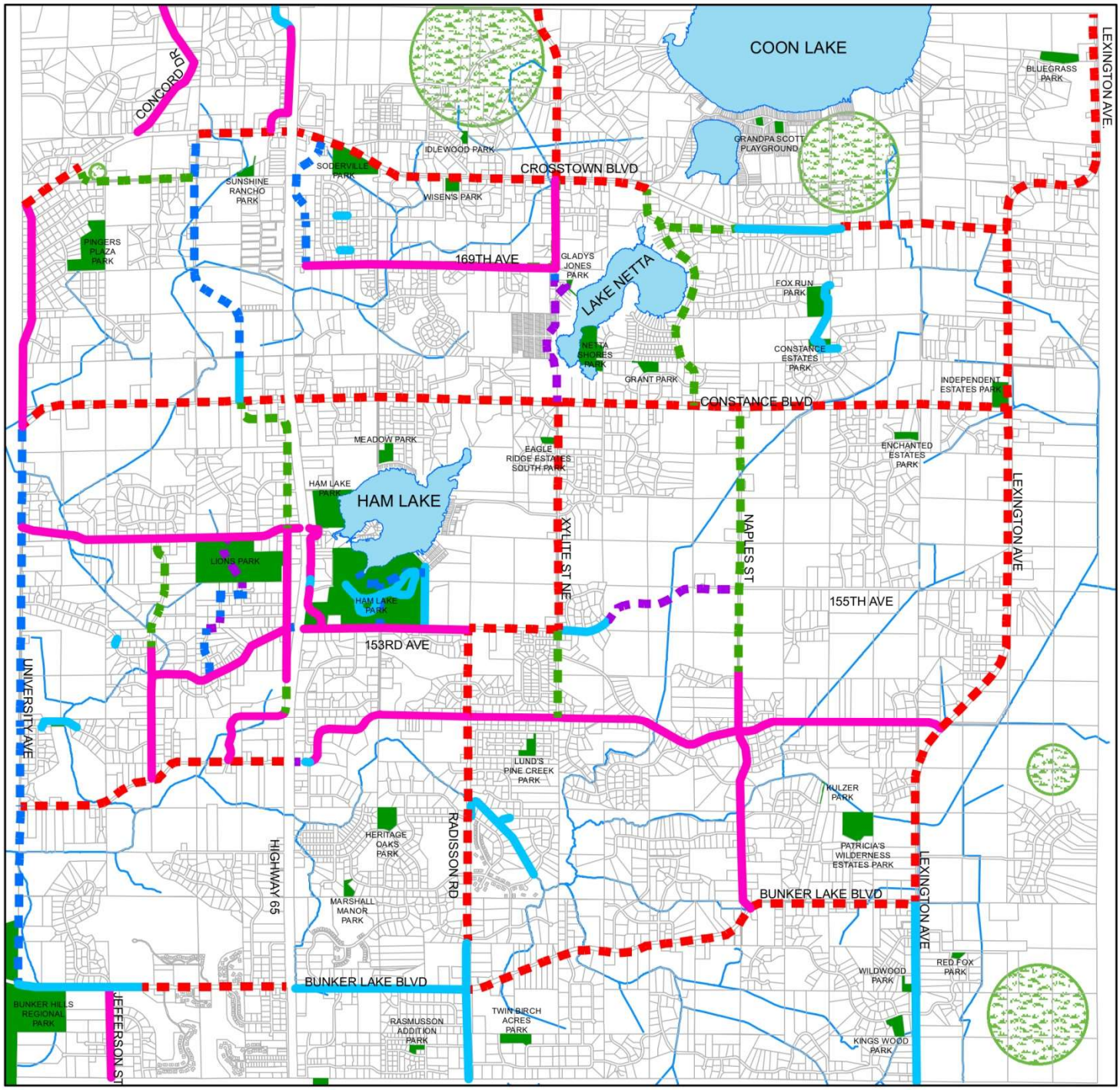
Facility Development and Funding

The current source of funding park and trail development is through the parkland dedication fee. The City currently requires that new developments contribute fees in lieu of land to fund park and trail development. The City also seeks out grants and aid from other government sources to fund land acquisition and facility development. The City will also continue to rely on private athletic associations, civic donations from groups such as the Ham Lake Chamber of Commerce, Soderville/Blaine Athletic Association and other charitable gifts to supplement revenue received from park dedication fees. The park dedication fees fund is solvent and there are no foreseeable concerns about implementing the City's trail system as well as meeting park development needs as identified in the 2013 Park and Tree Commission Master Plan. Maintenance of the system is funded through the City general fund, miscellaneous funds and user fees.

Pedestrian Facilities and Local Bike Trails

The Bicycle and Transportation Network (Figure 8.1) shows the location of existing and proposed bike lanes and paths. The bike paths are primarily constructed within to County right-of-way. The existing paths are ADA compliant and conforming to the 2007 Mn/DOT Bikeway Facility Design Manual. The existing bike lanes are constructed on some of the municipal state aid designated routes. Those lanes constructed since 2007 are compliant with the 2007 Mn/DOT Bikeway Facility Design Manual. The Anoka County Highway Department does not encourage pedestrians and bikers on their paved shoulders. The shoulder width is not consistent adjacent to turn lanes.

Figure 8.1 Bicycle Transportation Network



Legend

- Existing Bike Lane
- Existing Bike Path
- Proposed County Bike Path
- Proposed Bike Lane/Path
- Proposed Bike Lane
- Proposed Bike Path
- Lakes
- Streams and Ditches
- Potential Future Park
- Existing Park

0 2,500 5,000 10,000 Feet

MAP DATE: 6/1/2019

Sources:
City of Ham Lake
RFC Engineering, Inc.
Anoka County
Coon Creek Watershed District
Metropolitan Council

HAM LAKE, MINNESOTA

RFC Engineering, Inc. Consulting Engineers

Future Regional Trails

Two regional trails are planned in Ham Lake. Both trails will be planned by Anoka County with construction costs shared by the County and City. The "East Anoka County Regional Trail" will connect Rice Creek Chain of Lakes Park Reserve on the south with Martin Island-Linwood Lakes Regional Park in the northeast part of Anoka County. The trail will generally run along the east side of Lexington Avenue. The "Central Anoka County Regional Trail" is an east-west trail that will connect Bunker Hills Regional Park on the west with the East Anoka County trail on the east side of the City. It will run along Bunker Lake Boulevard and will be constructed at the time of road improvements made by the County (Figure 8.1).

D. Objectives and Strategies

The objectives and strategies identified below are broad statements regarding the motivation and intent of this Plan. The strategies that follow individual objectives are specific items that promote attainment of the objective. Strategies may be a program, regulation or a project.

Objective 1: Align park & trail development plans with available funding.

P 1.1 Re-examine local park and trail development needs with an eye on probable funding amounts and sources.

P 1.2 Explore new funding sources.

P 1.3 Implement recommendations of the 2013 Park & Tree Commission Master Plan with key focus on securing funding for top priorities.

Objective 2: Cooperate with adjacent jurisdictions and Anoka County to coordinate and implement park, trail and recreational needs of area residents.

P 2.1 Cooperate with Anoka County in the planning and development of regional bike trail facilities through Ham Lake.

P 2.2 Continue cooperation with athletic associations to make City facilities available to regional leagues.

Objective 3: Develop a system of priorities for improving parks and trails.

P 3.1 Implement the 2018-2022 Capital Improvement and Equipment Replacement Plan for parks and trails.

Housing 9

Contents

Purpose

The purpose of this Housing Chapter is to address how the community can maintain its inventory of high quality single family housing stock and increase the quality and quantity of affordable housing.

A. Overview

Ham Lake is widely recognized for its high quality and attractive single family housing stock. Much of the City's housing is located in attractive large lot neighborhoods integrated into a wooded, wetland landscape. The City also contains older single family housing stock as well as apartments and mobile homes that offer an affordable variety of housing. The affordability of the existing housing stock could be addressed by the City with community land trust homeownership models, working with property managers to accept Section 8 vouchers and committing to making effective referrals to residents in need of financial assistance.

B. Goal

A goal is a policy statement that states a desired outcome in general terms. The following housing goal was established in the 2020 Blueprint for Growth Comprehensive Plan. The goal remains important to the City.

Maintain a variety of housing choices.

This goal is ongoing, and is completed with the review of proposed residential development plans. Examples are consideration of expanding senior housing and the expansion of the mobile home park.

C. Key Findings and Themes

Housing information was compiled from a variety of sources including the existing Thrive MSP 2040 Plan as well as data from the census. Table 9.1 Existing Local Housing Conditions provides 2015 data obtained from the February 2017 Metropolitan Council's "Existing Housing Assessment".

Single Family, Rentals and Owner Occupied

The City's housing stock is dominated by single family homes. According to the 2010 U.S. Census, approximately 94 percent of the City's housing is owner occupied including nearly all mobile home units.

Single family units represent nearly 86 percent of the City's housing. The remaining units are comprised of 295 mobile homes in the Flamingo Terrace Mobile Home Park, 50 rental units in the Willows (senior rental), 50 rental units in Majestic Greens and 50 units in the Ham Lake apartments. There are also 272 townhomes distributed among twelve subdivisions in the City.

Table 9.1 Existing Local Housing Conditions	
Housing Types	Units
Total Number of Housing Units	5,768
Number of Housing Units:	
Units affordable to households with Incomes at or below 30% AMI	287
Units affordable to households with Incomes between 31% and 50% AMI	215
Units addordable to households with Incomes between 51% and 80% AMI	2,161
Number of Owner-Occupied Housing Units	5,188
Number of Rental Housing Units	452
Number of Single Family Homes	5,251
Number of Multi-Family Homes	222
Number of Manufactured Homes	295
Number of Publicly Subsidized Housing Units	
Senior	0
Housing for People with Disabilities	0
Other	0

The Metropolitan Council projects that there will be 7,100 housing units in the City by 2040, thus the City is likely to add over 1,300 housing units by 2040. Most of these will continue to be single family housing units.

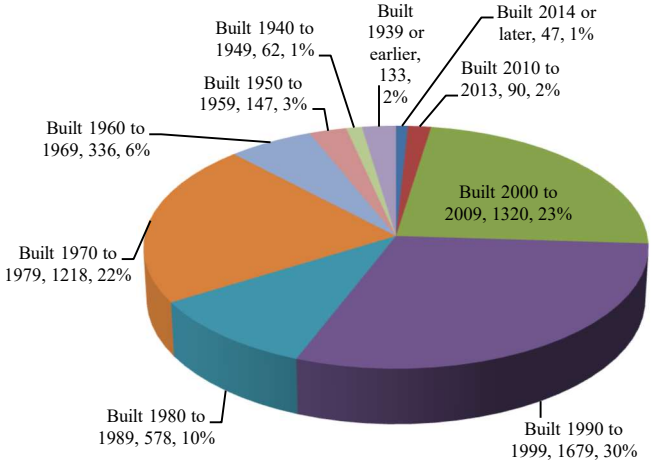
Landscape and SSTS Limit Opportunity for Multiple-Family Housing.

Widely dispersed wetlands, poor soils and lack of a centralized sewer system limit opportunities for building multiple-family housing. There is land in the Crosstown Boulevard area that would be appropriate for future development due to its proximity to commercial services and the transportation system, two important issues for siting multiple family housing.

Young Housing Stock

The City's housing stock is relatively new and in very good condition. The years 1970-1979 and 1990 through 2004 were significant for housing construction. 87 percent of the City's housing stock has been constructed since 1970 (Figure 9.1).

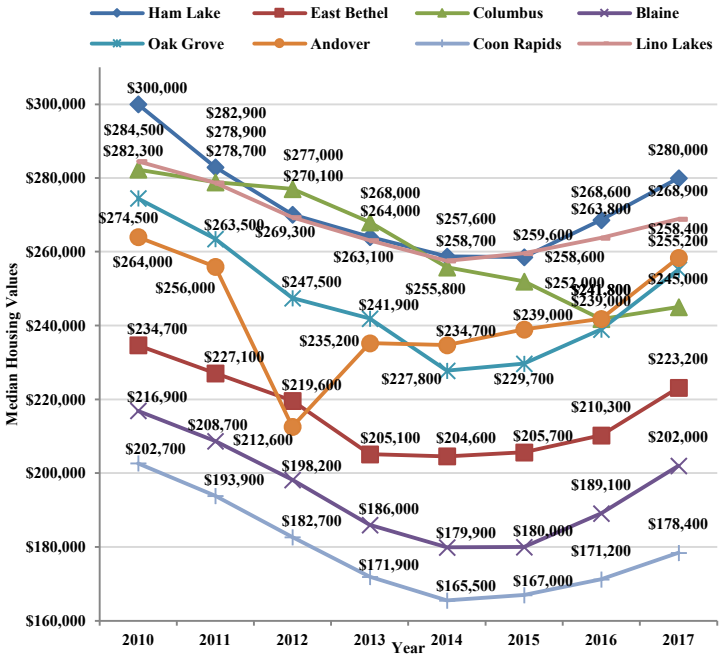
Figure 9.1
Ham Lake Housing Structures: Year Built
Source: 2010 U.S. Census & 2006-2017 American Community Surveys



High Housing Values

Median housing values were significantly higher in Ham Lake in 2010 compared to other north metro communities (Figure 9.2); however, by 2015 had narrowed to about the same range in values as Columbus and Lino Lakes. From 2010 to 2015, Ham Lake enjoys being within the top two positions for medium housing values due to the larger lots, abundant natural amenities and relatively young housing stock. Median housing values decreased for Ham Lake and surrounding communities from 2010 to between 2012 and 2014 due to unfavorable national economic conditions before changing to an increasing value trend.

Figure 9.2
Median Housing Values: Ham Lake & Surrounding Communities
Source: U.S. Census, American Community Surveys 2008-2017 & Metropolitan Council



Senior Housing

In 1995, Anoka County formed a Housing and Redevelopment Authority (HRA). The Anoka County HRA is responsible for the administration of federal, state and Anoka County programs. The City, operating with the Anoka County HRA under a joint powers agreement, developed the Willows in 1996-1997, a 50-unit senior housing facility with modest rents. The facility is fully occupied. The City's annual HRA levy is dedicated to either supplement the Willows revenue, or to be used in other City/HRA projects. Demographic trends nationally and in Ham Lake show an aging population. The Majestic Greens project also contains 50 units of market rate senior rentals. The planning process, which included the Preliminary Demand Estimate for Market Rate Active Adult Senior Housing in Ham Lake, identified that additional senior housing was needed to house the City's aging population.

Affordable Housing

The City acknowledges that it needs to provide a share of the region's need for low and moderate income housing. In this regard, housing units available to low and moderate income families include the 295 units in the Flamingo Terrace facility and the 50 units in the Ham Lake Apartments. Together, these units represent 6.0 percent of the City's current housing stock.

The Flamingo Terrace facility has been a well- managed facility for over forty years. The Ham Lake Apartments has undergone several ownership changes. Both the Flamingo Terrace and the Ham Lake Apartments do provide a needed source of temporary housing for low income families. The Ham Lake Apartments also supports families suffering temporary financial distress, and are often used for placement of such families by local social service agencies. There remains a strong desire to add more affordable housing to the City's housing stock.

Housing Affordability Definition and Status for Ham Lake

Housing is considered affordable when it costs no more than 30 percent of a household's income. The U.S. Department of Housing and Urban Development defines 30 percent of gross income as the maximum that households can pay in housing costs (mortgage payment, or rent plus utilities), without creating an excessive housing cost burden. The 30 percent threshold is generally used as the base measure of housing affordability, i.e., housing that requires more than 30 percent of income is considered to be "unaffordable." According to the 2010 U.S. Census for Ham Lake, 29 percent of the owner-occupied households and 48 percent of renter-occupied households were paying 30 percent or more of their income for housing in 2010 (Figures 9.3 and 9.4).

Figure 9.3
Housing Costs for Owners in 2010
Source: U.S. Census, American Community Survey

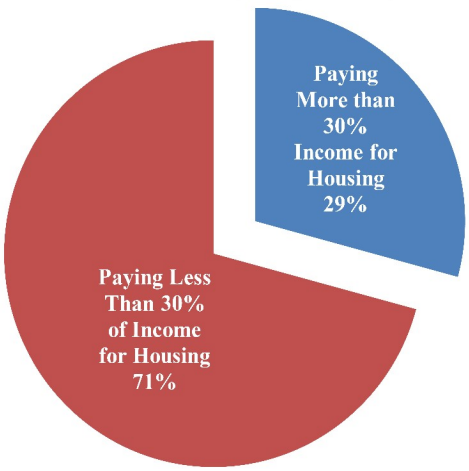


Figure 9.4
Housing Costs for Renters in 2010
Source: U.S. Census, American Community Survey

Housing cost burden refers to households whose housing costs are at least 30% of their income. The following table shows the number of housing units that have been adjusted to 30% Area Median Income (AMI).

Housing Cost Burdened Households:

Household Income Range:	
Income at or below 30% of AMI	162
Income 31% to 50% of AMI	101
Income 51% to 80% of AMI	199

Source: U.S. Department of Housing and Urban Development, 2010-2014 Comprehensive Housing Affordability Strategy (CHAS) data, with counts adjusted by Metropolitan Council to better match the Metropolitan Council 2016 household estimates.

Figure 9.5 is a map of owner-occupied housing units that identifies assessed housing values of above and $243,500.

Affordable Housing Programs

The City of Ham Lake does not have an allocation of affordable housing for 2040 because the City is not planning on having sewer-serviced homes. Because of this, high-density homes are either impractical or would require private treatment systems similar to that provided by the Flamingo Terrace facility to accommodate the higher residential density. However, the City of Ham Lake does support the preservation of its manufactured home communities.

Ham Lake does not offer housing assistance programs. Federal and state programs are available in the City, and other private, non-profit programs are also available. The City works to cooperate with housing providers so as to facilitate affordable housing and to preserve affordable housing stock.

Housing Assistance Programs include:

- Community Development Agency (CDA)
- Community Development Block Grants
- Livable Communities Act Grants (LCA)
- Section 8 Existing Housing Program
- Two Rivers Community Land Trust
- USDA Rural Development
- Veterans Administration

Currently, the City of Ham Lake does not plan to evaluate its zoning and subdivision ordinances for barriers to less expensive housing developments.

Existing Housing Needs

Market needs, character and housing quality are important considerations for housing growth in Ham Lake. Based on data compiled throughout the Comprehensive Planning process, The City of Ham Lake has identified two goals to address housing needs for today and the housing needs for 2040.

Goal One: Maintain a variety of housing choices through maintenance of existing inventory of high-quality single-family housing stock.

Goal Two: Adding a variety of additional housing stock through approval of new residential developments.

D. Objectives and Strategies

The objectives and strategies identified below are broad statements regarding the motivation and intent of this Plan. The strategies that follow individual objectives are specific items that promote attainment of the objective. Strategies may be a program, regulation or a project.

Objective 1: Continue collaboration with housing agencies to increase the quantity and quality of housing choices.

H 1.1 Work with the Anoka County HRA to develop a future senior housing project, with modest rent, directly adjacent to the existing Willows senior housing complex.

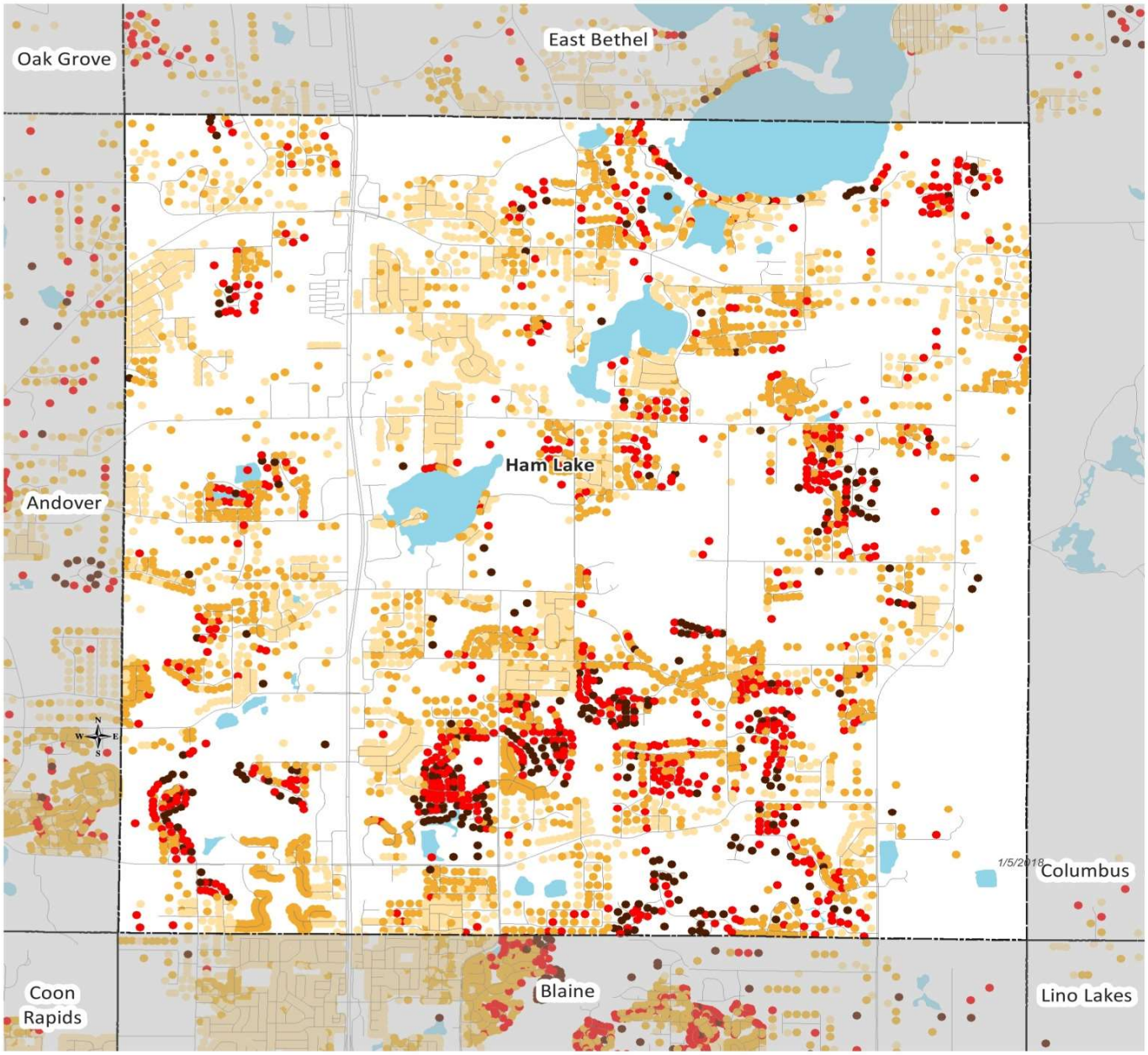
H 1.2 Explore funding sources to rehabilitate the Ham Lake Apartments in partnership with Anoka County Community Action Program and other agencies.

H 1.3 Work with the Anoka County Community Action Program for helping disadvantaged individuals out of poverty and into the community as productive citizens and work with the Program for offering educational opportunities, information and referral, and direct services, such as Head Start, Affordable Housing, and Child Care Aware of MN, Metro.

Figure 9.5

Owner-Occupied Housing by Estimated Market Value

Ham Lake



County Boundaries

City and Township Boundaries

Streets

Lakes and Rivers

Owner-Occupied Housing Estimated Market Value, 2016

- $243,500 or Less
- $243,501 to $350,000
- $350,001 to $450,000
- Over $450,000

1 in = 0.96 miles

Source: MetroGIS Regional Parcel Dataset, 2016 estimated market values for taxes payable in 2017.

Note: Estimated Market Value includes only homesteaded units with a building on the parcel.

Implementation 10

Contents

Purpose

Most chapters of this Plan indicate what the City of Ham Lake intends to do. This Chapter tells how the City intends to do it. This Chapter describes the official controls and public programs that ensure implementation of the Comprehensive Plan and protection of public infrastructure.

A. Overview

The City of Ham Lake intends to utilize an implementation program consisting of official controls, fiscal devices and other specific actions to be undertaken in stated sequence to implement the Comprehensive Plan and ensure conformity with metropolitan system plans.

B. Official Controls

Official controls include all relevant ordinances and regulations that ensure protection of the implementation of the Comprehensive Plan. Official controls are required to guide zoning, subdivision and private water supply and sewer systems.

The City of Ham Lake will not adopt any new official controls that conflict with the Comprehensive Plan and will not permit activity that may conflict with the Metropolitan System Policy Plans.

Ordinances

Currently, the City of Ham Lake has a set of ordinances designed to implement the City's Comprehensive Plans and future goals. These include Zoning and Subdivision Ordinances generally. More specifically, the City has adopted ordinances regulating septic systems, allowing for Planned Unit Developments, tree protection, shoreland protection, surface water management and other related planning goals. The City will continue to proactively monitor their ordinances to ensure the planning goals are being adequately met.

Zoning

In order to adequately implement the Comprehensive Plan, the City of Ham Lake has established the following zoning classifications, in Article 9 of the City Code which are represented on the Zoning Map (Figure 10.1):

- **Rural Single Family Residential (R-A)** – This district is intended for residential dwellings occupied by a single housekeeping unit generally in unplatted areas. Agricultural uses including sod farming, horticulture and maintaining animals as well as institutional uses are also permitted. The minimum density is one unit per acre.

- **Single Family Residential (R-1)** – This district is intended for residential dwellings occupied by a single housekeeping unit in platted areas. Institutional uses are also permitted. Density is 1 unit per acre at most.

- **Multi Family Residential (R-2)** – This district is intended for multiple family residential uses. The density includes lots that are 3 acres or more for two unit buildings; four acres or more for three unit buildings; five acres or more for four unit buildings. For buildings having more than four units, five acres plus one acre for every unit in excess of four units.

- **Residential Affordable Housing (R-AH)** – R-AH districts are areas for the creation of multiple-family apartment buildings targeted for occupancy by persons aged 55 or older or having low or moderate income, as those terms are defined by the City Council. Density is must be sufficient to support on-site sewer systems and is determined on a case by case basis.

- **Residential – Manufactured Mobile Home (R-M)** – This district is intended for privately owned residential communities consisting of manufactured mobile homes, each of which is intended for occupancy by a single housekeeping unit. Density is 7.2 units per acre.

- **Shoreland Residential – General Development (RS-1)** – This district is intended for residential dwellings located within the 1000 foot shore impact zone of Coon Lake and Little (or South) Coon Lake, which are designated "general development" lakes by the Shoreland Overlay Zone. Density is 1 unit per acre.

- **Shoreland Residential – Recreational Development (RS-2)** – This district is intended for residential dwellings located within the 1,000 foot shore impact zone of Ham Lake and Lake Netta, which are designated "recreational development" lakes by the Shoreland Overlay Zone. Density is one unit per acre.

- **Commercial Development 1 (CD-1)** – This zone is for general commercial uses and light industrial uses along major transportation corridors with high visibility. A high level of aesthetic standards is associated with this district. Minimum lot size is one acre.

- **Commercial Development 2 (CD-2)** – This zone is for general commercial uses and light industrial uses along major transportation corridors with less visibility. Aesthetic standards are not as high as the CD-1 District. Minimum lot size is one acre.

- **Commercial Development 3 (CD-3)** – This zone is for convenience commercial uses that serve local needs. Minimum lot size is one acre.

- **Commercial Development 4 (CD-4)** – Areas in this zone are located outside of the Trunk Highway 65 corridor and are used for commercial and light industrial activity which do not generate significant customer parking or traffic. Minimum lot size is one acre.

- **Commercial Development 5 (CD-5)** – The City designated these areas as Multiple Use Options areas with Ordinance No. 07-19. CD-5 lands will often be found near existing residential areas or areas expected to develop into residential land uses. The permitted uses: Medical/Dental Clinics or Facilities, Governmental, business and professional offices, Parks, Financial institutions, Veterinary clinics. Conditional uses are permitted.

- **Industrial Park (I-P)** – This district serves general industrial and limited office uses associated with industrial activity. Minimum lot size is one acre.

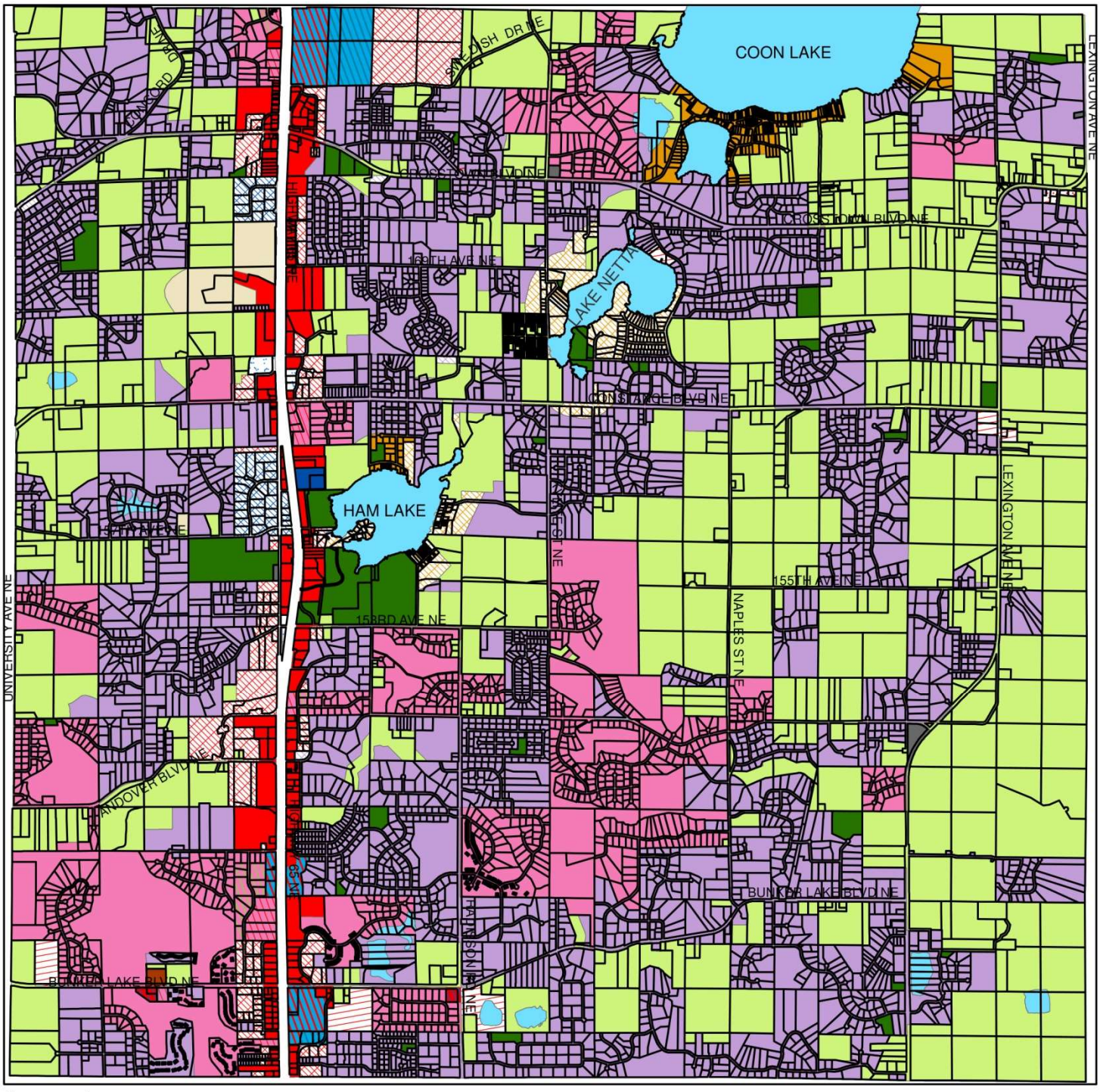
- **Light Industrial (I-1)** – This district serves general uses involving frequent truck traffic and which require a significant portion of the manufacturing process to occur outside of enclosed buildings. Minimum lot size is one acre.

- **Government Facilities (GF)** – This zone provides land for the functioning of governmental services. Minimum lot size is one acre.

- **Planned Unit Development (PUD)** – A PUD district provides land for single family housing along with a second active land use of a non-residential nature, or a non-single family residential use such as townhomes or affordable housing. Density is 1 unit per acre for residential uses and the minimum lot size is one acre.

- **Transition Zones** – Transition zones for CD-1 and CD-2 parcels are per Article 9-500 of City Code. The City recognizes that there are numerous large (and/or adjacent smaller) under-utilized commercial or commercial-eligible parcels in the Trunk Highway 65 Corridor that have not obtained their highest and best commercial usages. Some of these parcels were formerly occupied by businesses, some are currently occupied by businesses, some are vacant, and some are or were in agricultural use. Such parcels, if required to strictly observe the requirements of CD-1 and CD-2 zoning, will remain vacant and/or under-utilized indefinitely. It is the purpose of this Article 9500 to identify such parcels and permit a more liberal usage of Conditional Use Permit activity thereon, to promote increased commerce, tax base and employment.

Figure 10.1 Zoning Map



Legend

- R-A Rural Single Family Residential
- Transition Zone - CD-1 Underlying Use
- Transition Zone - CD-2 Underlying Use
- R-1 Single Family Residential
- R-2 Multiple Family Residential
- R-AH Residential-Affordable Housing
- R-M Residential/Manufactured Mobile Homes
- RS-1 General Shoreland Residential
- RS-2 Recreational Shoreland Residential
- CD-1 Commercial Development Tier 1
- CD-2 Commercial Development Tier 2
- CD-3 Commercial Development Tier 3
- CD-4 Commercial Development Tier 4
- G-F Government Facilities
- I-1 Light Industry
- I-P Industrial Park
- PUD Planned Unit Development
- PUD - CD-1 Underlying Use
- PUD - CD-2 Underlying Use
- PUD - CD-3 Underlying Use
- PUD - R-AH Underlying Use
- TOD Traditional Use Overlay Districts
- Park

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HAM LAKE, MINNESOTA

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C. Capital Improvement Plan

The City updates its five-year Capital Improvement Program (CIP) every year. The CIP shows how the City will support and implement the timing and financing of public improvements necessary for the municipality's planned growth. The CIP (included in Appendices A and B) address the following key areas for implementation of the Comprehensive Plan:

- Streets and Bridges
- Parks and open space facilities

All Streets and Bridges costs are funded thru the Revolving Street Fund and State-Aid funds. All parks and open space facilities costs are funded thru the Park and Tree Fund.

D. Implementation Steps

Zoning and Subdivision Regulations

- Review the zoning and subdivision regulations generally for consistency with the Comprehensive Plan.

- Establish standards for developing around sod field areas. Standards are to address soil suitability, excavation, site design, wetland restoration and trail development.

- Revise the Zoning Map for consistency with the Future Land Use Map.

Waste Water Treatment

- Initiate a process to facilitate resolution of failing septic systems.

Park & Trail Development

- Continue using residential development parkland dedication fees for park and trail development and improvements.

- Administer the Capital Improvement and Equipment Replacement Plan (Park and Beach Land Fund).

Appendix A

CITY OF HAM LAKE STREET AND BRIDGE CAPITAL IMPROVEMENT PROJECTS

2020

- Emerald Forest overlay (’02 construction)
- Knollwood Estates overlay (’00 construction)
- Marshall Manor overlay (’01 reconstruction)
- Marshall Manor 2nd Addition overlay (’01 reconstruction)
- Marshall Manor 3rd Addition overlay (’01 reconstruction)
- MSA 136th Lane overlay from West frontage road to Johnson Street (’01 construction)
- MSA 155th Avenue **construction** from Naples Street to Lexington Avenue
- MSA Aberdeen Street **construction** from 144th Avenue to 145th Avenue
- MSA Johnson Street overlay from 136th Lane to Bunker Lake Boulevard (’01 construction)
- Twin Birch Acres **reconstruction** (’79 construction, ’98 overlay)

2021

- Aberdeen Street from Baltimore Street to Fox Tail Ridge (’03 construction)
- Concord Woods overlay (’02 construction)
- Fox Tail Ridge (’99 construction)
- Livgard Addition overlay (’00 construction)
- Lund’s Lake View Forest **reconstruction** (’96 overlay)
- Trails End Shores overlay (’00 construction)
- MSA 173rd Avenue overlay from Polk Street to 1,337 feet west (’01 construction)
- MSA 181st Avenue overlay from 890 feet west of to 450 feet east of Highway 65 (’01 construction)
- MSA 181st Avenue **reconstruction** from Concord Drive to 890 feet W of Highway 65 (’92 construction)
- MSA Jackson Street **construction** from 0.16 miles N of McKay Drive to 0.06 miles S of 154th Avenue
- MSA Polk Street overlay from Crosstown Boulevard to 173rd Avenue (’01 construction)

2022

- Braastad Farms overlay (’02 construction)
- Larson’s Heritage Oaks 3rd Addition overlay (’02 construction)
- Larson’s Heritage Oaks 4th Addition overlay (’02 construction)
- Larson’s Heritage Oaks 5th Addition overlay (’02 construction)
- Larson’s Heritage Oaks 6th Addition overlay (’02 construction)
- Meadow Park North **reconstruction** (’99 overlay/reconstruction)
- Prairie Creek (’02 construction)
- Radisson Meadows overlay (’02 construction)
- White Oak Ridge overlay (’02 construction)

2023

- Clayton Park Estates overlay (’03 construction)
- Cottages of Heritage Oaks overlay (’03 construction)
- Deer Haven Hills 2nd Addition overlay (’03 construction)
- Deer Haven Hills 3rd Addition overlay (’03 construction)
- Eagle Ridge Estates South overlay (’03 construction)
- Highland Bluffs overlay (’03 construction)
- Highland Bluffs 2nd Addition overlay (’03 construction)

CITY OF HAM LAKE STREET AND BRIDGE CAPITAL IMPROVEMENT PROJECTS

2023 (continued)

- Idlewood 3rd Addition and 175th Lane W of Swedish Drive **reconstruction** ('99 recon/overlay)
- Landborg Industrial Park overly ('03 construction)
- Larson's Heritage Oaks West overlay ('03 construction)
- Lever Street from 173rd Avenue to 177th Avenue overlay ('03 construction)
- Nottingham Forest overlay ('03 construction)
- Royal Woods overlay ('03 construction)
- Woodland Bluffs overlay ('03 construction)
- Woodland Bluffs 2nd Addition overlay ('03 construction)
- Woodland Bluffs 3rd Addition overlay ('03 construction)
- MSA Hastings Street overlay ('03 construction)

2024

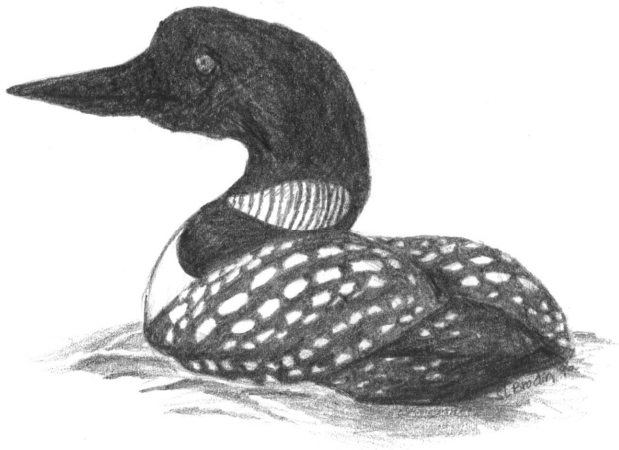
- 174th Avenue: Central Avenue to Johnson Street overlay ('04 construction)
- Central Avenue: 782 feet south of 174th Avenue to north cul-de-sac overlay ('04 construction)
- Crosstown Shopping Center **reconstruction** ('98 construction)
- Hidden Forest West overlay ('04 construction)
- Hidden Forest West 2nd overlay ('04 construction)
- Johnson Street: Constance Boulevard to 174th Avenue overlay ('04 construction)
- Naples Estates overlay ('04 construction)
- North Shore Addition overlay ('04 construction)
- Polk Street: Constance Boulevard to 833 feet north overlay ('04 construction)
- Rosewood Addition overlay ('04 construction)
- MSA Buchanan Street overlay ('04 construction)

City of Ham Lake
Capital Improvement & Equipment Replacement Plan
2018 thru 2022
PROJECTS BY FUND

		2018	2019	2020	2021	2022	Total
440	**Park and Beach Land Fund**						
	Resurface tennis courts	$25,000					$25,000
	Trail - Bunker Lake Blvd east of Jefferson Street to Hwy 65	$55,755					$55,755
	Miscellaneous park improvements	$20,000	$20,000	$20,000	$20,000	$20,000	$100,000
	Future park and trail development	$20,000	$20,000	$20,000	$20,000	$20,000	$100,000
	Path - County upgrade - Lexington Avenue at Broadway			$10,000			$10,000
	Total	$120,755	$40,000	$50,000	$40,000	$40,000	$290,755

CITY OF HAM LAKE STREET SURFACE WATER MANAGEMENT PLAN

CITY OF HAM LAKE, MINNESOTA



SURFACE WATER MANAGEMENT PLAN

May 2021

Prepared by:
RFC Engineering, Inc.
13635 Johnson St. NE
Ham Lake, MN

CITY OF HAM LAKE
SURFACE WATER MANAGEMENT PLAN
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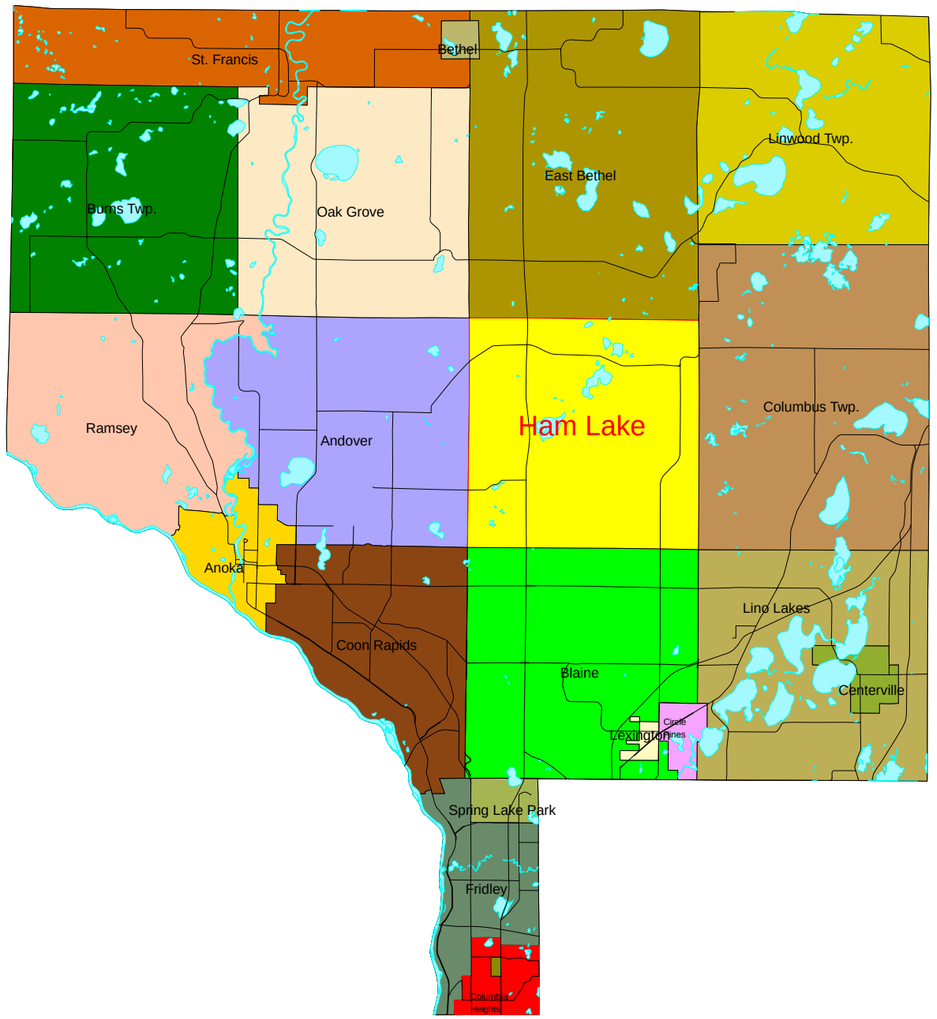

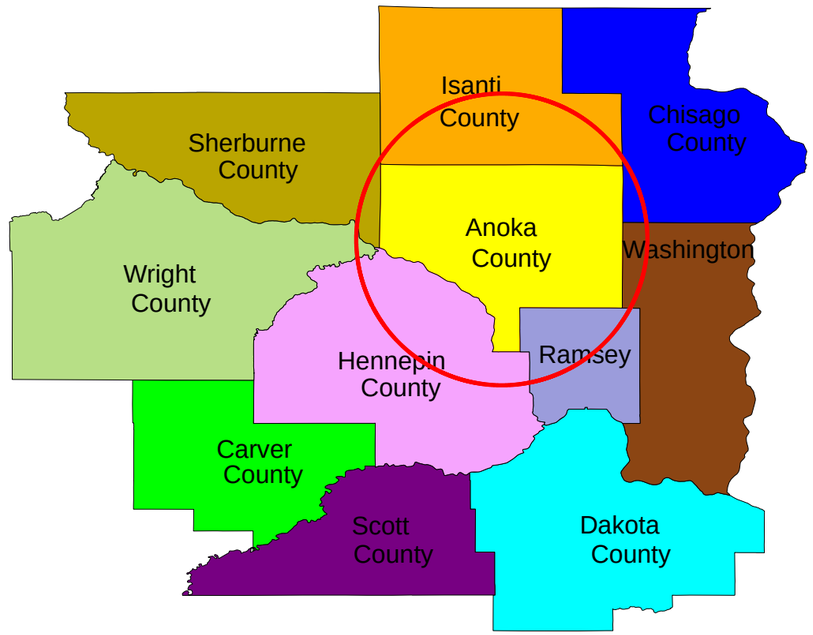

Sources:

- Minnesota Department of Transportation
- RFC Engineering, Inc.

