



# City of Gem Lake Comprehensive Plan

City of Gem Lake, Minnesota

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# City of Gem Lake Comprehensive Plan

Prepared for City of Gem Lake, Minnesota

## 1 City of Gem Lake Comprehensive Plan Summary

This comprehensive plan covers the following:

- Chapter 2, “Use of the Plan,” outlines the purpose of this document, which is intended to guide long-term growth. It defines the roles of the Planning Commission, City Council, and citizens of Gem Lake. It also covers compliance with and amendments to the plan.
- Chapter 3, “Community Development Trends and Determinants,” provides background information on the city’s past and present conditions. Elements covered are geographical setting, natural features, population growth and characteristics, employment, economic base, region-serving facilities and land development. The purpose of the chapter is to determine the current status of Gem Lake, and where the City may be headed. The chapter identifies possible resources that may be available and those that should be preserved.
- Chapter 4, “Plan Assumptions, Goals, and Issues,” covers the assumptions that the plan is based on, the goals that have been established and the principal issues that must be faced.
- The goals relate to a “vision” of Gem Lake’s future. They stress the preservation of the “small town” character and natural environment of the City.
- Chapter 5, “Land Use Goals and Policies,” divides the city into planning areas, describes each area, and identifies specific land use policies for each.
- Chapter 6, “Transportation Plan,” describes existing roadways, as well as transportation issues that face Gem Lake residents. Policies to guide the future development and maintenance of the transportation system are covered.
- Chapter 7, “Sanitary Sewer Plan,” describes the City’s overall approach to sanitary sewer services, including goals and policies. The current sanitary sewer and possible future extension of services are summarized here. The ordinances which regulate individual sewage treatment systems (Ordinance 46 and 61), and the operation of the municipal sanitary sewer system (Ordinance 64) are also covered.
- Chapter 8, “Water Supply Plan,” examines City options regarding its water supply now and in the future. The need for conservation and emergency plan procedures are covered.
- Chapter 9, “Housing Plan,” describes the current housing situation within the City. Census data is summarized. This chapter also includes a list of goals and policies to guide the future housing mix (quantity, quality, density, and type).
- Chapter 10, “Local Water Management Plan,” identifies goals and policies that relate to the storm water management system.
- Chapter 11, “Community Facilities and Service Plan” covers the current status of various community facilities and service arrangements. Police and fire protection, road maintenance, professional assistance, municipal building, public schools, health facilities, and outdoor recreational facilities are dealt with.

- Chapter 12, “Parks and Open Space Plan” outlines current parks and open spaces, as well as regional facilities serving Gem Lake.
- Chapter 13, Renewable Energy Policy Plan
- Chapter 14, “Plan Implementation,” covers the official controls that are currently in place, as well as developing a Capital Improvement Plan.

## 2 Use of the Plan

### 2.1 Purpose of Preparing the Plan

The Gem Lake Comprehensive Plan has been prepared with the primary purpose of guiding the long-term physical development of the City. This includes investments in both privately and publicly owned resources. The City Planning Commission and City Council have both recognized that investments in physical facilities within Gem Lake are usually long-term fixed assets that establish the development character of the City for many years. Accordingly, this document has been prepared to firmly establish the manner in which citizens and their elected and appointed representatives wish the City of Gem Lake to develop.

This plan document is the fifth Comprehensive Plan prepared for the City. The first plan was prepared in 1962, but was not officially adopted by the municipal government. A second plan was prepared in 1978, and revised in 1982 to meet Metropolitan Council (hereafter referred to as the Met Council) approval. The third and fourth plans were completed in 1997 and 2010.

This plan draws freely upon the proposals of the 2010 plan, but incorporates more recent development trends within Gem Lake and in the immediate vicinity of the City. It also introduces a new mixed use planning area to the City. New goals and policies of the City are also established. This plan supersedes all of the contents of the 2010 plan document.

The Comprehensive Plan represents the collective position of the City Planning Commission and the City Council at the time of its adoption. While consultant assistance was sought in the preparation of this plan, the actual recommendations and policy statements represent solely those of the City Council, the Planning Commission and, to the maximum extent possible, the citizens of Gem Lake.

While the plan is intended primarily as a policy document with the main objective of guiding the orderly physical development of the City, the plan should not be considered a detailed program for the implementation of City policies nor should it be considered a regulatory device for accomplishing this end. Rather, it is expected that all plan procedures and regulatory devices legally available to the City will be used in accordance with the provisions of the plan. The general time frame of the plan is approximately 15 to 20 years, at which time it is anticipated that most, if not all, land holdings within Gem Lake will be committed to some form of urban development.

### 2.2 Use of Plan by the City Planning Commission

The Planning Commission of Gem Lake is a three-member body appointed by the City Council of Gem Lake. Members of the Commission serve at the pleasure of the City Council. They may be reappointed.

Specifically, with regard to the Comprehensive Plan, the Planning Commission has the following major responsibilities to:

- Periodically review (not less than biannually) and make suggested additions and amendments to the Comprehensive Plan
- Assure that all provisions of the City's development control ordinances (or proposed amendments or additions to these ordinances) are in accordance with the principles of the plan

- Review proposed public capital investments of the City of Gem Lake to determine their consistency with the Comprehensive Plan
- Review proposed private capital investments within Gem Lake to assure that they are in accordance with the principles and proposals of the plan

While the Planning Commission’s responsibilities are primarily advisory — the City Council has prime authority in carrying out the plan’s features — the Planning Commission nevertheless is considered to be the City’s primary body in terms of making explicit interpretations of the plan’s stated proposals.

## 2.3 Use of the Plan by the City Council

The City Council is a five-member body directly elected by the citizens of Gem Lake. Council members are elected to four year staggered terms. The Mayor is also elected to a four-year term. As the primary policy making body of the City of Gem Lake, the Council has the following principal responsibilities in relation to the Comprehensive Plan to:

- Help ensure, to the maximum extent possible, that the policies contained within the Comprehensive Plan document represent the viewpoint of the citizens of the community
- Attempt to make incremental policy decisions in normal council deliberations that are consistent with the plan’s provisions
- Make public capital and related expenditures consistent with the principles of the plan
- Exercise the ultimate review and adoption of all original plan provisions and amendments to the plan forwarded to the Council by the Planning Commission.

## 2.4 Relationship of Other Municipal Bodies and Citizens to the Plan

Beyond guiding the actions of the Planning Commission and the City Council, the plan is designed to be an educational device. It covers the unique assets, liabilities, and key development issues facing the City in the coming years. Citizens interested in interpretations of the provisions of the Comprehensive Plan, or revisions to it, are encouraged to meet with the Planning Commission at its regularly scheduled sessions.

## 2.5 Compliance with the Plan

The Comprehensive Plan for the City of Gem Lake is designed to be more than a mere document spelling out general City policies. It is intended as a decision-making aid for guiding the expenditure of public capital funds and establishing the underlying rationale for developing codes and ordinances, which more specifically control private development within the City. The Comprehensive Plan is the guiding document of zoning.

Minnesota State Statute 462.356 (Subdivision 2) further spells out required compliance with the plan where public capital investments are involved:

*“After a Comprehensive Municipal Plan or Section thereof has been recommended by the Planning Agency (the Gem Lake Planning Commission) and a copy filed with the governing body (the Gem Lake City Council), no publicly owned interest in real property within the municipality shall be acquired or disposed of, nor shall any capital improvement be authorized by the municipality or special district or agency thereof or any other political subdivision having jurisdiction within the municipality until after the Planning Agency (City Planning Commission) has reviewed the proposed acquisition, disposal, or capital*

*improvements and reported in writing to the governing body (City Council) or other special district or agency or political subdivision concerned, its findings as to compliance of the proposed acquisition, disposal or improvement with the Comprehensive Municipal Plan. Failure of the Planning Agency to report on the proposal within 45 days after such a reference, or such other period as may be designated by the governing body (City Council), shall be deemed to have satisfied the requirements of this subdivision. The governing body (City Council) may, by resolution adopted by two-thirds vote, dispense with the requirements of this subdivision when in its judgment it finds that the proposed acquisition or disposal of real property or capital improvement has no relationship to the Comprehensive Municipal Plan.”*

## 2.6 Amendments to the Plan

The Comprehensive Plan for the City of Gem Lake is designed to be amended as the City grows and changes. The City Council provides authority to the Planning Commission to conduct an annual review. Any amendments to the Comprehensive Plan beyond an editorial level will be executed only after a public hearing. This hearing must be duly advertised in the officially designated newspaper of the municipality at least ten days prior to the hearing. Any amendments to the plan can be accomplished by a 2/3 majority vote (of the members of the City Council). Amendments must be formally submitted to the Met Council for review and will be placed on file with the Council as well as with all governmental units with boundaries contiguous to the City of Gem Lake

## 3 Community Development: Trends and Detriments

The City of Gem Lake has many unique features that should be considered when developing a comprehensive plan. Physical development within the City, its natural resources, people, economy, and governmental plan must be placed in context with the larger metropolitan area. The communities in the immediate vicinity should also be given special attention. The following subject areas impact the City's plan:

### 3.1 Creation of Gem Lake

The City of Gem Lake was created through a referendum conducted in 1959. The City was one of several municipal jurisdictions, which was incorporated during the 1950s, in response to a rapid increase in urbanization pressures. In addition to the City of Gem Lake, the municipalities of Little Canada, Maplewood, North Oaks, Shoreview, and Vadnais Heights, all within a five mile radius, were incorporated during that time frame.

### 3.2 Geographical Setting

The City of Gem Lake encompasses a land area of approximately 725 acres in the north central portion of Ramsey County. The City is located approximately seven miles north of the central business district of St. Paul, and approximately 11 miles northeast of the central business district of Minneapolis. Gem Lake is bounded on the north by White Bear Township. The City of White Bear Lake generally bounds the City on the east. Vadnais Heights bounds the City partially on the east, entirely on the south and west, and partially on the north. The northern and eastern boundaries of the City are well defined by the rights-of-way of the Burlington Northern Santa Fe Railroad. Most of the southern boundary of the City is also County Road E. The western border of the City is also Labore Road. In proximity to the City's western border is I-35E. U.S. Highway 61 cuts through the southeastern portion of the City.

### 3.3 Natural Features of Gem Lake

The natural environment of Gem Lake is unquestionably of a very high quality, the preservation or enhancement of which should be considered as the City more fully develops.

### 3.4 Topography

The topography of the community is generally rolling, exhibiting glacial morainic surface features. Elevations vary approximately 90 feet (from 920 feet to 1,010 feet above sea level). The greatest elevation variations are in the west central and northwestern portions of the City, where there are several areas of higher elevations. Virtually, all steeper slopes over 10 percent grade are also in this portion of the City. The northeast and southern portions of the City range from gently rolling to flat.

### 3.5 Surface Water and Drainage

Most of the City of Gem Lake lies on a low plateau more than 950 feet above sea level. This plateau drains north, west, and south. Since Gem Lake is in a relatively high elevation with respect to surrounding lands, no permanent streams exist within its boundaries. However, as is typical of glacial landscapes, much of the municipality is imperfectly drained. Much of the surface water currently drains into low lying depressions with no surface outlets. The largest of these depressions is the water body called Gem



Lake which covers approximately 38 acres including its attendant wetlands. Much of the central portion of the City drains into this water body. The second largest area of standing water is a pond covering about six acres in the northeastern portion of the City. Most of the lands north of the Gem Lake Drainage Area and south of Goose Lake Road drain into this surface feature. There are many other smaller pockets of intermittent and permanent surface water storage areas scattered throughout the municipality.

### 3.6 Soils

Most surface soils within Gem Lake are glacial tills. Consequently, the character of soils can vary significantly in a relatively small area. Gravel deposits displaying coarse soils are located in knobs in the northwestern portion of the City. In contrast, fine sediments are located in the Gem Lake and associated wetland area not far away. Overall, the soils might be characterized as medium to fine in all but the knob areas, and in the northeastern area of the City where coarser soils predominate.

### 3.7 Vegetation

Much of the City is significantly wooded, especially in the central portion around Gem Lake. There are also extensive stands of trees in the northwestern portion of the City along Goose Lake Road.

### 3.8 Population Growth of Gem Lake and Vicinity

Gem Lake is located in the northeast portion of the Minneapolis-St. Paul metropolitan area, which has experienced very rapid urbanization. This area reached the population 'take-off' stage during the 1950s, accelerated during the 1960s and has since stabilized.

The populations of the cities of Gem Lake and White Bear Lake have witnessed a slight decrease in population from 1990 to 2000; while the City of Vadnais Heights and White Bear Township have increased substantially in the same time period (refer to Table 3-1).

Table 3-1 – Population Trends and Projections for Gem Lake and Contiguous Governmental Units

Govt. Unit	1990 pop.	2000 pop.	% Change 1990-2000	2010 pop.	2020 est.	2030 est.	% Change 2010-2030
Gem Lake	439	419	-4.7%	393	480	500	27.2%
Vadnais Heights	11,041	13,069	18%	12,302	13,300	13,800	3.8%
White Bear Lake	24,642	24,325	-1.3%	23,797	24,300	25,000	2.9%
White Bear Township	9,424	11,293	20%	10,949	11,300	11,400	0.9%

Source: Met Council, US Census Bureau

Current and future population trends as estimated by the Met Council indicate that the populations of the Cities of Gem Lake and White Bear Lake will grow from the year 2010 to 2030. While Gem Lake's percentage of growth is the most significant when viewed against its neighbors, the actual number of people added is low in comparison.

To date, low density residential areas have been prevalent in the City. In addition, much of the City is already developed. Therefore, it is expected there will be added

development pressure for greater density on currently undeveloped or underutilized properties.

### 3.9 Characteristics of Population

Table 3-2 summarizes selected characteristics of the population of Gem Lake and adjoining municipalities.

The median age of Gem Lake residents is 37.5, which is approximately two years older than the U.S. average of 35.3. Very similar is the age of both the City of White Bear Lake and White Bear Township residents, with the median age being 37.4 and 37.5 respectively. However, the City of Vadnais Heights is much closer to the national average at 35.9 years of age.

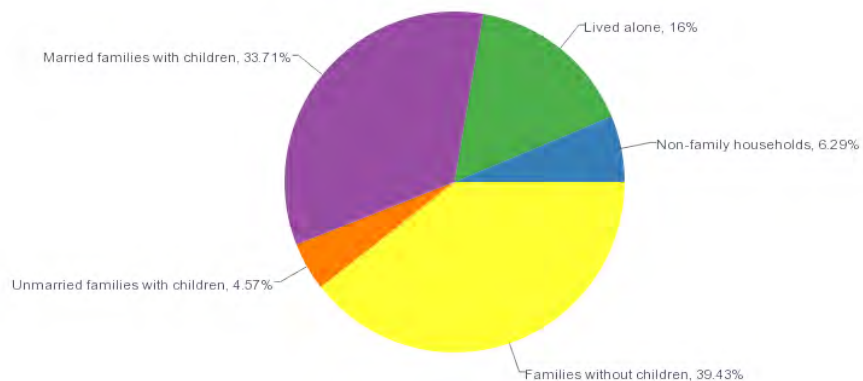
The 2000 median family income level in Gem Lake (\$82,909) was the highest of the adjacent communities. White Bear Township was the next closest at \$79,171. Approximately 5.9 percent of the population within Gem Lake was viewed to be below the poverty line as defined by the 2000 U.S. Census. This is an increase over the 1990 level of 2.3 percent. This poverty line percentage in Gem Lake is higher than some adjoining communities. For instance, only 2.8 percent of citizens in White Bear Township live below the poverty level, with the highest percent of nearby populations below the poverty line being 4.4 percent (City of White Bear Lake).

Table 3-2 – Selected Characteristics of the Population for Gem Lake and Contiguous Governmental Units

Govt. Unit	2010 pop.	Ages 0-4	Ages 5-19	Age 20-64	Age 65+	Median Family Income	% Below Poverty Level
Gem Lake	393	15	68	252	58	\$74,375	2.6%
Vadnais Heights	12,302	750	2,258	7,777	1,517	\$69,926	6.8%
White Bear Lake	23,797	1,490	4,240	14,058	4,009	\$56,953	4.4%
White Bear Township	10,949	519	2,086	6,875	1,466	\$85,815	2.3%

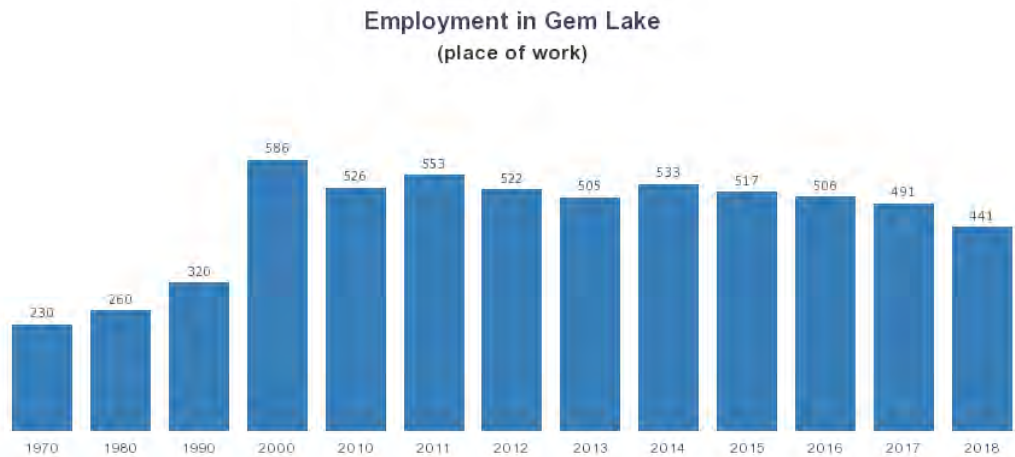
Source: US Census Bureau

Household Type in Gem Lake



### 3.10 Employment and Economic Base

The City of Gem Lake currently has more job opportunities than the population could reasonably be expected to support (Table 3-3). The nature of commercial development and employment opportunities is generally geared to a trade area much larger than Gem Lake. Auto dealerships are the dominant commercial enterprises with ‘Highway Service’ establishments, such as automotive or marine accessories or repair services constituting a large share of remaining commercial activity. Due to the City’s small population, there is very little in the way of commercial development at this stage of the community’s development geared to serving the resident population.



### 3.11 Development of Region Serving Facilities

Within in the last ten years, region serving facilities have continued to improve and expand in ways that help to shape, and sometimes accelerate development in and around the City of Gem Lake. Examples include the following:

- The interstate highway system located in close proximity to Gem Lake has been expanded to accommodate an ever increasing traffic volume. Interstate freeways I-694 and I-35E come together in the area, locating Gem Lake close to a major freeway interchange, with nearby on and off ramps. The two freeways are now part of a huge renovation project, centered near Gem Lake, which is called “unweave the weave.” This renovation is design to allow a greater number of drivers to safely use the highways each day.
- Two large regional shopping malls now serve the area, Maplewood Mall, located approximately two miles away, and Rosedale Mall in Roseville, located approximately seven miles away. Both malls have extended strip mall facilities surrounding them, making each a regional shopping district for the area.
- Several smaller but equally as important retail shopping areas have reached fruition in the area. They include but are not limited to the shopping area located at the 35 E and County Road E intersection, which includes a Target, a Wal-Mart and other assorted facilities; and the charming downtown White Bear Shopping area, which has undergone a facelift in the past decade.
- The City of Maplewood now plays host to an extended health care zone about five miles to the south of the City of Gem Lake surrounding St. John’s Hospital, which includes a large number of doctors’ offices and healthcare clinic and facilities. These recently constructed medical facilities include Allina Clinic, Urgency Room, Midwest ENT and Summit Orthopedics.

- Metropolitan trunk sewers have been expanded north beyond Gem Lake. This provision of major trunk interceptors has made larger scale development possible in the areas between the Cities of White Bear Lake and Forest Lake.
- The City of Vadnais Heights has located its city hall, fire department and several office complexes just to the west of the City of Gem Lake, which has created a city center feeling to the area. This has also led to the building of two nearby hotels at the intersection of County Road E and I-35E.

Table 3-3 – Existing and Projected Population, Households, and Employment in Gem Lake

	1970	1980	1990	2000	2010	2020	2030	2040	% Change 2000-2030
Population	216	394	439	419	393	480	500	530	26.5%
Households	54	118	140	139	155	200	230	250	80.0%
Employment	230	260	320	586	526	580	610	640	9.2%
Source: US Census Bureau, Met Council									

## 3.12 Land Development in Gem Lake and Vicinity

### 3.12.1 Residential Development

Gem Lake residents are overwhelmingly housed in single-family owner-occupied homes (89 percent of dwelling units; refer to Table 3-4). The adjoining communities range from 74 to 93 percent single-family owner-occupied homes. Housing values are very similar in Gem Lake and White Bear Township (\$295,500 to \$253,700). The remaining two communities are lower, at \$206,400 and \$192,800.

Table 3-4 – Selected Characteristics of Housing for Gem Lake and Contiguous Governmental Units – 2016 Estimates

Govt. Unit	Housing Units	Single-family Units	Homeowner Rate	Median Home Value
Gem Lake	178	173	89.4%	\$295,500
Vadnais Heights	5,488	2,840	83.1%	\$206,400
White Bear Lake	10,727	6,547	74.8%	\$192,800
White Bear Township	4,469	3,414	93.1%	\$253,700
Source: Met Council, US Census Bureau				

## 3.13 Commercial Development

There are several areas of commercial development in and around Gem Lake. The Maplewood Mall has significant development, as does Downtown White Bear Lake, Vadnais Heights, and the Rosedale Center. There is limited commercial development in the “Hoffman Corner’s” area of Gem Lake. There are also many auto dealerships in this area.

### 3.14 Office and Other Employment Concentrations

There is a limited amount of office development in the immediate vicinity of Gem Lake. These are small concentrations in Vadnais Heights and in the downtown areas of White Bear Lake and North St. Paul. The largest concentrations of office space near Gem Lake are in the central business district of St. Paul, the Midway District of St. Paul, and in Roseville, near the intersections of Snelling and Highway 36.

### 3.15 Industrial Development

There are no concentrations of industrial development within Gem Lake. However, within a five-mile radius of the City, there are some concentrations in Little Canada, Maplewood, North St. Paul, and Vadnais Heights. Most significantly, the abutting governmental units of Vadnais Heights and White Bear Township have planned extensive amounts of industrial land adjacent to Gem Lake. The White Bear Township plans industrial development abutting Gem Lake's northern boundary; Vadnais Heights plans industrial development beginning a few hundred feet south of Gem Lake's southern boundary.

### 3.16 Public Open Space and Recreational Areas

The City acquired open space around the Gem Lake Villas neighborhood that includes a pedestrian trail. There are no other publicly owned open spaces or recreational areas within the City of Gem Lake at this time. There is a commercial golf course located in the northeastern portion of the City that is expected to remain a golf course for the purpose of this planning timeframe.

Within the surrounding area, substantial amounts of open space or recreational areas exist, including the Tamarack Nature Center and the Bald Eagle-Otter Lake Regional Park, enormous parks located approximately one mile north of Gem Lake in White Bear Township. Approximately two miles to the west are substantial forest preserve lands owned by the City of St. Paul Water Utility and being developed by Vadnais Heights as parkland. In addition, one mile to the southeast of Gem Lake is a large community park, the Lakewood Hills Park, located within the City of White Bear. Extensive walking/biking trails exist in the immediate area. For instance, there is a trail that can be entered on Centerville Road in Vadnais Heights, which is located near Gem Lake's western border, and a shorter trail located along County Road E near Gem Lake's southern border, also in Vadnais Heights.

### 3.17 Comprehensive Plan and Development Characteristics in Contiguous Municipalities

Due to the small size of Gem Lake, it is very important that the community monitor and closely coordinate its development with the contiguous governmental units on its boundaries. White Bear Lake and Vadnais Heights are the most developed of these. Both cities exhibit a generally diversified development pattern. That portion of White Bear Lake closest to Gem Lake is planned principally for commercial development. The Vadnais Heights plan (based on the zoning map) calls for commercial development along all but a small portion of the entire south and western portion of the City of Gem Lake. White Bear Township is expanding an industrial district on the northern border of Gem Lake.

## 4 Plan Assumptions, Goals, and Issues

While an assessment of the current and projected characteristics of Gem Lake is important, there is also a need to examine the assumptions, goals and issues upon which this plan is based. Gem Lake's plan assumptions section explains the geographic and economic context in which the plan was written. The City's goals section provides the framework for policy proposals. Finally, the issues section of this chapter presents the unique challenges Gem Lake faces in bringing this plan to reality.

### 4.1 Plan Assumptions

It is assumed that:

- The economy of the Minneapolis-St. Paul metropolitan area will remain healthy and that sub-regional population projections, as established by the Metropolitan Council, will be reasonably accurate.
- The comprehensive development plans and physical development ordinances of the contiguous local units of government will remain essentially as they are today.
- Additional shopping and employment opportunities within municipalities located within a five-mile radius of Gem Lake will become available in reasonable proportion to population increases.
- The major open space acquisition and development plan will be completed as proposed by Ramsey County and the Metro Council.
- Facilities (such as roads, sanitary sewer and water) presently estimated by the Gem Lake City Engineer and/or projected will be adequate for the projected population.

### 4.2 Community Goals

The following goals are established as the principal guidelines for the physical development of Gem Lake. All policies, as presented in later chapters of this plan document, should be considered supplemental to these basic goals that the residents of Gem Lake desire to:

- Preserve and maintain a "small town" environment in a natural setting. Such an environment should promote an atmosphere of quiet, relaxed living, with maximum regard to maintaining openness of the physical environment as well as preserving trees, water areas, grass lands, and wetlands.
- Control the individual tax load of their property. The City Council has suggested that this be done by guiding the development of additional residential and commercial/business structures and facilities constructed in the city, so as to increase the overall tax base.
- Create and maintain a high-quality man-made environment. Good design, combined with a commonsense approach to aesthetics, will be valued. All new residential and commercial development and auxiliary structures and signs should be developed to high standards of design, beauty, and efficiency. Furthermore, all existing structures and auxiliary buildings and lands will be maintained to high standards to enhance the quality of the life in Gem Lake.
- Make plans for a commercial/business area in the city in the County Rd E/Hwy 61 intersection area to provide a "downtown" area of the city. An approximate residential and commercial mix of 50/50 is envisioned for this area

- Have a low-profile government that provides only essential public services necessary for their health, safety, and welfare. It is a further goal that these public services should be obtained on a long-term contractual basis with surrounding municipalities. It is hoped that these types of arrangements will help keep per capita expenses low for both the residents of Gem Lake and surrounding communities.
- Cooperate with adjacent communities to achieve a compatible land development and public service patterns.

Recognizing the small size of Gem Lake in relation to the substantial urbanizing pattern in the vicinity, the City will place considerable importance on cooperation. Gem Lake will work with other local units of government in encouraging the compatible development of this sub-region of the metropolitan area.

## 4.3 Principal Issues

Gem Lake, like most public communities, face significant issues that need to be considered as it develops. The issues listed below are the most critical and establish a focus for many of the plan proposals. The succeeding chapters of this document address these issues in more detail and demonstrate how they could affect plan performance if not dealt with properly.

### 4.3.1 Density of Residential Development

Residential development density has been discussed in great length in Gem Lake. The consensus of opinion calls for low overall density in the center of the City, which includes areas surrounding the water body called Gem Lake. This area currently includes large estate type and executive housing development.

This plan will make provision for higher densities on the periphery of Gem Lake in mixed use areas. An approximate residential/commercial mix of 50/50 would be sought. The goal of this plan is to have new residential development in the mixed use planning area that averages at least three units per acre, to conform to Metropolitan Council guidelines for land use. It is also important to note that mixed use areas directly adjacent to existing low density development will be planned to fit in harmoniously with these neighborhoods. An example would be to provide single-family low-density homes as a buffer between the existing low-density areas and planned mixed-use areas.

### 4.3.2 Commercial Expansion and Improvements – Mixed Use

Redeveloping the entire business area called ‘Hoffman’s Corner’ as a master planned mixed use development is desired. This redevelopment should be done in conjunction with similar plans for adjacent areas that are in City of Vadnais Heights. This includes Vadnais Heights land parcels that are next to Hoffman Corners on the same side of the street and on the opposite corner of the County Road E / U.S. Highway 61 intersection.

Developing the open parcels of land on County Road E (entirely in Gem Lake) also should be mixed use as specified above.

An up-grading of the existing structures in the commercial area along the east side of Scheueneman Road between County Road E and U.S. Highway 61 would also be encouraged.

### 4.3.3 Quality of New Construction and Maintenance of the Existing Man-Made Environment

Consistent with the goal of having a high quality and aesthetic man-made environment, the City of Gem Lake intends to help ensure that all development within the community is based on high standards spelled out in implementation controls and procedures. The City further intends to help ensure high quality maintenance of existing man-made structures (e.g., facades, signage, etc.) by vigorous enforcement of regulatory controls. These controls include, but are not limited to, subdivision, zoning, housing, building code, sign, landscaping, and tree preservation regulations. It is anticipated that these measures may be resisted by some land developers, community residents, and the business community. These resistances must be met, however, so that a high quality environment can be maintained for all residents.

### 4.3.4 Provisions for Public Utilities

#### 4.3.4.1 Sanitary Sewer

Sanitary sewers are being installed in the neighborhoods of the City of Gem Lake as requested by the residents of a designated area and as piping and facilities allow. The City of Gem Lake has a city sanitary sewer system presently serving 85 property owners. (The breakdown includes 35 business and 50 residential customers.) These services are being installed in accordance with the sewer plan of the city and its relevant ordinances. Sanitary sewers are being installed to help promote the desirability of the residents to maintain a high quality environment.

In the areas of the City where sanitary sewers are not currently available; measures are being taken to help ensure high quality, individual, and on-site facilities are installed and regularly inspected.

#### 4.3.4.2 Water

Public water system piping has been extended to the commercial district of the City and locations where water might be obtained from adjacent communities with public water systems are identified in the water plan. It is the intention of the City that public water should be installed in all commercial and retail business areas as soon as possible. Water mains will be proposed and should be constructed as the roads in the City are upgraded. Hydrants for fire fighting should be installed as part of each neighborhood expansion.

#### 4.3.4.3 Storm Sewer

Storm sewers are not currently used in the City of Gem Lake except in recent housing developments. All of the city streets presently have a "rural road profile" which allows for ditches on each side to handle storm water. Storm sewer systems will be needed in the commercial and retail business districts of the City as they develop. Storm sewer water should be pre-treated as close as possible to the source.

Engineered storm water systems will need to be installed in all commercial and residential areas as they are developed or re-developed.

Storm water routed to the water body called Gem Lake needs to be pre-treated and limited in quantity as Gem Lake does not have an outlet and large quantities of storm water routed to this water body might cause flooding of land areas close to the lake.



#### 4.3.5 Service Agreements with Cooperating Governmental Units

Cooperative service agreement with other municipalities is a cost effective and efficient arrangement for smaller cities. Gem Lake will work to secure long-term service packages, with these factors in mind. Currently, the City of Gem Lake cooperates with White Bear Township for City Administration services.

#### 4.3.6 Public or Semi-Public Open Space and Recreational Areas

There are no publicly held open or recreational spaces within Gem Lake at this time. The only recreational open space facility within the City is a private golf course. It is City's desire to have the golf course property remain recreational in nature. Although there are recreational facilities in adjacent communities and in nearby regional recreational facilities, there may be a need in the future for small neighborhood "parks" within Gem Lake.

# 5 Land Use Goals and Policies

## 5.1 Background

Gem Lake’s Land Use Plan is a general guide to physical growth and development in the City. Included in this section are policies for the appropriate timing and location of development, as well as strategies for protecting the environment as the development occurs.