RFC Engineering, Inc.
Consulting Engineers

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I. PURPOSE

The purpose of this Surface Water Management Plan is to meet the requirements for general permit coverage under the National Pollution Discharge Elimination System (NPDES) Phase II Storm Water Permit Program (the Permit), developed and administrated by the United States Environmental Protection Agency (EPA). This plan meets the requirements for Local Water Management Plans under Minnesota Statutes 103B and Minnesota Rules 8410, administered by the Minnesota Board of Water and Soil Resources. This plan is consistent with the goals and policies of the three watershed management organizations having jurisdiction within the City: Coon Creek Watershed District (CCWD), Sunrise River Watershed Management Organization (SRWMO), and Upper Rum River Watershed Management Organizations (URRWMO).

The City is the owner/operator of a Municipal Separate Storm Sewer System (MS4), and as such, is subject to the requirements of the Minnesota Pollution Control Agency (MPCA) general permit requirements. This establishes conditions for discharging stormwater into state waters from MS4s. In order to stay in compliance with the MPCA Permit, the City must fulfill the requirements of the MS4 Permit and the MPCA approved SWPPP Document. The requirements have been incorporated into this SWMP.

The primary goal of the SWMP is to:

- Preserve, protect and to use natural groundwater and surface water storage systems;
- Minimize expenditures to correct water quality issues;
- Establish local policies and controls for water management;
- Prevent soil erosion
- Protect the wildlife habitat; and
- Secure additional benefits associated with properly maintaining surface and groundwater.

The Ham Lake Surface Water Management Plan addresses these purposes.

II. WATER RESOURCES MANAGEMENT RELATED AGREEMENTS

The City of Ham Lake is comprised of one Watershed District and two Watershed Management Organizations. The Watershed Management Organizations are the Sunrise River Watershed Management Organization (SRWMO) and the Upper Rum River Watershed Management Organization (URRWMO). The Watershed District is the Coon Creek Watershed District (CCWD). See Map II – 2, Watershed District and Watershed Management Organizations, for the watershed and water management organization locations. CCWD, URRWMO and SRWMO maintain their own version of the WRAPS form as part of the requirements of MR 8410.0160. The City of Ham Lake is responsible for enforcing rules adopted by the SRWMO/URRWMO within the limits shared by Ham Lake and the respective Watershed Management Organization.

A. COON CREEK WATERSHED DISTRICT

The CCWD is the major watershed for the City. There are 32.27 square miles of the CCWD located within the City. The City of Ham Lake is 30.2 percent of the CCWD's 107 square mile area. This 32.27 square mile area is 90.2 percent of the City's 35.79 square mile area. The CCWD was established on May 28, 1959, by order of the Minnesota Water Resources Board under authorities given by Minnesota Statute Chapter 112.

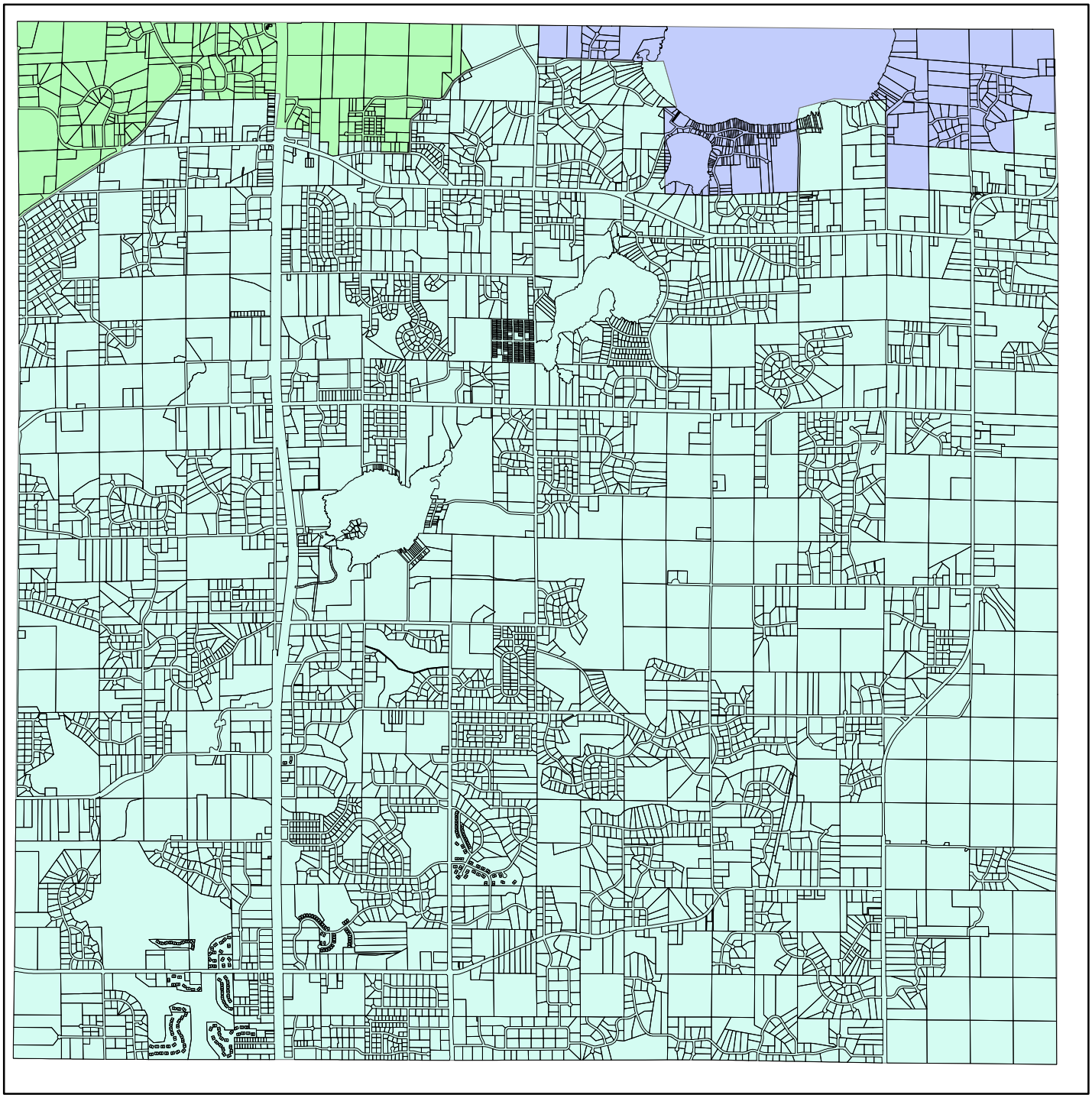
B. SUNRISE RIVER WATERSHED MANAGEMENT ORGANIZATION

The SRWMO is located in the northeastern corner of the City of Ham Lake. There are 1.82 square miles of the SRWMO located within the City. The City of Ham Lake is 2.6 percent of the SRWMO's 70.78 square mile area. This 1.83 square mile area is 5.1 percent of the City's 35.79 square mile area. The City of Ham Lake has joined the Cities of Columbus and East Bethel and the Township of Linwood in a Joint Powers Agreement forming the SRWMO in order to develop and implement a Watershed Management Plan. The City of Ham Lake joined the agreement on February 15, 1995. A further amended Joint Powers Agreement was executed in September 2000. The Joint Powers Agreement was completed under the authority given by Minnesota Statute Sections 103B.201 through 103B.255 and 471.59. The City of Ham Lake is the Local Government Unit (LGU) for that portion of the SRWMO within the City. The current Joint Powers Agreement is included in Appendix D.

C. UPPER RUM RIVER WATERSHED MANAGEMENT ORGANIZATION

The URRWMO is located in the northwestern corner of the City of Ham Lake. There are 1.70 square miles of the URRWMO located within the City. The City of Ham Lake is 1.3 percent of the URRWMO's 126.5 square mile area. This 1.70 square mile area is 4.7 percent of the City's 35.79 square mile area. The City of Ham Lake, along with the Cities of Bethel, East Bethel, Oak Grove and St. Francis and the Township of Burns, adopted a Joint Powers Agreement in 1991 forming the URRWMO. The Joint Powers Agreement was formed under the authority given by Minnesota Statute Sections 103B.201 through 103B.251 and 471.59. The City of Ham Lake is the LGU for that portion of the URRWMO within the City. The current Joint Powers Agreement is included in Appendix E.

Map II-1
Watershed District and Watershed Management Organizations



0 2,500 5,000 10,000 Feet

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MAP DATE: 12/14/2018

Legend

- COON CREEK WATERSHED DISTRICT
- SUNRISE RIVER WMO
- UPPER RUM RIVER WMO

Sources:
Natural Resource Conservation Service (USDA)
City of Ham Lake
RFC Engineering, Inc.
Coon Creek Watershed District
Anoka County
Minnesota Dept. of Natural Resources

HAM LAKE, MINNESOTA

RFC Engineering, Inc.
Consulting Engineers

III. EXECUTIVE SUMMARY

The SWMP for the City of Ham Lake has been developed to meet the applicable regulations and standards. It lays out the approach to managing the City's water resources. The plan was developed using the existing plans of the three watershed management organizations.

The SWMP expresses that the City's water resources are in good condition and meet the applicable requirements for management and maintenance efforts. Below is a brief summary of each section included in the SWMP. Appendices follow the main body of the SWMP as background material for the document.

LAND AND WATER RESOURCE INVENTORY, provides an inventory of the land and water resources within the City of Ham Lake, including both natural and manmade water resources.

ESTABLISHMENT OF GOALS AND POLICIES, outlines surface water management related goals and policies of the City of Ham Lake which address the needs of the City, as well as County, regional, state and federal agencies. These goals and policies are in the areas of water quality, water quantity, wetlands, public education and the ditch systems.

RELATION OF GOALS AND POLICIES TO LOCAL, REGIONAL, STATE AND FEDERAL PLANS, GOALS AND PROGRAMS, outlines how the goals and policies of the City of Ham Lake relate to the County, regional, state and federal goals and policies.

ASSESSMENT OF PROBLEMS, provides an assessment of the existing and potential surface water related problems within the City of Ham Lake. Existing impairments within the City of Ham Lake are evaluated and steps to remedy are taken when appropriate. Yearly public meetings occur to provide the City with a forum for residents to discuss storm water issues.

CORRECTIVE ACTIONS, provides a plan to correct and prevent the existing and potential surface water related problems within the City of Ham Lake.

FINANCIAL CONSIDERATIONS, examines the financial considerations of implementing the proposed regulatory controls, programs and improvements which have been identified in this Plan and their financial impact on the City of Ham Lake.

AMENDMENT PROCEDURES, outlines the correct procedures to take when making amendments to this plan. These changes could be required by the Permit or the watershed authorities.

IMPLEMENTATION PROGRAM, presents the implementation program for the City of Ham Lake, which includes defining the priorities and responsibilities and listing the elements of the program. This includes both current and new activities pertaining to the program.

IV. LAND AND WATER RESOURCE INVENTORY

This Section provides a general description and summary of the precipitation, topographic, geology, surface water resource data, soils, land use, public utilities and known pollutant sources. This Section also identifies where detailed information can be obtained.

A. PRECIPITATION

The climate within Anoka County Minnesota is a humid continental climate with moderate precipitation, wide temperature variations, warm humid summers and cold winters. The total average annual precipitation for Andover Minnesota is 31.6 inches, of which 40 percent occurs in the months of June, July and August. The average annual snowfall for Anoka County is 54.4 inches (see Table IV - 1, Andover Area Temperature Summary, Table IV - 2, Andover Area Precipitation Summary and Table IV - 3, Andover Area Climate Summary). Ham Lake uses the Atlas 14 method to determine design rainfall events for future design. Additional climatological information for the area can be obtained from Volume 8, Version 2.0, of the National Oceanic and Atmospheric Administration (NOAA) Atlas 14 Precipitation-Frequency Atlas of the United States.

TABLE IV - 1

Andover Area

Temperature Summary (degrees F)

	30-year Average			Daily Extremes				Mean Extremes			
Month	High	Low	Mean	High	Date	Low	Date	High	Date	Low	Date
January	23.3	1.5	12.4	58	1944	-34	1970	41.1	1990	-17.5	1912
February	28.4	6.6	17.5	61	2000	-32	1996	45.4	1987	-12.2	1936
March	40.2	19.2	29.7	83	1986	-32	1962	62.4	2012	0.5	1899
April	57.5	32.2	44.9	95	1980	2	1962	79.4	1987	21.2	1907
May	69.2	42.9	56.1	98	2013	18	1967	88.1	1934	33.2	1907
June	78.2	54.5	66.4	103	2011	34	1945	93.2	1933	44.4	1982
July	82.6	58.2	70.4	105	1988	43	1972	94.9	1936	52.5	1891
August	80.0	57.1	68.6	102	1947	39	1967	93.3	1947	49.4	1967
September	71.3	46.3	58.8	98	1976	26	1974	88.8	1948	5.5	1974
October	58.0	35.1	46.6	90	1997	13	1997	80.1	1963	25.2	1917
November	41.3	22.1	31.7	77	1999	-17	1964	62.0	2001	6.2	1896
December	26.6	8.3	17.5	68	1998	-29	1983	46.0	1923	-9.7	1983
Annual	54.8	32.1	43.5	105	1988	-34	1970	72.9	1988	19.0	1970
Winter	26.0	5.4	15.7	68	1998	-34	1970	46.2	1998	-17.3	1970
Spring	80.3	56.6	68.5	98	2013	-32	1962	88.0	2013	0.4	1962
Summer	55.6	31.4	43.5	105	1988	34	1945	94.9	1988	44.7	1945
Fall	56.9	34.5	45.7	98	1976	-17	1964	88.7	1976	6.4	1964

The above data is from the National Climatic Data Center.

Averages from 1981 through 2010, Extremes from 1988 through 2017.

TABLE IV - 2

Andover Area

Precipitation Summary (inches)

	Precipitation							Snowfall		
Month	30-yr Ave	High	Year	Low	Year	1 - Day Max		30-yr Ave	High	Year
January	0.90	3.63	1967	0.10	1990	1.21	1967	12.20	46.41	1982
February	0.77	2.14	1981	0.06	1964	1.34	2012	7.70	26.51	1962
March	1.89	4.75	1965	0.32	1994	1.66	1965	10.30	40.01	1951
April	2.66	7.00	2001	0.16	1987	2.58	2006	2.40	21.81	1983
May	3.36	9.34	2012	0.53	2009	3.39	2012	0.00	3.00	1946
June	4.25	11.36	2014	0.22	1988	4.13	2014	0.00		
July	4.04	17.90	1987	0.58	1975	10.00	1987	0.00		
August	4.30	9.32	2007	0.43	1946	7.36	1977	0.00		
September	3.08	7.53	1942	0.30	2012	3.55	1942	0.00	1.70	1942
October	2.43	5.68	1971	0.01	1952	4.83	2005	0.60	8.20	1991
November	1.77	5.29	1991	0.02	1939	2.91	1940	9.30	46.91	1991
December	1.16	4.27	1982	0.01	1943	2.47	1982	11.90	33.61	2010
Annual	31.6	40.32	2016	19.1	1988	10.00	1987	54.4	86.6	2010-11
Winter	2.7	3.99	2010	1.09	2002	2.47	1982	31.8	66.7	2010-11
Spring	8.4	13.78	2012	3.6	2009	3.39	2012	12.7	32.2	2013
Summer	12.6	22.31	1997	5.68	1988	10.00	1987	0.0		
Fall	8.0	13.24	1991	1.36	2011	4.83	2005	9.9	55.1	1991

The above data is from the National Climatic Data Center.

Averages from 1981 through 2010, Extremes from 1988 through 2017.

TABLE IV - 3

Andover Area
Climate Summary

Month	Total Precipitation (inches)	Mean Temperature (° F)	Dew Point Average (° F)	Mean Relative Humidity (%)
January	0.78	12.4	11.4	75
February	0.79	17.5	15.0	72
March	1.67	29.7	25.0	66
April	2.97	44.9	35.0	56
May	3.72	56.1	46.9	59
June	4.43	66.4	57.7	63
July	4.05	70.4	62.7	64
August	4.11	68.6	61.3	67
September	3.62	58.8	53.2	67
October	2.69	46.6	40.0	65
November	1.68	31.7	27.4	71
December	1.12	17.5	16.0	77
Total	31.63	43.4	37.6	66.8

The above data is from the National Climatic Data Center.
Normals from 1981 through 2010.

B. TOPOGRAPHIC AND GEOLOGIC INFORMATION

Topography for the City is available in ten foot contours from the United States Geological Survey (USGS). The County also maintains and is available to the public 2-foot contours obtained from lidar scans over the County. The City is characterized by gently rolling hills with patches of forest surrounded by low wetland and marshy areas. The land relief is approximately 50 feet, between elevations 874 feet above mean sea level in the southwest along County Ditch #57 to elevation 924 feet above mean sea level at Glen Cary Cemetery.

A Soil Survey was conducted by the United States Department of Agriculture Soil Conservation Service (SCS) in conjunction with the University of Minnesota Agricultural Experiment Station. This soil survey included data on specific soil types and their suitability for various uses. A link to the Soil Survey is included in the Appendices section of this SWMP. There are two different soil associations located within the City. These soil associations are Zimmerman-Isanti-Lino Association and Rifle-Isanti Association. A Soils Map is available for viewing from the Maps section of the City of Ham Lake webpage.

Infiltration capacities of soils affect the amount of direct runoff resulting from rainfall. The higher the infiltration rate for a given soil, the lower the potential is for runoff. This also increases the susceptibility of introducing ground water contaminants. With Ham Lake not having a centralized water distribution system, care should be taken when utilizing infiltration. Conversely, soils with low infiltration rates produce high runoff volumes and high peak discharge rates.

Four general hydrologic groups for soils have been established by the SCS. These groups are:

Group A - Low runoff potential, high infiltration rate
Group B - Moderate infiltration rate
Group C - Slow infiltration rate
Group D - High runoff potential, very slow infiltration rate

For Zimmerman-Isanti-Lino Association soils, the topography is level to undulating. The naturally occurring high water table is at or near the surface in most depressed areas. These soils are dominated by fine sands and drainage ranges from excessively to very poorly drained. A high water table is a characteristic of Isanti and Lino soils. The Zimmerman-Isanti soils are in the hydrologic group A, indicating low runoff potential and high infiltration rates. The Lino soils are in the hydrologic group B, indicating moderate runoff potential and moderate infiltration rates. These soils are normally good for urban development because they generally provide excellent drainage and have good bearing capacity. The soil has limited cropland use due to low fertility and high permeability. Zimmerman soils are in broad undulating areas on narrow escarpments and are excessively drained, consisting of very dark gray and dark-brown fine sand underlain by yellowish-brown and light yellowish-brown fine sand. Isanti soils are in depressions and on low-lying sandy loam about 10 inches thick and are very poorly drained black fine sandy loam underlain by gray and dark gray fine sand that occur in depressions and low-lying areas. Lino soils are on small flats, in small depressions and on small concave rises and are somewhat poorly drained black, dark gray or dark grayish-brown loamy fine sand underlain by mottled-brown and light brownish-gray fine sand.

For Rifle-Isanti Association soils, the topography is nearly level. The soil association is a series of large level bogs dominated by organic soils and small sandy island-like features that rise several feet above the general level of the surrounding bogs. They are poorly drained soils formed in organic material and fine sand. The soils are in the hydrologic group D, indicating high runoff potential and very slow infiltration rates. The soil has a moderately rapid permeability and a high water capacity. The organic matter content is very high. Unless these soils are drained, the water table is at or near the surface. These areas have been extensively ditched in the past to allow for drainage. These areas, when drained, display similar characteristics as the Zimmerman-Isanti-Lino Association soils. These areas have been used as pasture and cropland when drained. Rifle soils occur in large bogs and are very poorly drained. They have a surface layer of very dark brown mucky peat about 8 inches thick. The next layer and the underlying material are dark yellowish-brown and very dark grayish-brown mucky peat. Isanti soils occur as slight rises and narrow rims around island-like features and are very poorly drained black loamy fine sand or fine sandy loam about 10 inches thick, underlain by gray and dark-gray fine sand. The underlying material to a depth of about 31 inches is light brownish-gray fine sand.

Ham Lake is located in the Anoka sand plain. This geologic feature is named after the County in which it is most prevalent. This area is a sand outwash plain formed by the retreat of the Des Moines lobe and the Grantsburg sublobe of the Superior lobe glacier (see Map IV - 3, Sand Plain Surficial Geology). The surface of the Anoka sand plain is flat to moderately undulating. Low regions of upland represent areas of till left from previous ice movements that were not buried by the outwash sand. Other features of positive relief are patches of sand dunes, formed by southwesterly winds after the sand plain was abandoned by the outwash streams. Landscape features of negative relief include numerous lakes and marshes which formed from ice blocks, originally buried by the outwash sand, melted to create the depressions, which are now filled with water and/or organic soils. As a result of the glacial actions, glacial outwash is the predominate surficial geologic formation in the City.

The Anoka sand plain is characterized by medium grain size sand. These sands range from 15 to 80 feet deep and are generally underlain by 100 feet of consolidated red-brown sandy till. This relatively impermeable layer of till traps the groundwater above it, keeping the groundwater table high and readily available.

The most recent glacial deposits were laid down by a large eastward flowing river of melt water from a receding glacier known as the Des Moines ice lobe. The outwash from the Des Moines lobe forms the upper unit of the Anoka Sand Plain. Its thickness is typically between 20 feet and 60 feet.

The Des Moines lobe till occurs underneath the outwash sands if it has not been completely eroded. The till ranges from zero to 50 feet thick.

Further underneath lays another glacial deposit, the Superior lobe outwash sand. This unit comprises the lower half of the Anoka Sand Plain and ranges in thickness from zero to about 50 feet.

The bedrock layers were deposited during a time before the Ice Age when Minnesota experienced tropical weather and the land was covered by shallow seas. Over time these deposits were consolidated into solid rock formations of sandstone, dolomite and shale. The bedrock under the City varies from an elevation of 550 feet above mean sea level to an elevation of 800 feet above mean sea level.

The uppermost bedrock found in the City is the Jordan Sandstone. The Jordan Sandstone underlies a very small portion of the southeastern corner of the City. Typical thickness of the aquifer is between 75 feet and 100 feet.

Underlying the Jordan Sandstone is the St. Lawrence Formation and the Tunnel City Group. The St. Lawrence Formation and the Tunnel City Group lie under the majority of the City. The St. Lawrence Formation is commonly 30 feet to 50 feet thick, while the Tunnel City Group varies much more, from a few feet to 230 feet thick.

Below the Tunnel City Group lies a pair of sandstone units, the Wonewoc Sandstone. The Wonewoc Sandstone averages between 50 and 60 feet thick.

Below the Wonewoc Sandstone is the Eau Claire Formation. The Eau Claire Formation has

typical thicknesses of 80 feet to 85 feet.

Below the Eau Claire Formation lies the Mt. Simon and Hinckley Sandstones. The highly variable thickness of this formation is typically greater than 170 feet.

Underneath lays much older rock which is primarily volcanic in origin. Present at the bottom of the County's geologic formations, it is referred to as the "basement rock".

There are four primary aquifers found throughout Anoka County. These are, from shallowest to deepest, the glacial drift (surficial) aquifer, the Tunnel City aquifer, the Wonewoc aquifer and the Mt. Simon aquifer. Three additional aquifers found in limited areas of the County between the Tunnel City aquifer and the glacial drift aquifer are the St. Peter formation, the Jordan formation and the St. Lawrence formation.

The glacial drift aquifer is composed of variable and discontinuous layers of outwash and till. The top part of this aquifer ranges from zero to 20 feet below the land surface. Wells in this layer are typically 20 feet to 50 feet deep with typical yields of up to 20 gallons per minute (gpm).

Often beneath the first layer of sand lies under the Des Moines lobe outwash which acts as a confining material. Where this layer exists continuously over a large enough area, the water in the underlying sand layer (lobe outwash) is under pressure and is said to be confined. Wells in the confined drift aquifer, ranging from 30 feet to 300 feet deep, commonly yielding several hundred gpm. In general, the Des Moines till layer is discontinuous and cannot be relied upon to act as a confining barrier to downward movement of water.

Beneath the confined drift aquifer is the relatively continuous confining layer of the Superior lobe till. This till is sandier than the Des Moines lobe till, making it relatively more permeable, but is considerably thicker, up to several hundred feet. The Superior lobe generally lies over bedrock in Anoka County.

Throughout most of the County the Lower Tunnel City formation is the first bedrock aquifer encountered. The Lower Tunnel City yields 10 to 20 gpm. Although the Lower Tunnel City unit yields relatively low volumes of water, it is an adequate aquifer for private domestic wells pumping approximately 12 gpm.

The Wonewoc Aquifer underlies a small portion of the City. This aquifer has a transmissibility of 500 to 1,500 feet squared per day. The flow in this aquifer is from North to South. The area in which this formation exists is a recharge area. The Wonewoc aquifer is a relatively thin layer of highly permeable sandstone. The Wonewoc yields 40 to 400 gpm.

The Mount Simon Aquifer is the deepest aquifer in the City of Ham Lake. Being the aquifer of last resource if overlying aquifers are contaminated, high capacity wells can be constructed only for drinking water according to Minnesota Statute 103G.271. Well yields within this aquifer range from 125 to 2,000 gpm. The Mount Simon Aquifer recharges outside of City of Ham Lake. Below the Mt. Simon aquifer lie additional sedimentary units and eventually volcanic rocks which are not known to contain aquifers. Additional soils and geology information can be found in the Anoka County Groundwater Protection Assessment,

dated June 1995, and the Soil Survey of Anoka County, Minnesota, issued September 1977.

The Anoka County resource of www.knowtheflow.us includes various grant opportunities that the owners of individual, non-community and private well owners can apply for. The web site includes information on how to protect drinking water wells and classes for educating well owners.

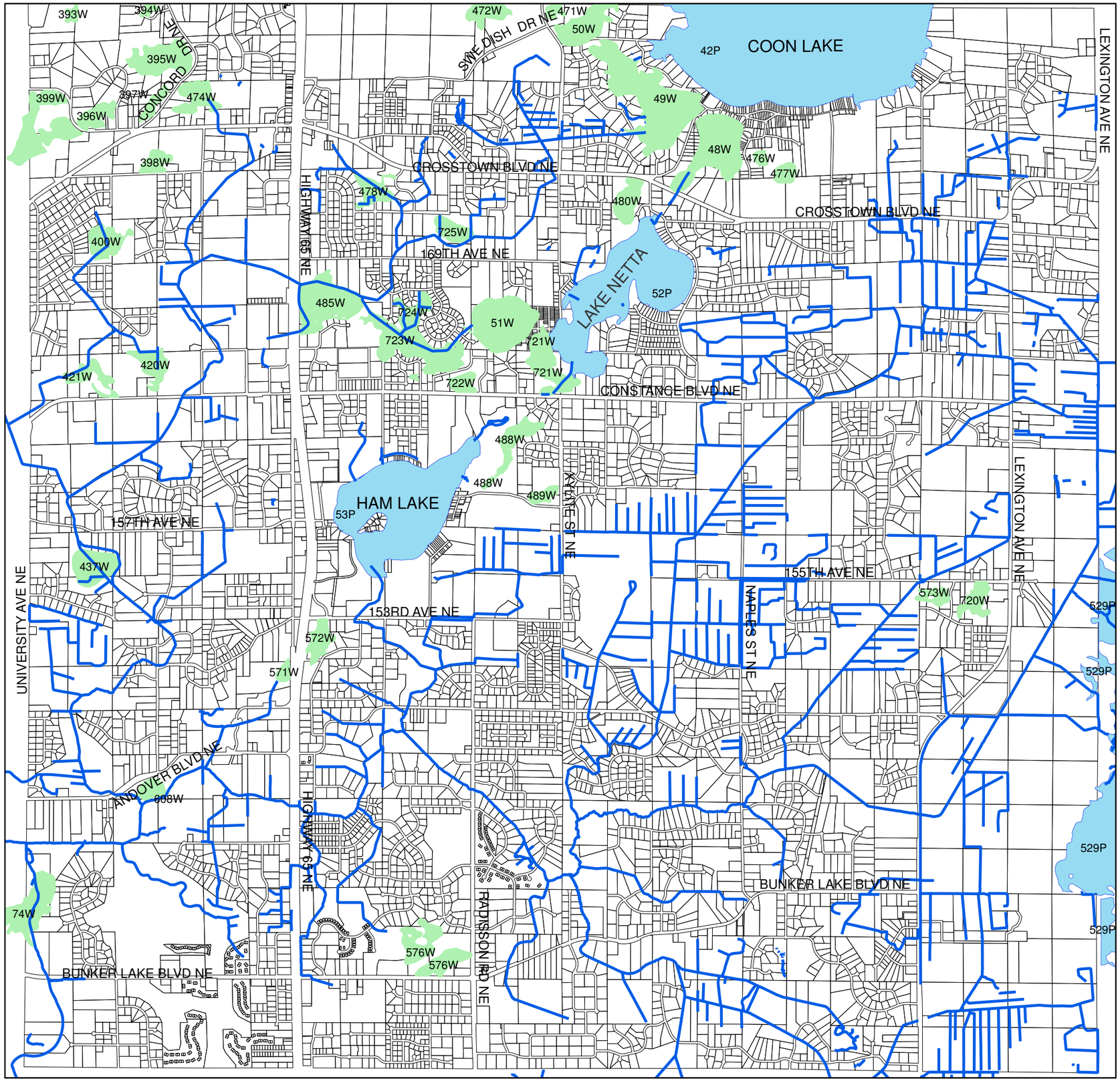
C. WETLANDS

Wetlands cover a significant portion of the City of Ham Lake (see Map IV - 1, DNR Protected Waters and Wetlands, Map IV - 2, National Wetland Inventory, Tables IV - 4 and IV - 5, DNR Protected Waters and Wetlands Classification and Table IV - 6, Wetland Functions). These wetlands provide the habitat for many species of plants and animals.

Inventory and assessment of wetlands in the City are performed on a case-by-case basis within the City. Generally, wetland considerations for removal or replacement, and administration of the Wetland Conservation Act (WCA) are handled by the local government unit (LGU). The LGU for that portion of the City within the Coon Creek Watershed District (CCWD) is the CCWD. The LGU for those portions of the City within the Sunrise River Watershed Management Organization and the Upper Rum River Watershed Management Organization is the City of Ham Lake.

Wetlands affect local water quality. The aquatic plants present in a healthy wetland will slow and filter water moving through the wetland, taking up nitrogen and phosphorus as nutrients and purifying the water through increased settling. The purified water then seeps into the groundwater supply or flows into the surface drainage.

Wetlands affect the amount of water in the floodplain. In most areas, the wetlands hold water during droughts and acts as natural storage ponds during periods of flooding, thus making storm water runoff more manageable. Wetlands should not be used as settling basins or they will fill up with coarse particulates and lose their nutrient assimilative storage capacity and processing capabilities, which could result in the loss of wildlife habitat.



HAM LAKE, MINNESOTA

DNR PROTECTED WATERS AND WETLANDS

MAP IV-1

LEGEND

- CCWD Streams and Ditches
- DNR PROTECTED WATERS
- DNR PROTECTED WETLANDS

0 2,000 4,000 8,000 Feet

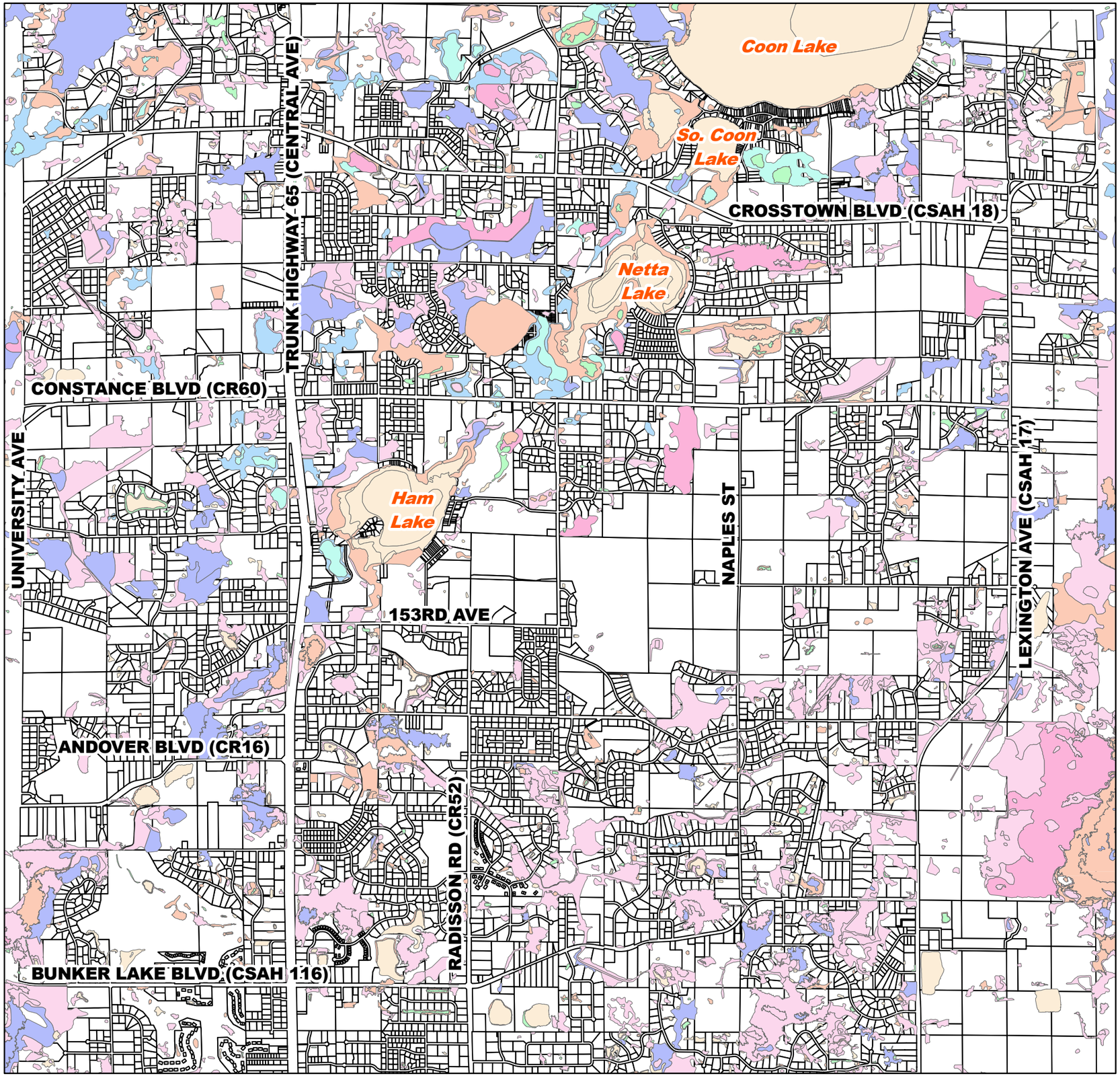
N W E S

MAP DATE: 09/08/16

Sources:

- Coon Creek Watershed District
- Anoka County GIS Services
- Minnesota DNR
- RFC Engineering, Inc.

RFC Engineering, Inc.
Consulting Engineers



HAM LAKE, MINNESOTA NATIONAL WETLAND INVENTORY MAP IV - 2

Legend

National Wetland Inventory

Circular 39 Class Type

- Seasonally Flooded (Type 1)
- Wet Meadow (Type 2)
- Shallow Marsh (Type 3)
- Deep Marsh (Type 4)
- Shallow Open Water (Type 5)
- Shrub Swamp (Type 6)
- Wooded Swamp (Type 7)
- Bog (Type 8)

0 1,500 3,000 6,000 Feet

N W E S

MAP DATE: 08/23/16

Sources:

- Anoka County Engineering & Surveying Departments
- US Department of Housing and Urban Development (National Flood Insurance Program)
- Land Management Information Center (LMIC)-MNPLANNING
- RFC Engineering, Inc.

RFC Engineering, Inc.
Consulting Engineers

TABLE IV - 4

DNR Protected Waters and Wetlands Classification

DNR Identification Number	Area (Acres)	Wetland Type	Watershed District or Organization	Location			Shoreland Ordinance Protection
				Section	Township	Range	
42P Coon Lake	1,779	Lake	Coon Creek & Sunrise River	1-3, 25-27, 34-36, 30	32, 33	22, 23	General Development
48W South Coon Lake	48	5	Coon Creek & Sunrise River	2, 3, 10	32	23	Natural Environmental
49W Mallard Lake	65	4	Coon Creek	3	32	23	Natural Environmental
50W	30	3	Coon Creek	3, 4	32	23	not classified
51W	56	3	Coon Creek	9	32	23	Natural Environmental
52P Lake Netta	269	Lake	Coon Creek	9, 10, 15, 16	32	23	Recreational Development
53P Ham Lake	224	Lake	Coon Creek	16, 17, 20, 21	32	23	Recreational Development
74W	46	3	Coon Creek	30, 31, 36	32	23, 24	Natural Environmental
393W	Unknown	Unknown	Upper Rum River	6, 30	32, 33	23, 22	not classified
394W	Unknown	Unknown	Upper Rum River	6	32	23	not classified
395W	33	3	Coon Creek & Upper Rum River	6	32	23	not classified
396W	Unknown	Unknown	Coon Creek	6	32	23	not classified
397W	Unknown	Unknown	Upper Rum River	6	32	23	not classified
398W	11	Unknown	Coon Creek	6	32	23	not classified
399W	Unknown	Unknown	Upper Rum River	1, 6	32	23, 24	not classified
400W	9	3	Coon Creek	7	32	23	not classified
420W	21	3	Coon Creek	7, 18	32	23	not classified
421W	17	3	Coon Creek	18	32	23	not classified
471W	4	3	Coon Creek	4	32	23	not classified
472W	12	3	Coon Creek	4	32	23	not classified

Note: There are protected channels between 48W and 52P, 52P and 51W, 51W and 721W

TABLE IV - 5

DNR Protected Waters and Wetlands Classification

DNR Identification Number	Area (Acres)	Wetland Type	Watershed District or Organization	Location			Shoreland Ordinance Protection
				Section	Township	Range	
473W	Unknown	Unknown	Coon Creek	19	32	23	not classified
474W	12	3	Coon Creek	5, 6	32	23	not classified
476W			Coon Creek	2	32	23	not classified
477W			Coon Creek	2, 11	32	23	not classified
478W	11	3	Coon Creek	8, 9	32	23	not classified
480W	20	4	Coon Creek	10	32	23	not classified
485W	55	3	Coon Creek	8	32	23	not classified
486W	Unknown	Unknown	Coon Creek	8	32	23	not classified
488W	15	3	Coon Creek	16	32	23	not classified
489W	7	3	Coon Creek	16	32	23	not classified
529P	2,290	3	Coon Creek	19, 20, 28-32, 25	32	22, 23	not classified
571W	7	3	Coon Creek	20	32	23	not classified
572W	8	3	Coon Creek	20	32	23	not classified
573W	11	3	Coon Creek	24	32	23	not classified
576W	21	3	Coon Creek	33	32	23	not classified
608W			Coon Creek	30	32	23	not classified
618W	Unknown	Unknown	Coon Creek	31	32	23	not classified
619W	Unknown	Unknown	Coon Creek	31	32	23	not classified
720W	13	3	Coon Creek	24	32	23	not classified
721W	19	3	Coon Creek	9, 15, 16	32	23	not classified
722W	11	3	Coon Creek	16	32	23	not classified
723W	49	3	Coon Creek	8, 9, 16, 17	32	23	not classified
724W	9	3	Coon Creek	9	32	23	not classified
725W	14	3	Coon Creek	9	32	23	not classified

Note: There are protected channels between 48W and 52P, 52P and 51W, 51W and 721W

TABLE IV - 6

Wetland Functions

Function	Description
Floodwater Storage and Retention	Wetlands can reduce flooding by slowing down the force of floodwater and by providing temporary storage of large amounts of storm water or snow melt water, thus reducing damages to roads, bridges, crops, etc.
Nutrient Assimilation	Wetland plants absorb nutrients during their growth and development. This removal means cleaner water leaving the wetland.
Sediment Entrapment	Wetlands can slow the flow of water moving through them. This allows sediments and associated nutrients time to settle out before the water is released to other wetlands, lakes or streams.
Ground Water Recharge	Some wetlands serve as a source of ground water recharge by collecting and retaining surface waters that would otherwise end up in distant lakes and rivers, helping assure long-term supplies of quality groundwater.
Low Flow Augmentation	Wetlands can augment low flows in streams through retarding direct runoff or by contributing to groundwater based low flows thus reducing impacts of short term precipitation deficiencies in rivers and streams.
Aesthetics and Recreation	Wetlands are often beautiful areas to observe unique plant and animal species. They are an amenity to residential and commercial development in urban environments. Hunters and fishermen also frequent wetland areas.
Shoreland Anchoring and Erosion Control	Wetland vegetation can reduce erosion along lake and stream banks by reducing forces associated with wave action.
Wildlife Habitat	Many species of wildlife spend all or certain seasons of the year in wetland habitats for breeding, brood rearing, feeding or cover purposes.

D. LAKES AND STREAMS

Ham Lake, Lake Netta, South Coon Lake and Mallard Lake are located entirely within the City. Coon Lake is located in portions of Ham Lake, East Bethel, Columbus and Linwood Township. Coon Creek runs from Northeast to Southwest through the City and is the final surface water outlet for Ham Lake, Lake Netta and Mallard Lake. Information on water quality and lake monitoring can be found on the Anoka Conservation District web site (www.anokaswcd.org) under Reports/Water Almanac.

Coon Lake is located in Sections 1-3 of Ham Lake, Sections 25-27 and 34-36 of East Bethel, Section 25 of Columbus and Section 30 of Linwood Township. The lake area is 1,481 acres, has a maximum depth of 27 feet and a mean depth of 7 feet. Public access is available at three locations with boat ramps, including one park with a swimming beach. Ham Lake has been placed on the MPCA's impaired waters list for high mercury concentrations in fish. The MPCA has prepared a plan to reduce mercury releases by 2025. This plan describes specific strategies that the State will employ to achieve the goals for the TMDL. No additional action by the City is needed.

Ham Lake is located in Sections 16, 17, 20 and 21 of Ham Lake. Ham Lake County Park is located at its south side. The lake area is 168 acres, with a maximum depth of 22 feet, an average depth of 10 feet and has public access within Ham Lake Park. Ham Lake has been placed on the MPCA's impaired waters list for high mercury concentrations in fish. The MPCA has prepared a plan to reduce mercury releases by 2025. This plan describes specific strategies that the State will employ to achieve the goals for the TMDL. No additional action by the City is needed.

Lake Netta is located in Sections 9, 10, 15 and 16 of Ham Lake. The lake surface area is 162 acres and the maximum depth of 19 feet.

South Coon Lake is located in Sections 2 and 3 of Ham Lake. The lake area is 47 acres and has a maximum depth of 4 feet.

Mallard Lake is located in Section 3 of Ham Lake. The lake area is approximately 26 acres.

E. DITCH SYSTEMS

There are numerous State, County, City and private ditches located within the City of Ham Lake. The first public ditch system of Ham Lake was constructed around the year 1900. It is a complex network of drainage ditches which have been modified over the years. There are many private ditches that have also been added to this system. Some private ditches now convey runoff from residential development areas. Although these private ditches are not now under City ownership, the problems associated with them often ends up being resolved by the City. This Plan will designate City policy for managing these private ditches, including the known problems that are a result of them. Many sections of the ditch system are silted in, overgrown with trees and brush and generally in poor condition. Minimal maintenance has been performed on many ditches since their construction.

Coon Creek is a major drainage ditch through central Anoka County. The slope of Coon

Creek is approximately 2.5 feet per mile through Ham Lake. The Anoka Conservation District (ACD) monitors the stream levels at the Naples Street crossing, where the creek is approximately 15 feet wide and 1 foot deep. The ACD monitors Ditch 58 at the Andover Boulevard crossing. Ditch 58 is a tributary to Coon Creek. Coon Creek was identified as impaired water by the MPCA in 2006 for E.coli and Macroinvertabrate. Coon Creek Watershed District's identifies agricultural runoff, poor pet waste management, wildlife waste and failing septic systems as contributors of Ecoli. Ham Lake has an ordinance requiring clean up of pet waste per City Code 11-1900.31, Illegal Discharges and has published in its news article regarding cleanup and city code requirements. Ham Lake also requires private SSTS to comply with Minnesota Rules 7080.1500 Subpart 4 (B). The City of Ham Lake reminds property owners every 3 years via a post card to have their SSTS system inspected to comply with Ham Lake code 11-450.5.

Sand Creek is a major drainage ditch and is mainly located in Blaine Minnesota south of 121st Avenue. While this creek does not flow through Ham Lake, portions of the SE quarter of section 32 and the SW quarter of section 33 do flow to County Ditch 60 in Blaine which is connected to Sand Creek as a contributing part of the watershed. Sand Creek is identified as impaired water by the MPCA for E. Coli and Macroinvertebrate. The closest point of Sand Creek is more than one mile from the Ham Lake border.

The MPCA has identified Coon Creek and Sand Creek with higher than acceptable Total Suspended Solids (TSS) and Total Phosphorous (TP). The Coon Creek Watershed District is working with the Cities of Andover, Blaine, Columbus, Coon Rapids and Fridley that are within the watersheds of Sand and Coon Creek to identify sources of these impairments in an attempt to reduce these impairments. The Coon Creek Watershed District is monitoring total phosphorous and total suspended solids within Coon Creek. Ditch 11 which parallels Lexington Avenue is exhibiting high amounts of phosphorous. Ham Lake contains many sod farms that utilize phosphorous to grow turf. State law prohibits the regulation of phosphorous for agricultural purposes. Further investigation into the causes of high TSS and TP is continuing.

Crooked Brook is a minor drainage ditch located in East Bethel Minnesota which feeds into Cedar Creek in East Bethel which then feeds into Rum River. The portions of Ham Lake that feed into Crooked Brook are the areas of Ditch 28 that flow north from Ham Lake into East Bethel along State Trunk Highway 65. Crooked Brook is identified as impaired water by the MPCA for low dissolved oxygen. The closest point of the Crooked Brook is more than one mile from the Ham Lake border. No recent data has been collected to determine if this still is an issue.

Mahoney Brook is a minor drainage ditch located in Andover and Oak Grove which feeds into Cedar Creek in Oak Grove. While this creek does not flow through Ham Lake, the portions of Ham Lake that feed into Mahoney Brook are the areas of Ditch 71 in the northwest portion of Ham Lake. Mahoney Brook is identified as impaired water by MPCA for aquatic life and fish bioassessments. The closest point of the Mahoney Brook is more than one mile from the Ham Lake border.

Ham Lake is part of the South Metro Mississippi River TMDL which is

CCWD took over Anoka County's ditch system within the CCWD. Anoka County maintains jurisdiction of the county ditch system within the SRWMO and URRWMO.

Within the City, there are a variety of fish species and habitats. Seasonally flooded marsh areas provide spawning and nursery habitat for northern pike. During high water periods the channels of the ditch system can be navigable by many fish species.

F. FLOOD INSURANCE

The National Flood Insurance Program had mapped the City of Ham Lake flood boundaries during flood insurance studies completed in 1979 and 1980. These studies were based on the existing City conditions at that time. Flood boundaries were determined by approximate methods using engineering judgment together with field inspection, aerial photographs and USGS topographic maps. The flood maps have been updated in 2015 to reflect updated rainfall events using Atlas 14 data and more accurate topographic information. The flood insurance study, City of Ham Lake FIS, January 1980, Community ID 270674, is available for review at the DNR Division of Waters or from the links in the References section of this SWMP. Amendments have been made to the map and are represented pictorially on Map IV - 3, Floodplain and Table IV - 9, National Flood Insurance Program Map Amendments. Amendments that were complete prior to the 2015 flood insurance update were reapplied to the 2015 update.

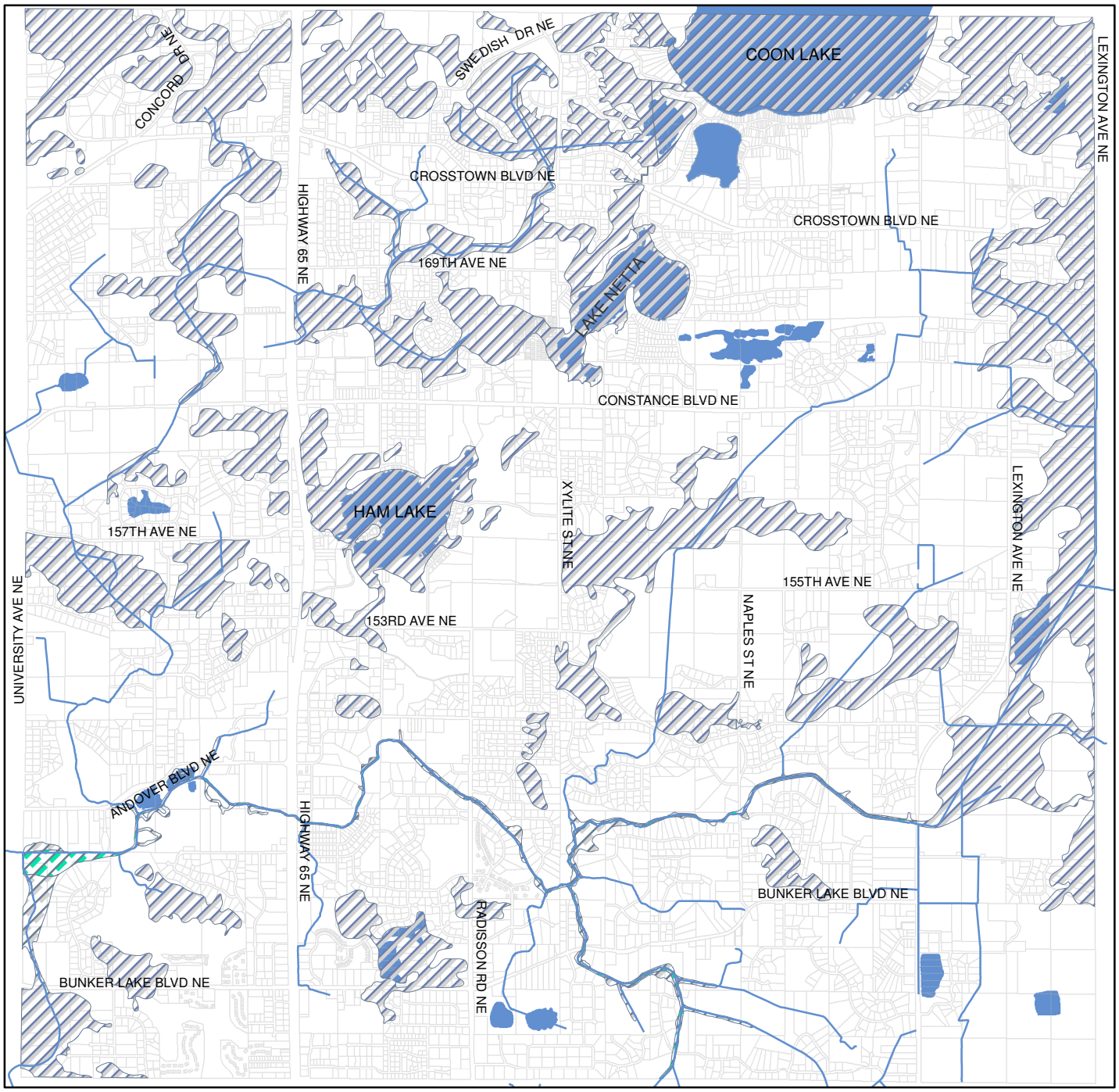
G. LAND USE

Approximately 71 percent of the 35.79 square miles of land in the City of Ham Lake is suitable for development. Approximately 54 percent of the 35.79 square miles of the City is now developed as single family residential. The numerous wetlands will keep the overall population density low. Existing Land Use and Map IV - 5, Future Land Use, show the existing and proposed land use. The City has passed a Shoreland Zoning Ordinance (Ham Lake Ordinance 92-35) and Floodplain Ordinance (Ham Lake Ordinance 15-27). The Floodplain Ordinance complies with Minnesota Administrative Rules 6120.5000.

H. POLLUTANT SOURCES

Potential sources of pollution are subsurface sewage treatment systems, non-point sources, petroleum pipelines, dump sites, absorption pits and storage tanks. See Map IV - 6, MPCA Pollutant Source Locations and the MPCA Pollutant Source Location Data in Appendix A, which are categorized as either Active or Inactive.

Map IV-3
Floodplain



FEMA Hazard Zone

- 100 Year Flood Zone
- 100 Year Flood W/ Elevation
- 100 Year Floodway
- Streams and Ditches
- Lakes
- Ham Lake Parcels

0 2,500 5,000 10,000 Feet

MAP DATE: 12/14/2018

Sources:
Federal Emergency Management Agency (FEMA)
City of Ham Lake
RFC Engineering, Inc.
Coon Creek Watershed District
Anoka County

HAM LAKE, MINNESOTA

RFC Engineering, Inc.
Consulting Engineers

TABLE IV-7

National Flood Insurance Program Map Amendments

Location	Section	Case Number	1% Annual (BFE)
Livgard Acres	20	**94-05-692A**	-
Lot 5, Block 5, Maple Ridge (14915 Naples Street) Lot 6, Block 5, Maple Ridge (3411 149th Avenue) Lot 7, Block 5, Maple Ridge (3441 149th Avenue)	23	**94-05-1046P, C, R**	-
2065 Bunker Lake Boulevard *	33	**94-05-1316A**	900.0
Lot 1, Block 2, Lexington Estates (16905 Opal Street) Lot 1, Block 3, Lexington Estates (4805 168th Lane) Lot 2, Block 3, Lexington Estates (4819 168th Lane) Lot 3, Block 3, Lexington Estates (4843 168th Lane) Lot 4, Block 3, Lexington Estates (4861 168th Lane) Lot 5, Block 3, Lexington Estates (4915 168th Lane) Lot 6, Block 3, Lexington Estates (4933 168th Lane) Lot 7, Block 3, Lexington Estates (4940 168th Lane) Lot 8, Block 3, Lexington Estates (4928 168th Lane) Lot 9, Block 3, Lexington Estates (4910 168th Lane) Lot 10, Block 3, Lexington Estates (4858 168th Lane) Lot 11, Block 3, Lexington Estates (4836 168th Lane) Lot 12, Block 3, Lexington Estates (4814 168th Lane) Lot 13, Block 3, Lexington Estates (4752 168th Lane) Lot 14, Block 3, Lexington Estates (16836 Opal Street) Lot 15, Block 3, Lexington Estates (16854 Opal Street) Lot 16, Block 3, Lexington Estates (See Multiple Amendments)	12	**95-05-1398C**	-
17239 Rockney Street *	12	**95-05-2052A**	-
Lot 1, Block 1, Blackberry Bend (2929 171st Lane) Lot 2, Block 1, Blackberry Bend (2946 171st Lane) Lot 3, Block 1, Blackberry Bend (2944 171st Lane) Lot 4, Block 1, Blackberry Bend (2956 171st Lane)	10	**95-05-2342A**	905.0
2065 Bunker Lake Boulevard *	33	**95-05-2354A**	-
Lot 2, Block 1, Lexington Estates (4636 169th Lane) Lot 4, Block 1, Lexington Estates (16936 Opal Street) Lot 3, Block 2, Lexington Estates (16931 Opal Street) Lot 6, Block 2, Lexington Estates (16912 Packard Street) Lot 7, Block 2, Lexington Estates (16956 Packard Street) Lot 1, Block 3, Lexington Estates (4805 168th Lane) Lot 2, Block 3, Lexington Estates (4819 168th Lane)	12	**96-05-246A** (follow-up to 95-05-1398C)	-
Lot 14, Blocl 3, Lexington Estates (16854 Opal St. NE) *	12	**96-05-566A** (follow-up to 95-05-1398C)	-
Lot 3, Block 3, Lexington Estates (4843 168th Lane) Lot 7, Block 3, Lexington Estates (4940 168th Lane) * Lot 14, Block 3, Lexington Estates (16836 Opal Street) *	12	**96-05-752A** (follow-up to 95-05-1398C)	-
Lot 13, Block 3, Lexington Estates (4752 168th Lane) *	12	**96-05-916A** (follow-up to 95-05-1398C)	-
Lot 1, Block 2, Hogdal Estates (2749 149th Avenue)	22	**96-05-1050A**	892.7
Lot 5, Block 3, Lexington Estates (4915 168th Lane)	12	**96-05-1972A** (follow-up to 95-05-1398C)	-
Lot 11, Block 3, Lexington Estates (4836 168th Lane) * Lot 12, Block 3, Lexington Estates (4814 168th Lane)	12	**96-05-2830A** (follow-up to 95-05-1398C)	-
Lot 4, Block 3, Lexington Estates (4861 168th Lane) Lot 10, Block 3, Lexington Estates (4858 168th Lane) *	12	**96-05-3200A** (follow-up to 95-05-1398C)	-
15700 - 15900 T.H. 65 (part of Government Lot 2)	17	**96-05-4054A**	898.0
Lot 1, Block 2, Country Creek (17764 Johnson Street) Lot 2, Block 2, Country Creek (17750 Johnson Street) Lot 3, Block 2, Country Creek (17732 Johnson Street) Lot 4, Block 2, Country Creek (17714 Johnson Street)	21	**97-05-504C**	
Lot 4, Block 1, Sunset Horizons (3447 143rd Avenue)	26	**97-05-3014A**	894.9
512 157th Avenue	19	**97-05-3298A**	897.0
Lot 4, Block 2, Lexington Estates (16905 Opal Street) *	12	**97-05-3516A**	-

TABLE IV-7

National Flood Insurance Program Map Amendments

Location	Section	Case Number	1% Annual (BFE)
Lot 1, Block 4, Oak Hills Estates (15411 Terrace Road)	19	**97-05-3594A**	897.6
Lot 9, Block 3, Lexington Estates (4910 168th Lane) *Superseded by 15-05-3861A*	12	**97-05-3898A** (follow-up to 95-05-1398C)	-
Lot 5, Block 6, Rolling Meadows 2nd Addition (16616 Isanti Circle) *	9	**97-05-3984A**	-
Lot 4, Block 1, Bear Creek (15350 Ghia Street) Lot 5, Block 1, Bear Creek (15334 Ghia Street) Lot 4, Block 2, Bear Creek (15347 Ghia Street) Lot 5, Block 2, Bear Creek (15325 Ghia Street) Lot 3, Block 3, Bear Creek (4258 153rd Avenue) Lot 4, Block 3, Bear Creek (4318 153rd Avenue) Lot 5, Block 3, Bear Creek (4330 153rd Avenue)	24	**97-05-4034A**	897.5
Lot 8, Block 3, Lexington Estates (4928 168th Lane) *	12	**97-05-4310A** (follow-up to 95-05-1398C)	-
3721 149th Avenue *	23	**97-05-4554A**	-
Lot 6, Block 3, Lexington Estates (4933 168th Lane)	12	**97-05-5222A** (follow-up to 95-05-1398C)	900.6
Lots 1 - 2, Block 4, Oak Hill Estates, (15411 Terrace Road) *	19	**97-05-5224A**	-
Lot 8, Block 1, Lawnview Addition (15032 Xylite Street) *	21	**98-05-146A**	-
Lot 1, Block 1, Country Creek (17829 Fillmore Street) Lot 2, Block 1, Country Creek (1205 178th Avenue) Lot 3, Block 1, Country Creek (1237 178th Avenue) Lot 4, Block 1, Country Creek (1301 178th Avenue) Lot 1, Block 2, Country Creek (17764 Johnson Street) Lot 2, Block 2, Country Creek (17750 Johnson Street) Lot 3, Block 2, Country Creek (17732 Johnson Street) Lot 4, Block 2, Country Creek (17714 Johnson Street)	5	**98-05-1014A** (follow-up to 97-05-504C)	-
Lot 6 Block 1, Meadowlark Acres (4915 170th Lane) *	12	**98-05-5108A**	906.5
Lot 1 Block 2, Larson's 1st Addition (2554 Crosstown Boulevard) *	9	**98-05-5504A**	-
Lot 2, Block 1, Pheasant Run 2nd Addition (625 154th Avenue) *	19	**99-05-752A**	-
Lot 2, Block 3, Hastings Hill (15114 Davenport Street) *	20	**99-05-2502A**	-
Lot 1, Block 1, Whitetail Ridge (2818 165th Avenue) Lot 2, Block 1, Whitetail Ridge (2834 165th Avenue) Lot 3, Block 1, Whitetail Ridge (2856 165th Avenue)	15	**99-05-3382A**	905.0
Lot 8, Block 2, Oak Hill Estates (15404 Terrace Road) *	19	**99-05-3480A**	893.5
4965 173rd Avenue*	1	**99-05-4292A**	-
Lot 6, Block 1, Stopher Addition (17144 Rockney Street) *	12	**99-05-5002A**	906.5
Lot 4, Block 3, Rolling Meadows 2nd Addition (2130 165th Lane) *	9	**99-05-5918A**	-
Lot 1, Block 1, Stopher Addition (4855 171st Lane) *	12	**99-05-6168A**	-
Braastad Farms	18	**00-05-341P**	-
Lot 1, Block 1; Lot 2 - 8, Block 2; Lot 1 - 4, Block 3, Lexington Preserve	12	**00-05-342A**	900.2
Lot 7, Block 1, Meadowlark Acres (4945 170th Lane) *	12	**00-05-662A**	906.5
Lot 1, Block 1, Concord Woods (18046 Concord Drive) (superseded by 01-05-2886A) Lot 2, Block 1, Concord Woods (733 180th Lane) (superseded by 01-05-2886A) Lot 3, Block 1, Concord Woods (622 180th Lane) (superseded by 01-05-2886A) Lot 4, Block 1, Concord Woods (656 180th Lane) (superseded by 01-05-2886A) Lot 5, Block 1, Concord Woods (654 180th Lane) (superseded by 01-05-2886A) Lot 6, Block 1, Concord Woods (668 180th Lane) (superseded by 01-05-2886A) Lot 7, Block 1, Concord Woods (706 180th Lane) Lot 8, Block 1, Concord Woods (740 180th Lane) (superseded by 01-05-2886A)	6	**01-05-001C**	903.0 (Lots 1-3, 5 & 6) 900.8 (Lot 4) 903.4 (Lots 7 & 8)
Lot 1, Block 2, Radisson Meadow (14657 Taconite Street) (superseded by 02-05-0820X) Lot 2, Block 2, Radisson Meadow (14625 Taconite Street) (superseded by 02-05-0820X) Lot 3, Block 2, Radisson Meadow (14611 Taconite Street) (superseded by 02-05-0820X)	28	**01-05-281A**	889.0
Lot 5, Block 4, Idlewood 3rd Addition (17565 Isanti Street)	4	**01-05-295A**	905.5
Lot 9, Block 1, Rustic Acres (1121 177th Lane) *	5	**01-05-300A**	904.3
SE corner Rockney Street and 173rd Avenue	12	**01-05-1072A**	900.0
Lots 2 - 4, Block 2 Larson's Heritage Oaks 5th Addition	28	**01-05-1279A**	896.3
Lot 2, Block 1, Hastings Hill (15206 Hastings Street) *	20	**01-05-1282A**	895.1
2209 165th Lane *	9	**01-05-1821A**	905.6

TABLE IV-7

National Flood Insurance Program Map Amendments

Location	Section	Case Number	1% Annual (BFE)
Lot 4, Block 1, Bodinski Addition (15509 5th Street) *	19	**01-05-1940A**	897.1
Lots 2 - 4, Block 2, Larson's Heritage Oaks 5th Addition	28	**01-05-2202A**	896.3
Fox Tail Ridge	20	**01-05-2357A**	890.0
Lots 1 - 6 and 8, Block 1, Concord Woods (superseded by 02-05-0359X)	6	**01-05-2886A**	903.0
Lot 1, Block 2, Sunrise Addition (15204 Xylite Street) *	21	**01-05-2899A**	895.5
17363 Guadalcanal Street (also see 02-05-1245A)	3	**01-05-3356A**	-
Lots 1, 2, 7, 8 and 10, Block 1; Lots 6 * and 7, Block 2; Lot 3, Block 3, Rustic Acres	5	**01-05-3703A**	903.8 (L1&2, B1) 903.4 (L7&8, B1) 904.3 (L10, B1) 902.3 (L6, B2) 902.3 (L7, B2) 903.4 (L3, B3)
Lots 1 - 6 and 8, Block 1, Concord Woods	6	**02-05-359X**	903.0
Lots 1 - 3, Block 2, Radisson Meadow	28	**02-05-820X**	889.0
Lot 1, Block 1, Netta Shores 2nd Addition (16552 Bataan Street) Superseded by 09-05-4979A	10	**02-05-1002A**	905.6
Lot 2, Block 2, Oak Hill Estates (15439 5th Street) *	19	**02-05-1203A**	893.5
17363 Guadalcanal Street *	3	**02-05-1245A**	906.0
Lot 13, Block 1, Netta Shores (2931 166th Lane) *	10	**02-05-1382A**	-
Lots 7 - 9, Block 1, Larson's Heritage Oaks 6th Addition (superseded by 02-05-3107X)	33	**02-05-1743A**	894.1
16847 Lexington Avenue *	12	**02-05-1960A**	900.5
Lots 7 - 9, Block 1, Larson's Heritage Oaks 6th Addition	33	**02-05-3107X**	894.1
Lot 8, Block 2, Rustic Acres (17717 177th Lane) *	5	**02-05-3332A**	902.3
Lot 1, Block 5, Netta Shores Addition (2902 166th Lane) *	10	**02-05-3549A**	905.6
Lot 6, Block 1, Maple Ridge (3217 149th Avenue)	27	**03-05-1441A**	892.4
Lots 1 - 3, Block 1, Landborg Industrial Park	8	**03-05-1484A**	-
Lot 10, Block 1, Meadow Park (1849 164th Lane) *	16	**03-05-1488A**	903.0
Lots 1 - 8, Block 1, Cottages of Heritage Oaks	32	**03-05-1531A**	894.2
Lot 1, Block 1, Maple Ridge (3065 149th Avenue) *	27	**03-05-1532A**	892.4
Lots 5, 6, 13 and 14, Block 1; Lots 9 - 11, Block 2, Larson's Heritage Oaks West	32 & 33	**03-05-1562A**	894.7
Lot 9, Block 2, West Coon Lake Shores Estates (17723 Oakland Drive) *	3	**03-05-1628A**	906.0
Woodland Bluffs Addition	3 & 4	**03-05-2018P**	-
Lot 1, Block 1, Pheasant Run 2nd Addition (643 154th Avenue) *	19	**04-05-217A**	-
Lot 1, Block 1, Blackberry Bend (2929 171st Lane) *	10	**04-05-218A**	905.6
Lot 7, Block 1, Concord Woods (706 180th Lane)	6	**04-05-999A**	-
Lots 4 and 7, Block 1, Hidden Forest West 2nd Addition (3121 and 3118 137th Avenue)	34	**04-05-2238A**	894.4
17626 Swedish Drive *	4	**04-05-3689A**	904.2
Lots 1, 3, 4 and 6, Block 1, Naples Estates 2nd Addition	26	**04-05-4319A**	-
1640 169th Avenue *	8	**04-05-4350A**	901.3
Lot 3, Block 1, Chateau Meadows (14060 Taconite Street) *	33	**04-05-4378A**	894.1
1640 169th Avenue (superseded by 04-05-4350A) *	8	**04-05-A378A**	905.6
1528 Crosstown Boulevard *	5	**05-05-2003C**	904.7
Lots 3, 5 and 8, Block 1, Alexa Woods	26	**05-05-3451A**	896.0 (L3) 896.5 (L5) 897.1 (L8)
Lots 1, 2, 4, 6, 7, Block 1, Alexa Woods	26	**05-05-4494A**	896.0
Lot 3, Block 1, Bodinski Addition (15526 5th Street)	19	**06-05-0543A**	897.2
15605 University Avenue	19	**06-05-0544A**	-
Lot 2, Block 1, Woodland Preserve (2336 175th Lane) Lot 3, Block 1, Woodland Preserve (2344 175th Lane) Lot 4, Block 1, Woodland Preserve (2345 175th Lane) Lot 3, Block 3, Woodland Preserve (17424 Staples Street) Lot 4, Block 3, Woodland Preserve (2248 175th Avenue) Lot 5, Block 3, Woodland Preserve (2240 175th Avenue) Lot 6, Block 3, Woodland Preserve (2241 175th Avenue) Lot 7, Block 3, Woodland Preserve (2249 175th Avenue) Lot 8, Block 3, Woodland Preserve (2314 176th Avenue) Lot 9, Block 3, Woodland Preserve (2258 176th Avenue)	4	**06-05-B562A**	904.0 for all listed lots
17440 Lexington Avenue *	1	**06-05-BL57A**	903.1
Lot 4, Block 1, Rosewood Addition (1206 180th Lane) *	5	**06-05-BW19A**	-

TABLE IV-7

National Flood Insurance Program Map Amendments

Location	Section	Case Number	1% Annual (BFE)
Lot 3, Block 2, Jefferson Oaks Estates (13316 Quincy Street) *	31	**06-05-C354A**	-
Lots 1 - 3, Block 1; Lots 1, 3 - 9, Block 2, Hidden Meadows	7	**07-05-0435A**	-
Lot 2, Block 2, Hidden Meadows (851 170th Lane)	7	**07-05-3206A**	-
Lots 1 - 2, Block 1, Cook's Addition	6	**07-05-3393A**	-
Lot 1, Block 1, Acorn Ridge (17347 Polk Street) Lot 2, Block 1, Acorn Ridge (1045 173rd Lane) Lot 3, Block 1, Acorn Ridge (1113 173rd Lane) Lot 4, Block 1, Acorn Ridge (1127 173rd Lane) Lot 5, Block 1, Acorn Ridge (1131 173rd Lane) Lot 6, Block 1, Acorn Ridge (1052 173rd Lane) Lot 7, Block 1, Acorn Ridge (1038 173rd Lane)	5	**07-05-3567A**	905.8 (Lots 1 &2) 904.6 (Lots 3 &4) 903.6 (Lots 5-7)
Lot 5, Block 1, Royal Woods (4541 176th Lane) *	1	**07-05-5871A**	-
Lot 9, Block 1, Patricia's Wilderness Estates (3755 Bunker Lake Boulevard) *	26	**07-05-6104A**	-
Lots 1 - 6, Block 1; Lot 1, Block 2; Lots 1 - 9, Block 3; Lots 1 - 12, Block 4; Lot 1, Block 5; Park, Bluegrass Estates 2nd Addition	1	**07-05-6202A**	None Given
Lot 7, Block 1, Maple Ridge (3235 149th Avenue) *	27	**08-05-3663A**	-
Lot 7, Block 1, Netta Shores 2nd Addition (2829 Bataan Street) *	10	**08-05-4958A**	-
Lot 2, Block 1, Pheasant Run (15605 Jackson Street) *	19	**08-05-5013A**	-
Lot 6, Block 1, Netta Shores 2nd Addition (16525 Bataan Street) *	10	**09-05-1068A**	-
17633 Swedish Drive *	4	**09-05-1788A**	-
17363 Guadalcanal Street *	3	**09-05-2948A**	906.0
17655 Swedish Drive *	4	**09-05-3460A**	-
Lot 1, Block 1, Netta Shores 2nd Addition (16552 Bataan Street) *	10	**09-05-4979A**	-
Lot 5, Block 1, Netta Shores 2nd Addition (16555 Bataan Street) *	10	**10-05-0179A**	904.4
16901 Xylite Street *	10	**10-05-1090A**	904.4
Lot 3, Block 1, Royal Woods (4451 176th Lane) *	1	**10-05-1361A**	-
4940 173rd Avenue *	12	**10-05-2945A**	907.0
17862 Lexington Avenue *	1	**10-05-3893A**	-
Idlewood Addition (2125 175th Avenue) *	4	**10-05-4262A**	-
17679 Oakland Drive (superseded by 11-05-2129A) *	3	**10-05-5251A**	906.0
Lot 7, Block 5, Netta Shores Addition (16602 Edison Street) *	10	**10-05-5941A**	904.4
17866 Lexington Avenue *	1	**10-05-6684A**	-
17679 Oakland Drive *	3	**11-05-2129A**	905.2
Lot 2, Block 1, Netta Shores 2nd Addition (16610 Bataan Street) *	10	**11-05-2333A**	904.4
Lot 9, Block 3, Fox Tail Ridge (1724 149th Lane) *	20	**11-05-4441A**	-
Lot 1, Block 2, Rolling Meadows 2nd Addition (2151 165th Lane) *	9	**11-05-4603A**	-
Lot 11, Block 1, Lund's Pine Creek Estates (2421 148th Lane) *	28	**11-05-5383A**	888.9
1941 Bunker Lake Boulevard *	33	**12-05-2564A**	896.4
Lot 3, Block 2, Pheasant Run (15522 Jackson Street) *	19	**12-05-5837A**	-
Lot 12, Block 1, Netta Shores Addition (2939 166th Lane) *	10	**12-05-6764A**	-
Lot 9, Block 1, Pheasant Run (951 154th Avenue) (superseded by 13-05-1856A)	19	**13-05-1119A**	893.8
Lot 9, Block 1, Pheasant Run (951 154th Avenue)	19	**13-05-1856A**	893.8
4940 173rd Avenue garage *	12	**13-05-3107A**	-
Lot 1 and 2, Block 5, Hiawatha Beach (17644 Oakland Drive) *	3	**13-05-5017A**	905.2
Lot 2, Block 1, Stopher Addition (4917 171st Lane) *	12	**13-05-5475A**	-
Lot 3 - 5, Block 5, Hiawatha Beach (17646 Oakland Drive residence) *	3	**13-05-6136A**	905.2
Lot 3 - 5, Block 5, Hiawatha Beach (17646 Oakland Drive garage) *	3	**13-05-6898A**	905.2
17357 Guadalcanal Street NE §	3	**13-05-7656A**	
17035 Polk Street *	8	**13-05-8387A**	-
Lot 3, Block 1, Meadowlark Acres 2nd Addition (16965 Packard Street) *	12	**13-05-8680A**	907.5 (house) 908.3 (shed) 908.8 (garage)
17667 Oakland Drive *	3	**14-05-3007A**	-
Lot 3 - 8, Block 1, Lake Life Estates (superseded by 14-05-8178A)	24	**14-05-6186A**	-
Lot 1, Block 1, Meadowlark Acres (4625 170th Lane) *	12	**14-05-8065A**	-
Lot 3 - 8, Block 1, Lake Life Estates	24	**14-05-8178A**	-
Lot 1, Block 3, Idelwood 3rd Addition (1809 176th Avenue) *	4	**14-05-8613A**	-
Lot 1, Block 1, Ham Lake Industrial Park 4th Addition (16030 Central Avenue) *	17	**14-05-9160A**	-
Lot 2, Block 3, Idlewood 3rd Addition (1821 176th Avenue) *	4	**14-05-9456A**	-
Lot 1, Block 1, Pheasant Run (960 157th Avenue)	19	**15-05-0976A**	-

TABLE IV-7

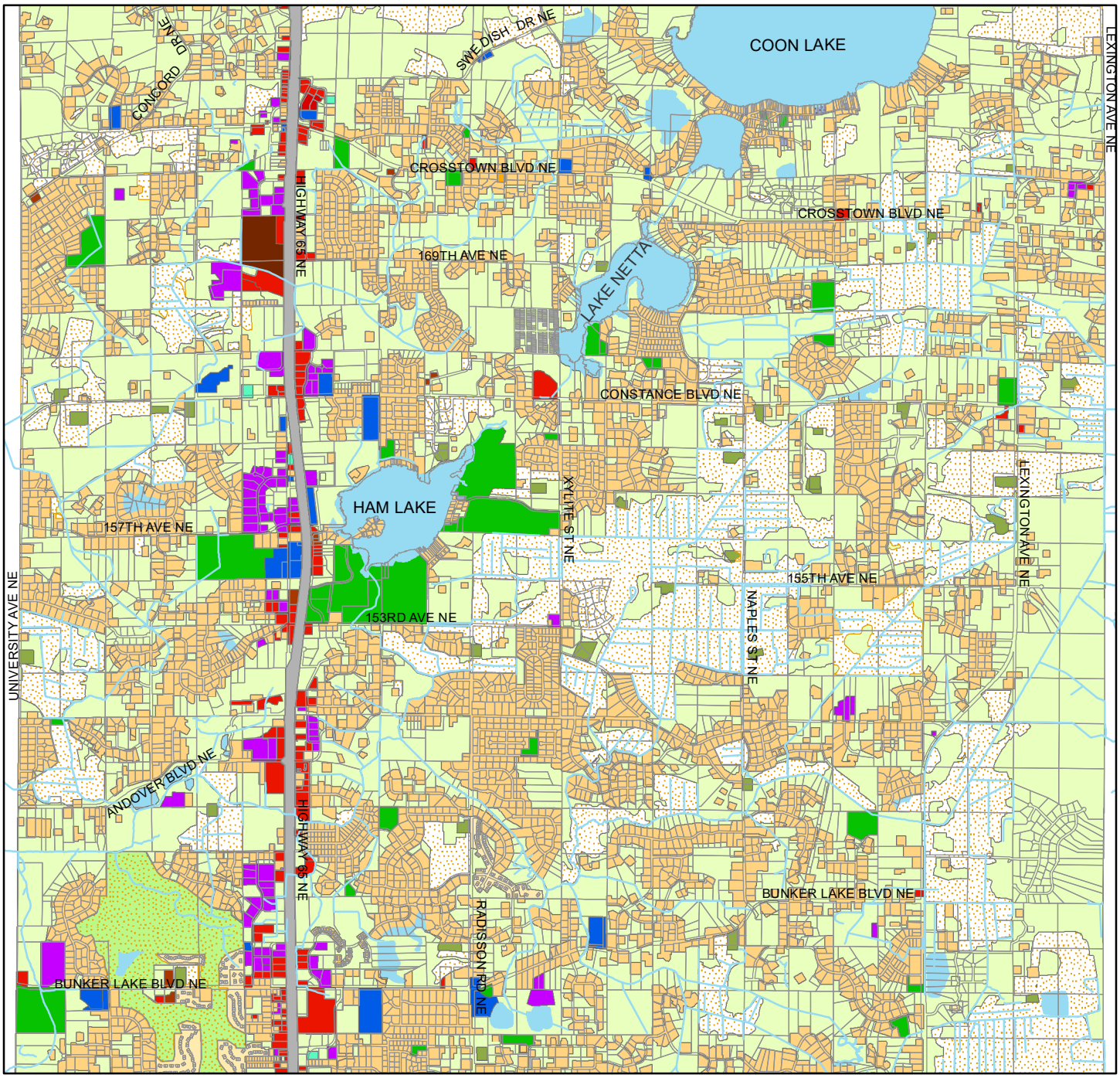
National Flood Insurance Program Map Amendments

Location	Section	Case Number	1% Annual (BFE)
Lot 2, Block 3, Meadowlark Acres (4910 170th Lane house and garage) *	12	**15-05-2517A**	-
Lot 16, Block 2, Lund's Pine Creek Estates (2506 149th Avenue) *	28	**15-05-1422A**	-
Lot 2, Block 3, Meadowlark Acres (4910 170th Lane) *	11	**15-05-3861A**	-
Lot 6, Block 2, Rendova Ridge (15223 Shenandoah Street) *	23	**15-05-5964A**	-
18001 University Avenue*	6	**15-05-6640A**	913.6
Lot 3, Block 2, Kulzer Woodland Addition (3659 Bunker Lake Boulevard) *	26	**16-05-1280A**	-
Lot 3, Block 4, Netta Shores 2nd Addition (16620 Bataan Street) *	10	**16-05-1858A**	-
Lot 4, Block 1, Landborg Industrial Park (17162 Lincoln Street) *	8	**16-05-2545A**	-
Lot 1, Block 2, Crosstown Shopping Center (17635 Central Avenue) * Lot 1, Block 2, Crosstown Shopping Center (17639 Central Avenue) * Lot 1, Block 2, Crosstown Shopping Center (17565 Central Avenue) *	5	**16-05-2590A**	-
16732 Lexington Avenue *	12	**16-05-2676A**	-
1843 169th Avenue *	9	**16-05-3013A**	-
Lot 6, Block 1, Rustic Acres (1025 178th Lane) *	5	**16-05-3333A**	-
Lot 1, Block 2, Oak Hill Estates (15465 5th Street) *	19	**16-05-3565A**	-
2220 165th Lane *	9	**16-05-3739A**	-
Lot 4, Block 4, Idlewood 3rd Addition (17557 Isanti Street) *	4	**16-05-3776A**	-
Lot 1, Block 1, Crosstown Shopping Center (17646 Highway 65) *	5	**16-05-4024A**	-
Lot 4, Block 8, Birch View Acres (17229 Eveleth Street) *	8	**16-05-4086A**	-
16864 Lexington Avenue *	12	**16-05-4135A**	-
Lot 1, Block 3, Pheasant Run (742 154th Avenue) *	19	**16-05-4188A**	-
Lot 6, Block 2, Fox Tail Ridge (14953 Chisholm Street) *	20	**16-05-4322A**	-
Lot 1, Block 6, Lund's Pine Creek Estates (2514 148th Lane) *	28	**16-05-4393A**	-
1503 157th Avenue *	17	**16-05-4435A**	-
1755 176th Lane *	5	**16-05-4641A**	-
Lot 3, Block 1, Hastings Hill (15248 Hastings Street) *	20	**16-05-4873A**	-
Lot 5, Block 3, Fox Tail Ridge (1614 149th Lane) *	20	**16-05-5068A**	-
Lot 2, Block 4, Braastad Farms (15941 Madison Street) *	18	**16-05-5132A**	-
1555 166th Avenue *	8	**16-05-5438A**	-
Lot 12, Block 2, Lund's Pine Creek Estates (2527 148th Lane) *	28	**16-05-5955A**	-
1953 169th Avenue *	9	**16-05-5791A**	-
1605 166th Avenue *	8	**16-05-6518A**	-
Lot 4, Block 3, Fox Tail Ridge (1560 149th Lane) *	20	**16-05-6784A**	-
Lot 4, Block 1, West Coon Lake Shores Estates (17766 Oakland Drive) *	3	**16-05-7260A**	-
Lot 4, Block 1, Royal Woods (4513 176th Lane) *	1	**17-05-0264A**	-
4950 173rd Avenue *	12	**17-05-1605A**	-
Lot 8, Block 1, Bunker Meadows (1819 135th Lane) *	33	**17-05-2646A**	-
925 Constance Boulevard *	18	**17-05-3884A**	-
Lot 2, Block 5, Crosstown Shopping Center (17615 Chisholm Street) *	5	**17-05-3982A**	-
Lot 6, Block 3, Majestic Oaks West (13831 Washington Street) *	31	**17-05-4271A**	-
1601 153rd Avenue *	20	**17-05-4374A**	-
1015 154th Avenue *	20	**17-05-5387A**	-
17346 Xylite Street *	4	**17-05-5598A**	-
3038 Bunker Lake Boulevard	34	**17-05-6014A**	-
L5 B1 Rosewood Addition (1220 180th Lane) *	5	**17-05-6538A**	-
L7 B2 Oak Hill Estates (15338 Terrace Road) *	19	**18-05-1122A**	-
250 134th Avenue *	31	**18-05-1341A**	-
2251 174th Avenue *	4	**18-05-1570A**	-
L1 B3 Meadowlark Acres (4830 170th Lane)	12	**18-05-3961A**	-

* Removed Structure Only

§ No Amendment, elevation identified only

IV-4 Existing Land Use



Streams and Ditches
Ham Lake Parcel

2018 Existing Land Use

- Agriculture
- Commercial
- Farmstead
- Golf Course
- Industrial
- Institutional
- Manufactured Housing Park
- Mixed Use Residential
- Mixed Use Commercial
- Office
- Park, Open Space
- Open Water
- Major Highway
- Residential Multi-Family
- Residential Single Family-Detached
- Residential Townhome
- Seasonal Recreational
- Undeveloped

Comprehensive Plan 2018 Update

0 2,500 5,000 10,000 Feet

MAP DATE: 8/27/2020

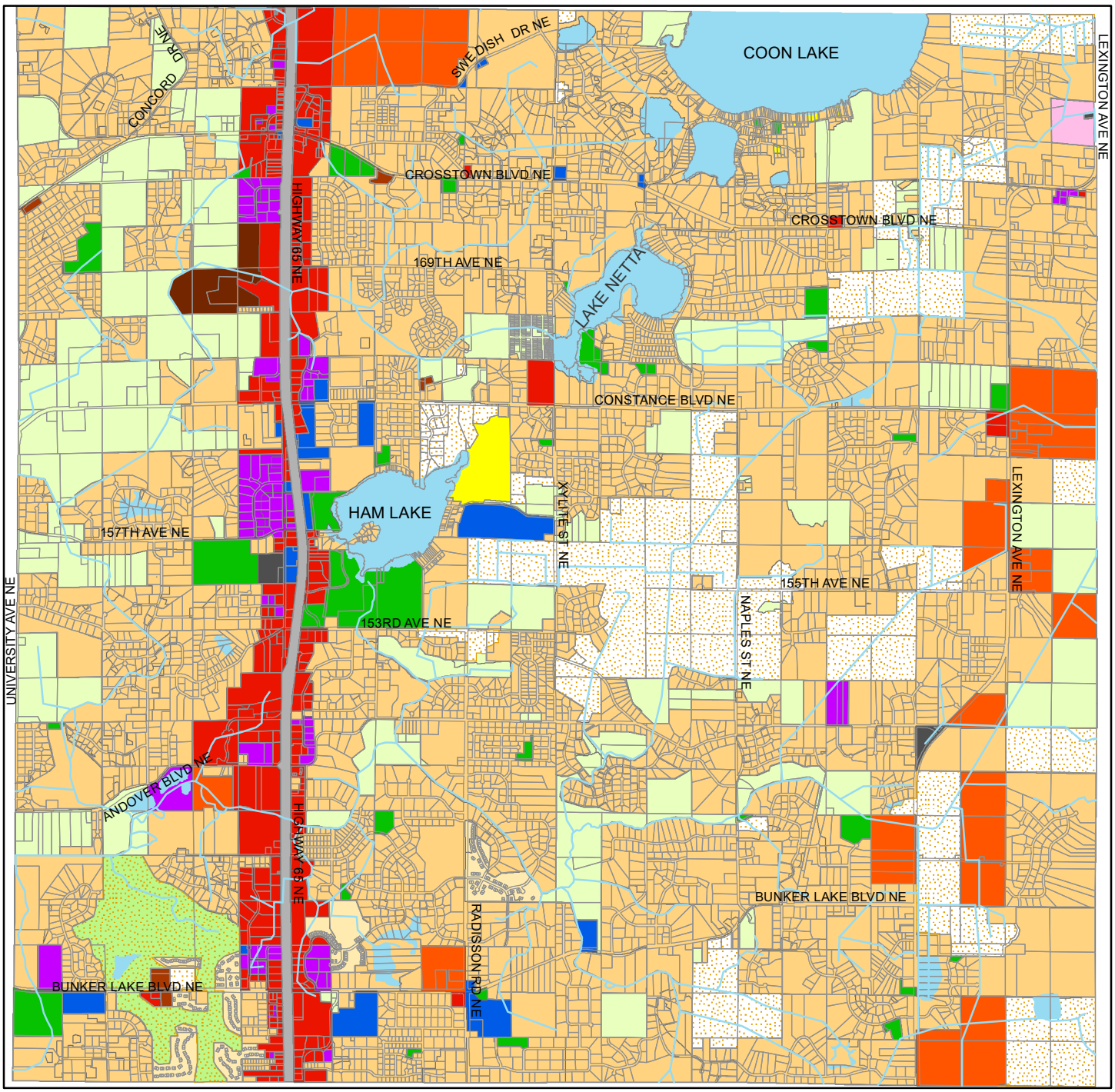
Sources:
RFC Engineering, Inc.
Coon Creek Watershed District
Anoka County
Metropolitan Council
Minnesota Natural Resources

HAM LAKE, MINNESOTA

RFC Engineering, Inc. Consulting Engineers

G:\SWMP\Map 4-4 Existing Land Use.mxd

Map IV-5 2040 Future Land Use



- Streams and Ditches
- Ham Lake Parcel
- Utility
- Seasonal Recreational
- Multiple Use Option
- Government
- Agriculture
- Commercial
- Farmstead
- Golf Course
- Industrial
- Institutional
- Manufactured Housing Park
- Park, Open Space
- Open Water
- Major Highway
- Residential Multi-Family
- Residential Single Family
- Residential Townhome
- Undeveloped

Comprehensive Plan 2018 Update

0 2,500 5,000 10,000 Feet

MAP DATE: 8/27/2020

Sources:
RFC Engineering, Inc.
Coon Creek Watershed District
Anoka County
Metropolitan Council

HAM LAKE, MINNESOTA

RFC Engineering, Inc. Consulting Engineers

G:\SWMP\Map 4-5 Future Land Use.mxd

HAM LAKE, MINNESOTA

MPCA POLLUTANT SOURCE LOCATIONS MAP VI-6

COON LAKE
LAKE NETTA
HAM LAKE
CONCORD DR NE
SWEDISH DR NE
CROSSTOWN BLVD NE
HIGHWAY 65 NE
169TH AVE NE
CONSTANCE BLVD NE
LEXINGTON AVE NE
157TH AVE NE
XYLITE ST NE
155TH AVE NE
NAPLES ST NE
153RD AVE NE
UNIVERSITY AVE NE
ANDOVER BLVD NE
BUNKER LAKE BLVD NE
RADISSON RD NE

LEGEND

activity

- Aboveground Tanks
- Brownfields, Petroleum Brownfield
- Brownfields, Voluntary Investigation and Cleanup
- Construction Stormwater
- Hazardous Waste
- Hazardous Waste, Minimal quantity generator
- Hazardous Waste, Small quantity generator
- Hazardous Waste, Very small quantity generator
- Industrial Stormwater
- Multiple Activities
- Petroleum Remediation, Leak Site
- SSTS
- SSTS, Licensed Organization
- Site Assessment
- Underground Tanks
- Wastewater
- Wastewater, Municipal SDS Permit
- Lot Lines / Right-of-Way
- Ditches
- Lakes

INFORMATION RECEIVED FROM MPCA AUG 20

0 1,500 3,000 6,000 Feet

MAP DATE: 1/12/2021

Sources:
- Anoka County Engineering & Surveying Departments
- Minnesota Pollution Control Agency
- RFC Engineering, Inc.