This Plan will be used by the City to help evaluate the viability of various public investments. Private development proposals will also be considered considering the overall goals of this plan. Therefore, it should be regarded as a general guide to the legal regulation of land development that is controlled by the City of Gem Lake Consolidated Land Use Ordinance and Zoning Map, under the powers granted to the City by the State of Minnesota.

Descriptions and maps that generally illustrate the location of future land use classifications within the City of Gem Lake are covered in this chapter. The boundaries of the use districts, as shown in the various illustrations, are approximate, and subject to interpretation and adjustment, as necessary, to conform to actual field conditions.

The Met Council has designated Gem Lake as “suburban” in the “2015 System Statement” which was used as a guideline for this Plan. This designation is based on Gem Lake’s location within the region, forecasted growth, availability of infrastructure and existing land uses. The policies and information contained in this land use chapter are based on policies and requirements for “suburban” in the Met Council 2040 Regional Framework Plan.

## 5.2 Policies and Objectives

Chapter 462 of Minnesota Statutes, Municipal Planning and Development, authorizes cities to prepare and implement a comprehensive plan. This statute enables a municipality to carry on comprehensive municipal planning activities to guide the future development and improvement of the municipality. It further enables the City to prepare, adopt, and amend a comprehensive municipal plan and implement such plan by ordinance and other official actions.

In addition to Chapter 462, the Metropolitan Land Use Planning Act, Chapter 473, requires local units of government (LUG) in the metropolitan area to either adopt or update their comprehensive plans to make them consistent with certain standards and policies as established by the Met Council. The intent of this state statute is to control and guide urban development in the metropolitan area.

Gem Lake’s 2018 Comprehensive Plan Update is written in response to the Met Council’s “System Statement” for the City and considers new growth projections and policies published in the Thrive MSP 2040. This plan also provides updates in policies of other state and regional plans.

Table 5-1 – Population, Households, Employment Forecasts, 2010-2040

Forecast Year	Population	Households	Employment
2010 Census	393	155	526
2018 Estimate	454	169	441
2020	480	200	580
2030	500	230	610
2040	530	250	640

Source: Met Council

### 5.3 Existing Pattern of Land Use in the City of Gem Lake

Understanding present development in the City of Gem Lake is the key to creating an appropriate future pattern of land use. The Figure 5-1 - Existing Land Use Map 2019 illustrates the land use patterns within the City.

Current land use within the City of Gem Lake represents historical patterns that have occurred since the City was formed in 1959.

Table 5-2 – Existing Land Use Acreage Breakdown

Land Use for Gem Lake		
Land Use	Acres	Percent
Agriculture	18	2.9%
Recreational Open Space (Golf Course)	60	9.6%
Institutional	3	0.5%
Open Space	34	5.5%
Commercial	41	6.6%
Mixed Use	1.5	0.2%
Single Family Residential	423	67.9%
Medium Density Residential	6.5	1.0%
Vacant/Undeveloped Land	36	5.8%
Total	623	100.0%

Source: Met Council & Ramsey County

#### 5.3.2 Commercial/Business Land Use

The existing commercial/business land uses in the City of Gem Lake are concentrated in and around the U.S. Highway 61/County Road E intersection. This includes two large car dealerships, other auto/motorcycle oriented businesses, and a marine sales retailer. A small neighborhood bar, a coffee shop, and a retail floral establishment also exist in this area. There are approximately 41 acres in this category.

#### 5.3.3 Single Family Residential Land Use

Existing single family residential land makes up the largest portion of the city and ranges

from:

- A 36-acre estate located along Goose Lake Road.
- Several single-family estates around the water body called Gem Lake.
- A large number of executive size houses on 2 to 3-acre lots in the Little Fox Lane, Big Fox Road and the Hillary Farm Lane areas.
- Several single-family homes on  $\frac{3}{4}$  to one acre lots along Scheuneman and Goose Lake Roads.
- Some single-family homes on  $\frac{1}{4}$  to  $\frac{1}{2}$  acre lots in the northeast corner of the City.

There are approximately 423 acres in this category.

### 5.3.4 Medium Density Residential Land Use

Existing medium density residential land use consists of new detached townhomes along County Road E, within the Mixed Use Area, and one detached home along Scheuneman Road. As of 2019, the large 18-acre parcel along County Road E is divided up into 30 individual lots with 24 currently built upon, 6 vacant, and the other 9 acres being open space.

### 5.3.5 Institutional Land Use

The White Bear Montessori School is located at the southwestern corner of the City and comprises the only public land use at this time. A Gem Lake City Hall is available to the residents of the City in the northeast corner of the City and is part of a joint project by White Bear Township and the City of Gem Lake. The City Hall is sited on a lot in White Bear Township that is directly on the White Bear Township/Gem Lake City Limits, and, as such, it is not identified on the following City of Gem Lake map. There are approximately three acres in this category.

### 5.3.6 Open Space and Recreational Open Space Land Use

The recreational open space land use is comprised of the Gem Lake Hills Golf Course in the northern portion of the City, which is privately owned and operated. The golf course land is designated in existing land use plan as recreational open space, occupying about 60 acres. There are also approximately 34 acres of open space land in the City. The City of Gem Lake recently acquired 9 acres of open space but currently owns no other property for park, recreational or preservation areas. There are approximately 94 acres in this category.

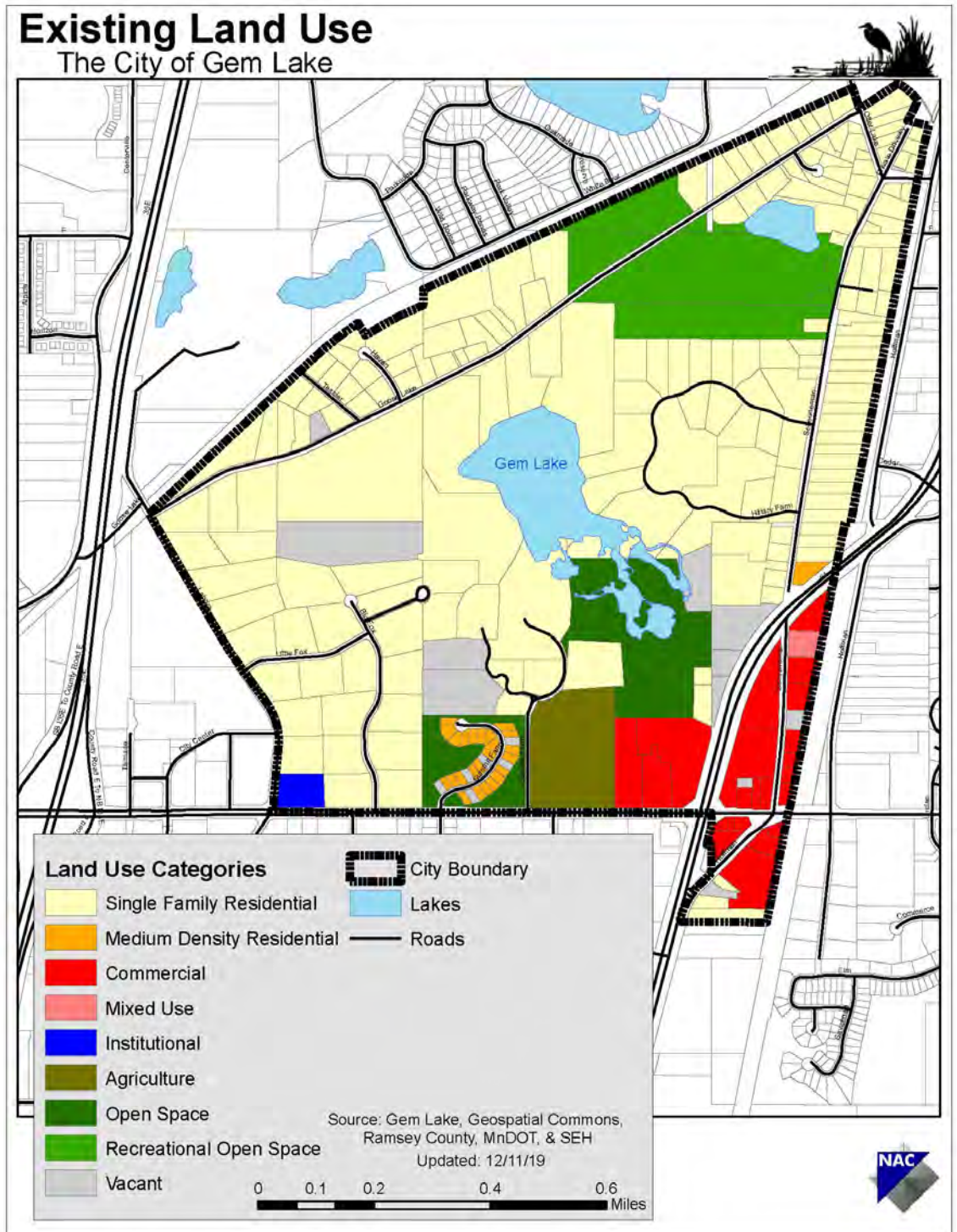
### 5.3.7 Agricultural Land

A portion of the approximately 18-acre parcel on County Rd E is currently used for macro-agriculture, though zoned for mixed use/residential per the Gateway District zoning rules.

### 5.3.8 Vacant/Undeveloped Land

The term vacant/undeveloped land refers to those parcels that currently have no structures on them. Figure 5.1 - Existing Land Use Map (2019) on the following page illustrates the existing vacant parcels which are scattered throughout the City.

Figure 5-1 – Existing Land Use Map (2019)



## 5.4 Future City of Gem Lake Land Use thru 2040

To guide use in subsequent decades, the City of Gem Lake has prepared a future land use plan. The plan brings together goals, policies, and recommendations for future land use, and is intended to assist with decision making on a going-forward basis.

Acreages for future land uses within Gem Lake are identified in Table 5.3 - Future Land Use Acreage Breakdown. Although Gem Lake covers a total of 707 acres, only 623 is reflected in the table below. The difference in acreage is consumed by roadways, wetlands and open water.

Table 5-3 – Future Land Use Acreage Breakdown

Regional Planned Land Use in Gem Lake for 2040		
Planned Land Use	Acres	Percent
Mixed use	63	10.0%
Open Space	49	7.9%
Public / Institutional	3	0.5%
Recreational Open Space	60	9.6%
Single Family Estate	102	16.3%
Single Family Executive	215	34.5%
Single Family Residential - 1 Acre	90	14.4%
Single Family Residential	41	6.8%
<b>Total</b>	<b>623</b>	<b>100.00%</b>

Source: Met Council and Ramsey County

## 5.5 Future Land Use Classifications

Residential development will remain the primary land use with the City of Gem Lake. The land for residential development is broken down into three main categories:

### 5.5.1 Single Family - Estate

This planning area within the City of Gem Lake encompasses most of the interior residential land area in the City, located around the water body called Gem Lake. The minimum density is 1 lot per 5 acres, and the maximum density is 1 lot per 5 acres in this district. Development projects utilizing planned unit development (PUD) guidelines may allow for clustering of houses to provide for common green spaces. Allowable housing in this district is single family.

### 5.5.2 Single Family - Executive

Roughly 33 percent of the total land area of the City is comprised of “Single Family Executive” land uses. “Single Family Executive” land uses are found primarily in the southwest and north central portions of the City. The minimum density is 1 lot per 4 acres and the maximum density is 1 lot per 3 acres. Sanitary sewer expansion is not proposed in this area prior to 2040. The McNulty Development within this district is already served

with sanitary sewer, and future developments will be required to consider sanitary sewer as part of the review/approval process. Allowable housing in this district is single family.

### 5.5.3 Single Family – One Acre

One acre parcels occur along the western part Goose Lake Road and Scheuneman Road near the golf course. There is also a one acre buffer along the edge of the Gateway District separating it from existing residential areas (though this will be calculated into the Gateway total acreage.) Minimum lot size is .83 acres (36,000 S.F.) Maximum lot size is 1 per 3 Acres. Density averages one lot per acre. Allowable housing in this district is single family. Where sewer is available, multi-family in twin home duplexes is also allowed.

### 5.5.4 Single Family - Residential

The last residential category is “Single Family Residential,” and is primarily found in the northeast portions of the City. This district is fully developed with single family homes and this plan does not project or assume any gains in housing units from this planning area. The minimum density in this area is 1 lot per acre and the maximum is 1 lot per ½ acre. Sanitary sewer expansion may be introduced to this area by 2040. Allowable housing in this district is single family. Where sewer is available, multi-family in twin home/duplexes are also allowed.

### 5.5.5 Gem Lake Gateway Special Planning District (Mixed Use)

This area is located at and near to the intersection of County Road E and U.S. Highway 61 where major transportation nodes and high sewer capacity are available. Roughly 13 percent of the total land in the City is found in this District. Where appropriate it will be guided for mixed use development, at an approximate 50/50 mix of residential and commercial/business uses. The actual percentages for the remainder of the Gateway District may vary dependent upon the project.

Subsequent development that is planned for “Mixed Use” under the Figure 5-2 - Future Land Use Map will be developed in a tiered fashion, to minimize the visual feel of the existing single family neighborhoods and preserve the value of existing homes. Depending on the exact location within the Gateway District, the minimum density for single family housing may range between 2 units per acre to greater than 5 units per acre when multi-family housing is considered (assumes this density will be necessary for providing an adequate amount of affordable housing). The Gem Lake Consolidated Land Use Ordinance provides more specific details on how this could be accomplished. Variations from the stated acreage for different densities would require a Comprehensive Plan amendment.

The western-most portion of the Gateway District, located along County Road E (west of the private Daniels Farm Road) will consist of single family residential in the one acre buffer between Gateway land and existing residential areas. Between the buffer and the roadway boundaries of this portion either single family housing or multi-family housing in twin home duplexes can exist. The one acre buffer continues east of Daniels Farm Road to the point where it ends against the land designated as open space under the conservation easement. Between the buffer, County Road E and the point where the Neighborhood Center sub-zone begins, exists the Neighborhood General and Neighborhood Mixed Use subzones totaling approximately 12 acres. Mixed use office space, retail, and residential may occur in this portion at a ratio of about 60% office, 20% commercial, and 20% residential. The residential component density for the subcategories

are Neighborhood General (NG) 3 (min)-5 (max) units per acre, Neighborhood Mixed (NM) 5 (min)-8 (max) units per acre, and Neighborhood Central (NC) 8 (min) – 12 (max).

East of Highway 61 there exists the possibility of bus rapid transit along the Highway 61 corridor. This will provide for possible redevelopment in portions of the Neighborhood Center sub-zone that may provide opportunities for multi-story multi-family housing and an active retail/commercial area, making Gem Lake a destination for shopping, dining, and entertainment.

Table 5-4 – Gem Lake Building Requirements

Building Type	Maximum Building Footprint	Maximum Impervious Surface
Mixed Use Building	65%	80%
Retail / Office Building	60%	80%
Single Use Building	60%	80%
Liner Building	No Maximum	No Maximum
Collar Building	No Maximum	No Maximum
Auto-Oriented Layout	No Maximum	80%

### 5.5.6 Open Space

The City has two areas of open space land. One is a designated conservation easement established by a property owner creating permanent open space within his property boundaries. The other are three small “unbuildable” lots west of Highway 61 between the auto dealership and the south end of the Scheuneman Road cul-de-sac. In this latter instance the land is comprised mainly of wetlands and other small water features that could support a hiking or biking trail along U.S. Highway 61. The City of Gem Lake projects that it will acquire the property through direct purchase or by developer dedication during this planning period.

### 5.5.7 Recreational Open Space

Approximately 60 acres of residentially zoned land is identified as recreational open space within the City of Gem Lake. This area is currently used as a private golf course and is located in the northern portion of the City. The course is abutted by all four types of single family residential land uses. By all accounts, the course is economically viable and is not projected to develop as a different use during this planning period.

The City of Gem Lake desires that this golf course /recreational space use continue in the future. Based on past zoning practices, and the City’s likely inability to purchase the golf course property at any point in this planning period, the golf course will continue as a conditional use within residential zones.

### 5.5.8 Public/Institutional

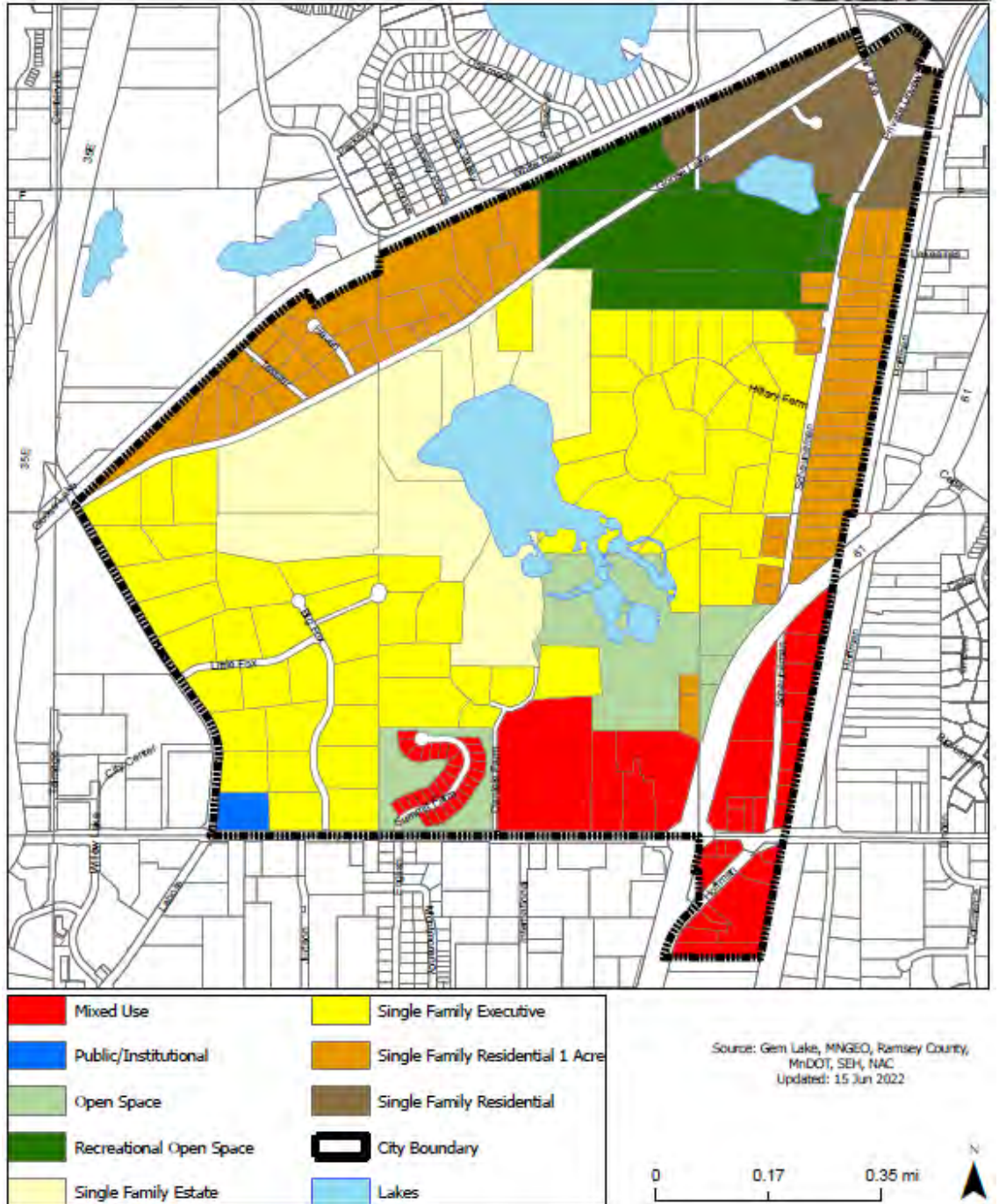
The White Bear Montessori School is located at the southwestern corner of the City and comprises the only public land use at this time. No expansion of this area is expected.



Figure 5-2 – Future Land Use Map

# Future Land Use

City of Gem Lake



## 5.6 Employment Locations

Employment is scattered throughout Gem Lake with some occurring at the golf course and some at the White Bear Montessori, but most employment opportunities will continue to exist in the Gateway district. Within the Gateway district, the Neighborhood General and Neighborhood Mixed Use will offer some employment opportunities, but the Neighborhood Center sub-zone will provide most of Gem Lake’s employment.

## 5.7 Development Staging & Forecasts

Gem Lake is classified as “suburban” in the Thrive MSP 2040 Framework. As such, Gem Lake will cooperate with its neighbors as it positions itself to enter this planning period. It will also increase the chances of connecting housing with shopping and employment activities in a thoughtful and well-planned manner.

To meet the forecasts for housing units and employment, the City of Gem Lake has identified the Gateway Mixed Use District as the intended redevelopment area within the community. From 2010 to 2040, the City needs to provide 95 units at a density of 5 units per acre. The redevelopment area has the capacity to provide 174 units over 34 acres, which would be at a density of over 5 units per acre. The City anticipates that some of these units may be provided after 2040. However, all properties will be eligible for redevelopment at any time.

Due to the forecasted units only being provided by the Gateway Mixed Use Area, only the Mixed Use Subdistricts are included in this analysis.

<b>Mixed Use Land Use Subcategories</b>					
<b>Residential Redevelopment Areas</b>					
Subcategory	Total Acres	Residential Acres	Minimum Density (Units per acre)	Max. Density (Units per acre)	Units
Neighborhood Edge (NE)	10*	1	1.0	2.9	1
Neighborhood General (NG)	17	17	3.0	4.9	51
Neighborhood Mixed (NM)	8	2	5.0	7.9	10
Neighborhood Central (NC)	46	14	8.0	12.0	112
<b>Totals</b>	<b>81</b>	<b>34</b>	<b>5.1</b>		<b>174</b>
*The City acquired 9 acres of open space					
Source: Northwest Associated Consultants, Inc.					

### Staging of Development

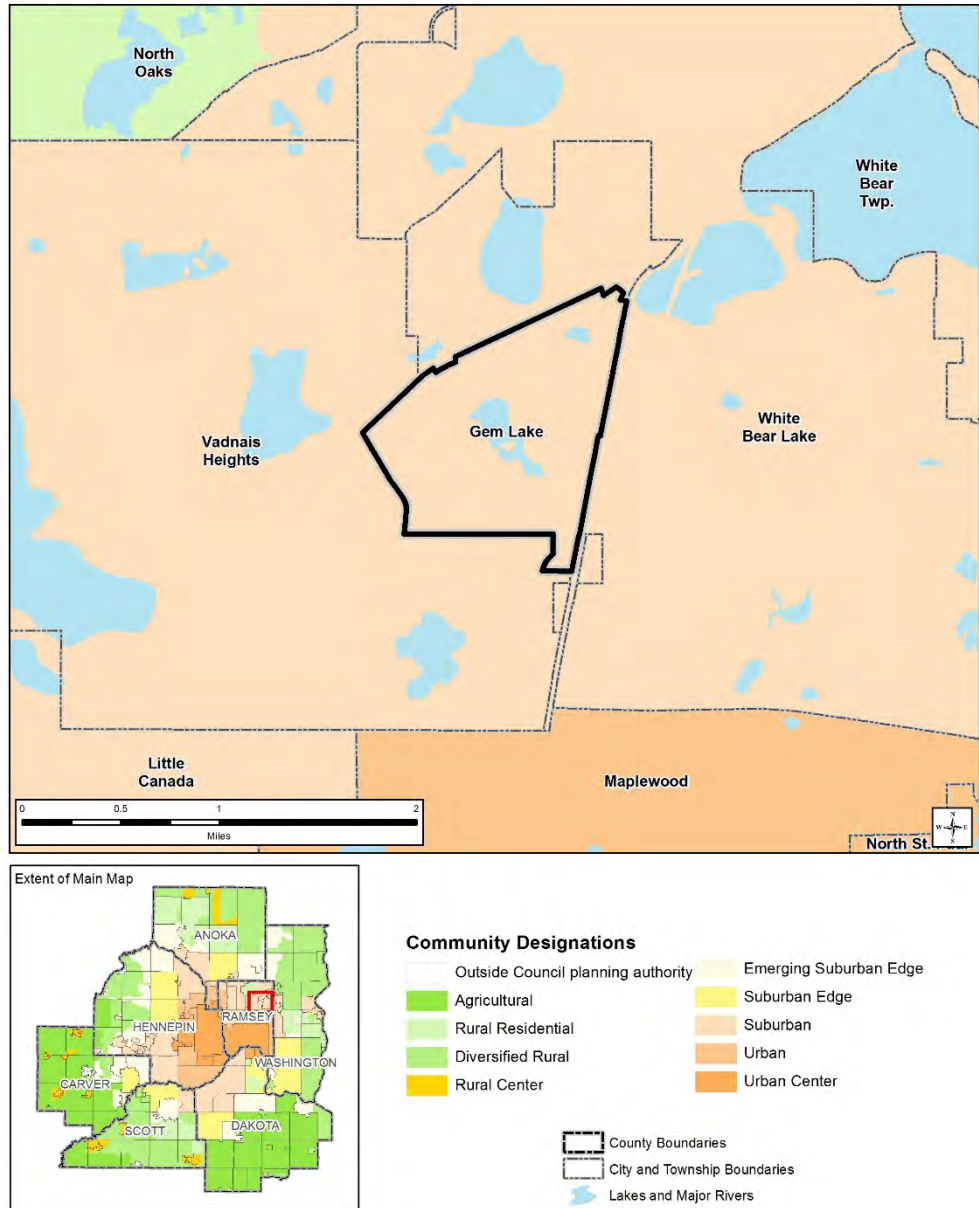
Area	2010-2020 Acres	2010-2020 Units	2010-2020 Density	2021-2030 Acres	2021-2030 Units	2021-2030 Density	2031-2040 Acres	2031-2040 Units	2031-2040 Density	Total Acres	Total Units	Total Net Density	Post 2040 Acres	Post 2040 Units
<b>NE</b>	9*	0	0.0	0	0	0.0	0	0	0.0	0.0	0	0.0	1	1
<b>NG</b>	9	30	3.3	0.0	0	0.0	0	0	0.0	9	30	3.3	8	24
<b>NM</b>	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	2	10
<b>NC</b>	0	0	0.0	4	35	8.8	4	30	7.5	8	65	8.1	6	47
<b>Totals</b>	9	30	3.3	4	35	8.8	4	30	7.5	17	95	5.6	17	82

\* Dedicated open space

Source: Northwest Associated Consultants, Inc.

Figure 5-3 – Community Destinations

**Community Designations  
City of Gem Lake, Ramsey County**



The Met Council has designated Gem Lake as Suburban. Suburban cities are defined as a density of 5 units per acre. Suburban communities saw their primary era of development in the 1980s and into the early 1990s as the Baby Boomers formed families and entered their prime earning years.

Thrive MSP 2040 from the Met Council discusses the City's role in implementing specific strategies developed communities may use to reach long-term development objectives. These strategies for orderly and efficient land use include:

- Plan for forecasted population and household growth at overall average densities of at least 5 units per acre, and target opportunities for more intensive development near regional transit investments at densities and in a manner articulated in the 2040 Transportation Policy Plan.
- Identify areas for redevelopment, particularly areas that are well-served by transportation options and nearby amenities and that contribute to better proximity between jobs and housing.
- In collaboration with other regional partners, lead major redevelopment efforts. • Lead detailed land use planning efforts around regional transit stations and other regional investments.
- Plan for and program local infrastructure needs (for example, roads, sidewalks, sewer, water, and surface water), including those needed to accommodate future growth and implement local comprehensive plans.

To this end, the City's strategies are:

- Accommodating growth forecasts through reinvestment at appropriate densities.
- Approving and permitting reinvestment projects that increase density and make cost effective use of infrastructure.
- Expand Residential One Acre development on the south side of Goose Lake Road in the city's northwestern quadrant.
- Adopting ordinances that accommodate growth and use land and infrastructure efficiently.
- Supporting the conversion or reuse of under-utilized lands in order to accommodate growth forecasts.
- Helping to ensure efficient use of existing infrastructure investments to meet community needs.
- Planning for infill development, redevelopment, and adaptive reuse of structures to diversify housing, connect housing and jobs, and integrate new development into existing neighborhoods.
- Encouraging preservation of existing neighborhoods and expansion of housing choices within the city.
- Adopting ordinances to increase life-cycle and affordable housing in mixed use areas.
- As a designated suburban city, the city will encourage Gateway district development that will promote a town center that will make Gem Lake a destination for shopping, dining, and entertainment, particularly if anticipated bus rapid transit will extend along the Highway 61 corridor.

Tables 5.5 indicates projected development by category and estimated land demand needed for implementation. This information is broken into ten-year increments from 2020 to 2040. The Plan shows that Single Family – Estate properties will be subdivided into Single Family – Executive and Single Family – Residential One Acre. In addition, the City will anticipate more land designated for roads and utilities to accommodate in increase in density.

Table 5-5 – Land Use through 2040 - Planned Land Use (in acres)

Within Urban Service Area	2020	2030	2040	Change 2020-2040
Single Family – Estate	102	63	63	-38.24%
Single Family – Executive	215	238	238	10.7%
Single Family – Residential 1 Acre	90	106	106	17.78%
Single Family – Residential	41	41	41	0
Mixed Use	81	81	81	0
Public / Institutional	3	3	3	0
Recreational Open Space	60	60	60	0
Open Space	31	31	31	0
<b>Total</b>	<b>623</b>	<b>623</b>	<b>623</b>	<b>n/a</b>

## 5.8 Land Use Development Constraints

With the many natural resources in Gem Lake, there are also associated development constraints. The City of Gem Lake is a significant natural resource area, including a lake, wetlands, and hardwood forests. Care needs to be exercised in the design and construction of any new development in the City. Sensitive areas should be protected as open space. Master planning, cluster development, and similar land use concepts should be used to minimize impacts on natural resources and maximize efficiency of services.

### 5.8.1 Aggregate Resources

Demand for aggregate resources continues to grow in the metropolitan area. As local resources become depleted, aggregate needed for urban development will have to be imported from outside the seven-county metropolitan area. The City will permit gravel mining operations where appropriate and consistent with the City's zoning ordinance. It is important to note that the City of Gem Lake doesn't have any aggregate resources and doesn't anticipate any in the future.

### 5.8.2 Solar Access Protection

Since 1978, the Metropolitan Land Planning Act has required communities to include verbiage in their plans to protect access to direct sunlight for solar energy systems. The purpose of this provision is to protect solar collectors from shading by adjacent structures and/or landscaping.

#### 5.8.2.1 Solar Resource Policy

The City of Gem Lake recognizes the value of solar access protection and energy conservation in general; however, the community is experiencing limited new construction in its urbanized area. In addition, while a considerable amount of new development will occur throughout the City in the future, the application of this provision will be difficult within the context of an established land use patterns and natural topography. For this reason, the City will look beyond solar accessibility alone and will address the conservation of energy in general, through its comprehensive planning efforts.