RFC Engineering, Inc.
Consulting Engineers

G:\SWMP\Map 4-6 MPCA Pollutant Source.mxd

V. ESTABLISHMENT OF GOALS AND POLICIES

The City of Ham Lake has developed a number of goals and policies that conform to the overall purpose that is specified in the Permit and Minnesota Statute Section 103B.201. The City's goals and policies have been developed to compliment the Watershed District, Watershed Management Organizations, County, Regional, State and Federal goals and policies.

Goals are the desired results toward which efforts are directed. A policy is defined as a governing principle that provides the means for achieving established goals. These goals and policies have been developed to preserve and to use natural water storage and retention subsystems in order to:

1. Minimize, to the greatest extent, the public expenditures necessary to control excessive volumes and rates of runoff.
2. Prevent flooding from surface water flows.
3. Maintain or improve the quality of water in lakes and streams located within or immediately downstream of the City.
4. Prevent erosion and sedimentation.
5. Protect wetlands in conformance with the requirements of the Wetland Conservation Act (WCA), or as amended.
6. Protect and enhance fish and wildlife habitat and water recreation.
7. Educate and inform the public on pertinent water resource management issues and increase public participation in water management activities.
8. Provide a mechanism through which City public and private ditch systems can be managed.
9. Comply with the MS4 and Watershed District/Watershed Management Organization Permit requirements.

The above goals are summarized for different subject areas as follows:

A. WATER QUANTITY

GOALS

1. Minimize, to the greatest extent, the public expenditures necessary to control excessive volumes and rates of runoff.
2. Prevent flooding from surface water flows.

POLICIES

1. The retention capacity of the existing drainage system will be optimized.
2. New developments will provide detention using the rate and volume control measures indicated in the technical criteria in the Implementation Programs and Priorities section.
3. Regional detention and/or on-site detention will be used to reduce flooding, control discharge rates and provide necessary storage volumes. Lake Amelia, located in Section

33, and Lake Diane, located in Sections 32 and 33, are man-made lakes located to the northwest of the intersection of Bunker Lake Boulevard and Radisson Road. Sedimentation control is required prior to discharging storm runoff into these two lakes. Sedimentation control will also be required prior to discharging storm runoff into man-made lakes in Sections 18, 24, 29, 30, 33 and 36.

4. The design of storm water facilities will consider and identify overflow location to prevent property damage from extreme water levels. Landlocked areas will be evaluated for available storage volume and emergency outlet/overflow routes. Provide storage for back to back 100-year events if there is no outlet/overflow for the pond/wetland. All new developments will provide emergency outlet/overflow routes. Outlets provided for currently landlocked basins will comply with the WCA rules and regulations and include an analysis addressing the impact and potential impact of downstream flooding due to additional flow volumes. Emergency outlets set at the 100-year-elevation are exempt from the analysis addressing the impact and potential impact of downstream flooding due to the additional flow volume requirement.
5. Minimum building elevations will meet the technical criteria in the Implementation Programs and Priorities section.
6. Hydrologic studies will utilize hydrograph methodology.
7. Hydrologic studies will be based on the ultimate development of the entire tributary drainage area.
8. All storm drain and ditch analyses and design will be based on the 10-year rainfall event. Time of concentration will be calculated, not estimated.
9. Basin and overflow facilities will be designed for the 100-year, 24-hour rainfall event as required in the technical criteria in the Implementation Programs and Priorities section.
10. The City will work with the County, Watershed District and Watershed Management Organizations to provide for joint effort on sizing of culverts and ditches, and for system maintenance.
11. The City will maintain the adopted Floodplain Ordinance (Ham Lake Ordinance 15-27) conforming to State regulations. The Floodplain Ordinance is in Appendix B.
12. Preserve the original design capacities of the existing drainage system with proper maintenance.
13. Site development involving outside storage of soluble, toxic or buoyant material within the 100-year 24-hour storm floodplain will not be allowed.
14. NOAA Atlas 14, Volume 8 and subsequent updates, are to be used to calculate precipitation amounts and stormwater runoff rates.

B. WATER QUALITY

GOALS

1. Maintain or improve the quality of water in lakes and streams located within or immediately downstream of the City.
2. Reduce pollutants in any storm water runoff from construction activities.
3. Detect and eliminate illicit discharges.
4. Prohibit non-storm water discharges into the storm sewer system.

5. Detect and address non-storm water discharges.
6. Ensure compliance with erosion control standards.
7. Provide secondary aid to Coon Creek Watershed District and Upper Rum and Sunrise Watershed Management Organization in curtailing any excessive TMDL found within Ham Lake.

POLICIES

1. Natural vegetation will be preserved to the greatest practical extent.
2. Erosion control plans will be required for all land development disturbance activities. The erosion control plans will be consistent with the criteria established in the Minnesota Stormwater Manual, and all subsequent changes, Ham Lake City Codes and the technical criteria in the Implementation Programs and Priorities section. A separate submittal may be required by the appropriate government agencies.
3. Erosion and sediment control measures on the grading, drainage and erosion control plan must be installed prior to site and utility work.
4. Storm water detention basins will be used to maximize the enhancement of water quality by removing sediment and nutrients from runoff.
5. Outlet control structure will be used to maximize detention time and enhance sediment removal and nutrient assimilation.
6. Storm water facility outlets will be designed to prevent debris from entering the conveyance system, impeding the flow path and to control floatables from leaving the site.
7. All existing storm drain inlets and conveyance systems shall be adequately protected from erosion and sedimentation with methods consistent with the technical criteria in the Implementation Programs and Priorities section.
8. Temporary sediment basins for runoff will be constructed as needed in areas of new development to prevent sediment from leaving the construction area.
9. Establishment of temporary and permanent vegetation will meet the technical criteria in the Implementation Programs and Priorities section.
10. All disturbed areas will be protected from storm water runoff in a manner consistent with the technical criteria in the Implementation Programs and Priorities section.
11. The City shall develop and maintain records of all on-site wastewater systems and wells, active and abandoned.
12. Apply to the MPCA for NPDES Phase II Permit for all construction site activities that result in a land disturbance of equal to or greater than one acre and less than five acres.
13. Incorporate potential water quality impacts in site plan review.
14. Ensure private and public SSTS compliant systems with regular inspections within Ham Lake

C. WETLANDS

GOALS

1. Protect wetlands in conformance with the requirements of the WCA or as amended.

2. Protect and enhance fish and wildlife habitat and water recreation.

POLICIES

1. Alteration of wetlands is to be minimized. Alteration may be allowed on an individual basis if the alteration meets the requirements of the federal, state and local laws and regulations, the WCA and the technical criteria of the Implementation Programs and Priorities section.
2. The actual boundaries of each wetland must to be delineated by a certified wetland delineator and verified in the field by the LGU prior to any development activities which might affect the wetland. A wetland delineation report will be submitted to the LGU and the City Engineer.
3. Any person proposing or carrying out filling or other development activities in or affecting wetland areas will obtain a City, Watershed District, Watershed Management Organization, DNR and/or a U.S. Army Corps of Engineers (COE) permit(s).
4. Wetlands will be protected whenever possible to preserve the wetlands ability to assimilate nutrients from runoff. All development activities will meet the requirements of the WCA and the technical criteria of the Implementation Programs and Priorities section.
5. Buffer zones of a natural strip of land created for wetland mitigation will be maintained around detention basins and mitigated wetlands to provide habitat for wildlife, reduce erosion and reduce nutrient transfer to water courses. The minimum average width of a buffer zone is 25 feet, with a minimum width of 20 feet, up from the permanent pool (dead storage). The buffer zone will be located within the drainage easement. Upper Rum River Watershed Management Organization and Sunrise River Watershed Management Organization has their own wetland buffer requirements and will be required to be followed within their respective boundaries.
6. When modifying wetlands, existing habitats shall be considered, maintained and enhanced, or new habitats will be developed.
7. The water surface bounce of wetland detention basins will be avoided or minimized to prevent adverse habitat changes.
8. The State, County and City shall work together to enhance water-based recreation by promoting the improvement of public boat access to City lakes.

D. PUBLIC EDUCATION

GOALS

1. Educate and inform the public on pertinent water resource management issues and increase public participation in water management activities.
2. Inform citizens about the impacts polluted storm water runoff discharges can have on water quality.
3. Inform public of hazards associated with illegal discharges.

POLICIES

1. The City shall actively develop and implement a community education program relating to preserving and improving water quality.
2. The City shall actively develop and implement an awareness program on the proper use of fertilizer.
3. The City shall actively develop and implement an Education Program addressing each Minimum Control Measure (MCM).
4. The City shall make available Guidelines for Development.

E. DITCH SYSTEMS

GOALS

1. To provide a mechanism through which City public ditch systems will be managed, for the purpose of protecting local water resources from degradation, including private ditches that serve existing development and multiple owners.

POLICIES

1. Develop a ditch system management policy whereby public ditches and private ditches used by public runoff can be maintained and/or purchased.
2. Anoka County is to maintain County Ditches within the URRWMO and SRWMO located within the City. CCWD took over the County Ditches within the Watershed District.
3. CCWD is to maintain CCWD ditches located within the City.
4. The City is to obtain drainage easements for drainage areas and ditches which service the City, public and multiple owners except for ditches that fall under the jurisdiction of the County or the CCWD.
5. Anoka County shall obtain drainage easements for ditches under their jurisdiction.

F. RELATION OF GOALS AND POLICIES TO LOCAL, REGIONAL, STATE AND FEDERAL PLANS, GOALS AND PROGRAMS

The City of Ham Lake Engineering Department is responsible for the planning, design, inspection and administration of roadway improvements, including protection of surface waters. The Engineering Department coordinates with outside agencies regarding management and conservation of the City's water features. The agencies they work with include:

- Anoka County
- Anoka Conservation District (ACD)
- Coon Creek Watershed District (CCWD)
- Upper Rum River Watershed Management Organization (URRWMO)

- Sunrise River Watershed Management Organization (SRWMO)
- Minnesota Pollution Control Agency (MPCA)
- Board of Water and Soil Resources (BWSR) and the Wetland Conservation Act (WCA)
- US Army Corps of Engineers (USACE)
- Minnesota Department of Natural Resources (MnDNR)
- Minnesota Department of Transportation (MnDOT)
- US Environmental Protection Agency (EPA)
- Federal Emergency Management Agency (FEMA)
- Natural Resources Conservation Service (NRCS)
- U.S. Geological Survey

The City has partnered with the ACD, Anoka County, CCWD, MnDNR and SRWMO for educational articles in the local Ham Laker newsletter.

While the City of Ham Lake places a high importance on partnerships and coordination, avoiding duplication is equally important. Water resources in Minnesota are managed through a complex network of agencies. This plan is intentionally focused upon those issues that are not already handled by other entities, are best handled by a local entity or through a partnership that includes the local entity, and are most directly in the jurisdiction of the Coon Creek Watershed District, SRWMO and URRWMO.

The City has a strong partnership with the CCWD to ensure successful implementation of water quality improvement projects thru plan review and construction observation. From the CCWD – "The District's principle strategy is 'unified action with our collaborators". Vital to the day-to-day effective implementation of this strategy are close working relationships with the other MS4s in the District. Unified Action with our partners is best achieved through informal partnerships".

The City partners with the ACD for any potential wetland violations.

The City has two appointed residents that are on the SRWMO Board. The City also partners with the URRWMO, and has two appointed residents that are on the URRWMO Board.

While the rules, policies and guidelines of these agencies are not restated in this plan, they are applicable and used in the projects, programs and planning within the City of Ham Lake. In addition, the Minnesota Stormwater Manual, written by the MPCA, is incorporated into the plan.

VI. ASSESSMENT OF PROBLEMS AND CORRECTIVE ACTIONS

A. 1994/1995 PROBLEM AREA QUESTIONNAIRE

Problem areas have been tabulated from the 1994/1995 questionnaire distributed to City Council, City officials, DNR, COE, Anoka County Highway Department, ACD, Watershed District, Watershed Management Organizations and from fieldwork. These problem areas have been corrected or are currently being studied for potential improvements and repairs. The 1994/1995 Problem Area Questionnaire results and dates completed or if ongoing maintenance is required are attached in Appendix C. See Map VI - 1, Drainage Problem Areas, for locations.

B. AREAS OF POTENTIAL CONTAMINATION

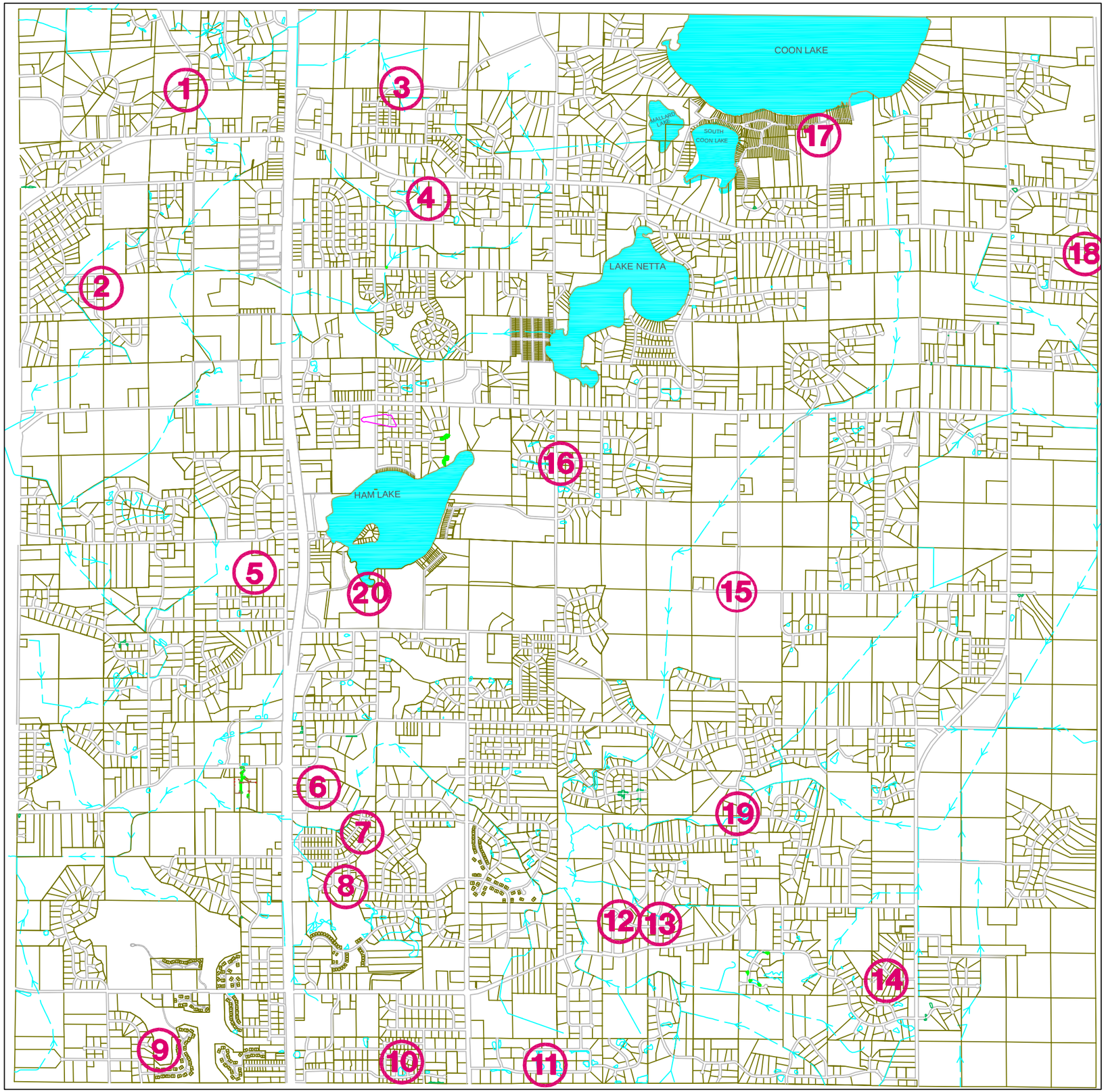
Some rural residences and commercial properties still make use of outdated and/or poorly maintained subsurface sewage treatment systems. These systems may have failing septic tanks, failing drain fields and/or sludge buildup. Tank deterioration or failure and drain field ponding can cause contamination of the area groundwater, lakes, streams and wetlands. Once failing systems have been reported to the City and to the Anoka County Public Health & Environmental Services, owners of the failing systems are required to bring their system into compliance with State septic system regulations. The City of Ham Lake does not require septic systems to be inspected at the point of sale of the property. The Anoka Conservation District administers grant funds from the MPCA to correct failing septic fields.

Increased residential development will result in an increased number of on-site subsurface sewage treatment systems which in turn may increase the potential for groundwater contamination. An increase in residential development denotes an increase in residential drinking water wells. As long as developments adhere to current state, county and local government regulations regarding on-site water supply and subsurface sewage treatment systems, no problems of this type are expected to be caused by new developments.

The main environmental hazards in the City of Ham Lake are from non-point sources of pollution such as surface water runoff from agricultural, urban areas and construction areas. The surface water runoff from these areas can cause a degradation of water quality in lakes and wetlands due to overloading of sediment, nutrients, toxic chemicals and fecal coliform bacteria.

Peterson Farm's (MPCA ID VP13660) is located at 1719 Bunker Lake Boulevard. The site was entered into the Voluntary Investigation Cleanup Program on October 31, 2000. The MPCA issued a No Further Action letter May 23, 2002.

The Deer Haven dump (MPCA ID VP16610) is located within the Deer Haven Hills Development in the vicinity of 148th Lane and Yancy Street. The site was entered into the Voluntary Investigation Cleanup Program on September 17, 2002. The MPCA issued the No Further Action letter on May 25, 2004.



HAM LAKE MINNESOTA

DRAINAGE PROBLEM AREAS MAP VI-1

LEGEND

NUMBERS CORRESPOND TO APPENDIX C

LOT LINES

WATER–LAKES/STREAMS/DITCHES

0 1,500 3,000 6,000 Feet

MAP DATE: 8/27/2020

PREPARED BY:

RFC Engineering, Inc.
Consulting Engineers

L:\Watershed\Mapping\VI-1.DWG

The Opal Street property (MPCA ID VP16220) is located at 17325 Opal Street. The MPCA considers the site inactive, with the No Action letter issued November 9, 2009.

The Robert Anderson parcel (MPCA ID VP19490) is located within the Fox Run 5th Addition north of 155th Avenue (former 4109 155th Avenue). The site was entered into the Voluntary Investigation Cleanup Program on August 18, 2004. The MPCA considers the site inactive, with a No Further Action letter sent November 6, 2006.

The Anoka County Highway Department located an old farm dump, which is identified as MPCA ID VP26180, when excavating a storm water retention pond at 1745 Bunker Lake Boulevard for the Bunker Lake Boulevard improvement project. The site was entered into the Voluntary Investigation Cleanup Program on May 20, 2010. The MPCA considers the site inactive, with the Response Action Plan approval and Phase II approval both on May 28, 2010.

There are four unpermitted dumps located in the City of Ham Lake. The Erickson dump is located south of the intersection of Bunker Lake Boulevard and Naples Street. Flamingo Terrace dump is located southwest of the intersection of 169th Avenue and Highway 65. The McKinley School dump is located south of Constance Boulevard and west of Hastings Street. The unpermitted dump identified as Peterson Dump-2 is located north of 140th Avenue west of Kenyon Street.

C. HYDRAULIC ANALYSIS

The City requires the use of the best available hydrologic data for stormwater modeling. The Coon Creek Watershed District has the best available hydrologic model for that portion of the City within the Coon Creek Watershed District. Anoka County maintains the best available hydrologic model for Upper Rum River and Sunrise Watershed Management Organizations.

D. STORM STRUCTURAL BMP EVALUATION

The City inspects and evaluates all public storm pond outfall control structures throughout a 5 year cycle as a requirement of the MS4 permit. Each detention pond is evaluated for sediment levels and is restored to construction levels as necessary. Any failing structures are remedied by Public Works or as a CIP project as needed.

VII. FINANCIAL CONSIDERATIONS

The City of Ham Lake has a limited amount of resources available for implementing storm water pollution prevention and water resource management practices. The highest management priorities are pollution prevention, storm water runoff and water quality management.

Funding sources for water quantity and water quality improvement projects will be determined for individual projects by the City. Possible funding sources include:

1. Special assessments for local improvements made under the authority granted by Minnesota Statute Chapter 429. Properties can be assessed annually to fund storm water management plans.
2. Revenue generated by Watershed Management Special Tax Districts provided for under Minnesota Statute Chapter 473.882.
3. For projects being completed by, or in cooperation with, the CCWD, the URRWMO and/or the SRWMO, funds could be obtained from Watershed District/Watershed Management Organization levies associated with their administrative funds, construction funds, preliminary funds, repair and maintenance funds and/or survey and data acquisition funds, as provided for in Minnesota Statute Section 103D.905, Funds of the Watershed District.
4. General Fund (Maintenance).
5. City funds for budgeted projects.
6. User fees.
7. Special benefit charges.
8. Groups such as sportsman's clubs and nature groups for projects that will enhance wildlife and other preservation objectives.
9. Grant and loan monies that may be secured from various local, regional, County, State or Federal agencies for some elements of the SWPPP, depending on the BMPs selected and the location.
10. Storm Water Utility Fees - Utility service charges are rates billed to customers for providing storm water management services. The service charges could be flat rates, or variable rated based on classes of customers. Utility service charges could represent a dedicated source of funding and an ongoing method of funding some or all storm water management programs.
11. The Drainage Fund (a.k.a. Future Drainage Fund and Drainage Improvement Fund) per Ham Lake City Code 10-420C.
12. Debt financing – The City could issue debt to finance the SWPPP, including revenue bonds and general obligation bonds.
13. Local Improvement – Under this type of funding system, individual properties benefited by storm water projects are assessed to fund the project.
14. Inspection Fees – plan review and inspection fees would allow the City to recover some or all of the direct cost associated with performing design reviews for pre and post construction BMPs.
15. Developer Fees – The developers construct needed facilities as a condition of development and bear associated costs.

VIII. IMPLEMENTATION PROGRAM AND PRIORITIES

Based on the information developed in the previous sections, the City of Ham Lake has developed a local surface water management program that reflects the needs and concerns of the City Council, City staff and private citizens, as well as the funding capabilities of the City. A listing of the studies, programs and capital improvements that have been identified as necessary to respond to the water resource needs within the City are outlined in this Section. See the Ham Lake City Ordinances Article 11 for complete rules regarding storm water requirements. Any rule that overlap in requirements between the City, and an overlapping Watershed, the more restrictive shall apply. While the City coordinates its review comments with the appropriate governmental agencies, a separate submittal may be required for approval to the appropriate agency.

A copy of the CCWD's Rules adopted in 2009 amended in 2015 to require NAVD 1988 datum elevations in all submittals. You can find the rules that apply within the district at the following website.
http://www.cooncreekwd.org

The SRWMO Stormwater Standards from the November 2009 Fourth Generation Water Resource Management Plan as adopted November 2019 and is located at the following website
http://www.srwmo.org

The URRWMO Stormwater Infiltration Standards from the Comprehensive Watershed Management Plan dated, March 2007 and amended February 3, 2009 are available at the following website
http://www.urrwmo.org

A. CURRENT IMPLEMENTATION ACTIVITIES

Table VIII-1 outlines the surface water management practices that are already in place in the City. These will continue in the same manner, modified as necessary with changes to priorities and new requirements.

Table VIII-1. Current Implementation Activities for Stormwater. (Cost: Low<$5000, Medium:$5,000-$75,000, High>$75,000)

Required By	Description	Time Frame	Cost Estimate
MS4	Stormwater articles in the Ham Laker	1/Qtr	Low
MS4	Presentation to City Council and City Staff	1/Yr	Low
	Collaborate with watershed district and watershed management organizations on construction site management and wetland concerns.	Ongoing	Low
MS4	Provide communication channel to residents regarding stormwater issues	June	Low
MS4	Make SWPPP available online and at City Hall	Complete	Low
MS4	Enforce City Code related to erosion control and stormwater	Ongoing	Low

	runoff during and after construction projects		
MS4	Construction Site Inspections on road reconstruction projects and proposed developments in the City	Ongoing	Low
MS4	Ensure stormwater compliance for proposed developments during design and construction phases	Ongoing	Low
MS4	Stormwater management system inspections and mapping	Ongoing	Low
MS4	Street Sweeping	2x/Yr	Medium
MS4	Storm sewer repair and cleaning	Ongoing	Medium
MS4/CCWD	Ditch Maintenance	Ongoing	Medium
MS4	Stormwater pond Maintenance	Ongoing	Medium

B. FUTURE IMPLEMENTATION ACTIVITIES

Table VIII-2 outlines the surface water management practices that are proposed in this SWMP and the City's SWPPP that will begin being implemented.

Table VIII-2. Proposed Implementation Activities for Stormwater. (Cost: Low<$5000, Medium:$5,000-$75,000, High>$75,000)

Required By	Description	Time Frame	Cost Estimate
MS4	Verify that City documents and procedures reflect the Post-Construction Stormwater Management section of the SWPPP	Ongoing	Low
MS4	Ensure inspection and maintenance staff document their training in inspection and maintenance procedures (construction sites, permanent stormwater management, buildings, grading and stabilization)	Ongoing	Low
MS4	Update current procedures, documents and checklists used for construction site inspections to ensure they meet all requirements in the MS4 Permits	Ongoing	Low

MS4	Add additional stormwater BMPs to City mapping applications	Ongoing	Low
MS4	Develop procedures and schedules for assessing City ponds/BMPs	Complete	Low
CIP	Upgrade roads to address drainage concerns	Ongoing	High
MPCA	Obtain Smart Salting training and maintain Level 1 and Level 2 certification	2020	Low
MS4	Upon completion of updating the SWPPP to be in compliance, make minor amendments to this SWMP	2020	Low
CIP	Update storm sewer and culverts as needed	Annual	Medium

Currently there are no impairments for chlorides within Ham Lake. Future impairments may require the city to modify the snow removal policy. The nature and scope of reducing chlorides will be determined at that time.

C. FINANCIAL CONSIDERATIONS

The City of Ham Lake recognizes that ongoing capital improvements will be required to solve some of the water resources problems within the City. For the purposes of this document, the City has summarized needed capital improvements of which it is aware of, along with administrative studies needed to assess the scope of capital improvements of watershed-wide significance. To develop the capital improvements, the City first identified existing and potential problems, then assessed the need for further study and resulting capital improvements. The City staff defined the conceptual scope of work involved in each study or capital improvement. Total estimated costs and funding sources were then evaluated, or are to be evaluated. The capital improvement projects are broken down into City wide capital improvements (see Table VIII - 3, Capital Improvement Projects). Cost estimates provided are for planning purposes only and may vary greatly for final actual costs. Detailed feasibility studies have not been completed for these projects, therefore cost estimates are subject to change. The timeframe of the improvements is subject to change. The City will share information about capital improvement projects that may affect water quality with the appropriate WMO or WD as requested.

Currently the City has many stormwater CIP planned in the next 10 years. Occasionally, additional projects will arise. The City will include the watershed district and watershed organizations in the review of the CIP as they relate to stormwater. These projects will require funding beyond the City's Drainage Fund, most likely from outside sources.

Table VIII-3
Captial Improvement Projects

No.	Project Description	Estimated Expenses											Comments
		2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	
CIP-1	Twin Birch Acres Reconstruction	$ 1,469,072											
CIP-2	Lund's Lake View Forest Reconstruction	$ 1,269,600											
CIP-3	MSA 181st Ave.	$ 420,000											From Concord Drive to 890 ft. west of TH 65
CIP-4	Meadow Park (N. of Constance) Reconstruction		$ 737,123										
CIP-5	Creek Valley		$ 665,754										
CIP-6	Idlewood 3rd Addn. and 175th Ln. W of Swedish Dr.			$ 687,835									
CIP-7	Crosstown Shopping Center				$ 672,130								
CIP-8	Chisholm St. - Crosstown Blvd to 171st Ave				$ 367,513								
CIP-9	MSA Jackson St. N of McKay (Ditch Crossing)				$ 355,262								From 0.16 mi N of McKay Drive to 0.06 miles s of 154th Avenue
CIP-10	Bunker Lake Blvd				$ 367,513								
CIP-11	Wildwood Park					$ 599,768							
CIP-12	MSA Central Ave					$ 609,520							From 149th Ave to 152nd Avenue
CIP-13	Ravenwood Estates						$ 279,430						
CIP-14	Wisen 11th Addn.							$ 428,684					
CIP-15	Pingers Plaza Metes & Bounds, & 7th Street from 168th Ave to 170th Ave								$ 2,197,793				
CIP-16	Oakview Meadows 1st & 2nd)								X				
CIP-17	Meadow Park (S of Constance)									X			
CIP-18	MSA Johnson St/135th Ave										X		
CIP-19	Idlewood 1st Addn.										$ 1,127,886		
CIP-20	W Coon Lake Shores										X		
CIP-21	Ambershire											X	
CIP-22	Amberwood											X	
CIP-23	Tomlyn Addn.											$ 988,061	
CIP-24	Birch View Acres											X	

IX. AMENDMENT PROCEDURES

The SWMP is intended to be in place for a 10-year period (until 2029). However, it is directly related to other programs, plans and standards both within the City and other encompassing jurisdictional bodies, and must remain flexible enough to incorporate changes as appropriate. Changes in watershed authority plans may require programmatic or implementation modifications to meet new requirements.

The SWMP is adopted by City Council as an official document, with regulatory policies on water resources issues set forth. The public may offer written requests for SWMP amendments, which will be addressed by City staff. Adjustments not impacting policies or programmatic activities that are required by the Permit shall be considered minor amendments for this document. Minor amendments, if approved, may be completed by staff without council approval. Major amendments will be reviewed by staff and brought before Council prior to action; a public hearing may be required before adopting official SWMP revisions.

To ensure conformance with all applicable rules, watershed authorities with jurisdiction in the City (the URRWMO, SRWMO and CCWD) shall be provided the opportunity to review and comment on major amendments before adoption.

Appendix A

MPCA Pollution Source Locations

NAME	ADDRESS	LEG_DIST	LATITUDE	LONGITUDE	CITY	ZIP_CODE	ACTIVITY	MPCA_ID	COUNTY	HUC8_ID	MAJ_WSHED	SITE_URL	COORD_METH	STATUS
Lexington Sand LLC	Lexington Ave	49A	45.21673732	-93.18567036	Ham Lake	55304	Wastewater Discharger	MNG490210	Anoka	07010206	Mississippi River (Twin Cities)	http://www.pca.state.mn.us/WIMN/siteInfo.cfm?siteid=253538	Public Land Survey-Quartering - MapTool	Active
Cedar Creek Homes Inc	17100 Highway 65 NE 55304	49A	45.27923772	-93.23506629	Ham Lake	55304	Hazardous Waste, Small to Minimal QG	MNR000114819	Anoka	07010206	Mississippi River (Twin Cities)	http://www.pca.state.mn.us/WIMN/siteInfo.cfm?siteid=120012	Address Matching House Number	Active
Superamerica #4537	1442 Constance Blvd 55304	49A	45.26614376	-93.23373120	Ham Lake	55304	Tank Site	20048	Anoka	07010206	Mississippi River (Twin Cities)	http://www.pca.state.mn.us/WIMN/siteInfo.cfm?siteid=227353	Address Matching House Number	Active
Wyatt Residence	1540 145th Ave NE 55304	49A	45.23329150	-93.23306532	Ham Lake	55304	Multiple Activities	Multiple Activities	Anoka	07010206	Mississippi River (Twin Cities)	http://www.pca.state.mn.us/WIMN/siteInfo.cfm?siteid=182958	Address Matching House Number	Inactive
Perfect Image	1330 133rd Ln NE 55304	49A	45.21282624	-93.23686220	Ham Lake	55304	Leak Site	13946	Anoka	07010206	Mississippi River (Twin Cities)	http://www.pca.state.mn.us/WIMN/siteInfo.cfm?siteid=248654	Address Matching House Number	Inactive
Jetson Inc	13414 Highway 65 NE 55304	49A	45.21366705	-93.23469019	Ham Lake	55304	Hazardous Waste, Small to Minimal QG	MNR000110486	Anoka	07010206	Mississippi River (Twin Cities)	http://www.pca.state.mn.us/WIMN/siteInfo.cfm?siteid=102032	Address Matching House Number	Active
Crosstown Sign Inc - Highway 65	10166 NE Highway 65 55304	59A	45.03482056	-93.24748230	Ham Lake	55304	Multiple Activities	Multiple Activities	Anoka	07010206	Mississippi River (Twin Cities)	http://www.pca.state.mn.us/WIMN/siteInfo.cfm?siteid=38803	Zip Code Centroid	Active
Ham Lake Mining Project	13627 Lexington Ave 55448	47A	45.19675827	-93.31431580	Ham Lake	55448	Construction Stormwater Permit	C00011775	Anoka	07010206	Mississippi River (Twin Cities)	http://www.pca.state.mn.us/WIMN/siteInfo.cfm?siteid=137678	Zip Code Centroid	Inactive
Hidden Forest West	13351 Alamo St NE 55304	49A	45.21285629	-93.20005035	Ham Lake	55304	Construction Stormwater Permit	C00009312	Anoka	07010206	Mississippi River (Twin Cities)	http://www.pca.state.mn.us/WIMN/siteInfo.cfm?siteid=119555	Address Matching House Number	Inactive
Dependable Car Maintenance	554 134th Ln NE 553046909	49A	45.21377945	-93.25547028	Ham Lake	55304	Hazardous Waste, Small to Minimal QG	MND985738657	Anoka	07010206	Mississippi River (Twin Cities)	http://www.pca.state.mn.us/WIMN/siteInfo.cfm?siteid=34375	Address Matching House Number	Inactive
Safety Speed Cut	13460 N Highway 65 55303	49A	45.21498108	-93.23376465	Ham Lake	55303	Leak Site	7553	Anoka	07010206	Mississippi River (Twin Cities)	http://www.pca.state.mn.us/WIMN/siteInfo.cfm?siteid=243939	Interpolation Unknown	Inactive
T-Ray Construction Co Inc	13535 Johnson St NE 55304	49A	45.21577835	-93.23661041	Ham Lake	55304	Hazardous Waste, Small to Minimal QG	MNR000113274	Anoka	07010206	Mississippi River (Twin Cities)	http://www.pca.state.mn.us/WIMN/siteInfo.cfm?siteid=115584	Address Matching House Number	Active
Battery Bob Inc	13557 Highway 65 NE 553046921	49A	45.21633148	-93.23432159	Ham Lake	55304	Hazardous Waste, Small to Minimal QG	MND985671890	Anoka	07010206	Mississippi River (Twin Cities)	http://www.pca.state.mn.us/WIMN/siteInfo.cfm?siteid=33646	Address Matching House Number	Inactive
HearthStone Companies Inc	13625 Lexington Ave NE 55304	49A	45.21706772	-93.16280365	Ham Lake	55304	Multiple Activities	Multiple Activities	Anoka	07010206	Mississippi River (Twin Cities)	http://www.pca.state.mn.us/WIMN/siteInfo.cfm?siteid=133052	Address Matching House Number	Inactive
Ham Lake Mining Project - SW	13627 Lexington Ave NE 55304	49A	45.21709824	-93.16280365	Ham Lake	55304	Industrial Stormwater Permit	A00013361	Anoka	07010206	Mississippi River (Twin Cities)	http://www.pca.state.mn.us/WIMN/siteInfo.cfm?siteid=141257	Address Matching House Number	Inactive
ABB	13720 Lincoln St NE Ste B 553046946	49A	45.21907043	-93.23938751	Ham Lake	55304	Hazardous Waste, Small to Minimal QG	MNR001000017	Anoka	07010206	Mississippi River (Twin Cities)	http://www.pca.state.mn.us/WIMN/siteInfo.cfm?siteid=76471	Address Matching House Number	Active
City Of Ham Lake Sr Housing Parcels	Bunker Lake Rd 55304	49A	45.21912384	-93.25463867	Ham Lake	55304	Leak Site	9159	Anoka	07010206	Mississippi River (Twin Cities)	http://www.pca.state.mn.us/WIMN/siteInfo.cfm?siteid=245338	Interpolation Unknown	Inactive
Townhomes of Majestic Oaks 3rd Addition	See location description 55304	49A	45.21982193	-93.24194336	Ham Lake	55304	Construction Stormwater Permit	C00001075	Anoka	07010206	Mississippi River (Twin Cities)	http://www.pca.state.mn.us/WIMN/siteInfo.cfm?siteid=13594	Address Matching House Number	Inactive
CenterPoint Energy - Blaine	13562 Highway 65 NE 55304	49A	45.22298813	-93.23430634	Ham Lake	55304	Hazardous Waste, Small to Minimal QG	MND080248818	Anoka	07010206	Mississippi River (Twin Cities)	http://www.pca.state.mn.us/WIMN/siteInfo.cfm?siteid=33756	Address Matching House Number	Inactive
Peterson Dump - 2	See location description 55303	49A	45.22441101	-93.22189331	Ham Lake	55303	Unpermitted Dump Site	REM04822	Anoka	07010206	Mississippi River (Twin Cities)	http://www.pca.state.mn.us/WIMN/siteInfo.cfm?siteid=172618	Digitized-DRG	Inactive
SP 0208-91 TH 65	See location description 55304	49A	45.22992706	-93.23406219	Ham Lake	55304	Construction Stormwater Permit	C00001117	Anoka	07010206	Mississippi River (Twin Cities)	http://www.pca.state.mn.us/WIMN/siteInfo.cfm?siteid=62288	Zip Code Centroid	Inactive
Wildwood Preserve WWTP	Address Unknown 55304	49A	45.23095322	-93.14489746	Ham Lake	55304	Wastewater Discharger	MN0067679	Anoka	07010206	Mississippi River (Twin Cities)	http://www.pca.state.mn.us/WIMN/siteInfo.cfm?siteid=152192	Public Land Survey-Quartering	Inactive
Terry's Auto Service	14525 Highway 65 NE Ste A 553046111	49A	45.23346329	-93.23414612	Ham Lake	55304	Hazardous Waste, Small to Minimal QG	MND985756188	Anoka	07010206	Mississippi River (Twin Cities)	http://www.pca.state.mn.us/WIMN/siteInfo.cfm?siteid=63697	Address Matching House Number	Inactive
Miniature Circuits Inc	14205 Highway 65 NE 55304	49A	45.23368073	-93.23375702	Ham Lake	55304	Hazardous Waste, Small to Minimal QG	MNR000106054	Anoka	07010206	Mississippi River (Twin Cities)	http://www.pca.state.mn.us/WIMN/siteInfo.cfm?siteid=81893	Address Matching House Number	Active
Denny Ds Body Shop	1244 Andover Blvd NE 553046104	49A	45.23680115	-93.23911285	Ham Lake	55304	Hazardous Waste, Small to Minimal QG	MND981950843	Anoka	07010206	Mississippi River (Twin Cities)	http://www.pca.state.mn.us/WIMN/siteInfo.cfm?siteid=34370	Address Matching House Number	Active
Morken Transport Storage Inc	1247 Andover Blvd NE 553046105	49A	45.23689270	-93.23905182	Ham Lake	55304	Hazardous Waste, Small to Minimal QG	MNR000024109	Anoka	07010206	Mississippi River (Twin Cities)	http://www.pca.state.mn.us/WIMN/siteInfo.cfm?siteid=35845	Address Matching House Number	Active
Rapid Sport Center Ham Lake	1343 Andover Blvd NE 553046105	49A	45.23690414	-93.23609161	Ham Lake	55304	Hazardous Waste, Small to Minimal QG	MNR000001735	Anoka	07010206	Mississippi River (Twin Cities)	http://www.pca.state.mn.us/WIMN/siteInfo.cfm?siteid=36444	Address Matching House Number	Active
Fox Ridge -CSW	See location description 55304	49A	45.23754883	-93.23271942	Ham Lake	55304	Construction Stormwater Permit	C00006362	Anoka	07010206	Mississippi River (Twin Cities)	http://www.pca.state.mn.us/WIMN/siteInfo.cfm?siteid=68653	Zip Code Centroid	Inactive
Knollwood Estates	See location description 55304	49A	45.23767090	-93.16275787	Ham Lake	55304	Construction Stormwater Permit	C00005836	Anoka	07010206	Mississippi River (Twin Cities)	http://www.pca.state.mn.us/WIMN/siteInfo.cfm?siteid=61130	Zip Code Centroid	Inactive
Hooze 4x4 Inc	1435 147th Ave 55304	49A	45.23751831	-93.30177307	Ham Lake	55304	Hazardous Waste, Small to Minimal QG	MNR000079384	Anoka	07010206	Mississippi River (Twin Cities)	http://www.pca.state.mn.us/WIMN/siteInfo.cfm?siteid=72909	Address Matching House Number	Active
White Tail Crossing	See location description 55304	49A	45.24465942	-93.24238586	Ham Lake	55304	Construction Stormwater Permit	C00006309	Anoka	07010206	Mississippi River (Twin Cities)	http://www.pca.state.mn.us/WIMN/siteInfo.cfm?siteid=67971	Zip Code Centroid	Inactive
Perfect Image Auto Body Inc	15003 Highway 65 NE 553046115	49A	45.24677658	-93.23274994	Ham Lake	55304	Hazardous Waste, Small to Minimal QG	MNR000064576	Anoka	07010206	Mississippi River (Twin Cities)	http://www.pca.state.mn.us/WIMN/siteInfo.cfm?siteid=72688	Address Matching House Number	Inactive
E & S Ham Lake Dr St Improvements	See location description 55304	49A	45.24778748	-93.21853638	Ham Lake	55304	Construction Stormwater Permit	C00001105	Anoka	07010206	Mississippi River (Twin Cities)	http://www.pca.state.mn.us/WIMN/siteInfo.cfm?siteid=62167	Zip Code Centroid	Inactive
Ham Lake city of	15544 Central Ave NE 55304	49A	45.25247574	-93.23502350	Ham Lake	55304	Multiple Activities	Multiple Activities	Anoka	07010206	Mississippi River (Twin Cities)	http://www.pca.state.mn.us/WIMN/siteInfo.cfm?siteid=114662	Address Matching House Number	Active
Heritage Furniture Restoration	15615 Highway 65 NE 55304	49A	45.25301361	-93.23185730	Ham Lake	55304	Hazardous Waste, Small to Minimal QG	MNR000031153	Anoka	07010206	Mississippi River (Twin Cities)	http://www.pca.state.mn.us/WIMN/siteInfo.cfm?siteid=34991	Address Matching House Number	Active
4 Wheel Parts & Service Inc	15625 Highway 65 NE 553045629	49A	45.25328827	-93.23180389	Ham Lake	55304	Hazardous Waste, Small to Minimal QG	MND981951585	Anoka	07010206	Mississippi River (Twin Cities)	http://www.pca.state.mn.us/WIMN/siteInfo.cfm?siteid=33269	Address Matching House Number	Active
Rl Automotive	15709 Highway 65 NE 553045675	49A	45.25484467	-93.23171234	Ham Lake	55304	Hazardous Waste, Small to Minimal QG	MND985736263	Anoka	07010206	Mississippi River (Twin Cities)	http://www.pca.state.mn.us/WIMN/siteInfo.cfm?siteid=36543	Address Matching House Number	Active
Telar Industries	15720 Lincoln St NE 553045535	49A	45.25534821	-93.23754120	Ham Lake	55304	Hazardous Waste, Small to Minimal QG	MN0000058909	Anoka	07010206	Mississippi River (Twin Cities)	http://www.pca.state.mn.us/WIMN/siteInfo.cfm?siteid=37063	Address Matching House Number	Active
Gbs Engineering Inc	15760 Lincoln St NE 553042201	49A	45.25585938	-93.23764038	Ham Lake	55304	Hazardous Waste, Small to Minimal QG	MND982607178	Anoka	07010206	Mississippi River (Twin Cities)	http://www.pca.state.mn.us/WIMN/siteInfo.cfm?siteid=34809	Address Matching House Number	Active
Yale Materials Handling-MN Inc	15735 Central Ave NE 55304	49A	45.25598145	-93.23434448	Ham Lake	55304	Hazardous Waste, Small to Minimal QG	MND982644304	Anoka	07010206	Mississippi River (Twin Cities)	http://www.pca.state.mn.us/WIMN/siteInfo.cfm?siteid=34536	Address Matching House Number	Active
Genco Builders Inc	15745 Lincoln St NE 55304	49A	45.25624466	-93.23809052	Ham Lake	55304	Hazardous Waste, Small to Minimal QG	MNR000116822	Anoka	07010206	Mississippi River (Twin Cities)	http://www.pca.state.mn.us/WIMN/siteInfo.cfm?siteid=124512	Address Matching House Number	Active
Ceda Inc	15830 Lincoln St NE 553045535	49A	45.25670242	-93.23790741	Ham Lake	55304	Multiple Activities	Multiple Activities	Anoka	07010206	Mississippi River (Twin Cities)	http://www.pca.state.mn.us/WIMN/siteInfo.cfm?siteid=33972	Address Matching House Number	Active
Illinois Fixture & Wood Products Inc	15840 Central Ave NE 55304	49A	45.25743484	-93.23453522	Ham Lake	55304	Multiple Activities	Multiple Activities	Anoka	07010206	Mississippi River (Twin Cities)	http://www.pca.state.mn.us/WIMN/siteInfo.cfm?siteid=1019	Address Matching House Number	Inactive
Mickman Brothers Nursery	See location description 55304	49A	45.25789261	-93.27404022	Ham Lake	55304	Construction Stormwater Permit	C00013795	Anoka	07010206	Mississippi River (Twin Cities)	http://www.pca.state.mn.us/WIMN/siteInfo.cfm?siteid=148482	Zip Code Centroid	Active
Enchanted Estates	See location description 55304	49A	45.25789261	-93.27404022	Ham Lake	55304	Construction Stormwater Permit	C00014060	Anoka	07010206	Mississippi River (Twin Cities)	http://www.pca.state.mn.us/WIMN/siteInfo.cfm?siteid=149655	Zip Code Centroid	Inactive
Marshfield Ponds	See location description 55304	49A	45.25789261	-93.27404022	Ham Lake	55304	Construction Stormwater Permit	C00013555	Anoka	07010206	Mississippi River (Twin Cities)	http://www.pca.state.mn.us/WIMN/siteInfo.cfm?siteid=147338	Zip Code Centroid	Inactive
Heritage Forest	See location description 55304	49A	45.25789261	-93.27404022	Ham Lake	55304	Construction Stormwater Permit	C00015020	Anoka	07010206	Mississippi River (Twin Cities)	http://www.pca.state.mn.us/WIMN/siteInfo.cfm?siteid=158625	Zip Code Centroid	Active
SP 02-716-06 (CSAH116)	See location description 55304	49A	45.25789261	-93.27404022	Ham Lake	55304	Construction Stormwater Permit	C00012750	Anoka	07010206	Mississippi River (Twin Cities)	http://www.pca.state.mn.us/WIMN/siteInfo.cfm?siteid=142294	Zip Code Centroid	Inactive
Third Coast Properties	See location description 55304	49A	45.27711244	-93.23474992	Ham Lake	55304	Construction Stormwater Permit	C00012834	Anoka	07010206	Mississippi River (Twin Cities)	http://www.pca.state.mn.us/WIMN/siteInfo.cfm?siteid=142743	Digitized - Map Tool	Active
Osborn Property	See location description 55304	49A	45.28076285	-93.23276044	Ham Lake	55304	Construction Stormwater Permit	C00011255	Anoka	07010206	Mississippi River (Twin Cities)	http://www.pca.state.mn.us/WIMN/siteInfo.cfm?siteid=132415	Digitized - Map Tool	Active
Naples Estates 2nd	See location description 55304	49A	45.25789261	-93.27404022	Ham Lake	55304	Construction Stormwater Permit	C00012159	Anoka	07010206	Mississippi River (Twin Cities)	http://www.pca.state.mn.us/WIMN/siteInfo.cfm?siteid=139701	Zip Code Centroid	Active
Hamlet Estates 2nd	See location description 55304	49A	45.25789261	-93.27404022	Ham Lake	55304	Construction Stormwater Permit	C00012247	Anoka	07010206	Mississippi River (Twin Cities)	http://www.pca.state.mn.us/WIMN/siteInfo.cfm?siteid=139928	Zip Code Centroid	Active
Townhomes of Highland Bluffs 2 & 3rd	See location description 55304	49A	45.25789261	-93.27404022	Ham Lake	55304	Construction Stormwater Permit	C00011489	Anoka	07010206	Mississippi River (Twin Cities)	http://www.pca.state.mn.us/WIMN/siteInfo.cfm?siteid=134578	Zip Code Centroid	Inactive
Maple Hollow	See location description 55304	49A	45.25789261	-93.27404022	Ham Lake	55304	Construction Stormwater Permit	C00009697	Anoka	07010206	Mississippi River (Twin Cities)	http://www.pca.state.mn.us/WIMN/siteInfo.cfm?siteid=124672	Zip Code Centroid	Inactive
Schoumaker Pond Excavation	See location description 55304	49A	45.25789261	-93.27404022	Ham Lake	55304	Construction Stormwater Permit	C00010427	Anoka	07010206	Mississippi River (Twin Cities)	http://www.pca.state.mn.us/WIMN/siteInfo.cfm?siteid=128119	Zip Code Centroid	Active
TH 65 W Frontage Road Reconstruction	See location description 55304	49A	45.25789261	-93.27404022	Ham Lake	55304	Construction Stormwater Permit	C00012891	Anoka	07010206	Mississippi River (Twin Cities)	http://www.pca.state.mn.us/WIMN/siteInfo.cfm?siteid=143033	Zip Code Centroid	Inactive
TH 65 and CR 16 Reconstruction	See location description 55304	49A	45.25789261	-93.27404022	Ham Lake	55304	Construction Stormwater Permit	C00012992	Anoka	07010206	Mississippi River (Twin Cities)	http://www.pca.state.mn.us/WIMN/siteInfo.cfm?siteid=143472	Zip Code Centroid	Inactive
Suburban Lawn	See location description 55304	49A	45.25789261	-93.27404022	Ham Lake	55304	Construction Stormwater Permit	C00013900	Anoka	07010206	Mississippi River (Twin Cities)	http://www.pca.state.mn.us/WIMN/siteInfo.cfm?siteid=148894	Zip Code Centroid	Inactive
Landborg Industrial Park	See location description 55304	49A	45.25789261	-93.27404022	Ham Lake	55304	Construction Stormwater Permit	C00008757	Anoka	07010206	Mississippi River (Twin Cities)	http://www.pca.state.mn.us/WIMN/siteInfo.cfm?siteid=104714	Zip Code Centroid	Active
H & E Moe Properties, Inc	See location description 55304	49A	45.25789261	-93.27404022	Ham Lake	55304	Construction Stormwater Permit	C00014548	Anoka	07010206	Mississippi River (Twin Cities)	http://www.pca.state.mn.us/WIMN/siteInfo.cfm?siteid=155635	Zip Code Centroid	Inactive
Townhomes of Highland Bluffs 5th	See location description 55304	49A	45.25789261	-93.27404022	Ham Lake	55304	Construction Stormwater Permit	C00014322	Anoka	07010206	Mississippi River (Twin Cities)	http://www.pca.state.mn.us/WIMN/siteInfo.cfm?siteid=152778	Zip Code Centroid	Active
Alexa Woods	See location description 55304	49A	45.25789261	-93.27404022	Ham Lake	55304	Construction Stormwater Permit	C00014184	Anoka	07010206	Mississippi River (Twin Cities)	http://www.pca.state.mn.us/WIMN/siteInfo.cfm?siteid=150752	Zip Code Centroid	Active
Braastad Farms	N of 157th Ave NE & Jackson St 55304	49A	45.25789261	-93.27404022	Ham Lake	55304	Construction Stormwater Permit	C00007182	Anoka	07010206	Mississippi River (Twin Cities)	http://www.pca.state.mn.us/WIMN/siteInfo.cfm?siteid=76075	Zip Code Centroid	Inactive
Northwest Dairy Fowarding Company	1305 159th Ave NE 553045567	49A	45.25862885	-93.23679352	Ham Lake	55304	Hazardous Waste, Small to Minimal QG	MNR000068197	Anoka	07010206	Mississippi River (Twin Cities)	http://www.pca.state.mn.us/WIMN/siteInfo.cfm?siteid=70711	Address Matching House Number	Active
Usa 1 4 X 4 Inc	1347 159th Ave NE 553045567	49A	45.25877762	-93.23571777	Ham Lake	55304	Hazardous Waste, Small to Minimal QG	MND985701846	Anoka	07010206	Mississippi River (Twin Cities)	http://www.pca.state.mn.us/WIMN/siteInfo.cfm?siteid=37252	Address Matching House Number	Active
Hamlet Estates	Constance Blvd & Lexington Ave 55304	49A	45.26536560	-93.15235901	Ham Lake	55304	Construction Stormwater Permit	C00004872	Anoka	07010206	Mississippi River (Twin Cities)	http://www.pca.state.mn.us/WIMN/siteInfo.cfm?siteid=11508	Address Matching House Number	Inactive
Constance Estates	See location description 55304	49A	45.26552582	-93.17454529	Ham Lake	55304	Construction Stormwater Permit	C00001274	Anoka	07010206	Mississippi River (Twin Cities)	http://www.pca.state.mn.us/WIMN/siteInfo.cfm?siteid=62036	Zip Code Centroid	Inactive
In The Works Auto Body & Paint	16324 Highway 65 NE Unit A 55304	49A	45.26578140	-93.23439789	Ham Lake	55304	Hazardous Waste, Small to Minimal QG	MND982426959	Anoka	07010206	Mississippi River (Twin Cities)	http://www.pca.state.mn.us/WIMN/siteInfo.cfm?siteid=33588	Address Matching House Number	Active
Superamerica 4537	1442 Constance Blvd NE 553045634	49A	45.26602173	-93.23306274	Ham Lake	55304	Hazardous Waste, Small to Minimal QG	MNR000055137	Anoka	07010206	Mississippi River (Twin Cities)	http://www.pca.state.mn.us/WIMN/siteInfo.cfm?siteid=37005	Address Matching House Number	Active
Ives Design Inc	1333 Constance Blvd NE 553045312	49A	45.26605988	-93.23596191	Ham Lake	55304	Multiple Activities	Multiple Activities	Anoka	07010206	Mississippi River (Twin Cities)	http://www.pca.state.mn.us/WIMN/siteInfo.cfm?siteid=35192	Address Matching House Number	Active
Peck Construction	1548 164th Ln NE 553045428	49A	45.26847076	-93.23175049	Ham Lake	55304	Hazardous Waste, Small to Minimal QG	MN0000341420	Anoka	07010206	Mississippi River (Twin Cities)	http://www.pca.state.mn.us/WIMN/siteInfo.cfm?siteid=36207	Address Matching House Number	Active
General Engine Repair	16525 Highway 65 NE 553045300	49A	45.26937103	-93.23446655	Ham Lake	55304	Hazardous Waste, Small to Minimal QG	MND981533995	Anoka	07010206	Mississippi River (Twin Cities)	http://www.pca.state.mn.us/WIMN/siteInfo.cfm?siteid=63749	Address Matching House Number	Inactive
Lavoie James	16736 3rd St NE 55304	49A	45.27186203	-93.26451874	Ham Lake	55304	Hazardous Waste, Small to Minimal QG	MND985758622	Anoka	07010206	Mississippi River (Twin Cities)	http://www.pca.state.mn.us/WIMN/siteInfo.cfm?siteid=35484	Address Matching House Number	Active
Cassady Richard	435 170th Ave NE 553044733	49A	45.27953339	-93.26036835	Ham Lake	55304	Hazardous Waste, Small to Minimal QG	MNR000033357	Anoka	07010206	Mississippi River (Twin Cities)	http://www.pca.state.mn.us/WIMN/siteInfo.cfm?siteid=33964	Address Matching House Number	Active
Engines by Alan Bohlman - Ham Lake	3011 Hemlock Ln NE 553044853	49A	45.27991104	-93.23986053	Ham Lake	55304	Hazardous Waste, Small to Minimal QG	MNR000077347	Anoka	07010206	Mississippi River (Twin Cities)	http://www.pca.state.mn.us/WIMN/siteInfo.cfm?siteid=69987	Address Matching House Number	Active
Greg Underdahl	17217 Vicker St W 55304	49A	45.28213882	-93.17280579	Ham Lake	55304	Hazardous Waste, Small to Minimal QG	MND981780109	Anoka	07010206	Mississippi River (Twin Cities)	http://www.pca.state.mn.us/WIMN/siteInfo.cfm?siteid=34882	Address Matching House Number	Active
Livgard Addition	See location description 55304	49A	45.28227234	-93.24769592	Ham Lake	55304	Construction Stormwater Permit	C00005783	Anoka	07010206	Mississippi River (Twin Cities)	http://www.pca.state.mn.us/WIMN/siteInfo.cfm?siteid=54182	Public Land Survey-Quartering	Inactive
M & E Automotive	17328 Highway 65 NE 553044818	49A	45.28379822	-93.23468018	Ham Lake	55304	Hazardous Waste, Small to Minimal QG	MND062678644	Anoka	07010206	Mississippi River (Twin Cities)	http://www.pca.state.mn.us/WIMN/siteInfo.cfm?siteid=35575	Address Matching House Number	Active
Crosstown Clinic of Chiropractic	2330 Crosstown Blvd NE 553044499	49A	45.28401184	-93.21035004	Ham Lake	55304	Hazardous Waste, Small to Minimal QG	MND985722297	Anoka	07010206	Mississippi River (Twin Cities)	http://www.pca.state.mn.us/WIMN/siteInfo.cfm?siteid=34220	Address Matching House Number	Active
Magnuson Body Shop	2016 Soderville Dr NE 553044423	49A	45.28695297	-93.21820831	Ham Lake	55304	Hazardous Waste, Small to Minimal QG	MN0000060012	Anoka	07010206	Mississippi River (Twin Cities)	http://www.pca.state.mn.us/WIMN/siteInfo.cfm?siteid=35597	Address Matching House Number	Active
Royal Woods	17505 NE Lever St 55304	49A	45.28718567	-93.15223694	Ham Lake	55304	Construction Stormwater Permit	C00008182	Anoka	07010206	Mississippi River (Twin Cities)	http://www.pca.state.mn.us/WIMN/siteInfo.cfm?siteid=82597	Address Matching House Number	Inactive
Dave Stevens Auto Repair	959 Crosstown Blvd NE 553044227	49A	45.28787231	-93.24613190	Ham Lake	55304	Hazardous Waste, Small to Minimal QG	MND985711662	Anoka	07010206	Mississippi River (Twin Cities)	http://www.pca.state.mn.us/WIMN/siteInfo.cfm?siteid=36908	Address Matching House Number	Active
Burn Country Estates	See location description 55304	48A	45.32099915	-93.22350311	Ham Lake	55304	Construction Stormwater Permit	C00004702	Anoka	07010207	Rum River	http://www.pca.state.mn.us/WIMN/siteInfo.cfm?siteid=13366	Address Matching House Number	Active
Hidden Forest	133rd Ln, 1/4 W of Lexington Ave 55304	49A	45.21189499	-93.16589355	Ham Lake	55304	Construction Stormwater Permit	C00004207	Anoka	07010206	Mississippi River (Twin Cities)	http://www.pca.state.mn.us/WIMN/siteInfo.cfm?siteid=13128	Zip Code Centroid	Inactive
Sterion Inc	13828 Lincoln St NE 55304	49A	45.21944046	-93.23912048	Ham Lake	55304	Multiple Activities	Multiple Activities	Anoka	07010206	Mississippi River (Twin Cities)	http://www.pca.state.mn.us/WIMN/siteInfo.cfm?siteid=100770	Address Matching House Number	Active
Smith Brothers Decorating Co	17362 Highway 65 NE 553044818	49A	45.28453064	-93.23466492	Ham Lake	55304	Hazardous Waste, Small to Minimal QG	MNR000026476	Anoka	07010206	Mississippi River (Twin Cities)	http://www.pca.state.mn.us/WIMN/siteInfo.cfm?siteid=36778	Address Matching House Number	Active
Dahlquist Machine Inc	13758 Johnson St NE 553046900	49A	45.21819305	-93.23706055	Ham Lake	55304	Hazardous Waste, Small to Minimal QG	MN0001025188	Anoka	07010206	Mississippi River (Twin Cities)	http://www.pca.state.mn.us/WIMN/siteInfo.cfm?siteid=34281	Address Matching House Number	Active
Auto Part City	329 Bunker Lake Blvd NE 55304	49A	45.21946335	-93.27426910	Ham Lake	55304	Multiple Activities	Multiple Activities	Anoka	07010206	Mississippi River (Twin Cities)	http://www.pca.state.mn.us/WIMN/siteInfo.cfm?siteid=8536	Address Matching House Number	Active
Larson's Heritage Oaks	14424 Radisson Rd NE 55304	49A	45.23202133	-93.21382904	Ham Lake	55304	Construction Stormwater Permit	C00001963	Anoka	07010206	Mississippi River (Twin Cities)	http://www.pca.state.mn.us/WIMN/siteInfo.cfm?siteid=11844	Address Matching House Number	Inactive
Robert Anderson Property	4109 155th Ave NE 55304	49A	45.25257111	-93.16445160	Ham Lake	55304	Voluntary Investigation & Cleanup (VIC)	VP19490	Anoka	07010206	Mississippi River (Twin Cities)	http://www.pca.state.mn.us/WIMN/siteInfo.cfm?siteid=173253	Manual	Active

Townhomes of Highland Bluffs 4th	See location description 55304	49A	45.25789261	-93.27404022	Ham Lake	55304	Construction Stormwater Permit	C00013350	Anoka	07010206	Mississippi River (Twin Cities)	http://www.pca.state.mn.us/WIMN/siteInfo.cfm?siteid=146233	Zip Code Centroid	Inactive
Constance Estates - 2002	See location description 55304	49A	45.25789261	-93.27404022	Ham Lake	55304	Construction Stormwater Permit	C00009157	Anoka	07010206	Mississippi River (Twin Cities)	http://www.pca.state.mn.us/WIMN/siteInfo.cfm?siteid=116580	Zip Code Centroid	Inactive
Mickman Brothers Nursery - CSW	14630 Highway 65 55304	49A	45.23575060	-93.23500014	Ham Lake	55304	Construction Stormwater Permit	C00006359	Anoka	07010206	Mississippi River (Twin Cities)	http://www.pca.state.mn.us/WIMN/siteInfo.cfm?siteid=68652	Address Matching House Number	Active
Former Central Garage	17504 Highway 65 55304	49A	45.28817500	-93.23499690	Ham Lake	55304	Multiple Activities	Multiple Activities	Anoka	07010206	Mississippi River (Twin Cities)	http://www.pca.state.mn.us/WIMN/siteInfo.cfm?siteid=226507	Address Matching House Number	Active
Ham Lake Dr Property	2063 S Ham Lake Dr 55304	49A	45.25337441	-93.21843011	Ham Lake	55304	Leak Site	13164	Anoka	07010206	Mississippi River (Twin Cities)	http://www.pca.state.mn.us/WIMN/siteInfo.cfm?siteid=247593	Address Matching House Number	Inactive
Arrow Designs	13735 Aberdeen St NE 55304	49A	45.21182251	-93.23286438	Ham Lake	55304	Hazardous Waste, Small to Minimal QG	MNR000032524	Anoka	07010206	Mississippi River (Twin Cities)	http://www.pca.state.mn.us/WIMN/siteInfo.cfm?siteid=33534	Address Matching House Number	Active
Orville's Car Care - CM&K Inc	13327 Highway 65 NE 55304	49A	45.21196365	-93.23447418	Ham Lake	55304	Hazardous Waste, Small to Minimal QG	MND982221368	Anoka	07010206	Mississippi River (Twin Cities)	http://www.pca.state.mn.us/WIMN/siteInfo.cfm?siteid=36125	Address Matching House Number	Active
Ham Lake Collision	13603 Johnson St NE 55304	49A	45.21659088	-93.23693085	Ham Lake	55304	Hazardous Waste, Small to Minimal QG	MND982218943	Anoka	07010206	Mississippi River (Twin Cities)	http://www.pca.state.mn.us/WIMN/siteInfo.cfm?siteid=63646	Address Matching House Number	Active
Stans Auto	13621 Johnson St NE 553046933	49A	45.21677399	-93.23693085	Ham Lake	55304	Hazardous Waste, Small to Minimal QG	MND130730625	Anoka	07010206	Mississippi River (Twin Cities)	http://www.pca.state.mn.us/WIMN/siteInfo.cfm?siteid=36892	Address Matching House Number	Active
ABRA Auto Body & Glass - Ham Lake	13819 Johnson St NE 55304	49A	45.22101212	-93.23673248	Ham Lake	55304	Multiple Activities	Multiple Activities	Anoka	07010206	Mississippi River (Twin Cities)	http://www.pca.state.mn.us/WIMN/siteInfo.cfm?siteid=131612	Address Matching House Number	Active
Erickson Dump	See location description 55303	49A	45.22135544	-93.18383789	Ham Lake	55303	Unpermitted Dump Site	REM03989	Anoka	07010206	Mississippi River (Twin Cities)	http://www.pca.state.mn.us/WIMN/siteInfo.cfm?siteid=172624	Digitized-DRG	Inactive
Larson's Heritage Oaks 6th Addition	141st Lane NE & Radisson Rd 55304	49A	45.22676086	-93.21372223	Ham Lake	55304	Construction Stormwater Permit	C00007268	Anoka	07010206	Mississippi River (Twin Cities)	http://www.pca.state.mn.us/WIMN/siteInfo.cfm?siteid=76291	Address Matching House Number	Inactive
Kings Wood Estates	County Road 17 & 136th Ave 55304	49A	45.22702026	-93.16255951	Ham Lake	55304	Construction Stormwater Permit	C00005736	Anoka	07010206	Mississippi River (Twin Cities)	http://www.pca.state.mn.us/WIMN/siteInfo.cfm?siteid=54185	Address Matching House Number	Inactive
A Ok Used Cars	14405 Highway 65 NE 553046714	49A	45.23132324	-93.23416138	Ham Lake	55304	Hazardous Waste, Small to Minimal QG	MND981793300	Anoka	07010206	Mississippi River (Twin Cities)	http://www.pca.state.mn.us/WIMN/siteInfo.cfm?siteid=33284	Address Matching House Number	Inactive
Suburban Propane	14525 Highway 65 NE 553046111	49A	45.23346329	-93.23414612	Ham Lake	55304	Hazardous Waste, Small to Minimal QG	MND985723345	Anoka	07010206	Mississippi River (Twin Cities)	http://www.pca.state.mn.us/WIMN/siteInfo.cfm?siteid=63316	Address Matching House Number	Inactive
A & R Collison	1248 Andover Blvd NE 553046104	49A	45.23680115	-93.23899078	Ham Lake	55304	Hazardous Waste, Small to Minimal QG	MND985705342	Anoka	07010206	Mississippi River (Twin Cities)	http://www.pca.state.mn.us/WIMN/siteInfo.cfm?siteid=33283	Address Matching House Number	Inactive
Wasche Interiors Inc	14735 Highway 65 NE 553046101	49A	45.23729706	-93.23413849	Ham Lake	55304	Hazardous Waste, Small to Minimal QG	MND985722743	Anoka	07010206	Mississippi River (Twin Cities)	http://www.pca.state.mn.us/WIMN/siteInfo.cfm?siteid=37393	Address Matching House Number	Active
Maple Ridge	See location description 55304	49A	45.23936462	-93.18297577	Ham Lake	55304	Construction Stormwater Permit	C00001074	Anoka	07010206	Mississippi River (Twin Cities)	http://www.pca.state.mn.us/WIMN/siteInfo.cfm?siteid=13593	Address Matching House Number	Inactive
Berggren Steel Fabricating Inc	14835 Aberdeen St NE 553046225	49A	45.24110031	-93.23281097	Ham Lake	55304	Multiple Activities	Multiple Activities	Anoka	07010206	Mississippi River (Twin Cities)	http://www.pca.state.mn.us/WIMN/siteInfo.cfm?siteid=10156	Address Matching House Number	Active
Letourneau Trucking	1046 Mckay Dr NE 553046122	49A	45.24489212	-93.24040222	Ham Lake	55304	Hazardous Waste, Small to Minimal QG	MND985765510	Anoka	07010206	Mississippi River (Twin Cities)	http://www.pca.state.mn.us/WIMN/siteInfo.cfm?siteid=35513	Address Matching House Number	Active
Bear Creek	155th Ave NE & 1/2 Mile W of 55304	49A	45.25111389	-93.16692352	Ham Lake	55304	Construction Stormwater Permit	C00004424	Anoka	07010206	Mississippi River (Twin Cities)	http://www.pca.state.mn.us/WIMN/siteInfo.cfm?siteid=11497	Zip Code Centroid	Inactive
RTD Co	15825 Central Ave NE 55304	49A	45.25723648	-93.23434448	Ham Lake	55304	Hazardous Waste, Small to Minimal QG	MNR000055186	Anoka	07010206	Mississippi River (Twin Cities)	http://www.pca.state.mn.us/WIMN/siteInfo.cfm?siteid=36373	Address Matching House Number	Active
General Pattern Co - Ham Lake	15803 Central Ave NE 55304	49A	45.25743103	-93.23475647	Ham Lake	55304	Hazardous Waste, Small to Minimal QG	MNS000113282	Anoka	07010206	Mississippi River (Twin Cities)	http://www.pca.state.mn.us/WIMN/siteInfo.cfm?siteid=162632	Address Matching House Number	Active
North Suburban Rental	See location description 55304	49A	45.25789261	-93.27404022	Ham Lake	55304	Construction Stormwater Permit	C00011829	Anoka	07010206	Mississippi River (Twin Cities)	http://www.pca.state.mn.us/WIMN/siteInfo.cfm?siteid=137915	Zip Code Centroid	Inactive
Naples Estates	See location description 55304	49A	45.23268677	-93.17759863	Ham Lake	55304	Construction Stormwater Permit	C00009568	Anoka	07010206	Mississippi River (Twin Cities)	http://www.pca.state.mn.us/WIMN/siteInfo.cfm?siteid=123714	Digitized - Map Tool	Active
Dynamic Sealing	See location description 55304	49A	45.25789261	-93.27404022	Ham Lake	55304	Construction Stormwater Permit	C00011366	Anoka	07010206	Mississippi River (Twin Cities)	http://www.pca.state.mn.us/WIMN/siteInfo.cfm?siteid=132979	Zip Code Centroid	Inactive
Buchanan Street Reconstruction	See location description 55304	49A	45.25789261	-93.27404022	Ham Lake	55304	Construction Stormwater Permit	C00011562	Anoka	07010206	Mississippi River (Twin Cities)	http://www.pca.state.mn.us/WIMN/siteInfo.cfm?siteid=135587	Zip Code Centroid	Inactive
Cottages of Heritage Oaks 2nd	See location description 55304	49A	45.25789261	-93.27404022	Ham Lake	55304	Construction Stormwater Permit	C00010570	Anoka	07010206	Mississippi River (Twin Cities)	http://www.pca.state.mn.us/WIMN/siteInfo.cfm?siteid=128673	Zip Code Centroid	Active
Woodland Bluffs	See location description 55304	49A	45.25789261	-93.27404022	Ham Lake	55304	Construction Stormwater Permit	C00008699	Anoka	07010206	Mississippi River (Twin Cities)	http://www.pca.state.mn.us/WIMN/siteInfo.cfm?siteid=104633	Zip Code Centroid	Inactive
Homestead Estates	See location description 55304	49A	45.25789261	-93.27404022	Ham Lake	55304	Construction Stormwater Permit	C00009158	Anoka	07010206	Mississippi River (Twin Cities)	http://www.pca.state.mn.us/WIMN/siteInfo.cfm?siteid=116581	Zip Code Centroid	Inactive
Pgm	2415 Constance Blvd NE 553045039	49A	45.26608658	-93.20777893	Ham Lake	55304	Hazardous Waste, Small to Minimal QG	MND985723881	Anoka	07010206	Mississippi River (Twin Cities)	http://www.pca.state.mn.us/WIMN/siteInfo.cfm?siteid=36241	Address Matching House Number	Active
J & R Graphic	17230 Rockney St NE 553044629	49A	45.28262711	-93.14582062	Ham Lake	55304	Hazardous Waste, Small to Minimal QG	MNR000063198	Anoka	07010206	Mississippi River (Twin Cities)	http://www.pca.state.mn.us/WIMN/siteInfo.cfm?siteid=72598	Address Matching House Number	Active
Ss Auto Repair	2219 Crosstown Blvd NE 553044411	49A	45.28432083	-93.21212769	Ham Lake	55304	Hazardous Waste, Small to Minimal QG	MNR000030809	Anoka	07010206	Mississippi River (Twin Cities)	http://www.pca.state.mn.us/WIMN/siteInfo.cfm?siteid=36858	Address Matching House Number	Active
Crosstown Dental Clinic	17565 Central Ave NE Ste 220 55304	49A	45.28819656	-93.23432922	Ham Lake	55304	Hazardous Waste, Small to Minimal QG	MND985702232	Anoka	07010206	Mississippi River (Twin Cities)	http://www.pca.state.mn.us/WIMN/siteInfo.cfm?siteid=34221	Address Matching House Number	Active
Westlund's Creekside Estates	See location description 55304	49A	45.25789261	-93.27404022	Ham Lake	55304	Construction Stormwater Permit	C00011152	Anoka	07010206	Mississippi River (Twin Cities)	http://www.pca.state.mn.us/WIMN/siteInfo.cfm?siteid=132132	Zip Code Centroid	Active
Improv for 149th Ave, Westlund, Naples	See location description 55304	49A	45.24039459	-93.19470215	Ham Lake	55304	Construction Stormwater Permit	C00001556	Anoka	07010206	Mississippi River (Twin Cities)	http://www.pca.state.mn.us/WIMN/siteInfo.cfm?siteid=11380	Address Matching House Number	Inactive
Larson's Heritage Oaks West	See location description 55304	49A	45.25789261	-93.27404022	Ham Lake	55304	Construction Stormwater Permit	C00008985	Anoka	07010206	Mississippi River (Twin Cities)	http://www.pca.state.mn.us/WIMN/siteInfo.cfm?siteid=108896	Zip Code Centroid	Inactive
Perfect Image Auto Body	1320 & 1330 133rd Ln NE 55304	49A	45.21262741	-93.23675537	Ham Lake	55304	Multiple Activities	Multiple Activities	Anoka	07010206	Mississippi River (Twin Cities)	http://www.pca.state.mn.us/WIMN/siteInfo.cfm?siteid=172243	Digitized-DRG	Inactive
Jims Salvage	14205 Highway 65 NE 55304	49A	45.22767639	-93.23419189	Ham Lake	55304	Hazardous Waste, Small to Minimal QG	MND981959372	Anoka	07010206	Mississippi River (Twin Cities)	http://www.pca.state.mn.us/WIMN/siteInfo.cfm?siteid=35256	Address Matching House Number	Active
Deer Haven Hills	See location description 55304	49A	45.25789261	-93.27404022	Ham Lake	55304	Construction Stormwater Permit	C00011551	Anoka	07010206	Mississippi River (Twin Cities)	http://www.pca.state.mn.us/WIMN/siteInfo.cfm?siteid=135576	Zip Code Centroid	Active
Mckinley School Absorption Pit/Surf Imp	See location description 55303	49A	45.26340103	-93.22623444	Ham Lake	55303	Unpermitted Dump Site	REM04567	Anoka	07010206	Mississippi River (Twin Cities)	http://www.pca.state.mn.us/WIMN/siteInfo.cfm?siteid=172806	Digitized-DRG	Inactive
Casper Hardwood Floors	17255 Highway 65 NE 55304	49A	45.28251266	-93.23442078	Ham Lake	55304	Hazardous Waste, Small to Minimal QG	147341077	Anoka	07010206	Mississippi River (Twin Cities)	http://www.pca.state.mn.us/WIMN/siteInfo.cfm?siteid=66960	Address Matching House Number	Inactive
Majestic Oaks	701 Bunker Lake Blvd NE 553046799	49A	45.21871185	-93.24781799	Ham Lake	55304	Hazardous Waste, Small to Minimal QG	MND053526885	Anoka	07010206	Mississippi River (Twin Cities)	http://www.pca.state.mn.us/WIMN/siteInfo.cfm?siteid=35613	Address Matching House Number	Active
Evergreen Woods - CSW	Constance Blvd & Wake St 55304	49A	45.26562300	-93.17201200	Ham Lake	55304	Construction Stormwater Permit	C00006271	Anoka	07010206	Mississippi River (Twin Cities)	http://www.pca.state.mn.us/WIMN/siteInfo.cfm?siteid=68010	Address Matching House Number	Inactive
Bus Works Inc	14525 Highway 65 NE 553046111	49A	45.23346329	-93.23414612	Ham Lake	55304	Hazardous Waste, Small to Minimal QG	MND985761907	Anoka	07010206	Mississippi River (Twin Cities)	http://www.pca.state.mn.us/WIMN/siteInfo.cfm?siteid=63315	Address Matching House Number	Inactive
Crosstown Sign Inc - Aberdeen St	16307 Aberdeen St NE 55304	49A	45.26737213	-93.23346710	Ham Lake	55304	Hazardous Waste, Small to Minimal QG	MNR000106708	Anoka	07010206	Mississippi River (Twin Cities)	http://www.pca.state.mn.us/WIMN/siteInfo.cfm?siteid=83054	Address Matching House Number	Active
Flamingo Terrace Mobile Home Park	17100 Highway 65 NE 55304	49A	45.27975082	-93.23472595	Ham Lake	55304	Wastewater Discharger	MN0051144	Anoka	07010206	Mississippi River (Twin Cities)	http://www.pca.state.mn.us/WIMN/siteInfo.cfm?siteid=4888	Address Matching House Number	Active
Rinerson Residence	4105 Wildwood Dr 55304	49A	45.22185898	-93.16543579	Ham Lake	55304	Leak Site	7046	Anoka	07010206	Mississippi River (Twin Cities)	http://www.pca.state.mn.us/WIMN/siteInfo.cfm?siteid=243716	Address Matching House Number	Inactive
Cylinder Head Exchange	17243 Rockney St NE 553044630	49A	45.28276443	-93.14524841	Ham Lake	55304	Hazardous Waste, Small to Minimal QG	MNR000025825	Anoka	07010206	Mississippi River (Twin Cities)	http://www.pca.state.mn.us/WIMN/siteInfo.cfm?siteid=34261	Address Matching House Number	Active
Peterson's Farm	1719 Bunker Lake Boulevard NE 55304	49A	45.21855545	-93.22612762	Ham Lake	55304	Voluntary Investigation & Cleanup (VIC)	VP13660	Anoka	07010206	Mississippi River (Twin Cities)	http://www.pca.state.mn.us/WIMN/siteInfo.cfm?siteid=172699	Digitized-DRG	Inactive
Dahlquist Machine Inc	1318 Bunker Lake Blvd NE 553046726	49A	45.21861267	-93.23680878	Ham Lake	55304	Hazardous Waste, Small to Minimal QG	MND068194893	Anoka	07010206	Mississippi River (Twin Cities)	http://www.pca.state.mn.us/WIMN/siteInfo.cfm?siteid=34282	Address Matching House Number	Inactive
MSAP 197-102-02 Ham Lake 96-03	See location description 55304	49A	45.24380875	-93.25047302	Ham Lake	55304	Construction Stormwater Permit	C00004389	Anoka	07010206	Mississippi River (Twin Cities)	http://www.pca.state.mn.us/WIMN/siteInfo.cfm?siteid=11381	Address Matching House Number	Inactive
SLP Machine Inc	1262 Mckay Dr NE 553046126	49A	45.24686813	-93.23690796	Ham Lake	55304	Hazardous Waste, Small to Minimal QG	MND049537384	Anoka	07010206	Mississippi River (Twin Cities)	http://www.pca.state.mn.us/WIMN/siteInfo.cfm?siteid=36774	Address Matching House Number	Active
Ptl Tire Service Inc	15300 Central Ave NE 553045603	49A	45.24963379	-93.23448181	Ham Lake	55304	Hazardous Waste, Small to Minimal QG	MND985706977	Anoka	07010206	Mississippi River (Twin Cities)	http://www.pca.state.mn.us/WIMN/siteInfo.cfm?siteid=36381	Address Matching House Number	Active
General Engine Repair	15711 Highway 65 NE 553045675	49A	45.25487900	-93.23171234	Ham Lake	55304	Hazardous Waste, Small to Minimal QG	MND982635120	Anoka	07010206	Mississippi River (Twin Cities)	http://www.pca.state.mn.us/WIMN/siteInfo.cfm?siteid=34815	Address Matching House Number	Active
Enterprise Plaza Building	See location description 55304	49A	45.25789261	-93.27404022	Ham Lake	55304	Construction Stormwater Permit	C00013075	Anoka	07010206	Mississippi River (Twin Cities)	http://www.pca.state.mn.us/WIMN/siteInfo.cfm?siteid=144700	Zip Code Centroid	Active
Majestic Oaks Townhomes 8th	See location description 55304	49A	45.25789261	-93.27404022	Ham Lake	55304	Construction Stormwater Permit	C00010192	Anoka	07010206	Mississippi River (Twin Cities)	http://www.pca.state.mn.us/WIMN/siteInfo.cfm?siteid=126795	Zip Code Centroid	Inactive
Stokes Addition	See location description 55304	49A	45.25789261	-93.27404022	Ham Lake	55304	Construction Stormwater Permit	C00013921	Anoka	07010206	Mississippi River (Twin Cities)	http://www.pca.state.mn.us/WIMN/siteInfo.cfm?siteid=149037	Zip Code Centroid	Inactive
Silver Fox Ridge	Bataan St & 159th Ave 55304	49A	45.25886536	-93.19821167	Ham Lake	55304	Construction Stormwater Permit	C00004394	Anoka	07010206	Mississippi River (Twin Cities)	http://www.pca.state.mn.us/WIMN/siteInfo.cfm?siteid=13592	Address Matching House Number	Inactive
North Side Honing Inc	16004 Central Ave NE 55304	49A	45.25995636	-93.23445892	Ham Lake	55304	Hazardous Waste, Small to Minimal QG	MND985756964	Anoka	07010206	Mississippi River (Twin Cities)	http://www.pca.state.mn.us/WIMN/siteInfo.cfm?siteid=35962	Address Matching House Number	Active
Opal Street Property	17325 Opal St 55304	49A	45.28358459	-93.14779663	Ham Lake	55304	Voluntary Investigation & Cleanup (VIC)	VP16220	Anoka	07010206	Mississippi River (Twin Cities)	http://www.pca.state.mn.us/WIMN/siteInfo.cfm?siteid=172944	Manual	Inactive
Holiday Stationstore 223	Crosstown Blvd & Highway 65 55304	49A	45.28826904	-93.23476410	Ham Lake	55304	Hazardous Waste, Small to Minimal QG	MNR000057802	Anoka	07010206	Mississippi River (Twin Cities)	http://www.pca.state.mn.us/WIMN/siteInfo.cfm?siteid=35037	Zip Code Centroid	Active
Prudential Green Realty Inc	2159 Swedish Dr NE 553044430	49A	45.29229736	-93.21469879	Ham Lake	55304	Hazardous Waste, Small to Minimal QG	MNR000063883	Anoka	07010207	Rum River	http://www.pca.state.mn.us/WIMN/siteInfo.cfm?siteid=72652	Address Matching House Number	Inactive
Diamond Metal Products	13815 Lincoln St NE 553046947	49A	45.22095871	-93.23868561	Ham Lake	55304	Multiple Activities	Multiple Activities	Anoka	07010206	Mississippi River (Twin Cities)	http://www.pca.state.mn.us/WIMN/siteInfo.cfm?siteid=34384	Address Matching House Number	Active
Deer Way Preserve - CSW	See location description 55304	49A	45.25789261	-93.27404022	Ham Lake	55304	Construction Stormwater Permit	C00015780	Anoka	07010206	Mississippi River (Twin Cities)	http://www.pca.state.mn.us/WIMN/siteInfo.cfm?siteid=163699	Zip Code Centroid	Active
Emerald Forest	Wake St S of Constance Blvd 55304	49A	45.25789261	-93.27404022	Ham Lake	55304	Construction Stormwater Permit	C00007235	Anoka	07010206	Mississippi River (Twin Cities)	http://www.pca.state.mn.us/WIMN/siteInfo.cfm?siteid=76216	Zip Code Centroid	Inactive
Quality Fiberglass Inc	17159 Highway 65 NE 553044817	49A	45.28076553	-93.23454285	Ham Lake	55304	Hazardous Waste, Small to Minimal QG	MND098417488	Anoka	07010206	Mississippi River (Twin Cities)	http://www.pca.state.mn.us/WIMN/siteInfo.cfm?siteid=36402	Address Matching House Number	Active
Eagle Ridge Estates South	16114 Xylite St NE 55304	49A	45.26260376	-93.20420074	Ham Lake	55304	Construction Stormwater Permit	C00010576	Anoka	07010206	Mississippi River (Twin Cities)	http://www.pca.state.mn.us/WIMN/siteInfo.cfm?siteid=128714	Address Matching House Number	Inactive
La Machine Shop Inc	15740 Lincoln St NE 553045535	49A	45.25558853	-93.23758698	Ham Lake	55304	Hazardous Waste, Small to Minimal QG	MND071512198	Anoka	07010206	Mississippi River (Twin Cities)	http://www.pca.state.mn.us/WIMN/siteInfo.cfm?siteid=35416	Address Matching House Number	Active
SAP 02-716-03 SP 0208-100 -CSW	See location description 55304	49A	45.21842194	-93.23401642	Ham Lake	55304	Construction Stormwater Permit	C00006727	Anoka	07010206	Mississippi River (Twin Cities)	http://www.pca.state.mn.us/WIMN/siteInfo.cfm?siteid=71013	Zip Code Centroid	Inactive
Doug Osborne Office Building	See location description 55304	49A	45.25789261	-93.27404022	Ham Lake	55304	Construction Stormwater Permit	C00015055	Anoka	07010206	Mississippi River (Twin Cities)	http://www.pca.state.mn.us/WIMN/siteInfo.cfm?siteid=158975	Zip Code Centroid	Active
Precision Wood Products Inc - Mill	16030 Central Ave NE 553045617	49A	45.26063156	-93.23512268	Ham Lake	55304	Multiple Activities	Multiple Activities	Anoka	07010206	Mississippi River (Twin Cities)	http://www.pca.state.mn.us/WIMN/siteInfo.cfm?siteid=2829	Digitized-DRG	Inactive
Midstate Radiator & Muffler	16326 Highway 65 NE 553045313	49A	45.26581573	-93.23439789	Ham Lake	55304	Hazardous Waste, Small to Minimal QG	MND982651291	Anoka	07010206	Mississippi River (Twin Cities)	http://www.pca.state.mn.us/WIMN/siteInfo.cfm?siteid=35762	Address Matching House Number	Active
Landborg Industrial Park	See location description 55304	49A	45.25789261	-93.27404022	Ham Lake	55304	Construction Stormwater Permit	C00010868	Anoka	07010206	Mississippi River (Twin Cities)	http://www.pca.state.mn.us/WIMN/siteInfo.cfm?siteid=131624	Zip Code Centroid	Active
Mike Little	2067 176th Ave NE	49A	45.28988838	-93.21804628	Ham Lake	55304	Wastewater Discharger	MNU000804	Anoka	07010207	Rum River	http://www.pca.state.mn.us/WIMN/siteInfo.cfm?siteid=56326123	Address Matching House Number	Active
Suburban Lawn Center	13555 Highway 65 NE 55304	49A	45.21630096	-93.23432159	Ham Lake	55304	Hazardous Waste, Small to Minimal QG	MNR000021048	Anoka	07010206	Mississippi River (Twin Cities)	http://www.pca.state.mn.us/WIMN/siteInfo.cfm?siteid=36955	Address Matching House Number	Inactive
MSAP 197-105-03 Naples Street	See location description 55304	49A	45.22499847	-93.18244171	Ham Lake	55304	Construction Stormwater Permit	C00005963	Anoka	07010206	Mississippi River (Twin Cities)	http://www.pca.state.mn.us/WIMN/siteInfo.cfm?siteid=61703	Zip Code Centroid	Inactive
Deerhaven	Yancy St & 148th Place 55304	49A	45.23383331	-93.19825745	Ham Lake	55304	Voluntary Investigation & Cleanup (VIC)	VP16610	Anoka	07010206	Mississippi River (Twin Cities)	http://www.pca.state.mn.us/WIMN/siteInfo.cfm?siteid=172970	Manual	Inactive
Radisson Meadow	14615 Radisson Road NE 55304	49A	45.23671722	-93.21371460	Ham Lake	55304	Construction Stormwater Permit	C00006926	Anoka	07010206	Mississippi River (Twin Cities)	http://www.pca.state.mn.us/WIMN/siteInfo.cfm?siteid=73674	Address Matching House Number	Inactive
Family of Christ Lutheran Church	See location description 55304	49A	45.25789261	-93.27404022	Ham Lake	55304	Construction Stormwater Permit	C00008959	Anoka	07010206	Mississippi River (Twin Cities)	http://www.pca.state.mn.us/WIMN/siteInfo.cfm?siteid=108828	Zip Code Centroid	Inactive
Flamingo Terrace Absorption Pit	See location description 55303	49A	45.27624130	-93.23930359	Ham Lake	55303	Unpermitted Dump Site	REM04041	Anoka	07010206	Mississippi River (Twin Cities)	http://www.pca.state.mn.us/WIMN/siteInfo.cfm?siteid=172797	Digitized-DRG	Inactive
Lakes Dental Association Pa	17615 Chisholm St NE 553044320	49A	45.28997040	-93.23129272	Ham Lake	55304	Hazardous Waste, Small to Minimal QG	MND985702224	Anoka	07010207	Rum River	http://www.pca.state.mn.us/WIMN/siteInfo.cfm?siteid=35436	Address Matching House Number	Active
Shofner Auto	1320 133rd Ln NE 553046954	49A	45.21286392	-93.23551941	Ham Lake	55304	Hazardous Waste, Small to Minimal QG	MNR000071092	Anoka	07010206	Mississippi River (Twin Cities)	http://www.pca.state.mn.us/WIMN/siteInfo.cfm?siteid=68912	Address Matching House Number	Active
Roblyn Transportation Inc	1551 164th Ln NE 553045428	49A	45.26863098	-93.23163605	Ham Lake	55304	Hazardous Waste, Small to Minimal QG	MNR000029686	Anoka	07010206	Mississippi River (Twin Cities)	http://www.pca.state.mn.us/WIMN/siteInfo.cfm?siteid=36554	Address Matching House Number	Inactive
Hidden Forest West 2nd	2932 134th Ave NE 55304	49A	45.25789261	-93.27404022	Ham Lake	55304	Construction Stormwater Permit	C00011073	Anoka	07010206	Mississippi River (Twin Cities)	http://www.pca.state.mn.us/WIMN/siteInfo.cfm?siteid=131512	Zip Code Centroid	Active
Maximum Overdrive Inc	1320 133rd Ln NE 55304	49A	45.21286392	-93.23551941	Ham Lake	55304	Hazardous Waste, Small to Minimal QG	MND981778103	Anoka	07010206	Mississippi River (Twin Cities)	http://www.pca.state.mn.us/WIMN/siteInfo.cfm?siteid=33461	Address Matching House Number	Active
Finish Rite	17138 Lincoln St NE Ste 300 55304	49A	45.28593855	-93.23894218	Ham Lake	55304	Hazardous Waste, Small to Minimal QG	MNS000101600	Anoka	07010206	Mississippi River (Twin Cities)	http://www.pca.state.mn.us/WIMN/siteInfo.cfm?siteid=132353	Address Matching House Number	Inactive
Steinkes Service	17566 Highway 65 NE 553044301	49A	45.28823471	-93.23445892	Ham Lake	55304	Multiple Activities	Multiple Activities	Anoka	07010206	Mississippi River (Twin Cities)	http://www.pca.state.mn.us/WIMN/siteInfo.cfm?siteid=36905	Address Matching House Number	Active
American Woodmark Corp-Ham Lake Facility	16430 Highway 65 NE 55304	49A	45.26775360	-93.23466492	Ham Lake	55304	Multiple Activities	Multiple Activities	Anoka	07010206	Mississippi River (Twin Cities)	http://www.pca.state.mn.us/WIMN/siteInfo.cfm?siteid=530	Address Matching House Number	Active
Beaver Auto & Truck	17856 Highway 65 NW 55304	49A	45.29409796	-93.23454830	Ham Lake	55304	Hazardous Waste, Small to Minimal QG	MND985760008	Anoka	07010207	Rum River	http://www.pca.state.mn.us/WIMN/siteInfo.cfm?siteid=33664	Address Matching House Number	Active
Bunker Meadows	Bunker Blvd & Radisson Rd 55304	49A	45.21860504	-93.21381378	Ham Lake	55304	Construction Stormwater Permit	C00004849	Anoka	07010206	Mississippi River (Twin Cities)	http://www.pca.state.mn.us/WIMN/siteInfo.cfm?siteid=12066	Address Matching House Number	Inactive