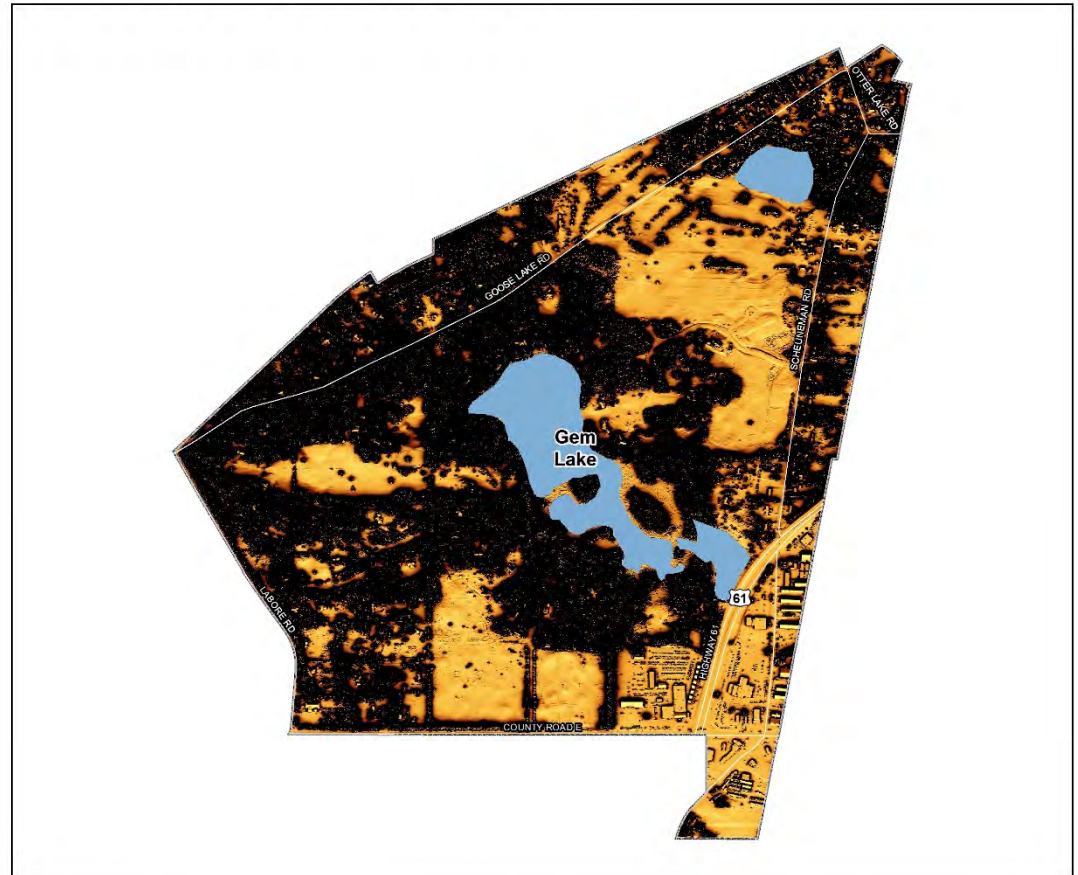
5.8.2.2 Solar Resource Goals

Table 5-6 – Gem Lake Solar Resource Potential

Gross Potential (Mwh/yr)	Rooftop Potential (Mwh/yr)	Gross Generation Potential (Mwh/yr) <sup>2</sup>	Rooftop Generation Potential (Mwh/yr) <sup>2</sup>
1,166,606	47,373	116,660	4,737
Source: Metropolitan Council			

Figure 5-4 – Gross Solar Potential

**Gross Solar Potential  
City of Gem Lake, Ramsey County**







12/12/2016



**Gross Solar Potential  
(Watt-hours per Year)**

High : 1271388  
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.

### 5.8.3 Historic Preservation

There are not any structures or sites within the City that are listed on the National Register of Historic Places or properties of State or local significance by the State Historic Preservation Office (SHPO). On a case by case basis, the City will work with SHPO and



local property owners to take the appropriate steps to preserve any historic or cultural resources that may be added or discovered in the future.

## 5.9 Land Use Goals and Policies

### 5.9.1 General Land Use Goals

- Protect and enhance the natural environment in the City of Gem Lake.
- Help ensure that all development and re-development contributes to a clear, orderly, and harmonious pattern of design, guided by professional planners, engineers, and designers.
- Preserve the large estate and executive lots in the interior of the City and surround them with compatible smaller lot residential, open space, recreational and business/commercial uses. These uses will connect housing with shopping and employment opportunities wherever feasible.
- Provide a safe, healthy, and attractive residential environment, which offers a broad choice of housing opportunities including affordable housing.
- Partner with others such as the Vadnais Lake Area Water Management Organization (VLAWMO) to protect and improve water quality including both groundwater and the water body Gem Lake. Consider projects to remove Gem Lake from the impaired waters list.
- Encourage open space through creative housing projects that utilize Planned Unit Development (PUD) strategies.
- Work with Ramsey County to extend the Bruce Vento Trail into Gem Lake and beyond to give residents access to the county trail network.
- Promote Gateway District development to include regional transit plans and strategies. This includes partnering with Ramsey County to provide a bus rapid transit stop along Highway 61 and County Road E.
- Provide buffers using berms, trees, and other natural resources to insulate the residential areas of the City from noise, light pollution, and traffic.
- Guide the development of an attractive special planning area around Hoffman's Corner at U.S. Highway 61 and on County Road E for a mix of business, commercial, retail, open space, and residential uses.

### 5.9.2 General Land Use Policies

- At the community's ultimate development stage, the dominant share of total land within the City of Gem Lake should be residential property.
- The City has provided detail in its land use ordinance on both cluster development and similar land use devices, in order to help ensure open space retention, reduce development costs, and efficient provision of utilities. Incentives, such as density bonuses, are provided for well-designed developments.
- It is the policy of the City of Gem Lake that substantial high density residential housing shall be constructed as part of the re-development of the Hoffman's Corner area
- It is the policy of the City of Gem Lake to promote regional transit goals and position itself to work with Ramsey County to develop a transit stop in Gem Lake.
- It is the policy of the City of Gem Lake to discourage all industrial land uses. Extensive industrial development can be easily found in other nearby portions of the metropolitan area.

- It is the policy of the City of Gem Lake to coordinate land use with its neighboring communities to maximize amenities and development across suburban boundaries.
- It is the policy of the City of Gem Lake to encourage redevelopment in its Gateway District that achieves goals of acceptable densities while maintaining the integrity of Gem lake's heritage.
- It is the policy of the City of Gem Lake to set water sustainability goals to minimize the impact of deep wells impacting the subsurface aquifers.
- It is the policy of the City of Gem Lake to review proposed institutional developments on a case-by-case basis. It is possible that this development could be permitted within other zoning areas in the city, if compatible with its overall land use goals.
- It is the policy of the City of Gem Lake that it will support the viability of the present golf course in the City as recreational open space, and to try to acquire additional recreational open space for passive viewing of other attractive areas.
- It is acknowledged that the character and natural environment of the City of Gem Lake depends on the continuance of natural vegetation within and along its borders. The City will encourage the continued planting of new and the preservation of existing trees to sustain and improve the natural beauty of the community.
- Aesthetic considerations for new and existing construction should be addressed through better performance standards in the zoning ordinance and other ordinances. Controls addressing signage, lighting, appearance, landscaping and vegetative screening, among other items, will be defined in the City's consolidated land use ordinance. The natural character of the City of Gem Lake, as well as general quality of life found here, is very important to residents. At the same time, the controls should not be so restrictive that they stifle the creativity and individuality of planners and designers, or place an unreasonable financial burden on the property owner. Perimeter landscaping and screening of parking lots, loading areas, outdoor storage and building mechanical units will be regarded as important components of development. However, minimizing light and noise pollution will be important considerations.
- It is important that the development of property which borders other communities be done in coordination with these communities. There is now a need for dialog and coordination of plans with the City of White Bear Lake, White Bear Township and the City of Vadnais Heights.
- Discussion with adjoining communities to facilitate cooperation and sharing of existing public utilities, such as water and sanitary sewer, should be initiated. Extensions of such utilities from adjacent communities will likely provide the most cost effective method of delivering these utilities to the City of Gem Lake. Each of these adjacent community's services could be used in selected portions of the City. Potential joint power agreements with the City of White Bear Lake, White Bear Township and the City of Vadnais Heights may result from the initiation of discussion by Gem Lake.
- The review of conditional or interim use permits or re-zonings of particular areas of the City must take into account impacts on adjacent uses, air and water quality, traffic generation, public safety and health, aesthetics and economic effects.
- Wildlife and natural vegetation in the City adds to the quality of life in Gem Lake. The wildlife and natural vegetation should be preserved and protected from over-development.

- Additional protection to wetland areas and the water body called Gem Lake is needed. The requirements for soil erosion and storm water controls are already included in the City’s zoning ordinance. Additional protective measures should be placed on storm water that enters the Gem Lake water body, which has no outlet. Both pre-treatment and rate controls will be needed to keep the Gem Lake water body clean, and to prevent it from overflowing.
- It is the policy of the City of Gem Lake to corroborate with and support area historical societies.

## 5.10 City Planning Area Policies

Beyond Gem Lake’s general land development policies, an additional set of policies has been established to more clearly delineate the type of development which is to be encouraged within the various “Planning Areas.” (refer to Figure 2 - Future Land Use Map for details of these areas) The policies listed below are preceded by a brief description of existing conditions in each planning area.

### 5.10.1 Gem Lake Gateway and Village Center Special Planning Area (Mixed use)

The Gateway and Village Center planning areas in the City of Gem Lake are broken up into five specific land areas, defined as follows:

- The southeast corner of U.S. Highway 61 & County Road E (Hoffman’s Corner)
- The northeast corner of U.S. Highway 61 & County Road E
- The northwest corner of U.S. Highway 61 & County Road E
- A 17-Acre Parcel on County Road E (East County Rd E parcel)
- An 18-Acre Parcel on County Road E (West County Rd E Parcel)

The “Gem Lake Gateway Special Planning Area” defines areas where commercial, business, retail, office and residential uses could be constructed in combination with each other. This would connect housing with nearby opportunities for shopping, working and social interaction. Subsequent graphics and text sections provide details on how these various uses could be successfully meshed within a mixed-use district.

Examples of possible layouts of the Mixed Use Gem Lake Gateway and Village Center Special Planning area are on *Figure 5-5 - Gem Lake Example Plan Subzones* and *Figure 5-6 - Gem Lake Example Concept Site Plans* on the following pages:

Figure 5-5 – Gem Lake Example Plan Sub-Zones Map

Figure 5.5

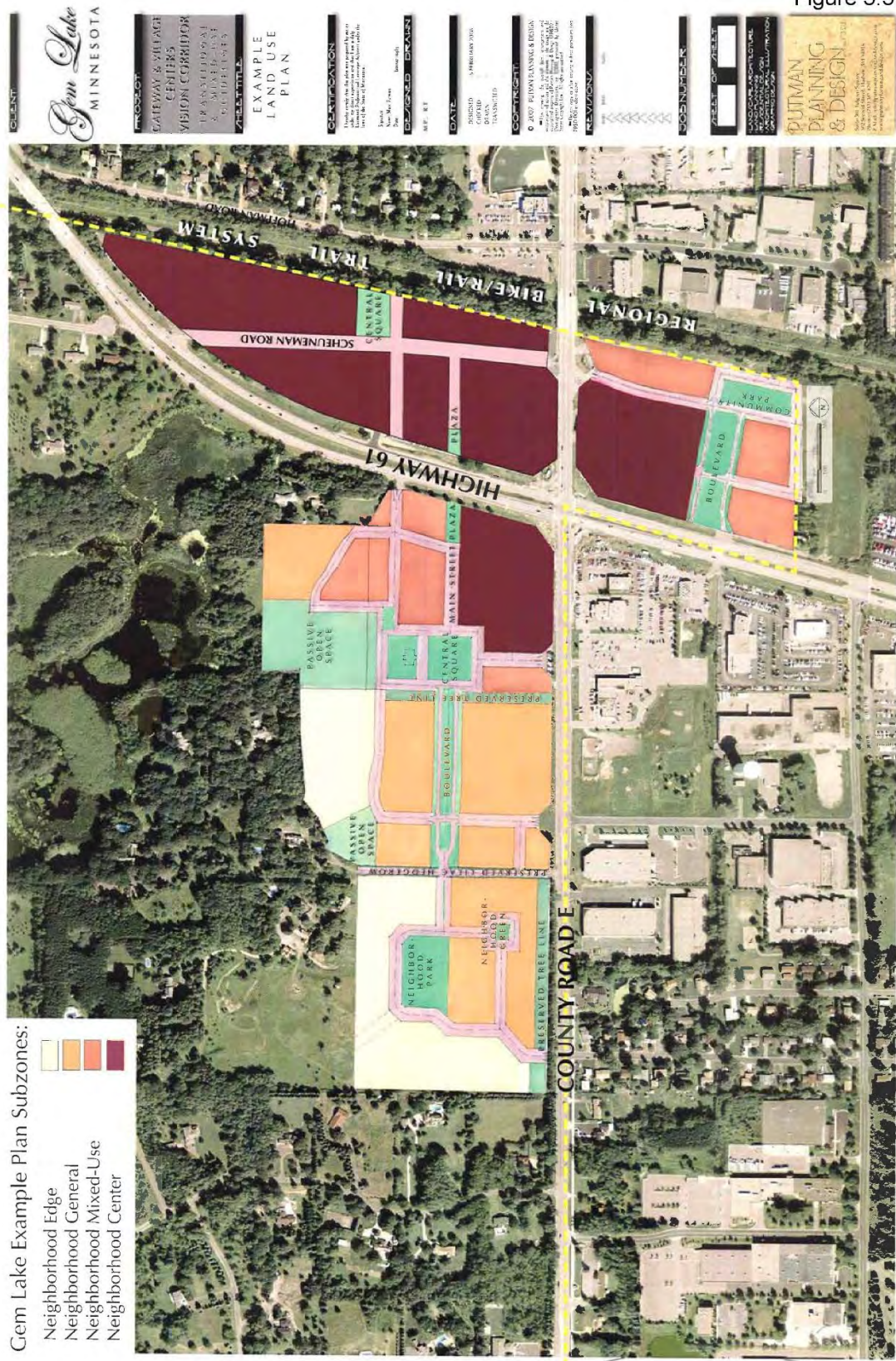


Figure 5-6 – Example Concept Site Plans Map

Figure 5.6



## 5.10.2 General Gateway Planning Area Details (Mixed Use)

The five Gateway planning areas are shown on Figure 5-5 - Future Gateway Zone Sub-Zones Map and Figure 5-6 - Gem Lake Example Concept Site Plans on the preceding pages. The colored areas on Figure 5-5 - Future Gateway Zones Sub-Zones Map indicate the suggested land uses (subzones) in each of these planning areas. These subzones are designed to express a range of uses including single family residential, and mixed uses, including small-scale commercial, ground floor retail with offices and residential/rental above, with residential building densities, transitioning from rural to urban conditions. The subzones provide for allocation of building types, open space standards and design guidelines. These subzones are intended to accommodate a diverse mixture of building types and uses, housing choices (including adequate supply of affordable housing) and land use. The particular mix encouraged in each subzone is based on the relative position of that subzone within the Gateway and Village Center planning area.

*Note: Any long-range plan must be flexible enough to respond to changing market conditions. Therefore, this plan recognizes that designations for all zones, except the Neighborhood Edge, may shift up or down one level to accommodate community needs.*

Each of the above Gateway district planning areas must be developed using a “Master Plan” and, as appropriate, using the PUD process and conditional use permits. The planning areas may be developed in stages but must be guided by the master plan as each stage occurs. It is important that the developers of adjacent planning areas work together to provide continuity of design, utilities, roadways, and uses.

The following general guidelines should be followed for the entire Gateway district planning area:

- Each of these sub-zones planning areas is to be a master planned development/re-development area of retail/service type businesses/offices, possibly including an integrated community of mixed use residences. The residences should be used for senior, affordable or other type of housing that would be compatible with, and use the services provided by, the shopping/retail service/office center.
- Co-operation with the City of Vadnais Heights on directly adjacent parcels located to the south of the first planning area will be necessary. These adjacent parcels would provide part of a logical access point into this development. They are adjacent to Willow Lake Road. This re-aligned access point could then allow for roads to proceed north thru the development area to connect and line up with Scheuneman Road at County Road E in the City of Gem Lake.
- The present AutoNation Ford dealership could be evaluated as a “large-box” retail structure for the mixed-use land parcel Number 3 in the “Gateway District.” There may be future opportunities to provide road extensions from the adjacent parcel that would then allow access to other building opportunities in the rear (north) of the current AutoNation Ford store.
- Pedestrian and bicycle friendly paths should be planned in the mixed land use parcels. This would provide shopping and social opportunities for residents living in adjacent parcels.
- Municipal water and an upgraded sanitary sewer system need to be installed in all of these mixed use planning areas. All businesses/offices/multiple use residences in these planning areas should have fire protection sprinklers.

- Cohesive signage design will be required as part of the initial site plan. All signs in this planning area should be similar in design and consistent in appearance.
- Adequate “green areas” need to be provided in this planning area to increase the pedestrian-friendly nature of the Gateway area.
- An engineered storm water system needs to be designed to gather storm water from each of these planning areas. Adjacent areas may need to work together to provide a conveyance system.
- Realignment of Daniels Farm Road and International Drive (located in Vadnais Heights) to provide access to the east mixed use parcel.
- The existing “border trees” along County Road E, and also along the railroad tracks on the eastern City limits should remain in place, if possible, or be replaced with new trees and berms. This would insulate each planning area from the noise and traffic coming from County Road E and adjacent industrial areas in Vadnais Heights.
- The overall planned density of residential use in the Gateway district should average at least one residence per ½ acre. If senior housing can be staged in these areas, much higher densities may be possible. Multi-family housing may also achieve this goal.

Figure 5-6 - Gem Lake Example Concept Site Plans shows how structures might be placed in the areas in the Gateway district mixed use area.

The subzones identified in Figure 5-5 - Future Gateway Zone Sub-Zones Map are defined as follows:

#### 5.10.2.1 Neighborhood Edge

This subzone is intended primarily for lower density residential development, and to act as a transition between new construction and existing single-family detached structures on adjacent lands. This subzone will accommodate single-family dwellings on one acre lots or other appropriate buffers, such as open space.

A portion of this subdistrict has already been dedicated as open space.

#### 5.10.2.2 Neighborhood General

This subzone is intended to accommodate single family structures on compact lots or multi-family structures that look like individual large homes. Garages will be served from an alley, or if from the street, to a turned garage mass. Attached row houses, providing common side walls and vehicular access from an alley or rear parking area, are also suggested.

This subdistrict is anticipated to develop at a minimum of 3 units per acre with a maximum of 5 units per acre.

#### 5.10.2.3 Neighborhood Mixed-Use

This subzone is intended to establish a neighborhood focus that is distinguished by civic buildings, small-scale commercial/business/office and mixed use buildings, together with other residential buildings at higher densities (to support the inclusion of affordable housing) than exist in the “Neighborhood General” zone. This subzone will accommodate a variety of activities and services within easy walking distance from homes, supporting daily convenience shopping and personal service needs, and also providing opportunities for public gathering and social contact.

The residential portion of this subdistrict is anticipated to develop at a minimum of 5 units per acre but not more than 8 units per acre. A minimum of 20% of this area will be developed as residential.

#### 5.10.2.4 Neighborhood Center

This subzone is intended for the most urban conditions within all of the shown mixed use areas. The mixture of land uses emphasizes ground-floor retail with offices and residential/rental above (as market acceptance matures), and structures providing commercial space for medium and large-sized retailers. Street frontages throughout this subzone should be pedestrian-oriented and defined by building facades at the back of the sidewalk. Multi-family housing is encouraged in this sub-zone particularly near where public transit is, or will be, available. Multi-family housing will enable the City to meet its affordable housing requirements and achieve its density mandate of eight units per acre.

Off- street parking is best provided in structures or located between large retailers and perimeter arterials (U.S. Highway 61 and County Road E). On-street parking could also be included as a component of the total parking program.

As stated herein, the City prefers a vertical configuration whereby the residential component would be above the commercial area. However, at minimum, 25% of this subdistrict is intended for residential development. The residential portion of this subdistrict is anticipated to develop at a minimum of eight units per acre with a maximum of 15 units per acre, unless otherwise approved by the City as part of a PUD.

### 5.10.3 Residential Planning Areas

The residential areas in the City of Gem Lake are defined as follows:

- “Single Family - Estate”
- “Single Family - Executive”
- “Single Family - One Acre”
- “Single Family - Residential”

Details on these residential areas are provided in the following sections.

#### 5.10.4 Single Family - Estate Planning Area

This planning area comprises the residential use lots, all greater than 5 acres in size, existing in the center of the City of Gem Lake. This land is generally gathered around the north, west and south of the water body called Gem Lake. Some undeveloped lots of this size also exist in various other areas in the center of the City. Most of these areas are blessed with a wooded, rolling and varied topography. Access to these lots is via Goose Lake Road, and a private road off of County Road E.

In response to these existing conditions, the following specific policies for this planning area are as follows:

- The continuation of moderately low density residential development continues to be encouraged in this planning area. It is possible to have some smaller lot development in the future along the perimeter thoroughfares to provide diversity of housing.
- Principle and accessory buildings shall be located in the “Single Family Estate” area so to allow for possible future subdivision into “Executive” or “Single Family One Acre Residential” lots.



- Engineered storm water collection/settling areas and discharge rate controls must be added before storm water is allowed to leave this area.
- ISTS systems are not allowed within 150 feet of the shorelines of the water body called Gem Lake, and its attendant wetlands.
- Municipal water should be extended into these areas, as feasible.
- Shoreline protection for the water body called Gem Lake, and its attendant wetlands, must be strictly enforced.
- Housing maintenance rules shall be strictly followed to keep existing estate homes in good repair.
- Careful subdivision planning including PUD and traditional development can maximize growth yet retain the character of this planning area.

### 5.10.5 Single Family - Executive Planning Area

This planning area consists of the following parts of the City:

- The housing development bordered by County Road E and Labore Road, and served by City maintained Big Fox Road and Little Fox Lane.
- The area called "Hunters Run" served by the private road called Hunters Run Road and Daniels Farm Road running north from County Road E, which is owned by the South Road Owners Association.
- Lots north of County Road E, and served by Daniels Farm Road owned by the South Road Owners Association.
- Homes in the development called "Hillary Farm," located just west of Scheuneman Road, and served by the private road called Hillary Farm Lane.

Some of these areas have lots that are larger than two to three acres in size but contain moderate cost single family homes.

In response to these existing conditions, the following specific policies for this planning area have been established:

- The continuation of moderately low density residential development continues to be encouraged in this planning area.
- Engineered storm water collection/settling areas and discharge rate controls will be required before storm water is allowed to leave this area.
- If sanitary sewer service is not available, executive lots must be of a large enough buildable size to support a well and an ISTS system, as well as space for a complete backup ISTS system.
- Municipal water should be extended into this area, as feasible.
- Shoreline protection for the water body called Gem Lake and its attendant wetlands must be enforced.
- Housing maintenance rules shall be strictly followed to keep existing homes in good repair.

### 5.10.6 Single Family – One Acre Planning Area

This planning area comprises the following areas in the City of Gem Lake:

- Areas along the western portion of Goose Lake Road, areas along Scheuneman Road,

- Areas east of Scheuneman Road from U.S. Highway 61 North to the Otter Lake Road. The homes on the private road called “Kahl Circle” are also included. One double home is also now located in this area.
- Areas west of Scheuneman Road from U.S. Highway 61 north to the “Hillary Farm” Development, and from the northern boundary of “Hillary Farm” to Otter Lake Road.

These areas have existing single family dwellings with lot sizes that vary from just under one acre up to two plus acres (but averaging one acre) in size. These lots contain medium cost single family homes. Most of the areas identified above are fully developed.

In response to these conditions, the following specific policies for this planning area have been established:

- The continuation of moderately low density residential development continues to be encouraged in this planning area.
- Engineered storm water collection/settling areas and discharge rate controls will be required before storm water is allowed to leave this area.
- If sanitary sewer service is not available, executive lots must be of a large enough buildable size to support a well and an ISTS system, as well as space for a complete backup ISTS system.
- Municipal water should be extended into this area, as feasible.
- Housing maintenance rules shall be strictly followed to keep existing homes in good repair.
- Natural buffers of plants, trees or berms are encouraged.

## 5.10.7 Single Family - Residential Planning Area

This planning area comprises the following areas in the City of Gem Lake:

- Areas west of Goose Lake Road between Labore Road and the Gem Lake Hills Golf Course.
- Areas northeast of the golf course along Goose Lake Road, and on both sides of Otter Lake Road.
- Areas along the private road that extends north of Scheuneman Road at its intersection with Otter Lake Road.
- The area along each side of Otter Lake Road.

These areas have existing single family dwellings with lot sizes that vary from just over one acre in size to ½ to ⅓ acre in size. These lots contain medium cost single family homes. Most of the areas identified above are fully developed.

In response to these conditions, the following specific policies for this planning area have been established:

- The continuation of low density residential development continues to be encouraged in this planning area.
- If further residences are added in this area, master planning, clustering, and similar concepts should be used to maximize the benefits from community resources, such as municipal water and sanitary sewer.
- If sanitary sewer service is not available, lots must be of a large enough buildable size to support a well and an ISTS system, as well as space for a complete backup ISTS system.

- Municipal water should be extended into this planning area, as feasible.
- Natural buffers of plants, trees or berms are encouraged in areas that border business and commercial zones in White Bear Lake or Vadnais Heights.
- Housing maintenance rules shall be strictly followed to keep existing homes in good repair.

### 5.10.8 Park, Recreational, and Preservation Planning Area

An 18-hole golf course is presently located in the Single Family Executive planning area. The private golf course (Gem Lake Hills Golf Course) now provides the only semi-public open space in the City of Gem Lake and substantially enhances the feeling of open space and natural environment treasured by the residents of the City.

In response to these existing conditions, the following specific policies for this planning area are offered:

- Continued maintenance shall be required, under a conditional use permit, for the grounds and structures located on the golf course, to maintain its high quality natural environment.
- Golf courses shall be retained, as a lawful conditional use, in residential areas under city zoning codes. The land of the golf course shall be mapped into one or more residential zones based on compatibility with adjacent lands and prevailing conditions when and if development occurs.
- The City of Gem Lake shall continue to explore options for acquiring true public open or preservation areas, focusing on land which directly impacts the water quality of Gem Lake itself.

# 6 Transportation Plan

Most Gem Lake residents work, shop, find entertainment and obtain educational services outside Gem Lake city limits, so the quality of the transportation system is key to their quality of life. Maintaining and improving the transportation system will be especially important as the City and surrounding areas grow, and will require close cooperation with other governmental agencies.

The City of Gem Lake recognizes the regional and local importance of the I-35E, US 61 and Ramsey County Road E corridors, and remains active in planning efforts for these roadways and the transit, bicycle, and pedestrian routes that interact with them.

Maintaining and enhancing Gem Lake's transportation system as a part of this Transportation Plan will be done with a focus on enhancing the natural and man-made environments within, and bordering on, the City limits.

## 6.1 The Existing Transportation System

### 6.1.1 Roadway Network

The most important component of the transportation system within Gem Lake for the foreseeable future will be the local street and highway network, shown in Figure 6.1. The functional classification of each roadway and jurisdictional responsibility for maintaining them are summarized in Tables 6.1 and 6.2.

#### 6.1.1.1 Arterials

The most heavily traveled arterial route through the City is U.S. Highway 61, a four-lane divided highway which serves as a major artery connecting Gem Lake with White Bear Lake and the more intensively developed portions of the Twin Cities metropolitan area to the south. Highway 61 connects with the I-694/494 Twin Cities beltway loop at a point approximately one mile south of the City limits, and is functionally classified as an A-Minor Arterial Expander. The future number of lanes is expected to remain the same.

The next most traveled arterial within the community is County Road E, a four-lane undivided highway which serves as part of Gem Lake's southern boundary. County Road E, also functionally classified as an A-Minor Arterial Expander, intersects with U.S. Highway 61 in the southeast portion of Gem Lake, connects to the southern portion of White Bear Lake to the east, and intersects with I-35E approximately one mile west of Gem Lake's western boundary. The future number of lanes is expected to remain the same.

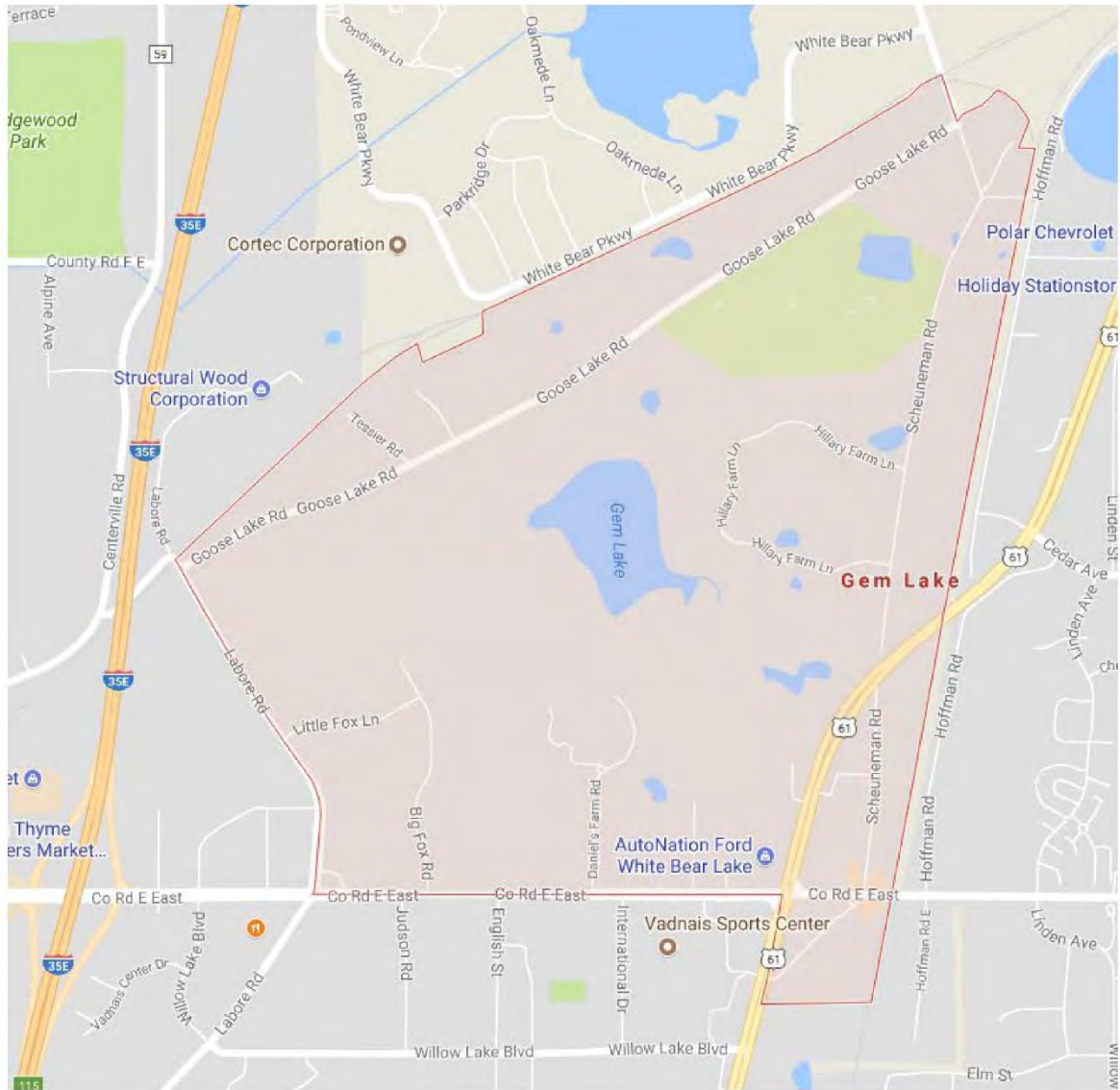
Interstate 35E is the only Principal Arterial near the City. Other arterials include Labore Road on the western boundary, Goose Lake Road running southwest to northeast near the northern boundary, and Otter Lake Road located in the northeastern portion of the City. The future number of lanes is expected to remain the same.