Standard Diesel & Equipment Repair Inc	13412 Highway 65 NE 553046918	49A	45.22054672	-93.23432922	Ham Lake	55304	Hazardous Waste, Small to Minimal QG	MND985676477	Anoka	07010206	Mississippi River (Twin Cities)	http://www.pca.state.mn.us/WIMN/siteInfo.cfm?siteid=36888	Address Matching House Number	Inactive
White Oak Ridge	Naples St & 151st Ave 55304	49A	45.24390793	-93.18341064	Ham Lake	55304	Construction Stormwater Permit	C00007272	Anoka	07010206	Mississippi River (Twin Cities)	http://www.pca.state.mn.us/WIMN/siteInfo.cfm?siteid=76348	Address Matching House Number	Inactive
Enterprise Plaza	Unknown 55304	49A	45.25472260	-93.27436066	Ham Lake	55304	Construction Stormwater Permit	C00004070	Anoka	07010206	Mississippi River (Twin Cities)	http://www.pca.state.mn.us/WIMN/siteInfo.cfm?siteid=13168	Zip Code Centroid	Inactive
Merit Business Center	See location description 55304	49A	45.25789261	-93.27404022	Ham Lake	55304	Construction Stormwater Permit	C00013268	Anoka	07010206	Mississippi River (Twin Cities)	http://www.pca.state.mn.us/WIMN/siteInfo.cfm?siteid=145752	Zip Code Centroid	Inactive
Highland Meadows	E side of CR 52, 3/4 mi N of CR 116 55304	49A	45.25789261	-93.27404022	Ham Lake	55304	Construction Stormwater Permit	C00008176	Anoka	07010206	Mississippi River (Twin Cities)	http://www.pca.state.mn.us/WIMN/siteInfo.cfm?siteid=82560	Zip Code Centroid	Inactive
Crosstown Masonry Inc	1322 159th Ave NE 55304	49A	45.25958252	-93.23754883	Ham Lake	55304	Hazardous Waste, Small to Minimal QG	MNR000110601	Anoka	07010206	Mississippi River (Twin Cities)	http://www.pca.state.mn.us/WIMN/siteInfo.cfm?siteid=102683	Address Matching House Number	Active
Lilhander Auto Sales	17255 Highway 65 NE Ste B 55304	49A	45.28251266	-93.23455048	Ham Lake	55304	Hazardous Waste, Small to Minimal QG	MNR000059501	Anoka	07010206	Mississippi River (Twin Cities)	http://www.pca.state.mn.us/WIMN/siteInfo.cfm?siteid=63760	Address Matching House Number	Active
Checker Auto Parts 1836	17638 Central Ave NE 55304	49A	45.29000092	-93.23342133	Ham Lake	55304	Hazardous Waste, Small to Minimal QG	MNS000106245	Anoka	07010207	Rum River	http://www.pca.state.mn.us/WIMN/siteInfo.cfm?siteid=145859	Address Matching House Number	Active
MSAP 197-109-01 Concord Dr NE	See location description 55304	49A	45.29346085	-93.24577332	Ham Lake	55304	Construction Stormwater Permit	C00001904	Anoka	07010207	Rum River	http://www.pca.state.mn.us/WIMN/siteInfo.cfm?siteid=54251	Address Matching House Number	Inactive
Neptune Register Service Co	3613 181st Ave NW 553041049	49A	45.29845428	-93.35732269	Ham Lake	55304	Hazardous Waste, Small to Minimal QG	MNR000065870	Anoka	07010207	Rum River	http://www.pca.state.mn.us/WIMN/siteInfo.cfm?siteid=69566	Address Matching House Number	Active
Majestic Oaks Townhomes 4	See location description 55304	49A	45.21424103	-93.24707031	Ham Lake	55304	Construction Stormwater Permit	C00003399	Anoka	07010206	Mississippi River (Twin Cities)	http://www.pca.state.mn.us/WIMN/siteInfo.cfm?siteid=13599	Address Matching House Number	Inactive
Bunker Lake Blvd. - Baptist Church Pond	Bunker Blvd & Radisson Rd 55304	49A	45.25789261	-93.27404022	Ham Lake	55304	Construction Stormwater Permit	C00005721	Anoka	07010206	Mississippi River (Twin Cities)	http://www.pca.state.mn.us/WIMN/siteInfo.cfm?siteid=70007	Zip Code Centroid	Inactive
Nottingham Forest	E of Coral Sea St, S of 144th Ave, 55304	49A	45.25789261	-93.27404022	Ham Lake	55304	Construction Stormwater Permit	C00008048	Anoka	07010206	Mississippi River (Twin Cities)	http://www.pca.state.mn.us/WIMN/siteInfo.cfm?siteid=81475	Zip Code Centroid	Inactive
Bendtsen's Transmission Center	13603 Johnson St NE 55304	49A	45.21659088	-93.23693085	Ham Lake	55304	Hazardous Waste, Small to Minimal QG	MNR000004523	Anoka	07010206	Mississippi River (Twin Cities)	http://www.pca.state.mn.us/WIMN/siteInfo.cfm?siteid=63647	Address Matching House Number	Active
AME Red-I-Mix Inc - Ham Lake	15915 Highway 65 NE 55304	49A	45.25855637	-93.23220825	Ham Lake	55304	Multiple Activities	Multiple Activities	Anoka	07010206	Mississippi River (Twin Cities)	http://www.pca.state.mn.us/WIMN/siteInfo.cfm?siteid=8134	Address Matching House Number	Active
Lares Corp - Ham Lake	13517 Highway 65 NE 55304	49A	45.21572113	-93.23433685	Ham Lake	55304	Hazardous Waste, Small to Minimal QG	MND985687847	Anoka	07010206	Mississippi River (Twin Cities)	http://www.pca.state.mn.us/WIMN/siteInfo.cfm?siteid=35471	Address Matching House Number	Active
Lund John J	1625 145th Ln NE 553046205	49A	45.23448944	-93.22886658	Ham Lake	55304	Hazardous Waste, Small to Minimal QG	MND985766245	Anoka	07010206	Mississippi River (Twin Cities)	http://www.pca.state.mn.us/WIMN/siteInfo.cfm?siteid=35566	Address Matching House Number	Inactive
Jellison Auto Wrecking	3817 149th Ave NE 553046610	49A	45.24009705	-93.17381287	Ham Lake	55304	Multiple Activities	Multiple Activities	Anoka	07010206	Mississippi River (Twin Cities)	http://www.pca.state.mn.us/WIMN/siteInfo.cfm?siteid=35225	Address Matching House Number	Active
Design Homes Model Home Display	See location description 55304	49A	45.25789261	-93.27404022	Ham Lake	55304	Construction Stormwater Permit	C00010518	Anoka	07010206	Mississippi River (Twin Cities)	http://www.pca.state.mn.us/WIMN/siteInfo.cfm?siteid=128494	Zip Code Centroid	Active
CP 93-04-60 County Road 60	See location description 55304	49A	45.26550674	-93.18830872	Ham Lake	55304	Construction Stormwater Permit	C00003675	Anoka	07010206	Mississippi River (Twin Cities)	http://www.pca.state.mn.us/WIMN/siteInfo.cfm?siteid=61877	Zip Code Centroid	Inactive
Walsh Auto Repair	1766 Soderville Dr NE 553044323	49A	45.28710938	-93.22464752	Ham Lake	55304	Hazardous Waste, Small to Minimal QG	MND985678382	Anoka	07010206	Mississippi River (Twin Cities)	http://www.pca.state.mn.us/WIMN/siteInfo.cfm?siteid=37387	Address Matching House Number	Active
Ham Lake Dental Association PA	16220 Aberdeen St NE Ste A1 55304	49A	45.26493209	-93.23323168	Ham Lake	55304	Hazardous Waste, Small to Minimal QG	MNR000111229	Anoka	07010206	Mississippi River (Twin Cities)	http://www.pca.state.mn.us/WIMN/siteInfo.cfm?siteid=103344	Address Matching House Number	Active
Hooze 4x4 Trucks	13655 Highway 65 NE 553046956	49A	45.21782303	-93.23429871	Ham Lake	55304	Hazardous Waste, Small to Minimal QG	MND985707231	Anoka	07010206	Mississippi River (Twin Cities)	http://www.pca.state.mn.us/WIMN/siteInfo.cfm?siteid=35054	Address Matching House Number	Active
Red Pine Estates	Unknown 55304	49A	45.25472260	-93.27436066	Ham Lake	55304	Construction Stormwater Permit	C00005002	Anoka	07010206	Mississippi River (Twin Cities)	http://www.pca.state.mn.us/WIMN/siteInfo.cfm?siteid=13852	Zip Code Centroid	Active
Certified Auto Recyclers	3827 Crosstown Blvd NE 553045206	49A	45.27993774	-93.17654419	Ham Lake	55304	Multiple Activities	Multiple Activities	Anoka	07010206	Mississippi River (Twin Cities)	http://www.pca.state.mn.us/WIMN/siteInfo.cfm?siteid=7695	Address Matching House Number	Active
John Meyer Warehouse Addition	1327 - 153rd Lane NE 55304	49A	45.24900436	-93.23681641	Ham Lake	55304	Industrial Stormwater Permit	A00012702	Anoka	07010206	Mississippi River (Twin Cities)	http://www.pca.state.mn.us/WIMN/siteInfo.cfm?siteid=137378	Address Matching House Number	Inactive
North Country RV - Ham Lake	14525 Highway 65 NE 55304	49A	45.23346329	-93.23414612	Ham Lake	55304	Hazardous Waste, Small to Minimal QG	MND982636508	Anoka	07010206	Mississippi River (Twin Cities)	http://www.pca.state.mn.us/WIMN/siteInfo.cfm?siteid=63696	Address Matching House Number	Active
L & S Electric Inc - Ham Lake	14115 Lincoln St Ste 100 55304	49A	45.22053528	-93.23879242	Ham Lake	55304	Hazardous Waste, Small to Minimal QG	MNR000116871	Anoka	07010206	Mississippi River (Twin Cities)	http://www.pca.state.mn.us/WIMN/siteInfo.cfm?siteid=124558	Address Matching House Number	Active
Cliffs Auto Repair	13546 Highway 65 NE 553046920	49A	45.21617889	-93.23445129	Ham Lake	55304	Hazardous Waste, Small to Minimal QG	MND982220741	Anoka	07010206	Mississippi River (Twin Cities)	http://www.pca.state.mn.us/WIMN/siteInfo.cfm?siteid=34098	Address Matching House Number	Active

Appendix B

Floodplain Ordinance

Ordinance 15-27

An Ordinance relating to Floodplain in the City of Ham Lake.

Be it ordained by the City Council of the City of Ham Lake, Anoka County, Minnesota, as follows:

Ordinance 91-3 is hereby repealed, to be replaced by the following Ordinance 15-27.

SECTION - 1.0 STATUTORY AUTHORIZATION, FINDINGS OF FACT AND PURPOSE

1.1 **Statutory Authorization:** The legislature of the State of Minnesota has, in Minnesota Statutes Chapter 103F and Chapter 462 delegated the responsibility to local government units to adopt regulations designed to minimize flood losses. Therefore, the City Council of Ham Lake, Minnesota, does ordain as follows.

1.2 **Purpose:**

1.2.1 This Ordinance regulates development in the flood hazard areas of Ham Lake, Minnesota. These flood hazard areas are subject to periodic inundation, which may result in loss of life and property, health and safety hazards, disruption of commerce and governmental services, extraordinary public expenditures for flood protection and relief, and impairment of the tax base. It is the purpose of this Ordinance to promote the public health, safety, and general welfare by minimizing these losses and disruptions.

1.2.2 National Flood Insurance Program Compliance. This Ordinance is adopted to comply with the rules and regulations of the National Flood Insurance Program codified as 44 Code of Federal Regulations Parts 59 -78, as amended, so as to maintain the community's eligibility in the National Flood Insurance Program.

1.2.3 This Ordinance is also intended to preserve the natural characteristics and functions of watercourses and floodplains in order to moderate flood and stormwater impacts, improve water quality, reduce soil erosion, protect aquatic and riparian habitat, provide recreational opportunities, provide aesthetic benefits and enhance community and economic development.

SECTION - 2.0 GENERAL PROVISIONS

2.1 **How to Use This Ordinance:** This Ordinance adopts the floodplain maps applicable to the City of Ham Lake and includes three floodplain districts: Floodway, Flood Fringe, and General Floodplain.

2.1.1 Where Floodway and Flood Fringe districts are delineated on the floodplain maps, the standards in Sections 4.0 or 5.0 will apply, depending on the location of a property.

2.1.2 Locations where Floodway and Flood Fringe districts are not delineated on the floodplain maps are considered to fall within the General Floodplain district. Within the General Floodplain district, the Floodway District standards in Section 4.0 apply unless the floodway boundary is determined, according to the process outlined in Section 6.0. Once the floodway boundary is determined, the Flood Fringe District standards in Section 5.0 may apply outside the floodway.

2.2 **Incorporation of Maps by Reference:** The following maps together with all attached material are hereby adopted by reference and declared to be a part of the Official Zoning Map and this Ordinance. The attached material includes the Flood Insurance Study for Anoka County, Minnesota, and Incorporated Areas and the Flood Insurance Rate Map enumerated below, all dated December 16, 2015 and all prepared by the Federal Emergency Management Agency. These materials are on file in the Building Department.

- 27003C0195E
- 27003C0215E
- 27003C0220E
- 27003C0307E
- 27003C0309E
- 27003C0326E
- 27003C0327E
- 27003C0328E
- 27003C0329E
- 27003C0331E
- 27003C0333E
- 27003C0335E

2.3 **Regulatory Flood Protection Elevation:** The regulatory flood protection elevation (RFPE) is an elevation no lower than one foot above the elevation of the regional flood plus any increases in flood elevation caused by encroachments on the floodplain that result from designation of a floodway.

2.4 **Interpretation:** The boundaries of the zoning districts are determined by scaling distances on the Flood Insurance Rate Map.

2.4.1 Where a conflict exists between the floodplain limits illustrated on the Official Zoning Map and actual field conditions, the flood elevations shall be the governing factor. The Building Official must interpret the boundary location based on the ground elevations that existed on the site on the date of the first National Flood Insurance Program map showing the area within the regulatory floodplain, and other available technical data.

2.4.2 Persons contesting the location of the district boundaries will be given a reasonable opportunity to present their case to the City Council and to submit technical evidence.

2.5 **Abrogation and Greater Restrictions:** It is not intended by this Ordinance to repeal, abrogate, or impair any existing easements, covenants, or other private agreements. However, where this Ordinance imposes greater restrictions, the provisions of this Ordinance prevail. All other ordinances inconsistent with this Ordinance are hereby repealed to the extent of the inconsistency only.

2.6 **Warning and Disclaimer of Liability**: This Ordinance does not imply that areas outside the floodplain districts or land uses permitted within such districts will be free from flooding or flood damages. This Ordinance does not create liability on the part of the City of Ham Lake or its officers or employees for any flood damages that result from reliance on this Ordinance or any administrative decision lawfully made hereunder.

2.7 **Severability:** If any Section, clause, provision, or portion of this Ordinance is adjudged unconstitutional or invalid by a court of law, the remainder of this Ordinance shall not be affected and shall remain in full force.

2.8 **Definitions:** Unless specifically defined below, words or phrases used in this Ordinance must be interpreted according to common usage and so as to give this Ordinance its most reasonable application.

2.8.1 Accessory Use or Structure – a use or structure on the same lot with, and of a nature customarily incidental and subordinate to, the principal use or structure.

2.8.2 Base Flood Elevation – The elevation of the "regional flood." The term "base flood elevation" is used in the flood insurance survey. The base flood elevation is to consider the highest elevation between the flood insurance study and watershed district/watershed management organization hydrologic modeling.

2.8.3 Basement – any area of a structure, including crawl spaces, having its floor or base subgrade (below ground level) on all four sides, regardless of the depth of excavation below ground level.

2.8.4 Conditional Use – a specific type of structure or land use listed in the official control that may be allowed but only after an in-depth review procedure and with appropriate conditions or restrictions as provided in the official zoning controls or building codes and upon a finding that:

(a) Certain conditions as detailed in City Code Article 9 exist.

(b) The structure and/or land use conform to the comprehensive land use plan if one exists and are compatible with the existing neighborhood.

2.8.5 Critical Facilities – facilities necessary to a community's public health and safety, those that store or produce highly volatile, toxic or water-reactive materials, and those that house occupants that may be insufficiently mobile to avoid loss of life or injury. Examples of critical facilities include hospitals, correctional facilities, schools, daycare facilities, nursing homes, fire and police stations, wastewater treatment facilities, public electric utilities, water plants, fuel storage facilities, and waste handling and storage facilities.

2.8.6 Development – any manmade change to improved or unimproved real estate, including buildings or other structures, mining, dredging, filling, grading, paving, excavation or drilling operations, or storage of equipment or materials.

2.8.7 Equal Degree of Encroachment – a method of determining the location of floodway boundaries so that floodplain lands on both sides of a stream are capable of conveying a proportionate share of flood flows.

2.8.8 Farm Fence – A fence as defined by Minnesota Statutes Section 344.02, subdivision 1(a)-(d). An open type fence of posts and wire is not considered to be a structure under this Ordinance. Fences that have the potential to obstruct flood flows, such as chain link fences and rigid walls, are regulated as structures under this Ordinance.

2.8.9 Flood – a temporary increase in the flow or stage of a stream or in the stage of a wetland or lake that results in the inundation of normally dry areas.

2.8.10 Flood Frequency – the frequency for which it is expected that a specific flood stage or discharge may be equaled or exceeded.

2.8.11 Flood Fringe – that portion of the floodplain outside of the floodway. Flood fringe is synonymous with the term "floodway fringe" used in the Flood Insurance Study for Anoka County, Minnesota.

2.8.12 Flood Prone Area – any land susceptible to being inundated by water from any source (see "Flood").

2.8.13 Floodplain – the beds proper and the areas adjoining a wetland, lake or watercourse which have been or hereafter may be covered by the regional flood.

2.8.14 Floodproofing – a combination of structural provisions, changes, or adjustments to properties and structures subject to flooding, primarily for the reduction or elimination of flood damages.

2.8.15 Floodway – the bed of a wetland or lake and the channel of a watercourse and those portions of the adjoining floodplain which are reasonably required to carry or store the regional flood discharge.

2.8.16 Lowest Floor – the lowest floor of the lowest enclosed area (including basement). An unfinished or flood resistant enclosure, used solely for parking of vehicles, building access, or storage in an area other than a basement area, is not considered a building's lowest floor.

2.8.17 Manufactured Home – a structure, transportable in one or more Sections, which is built on a permanent chassis and is designed for use with or without a permanent foundation when attached to the required utilities. The term "manufactured home" does not include the term "recreational vehicle."

2.8.18 Obstruction – any dam, wall, wharf, embankment, levee, dike, pile, abutment, projection, excavation, channel modification, culvert, building, wire, fence, stockpile, refuse, fill, structure, or matter in, along, across, or projecting into any channel, watercourse, or regulatory floodplain which may impede, retard, or change the direction of the flow of water, either in itself or by catching or collecting debris carried by such water.

2.8.19 One Hundred Year Floodplain – lands inundated by the "Regional Flood" (see definition).

2.8.20 Principal Use or Structure – all uses or structures that are not accessory uses or structures.

2.8.21 Reach – a hydraulic engineering term to describe a longitudinal segment of a stream or river influenced by a natural or man-made obstruction. In an urban area, the segment of a stream or river between two consecutive bridge crossings would most typically constitute a reach.

2.8.22 Recreational Vehicle – a vehicle that is built on a single chassis, is 400 square feet or less when measured at the largest horizontal projection, is designed to be self-propelled or permanently towable by a light duty truck, and is designed primarily not for use as a permanent dwelling but as temporary living quarters for recreational, camping, travel, or seasonal use. For the purposes of this Ordinance, the term recreational vehicle is synonymous with the term "travel trailer/travel vehicle."

2.8.23 Regional Flood – a flood which is representative of large floods known to have occurred generally in Minnesota and reasonably characteristic of what can be expected to occur on an average frequency in the magnitude of the 1% chance or 100-year recurrence interval. Regional flood is synonymous with the term "base flood" used in a flood insurance study.

2.8.24 Regulatory Flood Protection Elevation (RFPE) - an elevation not less than one foot above the elevation of the regional flood plus any increases in flood elevation caused by encroachments on the floodplain that result from designation of a floodway.

2.8.25 Repetitive Loss: Flood related damages sustained by a structure on two separate occasions during a ten year period for which the cost of repairs at the time of each

such flood event on the average equals or exceeds 25% of the market value of the structure before the damage occurred.

2.8.26 Special Flood Hazard Area – a term used for flood insurance purposes synonymous with "One Hundred Year Floodplain."

2.8.27 Structure - anything constructed or erected on the ground or attached to the ground or on-site utilities, including, but not limited to, buildings, factories, sheds, detached garages, cabins, manufactured homes, recreational vehicles not meeting the exemption criteria specified in Section 9.2.2 of this Ordinance and other similar items.

2.8.28 Substantial Damage - means damage of any origin sustained by a structure where the cost of restoring the structure to its before damaged condition would equal or exceed 50 percent of the market value of the structure before the damage occurred.

2.8.29 Substantial Improvement - within any consecutive 365-day period, any reconstruction, rehabilitation (including normal maintenance and repair), repair after damage, addition, or other improvement of a structure, the cost of which equals or exceeds 50 percent of the market value of the structure before the "start of construction" of the improvement. This term includes structures that have incurred "substantial damage," regardless of the actual repair work performed. The term does not, however, include either:

(a) Any project for improvement of a structure to correct existing violations of state or local health, sanitary, or safety code specifications which have been identified by the local code enforcement official and which are the minimum necessary to assure safe living conditions.

(b) Any alteration of a "historic structure," provided that the alteration will not preclude the structure's continued designation as a "historic structure." For the purpose of this Ordinance, "historic structure" is as defined in 44 Code of Federal Regulations, Part 59.1.

2.9 **Annexations:** The Flood Insurance Rate Map panels adopted by reference into Section 2.2 above may include floodplain areas that lie outside of the corporate boundaries of the City of Ham Lake at the time of adoption of this Ordinance. If any of these floodplain land areas are annexed into the City after the date of adoption of this Ordinance, the newly annexed floodplain lands will be subject to the provisions of this Ordinance immediately upon the date of annexation.

SECTION 3.0 - ESTABLISHMENT OF ZONING DISTRICTS

3.1 **Districts:**

3.1.1 Floodway District. The Floodway District includes those areas designated as floodway on the Flood Insurance Rate Map adopted in Section 2.2. For lakes, wetlands and other basins, the Floodway District includes those areas designated as Zone A or AE on the Flood Insurance Rate Map that are at or below the ordinary high water level as defined in Minnesota Statutes, Section 103G.005, subdivision 14.

3.1.2 Flood Fringe District. The Flood Fringe District includes those areas designated as floodway fringe on the Flood Insurance Rate Map adopted in Section 2.2, as being within Zone AE but being located outside of the floodway. For lakes, wetlands and

other basins (that do not have a floodway designated), the Flood Fringe District includes those areas designated as Zone A or AE on the Flood Insurance Rate Map panels adopted in Section 2.2 that are below the 1% annual chance (100-year) flood elevation but above the ordinary high water level as defined in Minnesota Statutes, Section 103G.005, subdivision 14.

3.1.3 General Floodplain District. The General Floodplain District includes those areas designated as Zone A or Zone AE without a floodway on the Flood Insurance Rate Map adopted in Section 2.2, but not subject to the criteria in Sections 3.1.1 and 3.1.2 above.

3.2 **Compliance:** Within the floodplain districts established in this Ordinance, the use of any land, the use, size, type and location of structures on lots, the installation and maintenance of transportation, utility, water supply and waste treatment facilities, and the subdivision of land must comply with the terms of this Ordinance and other applicable regulations. All uses not listed as permitted uses or conditional uses in Sections 4.0, 5.0 and 6.0, respectively, are prohibited.

In addition, a caution is provided here that:

3.2.1 New and replacement manufactured homes and certain recreational vehicles are subject to the general provisions of this Ordinance and specifically Section 9.0.

3.2.2 Modifications, additions, structural alterations, normal maintenance and repair, or repair after damage to existing nonconforming structures and nonconforming uses of structures or land are regulated by the general provisions of this Ordinance and specifically Section 11.0.

3.2.3 All structures must be constructed with electrical, heating, ventilation, plumbing, and air conditioning equipment and other service facilities that are designed and/or located so as to prevent water from entering or accumulating within the components during conditions of flooding.

3.2.4 As-built elevations for elevated or floodproofed structures must be certified by ground surveys and flood-proofing techniques must be designed and certified by a registered professional engineer or architect as specified in the general provisions of this Ordinance and specifically as stated in Section 10.0 of this Ordinance.

3.2.5 Critical facilities, as defined in Section 2.8.5, are prohibited in all floodplain districts.

SECTION 4.0 - FLOODWAY DISTRICT (FW)

4.1 **Permitted Uses:** The following uses, subject to the standards set forth in Section 4.2, are permitted uses if otherwise allowed in the underlying zoning district:

4.1.1 General farming, pasture, grazing, outdoor plant nurseries, horticulture, truck farming, forestry, sod farming, and wild crop harvesting.

4.1.2 Industrial-commercial loading areas, parking areas, and airport landing strips.

4.1.3 Open space uses, including but not limited to private and public golf courses, tennis courts, driving ranges, archery ranges, picnic grounds, boat launching ramps, swimming areas, parks, wildlife and nature preserves, game farms, fish hatcheries, shooting preserves, hunting and fishing areas, and single or multiple purpose recreational trails.

4.1.4 Residential lawns, gardens, parking areas, and play areas.

4.1.5 Railroads, streets, bridges, utility transmission lines and pipelines, provided that the Department of Natural Resources' Area Hydrologist is notified at least ten days prior to issuance of any permit, and that the standards in Sections 4.4.1, 4.4.3(a) and 4.4.6 of this Ordinance are met.

4.2 **Standards for Floodway Permitted Uses:**

4.2.1 The use must have low flood damage potential.

4.2.2 With the exception of the uses listed in Section 4.1.5, the use must not obstruct flood flows or increase flood elevations and must not involve structures, fill, obstructions, excavations or storage of materials or equipment.

4.2.3 Any facility that will be used by employees or the general public must be designed with a flood warning system that provides adequate time for evacuation if the area is inundated to a depth and velocity such that the depth (in feet) multiplied by the velocity (in feet per second) would exceed a product of four upon occurrence of the regional (1% chance) flood.

4.3 **Conditional Uses:** The following uses may be allowed as conditional uses following the standards and procedures set forth in Section 10.4 of this Ordinance and further subject to the standards set forth in Section 4.4, if otherwise allowed in the underlying zoning district.

4.3.1 Extraction and storage of sand, gravel, and other materials.

4.3.2 Marinas, boat rentals, docks, piers, wharves, and water control structures.

4.3.3 Storage yards for equipment, machinery, or materials.

4.3.4 Placement of fill or construction of fences that obstruct flood flows. Farm fences, as defined in Section 2.8.8, are permitted uses.

4.3.5 Travel-ready recreational vehicles meeting the exception standards in Section 9.3.

4.3.6 Levees or dikes intended to protect agricultural crops for a frequency flood event equal to or less than the 10-year frequency flood event.

4.4 **Standards for Floodway Conditional Uses:**

4.4.1 All Uses. A conditional use must not cause any increase in the stage of the 1% chance or regional flood or cause an increase in flood damages in the reach or reaches affected.

4.4.2 Fill; Storage of Materials and Equipment:

(a) The storage or processing of materials that are, in time of flooding, flammable, explosive, or potentially injurious to human, animal, or plant life is prohibited.

(b) Fill, dredge spoil, and other similar materials deposited or stored in the floodplain must be protected from erosion by vegetative cover, mulching, riprap or other acceptable method. Permanent sand and gravel operations and similar uses must be covered by a long-term site development plan.

4.4.3 Structural works for flood control that will change the course, current or cross Section of protected wetlands or public waters are subject to the provisions of Minnesota Statutes, Section 103G.245.

4.4.4 A levee, dike or floodwall constructed in the floodway must not cause an increase to the 1% chance or regional flood. The technical analysis must assume equal conveyance or storage loss on both sides of a stream.

4.4.5 Floodway developments must not adversely affect the hydraulic capacity of the channel and adjoining floodplain of any tributary watercourse or drainage system.

SECTION - 5.0 FLOOD FRINGE DISTRICT (FF)

5.1 **Permitted Uses:** Permitted uses are those uses of land or structures allowed in the underlying zoning district(s) that comply with the standards in Section 5.2.

5.2 **Standards for Flood Fringe Permitted Uses:**

5.2.1 All structures, including accessory structures, must be elevated on fill so that the lowest floor, as defined, is at or above the regulatory flood protection elevation. The finished fill elevation for structures must be no lower than one foot below the regulatory flood protection elevation and the fill must extend at the same elevation at least 15 feet beyond the outside limits of the structure.

(a) All service utilities, including ductwork, must be elevated or water-tight to prevent infiltration of floodwaters.

5.2.2 The cumulative placement of fill or similar material on a parcel must not exceed 1,000 cubic yards, unless the fill is specifically intended to elevate a structure in accordance with Section 5.2.1 of this Ordinance, or if allowed as a conditional use under Section 5.3.3 below.

5.2.3 The storage of any materials or equipment must be elevated on fill to the regulatory flood protection elevation.

5.2.4 The storage or processing of materials that are, in time of flooding, flammable, explosive, or potentially injurious to human, animal, or plant life is prohibited.

5.2.5 Fill must be properly compacted and the slopes must be properly protected by the use of riprap, vegetative cover or other acceptable method.

5.2.6 All new principal structures must have vehicular access at or above an elevation not more than two feet below the regulatory flood protection elevation, or must have a flood warning /emergency evacuation plan acceptable to the City Council.

5.2.7 Accessory uses such as yards, railroad tracks, and parking lots may be at an elevation lower than the regulatory flood protection elevation. However, any facilities used by employees or the general public must be designed with a flood warning system that provides adequate time for evacuation if the area is inundated to a depth and velocity such that the depth (in feet) multiplied by the velocity (in feet per second) would exceed a product of four upon occurrence of the regional (1% chance) flood.

5.2.8 Interference with normal manufacturing/industrial plant operations must be minimized, especially along streams having protracted flood durations. In considering permit applications, due consideration must be given to the needs of industries with operations that require a floodplain location.

5.2.9 Flood fringe developments must not adversely affect the hydraulic capacity of the channel and adjoining floodplain of any tributary watercourse or drainage system.

5.2.10 Manufactured homes and recreational vehicles must meet the standards of Section 9.0 of this Ordinance.

5.3 **Conditional Uses:** The following uses and activities may be allowed as conditional uses, if allowed in the underlying zoning district(s), following the procedures in Section 10.4 of this Ordinance. Conditional uses must meet the standards in Sections 5.2.4 thru 5.2.10 and Section 5.4.

5.3.1 Any structure that is not elevated on fill.

5.3.2 Storage of any material or equipment below the regulatory flood protection elevation.

5.3.3 The cumulative placement of more than 1,000 cubic yards of fill when the fill is not being used to elevate a structure in accordance with Section 5.2.1 of this Ordinance.

5.4 **Standards for Flood Fringe Conditional Uses:**

5.4.1 The standards listed in Sections 5.2.4 thru 5.2.10 apply to all conditional uses.

5.4.2 Basements, as defined by Section 2.8.3 of this Ordinance, are subject to the following:

(a) Basement construction is not allowed below the regulatory flood protection elevation.

5.4.3 The placement of more than 1,000 cubic yards of fill or other similar material on a parcel (other than for the purpose of elevating a structure to the regulatory flood protection elevation) must comply with an approved erosion/sedimentation control plan.

(a) The plan must clearly specify methods to be used to stabilize the fill on site for a flood event at a minimum of the regional (1% chance) flood event.

(b) The plan must be prepared and certified by a registered professional engineer or other qualified individual acceptable to the City Council.

(c) The plan may incorporate alternative procedures for removal of the material from the floodplain if adequate flood warning time exists.

5.4.4 Storage of materials and equipment below the regulatory flood protection elevation must comply with an approved emergency plan providing for removal of such materials within the time available after a flood warning.

5.4.5 Alternative elevation methods other than the use of fill may be utilized to elevate a structure's lowest floor above the regulatory flood protection elevation. These alternative methods may include the use of stilts, pilings, parallel walls, etc., or above-grade, enclosed areas such as crawl spaces or tuck under garages. The base or floor of an enclosed area shall be considered above-grade and not a structure's basement or lowest floor if: 1) the enclosed area is above-grade on at least one side of the structure; 2) it is designed to internally flood and is constructed with flood resistant materials; and 3) it is used solely for parking of vehicles, building access or storage. The above-noted alternative elevation methods are subject to the following additional standards:

(a) Design and Certification - The structure's design and as-built condition must be certified by a registered professional engineer or architect as being in compliance with the general design standards of the State Building Code and, specifically, that all electrical, heating, ventilation, plumbing and air conditioning equipment

and other service facilities must be at or above the regulatory flood protection elevation or be designed to prevent flood water from entering or accumulating within these components during times of flooding.

(b) Specific Standards for Above-grade, Enclosed Areas - Above-grade, fully enclosed areas such as crawl spaces or tuck under garages must be designed to internally flood and the design plans must stipulate:

(1) The minimum area of openings in the walls where internal flooding is to be used as a floodproofing technique. There shall be a minimum of two openings on at least two sides of the structure and the bottom of all openings shall be no higher than one foot above grade. The automatic openings shall have a minimum net area of not less than one square inch for every square foot of enclosed area subject to flooding unless a registered professional engineer or architect certifies that a smaller net area would suffice. The automatic openings may be equipped with screens, louvers, valves, or other coverings or devices provided that they permit the automatic entry and exit of flood waters without any form of human intervention; and

(2) That the enclosed area will be designed of flood resistant materials in accordance with the FP-3 or FP-4 classifications in the State Building Code and shall be used solely for building access, parking of vehicles or storage.

SECTION 6.0 - GENERAL FLOODPLAIN DISTRICT (GF)

6.1 Permitted Uses:

6.1.1 The uses listed in Section 4.1 of this Ordinance, Floodway District Permitted Uses, are permitted uses.

6.1.2 All other uses are subject to the floodway/flood fringe evaluation criteria specified in Section 6.2 below. Section 4.0 applies if the proposed use is determined to be in the Floodway District. Section 5.0 applies if the proposed use is determined to be in the Flood Fringe District.

6.2 Procedures for Floodway and Flood Fringe Determinations:

6.2.1 Upon receipt of an application for a permit or other approval within the General Floodplain District, the Building Official must obtain, review and reasonably utilize any regional flood elevation and floodway data available from a federal, state, or other source.

6.2.2 If regional flood elevation and floodway data are not readily available, the applicant must furnish additional information, as needed, to determine the regulatory flood protection elevation and whether the proposed use would fall within the Floodway or Flood Fringe District. Information must be consistent with accepted hydrological and hydraulic engineering standards and the standards in Section 6.2.3 below.

6.2.3 The determination of floodway and flood fringe must include the following components, as applicable:

(a) Estimate the peak discharge of the regional (1% chance) flood.

(b) Calculate the water surface profile of the regional flood based upon a hydraulic analysis of the stream channel and overbank areas.

(c) Compute the floodway necessary to convey or store the regional flood without increasing flood stages more than one-half (0.5) foot. A lesser stage increase than 0.5 foot is required if, as a result of the stage increase, increased flood damages would result. An equal degree of encroachment on both sides of the stream within the reach must be assumed in computing floodway boundaries.

6.2.4 The Building Official will review the submitted information and assess the technical evaluation and the recommended Floodway and/or Flood Fringe District boundary. The assessment must include the cumulative effects of previous floodway encroachments. The Building Official may seek technical assistance from the City Engineer or other expert person or agency, including the Department of Natural Resources. Based on this assessment, the Building Official may approve or deny the application.

6.2.5 Once the Floodway and Flood Fringe District boundaries have been determined, the Building Official must process the permit application consistent with the applicable provisions of Section 4.0 and 5.0 of this Ordinance.

SECTION 7.0 - LAND DEVELOPMENT STANDARDS

7.1 **In General:** Recognizing that flood prone areas may exist outside of the designated floodplain districts, the requirements of this Section apply to all land within the City of Ham Lake.

7.2 **Subdivisions:** No land may be subdivided which is unsuitable for reasons of flooding or inadequate drainage, water supply or sewage treatment facilities. Manufactured home parks and recreational vehicle parks or campgrounds are considered subdivisions under this Ordinance.

7.2.1 All lots within the floodplain districts must be able to contain a building site outside of the Floodway District at or above the regulatory flood protection elevation.

7.2.2 All subdivisions must have road access both to the subdivision and to the individual building sites no lower than two feet below the regulatory flood protection elevation, unless a flood warning emergency plan for the safe evacuation of all vehicles and people during the regional (1% chance) flood has been approved by the City Council. The plan must be prepared by a registered engineer or other qualified individual, and must demonstrate that adequate time and personnel exist to carry out the evacuation.

7.2.3 For all subdivisions in the floodplain, the Floodway and Flood Fringe District boundaries, the regulatory flood protection elevation and the required elevation of all access roads must be clearly labeled on all required subdivision drawings and platting documents.

7.2.4 In the General Floodplain District, applicants must provide the information required in Section 6.2 of this Ordinance to determine the regional flood elevation, the Floodway and Flood Fringe District boundaries and the regulatory flood protection elevation for the subdivision site.

7.2.5 If a subdivision proposal or other proposed new development is in a flood prone area, any such proposal must be reviewed to assure that:

(a) All such proposals are consistent with the need to minimize flood damage within the flood prone area,

(b) All public utilities and facilities, such as sewer, gas, electrical, and water systems are located and constructed to minimize or eliminate flood damage, and

(c) Adequate drainage is provided to reduce exposure of flood hazard.

7.3 **Building Sites:** If a proposed building site is in a flood prone area, all new construction and substantial improvements (including the placement of manufactured homes) must be:

(a) Designed (or modified) and adequately anchored to prevent floatation, collapse, or lateral movement of the structure resulting from hydrodynamic and hydrostatic loads, including the effects of buoyancy;

(b) Constructed with materials and utility equipment resistant to flood damage;

(c) Constructed by methods and practices that minimize flood damage; and

(d) Constructed with electrical, heating, ventilation, plumbing, and air conditioning equipment and other service facilities that are designed and/or located so as to prevent water from entering or accumulating within the components during conditions of flooding.

SECTION 8.0 - PUBLIC UTILITIES, RAILROADS, ROADS, AND BRIDGES

8.1 **Public Utilities:** All public utilities and facilities such as gas, electrical, sewer, and water supply systems to be located in the floodplain must be floodproofed in accordance with the State Building Code or elevated to the regulatory flood protection elevation.

8.2 **Public Transportation Facilities:** Railroad tracks, roads, and bridges to be located within the floodplain must comply with Sections 4.0 and 5.0 of this Ordinance. These transportation facilities must be elevated to the regulatory flood protection elevation where failure or interruption of these facilities would result in danger to the public health or safety or where such facilities are essential to the orderly functioning of the area. Minor or auxiliary roads or railroads may be constructed at a lower elevation where failure or interruption of transportation services would not endanger the public health or safety.

8.3 **On-site Water Supply and Sewage Treatment Systems:** Where public utilities are not provided: 1) On-site water supply systems must be designed to minimize or eliminate infiltration of flood waters into the systems; and 2) New or replacement on-site sewage treatment systems must be designed to minimize or eliminate infiltration of flood waters into the systems and discharges from the systems into flood waters and they must not be subject to impairment or contamination during times of flooding. Any sewage treatment system designed in accordance with the state's current statewide standards for on-site sewage treatment systems is considered to be in compliance with this Section.

SECTION 9.0 - MANUFACTURED HOMES, MANUFACTURED HOME PARKS, AND RECREATIONAL VEHICLES.

9.1 **Manufactured Homes:** New manufactured home parks and expansions to existing manufactured home parks are prohibited in any floodplain district. For existing manufactured home parks or lots of record, the following requirements apply:

9.1.1 Placement or replacement of manufactured home units is prohibited in the Floodway District.

9.1.2 If allowed in the Flood Fringe District, placement or replacement of manufactured home units is subject to the requirements of Section 5.0 of this Ordinance and the following standards.

(a) New and replacement manufactured homes must be elevated in compliance with Section 5.0 of this Ordinance and must be securely anchored to an adequately anchored foundation system that resists flotation, collapse and lateral movement. Methods of anchoring may include, but are not limited to, use of over-the-top or frame ties to ground anchors. This requirement is in addition to applicable state or local anchoring requirements for resisting wind forces.

(b) New or replacement manufactured homes in existing manufactured home parks must meet the vehicular access requirements for subdivisions in Section 7.2.2.

9.2 **Recreational Vehicles:** New recreational vehicle parks or campgrounds and expansions to existing recreational vehicle parks or campgrounds are prohibited in any floodplain district. Placement of recreational vehicles in existing recreational vehicle parks or campgrounds in the floodplain must meet the exemption criteria below or be treated as new structures meeting the requirements of this Ordinance.

9.2.1 Recreational vehicles are exempt from the provisions of this Ordinance if they are placed in any of the following areas and meet the criteria listed in Section 9.2.2:

(a) Individual lots or parcels of record.

(b) Existing commercial recreational vehicle parks or campgrounds.

(c) Existing condominium-type associations.

9.2.2 Criteria for Exempt Recreational Vehicles:

(a) The vehicle must have a current license required for highway use.

(b) The vehicle must be highway ready, meaning on wheels or the internal jacking system, attached to the site only by quick disconnect type utilities commonly used in campgrounds and recreational vehicle parks.

(c) No permanent structural type additions may be attached to the vehicle.

(d) The vehicle and associated use must be permissible in any pre-existing, underlying zoning district.

(e) Accessory structures are not permitted within the Floodway District. Any accessory structure in the Flood Fringe District must be constructed of flood-resistant materials and be securely anchored, meeting the requirements applicable to manufactured homes in this Section.

(f) An accessory structure must constitute a minimal investment

9.2.3 Recreational vehicles that are exempt in Section 9.2.2 lose this exemption when development occurs on the site that exceeds a minimal investment for an accessory structure such as a garage or storage building. The recreational vehicle and all accessory structures will then be treated as new structures subject to the elevation and floodproofing requirements of Section 5.0 of this Ordinance. No development or improvement on the parcel or attachment to the recreational vehicle is allowed that would hinder the removal of the vehicle should flooding occur.

SECTION 10.0 - ADMINISTRATION

10.1 **Building Official:** The Building Official or other official designated by the City Council must administer and enforce this Ordinance.

10.2 **Permit Requirements:**

10.2.1 Permit Required. A permit must be obtained from the Building Official prior to conducting the following activities:

(a) The erection, addition, modification, rehabilitation, or alteration of any building, structure, or portion thereof. Normal maintenance and repair also requires a permit if such work, separately or in conjunction with other planned work, constitutes a substantial improvement as defined in this Ordinance.

(b) The use or change of use of a building, structure, or land.

(c) The construction of a dam, fence, or on-site septic system, although a permit is not required for a farm fence as defined in this Ordinance.

(d) The change or extension of a nonconforming use.

(e) The repair of a structure that has been damaged by flood, fire, tornado, or any other source.

(f) The placement of fill, excavation of materials, or the storage of materials or equipment within the floodplain.

(g) Relocation or alteration of a watercourse - including new or replacement culverts and bridges), unless a public waters work permit has been applied for.

(h) Any other type of "development" as defined in this Ordinance.

10.2.2 Application for Permit. Permit applications must be submitted to the Building Official on forms provided by the Building Official. The permit application must include the following as applicable:

(a) A site plan showing all pertinent dimensions, existing or proposed buildings, structures, and significant natural features having an influence on the permit.

(b) Location of fill or storage of materials in relation to the stream channel.

(c) Copies of any required municipal, county, state or federal permits or approvals.

(d) Other relevant information requested by the Building Official as necessary to properly evaluate the permit application.

10.2.3 Certificate of Zoning Compliance for a New, Altered, or Nonconforming Use. No building, land or structure may be occupied or used in any manner until a certificate of zoning compliance has been issued by the Building Official stating that the use of the building or land conforms to the requirements of this Ordinance.

10.2.4 Certification. The applicant is required to submit certification by a registered professional engineer, registered architect, or registered land surveyor that the finished fill and building elevations were accomplished in compliance with the provisions of this Ordinance. Floodproofing measures must be certified by a registered professional engineer or registered architect.

10.2.5 Record of First Floor Elevation. The Building Official must maintain a record of the elevation of the lowest floor (including basement) of all new structures and alterations or additions to existing structures in the floodplain. The Building Official must also maintain a record of the elevation to which structures and alterations or additions to structures are floodproofed.

10.2.6 Notifications for Watercourse Alterations. Before authorizing any alteration or relocation of a river or stream, the Building Official must notify adjacent communities. If the applicant has applied for a permit to work in public waters pursuant to Minnesota Statutes, Section 103G.245, this will suffice as adequate notice. A copy of the notification must also be submitted to the Chicago Regional Office of the Federal Emergency Management Agency (FEMA).

10.2.7 Notification to FEMA When Physical Changes Increase or Decrease Base Flood Elevations. As soon as is practicable, but not later than six months after the date such supporting information becomes available, the Building Official must notify the Chicago Regional Office of FEMA of the changes by submitting a copy of the relevant technical or scientific data.

10.3 **Variances:**

10.3.1 Variance Applications. An application for a variance to the provisions of this Ordinance will be processed and reviewed in accordance with applicable state statutes and Section 9-360 of City Code.

10.3.2 Adherence to State Floodplain Management Standards. A variance must not allow a use that is not allowed in that district, permit a lower degree of flood protection than the regulatory flood protection elevation for the particular area, or permit standards lower than those required by state law.

10.3.3 Additional Variance Criteria. The following additional variance criteria of the Federal Emergency Management Agency must be satisfied:

(a) Variances must not be issued by a community within any designated regulatory floodway if any increase in flood levels during the base flood discharge would result.

(b) Variances may only be issued by a community upon (i) a showing of good and sufficient cause, (ii) a determination that failure to grant the variance would result in exceptional hardship to the applicant, and (iii) a determination that the granting of a variance will not result in increased flood heights, additional threats to public safety, extraordinary public expense, create nuisances, cause fraud on or victimization of the public, or conflict with existing local laws or ordinances.

(c) Variances may only be issued upon a determination that the variance is the minimum necessary, considering the flood hazard, to afford relief.

10.3.4 Flood Insurance Notice. The Building Official must notify the applicant for a variance that: 1) The issuance of a variance to construct a structure below the base flood level will result in increased premium rates for flood insurance up to amounts as high as $25 for $100 of insurance coverage; and 2) Such construction below the base or regional flood level increases risks to life and property. Such notification must be maintained with a record of all variance actions.

10.3.5 General Considerations. The community may consider the following factors in granting variances and imposing conditions on variances and conditional uses in floodplains:

(a) The potential danger to life and property due to increased flood heights or velocities caused by encroachments;

(b) The danger that materials may be swept onto other lands or downstream to the injury of others;

(c) The proposed water supply and sanitation systems, if any, and the ability of these systems to minimize the potential for disease, contamination and unsanitary conditions;

(d) The susceptibility of any proposed use and its contents to flood damage and the effect of such damage on the individual owner;

(e) The importance of the services to be provided by the proposed use to the community;

(f) The requirements of the facility for a waterfront location;

(g) The availability of viable alternative locations for the proposed use that are not subject to flooding;

(h) The compatibility of the proposed use with existing development and development anticipated in the foreseeable future;

(i) The relationship of the proposed use to the Comprehensive Land Use Plan and flood plain management program for the area;

(j) The safety of access to the property in times of flood for ordinary and emergency vehicles;

(k) The expected heights, velocity, duration, rate of rise and sediment transport of the flood waters expected at the site.

10.3.6 Submittal of Hearing Notices to the Department of Natural Resources (DNR). The Building Official must submit hearing notices for proposed variances to the DNR sufficiently in advance to provide at least ten days' notice of the hearing. The notice may be sent by electronic mail or U.S. Mail to the respective DNR area hydrologist.

10.3.7 Submittal of Final Decisions to the DNR. A copy of all decisions granting variances must be forwarded to the DNR within ten days of such action. The notice may be sent by electronic mail or U.S. Mail to the respective DNR area hydrologist.

10.3.8 Record-Keeping. The Building Official must maintain a record of all variance actions, including justification for their issuance, and must report such variances in an annual or biennial report to the Administrator of the National Flood Insurance Program, when requested by the Federal Emergency Management Agency.

10.4 **Conditional Uses:**

10.4.1 Administrative Review. An application for a conditional use permit under the provisions of this Ordinance will be processed and reviewed in accordance with Section 9-310 of the City Code.

10.4.2 Factors Used in Decision-Making. In passing upon conditional use applications, the City Council must consider all relevant factors specified in other Sections of this Ordinance, and those factors identified in Section 10.3.5 of this Ordinance.

10.4.3 Conditions Attached to Conditional Use Permits. The City Council may attach such conditions to the granting of conditional use permits as it deems necessary to fulfill the purposes of this Ordinance. Such conditions may include, but are not limited to, the following:

(a) Modification of waste treatment and water supply facilities.

(b) Limitations on period of use, occupancy, and operation.

(c) Imposition of operational controls, sureties, and deed restrictions.

(d) Requirements for construction of channel modifications, compensatory storage, dikes, levees, and other protective measures.

10.4.4 Submittal of Hearing Notices to the Department of Natural Resources (DNR). The Building Official must submit hearing notices for proposed conditional uses to the DNR sufficiently in advance to provide at least ten days' notice of the hearing. The notice may be sent by electronic mail or U.S. Mail to the respective DNR area hydrologist.

10.4.5 Submittal of Final Decisions to the DNR. A copy of all decisions granting conditional uses must be forwarded to the DNR within ten days of such action. The notice may be sent by electronic mail or U.S. Mail to the respective DNR area hydrologist.

SECTION 11.0 - NONCONFORMITIES

11.1 **Continuance of Nonconformities:** A use, structure, or occupancy of land which was lawful before the passage or amendment of this Ordinance but which is not in conformity with the provisions of this Ordinance may be continued subject to the following conditions. Historic structures, as defined in Section 2.8.29(b) of this Ordinance, are subject to the provisions of Sections 11.1.1 thru 11.1.7 of this Ordinance.

11.1.1 A nonconforming use, structure, or occupancy must not be expanded, changed, enlarged, or altered in a way that increases its flood damage potential or degree of obstruction to flood flows except as provided in 11.1.2 below. Expansion or enlargement of uses, structures or occupancies within the Floodway District is prohibited.

11.1.2 Any addition or structural alteration to a nonconforming structure or nonconforming use that would result in increasing its flood damage potential must be protected to the regulatory flood protection elevation in accordance with any of the elevation on fill or floodproofing techniques (i.e., FP-1 thru FP-4 floodproofing classifications) allowable in the State Building Code, except as further restricted in 11.1.3 and 11.1.7 below.

11.1.3 If the cost of all previous and proposed alterations and additions exceeds 50 percent of the market value of any nonconforming structure, then the entire structure must meet the standards of Sections 4.0 or 5.0 of this Ordinance for new structures depending upon whether the structure is in the Floodway or Flood Fringe District, respectively. The cost of all structural alterations and additions must include all

costs such as construction materials and a reasonable cost placed on all manpower or labor.

11.1.4 If any nonconforming use, or any use of a nonconforming structure, is discontinued for more than one year, any future use of the premises must conform to this Ordinance. The Assessor must notify the Building Official in writing of instances of nonconformities that have been discontinued for a period of more than one year.

11.1.5 If any nonconformity is substantially damaged, as defined in Section 2.8.28 of this Ordinance, it may not be reconstructed except in conformity with the provisions of this Ordinance. The applicable provisions for establishing new uses or new structures in Sections 4.0 or 5.0 will apply depending upon whether the use or structure is in the Floodway or Flood Fringe, respectively.

11.1.6 If any nonconforming use or structure experiences a repetitive loss, as defined in Section 2.8.25 of this Ordinance, it must not be reconstructed except in conformity with the provisions of this Ordinance.

11.1.7 Any substantial improvement, as defined in Section 2.8.29 of this Ordinance, to a nonconforming structure requires that the existing structure and any additions must meet the requirements of Sections 4.0 or 5.0 of this Ordinance for new structures, depending upon whether the structure is in the Floodway or Flood Fringe District.

SECTION 12.0 - PENALTIES AND ENFORCEMENT

12.1 **Violation Constitutes a Misdemeanor:** Violation of the provisions of this Ordinance or failure to comply with any of its requirements (including violations of conditions and safeguards established in connection with grants of variances or conditional uses) constitute a misdemeanor and will be punishable as defined by law.

12.2 **Other Lawful Action:** Nothing in this Ordinance restricts the City from taking such other lawful action as is necessary to prevent or remedy any violation. If the responsible party does not appropriately respond to the Building Official within the specified period of time, each additional day that lapses will constitute an additional violation of this Ordinance and will be prosecuted accordingly.

12.3 **Enforcement**: In responding to a suspected ordinance violation, the Building Official and City Council may utilize the full array of enforcement actions available to it including but not limited to prosecution and fines, injunctions, after-the-fact permits, orders for corrective measures or a request to the National Flood Insurance Program for denial of flood insurance availability to the guilty party. The City must act in good faith to enforce these official controls and to correct ordinance violations to the extent possible so as not to jeopardize its eligibility in the National Flood Insurance Program.

12.3.1 When a violation is either discovered by or brought to the attention of the Building Official, the Official shall immediately investigate the situation and document the nature and extent of the violation of the official control. As soon as it is reasonably possible, this information will be submitted to the appropriate State Department of Natural Resources and Federal Emergency Management Agency regional office along with the city's plan of action to correct the violation to the degree possible.

12.3.2 The Building Official shall notify the suspected party of the requirements of this chapter and all other official controls and the nature and extent of the suspected violation of these controls. If the structure and/or use is under construction or

development, the Building Official may order the construction or development immediately halted until a proper permit or approval is granted by the city. If the construction or development is already completed, the Building Official may either: 1) issue an order identifying the corrective actions that must be made within a specified time period to bring the use or structure into compliance with the official controls; or 2) notify the responsible party to apply for an after the fact permit/development approval within a specified period of time not to exceed 30 days.

SECTION 13.0 AMENDMENTS

13.1 **Floodplain Designation – Restrictions on Removal:** The floodplain designation on the Official Zoning Map must not be removed from floodplain areas unless it can be shown that the designation is in error or that the area has been filled to or above the elevation of the regulatory flood protection elevation and is contiguous to lands outside the floodplain. Special exceptions to this rule may be permitted by the Commissioner of the Department of Natural Resources (DNR) if the Commissioner determines that, through other measures, lands are adequately protected for the intended use.

13.2 **Amendments Require DNR Approval:** All amendments to this Ordinance must be submitted to and approved by the Commissioner of the Department of Natural Resources (DNR) prior to adoption. The Commissioner must approve the amendment prior to community approval.

13.3 **Map Revisions Require Ordinance Amendments.** The floodplain district regulations must be amended to incorporate any revisions by the Federal Emergency Management Agency to the floodplain maps adopted in Section 2.2 of this Ordinance.

Presented to the Ham Lake City Council on November 2, 2015 and adopted by a unanimous vote this 16th day of November, 2015.

Denise Webster, City Clerk

Michael G. Van Kirk, Mayor

Appendix C

1994-1995 Problem Area Questionnaire

1994/1995 PROBLEM AREA QUESTIONNAIRE RESULTS

1. Basin at 17717 Concord Drive (PIN 06 32 23 14 0009). Basin level has risen during the wet years. Public Works Department has had to pump out the basin.

Resolved 2005

2. Drainage problem at 16829 Washington Street (Lot 2, Block 10, Pinger's Plaza). Resident noted that the problem is the culvert under road.

Resolved _____

3. Ditch 28-11 and culvert at 17655 Swedish Drive (PIN 04 32 23 32 0004). During heavy rains, water backs up in the ditch along 176th and causes basement flooding. Culvert and ditch to North are in need of repair.

Resolved – Unknown Date

4. Rose Crest basin and City ditch. Basin levels seem to be high and ditch needs cleaning.

Resolved _____

5. City Hall complex basins and ditch. Basin levels uncontrolled and ditch needs cleaning.

Resolved 2008

6. Basement and property at 1531-145th Lane (Lot 2, Block 3, North Pines Addition) are flooding after some storms.

Resolved – Continued maintenance every 10 years or as necessary.

7. Backyard flooding in the spring at 1724-143rd Lane (Lot 9, Block 1, Marshall Manor 2" Addition). City ditch to Ditch 59 needs cleaning.

Resolved – Continued maintenance every 10 years or as necessary.

8. Both the culvert under road at the intersection of 141st Lane and Eveleth Street and the City ditch through Outlet A need cleaning.

Resolved – Unknown Date

9. Yard flooding in the spring and after heavy rains at 750 Quincy Street (Lot 5, Block 4, Jefferson Oaks Estates).

Resolved 2006

10. Rasmusson Basin in Rasmusson Addition. Flooded over road and into basement on several occasions.

Resolved _____

11. Basement flooding at 2525-133rd Lane (Lot 9, Block 4, Twin Birch Acres). Public Works Department has pumped the area out to the North over 134th Lane into Twin Birch Acres park,

Resolved: Proposed 2021

12. Backyard flooding at 2850-140th Avenue (Lot 2, Block 1, North Woods Estates 1st Addition). Floods annually due to no outlet.

Resolved Unknown Date

13. Culvert at the intersection of Guadalcanal Street and 140th Avenue. Water backing up East of Guadalcanal Street. Culvert has been cleaned several times.

Resolved Unknown Date

14. Backyard flooding at 4020 Wildwood Drive (Lot 3, Block 5, Wildwood Park). Backyard drains to Ditch 59-5, which may need cleaning.

Resolved _____

15. Flooding at 155th Avenue and Naples Street. The road flooded over during the heavy rains of 1993. Culverts need cleaning and repair.

Resolved 2020

16. Obstruction of Lund's Lakeview Forest ditch.

Resolved 1996

17. Restricted flow of Interlachen Drive culvert West of Vickers Street.

Resolved 2015

18. Backyard and basement flooding at 4950-1701h Lane (Lot 3, Block 3 Meadowlark Acres). An overflow outlet is to be constructed to the Lexington Estates basin northwest of the intersection of 168th Lane and Packard Street.

Resolved 2016

19. Hydraulic problem at Ditch 44 under Naples Street. Water backs up behind culverts.

Resolved 1998

20. Hydraulic problem at private ditch from Ham Lake outlet to Ditch 59.

Resolved – Continued maintenance every 10 years or as necessary.

Appendix D

Sunrise Management Organization

Joint Powers Agreement

AMENDED

SUNRISE RIVER WATERSHED MANAGEMENT ORGANIZATION

JOINT POWERS AGREEMENT

THIS AMENDED JOINT POWERS AGREEMENT made and entered into as of the date of execution by and between the Local Government Units of the City of Columbus, City of East Bethel, City of Ham Lake and Linwood Township. The purpose of this Joint Powers Agreement is to establish a Water Management Organization to assist the member local units of government with surface water, ground water, water quality and water usage issues.

WHEREAS, the parties to this Agreement have authority pursuant to Minnesota Statutes, Chapter 471.59, to jointly or cooperatively, by agreement, exercise any power common to the contracting parties. Pursuant to Minnesota Statutes, Chapters 103B.201 to 103B.255, these local units of government have authority to jointly or cooperatively manage or plan for the management of surface water within a defined watershed; and

WHEREAS the parties to this Agreement desire to prepare a surface water management plan for the purpose of management and implementation of the programs identified by Minnesota Statutes, Chapters 103B.201 through 103B.255.

NOW, THEREFORE, the parties to this Agreement do mutually agree as follows:

SECTION I

General Purpose

1.1 It is the general purpose of the parties to this Agreement to establish a Water Management Organization to jointly and cooperatively develop a Watershed Management Plan for the purposes of (a) protecting, preserving, and using natural surface and groundwater storage and retention systems in the Sunrise River Watershed; (b) minimizing public capital expenditures needed to correct flooding and water quality problems; (c) identifying and planning for means to effectively protect and improve surface and groundwater quality; (d) assist with establishing more uniform local policies and official controls for surface and ground water management; (e) preventing erosion of soil into surface water systems; (f) promoting groundwater recharge; (g) protecting and enhancing fish and wildlife habitat and water recreational facilities; and (h) securing other benefits associated with the proper management of surface and groundwater. The plan and programs shall operate within the boundaries of the Sunrise River Watershed as set forth in Appendix 1 and 2, attached hereto (hereinafter "Area").

SECTION II

Sunrise River Watershed Management Organization

2.1 Establishment: There is hereby established the "Sunrise River Watershed Management Organization" whose membership shall be appointed in accordance with the provisions of this section and whose duties shall be to carry out the purposes contained herein. The Sunrise River Watershed Management Organization (hereinafter "Organization") shall be constituted as described in Section 2.2.

2.2 Membership Appointment: Each party to this Agreement shall appoint two (2) representatives to serve as members of the Organization board. Each representative of a party to this agreement who is current in the payment of operating costs shall have one (1) vote. Representatives appointed to the Organization board shall be evidenced by a resolution or certified copy of official meeting minutes of the governing body of each party and filed with the Organization.

2.3 Alternate Members: One alternate member of the Organization board may be appointed by appropriate resolution or certified copy of official meeting minutes of the governing body of each party to this Agreement filed with the Organization. The alternate member may attend any meeting of the Organization board when a regular member representing that party is absent and vote on behalf of the party the member represents. If an Organization board member is also an officer of the Organization, the alternate member shall not be entitled to serve as such officer.

2.4 Term: The members of the Organization board shall be filled by the governing body of the party whose membership position on the board is vacant. Removal of a board member or alternate board member shall be at the sole discretion of the appointing authority. The term of appointment is at the sole discretion of the appointing authority.

2.5 Vacancies: The Organization shall notify the Board of Water and Soil Resources of member appointments and vacancies in member positions within 30 days. A vacancy on the Organization board shall be filled by 90 days after the vacancy occurs by the governing body of the party whose membership position on the board is vacant.

Vacancies resulting from expiration of members' terms or other reasons shall be filled only after published notice of the vacancy once a week for two (2) successive weeks in a newspaper of general circulation in the watershed management organization area. The notices must state that the party is considering applications for appointment of a member to the Organization board and that persons interested in being appointed to serve on the board may submit their names to the appointing authority for consideration. A vacancy shall not be filled until at least 15 days have elapsed after the last published notice.

2.6 Compensation and Expenses: The Organization members shall not be entitled to compensation or reimbursement for expenses incurred in attending meetings, except to the extent that the governing body of a party may determine to compensate or reimburse the

expenses of the member(s) it appoints, in which case the obligation to make such payments shall be that of the party and not that of the Organization.

2.7 Officers: The Organization board shall elect from its membership a chair, a vice-chair, a secretary, and a treasurer. All such officers shall hold office for a term of one (1) year and until their successors have been qualified and duly elected by the board. An officer may serve only while a member of the Organization. A vacancy in an office shall be filled from the membership of the board by election for the remainder of the unexpired term of such office.

2.8 Duties of Officers: The duties of the officers of the Organization shall be as outlined in Parts 40 and 41, Article VII, Robert's Rules of Order, as the board deems necessary.

2.9 Quorum: Voting members of the Organization board representing a majority of the parties to this Agreement shall constitute a quorum. Less than a quorum may adjourn a scheduled meeting.

2.10 Meetings:

A. Meetings of the Organization board will be scheduled as needed, with the annual meeting held in February at the East Bethel City Hall, 2241 221st Avenue NE, East Bethel, MN 55011. Notice of all regular meetings shall be provided with a minimum of thirty (30) days advance notice of the meeting by the secretary of the Board to all parties to this Agreement. Such meeting notice shall be posted on the official notification board for each party to this agreement.

At the annual meeting the board, at a minimum, shall:

1. Elect officers for the next fiscal year;
2. Establish the annual budget and work plan;
3. Hear recommendations on amendments to this agreement and the watershed management plan;
4. Biennially renew or decide on contracts for professional, legal, and administrative services; and
5. Decide on meeting dates.

B. Special meetings may be held at the call of the chair or by any three (3) members of the board giving not less than 72 hours written notice of the time, place, and purpose of such meeting delivered by mailed or email to the residence of each Organization member and delivered to the City or Town Hall of each party to this Agreement.

C. All meetings of the board are subject to Minnesota Statutes, Section 13D and the notice provisions contained therein. Posted notice, when required, shall be given separately to each party to this Agreement.

2.11 Conduct of Meetings: The Organization board shall adopt rules of order and procedure for the conduct of its meetings; the board may adopt any such rules as a

majority of all voting members shall agree. Decisions by the board may not require more than a majority vote, except a decision on a capital improvement project may require a unanimous vote by all parties.

2.12 Organization Office: The office of the Organization shall be the East Bethel City Hall, 2241 221st Avenue NE, East Bethel, MN 55011. All notices to the Organization shall be delivered or served at said office.

SECTION III

Organization Powers and Duties

3.1 Authority: Upon execution of the Agreement by all parties, the Organization shall have authority provided for in Minnesota Statutes, Chapter 103B.211 through 103B.255, unless otherwise limited by this Agreement that provides for, in part:

A. The authority to prepare, adopt and implement a plan for the Sunrise River Watershed meeting the requirements of Minnesota Statutes, Chapter 103B.231.

B. The authority to review and approve local water management plans as provided in Minnesota Statutes, Chapter 103B.235, Subd. 3, Review.

C. Other powers necessary to exercise the authority under clauses A and B, including the power to enter into contracts for the performance of functions with governmental units or persons.

3.2 Watershed Management Plan: The Organization shall prepare a Watershed Management Plan for the Sunrise River Watershed. The plan shall be in compliance with Minnesota Statutes, chapter 103B.231, Subd. 4 as from time to time amended. This Chapter describes plan contents to include but not limited to the following:

A. Description of the existing physical environment, land use and development in the Sunrise River Watershed. It shall further describe the environment, land use and development proposed in existing local and metropolitan comprehensive plans; and

B. Present information on the hydrologic system in the Sunrise River Watershed and its components, including any drainage systems previously constructed under Minnesota Statutes, Chapter I03E, and existing and potential problems relating thereof; and

C. State objectives and policies, including management principles, alternatives and modifications, water quality, and protection of natural characteristics; and

D. Set forth a management plan, including the hydrologic and water quality conditions that will be sought and significant opportunities for improvement; and

E. Describe the effect of the Watershed Management Plan on existing drainage systems; and

F. Describe conflicts between the Watershed Management Plan and existing plans of local government units; and

G. Set forth an Implementation Program consistent with the Watershed Management Plan, which may include a Capital Improvement Program; and

H. Set out a procedure for amending the Watershed Management Plan. The plan shall be amended as required from time to time.

3.3 Employment: The Organization may contract for services, may contract services from parties to this Agreement, or may employ such other persons as it deems necessary. Where staff services of a party are contracted, such services shall not reduce the financial commitment of such party to the operating fund of the Organization unless the Organization so authorizes.

3.4 Committees: The Organization may appoint such committees and subcommittees as it deems necessary. The Organization shall establish a citizen advisory committee and technical advisory committee and promote other means of public participation.

Citizen and/or technical advisory committees will be formed from time-to-time as deemed appropriate by the Organization board and shall be issue-specific. Committees may be formed that include both citizens and technical experts. Committees shall operate by seeking consensus, while noting any dissenting opinions. Committee findings shall be reduced to writing and submitted to the Organization board. In all cases, committees shall be advisory in nature and their findings shall be referred to the Organization board. Issues that may warrant formation of advisory committees include but are not limited to amendments or updates to the Organization's Watershed Management Plan; lake level or water quality issues; a total maximum daily load (TMDL) impaired waters study or implementation of the study; capital improvement projects; major hydrological changes in the watershed and others as deemed appropriate by the Organization board.

Technical advisory committees shall include technical experts in areas relating to land use, natural resources, pollution control, and soil and water resources.

Citizen advisory committees shall include residents and elected officials from the affected area including but not limited to homeowners; business owners; lake association or lake improvement district representatives; and, others, as deemed appropriate by the Organization Board.

All advisory committees shall include at least one Organization board member.

3.5 Rules and Regulations: The Organization may prescribe and promulgate such rules and regulations as it deems necessary or expedient to carry out its powers and duties and the purpose of the Agreement.

3.6 Review and Recommendations: Where the Organization is authorized or requested to review and make recommendations on any matter relating to the Watershed Management Plan, the Organization shall act on such matter within 60 days of receipt of the matter referred. Failure of the Organization to act within 60 days shall constitute approval of the matter referred, unless the Organization requests and receives from the referring unit of government an extension of time to act on the matter referred. Such extension shall be in writing and acknowledged by both parties.

The Board shall adopt an appeal procedure for any party aggrieved by a decision of the Board or an alleged failure to implement the Plan pursuant to Minnesota Statutes, Chapter 103B.231, Subd. 13.

3.7 Ratification: The Organization may, and where required by this Agreement shall, refer matters to the governing bodies of the parties for review, comment or action

3.8 Financial Matters:

A. Method of Operation: The Organization may collect and receive money and contract for services subject to the provision of the Agreement from the parties and from any other sources approved by the Organization. The organization may incur expenses and make disbursements necessary and incidental to the effectuation of the purposes of this Agreement. Funds may be expended by the Organization in accordance with procedures established herein. Checks shall be signed by the chair or treasurer. Other legal instruments shall be executed on behalf of the Organization by the chair or vice-chair and an appointed Board member.

B. Operating Funds. On or before June 1st of each year, the Organization shall prepare a work plan and operating budget for the following year. The annual budget shall provide details to support the proposed revenues and expenditures for the Organization. This detail shall be sufficient to meet standard budget and/or accounting principles generally recognized for governmental organizations. Expenditures may include administrative expenses, plan development costs, review expenses, capital improvement costs authorized in Section 3.12, and insurance costs as authorized in Section 3.14. Upon the approval of a majority of the partners of this agreement, the budget shall be recommended to the parties for ratification along with a statement showing each party's proposed share of the budget. The budget shall be implemented only after ratification by all parties to this Agreement. Failure to ratify or pay its share of the budget by any party to this Agreement shall be subject to the procedures in Section 3.6. Each party's share of the operating cost is based on 50% of their portion of the watershed's Total Market Value (TMV) and 50% of their portion of the Total Taxable Watershed Acreage (TWA).

Work Plan - ((PA / WA) + (PV / WV)) / 2 = the party's percentage share of the organization's operating budget.

PA = Party's area within the watershed organization area

WA = watershed organization area

PV = party's market valuation within the watershed organization area

WV = market valuation of the watershed organization area

Operating Costs - Total amount to be divided equally between members of the Joint Powers Agreement. Operating costs per the operating budget are defined as copies, postage, recording secretary fees, insurance, and administrative fee charged to each member community.

After ratification by the organization, the Organization Chair or Vice Chair shall certify the recommended budget to each party on or before June 1 of each year together with a statement showing the budgeted amounts applicable to each party. Each party shall pay over to the Organization the amount owing in two (2) equal installments, the first on or before January 15 and the second on or before July 15 in accordance with the tax year for which the amount due is being paid.

C. Review Services: When the Organization is authorized or requested to undertake a review and submit recommendations to a party as provided in this Agreement, the Organization shall conduct such review, without charge, except as provided below. Where the project size and complexity of review are deemed by the Organization to be extraordinary and substantial, the Organization may charge a fee for such review services, the amount to be based upon direct and indirect costs attributable to that portion of review services determined by the Organization to be extraordinary and substantial. Where the Organization determines that a fee will be charged for extraordinary and substantial review services, or where the flowage enters the Sunrise River, but the party is not a member of the Sunrise River Watershed Management Organization, the party to be charged shall receive written notice from the Organization of the services to be performed and the fee therefore, prior to undertaking such review services. Unless the party to be charged objects within fifteen (15) days of receipt of such written notice to the amount of the fee to be charged, such review services shall be performed and the party shall be responsible for the cost thereof. If the party to be charged objects to the proposed fee for such services with fifteen (15) days and the party and the Organization are unable to agree on a reasonable alternative amount for review services, such extraordinary and substantial review services shall not be undertaken by the Organization. Payment for such services shall be in advance of any work performed.

3.9 Annual Audit. The Organization shall annually prepare a comprehensive financial report on operations and activities. An annual audit, by an independent accounting firm or the State Auditor, shall be provided for that includes a full and complete audit of all books and accounts the Organization is charged with maintaining. Such audit shall be conducted in accordance with generally accepted auditing principles and guidelines. A copy of the annual financial report and auditor's statement shall be provided to all parties to this agreement and to the Board of Water and Soil Resources no later than June 30th of each year. The report to the Board of Water and Soil Resources shall include an annual

activity report. All of its books, reports and records shall be available for and open to examination by any party at all reasonable times.

3.10 Gifts, Grants, Loans. The Organization may, within the scope of this Agreement, accept gifts, may apply for and use grants of money or other property from the United States, the State of Minnesota, a local government unit or other governmental unit or organization or any person or entity for the purpose described herein. The Organization may enter into any reasonable agreement required in connection therewith. The Organization shall comply with any laws or regulations applicable to grants, donations and agreements. The Organization may hold, use, and dispose of such money or property in accordance with the terms of the gift, grant, or agreement relating thereto.

3.11 Contracts. The Organization may make such contracts and enter into any such agreements as it deems necessary to make effective any power granted to it by this Agreement. Every contract for the purchase or sale of merchandise, materials, or equipment by the Organization shall be let in accordance with the Uniform Municipal Contracting Law, Minnesota Statutes, Section 471.345 and the Joint Exercise of Powers Statute, Minnesota Statues, Section 471.59. No member or employee of the Organization or officer or employee of any of the parties shall be directly or indirectly have an interest in any contract made by the Organization.