Functional classifications for Gem Lake roadways are shown in Figure 6.2

Figure 6-1 – Roadway System

Gem Lake Roadway Network

Figure 6.1

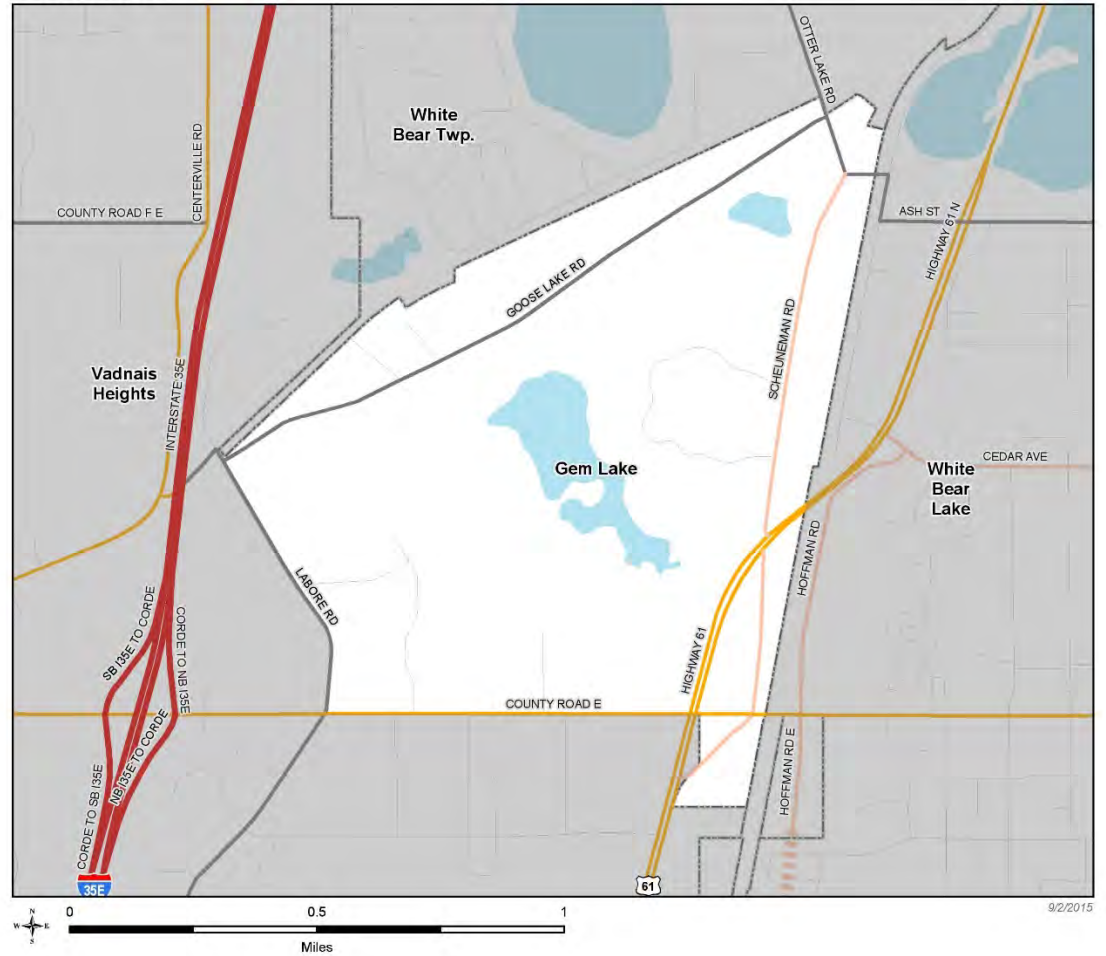


Source: Googlemaps

Figure 6-2 – Functional Classification

**Regional Transportation System - Functional Class Roads  
Gem Lake**

Figure 6.2



Existing Functional Class Roads	Planned Functional Class Roads	County Boundaries
Principal Arterial	Principal Arterial	City and Township Boundaries
A Minor Augmentor	A Minor Augmentor	Lakes and Rivers
A Minor Reliever	A Minor Reliever	
A Minor Expander	A Minor Expander	
A Minor Connector	A Minor Connector	
Other Arterial	Other Arterial	
Major Collector	Major Collector	
Minor Collector	Minor Collector	

### 6.1.1.2 Collectors

Collector streets include Scheuneman Road N., which provides access to Gem Lake Golf Course and the residential area of Gem Lake, and Scheuneman Road S., which provides access to the commercial/business area. Due to the recent closure of the Scheuneman Road N. intersection with U.S. Highway 61, the reclassification of Scheuneman Road N. to a Local Street may be warranted.

### 6.1.1.3 Local Streets

The remaining roads within the City are classified as Local Streets, principally serving adjacent land users. These local streets comprise approximately 50 percent of the total roadway mileage within the community.

Table 6-1 – Inventory of Roads, Streets, and Highways

Name of Facility	Functional Classification	Jurisdiction	Length (miles)
U.S. Highway 61	A Minor Arterial Expander	State	0.5
County Road E	A Minor Arterial Expander	Ramsey County	0.9
Goose Lake Road	Other Arterial	Ramsey County	1.4
Labore Road	Other Arterial	Ramsey County	0.6
Otter Lake Road	Other Arterial	Ramsey County	0.2
Scheuneman Road (N.)	Major Collector	Gem Lake	0.8
Scheuneman Road (S.)	Major Collector	Gem Lake	0.3
Hoffman Road West	Local	Gem Lake	0.2
Tessier Road	Local	Gem Lake	0.1
Haven Road	Local	Gem Lake	0.1
Big Fox Road	Local	Gem Lake	0.4
Little Fox Lane	Local	Gem Lake	0.2
Daniel's Farm Road; Hillary Farm Lane; Kahl Circle; Scotland Court; & Heritage Garden Road	Local	Private	1.5
<b>Total</b>			<b>6.8</b>

Table 6-2 – Summary of Existing Road Mileage by Jurisdiction and Functional Classification

Jurisdiction	Minor Arterial	Other Arterial	Collector	Local	Total	% of Total
State	0.5	—	—	—	0.5	7
Ramsey County	0.9	2.2	—	—	3.1	43
Gem Lake	—	—	1.1	1.0	2.1	29
Private	—	—	—	1.5	1.5	21
<b>Total</b>	<b>1.2</b>	<b>2.2</b>	<b>1.1</b>	<b>2.5</b>	<b>7.2</b>	<b>100</b>

#### 6.1.1.4 Jurisdiction

With U.S. Highway 61, MnDOT currently maintains 7 percent of the total 7.2 miles of roadway within Gem Lake, while Ramsey County maintains 43 percent which includes most of the Minor Arterial and all of Other Arterial (refer to Table 6.2). Gem Lake maintains 2.1 miles (approximately 29 percent) of the total mileage. The remaining 21 percent of roads are under private jurisdiction.

#### 6.1.1.5 Access Management.

- Gem Lake follows a draft set of access management policies developed by Ramsey County. Rather than a set of specific standards, Ramsey County's draft policies "are intended to apply accepted access management principles in a context-sensitive manner to maximize the possible benefits as development occurs or as existing properties are modified." The draft policies are as follows.



- A parcel has the legal right to one access from a public street. If access can be obtained from an adjacent street, access from a County Road or County State Aid Highway should be directed to the minor street.
- Opportunities to combine or eliminate accesses shall be considered when new accesses are proposed.
- Where feasible, the access spacing standards of the MnDOT Access Management Manual shall be met.
- Where possible, new driveways shall be aligned with existing driveways or streets.

## 6.1.2 Public Transit

Gem Lake is located in Transit Market Area III. Transit Market Area III means that transit services in this area are primarily commuter express bus services with some fixed-route local service providing basic coverage. General public dial-a-ride services are available where fixed-route service is not viable. For Gem Lake, general public dial-a-ride services are available through Transit Link, and paratransit service is available to residents that meet the qualifications for Metro Mobility.

In addition, for those who have disabilities, special transportation services are available through the Lions Club.

There are no existing or planned transit advantages or existing transit support facilities in Gem Lake.

While no transit routes currently exist in Gem Lake, residents do have access to Route 275 at the I-35E and County Road E park and ride in Vadnais Heights for service to downtown St. Paul, and Route 270 at Maplewood Mall Transit Center, and the park and ride in Maplewood at Hwy 61 and County Road C for service to downtown Minneapolis.

## 6.1.3 Bicycles and Pedestrians

Existing bicycle and pedestrian facilities within or bordering the City are mostly limited to on-street biking and walking but for a trail that begins on Summit Farm Lane that rounds the outside of Gem Lake Villas and connects back to the cul-de-sac on Summit Farm Lane and a few sections along County Road E east of the U.S. Highway 61 intersection. Crosswalks are located at the Labore Road and International Drive intersections with County Road E, and the County Road E/U.S. Highway 61 intersection that connects to a sidewalk running along the south side of County Road E, outside the city limits. Shoulders are striped on Labore Road, Goose Lake Road, Otter Lake Road, and Scheuneman Road N., and a Bike Route is signed east of the Scheuneman Road N./Otter Lake Road intersection.

Existing bicycle and pedestrian facilities are shown in Figure 6.3

## 6.1.4 Airports

There are no airports, proposed airport sites, search areas, or other related facilities located in Gem Lake. The City is served by the Minneapolis-St. Paul International Airport and the St. Paul Downtown Airport. In addition, a private, small aircraft airport is located in White Bear Township, approximately five miles north of Gem Lake.

The airports have no direct impact on the City of Gem Lake, and any development in Gem Lake will have no impact on the regional aviation system.

The City Clerk/Administrator will notify the Federal Aviation Administration (FAA) and the Minnesota Department of Transportation (MnDOT) of any structure to be constructed within Gem Lake that may affect navigable airspace.

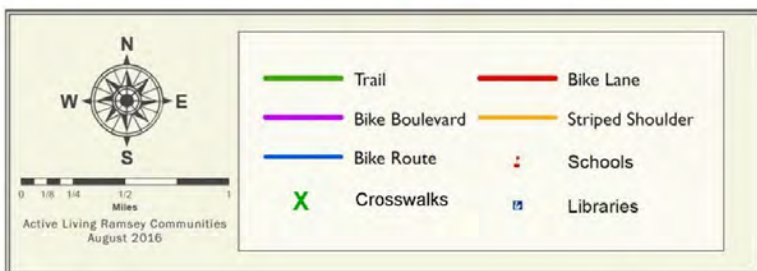
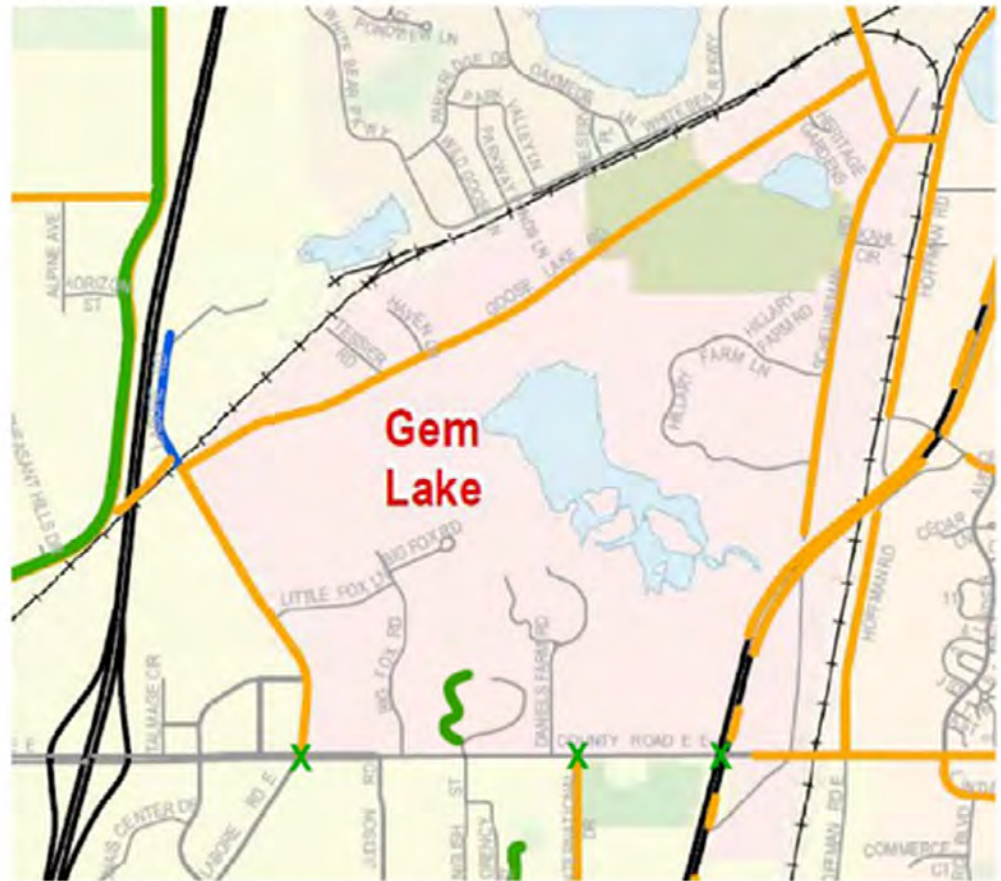
There presently are no structures in Gem Lake that are 200 feet or greater in height. The existing zoning ordinance does not allow any sign or building to exceed 36 feet in height.

While the height limitation of 36 feet does not apply to such structures as transmission towers for commercial radio broadcasting station or television antennas, these would both require special use permits.

Figure 6-3 – Existing Bicycle and Pedestrian Facilities

Existing Pedestrian and Bicycle Facilities  
Gem Lake

Figure 6.3



Source: Ramsey County

## 6.1.5 Freight

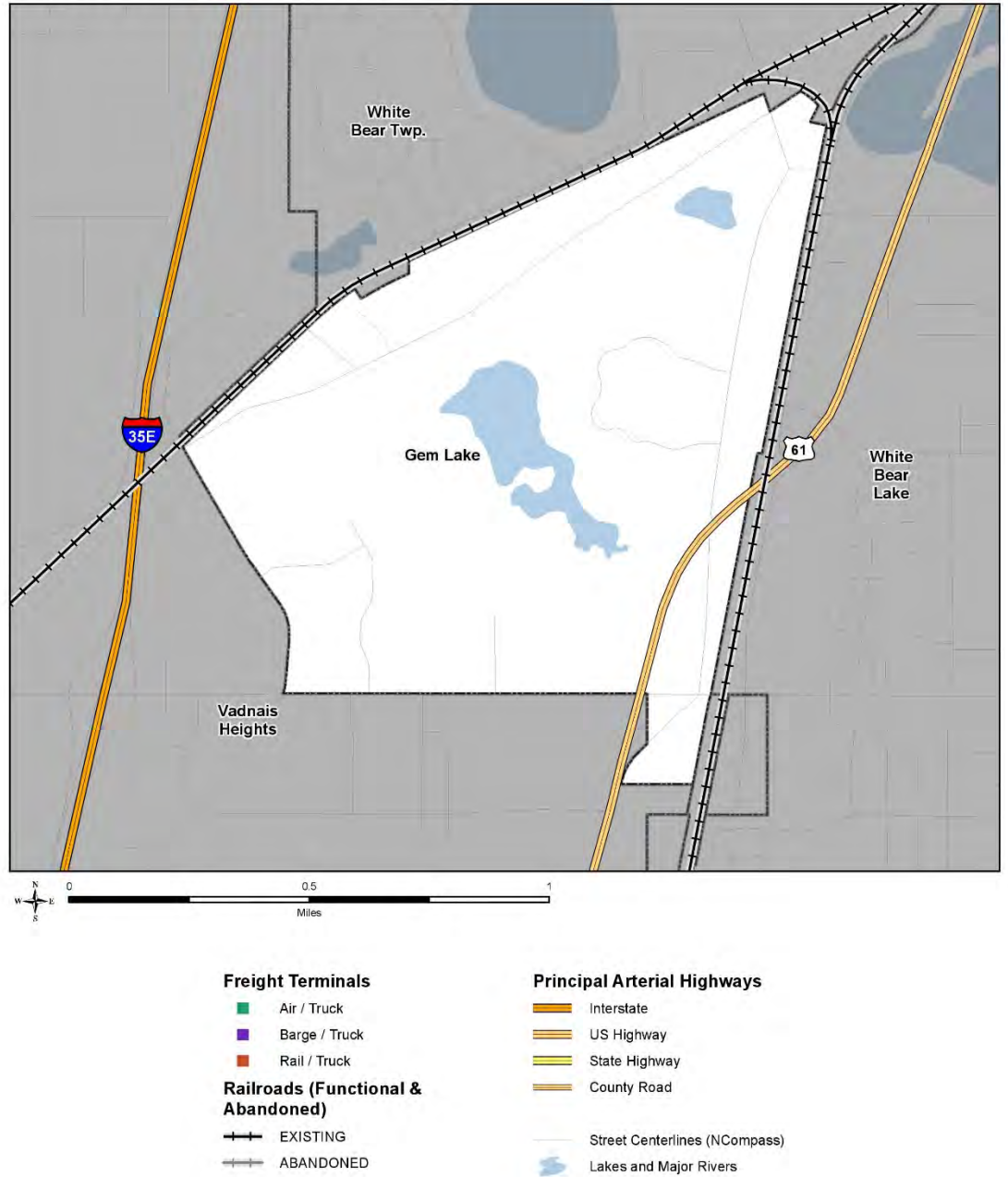
Freight facilities within the City are limited to the Burlington-Northern railroad running north-south along the eastern boundary, and the Canadian-National railroad running southwest-northeast along the northern boundary. The Burlington-Northern railroad is planned to become a part of the Bruce Vento Regional Trail and is a Tier 1 Alignment identified in the Met Council's Regional Bicycle Transportation Network.

Gem Lake's Freight System elements are shown in Figure 6.4

Figure 6-4 – Freight System Elements

**Metropolitan Freight System  
City of Gem Lake, Ramsey County**

Figure 6.4



## 6.2 Future Transportation System

Future improvements to the Twin Cities Metropolitan highway and transit systems are categorized under two funding scenarios:

1. Current Revenue Scenario: represents the fiscally constrained regional transportation plan, which assumes revenues that the region can reasonably expect to be available based on past experiences and current laws and allocation formulas.
2. Increased Revenue Scenario: represents an illustration of what can be achieved with a reasonable increase in revenues for transportation.

The future highway and transit improvements identified in this plan are reflective of the Current Revenue Scenario, and any improvements or changes identified under the Increased Funding Scenario are not currently funded nor planned to be funded in the future.

### 6.2.1 Future Roadway Network

There are currently no planned highway or local roadway improvements within the City of Gem Lake. Previous transportation plans and studies included the following potential future roadway improvements:

- Connection of White Bear Parkway and Labore Road. Additional right-of-way would be required to make this connection.
- Realignment of the Otter Lake Road/County Road F connection (without vacating any existing right-of-way). Additional right-of-way would be required to make this connection.
- Extension of center raised median on County Road E to U.S. Highway 61.
- Realignment of Daniel's Farm Road to connect to the International Drive/County Road E signalized intersection as a part of commercial development north of County Road E (without vacating any existing right-of-way).

As with all roadway changes, the citizens of Gem Lake have expressed a desire for quality design and construction that enhances rather than detracts from the existing natural environment.

#### 6.2.1.1 2040 Traffic Forecast

Year 2015 and 2040 Met Council Regional Traffic Model outputs were used to generate Year 2040 traffic forecasts for Gem Lake A-Minor Arterial roadways. Existing Average Daily Traffic (ADT), Heavy Commercial Average Daily Traffic (HCADT), and 2040 Future Average Daily Traffic volumes are listed below in Table 6.3 and shown in Figure 6.5.

Table 6-3 – Existing and Future Traffic Volumes for A-Minor Arterial Roadways

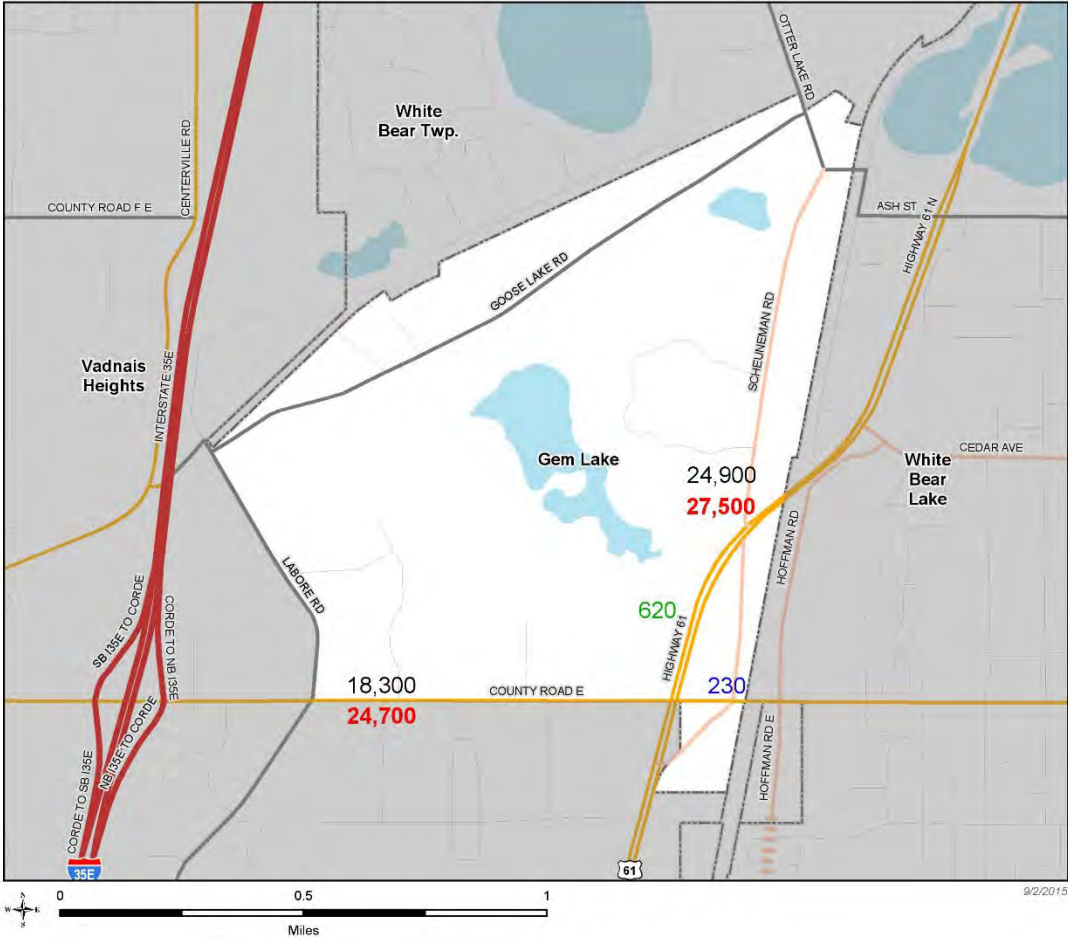
Year	Daily Traffic Volumes			
	2014 ADT	2014 HCADT	2015 HCADT	2040 ADT*
County Road E	18,300	—	230	24,700
U.S. Highway 61	24,900	620	—	27,500

\* Year 2040 Daily Traffic Forecasts are based on growth factors from the 2015 and 2040 Met Council Regional Traffic Forecast Models.

Figure 6-5 – Existing and Future Traffic Volumes

**Existing 2014 and Future 2040 Traffic Volumes**  
**Gem Lake**

Figure 6.5



**Average Daily Traffic Volumes**

- X,XXX - 2014 ADT
- X,XXX - 2040 ADT
- XXX - 2014 HCADT
- XXX - 2015 HCADT

- County Boundaries
- City and Township Boundaries
- Lakes and Rivers

Table 6.4 lists the socio-economic data by Transportation Analysis Zone (TAZ) that was input into the regional model for Gem Lake. The City lies mostly within TAZ 1794, with smaller areas in 1782, 1783, 1792 and 1797. Figure 6.6 shows the Transportation Analysis Zones for Gem Lake.

Table 6-4 – Gem Lake Socio-Economic Data by TAZ

TAZ #1782	2010	2020	2030	2040
Population	90	93	86	70
Households	36	41	38	34
Employment	2	0	0	0

TAZ #1783	2010	2020	2030	2040
Population	11	18	19	10
Households	5	7	7	5
Employment	0	0	0	0

TAZ #1792	2010	2020	2030	2040
Population	0	0	0	35
Households	0	0	0	15
Employment	186	208	228	248

TAZ #1794	2010	2020	2030	2040
Population	285	356	385	370
Households	110	146	181	177
Employment	299	321	314	303

TAZ #1797	2010	2020	2030	2040
Population	7	13	10	45
Households	4	6	4	19
Employment	39	51	68	89

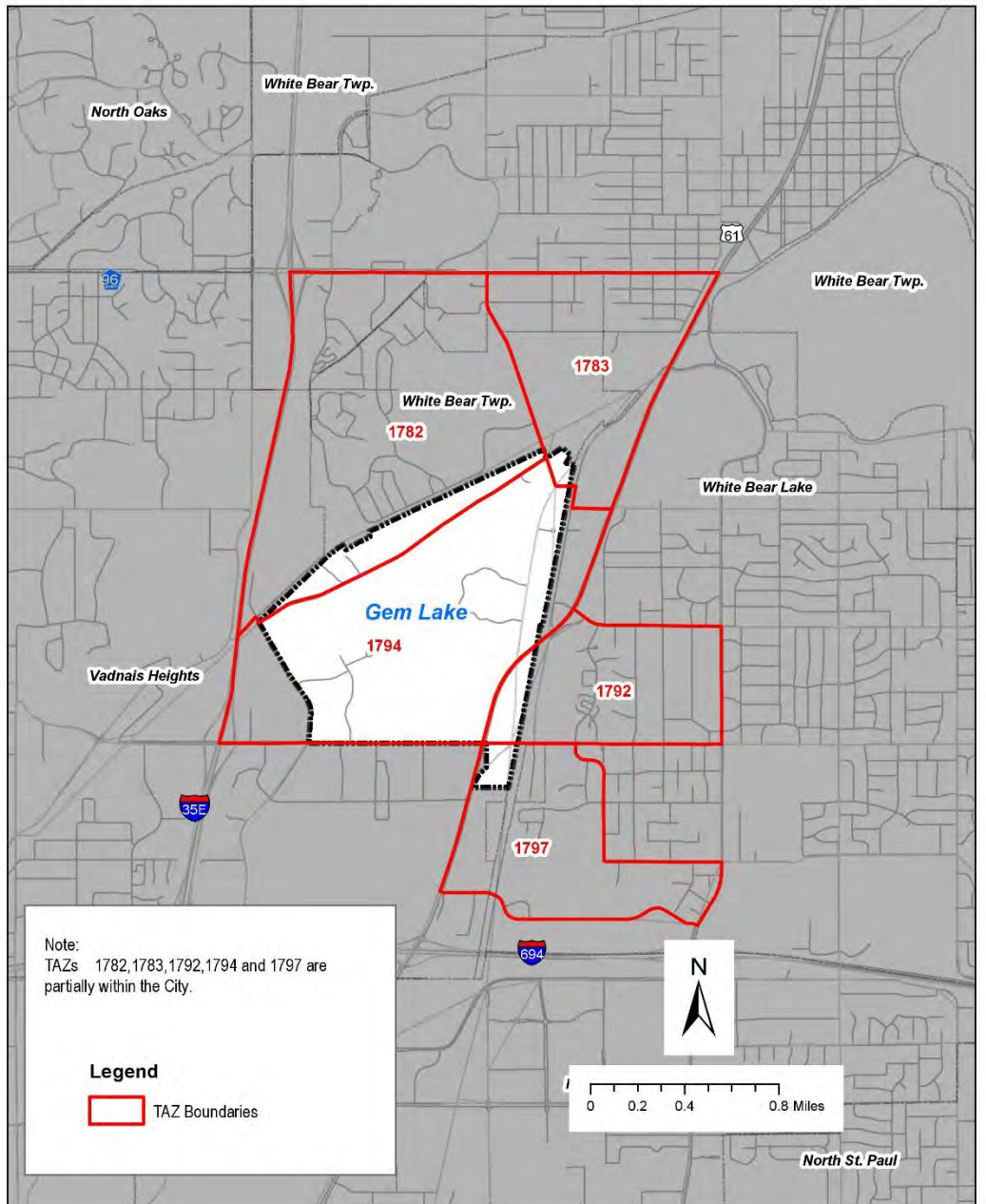
Total	2010	2020	2030	2040
Population	393	480	500	530
Households	155	200	230	250
Employment	526	580	610	640



Figure 6-6 – Transportation Analysis Zones (TAZ) Map

**Gem Lake Regional Model TAZs**

Figure 6.6



## 6.2.2 Future Public Transit

Under the Current Revenue Scenario, the Rush Line Transitway is funded. The Locally Preferred Alternative for the Rush Line Transitway is Dedicated Bus Rapid Transit (BRT) from Union Depot in downtown St. Paul to White Bear Lake. The transitway is planned to run along Highway 61 and includes a transit station at the intersection of County Road E and U.S. Highway 61 in southeastern Gem Lake. There is a second station identified just east of Gem Lake at the intersection of Cedar Avenue and Highway 61.

The City supports this future transit project and will take these two transit stations into consideration for future residential and commercial development, roadways, and bicycle and pedestrian connections.

## 6.2.3 Future Bicycles and Pedestrians

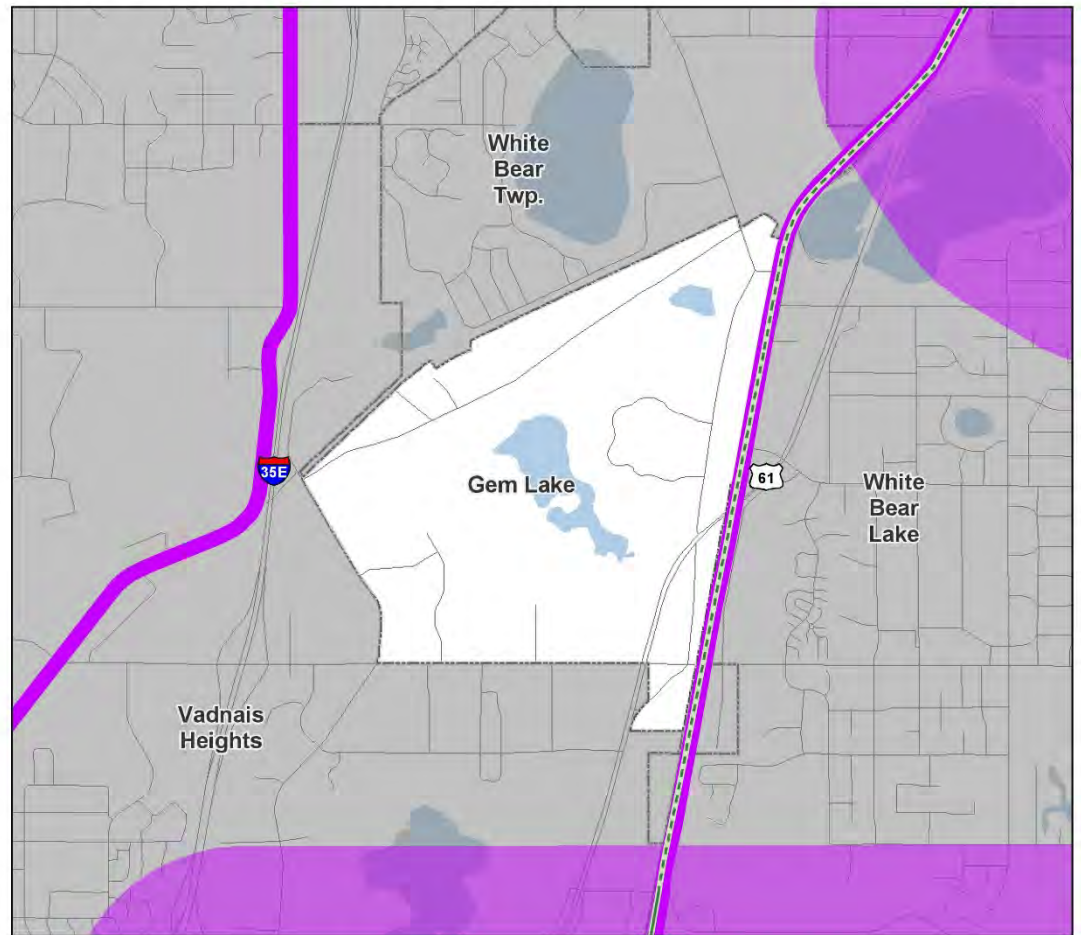
A future extension to the Bruce Vento Regional Trail using the Burlington-Northern railway right-of-way along the eastern boundary of Gem Lake is identified as a Tier 1 Alignment as a part of the Met Council's Regional Bicycle Transportation Network (see Figure 6.7).