3.12 Works of Improvement: Works of improvement for protection and management of the natural resources of the Area, including, but not limited to, improvements to property, land acquisition, easements, or right-of-way, may be initiated by:

A. Recommendation of the Organization to a party or parties; or

B. Petition to the Organization by the governing body of a party or parties.

Where works of improvement are recommended by the Organization, the Organization shall first determine whether such improvement will result in a local or regional benefit to the area. Where the Organization determines that the benefits from the improvement will be local or not realized beyond the boundaries of the party in which the improvement is to be established, the Organization may recommend such improvement to the governing body of the unit of government which the Organization determines will be benefited. The recommendation shall include the total estimated cost of the improvement and a detailed description of the benefits to be realized.

Where the Organization determines that the benefits from the improvement will be beyond the local unit or beyond the boundaries of the party in which the improvement is to be established, the Organization may recommend such improvement to each party to this Agreement which the Organization determines will be benefited thereby. The recommendation of the Organization shall include the total estimated cost of the improvement, a description of the extent of the benefits to be realized by each party to this Agreement and the portion of the cost to be borne by each party benefited in accordance with the benefit of party to this Agreement.

Each party to whom the Organization submits such recommendation shall respond within 60 days from receipt of such recommendation. Where the Organization determines that the benefits of such improvement will be local, the unit of government to whom such recommendation is made may decline to ratify and undertake said improvement. Where the Organization determines that the benefits of such improvement will be regional, all Parties to this Agreement must ratify the project proposal before any project is moved forward by the Organization. Should the project not be ratified by all Parties to this Agreement, the Organization shall continue to review and recommend alternative methods of cooperation and implementation among those parties ratifying the recommendation of the Organization, unless and until the Organization determines that said improvement is no longer feasible.

When works of improvement are initiated by a Party to this Agreement, a copy of the proposed project shall be submitted to the Organization for review and comment. The Organization shall review and make recommendations on the proposed improvement and its compliance with the Organization's management plan in accordance with the provisions of Section 3.5 of this Agreement.

When a proposed improvement may be eligible for federal or state funds as a cost-share project, the Organization shall receive the approval of all Parties to this Agreement prior to submission of any grant request. No member Party shall unreasonably withhold approval for a grant application. All improvements that are considered for state or federal grant funding that have a local or member share (matching funds) must be submitted for approval in advance of the proposed grant award. All improvements that are considered for state or federal grant funding shall be presented to each Party to the Agreement for review, comment and approval and shall provide details to include projects scope, estimated cost, estimated matching share, benefits to be derived and project timing.

3.13 Claims. The Organization or its agents may enter upon lands within or without the Sunrise River Watershed to make surveys and investigations to accomplish the purpose of the Organization. The Organization shall be liable for actual damages resulting there from. But every person who claims damages shall serve the Chairperson or Secretary of the Organization with a notice of claim as required by Minnesota Statutes, Section 466.05. The Organization shall obtain court orders authorizing and directing such entries when necessary due to refusals of landowners to allow the same.

3.14 Indemnification and Insurance. Any and all claims that arise or may arise against the Organization, its agents or employees as a consequence of any act or omission on the part of the Organization or its agents or employees while engaged in the performance of this Agreement shall in no way be the obligation or responsibility of the parties. The Organization shall indemnify, hold harmless and defend the parties, their officers and employees against any and all liability, loss, costs, damages, expenses, claims, or actions, including attorney's fees which the parties, their officers, or employees may hereafter sustain, incur, or be required to pay, arising out of or by reason of any act or omission of the Organization, its agents or employees in the execution, performance, or failure to

adequately perform the Organization's obligations and understandings pursuant to the Agreement.

The Organization agrees that in order to protect itself as well as the parties under the indemnity provision set forth above, it will at all times during the term of this Agreement keep in force the following insurance policies in the limits specified.

A. Commercial General Liability/Professional Liability: $1,250,000 per incident and shall include the following endorsements:

B. Automobile Coverage ($0)

C. Worker's Compensation Coverage (statutory minimum)

The minimum liability limits shall be increased to the statutory limits provided for member local units of government in Minnesota Statutes.

Any policy obtained and maintained under this clause shall provide that it shall not be cancelled, materially changed or not renewed without a minimum of thirty (30) days prior notice thereof to each of the parties.

Prior to the effective date of this Agreement, and as a condition precedent to this Agreement, the Organization will furnish the parties with certificates of insurance listing each party to the Agreement as an additional insured.

3.15 General: The Organization may take all such other actions as are reasonably necessary and convenient to carry out the purpose of this Agreement.

SECTION IV

Mediation

4.1 The parties agree that any controversy that cannot be resolved between parties shall be submitted to for mediation. Mediation shall be conducted by a mutually agreeable process by all parties.

SECTION V

Termination of Agreement

5.1 This Agreement may be terminated by approval of two-thirds vote of the governing bodies of each party hereto, provided that all such approvals occur within a ninety (90) day period. Withdrawal of any party may be accomplished by filing written notice with the Organization and the other parties sixty (60) days prior to the effective date of termination. No party may withdraw from this Agreement until the withdrawing party has met its full financial obligations through the effective date of such withdrawal.

SECTION VI

Dissolution of Organization

6.1 The Organization shall be dissolved under any of the following conditions:

A. Upon termination of this Agreement;

B. Upon unanimous agreement of all parties; or

C. Upon the membership of the Organization being reduced to fewer than three (3) parties.

D. Process. At least 90 days notice of the intent to dissolve shall be given to affected counties and the Board of Water and Soil Resources. Upon dissolution, all personal property of the Organization shall be sold, and the proceeds thereof, together with monies on hand after payment of all obligations, shall be distributed to the parties. Such distribution of Organization assets shall be made in proportion to the total contributions to the Organization for such costs made by each party. All payments due and owing for operating costs under Section 3.8, B, or other unfilled financial obligations, shall continue to be the lawful obligation of the parties.

SECTION VII

Amendment

7.1 The Organization may recommend changes and amendments to this Agreement to the governing bodies of the parties. Amendments shall be adopted by all governing bodies of the parties. Adopted amendments shall be evidenced by appropriate resolutions or certified copies of meeting minutes of the governing bodies of each party filed with the Organization and shall, if no effective date is contained in the amendment, become effective as of the date all such filings have been completed.

SECTION VIII

Counterparts

8.1 This Agreement shall be executed in several counterparts and all so executed shall constitute one Agreement, binding on all of the parties hereto. Each party to the agreement shall receive a fully executed copy of the entire document following adoption by all parties.

IN WITNESS OF, the parties hereto have executed this Agreement as of the 20 day of April, 2011.

CITY OF HAM LAKE

By: _____
Mayor

Dated: 4/20/11

By: _____
City Administrator

IN WITNESS OF, the parties hereto have executed this Agreement as of the 12 day of July, 2011.

LINWOOD TOWNSHIP

By: _____
Board Chair

Dated: 7/12/11

By: _____
Township Clerk

SRWMO JPA Appendix 1

SUNRISE RIVER WATERSHED MANAGEMENT ORGANIZATION
LEGAL DESCRIPTION OF SUBJECT PROPERTY

All of Linwood Township, Anoka County.

That part of East Bethel Township, Anoka County lying Easterly of the following described line:

Beginning on the Anoka and Isanti County Line at the Northwest corner of East Half of East Half of Section 25, Township 34 North, Range 23 West, Anoka County, Minnesota; thence South along the West line of East Half of East Half of Section 25 and East Half of East Half of Section 36 to the Southeast corner of Northwest Quarter of Northeast Quarter of Section 36; thence Southwesterly in a straight line to the intersection of Durant Street and 231st Lane NE on the East line of Section 35, Township 34 North, Range 23 West, thence South along Durant Street to 229th Avenue at the Northeast corner of Section 2, Township 33 North, Range 23 West; thence West along 229th Avenue and North line of Section 2 to East Bethel Boulevard at the Northwest corner of Section 2; thence Southerly along East Bethel Boulevard to 221st Avenue and the North line of Section 11, Township 33 North Range 23 West; thence in a straight line to East Bethel Boulevard at the Northwest corner of the Southwest Quarter of Section 11; thence Southerly along East Bethel Boulevard to the center of Section 22, Township 33 North Range 23 West; thence in a straight line to the Northwest corner of the Southeast quarter of the Southwest Quarter of Section 22. Thence South along the West line of East Half of Southwest Quarter of Section 22 and the East Half of Northwest Quarter of Section 27 to the Southwest corner of East Half of Northwest Quarter Section 27;

Thence West along the North line of Southwest Quarter Section 27 to the West line of Section 27; thence South along the West line of Sections 27 and 34 to the Northeast corner of the Southeast Quarter of Section 33, Township 33 North, Range 23 West:

Thence West along the North line of the Southeast Quarter of Section 33 to the centerline of County Road No. 68 (Greenbrook Drive); thence Southerly along the centerline of County Road No. 68 to the South line of Section 33, which is also the South line of East Bethel, and the North line of Ham Lake; and there terminating.

That part of Columbus Township, Anoka County lying Northerly of the following described line:

Beginning at the West line of Section 6, Township 32 North, Range 22 West, at the Northwest corner of the South Half of Section 6, which is the Northerly line of Coon Creek Watershed District; thence Easterly along the Northerly line of the South Half of Section 6 to the Southwest corner of East Half of Northeast Quarter of Section 6; thence North along the West line of East Half of Northeast Quarter to the Northwest

corner of the East Half of Northeast Quarter; thence East along the North line of Section 6 to the Southwest corner of Section 32, Township 33 North, Range 22 West;

Thence North along the West line of Section 32 to the Northwest corner of the South Half of the South Half of Section 32, thence Easterly along the North line of South Half of South Half to the East line of Section 32; thence Southerly along the Easterly line of Section 32 and Section 5, Township 32 North, Range 22 West, to the Southwest corner of Northwest Quarter of Section 4: thence Easterly along the South line of the Northwest Quarter to Northwest corner of East Half of Southwest Quarter; thence Southerly along the West line of East Half of Southwest Quarter to South line of Section 4; thence Easterly along the South line of Section 4 to the Northeast corner of Northwest Quarter of Section 9;

Thence Southerly along the East line of Northwest Quarter to Northeast corner of Southwest Quarter, of Section 9; thence, departing from the boundary of Coon Creek Watershed District to follow the Northerly line of Rice Creek Watershed District, Southerly on the East line of the Southwest Quarter to the Southeast corner of the Northeast Quarter of the Southwest Quarter; thence Easterly on the North line of the South Half of the Southeast Quarter to the Northeast corner of the South Half of the Southeast Quarter of Section 9; thence Northerly on the West line of Section 10 to the Northwest corner of the South Half of the Northwest Quarter of Section 10;

Thence Easterly on the North line of the South Half of the North Half of Section 10 and South Half of the Northwest Quarter of Section 11 to the Northeast corner of the South Half of the Northwest Quarter of Section 11; thence Northerly on the West line of the East Halves of Sections 11 and 2 to the Northwest corner of South Half of Southeast Quarter of Section 2; thence Easterly on the South line of North half of Southeast Quarter of Section 2 to a point of intersection with the Southerly extension of the East line of Lot 1, Block 2, (Hansen Farms); thence North on said line to the Northeast corner of Lot 1, Block 2, (Hansen Farms); thence Northeasterly to the Southeast corner of Lot 8, Block 1, (Hansen Fan's); thence North along the East line of Lot 8, Block 1, (Hansen Farms) to the Northeast corner of Lot 8, Block 1, (Hansen Farms) at the North line of South Half of Section 2; thence Easterly on the North line of the South Halves of Section 2 and 1 to the Northeast corner of the Southwest Quarter of Section 1; thence Southerly on the East line of the Southwest Quarter to the Southeast corner of the Southwest Quarter; thence Easterly on the North line of Section 12 to the Northeast corner of the West Half of the Northeast Quarter of Section 12;

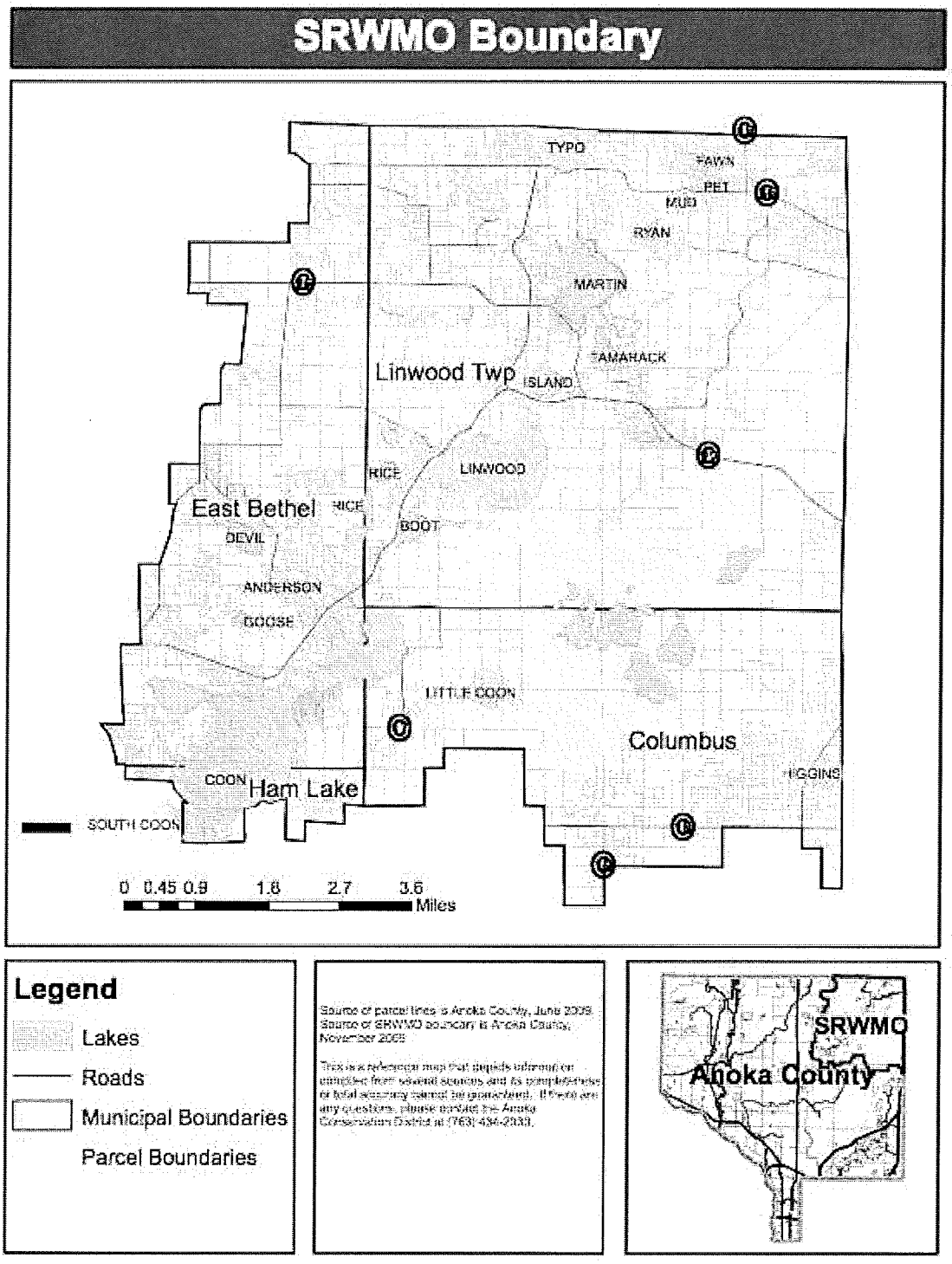
Thence Southerly on the East line of the West Half of the Northeast Quarter to the Southeast corner of the West Half of the Northeast Quarter; thence Easterly on the North line of the Southeast Quarter to the Northeast corner of the Southeast Quarter; this point being on the East boundary of Columbus Township, and the East boundary of Anoka County; and there terminating.

That part of Ham Lake, Anoka County described as follows:

Government Lot 1 and Government Lot 2 Section 1, the Northeast Quarter of Section 1, the Northwest Quarter of the Southeast Quarter of Section 1, the Southeast Quarter of the Northwest Quarter of Section 1, the North Half of the Southwest Quarter of Section 1, the Southwest Quarter of the Southwest Quarter of Section 1 and that part of Government Lot 1 of Section 2 lying North of the Southeast Quarter, Government Lot 3 and Government Lot 4, Section 2 and Government Lot one and Government Lot 3 in Section 3, the Southeast Quarter of the Southeast Quarter of Section 3, that part of Government Lot 2 in Section 3 lying East of the West Half of the Northeast Quarter, all in Township 32 North, Range 23 West.

That part of Forest Lake Township, Washington County lying Westerly of the following described line:

The center line of Elmcrest Ave N within the Northeast Quarter of Section 6, Township 32 North, Range 21 West.


SRWMO Boundary
TYPO
FAWN
PET
MUD
RYAN
MARTIN
TAMARACK
ISLAND
Linwood Twp
RICE
LINWOOD
East Bethel
RICE
BOOT
DEVIL
ANDERSON
GOOSE
LITTLE COON
Columbus
COON
Ham Lake
SOUTH COON
HIGGINS
0 0.45 0.9 1.8 2.7 3.6
Miles
Legend
Lakes
Roads
Municipal Boundaries
Parcel Boundaries
Source of parcel lines is Anoka County, June 2009.
Source of SRWMO boundary is Anoka County, November 2009.
SRWMO
Anoka County

IN WITNESS OF, the parties hereto have executed this Agreement as of the 26th day of April, 2011.

CITY OF COLUMBUS

By: _____
Mayor

Dated: April 26th, 2011

By: _____
City Administrator

IN WITNESS OF, the parties hereto have executed this Agreement as of the 31st day of May, 2011.

CITY OF EAST BETHEL

By: R. Lawrence
Mayor

Dated: May 31, 2011

By: Mike Davis
City Administrator

Appendix E

Upper Rum River Management Organization

Joint Powers Agreement

AMENDED
JANUARY 2011

UPPER RUM RIVER WATERSHED MANAGEMENT ORGANIZATION
JOINT POWERS AGREEMENT

THIS AGREEMENT, made and entered into as of the date of execution by and between the Local Government Units of: City of Bethel, City of East Bethel, City of Ham Lake, City of Nowthen, City of Oak Grove, and City of St. Francis for the establishment of a watershed management organization. The purpose of this Joint Powers Agreement is to establish a Water Management Organization to assist the member local units of government with surface water, ground water, water quality and water usage issues.

WHEREAS, the parties to this Agreement have authority pursuant to Minnesota Statutes, Chapter 471.59 to jointly or cooperatively by agreement exercise any power common to the contracting parties and pursuant to Minnesota Statutes, Sections 103B.201 to 103B.255 have authority to jointly or cooperatively manage or plan for the management of surface water;

WHEREAS the parties to this Agreement desire to prepare a surface water management plan for the purpose of management and implementation of the programs required by Minnesota Statutes, Sections 103B.201 to 103B.255.

NOW, THEREFORE, the parties to this Agreement do mutually agree as follows:

SECTION I
General Purpose

1.1 It is the general purpose of the parties to this Agreement to establish an organization to jointly and cooperatively develop a Watershed Management Plan and an Implementation Program and a Capital Improvement Program for the purposes of (a) protecting, preserving, and using natural surface and groundwater storage and retention systems in the Upper Rum River Watershed; (b) minimizing public capital expenditures needed to correct flooding and water quality problems; (c) identifying and planning for means to effectively protect and improve surface and groundwater quality; (d) establishing more uniform local policies and official controls for surface and ground water management; (e) preventing erosion of soil into surface water systems; (f) promoting groundwater recharge; (g) protecting and enhancing fish and wildlife habitat and water recreational facilities; and (h) securing the other benefits associated with the proper management of surface and groundwater. The plan and programs shall operate within the boundaries of the Upper Rum River Watershed as set forth in Addendum 1 attached hereto (hereinafter "Area").

SECTION II
Upper Rum River Watershed Management Organization

2.1 Establishment: There is hereby established the "Upper Rum River Watershed Management Organization" whose membership shall be appointed in accordance with the

provisions of this section and whose duties shall be to carry out the purposes contained herein. The Upper Rum River Watershed Management Organization (hereinafter "Organization") shall be constituted as described in Section 2.2.

2.2 Membership Appointment: Each party to this Agreement shall appoint two (2) representatives to serve as members of the Organization board. Each representative of a party to this agreement who is current in the payment of their share of operating expenses shall have one (1) vote. Representatives appointed to the Organization board shall be evidenced by a resolution or certified copy of official meeting minutes of the governing body of each party and filed with the Organization.

2.3 Alternate Members: One (1) alternate member of the Organization board may be appointed by appropriate resolution or certified copy of official meeting minutes of the governing body of each party to this Agreement, filed with the Organization. The alternate member may attend any meeting of the Organization board when a regular member representing that party is absent and vote on behalf of the party the member represents. If an Organization board member is also an officer of the Organization, the alternate member shall not be entitled to serve as such officer.

2.4 Term: The members of the Organization board shall be filled by the governing body of the party whose membership position on the board is vacant. Removal of a board member or alternate board member shall be at the sole discretion of the appointing authority. The term of appointment is at the sole discretion of the appointing authority.

2.5 Vacancies: The Organization shall notify the Board of Water and Soil Resources of member appointments and vacancies in member positions within thirty (30) days. A vacancy on the Organization board shall be filled by ninety (90) days after the vacancy occurs by the governing body of the party whose membership position on the board is vacant.

Vacancies resulting from expiration of members' terms and other reasons shall be filled only after published notice of the vacancy once a week for two (2) successive weeks in a newspaper of general circulation in the watershed management organization area; the notices must state that the party is considering applications for appointment of a member to the Organization board and that persons interested in being appointed to serve on the board may submit their names to the appointing authority for consideration. A vacancy shall not be filled until at least fifteen (15) days have elapsed after the last published notice.

2.6 Additional Parties – Membership: The Organization, with the ratification of the governing bodies of all voting members of the Organization, may invite other local government units within the Upper Rum River Watershed to also become parties to this Agreement. The governing body of any such additional party shall appoint a member to the Organization who shall have voting rights in accordance with the provisions of Section 2.2 and in all respects thenceforth enjoy the full rights, duties, and obligations of this Agreement.

2.7 Compensation and Expenses: The Organization members shall not be entitled to compensation or reimbursement for expenses incurred in attending meetings, except to the

extent that the governing body of a party may determine to compensate or reimburse the expenses of the member(s) it appoints, in which case the obligation to make such payments shall be that of the party and not that of the Organization.

2.8 Officers: The Organization board shall elect from its membership a chair, a vice-chair, a secretary. All such officers shall hold office for a term of one (1) year and until their successors have been qualified and duly elected by the board. An officer may serve only while a member of the Organization. A vacancy in an office shall be filled from the membership of the board by election for the remainder of the unexpired term of such office.

2.9 Duties of Officers: The duties of the officers of the Organization shall be as outlined in Robert's Rules of Order Newly Revised 10th Edition.

2.10 Quorum: Voting members of the Organization board representing a majority of the parties to this Agreement shall constitute a quorum. Less than a quorum may adjourn a scheduled meeting.

2.11 Meetings:

A. Annual Meeting. The annual meeting of the Organization board will be held in May of each year at Oak Grove City Hall. At the annual meeting the board, at a minimum, shall:

1. Elect officers;
2. Establish the annual budget and work plan;
3. Hear recommendations on amendments to this agreement and the watershed management plan;
4. Biennially renew or decide on contracts for professional, legal, and administrative services; and
5. Decide on regular meeting dates.

B. Meeting Notices. Notice of all regular and special meetings shall be provided with a minimum of seventy-two (72) hours advance notice of the meeting to all parties of this agreement. Such meeting notice shall be posted on the official notification board for each party to this Agreement.

C. Special meetings may be held at the call of the chair or by any three (3) members of the board giving not less than seventy-two (72) hours written notice of the time, place and purpose of such meeting delivered, mailed or e-mailed to the residence of each Organization member and delivered, mailed or e-mailed to the City Hall of each party to this Agreement.

D. All meetings of the board are subject to Minnesota Statutes and the notice provisions contained therein. Posted notice, when required, shall be given separately by each party to this Agreement.

2.12 Conduct of Meetings: The Organization board shall adopt rules of order and procedure

for the conduct of its meetings in accordance with Robert's Rules of Order Newly Revised 10th Edition; the board may adopt any such rules as a majority the parties to this Agreement shall agree. Decisions by the board may not require more than a majority vote, except a decision on a capital improvement project may require no more than a two-thirds vote. All meetings of the board are subject to Minn. Stat. 13D (Minnesota Open Meeting Law).

2.13 Organization Office: The office of the Organization shall be the Oak Grove City Hall, 19900 Nightingale Street NW, Cedar, Minnesota 55011. All notices to the Organization shall be delivered or served at said office.

SECTION III
Organization Powers and Duties

3.1 Authority: Upon execution of the Agreement by the parties, the Organization shall have authority provided for in Minnesota Statures, Chapter 103B.211 through 103B.255 that provides for, in part:

A. The authority to prepare, adopt, and implement a plan for the Upper Rum River Watershed meeting the requirements of Minnesota Statutes, Section 103B.231.

B. The authority to review and approve local water management plans as provided in Minnesota Statutes, Section 103B.235C. This is subject to amendment by the legislature.

3.2 Watershed Management Plan: The Organization shall prepare a Watershed Management Plan for the Upper Rum River Watershed. The plan shall be in compliance with Minnesota Statutes, Chapter 103B.231, Subd. 4 and 6 as from time to time amended. The Chapter describes plan contents to include but not limited to the following.

A. Describe the existing physical environment, land use and development in the Upper Rum River Watershed, and shall further describe the environment, land use and development proposed in existing local and metropolitan comprehensive plans;

B. Present information on the hydrologic system in the Upper Rum River Watershed and its components, including any drainage systems previously constructed under Minnesota Statutes, Chapter 103E, and existing and potential problems relating thereof;

C. State objectives and policies, including management principles, alternatives and modifications, water quality, and protection of natural characteristics;

D. Set forth a management plan, including the hydrologic and water quality conditions that will be sought and significant opportunities for improvement;

E. Describe the effect of the Watershed Management Plan on existing drainage systems;

F. Describe conflicts between the Watershed Management Plan and existing plans of local government units;

G. Set forth an Implementation Program consistent with the Watershed Management Plan, which includes a Capital Improvement Program and standards and schedules for amending the comprehensive plans and official controls of local government units in the watershed to bring about conformance with the Watershed Management Plan; and

H. Set out a procedure for amending the Watershed Management Plan.

The plan shall be amended as required from time to time.

3.3 Employment: The Organization may contract for services from parties to this Agreement, or may employ such other persons as it deems necessary. Where staff services of a party are utilized, such services shall not reduce the financial commitment of such party to the operating fund of the Organization unless the Organization so authorizes.

3.4 Committees: The Organization may appoint such committees and sub-committees as it deems necessary. The Organization shall establish citizen and technical advisory committees unless other means of public participation are established. See Addendum 2 attached.

3.5 Rules and Regulations: The Organization may prescribe and promulgate such rules and regulations as it deems necessary or expedient to carry out its powers and duties and the purpose of the Agreement.

3.6 Review and Recommendations: Review and Recommendations: Where the Organization is authorized or requested to review and make recommendations on any matter relating to the Watershed Management Plan, the Organization shall act on such matter within sixty (60) days of receipt of the matter referred. Failure of the Organization to act within sixty (60) days shall constitute approval of the matter referred, unless the Organization requests and receives from the referring unit of government an extension of time to act on the matter referred. Such extension shall be in writing and acknowledged by both parties.

The Board shall adopt an appeal procedure for any party aggrieved by a decision of the Board or an alleged failure to implement the Plan pursuant to Minnesota Statutes, Chapter 103B.231, Subd. 13.

3.7 Ratification: The Organization may, and where required by this Agreement shall, refer matters to the governing bodies of the parties for review, comment or action.

3.8 Financial Matters:

Subdivision 1 - Method of Operation: The Organization may collect and receive money and contract for services subject to the provision of the Agreement from the parties and from any other sources approved by the Organization. The Organization may incur expenses and make disbursements necessary and incidental to the effectuation of the

purposes of this Agreement. Funds may be expended by the Organization in accordance with procedures established herein. Upon Board approval, invoices shall be initialed by the chair or vice-chair for payment by the Organization office. Other legal instruments shall be executed on behalf of the Organization by the chair, vice-chair or an appointed Board member.

Subdivision 2 - Operating Funds : On or before June 1 of each year, Organization shall prepare a work plan and an operating budget for the following year. The annual budget shall budget provide details to support the proposed revenues and expenditures for the Organization. This detail shall be sufficient to meet standard budget and/or accounting principles generally recognized for governmental organizations. Expenditures may include administrative expenses, plan development costs, review expenses, capital improvement costs, Management Programs, Management Studies costs in Section 3.12, and insurance costs as authorized in Section 3.14. Upon the approval of the majority of voting members of the Organization, the budget shall be recommended to the parties for ratification along with a statement showing each party's proposed share of the budget. The budget shall be implemented only after ratification by each party to this Agreement. Failure to ratify or pay its share of the budget by any party to this Agreement shall be subject to the procedures in Section 3.6. Each party shall contribute funds toward the budget according to the following methods:

Work Plan – ((PA / WA) + (PV / WV)) / 2 = the party's percentage share of the organization's operating budget.

PA = Party's area within the watershed organization area
WA = watershed organization area
PV = party's market valuation within the watershed organization area
WV = market valuation of the watershed organization area

Operating Costs – Total amount to be divided equally between each community member of the Joint Powers Agreement. Operating costs per the operating budget are defined as copies, postage, recording secretary fees, insurance, and administrative fee charged to each member community.

After ratification the chair or vice-chair shall certify the recommended budget to each party on or before June 1 of each year together with a statement showing the amounts due from each party. Each party shall pay over to the Organization the amount owing in two equal installments, the first on or before January 1 and second on or before July 1 in accordance with the tax year for which the amount due is being paid.

Subdivision 3 - Review Services: When the Organization is authorized or requested to undertake a review and submit recommendations to a party as provided in this Agreement, the Organization shall conduct such review, without charge, except as provided below. Where the project size and complexity of review are deemed by the Organization to be extraordinary and substantial, the Organization may charge a fee for such review services, the amount to be based upon direct and indirect costs attributable to that portion of review services determined by the Organization to be extraordinary and substantial. Where the

Organization determines that a fee will be charged for extraordinary and substantial review services, or where the flowage enters the Upper Rum River, but the party is not a member of the Upper Rum River Watershed Management Organization, the party to be charged shall receive written notice from the Organization of the services to be performed and the fee therefore, prior to undertaking such review services. Unless the party to be charged objects within fifteen (15) days of receipt of such written notice to the amount of the fee to be charged, such review services shall be performed and the party shall be responsible for the cost thereof. If the party to be charged objects to the proposed fee for such services within fifteen (15) days, and the party and the Organization are unable to agree on a reasonable alternative amount for review services, such extraordinary and substantial review services shall not be undertaken by the Organization.

3.9 Annual Audits: The Organization shall annually prepare a comprehensive financial report on operations and activities for the fiscal year defined as January 1 through December 31. An annual audit shall be provided that includes a full and complete audit of all books and accounts the Organization office is charged with maintaining. Such audits shall be conducted in accordance with generally accepted auditing principles and guidelines. A copy of the annual financial report and auditor's statement shall be provided to all parties and to the Board of Water and Soil Resources. The report to the Board of Water and Soil Resources shall include an annual activity report. All of its books, reports, and records shall be available for and open to examination by any party at all reasonable times.

3.10 Gifts, Grants, Loans: The Organization may, within the scope of this Agreement, accept gifts; may apply for and use grants of money or other property from the United States, the State of Minnesota, a local government unit or other governmental unit or organization or any person or entity for the purpose described herein. The Organization may enter into any reasonable agreement required in connection therewith. The Organization shall comply with any laws or regulations applicable to grants, donations and agreements. The Organization may hold, use, and dispose of such money or property in accordance with the terms of the gift, grant, or agreement relating thereto.

3.11 Contracts: The Organization may make such contracts and enter into any such agreements as it deems necessary to make effective any power granted to it by this Agreement. Every contract for the purchase or sale of merchandise, materials, or equipment by the Organization shall be let in accordance with the Uniform Municipal Contracting Law, Minnesota Statutes, Section 471.345 and the Joint Exercise of Powers Statute, Minnesota Statues, Section 471.59. No member or employee of the Organization or officer or employee of any of the parties shall have direct or indirect interest in any contract made by the Organization.

3.12 Works of Improvement: Works of improvement for protection and management of the natural resources of the Area, including, but not limited to, improvements to property, land acquisition, easements, or right-of-way, may be initiated by:

A. Recommendation of the Organization to a party or parties; or

B. Petition to the Organization by the governing body of a party or parties.

Where works of improvement are recommended by the Organization, the Organization shall first determine whether such improvement will result in a local or regional benefit to the Area. Where the Organization determines that the benefits from the improvement will be local or not realized beyond the boundaries of the party in which the improvement is to be established, the Organization shall recommend such improvement to the governing body of the unit of government which the Organization determines will be benefited thereby, with the total estimated cost of the improvement and a description of the benefits to be realized.

The Organization shall recommend such improvement to each governing body of the units of government which the Organization determines will be benefited thereby. The recommendation of the Organization shall include the total estimated cost of the improvement, a description of the extent of the benefits to be realized by each unit of government and the portion of the cost to be borne by each party benefited in accordance with the extent of the benefit of each unit of government as described by the Organization.

Each party to whom the Organization submits such recommendation shall respond within sixty (60) days from receipt of such recommendation. Where the Organization determines that the benefits of such improvement will be local, the unit of government to whom such recommendation is made may decline to ratify and undertake said improvement. Where the Organization determines that the benefits of such improvement will be regional, unless all parties to whom such recommendation is directed decline to ratify and undertake said improvement, the Organization shall continue to review and recommend alternative methods of cooperation and implementation among those parties ratifying the recommendation of the Organization, unless and until the Organization determines that said improvement is no longer feasible.

When works of improvement are initiated by the governing body of a party or parties to this Agreement, said governing body or bodies shall submit a petition to the Organization setting forth a description of the proposed work of improvement, the benefits to be realized by said improvement, its total estimated cost and a proposed cooperative method for implementation of the improvement, if applicable. The Organization shall review and make recommendations on the proposed improvement and its compliance with the Organization's management plan in accordance with the provisions of Section 3.5 of this Agreement.

When a proposed improvement may be eligible for federal or state funds as a cost-share project, the Organization may undertake a proposed work of improvement for the area, subject to Organization recommendation to and ratification by the parties to this Agreement, as required for an improvement of regional benefit.

The Organization is further authorized to undertake experimental improvement projects within the Area to serve as a basis for evaluation of other improvements by the parties. When the Organization determines to undertake an experimental improvement project, the costs of such project shall be the obligation of the Organization and not of the parties to this Agreement.

3.13 Claims: The Organization or its agents may enter upon lands within or without the Upper Rum River Watershed to make surveys and investigations to accomplish the purpose of the Organization. The Organization shall be liable for actual damages resulting there from, but every person who claims damages shall serve the Chairperson or Secretary of the Organization with a notice of claim as required by Minnesota Statutes, Section 466.05. The Organization shall obtain court orders authorizing and directing such entries when necessary due to refusals of landowners to allow the same.

3.14 Indemnification and Insurance: Any and all claims that arise or may arise against the Organization, its agents or employees as a consequence of any act or omission on the part of the Organization or its agents or employees while engaged in the performance of this Agreement shall in no way be the obligation or responsibility of the parties. The Organization shall indemnify, hold harmless and defend the parties, their officers and employees against any and all liability, loss, costs, damages, expenses, claims, or actions, including attorney's fees which the parties, their officers, or employees may hereafter sustain, incur, or be required to pay, arising out of or by reason of any act or omission of the Organization, its agents or employees in the execution, performance, or failure to adequately perform the Organization's obligations and understandings pursuant to the Agreement.

The Organization agrees that in order to protect itself as well as the parties under the indemnity provision set forth above, it will at all times during the term of this Agreement keep in force the following protection in the limits specified:

A. Commercial General Liability / Professional Liability ($500,000 per individual; $1,500,000 per incident) including the following endorsements:

B. Automobile Coverage ($0)

C. Worker's Compensation Coverage (statutory minimum)

The minimum liability limits shall be increased to the statutory limits provided for member local units of government in Minnesota Statutes.

Any policy obtained and maintained under this clause shall provide that it shall not be cancelled, materially changed or not renewed without thirty (30) days prior notice thereof to each of the parties.

Prior to the effective date of this Agreement, and as a condition precedent to this Agreement, the Organization will furnish the parties with certificates of insurance listing each party to the Agreement as an additional insured.

3.15 General: The Organization may take all such other actions as are reasonably necessary and convenient to carry out the purpose of this Agreement.

SECTION IV
Mediation

4.1 The parties agree that any controversy that cannot be resolved shall be submitted for mediation. Mediation shall be conducted by a mutually agreeable process by all parties.

SECTION V
Termination of Agreement

5.1 This Agreement may be terminated by approval of two-thirds vote of the governing bodies of each party hereto, provided that all such approvals occur within a ninety (90) day period. Withdrawal of any party may be accomplished by filing written notice with the Organization and the other parties 60 days prior to the effective date of termination. No party may withdraw from this Agreement until the withdrawing party has met its full financial obligations through the effective date of such withdrawal.

SECTION VI
Dissolution of Organization

6.1 The Organization shall be dissolved under any of the following conditions:

A. Upon termination of this Agreement;

B. Upon unanimous agreement of all parties; or

C. Upon the membership of the Organization being reduced to fewer than three (3) parties.

At least 90 days notice of the intent to dissolve shall be given to affected counties and the Board of Water and Soil Resources. Upon dissolution, all personal property of the Organization shall be sold, and the proceeds thereof, together with monies on hand after payment of all obligations, shall be distributed to the parties. Such distribution of Organization assets shall be made in proportion to the total contributions to the Organization for such costs made by each party. All payments due and owing for operating costs under Section 3.8,B or other unfilled financial obligations, shall continue to be the lawful obligation of the parties.

SECTION VII
Amendment

7.1 The Organization may recommend changes and amendments to this Agreement to the governing bodies of the parties. Amendments shall be adopted by a two-thirds majority vote of the governing bodies of the parties as evidenced by meeting minutes of the governing body, within ninety (90) days of referral. Amendments shall be evidenced by appropriate resolutions or certified copies of meeting minutes of the governing bodies of each party filed with the Organization and shall, if no effective date is contained in the amendment, become effective as of the date all such filings have been completed.

SECTION VIII
Counterparts

8.1 This Agreement may be executed in several counterparts and all so executed shall constitute one Agreement, binding on all of the parties hereto. Each party to the agreement shall receive a fully executed copy of the entire document following adoption by all parties.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement as of the 15 day of April, 2011.

CITY OF HAM LAKE

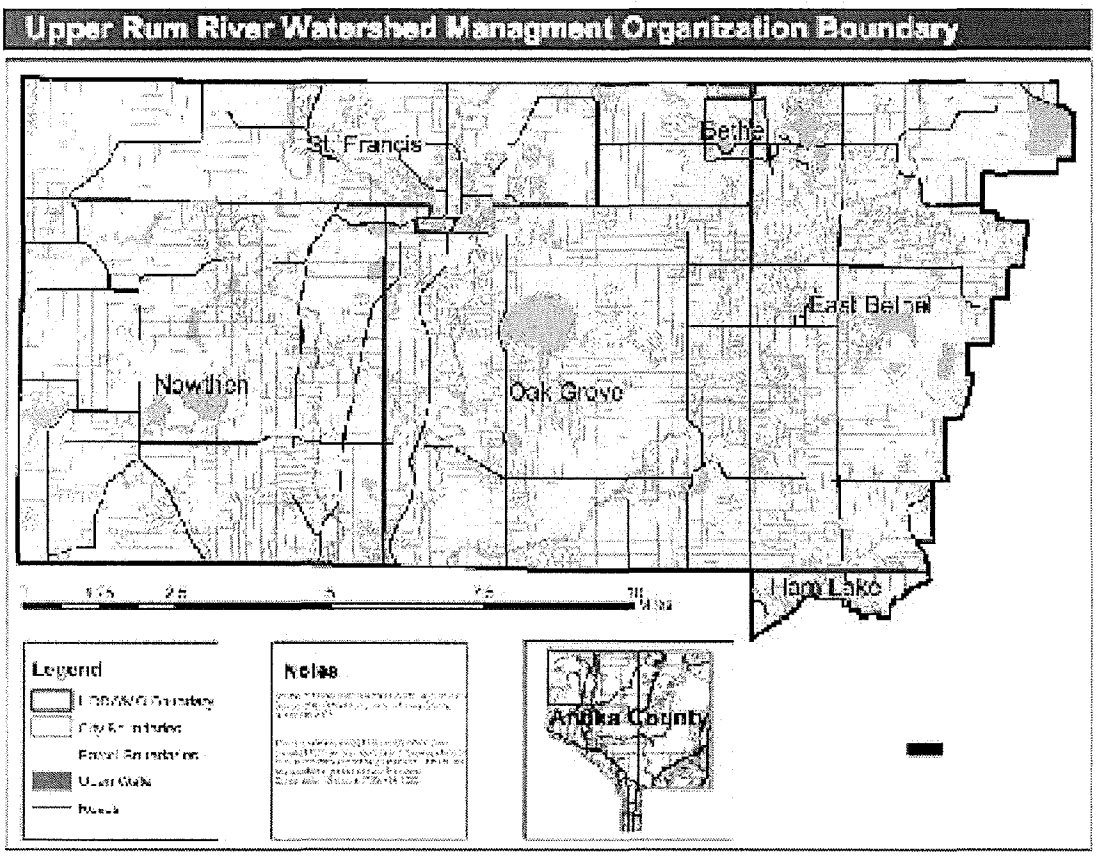
By: _____

Mayor

By: _____

City Administrator / City Clerk

Addendum 1


Upper Rum River Watershed Managment Organization Boundary
St. Francis
Bethe
East Bethel
Nowthen
Oak Grove
Ham Lake
Legend
Anoka County

Addendum 2

The Organization shall establish citizen and technical advisory committees and other means of public participation.

Regular, recurring public participation opportunities shall include:

- Open mike at each Organization meeting,
- Contact information posted on the Organization website, such that the public may contact an Organization representative outside of public meetings.

Citizen and/or technical advisory committees will be formed from time-to-time as deemed appropriate by the Organization and shall be issue-specific. Committees may be formed that include both citizens and technical experts. Committees shall operate by seeking consensus, while noting any dissenting opinions. Committee findings shall be reduced to writing and submitted to the Organization Board. In all cases, committees shall be advisory and their findings shall be referred to the Organization Board for final decision-making.

Issues that may warrant formation of advisory committees include:

- Amendments or updates to the Organization's watershed Management Plan
- Lake level or water quality issues,
- A total maximum daily load (TMDL) impaired waters study or implementation of the study,
- Capital improvement projects,
- Major hydrological changes in the watershed,
- Others as deemed appropriate by the Organization Board.

Technical advisory committees shall include technical experts, and invited members may include:

- Staff and/or elected officials from affected communities,
- MN Department of Natural Resources,
- MN Pollution Control Agency,
- MN Board of Water and Soil Resources,
- Metropolitan Council,
- Anoka Conservation District,
- Others, as deemed appropriate by the Organization Board.

Citizen advisory committees shall include residents and elected officials from the affected area, and invited members may include:

- Homeowners,
- Business owners
- Lake association or lake improvement district representatives,
- Others, as deemed appropriate by the Organization Board.

All advisory committees shall include at least one URRWMO Board member.