Sidewalk connections in Gem Lake to this planned regional trail should be provided along the north side of County Road E and along the west side of U.S. Highway 61 as a part of future development and redevelopment in Gem Lake. These connections would also connect with the potential future Rush Line Corridor transit stations at the County Road E/U.S. Highway 61 intersection.

Figure 6-7 – Regional Bicycle Transportation Network

**Regional Bicycle Transportation Network (RBTN)  
City of Gem Lake, Ramsey County**

Figure 6.7



**RBTN Alignments**

- Tier 1 Alignment
- Tier 2 Alignment

**RBTN Corridors (Alignments Undefined)**

- Tier 1 Priority Corridor
- Tier 2 Corridor

**Regional Destinations**

- Metropolitan Job Centers
- Regional Job Centers
- Subregional Job Centers
- ▲ Large High Schools
- ▲ Colleges & Universities
- Highly Visited Regional Parks
- Major Sport & Entertainment Centers

**Regional Trails (Parks Policy Plan)**

- Existing
- Planned
- County Boundaries
- City and Township Boundaries
- NCompass Street Centerlines
- Open Water Features
- Existing State Trails (DNR)
- Mississippi River Trail

## 6.3 Transportation Policies

The following policies have been established by the municipal government of Gem Lake to enhance the quality of transportation for citizens of the community:

- The need to establish arterial and collector routes serving the northeastern metropolitan area is recognized and supported by the City. As identified in previous studies and plans, the relocation of Otter Lake Road to connect directly to County Road F and the connection of Labore Road and White Bear Parkway can further this goal.
- Gem Lake's desire to maintain a rustic, natural environment will inform any impact that an increase in traffic may have on the City's road system and residential neighborhoods.
- Gem Lake encourages the incorporation of parkway design criteria and the use of natural landscape barriers in any reconstruction of arterial and connector routes. (e.g., potential future Labore Road/White Bear Parkway connection.)
- Consistent with the City's desire to maintain a low profile government, further development of private roads serving more than one property will be encouraged.. However, the City should strictly oversee the development of any private roads to ensure that City construction and design standards and specifications are met.
- The basic arterial and collector road system of Gem Lake has been established. Therefore, future streets should be designed to channel local traffic onto County Road E, Labore Road and Goose Lake Road. Accommodating through traffic on new streets will be discouraged.
- Because Gem Lake has no natural outlet, all future streets should be designed to prevent additional surface water runoff into Gem Lake and its attendant wetlands.
- The City of Gem Lake has limited need for public transit service due to planned low density development. However, it will cooperate with adjacent communities to secure improved bus service as needed along its Minor Arterial street system, and with a future Rush Line BRT service as identified in the Met Council's Increase Revenue Scenario. Bus service in other areas of the City will be discouraged consistent with its planned low density and desired rustic environment.
- Gem Lake officially recognizes that any development affecting navigational air space within the community is subject to Minnesota Department of Transportation, Aeronautics Division, and Regulations. The community will routinely consider such regulations as part of the development review process.
- The operation of private airports, including heliports and seaplane bases, is prohibited in Gem Lake.
- Gem Lake encourages the future development of hiking/biking trails on the Burlington Northern right-of-way along the eastern boundary of the City, and on the Canadian National Railroad right-of-way along the northern boundary. The City will work with adjacent communities and provide access and pedestrian/bike connections to trails.

# 7 Sanitary Sewer System Plan

## 7.1 Introduction

The City of Gem Lake currently owns and maintains a sanitary sewer network that currently serves all of the businesses at the Hoffman's Corners area, a segment of the residential area along Scheuneman Road north of U.S. Highway 61 and the Hillary Farm neighborhood. The City of Vadnais Heights supplies sanitary sewer services to the Tousley Ford property, the Montessori School at the corner of County Road E and Labore Road, and several residences that neighbor the school.

### 7.1.1 Existing Sanitary Sewer System

The current system consists of approximately 13,400 Lineal Feet (LF) of sanitary sewer pipe ranging from 8" to 10" in diameter of both vitrified clay pipe (VCP) and polyvinylchloride pipe (PVC). There are approximately 65 manholes in the system. There are no lift stations or force mains within the existing system. Figure 7-1 shows the City's current sewer system and sewer districts.

Currently the system discharges into the Metropolitan Council Environmental Services (MCES) System in six locations including the two properties that discharge directly to MCES interceptor 7122 on Scheuneman Road as shown in Figure 7-4. The system discharges into a combination of both the VH-423/VH-423A Interceptors and the 7122 Interceptor. Currently MCES does not have a metering station near the city limits of Gem Lake. There are no existing treatment facilities, municipally or privately owned, in the City.

The existing condition of the City's sewer system was evaluated in the fall of 2006 / spring of 2007. A sanitary sewer system plan was developed in May of 2007 by SEH for the City, developed based on the field inspections of manholes and a closed circuit televised (CCTV) inspection of the pipes. This plan is an update to the sanitary sewer system plan developed in May of 2007.

## 7.2 Projected Flows

The projected population, household and employment numbers for the City of Gem Lake, as published by the MCES Thrive MSP 2040 forecasts are shown in Table 7-1 below. These numbers are to be used in future planning and development for the City, to assist MCES with metro area planning. MCES also has provided sewer and unsewered projections, summarized in Table 7-2.

Table 7-1 – MCES Thrive MSP 2040 Forecasts

	2020	2030	2040
Population	480	500	530
Households	200	230	250
Employment	580	610	640

Source: Gem Lake Community Page, produced by MCES

MCES has produced the following (Table 7-2) projected flows for the City of Gem Lake. Because Gem Lake is unmeasured, the project flows are determined using a combination of temporary flow data and SAC connection counts.

Table 7-2 – Projected Sanitary Flows (MGD)

2010 (actual)	2020	2030	2040
0.02	0.03	0.03	0.03

There are no public or privately-owned Community Wastewater Systems other than the indicated 106 individual SSTS remaining in operation in the City.

## 7.2.2 Existing System Model Analysis

### 7.2.2.1 Methodology

InfoSWMM, a product from Innowyze, is a wastewater modeling and management software application, fully integrated with ArcGIS. InfoSWMM Suite 14.5 and ArcGIS v. 10.2.2 was used to model the sanitary sewer system of Gem Lake. InfoSWMM is a comprehensive hydrologic, hydraulic, and water quality simulation model software that operates through ArcGIS. It is intended for use modeling urban stormwater and wastewater collection systems. InfoSWMM uses the Environmental Protection Agency (EPA) SWMM software that was developed by the EPA in a joint effort with CDM, Inc. It is an internationally used software that is used for planning, analysis and design related to stormwater runoff, combined and sanitary sewers, and other drainage systems in urban areas as well as applications in non-urban areas

The City's existing sewer structure data and as-built information from the City's sewer construction plan sheets were compiled into a GIS database to configure the model. The model was then used to evaluate current and future sewer capacities and required system improvements.

For the purpose of the analysis, the original sub-sewersheds from the previous comprehensive plan were maintained and are shown on Figure 7-1.

### 7.2.2.2 Dry Weather Analysis

Dry weather flow (DWF) values used in the model were determined by assigning each parcel a wastewater flow rate from the land use loading rates. Those flows were compared to previously established land use loading rates. The following table 7-3 shows sanitary sewer loading rates used in the 2030 Comprehensive Plan and the changes that were made in the 2040 Comprehensive Plan, to calibrate Gem Lake flow to what has been metered by MCES. Wastewater flows were summed and added to the nearest manhole in the existing system.

Table 7-3 – Sewer Allocation Forecasts

Existing Land Use	2030 Comprehensive Plan GPD/AC	2040 Comprehensive Plan GPD/AC
Mixed Use	1237.5	600
Open Space	0	0
Public/Institutional	500	500
Recreational Open Space	0	0

Existing Land Use	2030 Comprehensive Plan GPD/AC	2040 Comprehensive Plan GPD/AC
Single Family Estate	22.9	22.9
Single Family Executive	110	110
Single Family Residential	825	110
Single Family Residential (1-acre)	825	110

Using the Land Use method to calculate sanitary loading rates and the rates summarized above, the sanitary loading of existing sewered Gem Lake into the MCES interceptors is approximately 0.034 MGD, on par with MCES flow projections for Gem Lake.

A diurnal flow pattern was applied to the model to represent typical flow patterns. The diurnal curve used in the model is shown in Table 7-4 below. A diurnal flow pattern mimics typical water uses, with peaks in the morning and evening, when much of the general population is at home.

Table 7-4 – Diurnal Flow Pattern

Hour	Factor	Hour	Factor
0	0.65	12	1
1	0.65	13	0.9
2	0.65	14	0.85
3	0.75	15	1.05
4	0.9	16	1.2
5	1.2	17	1.1
6	1.45	18	1.05
7	1.8	19	1
8	1.5	20	0.9
9	1.1	21	0.85
10	1	22	0.75
11	1.1	23	0.6

This analysis shows that the Southeast District is already at capacity. Figure 7-2 show pipes at varying Depth over Diameter (d/D) capacities. Depth over Diameter is a ratio of how full the pipe is compared to diameter of pipe. Ratios between 0.6-0.8 mean the pipe is approaching full capacity and a ratio of greater than 0.8 means the pipe is at full capacity. The figure also shows total flow per existing sub-sewered district.

Each model run results in pipes at different capacity ratios at different times of day. The attached figures (7.1-7.5) show the worst time of day for the most downstream pipe. Pipes may be yellow or red due to capacity issues due to amount of flow, flat slopes (meaning water builds up easier in the pipe as opposed to steep slopes) or caused by data issues.

### 7.2.2.3 Wet Weather Analysis

An analysis of the existing sewer system was performed with a wet weather peaking factor. Wet weather modeling is performed to account for typical sanitary sewer flow with the addition of inflow and infiltration (I/I) into the sanitary system. A wet weather factor of 4 was applied to the model, based on MCES allowable peaking factors.

Figure 7-3 shows the existing system d/D ratios with wet weather flow rates. The modeling resulted in a system with multiple existing pipes at capacity, with d/D ratios greater than 0.6.

### 7.2.2.4 Future System Model Analysis

Two scenarios were modeled, dry weather and wet weather, similar to the existing conditions modeling, using the same sanitary loading rates as listed in Table 7.5. As in existing modeling, the flow rate per future land use type was multiplied by parcel acres to determine proposed waste water flow rates for each development area.

An analysis similar to what was done for existing conditions modeling was performed for proposed development conditions using future land use. The City of Gem Lake has phased future sewer connections, shown in Figure 7-4. Two stages are anticipated and noted in the following figures and tables. Table 7-5 shows flow rates from future planned connection areas using the future land use.

Table 7-5 – Current and Proposed Wastewater Discharge (MGD) into MCES Interceptors/Community Connections

Year	Destination	Population	Houses	Employment	PWWF [MGD] (Design Flow, PF = 4)	Capacity [MGD]
2020	Unsewered	280	106	160	N/A	N/A
	MCES Interceptor 7122 (North East District)	175	82	0	0.052	0.54
	MCES Interceptor 7122 (East District)	25	12	0	0.004	0.61
	MCES Interceptor 7122 (3800 Scheuneman Rd.)	0	0	15	0.004	N/A
	MCES Interceptor 7122 (3734 Scheuneman Rd.)	0	0	15	0.004	N/A
	MCES Interceptor 1-VH-423 (South District S2)	0	0	130	0.028	0.49



Year	Destination	Population	Houses	Employment	PWWF [MGD] (Design Flow, PF = 4)	Capacity [MGD]
	MCES Interceptor 1-VH-423A (South East District)	0	0	260	0.08	0.5
	MCES Interceptor 7122 (South East District)	N/A	N/A	N/A	N/A	N/A
	Vadnais Heights Connection (South District S1)	N/A	N/A	N/A	N/A	N/A
2030	Unsewered	280	106	150	N/A	N/A
	MCES Interceptor 7122 (North East District)	175	82	0	0.052	0.54
	MCES Interceptor 7122 (East District)	25	12	0	0.004	0.61
	MCES Interceptor 7122 (3800 Scheuneman Rd.)	0	0	15	0.004	N/A
	MCES Interceptor 7122 (3734 Scheuneman Rd.)	0	0	15	0.004	N/A
	MCES Interceptor 1-VH-423 (South District S2)	10	15	170	0.084	0.49
	MCES Interceptor 1-VH-423A (South East District)	N/A	N/A	N/A	N/A	N/A
	MCES Interceptor 7122 (South East District)	0	0	260	0.08	0.5
	Vadnais Heights Connection (South District S1)	10	15	0	0.01	0.5
	2040	Unsewered	280	106	150	N/A
MCES Interceptor 7122		175	82	0	0.052	0.54

Year	Destination	Population	Houses	Employment	PWWF [MGD] (Design Flow, PF = 4)	Capacity [MGD]
	(North East District)					
	MCES Interceptor 7122 (East District)	25	12	0	0.004	0.61
	MCES Interceptor 7122 (3800 Scheuneman Rd.)	0	0	15	0.004	N/A
	MCES Interceptor 7122 (3734 Scheuneman Rd.)	0	0	15	0.004	N/A
	MCES Interceptor 1-VH-423 (South District S2)	25	25	200	0.084	0.49
	MCES Interceptor 1-VH-423A (South East District)	N/A	N/A	N/A	N/A	N/A
	MCES Interceptor 7122 (South East District)	0	0	260	0.08	0.5
	Vadnais Heights Connection (South District S1)	25	25	0	0.016	0.5

Figure 7-5 shows the current system with future land use d/D ratios with wet weather flow rates. Under the sewer pipe planned design in Figure 7-4, the system shows the same pipes at capacity, with d/D ratios greater than 0.6. The planned design has all future discharge connection points either to the Vadnais Heights or MCES connection systems.

### 7.3 Future System Needs

The Gem Lake sanitary sewer system was evaluated under the recommended peaking factor for a City of this size per MCES standards. Capacity problems in the Southeast District were identified. Future extensions to the existing piping network in this area will need to address these pipe segments as part of any future construction. The future conditions assessment of the system will be analyzed using those same peak flow factors and the flow rates generated from new land use designations anticipated by the City through the year 2040.

### 7.3.1 Inflow & Infiltration Reduction

The City of Gem Lake, like the many communities in the metropolitan area, has spent considerable time and energy managing inflow and infiltration (I/I) within their sanitary sewer collection system. The Metropolitan Council (MCES) has implemented a surcharge program which is designed to encourage metropolitan communities to reduce inflow entering their interceptors in order to provide reserve wastewater capacity for daily domestic dry weather demand flows from municipalities they serve around the Twin Cities metro area. Wastewater from the City of Gem Lake sanitary sewer collection system discharges directly into the MCES interceptor system and is currently unmetered by the City and metered periodically by MCES staff due to the small flows generated by the City. While the City has not exceeded the pre-determined maximum peak level established by MCES, it continues its effort to minimize clear water discharges into their sanitary sewer collection system.

### 7.3.2 Overall Sanitary Sewer Program Policy

The City of Gem Lake has adopted policies, procedures and strategies as outlined as part of an overall Sanitary Sewer System Plan developed in May 2007. The plan is used to identify routine sewer maintenance, isolate and prioritize sewer rehabilitation in the sanitary sewer collection system and reduce I/I contributions, both on the public and private side of the system. The City's policy is to serve as a guide to operate, monitor, maintain, and rehabilitate the City of Gem Lake's sanitary sewer system. These procedures are necessary to prevent sewer backups into homes and businesses, and the natural environment. It also provides continued compliance with local and regional standards for wastewater, including the control of I/I to the system. Maintenance also protects and extends the life of the City's sanitary sewer system.

### 7.3.3 Local Sanitary Sewer Ordinances

The City of Gem Lake has enacted ordinances which regulate subsurface sewage treatment systems (Ordinance 67D) and the operation of the municipal sanitary sewer system (Ordinance 64E and Ordinance 129). The City's current sewer ordinance does not include specific language requiring the disconnection of existing foundation drains, sump pumps and roof leaders from the Gem Lake sanitary sewer collection system. To reduce inflow, the City has developed a program to eliminate illegal connections to the sanitary sewer system which mainly includes public education to encourage voluntary compliance. The City ordinance is attached as an appendix to this document.

#### 7.3.3.1 Ordinance 67D – Subsurface Sewage Treatment Systems (SSTS)

Ordinance 67D is designed to protect and promote the health, safety and general welfare of the people of Gem Lake by regulating seepage discharges and the location, installation, alternation, operation and maintenance and monitoring of all subsurface sewage treatment systems (SSTS). Subsurface sewage treatment systems must be installed in accordance to Chapter 7080 or 7081 of the Minnesota Rules. The SSTS shall be designed to receive all sewage from the dwelling(s), building(s), or other establishment(s) served by the system, including laundry waste and basement floor drainage. Surface, roof and foundation drainage and other storm water shall not be allowed to enter any part of the system. Not more than one dwelling, commercial, business, institutional, or industrial unit shall be connected to the same SSTS, unless such multiple connections was specified in the application submitted and in the permit issued for the system. No SSTS shall be installed or renovated on lands to which public sewer service is currently available, without a system permit. Within the Urban Service

Area, as identified in a Met Council approved a comprehensive sewer plan, developers will place any SSTS systems where they can later be most cost effectively connected to the public sewer system, when it becomes available.

No preliminary plat shall be approved by the City of Gem Lake City Council, unless the engineer makes a favorable recommendation regarding the ability of each lot to accommodate a satisfactory SSTS. A system permit, obtained from the administrator, is required for any installation or renovation of an SSTS. No building permit for any building including the installation or renovation of an SSTS shall be issued until a system permit for the involved facility has been approved.

There are currently 106 SSTSs in operation within the City as of July 28, 2020 shown in Figure 7.6. There are no known currently nonconforming SSTSs in Gem Lake. The city ordinance provides for an inspection of all SSTS by a professional to take place every year. The City hires an outside consultant to perform this service. Computer records are maintained as to which property owners have SSTS. At the time of the inspection the inspector will make sure that the SSTS is in proper working condition. The inspector will provide maintenance tips to the property owner to keep the system in proper working condition. If the SSTS is found to be in need of repair, the inspector will review the repair or replacement needs with the property owner. The inspector will also notify the City for tracking and inspection of the repairs or replacement whichever is required. All SSTS records are kept at the City.

The City of Gem Lake has instituted an inspection program for SSTS. The initial inspection is to determine if installation or renovation has been accomplished in compliance with Chapter 7080 or 7081 of the Minnesota Rules and with the Gem Lake Subsurface Sewage Treatment System Ordinance. The City's inspector shall inspect any individual SSTS at other times with a receipt of a complaint or other notice of system malfunction.

It is the responsibility of the owner of any premises using an SSTS, for which a permit has been issued, to provide for the periodic maintenance by a qualified septic system company. Reports of the maintenance should be submitted to the Department.

It is the duty of the Department to create, update and maintain an accurate inventory of each SSTS for which permits have been issued within the City of Gem Lake. The inventory should include location, system description, renovation description and maintenance reports. The City may inspect any system it deems necessary as a result of the reporting program. The City, at cost to the land owner, has each and every SSTS inspected every year. Any system which fails the inspection must be renovated or replaced. Ordinance 67D defines the inspection and maintenance routines.

### 7.3.3.2 Ordinance 64E – Municipal Sanitary Sewer System

Ordinance 64E is designed to regulate the operation of the municipal sanitary sewer system. The ordinance contains language that does the following:

- Regulates connections to be made to the municipal sanitary system
- Establishes regulations as to type and kinds of waste that may be disposed of in the municipal sanitary sewer system
- Prohibits the discharge of any type or kind of surface waters into the municipal sanitary sewer system. Also prohibits the connection of sump pumps, rain leaders, and passive drain tile to the sanitary sewer system.
- Prescribes rates and charges for sewage disposal services

- Provides for the issuance of permits for and supervision of all connections to the municipal sanitary sewer system
- Prescribes certain materials and methods to be used for said connections
- Provides for licensing of sewer contractors
- Prescribes penalties for the violation of the provisions of this ordinance

City Ordinance 129 (attached in the appendix) requires the disconnection of existing foundation drains, sump pumps, and roof leaders from the sanitary sewer system. The timing of the possible expansions would depend on funding and need. The first priority would be to connect all commercial establishments to public sanitary sewer. A second priority would be properties where soil or topographic conditions make the installation of an ISTS difficult.

### 7.3.3.3 Current and Future Measures to Mitigate I/I

The City of Gem Lake does not employ full time utility maintenance personnel to perform daily operation and maintenance on their sanitary sewer collection system. The City relies on contractors to perform the work needed to maintain the collection system through recommendations provided from their City engineer. The City of Gem Lake does not perform routine cleaning and closed-circuit television (CCTV) inspection but has contracted with a contractor to provide cleaning and CCTV television to reduce the potential for sewer backups and identify potential maintenance and I/I issues.

Since Gem Lake is not directly metered by the MCES and no metering data is available for the sanitary sewer in the City, it is difficult to accurately estimate the quantity of I/I currently present in the system. It is assumed that the amount of I/I present in the system is relatively low since the majority of Gem Lake's sanitary sewer system was constructed fairly recently with PVC pipe or was recently lined with the exception being the small amount of pipe serving a few properties in the East Sewer District. There were 75 houses built in Gem Lake before 1970 according to US Census data, this is about 1/3 of the total houses in the City and some of these properties may be connected to the sanitary sewer system. To date the City has not performed any evaluation of these service connections, however, the City will be doing an inspection of all the manholes in 2020, repairs in 2021, and will be flushing and televising the entire system in 2021. An analysis of I/I susceptibility will be performed for these pre-1970 connections as a part of this project. After inspection of the televising data, the City will begin an I/I investigation project that will include metering the sanitary sewer to quantify I/I during storm events. The planning level cost estimates for these projects is included as Table 7-6 below.

As part of a routine maintenance program, the City of Gem Lake contracts for manhole inspection, sewer cleaning and CCTV inspection to inspect their entire sanitary sewer collection system. Over the past ten years of inspection program, the following issues have been found in the collection system.

- Minor sag and gas service through the pipe
- Pipe cracks, roots, and poor joints in sections
- A root blockage, debris and joint failure in an isolated section of the pipe
- Manhole lids which allow storm water to enter the system
- Manhole casting rings are deteriorated and in need of repair

Sewer rehabilitation in past years has included the following remedial measures which includes manhole replacement to reduce the potential for I/I entering the sanitary sewer collection system.

- Replacing existing manhole covers with solid covers
- Repair of mortar between rings
- Sealing between manhole castings and the manhole structures at manhole locations outside of the bituminous pavement
- Raising the existing manhole casting to provide access
- Removal of sewer rod or other obstructions in manholes
- Sewer lining in sewer sections with multiple poor and deteriorating pipe joints

The City of Gem Lake plans to continue their current operation and maintenance program on the sanitary sewer collection system with the goal of providing an effective and efficient piping network and reduce the potential of I/I entering the MCES interceptor system. I/I direct sanitary sewer connections sources from foundation drains, sump pits/pumps and roof leaders will not be allowed by ordinance from future development. In addition, the City will continue their public education program to discourage these types of connections from existing Gem Lake properties.

Table 7-6 – Engineers Estimate of Probable Cost for I/I Investigation and Mitigation

Description	Qty	Unit	Unit Cost	Cost
Manhole Inspection	65	EA	\$500	\$32,500
Manhole Rehabilitation	32	EA	\$1,000	\$32,000
Flush and Televis Pipe	13400	LF	\$10	\$134,000
Sanitary Sewer Metering	1	LS	\$50,000	\$50,000
<b>Subtotal</b>				\$248,500
<b>30% Contingency</b>				\$74,550
<b>Total</b>				\$323,050

### 7.3.3.4 Gravity Sewer Needs

A significant portion of a City's time and budget is used in areas constructed of VCP. This is a result of the root intrusion of joints in this type of pipe. This is not unique to the City of Gem Lake and is typical of VCP throughout the metro area. Many communities have lined or replaced VCP sewer to eliminate the high maintenance needs often associated with these types of sewers. The City has undertaken projects to line the VCP sewers, but to reduce the strain and work for the sewer maintenance staff, a more aggressive lining program should be undertaken.

Maintenance in the sewer system typically involves cleaning the sewer using a combination of jetter and vector trucks to remove debris from the sewer pipes. Root intrusion in joints of the pipe requires cutting and removal to remove obstructions in the pipe and allow flow of the sewage through the system. Once roots begin to enter sewers, it is very difficult to eliminate the recurring growth. The simple cutting of roots often promotes additional growth. Unmanaged root growth can also cause the VCP pipe to crack, impacting the integrity of the pipe. Cracked pipes allow groundwater and soil into the sewer system, which can cause road collapses. The continued efforts to cut roots in the VCP portions of the system annually results in other portions of the City's sewer system having a lower priority for maintenance.

The League of Minnesota Cities (LMC) Insurance Trust provides insurance coverage for the City to protect against claims resulting from sewer backups and other claims that may result from problems related to the City's utility services. LMC also provides no-fault

insurance for private sewer connection to owners whose sewers cause damage to the City's municipal system. LMC have noted increased claims in specific areas of sewer systems throughout the state. One item of notice is VCP sewers having higher than normal claims. They have suggested a cleaning of VCP sewer pipes every three years.

## 7.4 Recommended Maintenance Program

Because of the high percentage of VCP pipe comprising the sewer system in Gem Lake, those portions of the system should be more closely evaluated for replacement or lining to negate the concerns of root intrusion and to implement the maintenance schedule suggested by LMC.

Proper monitoring and maintenance of the existing system is an important factor in the long-term viability of the system. Maintaining the system extends the life of the system and decreases the likelihood of sewer backups. Sewer backups often lead to property damage claims against the City. This results in increased costs to the City to pay those claims with associated increases in insurance premiums. It is recommended to create a program specifically for VCP cleaning, televising and rehabilitation to ensure the system lasts and to reduce potential expenses from collapsed/broken sewers or other backups that result from lack of maintenance.

### 7.4.1 System Cleaning

Gem Lake will maintain their sanitary sewer collection system. The City's sanitary sewer line consists of the main trunk line and does not include service leads off of the main trunk line. Private property owners are responsible for the maintenance of the private service lines from the City's main line to any building or private property. The City will clean/maintain its sanitary sewer line every three years. Adjustments to maintenance schedules may become necessary in the case of unforeseen or uncontrollable circumstances. Problem areas such as an area that has had a sewer backup, blockage, or a known problem such as grease accumulation or shallow slope will be cleaned twice per year, for the first year. If there are no further problems, it will be cleaned once the second year and then to a regular schedule the third year.

#### 7.4.1.1 Equipment

Lines will be cleaned with a jetter or jetter/vacuum truck or rodder machine. The equipment used depends upon the location, type of line, and if there are any known problems that are more suitable to a particular method of cleaning. Each pipe section will be inspected by (CCTV) television camera every 10 years. Any pipes that are located on a street where a street maintenance project is planned will be inspected prior to the start of those projects. The City will also televise any sewer lines in a new development before the City accepts any responsibility for maintenance of those lines. Televising will also be performed to inspect lines where there may be possible problems or where problems are occurring.

The lines will be visually inspected by looking down manholes to determine if there are any problems during cleaning. Every dead-end manhole will be flushed during regularly scheduled sewer line maintenance. Flushing will occur from every downstream manhole. However, two manholes will need to be flushed through due to the manholes being buried. These two manholes are MH #6 & MH #28. Additionally, MH #40 & MH #50 are not accessible. These pipes will need to be back flushed.

Cleaning costs are estimated at \$4,000 per mile when contracted. A program to clean 3 miles over a three year period results in a contract cost of \$4,000 per year. The actual cost to the City may be different depending on the amount of work accomplished.

## 7.4.2 System Televising

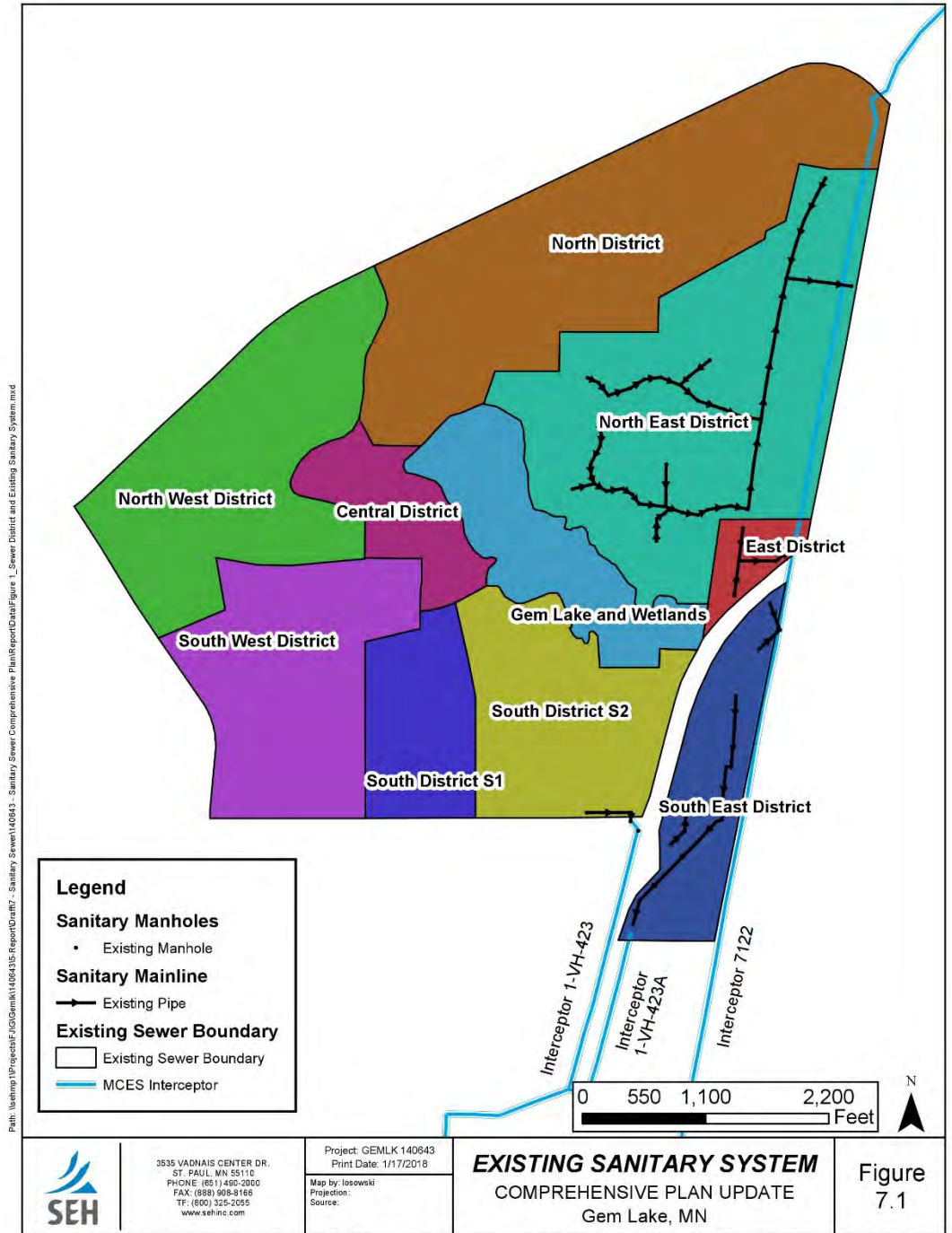
The City of Gem Lake has established a televising program to televise all sewers. CCTV all sewer lines help establish a “base line” televising database for all sewers in the community. In addition, the City has already established a practice of televising sewers in areas where street rehabilitation or reconstruction is scheduled to occur. This allows the City to be efficient with infrastructure management and to avoid situations that require removing portions of a newly constructed street. Contracts for new sewer construction include the televising of the new sewer. A copy of the televising reports and video are provided to the City at the end of the project.

### 7.4.2.1 Equipment

The City of Gem Lake contracts out all their CCTV inspection and does not have an equipment inventory. The cost of the equipment and amount required by the City are often more efficiently contracted rather than owning specialized equipment. The most efficient means to provide CCTV inspection would be to develop a televising program that coincides with the cleaning program described above. It is recommended that the City televise the entire system every three years. A 3-year schedule equates to 1 mile per year. Televising costs are estimated at \$5,000 per mile. A program to televise one mile per year results in a contract cost of \$5,000 per year.

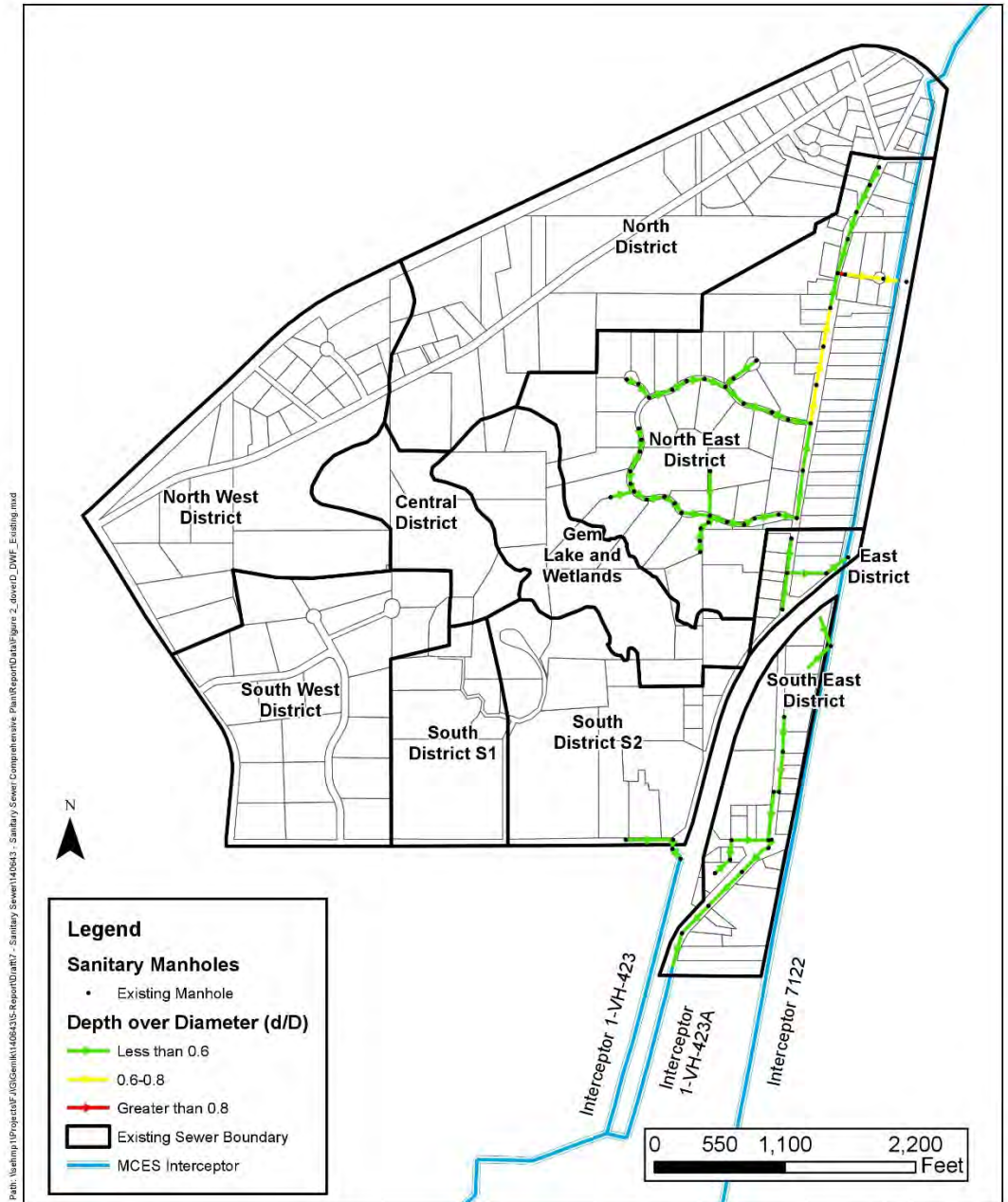


Figure 7-1 – Existing Sanitary System




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Figure 7-2 – Existing Capacity Results



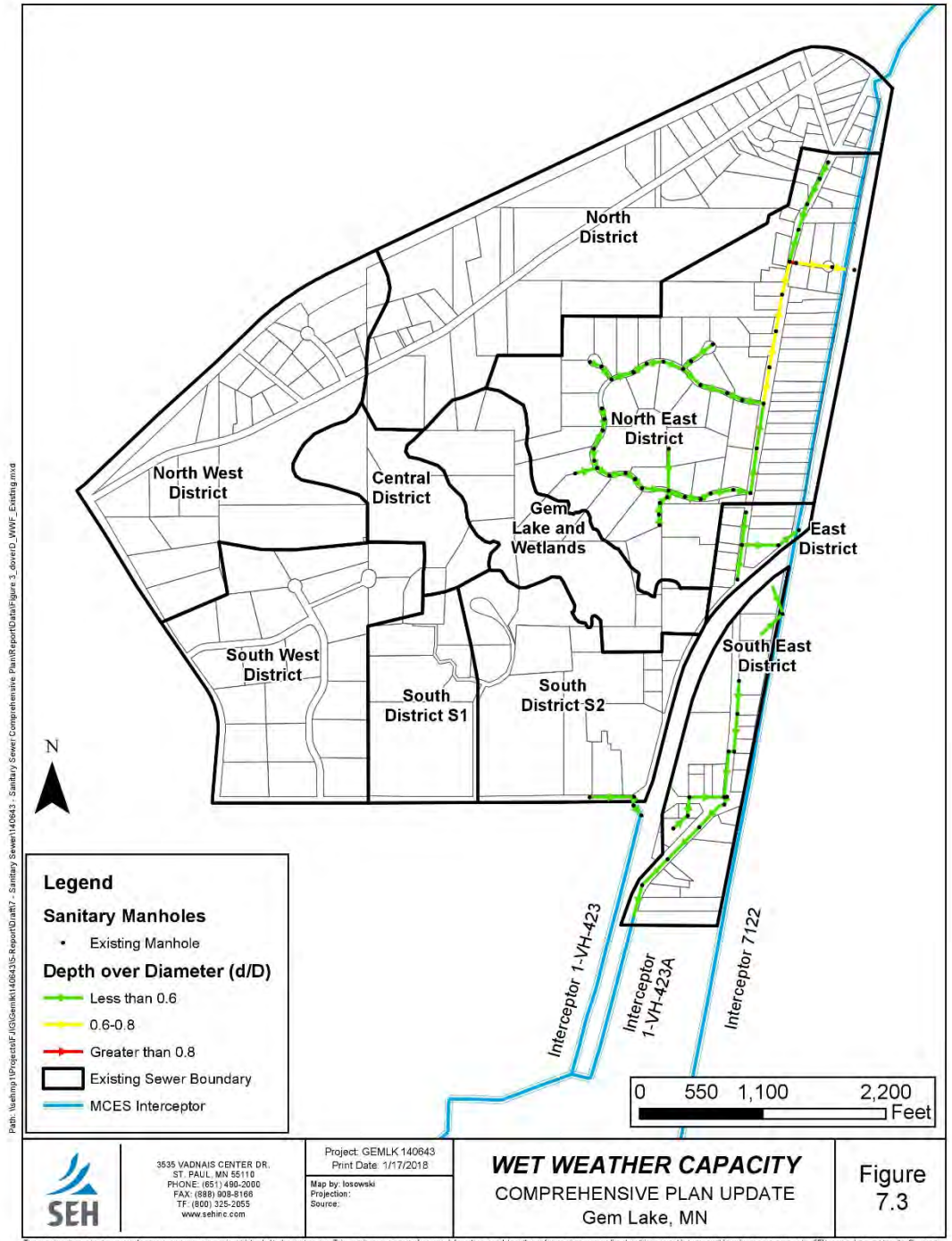
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Legend	
<b>Sanitary Manholes</b>	
•	Existing Manhole
<b>Depth over Diameter (d/D)</b>	
<span style="color: green;">—</span>	Less than 0.6
<span style="color: yellow;">—</span>	0.6-0.8
<span style="color: red;">—</span>	Greater than 0.8
<span style="border: 1px solid black; display: inline-block; width: 10px; height: 10px;"></span>	Existing Sewer Boundary
<span style="border-bottom: 1px solid blue; display: inline-block; width: 10px;"></span>	MCES Interceptor

 <p>3535 VADNAIS CENTER DR. ST. PAUL, MN 55110 PHONE: (651) 498-2000 FAX: (888) 908-8168 TF: (800) 325-2655 www.sehinc.com</p>	<p>Project: GEMLK 140643 Print Date: 1/17/2018</p> <p>Map by: losowski Projection: Source:</p>	<p><b>EXISTING CAPACITY RESULTS</b> COMPREHENSIVE PLAN UPDATE Gem Lake, MN</p>	<p>Figure 7.2</p>
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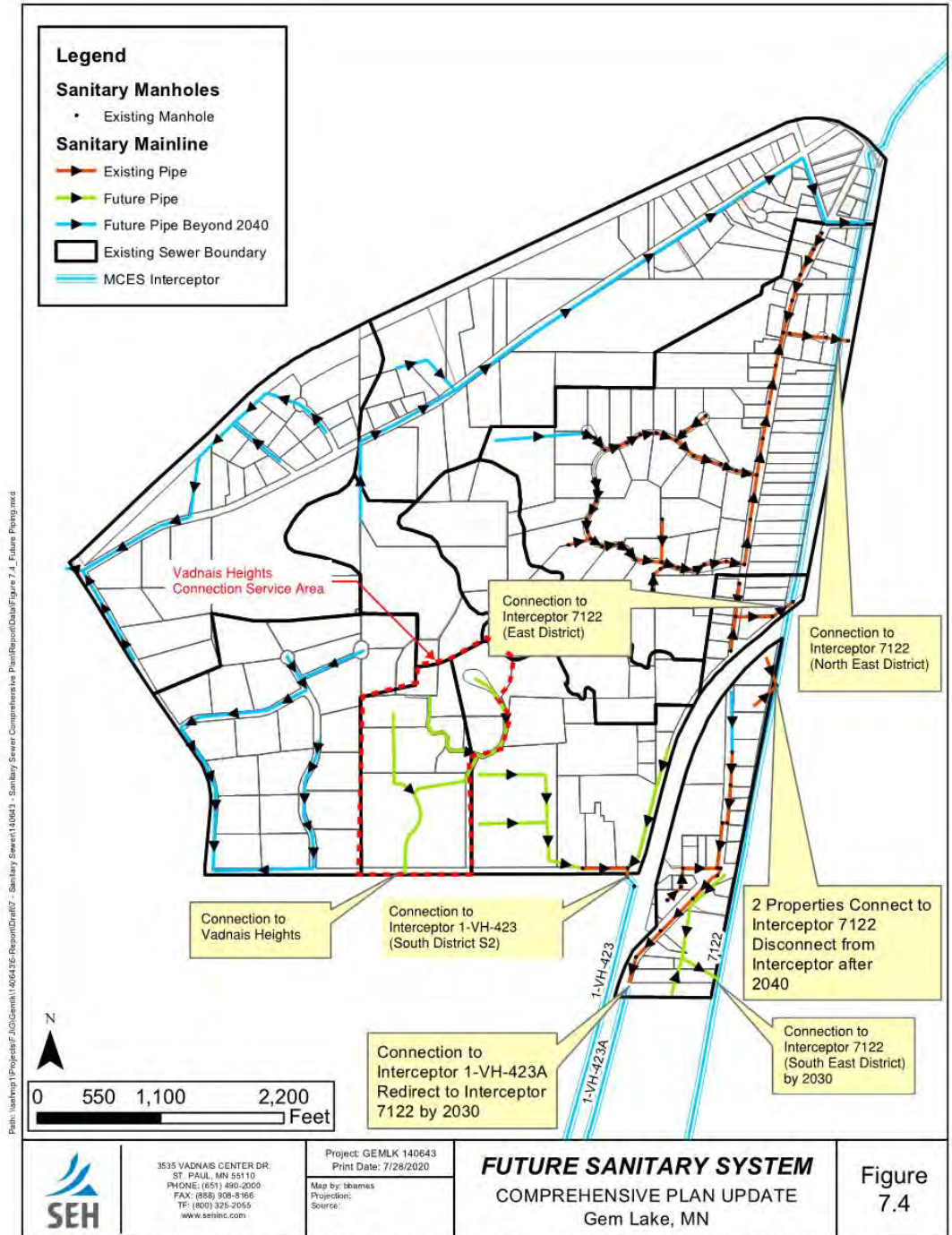
Figure 7-3 – Wet Weather Capacity



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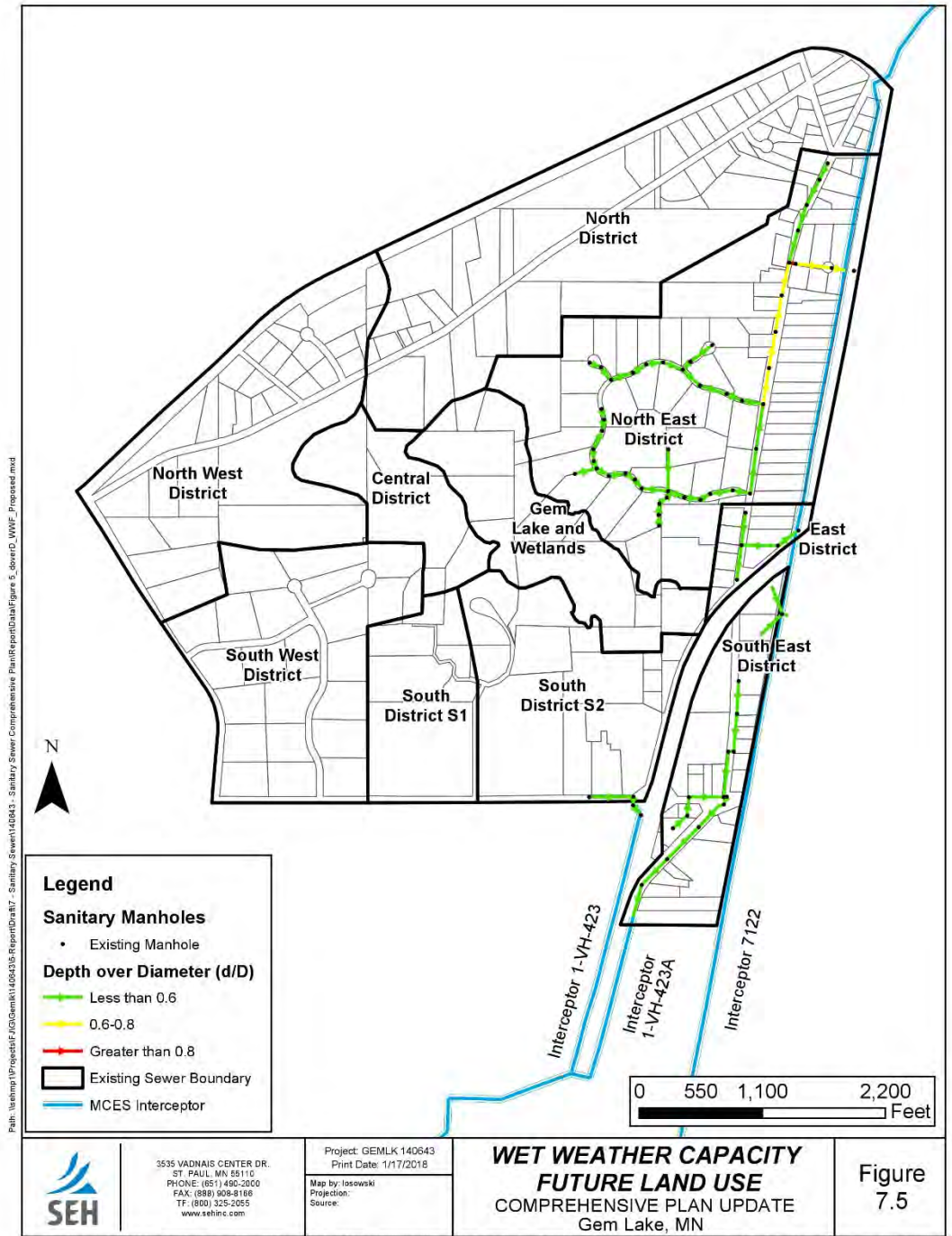
Figure 7-4 – Future Sanitary System



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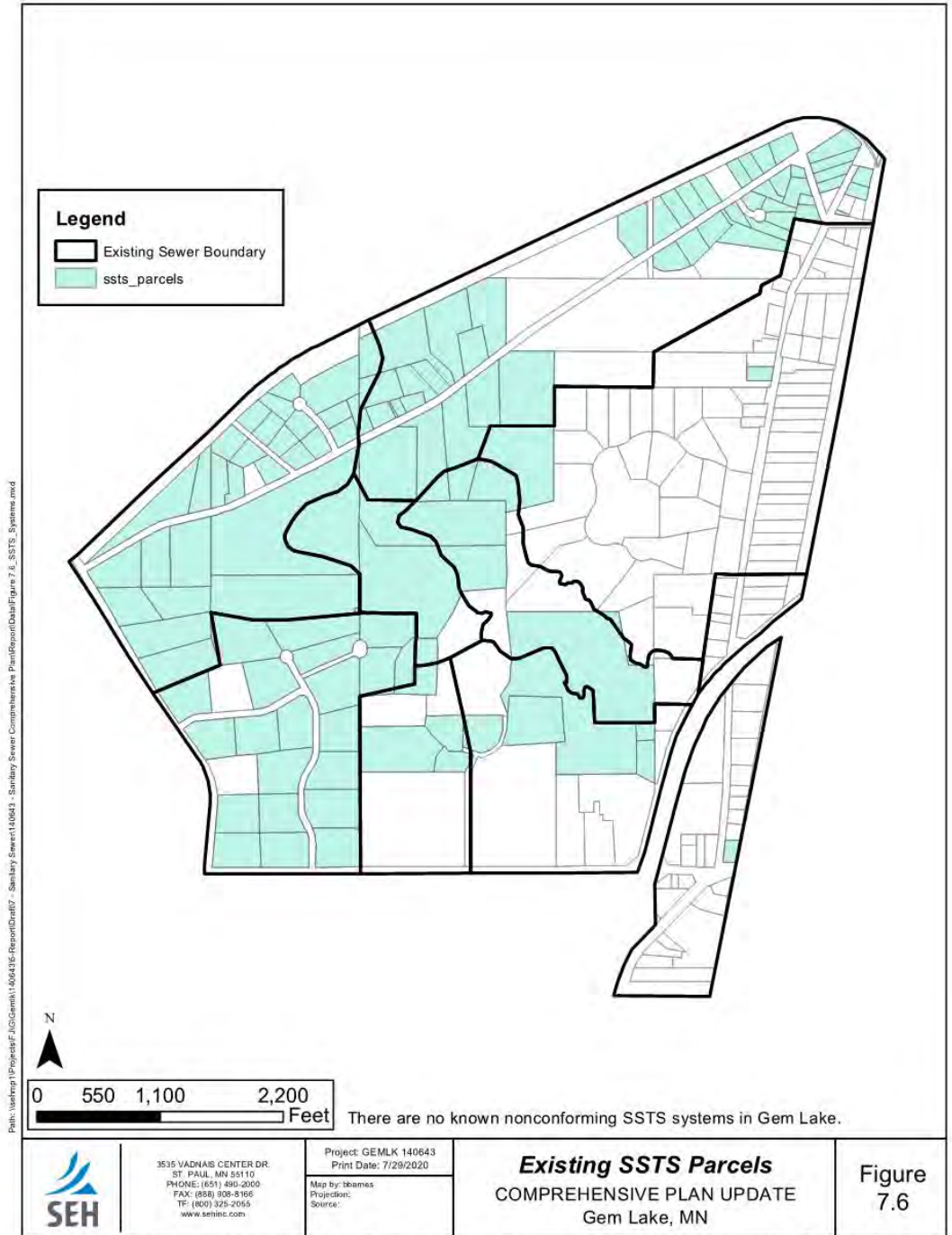
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Figure 7-5 – Wet Weather Capacity Future Land Use



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Figure 7-6 – SSTS Parcel in Gem Lake



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## 8 Water Supply System Plan

Currently the residents and businesses within Gem Lake receive water supply from varying sources. The City's municipal water supply system consists of City of a short section of water main connecting to the White Bear Lake water system from which the water is purchased. The water passes through a meter vault where the flow quantity is tabulated and then the water is delivered to the customers along the line. Other homes and businesses, not located along this water line, utilize private wells for their water supply, with the exception of Tousley Ford and The Monessori School which receive water from Vadnais Heights. Although the private wells provide sufficient flow to meet daily demands, they do not provide enough water to fulfill fire flow demands resulting in higher insurance rates and risk for the residents. Also, using private wells as a water supply can result in issues with water contamination, poor quality of water, or the wells going dry. This chapter lays out a potential plan to make municipal water service available to all areas of the City.

### 8.1 Water System History

Prior to the current water system development, the City of Gem Lake considered different options for the source of their water supply including building their own distribution system and purchasing water from the City of Vadnais Heights, City of White Bear Lake and White Bear Township. The City has incrementally moved forward with the option of purchasing water from the surrounding communities for their water supply. Recently, a single watermain has been constructed connecting the White Bear Lake distribution system to the service area it will be supplying. This watermain connects to the distribution system on County Road E, follows the existing Scheuneman Road, and ends after crossing US Highway 61.

### 8.2 Future Water System Option

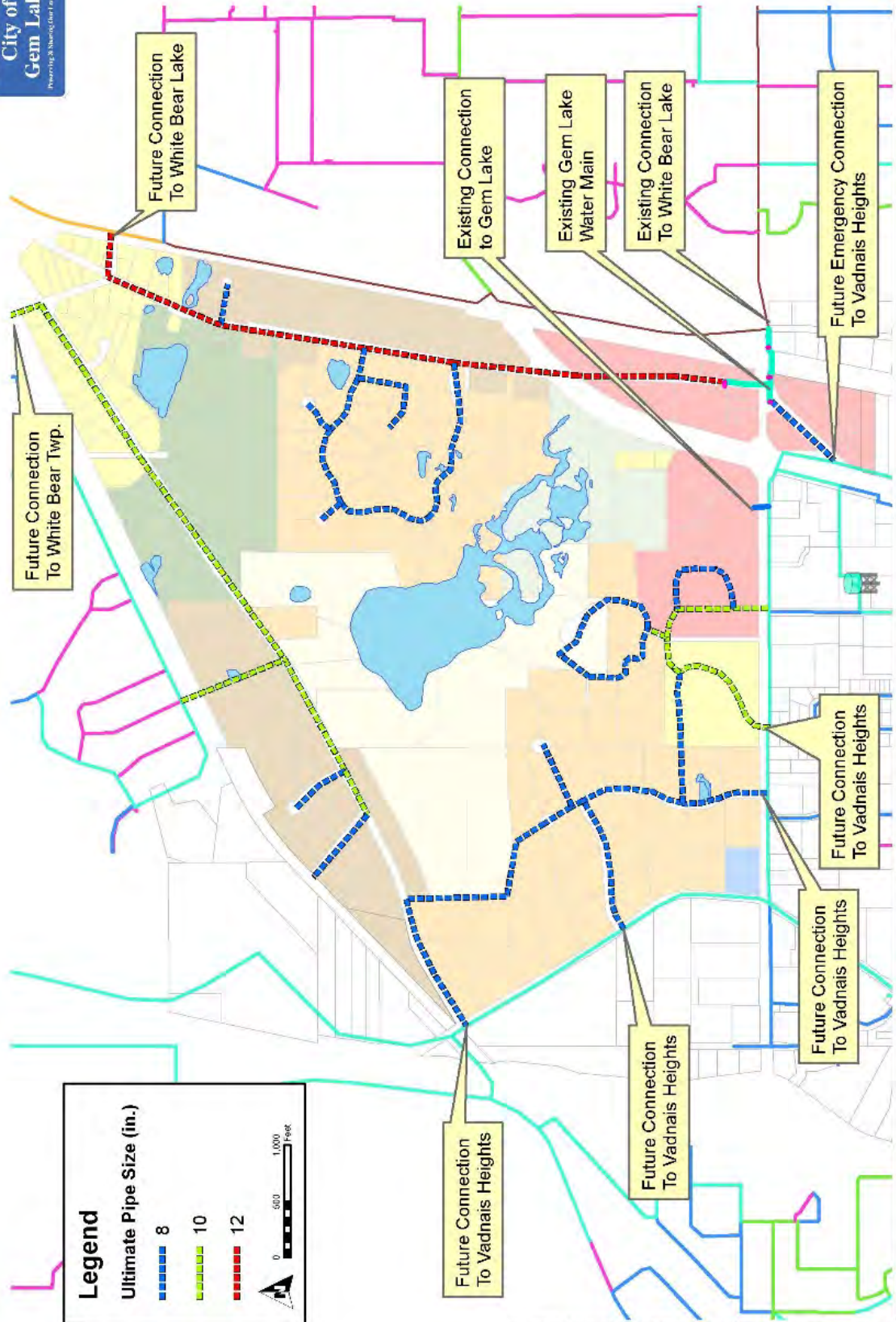
For purposes of future water system planning, a proposed water system layout was developed and is shown corresponding water planning map Figure 8.1. The City of Gem Lake is divided into three potential water service areas based on the ease of access to the surrounding community's distribution system. The proposed pipe routes primarily go through already existing roads and developments, with the exception of the new Enclave development located in the Vadnais Heights service area. These routes are connected to the supplying distribution system in multiple locations to prevent dead ends in the system.

**Service from Vadnais Heights** will be connected to the Vadnais Heights distribution system in five locations. Three of these connections are located on the southern side of the City south of County Road E, and the other two connecting west of Labore Road.

**Service from White Bear Lake** distribution system currently connects to its service area on the southeast side of the City on County Road E. A second connection is proposed to be located on the northeast portion east of Hoffman Road.

**Service from White Bear Township** distribution system is proposed to be located north of the railroad located on the northern side of the City.

Figure 8-1 – Water System Plan



**FIGURE 8.1**  
Water System Plan

Water System Plan  
Gem Lake, Minnesota

Project Number: GEMLK 140643  
 Print Date: 1/10/2018

This plan is a conceptual design and is not intended to be used for construction. It is subject to change without notice. The City of Gem Lake is not responsible for any errors or omissions in this plan. The City of Gem Lake is not responsible for any damages or liabilities arising from the use of this plan. The City of Gem Lake is not responsible for any costs or expenses incurred by any third party in connection with this plan. The City of Gem Lake is not responsible for any costs or expenses incurred by any third party in connection with this plan.



## 8.3 Future Water Supply Needs

Since Gem Lake does not intend on having their own water supply source, the City must rely on the surrounding communities to maintain a safe and reliable source, however, delivery of the water once purchased is the responsibility of Gem Lake. A city's distribution system must be capable of meeting the daily water demands of the users. Water demands of a city are based off land use patterns, projected populations, and per capita water usage patterns. Historical customer water use data is unavailable for the City of Gem Lake, so the water demand analysis was based off of land use patterns. For each of the three service areas an average day demand and maximum day demand was determined. When determining the demands it was assumed that the average day demand was 250 gallons/day/residence, and the maximum day demand peaking factor was 2.6 as given by the Metropolitan Council.

The total demands for the City of Gem Lake are an average day demand of 97,00 gallons per day (gpd) and a maximum day demand of 176 gallons per minute (gpm).

Vadnais Heights service area has an estimated average day demand of 22,000 gpd and an estimated maximum day demand of 40 gpm.

White Bear Lake service area has an estimated average day demand of 33,250 gpd and a maximum day demand of 60 gpm.

White Bear Township service area has an estimated average day demand of 16,000 gpd and a maximum day demand of 29 gpm.

## 8.4 System Pipe Sizing

In addition to meeting daily water demands, a distribution system must be capable of meeting the fire flow requirements. Available fire flow is the system's ability to provide sufficient flow in the event of a fire while maintaining a minimum system pressure of 20 psi. The amount of fire flow needed depends on the property and land use of that area. Fire flow available to Gem Lake will be supported by each connection to each individual water system. In general, close proximity to the connecting systems water tower and large diameter trunk water mains will enable more robust fire flow availability.

Pipe sizes in a distribution system are determined based on daily flow demands or fire flow requirements. In smaller communities the fire flow requirements tend to be larger than the daily flow demands. The total daily demands for the City of Gem Lake are lower than the fire flow demands, therefore the fire flow demands will dictate the pipe size. Pipe sizes for the City of Gem Lake distribution system were modeled as part of a Metropolitan Council Regional Project. The pipe sizes determined for that project will be used for the City distribution system. The determined pipe sizes are 10, 8, and 6 inch pipes for Vadnais Heights service area, 12, 8, and 6 inch pipes for White Bear Lake service area, and 10 and 8 inch pipes for White Bear Township. The Attached map below documents a suggested pipe size layout for the City of Gem Lake.

## 8.5 Interim Water System

There are some steps that the City should undertake if it continues to primarily rely on private wells for its water supply. For instance, a program should be set up to require periodic testing of water from every well in the City to determine water quality. This program could include steps to take in the event water quality fails to meet minimum standards.

In addition, an educational program should be set up to promote water conservation measures within the City of Gem Lake. Although each residence and business has its own private well, it would be beneficial to the community to have some type of water conservation program in order to maximize groundwater supply. It would be difficult for the City to impose water conservation regulations on properties with private wells. However, an educational program could recommend voluntary water conservation measures to property owners. Space in the city newsletter could be devoted to describing and/or recommending water saving techniques, devices and appliances (i.e., how to cut down on water use, the best and worst times to use water outdoors, etc.). The educational program could emphasize the value and importance of conserving water, regardless of whether or not the City has municipal water.

An emergency preparedness/contingency plan should also be considered by the City. Again, although the City of Gem Lake does not have a public water supply, it may be in the City's best interest to be prepared in case of an emergency. One option would be to adopt the emergency plan and consider policies of the water supplier.

The City should make arrangements with the adjacent neighboring communities to obtain water from them for its citizens in case the groundwater supply ever becomes contaminated. The City should also have a list of contacts available in case of an emergency. It would also be helpful to make available to residents, steps that should be taken in case of contamination to an individual's water supply.

## 8.6 Water Supply Policies

The following policies have been established by the municipal government of Gem Lake with regard to the water supply for the citizens and businesses of the community:

1. The possibility of developing a centralized water distribution system within Gem Lake will be considered. The system might either be developed based on a well supply within Gem Lake or by attachments to the Vadnais Heights, White Bear Lake or White Bear Township systems.
2. Water service should be extended to each targeted area at the same time and in the same priorities as the sanitary sewerage service, in order to minimize street reconstruction and traffic disruption.
3. The possibility of connecting only the commercial area of Gem Lake to the Vadnais Heights, White Bear Lake, or White Bear Township water distribution systems will be explored.
4. The adoption of a mandatory water quality testing program for private wells will be considered.
5. An educational program promoting water conservation measures within the City of Gem Lake will be developed.
6. An emergency preparedness plan with regard to the water supply will be developed, or the City will adopt the policy of the water supplier.

# 9 Housing Plan

## 9.1 Housing Supply

The housing supply in Gem Lake is rather homogeneous. The 2015 US Census estimate of Gem Lake housing units is 178, with 173 estimated to be single family detached. Of these, 165 units are estimated to be occupied, with 143 housing units listed as “owner-occupied” and 22 units listed as “renter-occupied” (note that the Metropolitan Council modified this rental total to 12 units, see Figure 9.1). Seven units are estimated to be double units. Five housing units are considered multi-family.

The condition of housing within Gem Lake is generally good. Well over half the homes in Gem Lake have been built since 1970. Since 2000, the US Census Bureau estimates 38 new units have been constructed. A total of 75 units were built prior to 1970, according to US Census data.

The median value of housing in Gem Lake in 2015 was \$305,000. Table 9-1 lists 2015 US Census Bureau estimated housing valuation data.

Table 9-1 – US Census Bureau 2015 housing valuation estimates

Value	Housing Units
Less than \$50,000	6
\$50,000-\$99,999	1
\$100,000-\$149,000	5
\$150,000-\$199,999	19
\$200,000-\$299,999	40
\$300,000-\$499,999	36
\$500,000-\$999,999	25
\$1,000,000 or more	12

The median gross rent in Gem Lake in 2018 was \$1,375 per month.

The 2018 estimates show that there are 454 persons and 169 households in Gem Lake, for an average of 2.69 persons per household. This compares to 3.01 in 2000. Due to an aging population, smaller households have become a national trend.

The median household income in 2018 for Gem Lake was \$105,400. That compares to \$63,179 respectively to the United States and \$70,315 respectively to Minnesota.

Supply and types of housing in the City of Gem Lake are limited. Few are vacant or available and almost all of the housing stock is classified as single family detached.

More diverse housing options currently exist within the neighboring communities of Vadnais Heights, White Bear Lake, and White Bear Township. While the planned mixed use development near Hoffman Corner’s may provide an opportunity for senior and multiple family housing, Gem Lake also needs to explore region-wide efforts to provide for more housing diversity.

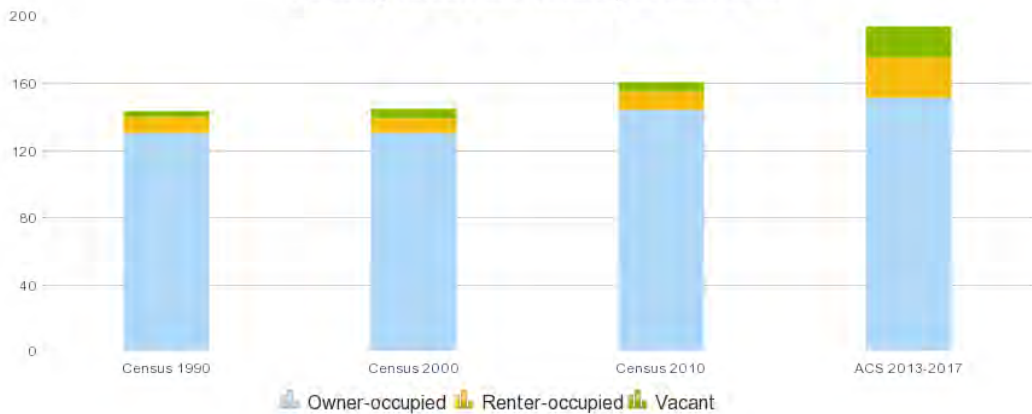
Overcrowding is not a problem in the City of Gem Lake. The majority of houses in the City have three or more bedrooms, which meshes well with the average household size of 2.69 persons.

The cost of housing is becoming more burdensome on some households. Estimates for 2018 show that 23% of all households in Gem Lake experience a cost burden, 18% being homeowners and 60% being renters, according to the ACS in 2018.

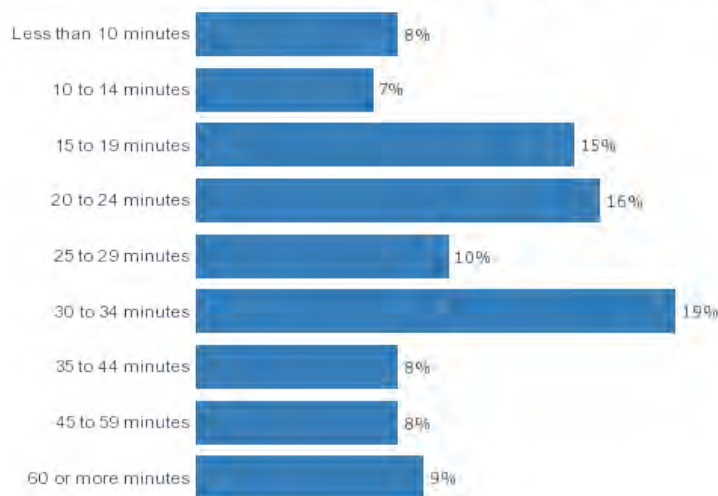
The 2018 median gross rent is \$1,375 with no renters paying less than \$500 per month. The highest category of \$1,500 or greater has seven renters.

Although there are a great number of employment opportunities within Gem Lake, few residents are also employed here. Of 279 workers age 16 or above, 242 drove themselves to their place of employment while 11 carpooled. Six workers walked to work while six more rode public transportation. Only 13 workers worked from their homes. The mean travel time was 24.7 minutes indicating most workers were employed outside of Gem Lake.

Housing Tenure and Vacancy in Gem Lake



Travel Time to Work, Gem Lake Residents



## 9.2 Affordable Housing Units Needed 2021-2030

Gem Lake has 35 households experiencing housing cost burden.

The City of Gem Lake will strive to add 11 units of affordable housing between 2021 and 2030 per Metropolitan Council recommendations. The City has identified its Mixed Use areas as target areas for affordable housing, which is being provided at the appropriate density.

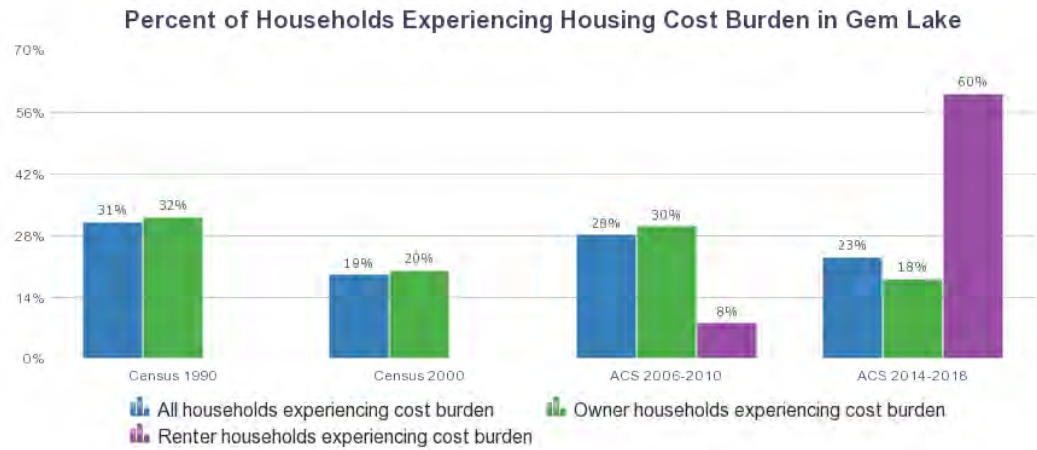


Figure 9-1 – Metropolitan Council Tables for Gem Lake

Total housing units <sup>1</sup>= 178

Total households <sup>2</sup>= 164

Table 1 Affordability in 2016 <sup>3</sup>

Units affordable to households with income at or below 30% of AMI	Units affordable to households with income 31% to 50% of AMI	Units affordable to households with income 51% to 80% of AMI
2	14	67

Table 2 Tenure in 2016 <sup>4</sup>

Ownership units	Rental units
166	12

Table 3 Housing Type in 2016 <sup>1</sup>

Single-family units	Multifamily units	Manufactured homes	Other housing units
173	5	0	0

Table 4 Publicly Subsidized Units <sup>5</sup>

All publicly subsidized units	Publicly subsidized senior units	Publicly subsidized units for people with disabilities	Publicly subsidized units: All others
0	0	0	0

Table 5 Housing Cost-Burdened Households in 2016 <sup>6</sup>

Income at or below 30% of AMI	Income 31% to 50% of AMI	Income 51% to 80% of AMI
13	8	14

<sup>1</sup> Source: Metropolitan Council, 2016 housing stock estimates. Single-family units include single-family detached homes and townhomes. Multifamily units include units in duplex, triplex, and quadplex buildings as well as those in buildings with five or more units.

<sup>2</sup> Source: Metropolitan Council, 2016 household estimates.

<sup>3</sup> Source: Metropolitan Council staff estimates for 2016 based on 2016 and 2017 MetroGIS Regional Parcel Datasets (ownership units), 2010-2014 Comprehensive Housing Affordability Strategy data from HUD (rental units and household income), and the Council's 2016 Manufactured Housing Parks Survey (manufactured homes). Counts from these datasets were adjusted to better match the Council's estimates of housing units and households in 2016 as well as more current tenure, affordability, and income data from the American Community Survey, home value data from the Federal Housing Finance Agency, and rents from HousingLink's Twin Cities Rental Revue data.

<sup>4</sup> Source: U.S. Census Bureau, 2012-2016 American Community Survey five-year estimates; counts adjusted to better match the Council's 2016 housing stock estimates.

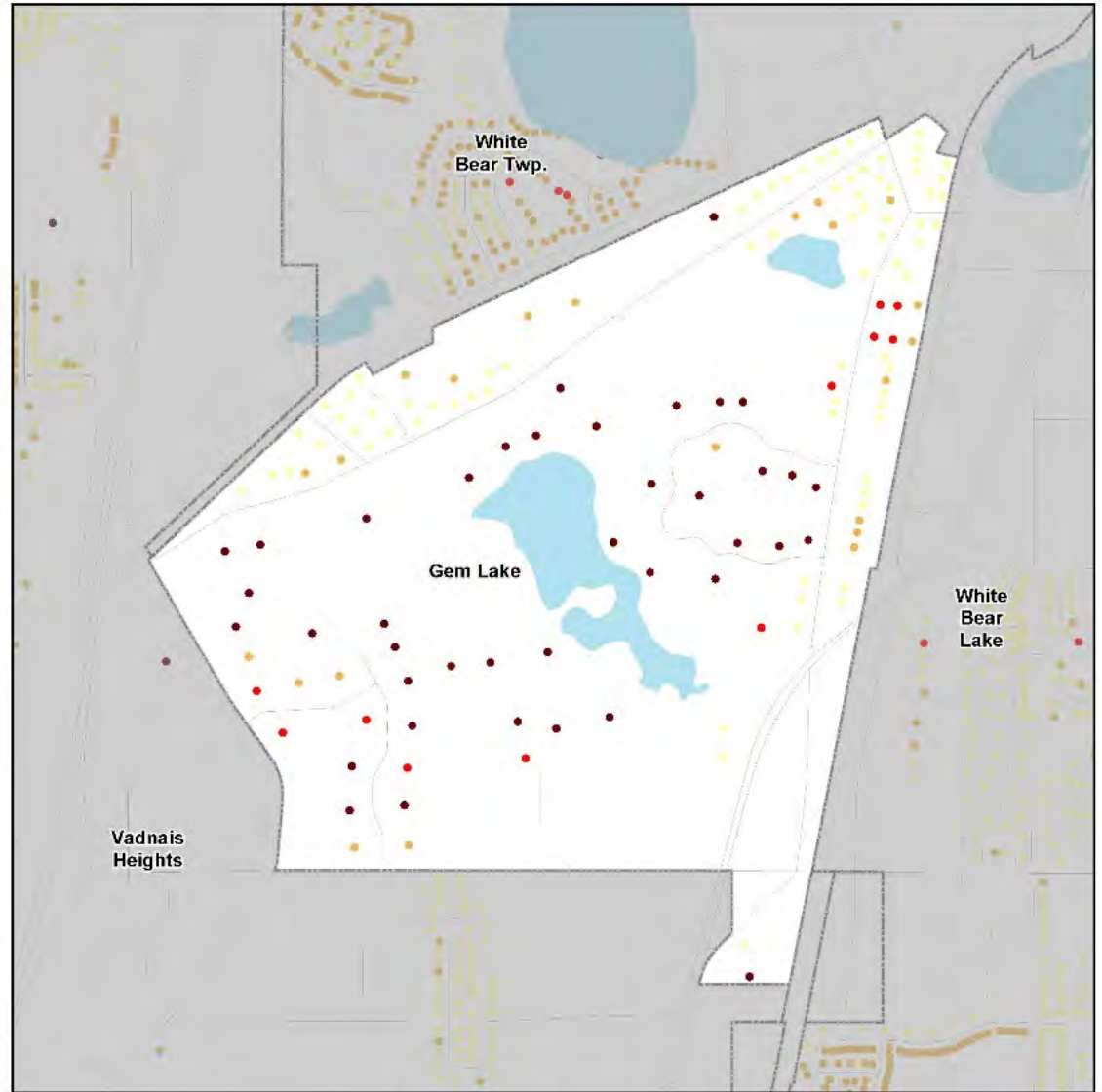
<sup>5</sup> Source: HousingLink Streams data (covers projects whose financing closed by December 2016), <http://www.housinglink.org/streams>

<sup>6</sup> Housing cost burden refers to households whose housing costs are at least 30% of their income. Source: U.S. Department of Housing and Urban Development, 2010-2014 Comprehensive Housing Affordability Strategy (CHAS) data, with counts adjusted to better match Metropolitan Council 2016 household estimates.

March 2018

Figure 9-2 – Owner-occupied Housing by Estimated Market Value, source Metropolitan Council

### Owner-Occupied Housing by Estimated Market Value Gem Lake



- County Boundaries
- City and Township Boundaries
- Lakes and Major Rivers
- Street Centerlines

**Owner-Occupied Housing  
Estimated Market Value, 2015**

- \$238,500 or Less
- \$238,501 to \$350,000
- \$300,001 to \$450,000
- Over \$450,000

1 inch = 0.2301 miles

Source: MetroGIS Regional Parcel Dataset, 2015 estimated market values for taxes payable in 2016.

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

## 9.3 Housing Goals and Policies

The following goals and policies have been established by the municipal government of Gem Lake with regard to housing:

Goal: Maintain and improve existing housing in the city.

- Continue to encourage low, to very low, density residential development within the existing core area of the City.
- Encourage the rehabilitation and continuous maintenance of existing housing.
- Preserve the identity and improve the quality and appearance of existing residential neighborhoods.
- Examine alternative transportation services that relate to life-cycle housing opportunities.

Goal: Provide the required affordable housing and access to funds.

- Encourage the construction of more dense housing along the transit corridors of County Road E and Highway 61. This is where all of the mixed use plan areas are identified.
- Encourage the development of life-cycle housing opportunities.
- Encourage the preservation of owner-type housing for low and moderate income households.
- Consider working with the Ramsey County Housing and Redevelopment Authority (HRA) in the development of a housing strategy for the City of Gem Lake.
- Explore the possibility of participating in region-wide efforts to develop a wide variety of housing types.

Goal: Encourage the development of new housing consistent with this plan.

- Encourage a better variety of housing by adopting wording in the zoning ordinance allowing for different types of housing (townhomes, villas, row houses etc.) as redevelopment occurs, and in the mixed use areas.
- Help ensure that all new housing, including affordable housing, adheres to the highest community design, planning and construction standards.
- Protect residential neighborhoods adjacent to commercial developments through physical and/or vegetative buffering, and through the placement of "transitional" land uses on the periphery. Adequate buffering should be an explicit objective of site plan review and approval.
- Consider adapting the current Gem Lake Planned Unit Development and Cluster Development Standards to allow for more creativity and flexibility with regard to life-cycle housing opportunities.



## 9.4 Implementation Plan

- Consider participating in the Metropolitan Livable Communities Program.
- Explore local fiscal initiatives for housing, including but not limited to, the use of housing revenue bonds, tax increment financing, Community Development Block Grants, and Minnesota Housing Finance Agency programs.
- Explore local fiscal initiatives for housing, including but not limited to, the use of housing revenue bonds, tax increment financing, Community Development Block Grants, and Minnesota Housing Finance Agency programs.

<b>Housing Goals &amp; Implementation Tools</b>		
<b>Identified Need</b>	<b>Available Tools</b>	<b>Circumstances and Sequence of Use</b>
<i>Maintain and improve housing units in the City</i>	Code Enforcement	The City intends to continue existing code enforcement procedures to ensure quality neighborhoods and limit blight.
	County Rental Rehabilitation Program	Ramsey County Community & Economic Development (CED) and Housing and Redevelopment Authority (HRA) works with developers and owners of rental properties in suburban Ramsey County communities. Direct services for renters are provided through a network of other area organizations. For existing properties, the County can provide below-market, flexible loan financing for weatherization and energy conservation, health and safety, and other basic rehabilitation activities. The City will refer interested parties and encourage participation.
	4(d) Tax Program	The 4(d) tax program provides a property tax reduction for rental properties which include affordable housing units. This program is administered through the Minnesota Housing Finance Agency. The City encourages property owners to seek such assistance, if eligible.
<i>Meet local and regional needs for affordable housing and provide access to funding sources</i>	Tax Exempt Bonds	The HRA is authorized to issue tax exempt bonds for multi-family projects. The City will continue to partner with the HRA to find opportunities within the community.
	Community Development Block Grants (CDBG)	CDBG funds are administered through the HRA at the City's request. CDBG funds can be used to meet a variety of community development needs including investments in public infrastructure, single family or multi-family housing rehabilitation, homelessness assistance, business loans, or capital improvements for publicly owned buildings. The activities must benefit households with incomes at 80% AMI or below. The City will promote the CDBG program when appropriate.
	HOME Investment Partnership Program	HOME funds are used for the construction of new affordable housing or rehabilitation and preservation of existing affordable housing.

		They may also be used for activities related to homebuyer assistance or tenant-based rental assistance. The activities must benefit households with incomes at 80% AMI or below. Funding is granted on an annual basis through a competitive process. The HRA administers the HOME program on behalf of Ramsey County as pass-through funds from the U.S. Department of Housing and Urban Development. The City will promote the program for those who qualify when appropriate.
	Low Income Housing Tax Credits	The HRA is a sub-collector of housing tax credits to raise private equity for affordable housing projects. The City will continue to partner with the HRA to find opportunities within the community.
	Minnesota City Participation Program	The Minnesota Housing Finance Agency's Minnesota City Participation Program allows for MHFA to sell mortgage bonds on behalf of the City to meet locally identified housing needs. The proceeds are used to provide below market rate mortgages for low-moderate income first time home buyers. The City will continue to participate in this program.
	Effective Referrals	One of the simplest and most cost-effective ways to support housing broadly, and in particular to serve households in need of affordable housing, is by making effective referrals. Being aware of programs and services that are available to existing or future residents requires limited time and budget but it can be difficult to keep that information current. City Staff will strive to remain familiar with the relevant programs and will provide effective referrals.
	Community Land Trust	The Community Land Trust provides secure, affordable access to land and housing for our local workforce. This program helps potential home buyers with low to moderate incomes purchase a home on property that is leased from the land trust through a long-term (99 year), renewable ground lease. The City will continue to encourage qualifying people to utilize this program.
	Participation in housing-related organizations, partnerships, and initiatives	Connecting with others around meeting housing needs in our communities creates opportunities for cities, counties, the Metropolitan Council and other stakeholders to learn from one another. Staff are members of various professional organizations which provide resources and educational opportunities related to housing.
	Consolidated RFP	The Minnesota Housing Finance Agency provides a request for proposal (RFP) once

		annually where affordable housing developers can apply for funding to construct affordable housing. The City invites developers to apply for funds to support development of housing units which meets the City's need for affordable housing.
	City Land Use Plan and Zoning Ordinance	The City will guide and zone lands at the appropriate density to provide for the requisite amount of affordable housing.
	Fair Housing Policy	The City will consider a Fair Housing Policy in order to receive Livable Community Act funds.
	Housing Bonds	Cities are authorized under state law to develop and administer programs that make or purchase mortgages to finance the acquisition or rehabilitation of affordable housing. Cities may further make or purchase loans using the proceeds of the bond sales for activities such as new construction, acquisition, rehabilitation, or refinancing bond debt. The City may consider using housing bonds for a project meeting the goals of this plan upon request.
<i>Encourage the development of new housing</i>	Land Assembly	The City may participate in land assembly for projects that are consistent with the goals and policies of this Plan.
	Tax Abatement	In order to meet the goals of this plan, the City will consider the use of tax abatement upon request.
	Tax Increment Financing (TIF)	Through the CED and HRA, the City may consider the use of TIF for accelerating the development process and achieving development on sites that would not be developed without this assistance in order to meet the goals of this plan. To this end, the City will consider TIF upon request.
	Met Council Livable Communities Demonstration Account (LCDA)	Funding provided by the Met Council for innovative projects that promote Livable Communities. Possible uses could include Transit Oriented Development (TOD), (County Road E on the Rush Line BRT), life-cycle housing, mixed-use/walkable neighborhoods, workforce housing, and affordable housing grants. Funds may also be used for public infrastructure and site assembly. The City will promote the use of said programs when appropriate.

# 10 Local Water Management Plan

The Gem Lake Local Water Management Plan is included in the Appendix.

# 11 Community Facilities and Services Plan

As stated in Chapter 4 of this plan, Gem Lake residents wish to maintain a low profile government. This would mean providing a minimum of urban services, consistent with the needs of a low density “small town” community. With this in mind, the City of Gem Lake intends to establish long-term service commitments with other governmental units in the area. Given the relatively small ultimate population planned for the community, it would not be cost efficient to maintain separate municipal commitments for many community services.

## 11.1 Police

Currently, the City receives police protection on a contractual basis from the City of White Bear Lake. As the population of Gem Lake increases, there will be a need to increase police surveillance. There is a Ramsey County Sheriff’s sub-station located at Gem Lake City Hall which does cause a better patrol presence in the City.

### 11.1.1 Policy

The City of Gem Lake will seek to combine with other governmental units in the area in maintaining and improving upon a high quality sub-regional police force. The City will continue to support the Sheriff’s substation at the Gem Lake City Hall.

## 11.2 Fire Protection

The City of Gem Lake currently contracts with the City of White Bear Lake for fire protection services. These services are currently based on a flat rate, plus a fixed charge per fire occurrence.

### 11.2.1 Policy

The City will seek a longer term commitment with either Vadnais Heights or White Bear Lake for fire protection services. In the future, these services might be charged on an annual basis. The fees could be based on mutually agreed upon criteria, such as assessed property valuation.

## 11.3 Road Maintenance

Approximately 2.1 miles of roads are currently maintained under Gem Lake jurisdiction.

### 11.3.1 Policy

The City will continue to contract for road maintenance.

## 11.4 Professional Assistance

There are no full-time employees of the City of Gem Lake. All professional assistance including lawyers, engineers and planners are paid for on the basis of time and materials. The City contracts with White Bear Township for City Administration and other related services.

### 11.4.1 Policies

Legal, engineering and planning assistance will continue to be on a time and materials basis. The contracting of City Administration services by White Bear Township will be continued.

## 11.5 Municipal Building

Gem Lake constructed and opened a City Hall in January of 2008. This structure was a joint project between the City of Gem Lake and White Bear Township. The facility is expected to provide adequate space for the City for the next 20 or more years.

### 11.5.1 Policy

The City should review space needs every 5 to 10 years to determine if can be met with the current building. There is adequate space on the current site to expand the building if necessary.

## 11.6 Public Schools

District 624 provides education to Gem Lake residents.

### 11.6.1 Policy

The City will continue to support high quality elementary and secondary public education for residents of Gem Lake.

## 11.7 Health Facilities

At present, there are no hospital facilities in Gem Lake or in any of the contiguous municipalities adjoining it. The closest hospital facility is St. John's Hospital in Maplewood, approximately two miles away.

### 11.7.1 Policy

Gem Lake should cooperate with other local governments in encouraging the development of medical facilities within a more convenient proximity as area population growth dictates. Plans for a medical clinic in the SW parcel of the City of Gem lake Gateway and Village Planning area have been discussed.

## 11.8 Outdoor Recreational Facilities

There are no publicly held open spaces or recreational facilities within the community. All existing outdoor recreation in Gem Lake must currently occur on privately developed lands, vacant lots, or on the streets.

### 11.8.1 Policies

- Some form of neighborhood-oriented park will be provided as the community develops. This might include a picnic ground and/or playground facilities.
- The community will continue to rely on Ramsey County for development of larger natural resource based recreational facilities.
- The City will explore bicycle trail options and methods for providing access to regional trails.
- The City will encourage the continued operation of the private golf course now located in the NE portion of the City.

## 12 Park and Open Space Plan

The *2040 Regional Parks Policy Plan*, adopted by the Met Council on November 22, 2018, is the official system plan for regional recreation open space. Local comprehensive plans must conform to the principles of this parks policy and are based on three primary criteria:

- Conformance with Metropolitan System Plans
- Consistency with Council Policies
- Compatibility with Adjacent and Affected Governmental Units

### 12.1 Conformance with Metropolitan System Plans

This system statement summarizes significant elements of the metropolitan system plan and highlights those elements that apply specifically to the City of Gem Lake. In addition to reviewing this system statement, Gem Lake should consult the entire 2040 Regional Parks Policy Plan, the Thrive MSP 2040 and other pertinent regional planning and policy documents to ensure its comprehensive plan and plan amendments conform to the metropolitan system plans. A PDF file of the entire 2040 Regional Parks Policy Plan, the Thrive MSP 2040, and other regional planning and policy documents of the Metropolitan Council are available online at the Metropolitan Council's website:

<https://metro council.org/Parks/Planning/Parks-Policy-Plan.aspx>

*See Figure 12.1 – Twin Cities Metropolitan Area 2040 Regional Park System Plan*

#### 12.1.1.1 Regional Parks and Trails in Gem Lake

There are no regional parks in, or adjacent to, Gem Lake, however two regional trail facilities are located at the boundaries of the City of Gem Lake as identified in the 2040 Regional Parks Policy Plan, Table 5 (Trail Number).

Bruce Vento Regional Trail (28)

St. Anthony Railroad Spur Regional Trail Search Corridor (20)

#### 12.1.1.2 Bruce Vento Regional Trail

This regional trail is partially complete and open to the public. The section on the eastern border of the City of Gem Lake is not yet complete. The trail alignment is shown in Figure 2 and is acknowledged by the City of Gem Lake.

#### 12.1.1.3 St. Anthony Railroad Spur Regional Trail Search Corridor

This is a proposed 10 mile regional trail that would follow the existing railroad corridor long the northwest border of the City of Gem Lake. Since there is an active railroad operating on this corridor tracks, trail planning would not take place until there is a change in the status of the use of the tracks. At that time, the County will work with Gem Lake and others to master plan the trail. The general alignment of the proposed trail is shown in Figure 2 and is acknowledged by the City of Gem Lake.

*See Figure 12.2 - Map of Gem Lake - Regional Parks and Open Space Map.*

### 12.2 Consistency with Council Policies

The *2040 Regional Parks Policy Plan* includes the following policies and strategies for regional parks;

- **Expanding the Regional Parks System** to conserve, maintain, and connect natural resources identified as being of high quality or having regional importance.

- **Providing a comprehensive regional park and trail system** that preserves high-quality natural resources, increases climate resiliency, fosters healthy outcomes, connects communities, and enhances quality of life in the region.
- **Promoting expanded, multimodal access** to regional parks, regional trails, and the transit network, where appropriate.
- **Strengthening equitable use of regional parks and trails** by all our region's residents, such as across age, race, ethnicity, income, national origin, and ability.

## 12.2.1 City of Gem Lake Parks and Trails

### 12.2.1.1 Parks

The City of Gem Lake does not have the land mass that meets any criteria for a regional park facility, nor does the City have plans for a park in the planning horizon of 2040. The Gem Lake Hills Golf Course in the northern portion of the City is a privately owned and operated recreation property in Gem Lake. This golf course represents the total amount of 1.7% of the classified land use of Park, Recreational or Preserves. For comparison both Minneapolis and St. Paul have approximately 14% of land use classified as Park, Recreation or preserve land. Nationally, the median for Low-Density Cities is 5.9%. Future considerations for Gem Lake to add parks and open space include;

- New residential development will be planned with open space, with both active and natural features that add park, recreation or preserved lands.
- Consideration of active and passive recreation features including a playground and picnic areas in the Northeast corner of the City near the City Hall.

### 12.2.1.2 Trails

The City of Gem Lake would like to see trails constructed along existing roadways. A marked bike trail now exists along the shoulder of Goose Lake Road in the City. As Goose Lake Road is a Ramsey County maintained road, the City suggests that a blacktop trail be built along the side of the existing roadway when roadway maintenance or construction occurs. Other trails could be constructed along the Highway 61 right-of-way and along County Road E, either on the road right-of-way or on private land being developed inside the border trees along the cities southern border.

Private trails along land parcels in the City of Gem Lake constructed along easements or property lines could be considered as trails, but are usually set up by agreements between individual property owners and are not considered part of a formal trails network, and will NOT be included in this Gem Lake Comprehensive Plan.

Potential trail connections between trails in the City of Gem Lake and the Bruce Vento Trail could be located at Hoffman's Corner (Highway 61 & County Road E area) or near the Schueneman Road crossing of the current railroad track in the Northeast corner of the City.

Potential trail connections to the St. Anthony Railroad Spur Regional Trail Search Corridor could be made at:

- Tessier Road, where it intersects with this current railroad track
- Along a 40-foot wide strip of land running from Goose Lake Road to the railroad tracks, that is currently owned by the railroad
- Otter Lake Road (CR-148) railroad crossing in front of the Gem Lake City Hall
- Scheuneman Road (CR-147) to the east from Otter Lake Road toward Hoffman Road.



## 12.3 Compatibility with Adjacent and Affected Governmental Units

The City of Gem Lake will initiate dialog and coordinate efforts with other bordering communities of White Bear Lake, White Bear Township and the City of Vadnais Heights in their approach and planning of connections to Regional Trail facilities including;

- Connections to the existing Vadnais Heights trail
- Connections to the planned Bruce Vento trail to the east from future development in the southern portion of the City along TH-61.

Figure 12-1 – Twin Cities Metropolitan Area 2040 Regional Park System Plan

Figure 12.1

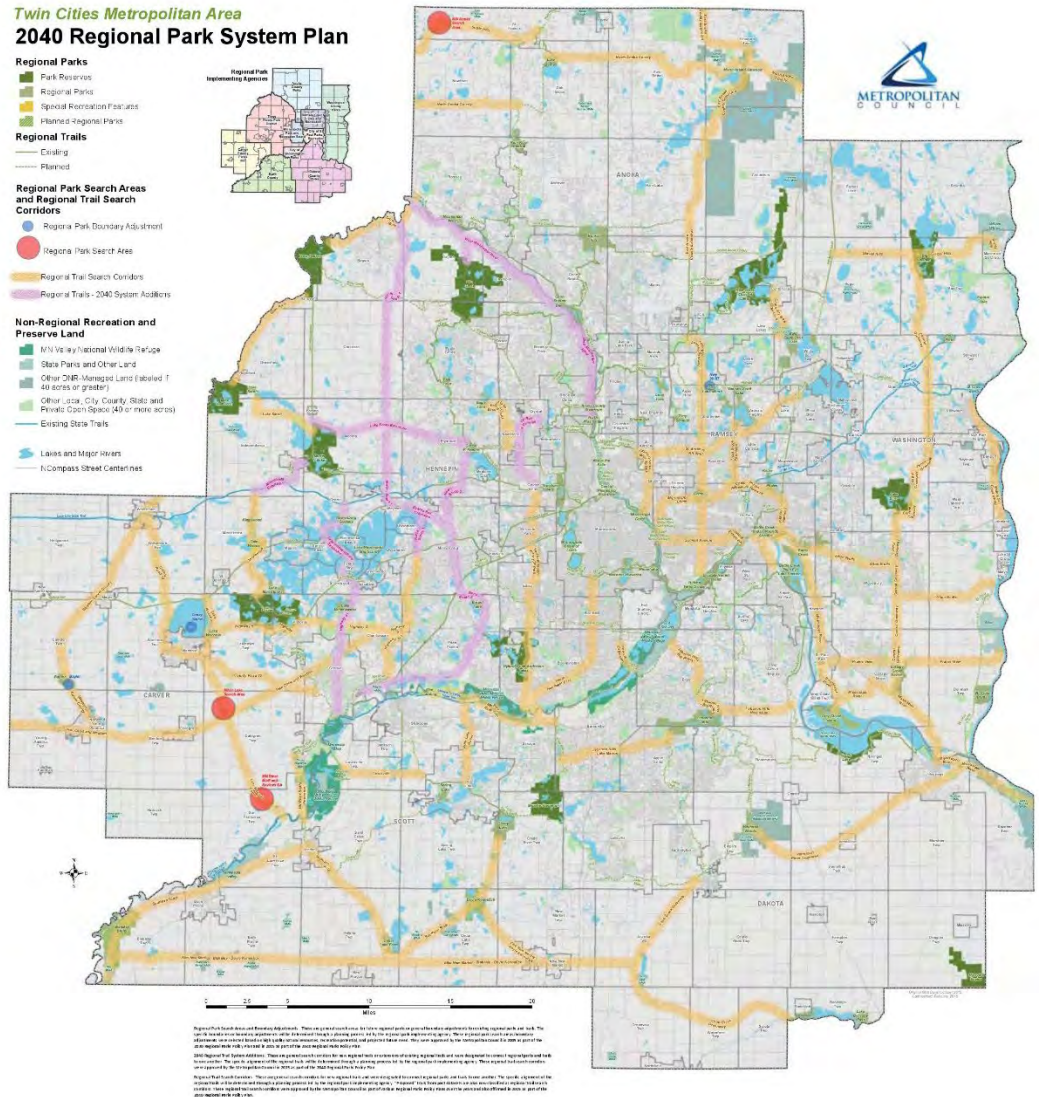
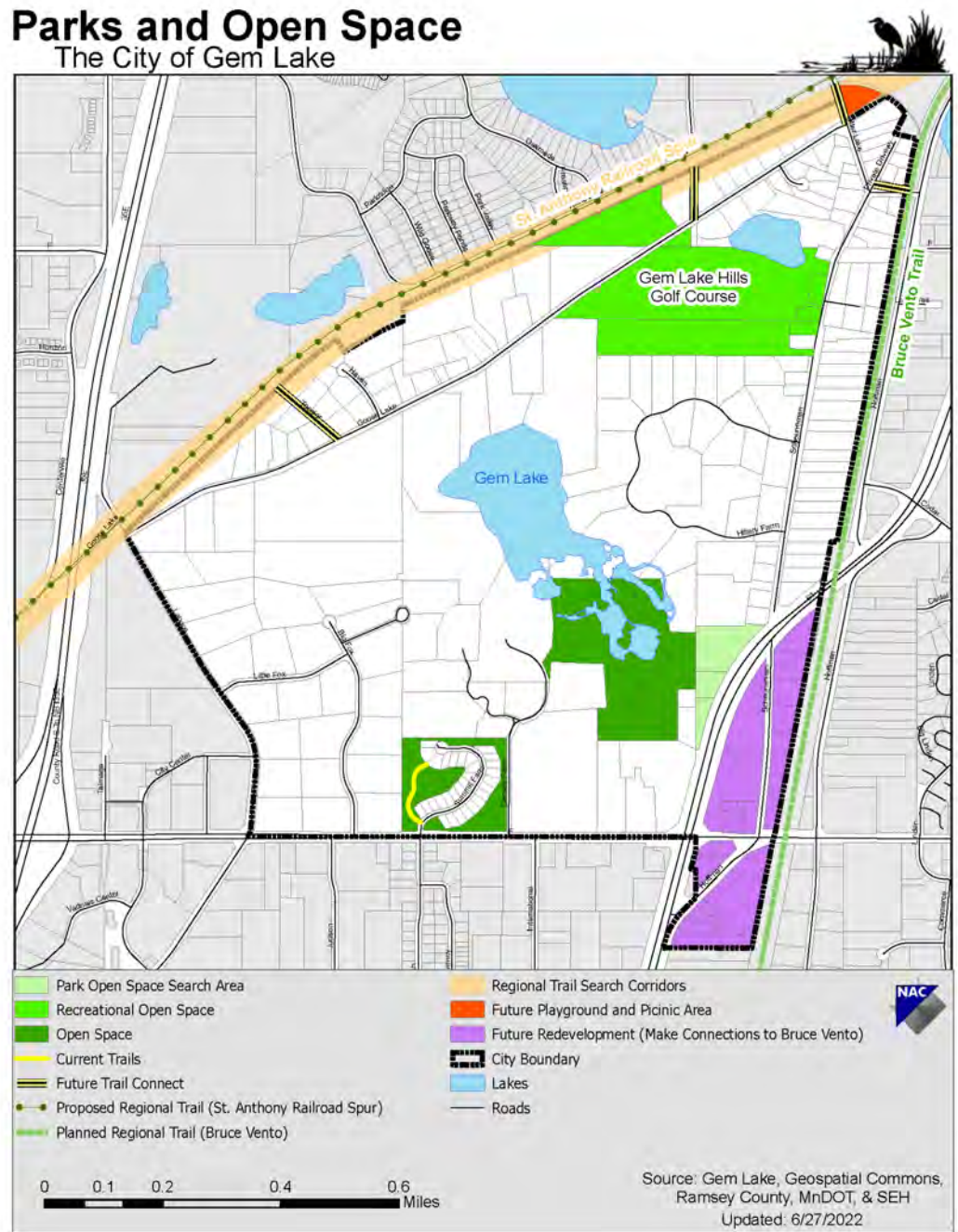


Figure 12-2 – Map of Gem Lake - Regional Parks and Open Space Map



## 13 Renewable Energy Policy

The City of Gem Lake recognizes the importance of renewable energy. The City will strive to achieve the following:

- Encourage solar energy installations as an accessory use for new and existing development.
- Encourage geo-thermal energy systems for new and existing development.

# 14 Implementation

## 14.1 Background

Implementation of Gem Lake's comprehensive plan will occur on a number of fronts, ranging from encouraging private investment to ownership and construction of public improvements. After formally adopting the plan, the city can insure it orderly implementation in a number of ways:

\* *Policies (land use types and locations)*

- Regulations
- Public Investments
- Public Incentives
- Public Services

The comprehensive plan provides a rational basis for guiding development, making public investments, encouraging private investments and establishing the policies and regulations necessary to implement the plan. For the City of Gem Lake, plan implementation means weaving together the needs of citizens and investors with public policies, public investments and city regulations.

The comprehensive plan establishes the background and policies for the orderly development and reinvestment in the City. Implementation strategies link plans to actions and resources. Public investments serve development objectives and allocation of available resources. Regulations can be a natural extension of the planning process translating agreed upon ideas into practical application, with the assistance of clear and publicly administer guidelines.

The first implementation step is the formal adoption of the comprehensive plan. Plan adoption procedures are prescribed by state law. These procedures involve a report and recommendation by the planning commission after public notice and public hearing. This is followed by a 4/5 vote of the City Council.

The significant elements of Gem Lake's comprehensive plan revision include:

- An inventory of the physical and natural resources that impact public and private development
- Identifying county, state, school district, watershed district and water management organization and neighboring communities plans and policies
- Identifying, and coordinating with, Met Council system plans and plan review policies
- Identifying current and future community values, needs, opportunities and objectives
- Projecting population and land use trends
- Developing a comprehensive set of policies by which all other plan elements are evaluated
- Identifying economic development strategies and policies
- Evaluating available vacant land
- Determining a logical distribution of land uses within the environmental and natural resources protection framework

- Identifying the supporting public service system plans including utilities, transportation, parks and open space, fire protection, public facilities and schools
- Developing public investment strategy which considers direct and indirect financial investment including public infrastructure
- Preparing to implement regulations

It is important to note that the comprehensive plan is much more than a simple map with descriptive text. It is an interwoven blueprint for the physical and economic development of the community.

## 14.2 Regulations

The major land use regulation tool is the zoning ordinance. Allied regulations include those dealing with subdivision of land, wetlands, nuisances, property maintenance and shore lands.

The City of Gem Lake’s chief regulatory tool is the zoning ordinance. In accordance with the requirements set by the Metropolitan Council, the City will be reviewing its zoning, subdivision, building regulation, and any other ordinance which may be in conflict with the proposals made by this document. These controls will be updated within nine months from the date of the plan’s official adoption by the City.

### 14.2.1 Zoning Ordinance

The zoning ordinance guides the use of land and the placement of structures on that land to assure a sense of order and to protect the public health, safety and general welfare. The zoning ordinance has often been considered a protective implementation tool, but it can also provide incentives to encourage good site design, general harmony, adequate open space and the reduction of congestion. A number of implementation issues and policies that need to be reviewed are discussed here.

#### 14.2.1.1 Mixed Uses

A new mixed use district (defined by a planning venture of the City titled “Gateway & Village Centers Vision Corridor”) allows for a multitude of land uses for the business district of the city centered around ‘Hoffman’s Corners.’ This area is located at the intersection of County Road E and Highway 61. It also extends west along County Road E to cover two undeveloped land parcels of approximately 18 acres each.

The professional planner for this district recently envisioned many different uses along two major transportation corridors. A 50/50 mix of office/commercial/retail and residential is suggested.

With this Vision Corridor document, developers are presented a variety of planning ideas for the five different land parcels that make up this area. The document allows creative levee way for developer input, as long as concepts fit within the general guidelines. Ideas expressed in the document range from the use of second story condos over office or retail spaces, to the building of multi-story senior housing. Areas for a medium scale retail shopping center, with many “shoulder type” retail uses, are also suggested.

Any or all of these concepts would be constructed within a master plan and through a PUD. The City desires that this development provide an “integrated community where opportunities for shopping, working, recreation and social interaction can co-exist.”

Given changing economic conditions and needs, tiered development by different developers is a possibility that needs to be planned for. This would require careful coordination to result in the unified look and feel that the City seeks for this Gateway area.

### 14.2.1.2 Residential Densities

Residential densities listed in this plan refer to the required lot size per housing unit or the number of units per acre. Lot size or density regulations allow a community to provide reasonable estimates as to the size of the needed public infrastructure. This insures that transportation, sewer, water, parks and other public services can be delivered in an economical and efficient manner.

Varied densities permit a variety of differing housing types and give the community the ability to attract a range of age and income groups. In this plan, higher densities have typically been directed to areas of higher land values, adjacent to transportation opportunities and other amenities.

In some cases, higher densities generally reduce the projected cost per unit for amenities such as water, sewer, parkland and other services. Well planned high density development can also accomplish lower service costs without sacrificing quality design. In fact, quality design can reduce the visual impact of higher density area and relieve the feeling of congestion that poorly plan developments often result in.

Paramount is the ability to create scale and quality of development that is consistent with the site and the neighborhood. Clearly, density evaluation must examine building scale (mass and height), building design and orientation, noise protection, vehicle circulation and storage, useable open space, type of land (hilly, rolling, flat) and what natural resources (forests, trees, water bodies) exist on them.

### 14.2.1.3 Related Zoning Ordinance Revision Considerations

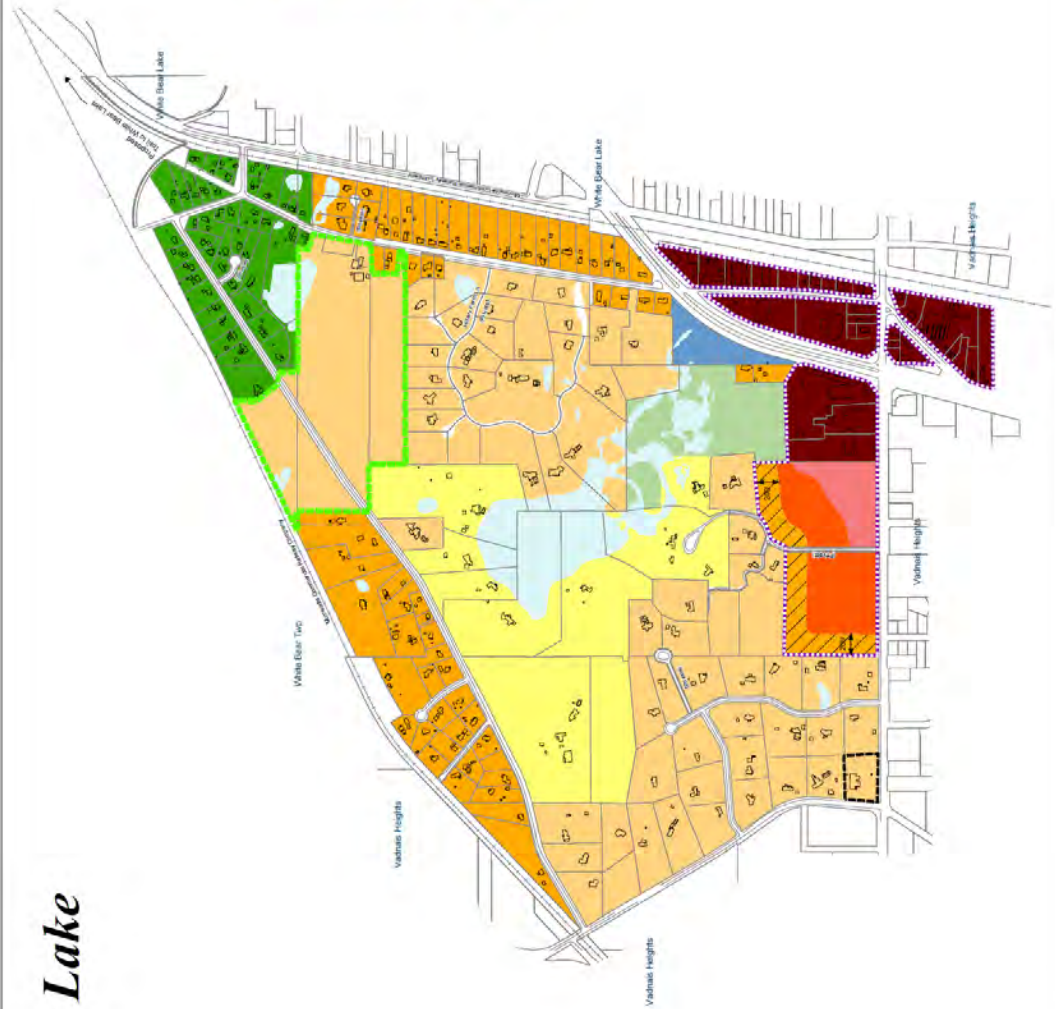
- The City of Gem Lake’s existing comprehensive plan now designates four updated single family residential development districts within the City. These districts are:
  - Single Family Estate
  - Single Family Executive
  - Single Family Residential
  - Mixed Use Residential

Appropriate changes must be made in the zoning ordinance to identify the land uses for each of these districts and other features such as lot coverage, setbacks and minimum lot frontage needed. The list of appropriate principal uses, allowed accessory uses and conditional uses needs to be examined and possibly updated.

- All new construction plans (residential and commercial) must be reviewed by a plan review committee. This committee will need to update plan review check-lists to allow for the newer districts.
- Shore land management - Gem Lake and its attendant wetlands are currently protected in the zoning ordinance with a 100-foot no construction buffer and a 150-foot buffer where ISTS systems cannot be constructed. The area around the lake and wetland is protected from tree and vegetation cutting from 50 feet into the lake to 100 feet from the lake and wetlands. These distances should be reviewed against DNR regulations to see if any changes are needed.



# City of Gem Lake Zoning Map



### LEGEND

- Conditional Use Institutional
- Conditional Use Golf Course
- Gateway and Village Center Mixed Use  
*Requires Master Planning and PUD*
- Estate Residential (RE)
- Executive Residential (RX)
- Low Density Residential (RO)
- Medium Density Residential (RS)
- Minnesota Land Trust
- Open Space / Recreational (OS/R)
- Gateway Zone - Sub Zones
  - Neighborhood Edge (NE)
  - Neighborhood General (NG)
  - Neighborhood Mixed Use (NMIU)
  - Neighborhood Center (NC)



Source: Gem Lake, Ramsey County GIS, Mn/DOT, and SEH Inc.



SEPTEMBER 2017

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- The Vadnais Lake Water Management Organization (VLAWMO) has informed the City that the water body known as Gem Lake does not have an outlet. Therefore, inlets to the lake must be filtered and flow control added.
- Wetland protection - VLAWMO and Ramsey Washington County Metro Watershed District (RWMWD) recently adopted updated water management plans that might require changes in the storm water section of the zoning ordinance.
- The Gem Lake has two years from the date these plans were adopted to update its City storm water management plan appropriately.
- Subdivision regulations - The City of Gem Lake has adopted a new set of subdivision regulations. These regulations should be reviewed to allow for smaller lots (and zero lot line construction) that might occur with PUDs that include town homes or other similar structures.

### 14.3 Private Investment

The basis for a comprehensive plan diminishes rapidly absent private investment. Therefore, implementation policies recognize the desirability of encouraging private land ownership, protection of environmentally sensitive areas, enhancement of business/commercial opportunities, construction and maintenance of a broad range of life-cycle housing, and provision of resident and visitor oriented retail and service facilities. Promoting the qualities of the area and providing cost effective public services are at the core of the public strategy to encourage and support private investment.

Other public policies affecting private investments include tax increment financing, special assessments, coordination of community and business promotion activities, cooperative ventures and development sensitive regulatory frameworks.

### 14.4 Public Investments

In carrying out the objectives of the comprehensive plan, the components and staging of public investment is important. Understanding the basis for, and phasing of, public investments stimulates private investments in terms of location and timing. Public capital improvements involve the acquisition of land and the construction of public facilities. Public ownership has historically been the case, but varying ownership arrangements are emerging. Many municipal capital improvement budgets also include major equipment purchase such as fire trucks, road maintenance vehicles, office furniture, and so on. Maintenance expenditures (such as resurfacing a road) overlap between maintenance and capital expenditures. The majority of parkland and roadway rights-of-way have been acquired through dedication. Subdivision regulations provide for that dedication. In the case of future rights-of-way, they will need to be purchased by agreement or condemnation.

## 14.5 Municipal Capital Improvement Program 2008-2018

### 14.5.1 Background

The capital improvement program provides a working strategy for guiding public investment within the comprehensive planning framework. Resources are finite and rarely meet all needs. A well thought out capital improvement program results in a comprehensive “shopping list” where all desired investments are cataloged and prioritized. Absence of current available funding should not keep a project off the shopping list (funding approaches are dynamic and changing) but will impact its priority.

## 14.5.2 Funding Sources

A number of funding sources are available or can be made available to municipalities. Some have specific requirements or limits. Increasingly, creative financing approaches are being undertaken which leverage private or public funds and/or engage partnerships with private business or other government entities. Some investment and debt funding sources for public capital investments include:

### 14.5.2.1 General Fund

General property tax dollars and fees make up the broad category general funds.

### 14.5.2.2 Enterprise Funds

Water and sewer utilities usually operate as an “enterprise” account that collects more than is spent for services purchased. The extra funds are kept in a separate account that is used for operation, maintenance and upgrades of the supported system. A one-time initial installation charge is also collected from each connection made to the sewer or water system. This charge is called a Sewer Availability Charge (SAC) or water availability charge (WAC), and is usually used to expand capabilities.

### 14.5.2.3 General Obligation Bonds

Certificates of indebtedness paid for by a property tax levy, backed by the property values of the city and authorized by the voters or by statutory provision.

### 14.5.2.4 Revenue Bonds

Bonds supported by the specific revenue stream of the specific investment (i.e. fees collected for an ice arena).

### 14.5.2.5 Tax Increment Financing

This revenue source is the captured increased property value resulting from the investment, which would not have occurred without the public financial assistance. This revenue is specifically pledged to qualified improvements for a specified period of time.

Debt financing is not mandatory and the income stream could be used to pay investors or lenders on a periodic or annual basis. Tax increment bonds are generally backed by the full faith and credit of the City and its taxpayers.

The legislature has continued to reduce the flexibility of this tool in response of a limited number of practices that have been considered objectionable. Changing of tax rates for commercial properties at the state level also has significant impact on revenue projections. The City of Gem Lake currently does not currently have any tax increment financing districts.

### 14.5.2.6 Special Assessment Bonds

Revenues are derived from the specially benefited property served by the improvement.

### 14.5.2.7 Capital Improvement Reserve Funds

Special assessments are required to be satisfied when property ownership is transferred. The result is that advance payment of special assessments in reserve produces additional earnings until they are applied to the bond payment schedule. These funds can be used to restructure debt or to be used for capital investments.

### 14.5.3 Utility bonds

A bond defrayed by the revenues derived from utility changes.

#### 14.5.3.1 Transportation Equity Act (TEA21) Funds

In conjunction with the Twin Cities Metropolitan Planning Organization transportation planning and programming, federal matching funds are available for transportation and enhancement related projects.

#### 14.5.3.2 Grants

A diminishing number of grants are available for specifically qualifying projects, such as park and trail development, or utility improvements.

#### 14.5.3.3 Loans

Revenues to repay the loans would have to come from one of the sources listed above, or from some specific future equity position in the project. The general policy of public financial assistance should be loan before grant, to keep the money working for the community.

#### 14.5.3.4 Donations

Private contributions given for general or specific purposes. A significant amount of private wealth is anticipated to be passed to the next generation in the near future. Having a policy in place for accepting donations would give security to donors, insure the proper management of donated funds and, potentially, foster additional gifts.

Donations or grants could come from individual, businesses or non-profits. Funding sources from other governmental jurisdictions are somewhat limited, and fall into the above categories. However, other jurisdictions do make investment decisions affecting the City and need to be considered in collateral requirements. Pathway and trail funding would be a case in point. The Minnesota Department of Natural Resources and Ramsey County currently have primary jurisdiction when securing financial participation from regional, state and federal government entities. Part of the implementation process involves working with the various agencies and private interest groups to secure the improvements, and to be prepared to provide local supporting action and investments.

### 14.5.4 Investment Purposes

Pubic investment purposes are broadening to include equity positions in some private (but public purpose) property, such as affordable housing. In some cases, historically public facilities are being converted into private or joint ventures with or without direct lease payments to or from the municipality. These investments fall into general groups that might be labeled as land acquisition, facilities acquisition and development projects.

There are also some limited incentive investments that are made to directly induce private investment. Direct public investments would focus on land acquisition, public improvements and community facilities.

### 14.5.5 Recent Capital Investments

The City of Gem Lake made its first capital investment in 2007-2008 in conjunction with White Bear Township (WBT) in building a joint Gem Lake City Hall/WBT meeting room. This facility is jointly maintained, with WBT handling the grounds and the City of Gem Lake handling the building.

## 14.5.6 Future Capital Improvements

Projected future capital improvement projects can be classified in a number of different ways to reflect the objectives of the comprehensive plan and the reality of funding availability. A central debate revolves around whether or not the community should plan for something if it does not have available resources. One school of thought calls for planning only to realized funding. Another school of thought suggests prioritizing needs (which nearly always exceed resources) and developing a program that can respond to differing financing trends and programs. Establishing a realistic but extended plan that exceeds available resources permits capturing opportunities when new or special funding occasions occur.

Many funding sources are competitive and require long term planning and perseverance. It is important to develop a comprehensive strategy that compiles improvement by: 1) investment type (economic, development, parks), 2) priority (immediate to future), 3) funding source (General Obligation Bond, Assessment, etc.), 4) or other management category. The purpose of this comprehensive capital improvement strategy is to continually match changing community objectives with potential funding sources, thus assisting the City in determining priorities.

The current list of capital improvements, included as part of the section, does not involve revenue source estimates or specific assistance in non-defined public assistance areas. This allows the City to remain flexible in evaluating multiple potential funding sources and selecting the best solution, given current conditions.

There is no absolute answer on the amount of debt that a community should carry, only carefully weighed considerations relating to benchmark levels, community needs and community acceptance. \$ 900 to \$1200 debt per capita provides a national experience range benchmark. Consideration must also be given to overlapping debt from other jurisdictions. Special assessments for street and water system improvements, properly administered, are self-liquidating through special assessments or service charges. Capital outlays are projected annually over the next 0 to 5 and 5 to 10 years.

## 14.5.7 Community Facilities

Sometime in the next 10+ years, an expansion of City Hall is anticipated. Depending upon population growth, additional space will probably be needed for city offices and record storage. The parking lot at the City Hall most likely also requires expansion.

## 14.5.8 Transportation

### 14.5.8.1 Trails

Trails have generally been installed as on-road facilities, coordinated with Ramsey County road construction/reconstruction projects. Expansion of the trail system is, therefore, tied to County maintenance development and road turn-back programs. The City of Gem Lake has partnered with Vadnais Heights to construct some bike trails along County Road E. Additional connecting trails will be added by Gem Lake as conditions and finances allow.

### 14.5.8.2 Road Turnbacks and Road Construction

The road turn-back program was set up by a state aid program, to align jurisdictional responsibilities of county roads. An amount of funds was set aside to permit transferring the roads and sufficient resources to bring them up to standard.

Several City of Gem Lake roads were replaced, rebuilt or overlaid in the last three years. Approximately .7 miles of Scheueneman Road and Hoffman Road, located in the Gem Lake Business District that were accepted by a “turn-back” from Ramsey County in 2007 still needs repairs.

## 14.5.9 Capital Improvement Program List

Refer to the City Capital Improvement (CIP) and Maintenance Plan in Appendix A.

## 14.6 Implementation Schedule

### *Immediate Priorities (2021-2022)*

- *Formal adoption/amendment of Comprehensive Plan following official review*
- *Revise zoning and official controls*
- *Maintain CIP program for road and sewer maintenance and environmentally friendly development measures*

### *Short-Term Priorities (2025)*

- *Examine potential transit growth and opportunities compatible with the character of the area*
- *Work with the County and adjacent communities to Develop regional trails and bike paths*

### *First-Half Priorities (2030)*

- *Examine development potential of Mixed-Use Area*
- *Encourage private maintenance and improvement of Existing housing stock through education and assistance programs*

### *Long-Term Priorities (2040)*

- *Conduct 2050 Comprehensive Plan Update*
- *Plan for continued development of residential areas*
- *Preserve and improve upon local environmental resources*

# Appendix A

City Capital Improvement (CIP) and Maintenance Plan



ITEM #	ITEM DESCRIPTION / PROJECT	TYPE	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	NOTES
	REPLACE OUTDATED COVERS = 22				\$4,500								
	REPAIR MH INVERTS = 6				\$8,000								
	ADJUST & REPLACE RINGS/CASTINGS = 22				\$30,000								
9	STORM SEWER MH'S						\$2,000						
10	STORM CULVERTS						\$2,000						
11	MISC STREET OVERLAY / PATCHING							\$200,000					
<b>PROJECTS</b>													
12	EXTEND WATER - SCHEUNEMAN RD S.		\$400,000										INCLUDES ROADWAY REPLACEMENT AND IMPROVEMENTS, AND STORM SEWER ADDITIONS W/POND
13	EXTEND WATER - SCHEUNEMAN RD N.								\$1,000,000				INCLUDES CONNECTION UNDER TH61 AND LOOP BACK TO WBL AT OTTER LAKE RD
14	EXTEND WATER TO VILLAS OF GEM LAKE		\$15,000										COST FOR WATER UPSIZING BY DEVELOPER
15	EXTEND WATER TO BIG FOX/LITTLE FOX											\$1,000,000	
16	EXTEND WATER DOWN INTO HOFFMAN CORNERS										\$500,000		
17	EXTEND SEWER & WATER INTO NE DISTRICT						\$800,000						EXTENSION INTO AREA NEAR AND AROUND CITY HALL
18	EXTEND SEWER TO BIG FOX/LITTLE FOX											\$1,000,000	
19	REPLACE SEWER IN HOFFMAN CORNERS										\$500,000		
20	STORM WATER MANAGEMENT FEATURES						\$40,000			\$40,000	\$60,000	\$60,000	STORM WATER MANGEMENT PONDS OR BASINS TRIGGERED BY WATERSHED DIST REQUIREMENTS FOR ABOVE PROJECTS
21	RECONSTRUCT HAVEN & TESSIER							\$1,000,000					NEW PAVEMENT, CURB & GUTTER, AND UTILITIES
22	RECONSTRUCT BIG FOX & LITTLE FOX											\$1,200,000	NEW PAVEMENT, CURB & GUTTER, AND UTILITIES
	<b>TOTALS</b>		<b>\$498,450</b>	<b>\$51,000</b>	<b>\$88,500</b>	<b>\$87,600</b>	<b>\$983,000</b>	<b>\$1,248,000</b>	<b>\$86,155</b>	<b>\$1,094,500</b>	<b>\$1,111,000</b>	<b>\$3,365,355</b>	



## Appendix B

City of Gem Lake, Ramsey County, Minnesota Ordinance No. 64E

**CITY OF GEM LAKE, RAMSEY COUNTY, MINNESOTA  
ORDINANCE NO. 64E**

**AN ORDINANCE REGULATING THE OPERATION OF THE MUNICIPAL SANITARY SEWER SYSTEM; REQUIRING CONNECTIONS TO BE MADE TO THE MUNICIPAL SANITARY SEWER SYSTEM; ESTABLISHING REGULATIONS AS TO TYPE AND KINDS OF WASTE THAT MAY BE DISPOSED OF IN THE MUNICIPAL SANITARY SEWER SYSTEM; PROHIBITING THE DISCHARGE OF ANY TYPE OR KIND OF SURFACE WATERS INTO THE MUNICIPAL SANITARY SEWER SYSTEM; PRESCRIBING RATES AND CHARGES FOR SEWAGE DISPOSAL SERVICES; PROVIDING FOR THE ISSUANCE OF PERMITS FOR AND SUPERVISION OF ALL CONNECTIONS TO THE MUNICIPAL SANITARY SEWER SYSTEM; PRESCRIBING CERTAIN MATERIALS AND METHODS TO BE USED FOR SAID CONNECTIONS; PROVIDING FOR LICENSING OF SEWER CONTRACTORS; AND PRESCRIBING PENALTIES FOR THE VIOLATION OF THE PROVISIONS OF THIS ORDINANCE.**

The City Council of the City of Gem Lake does ordain:

**Section 1 Repeal Of Other City Ordinances**

**Section 1.1** This Ordinance shall replace Ordinances # 18, 25 and 32A of the City of Gem Lake.

**Section 2 Separability**

**Section 2.1** It is hereby declared to be the intention of the City Council that the several provisions of this Ordinance are separable and that if any court of competent jurisdiction shall adjudge any provision of this Ordinance or application thereof to be invalid, such judgment shall not affect any other provisions of this Ordinance not specifically included in said judgment.

**Section 3 Rules And Definitions**

**Section 3.1 Rules of Construction**

**Section 3.1.1** The word "shall" is mandatory, and the word "may" is permissive.

**Section 3.1.2** The masculine gender includes the feminine and neuter genders.

**Section 3.1.3** Whenever a word or term defined hereinafter appears in the text of this Ordinance, its meaning shall be construed as set forth in the definition thereof.

**Section 3.1.4** The present tense includes the past and future tenses and the future the present.

**Section 3.2 Definitions Of Terms:** The following words and terms, whenever they occur in this Ordinance, are defined as follows:

**Assessment.** A charge made to affected property owners for improvements that increases or maintains their property's value or enhances the health and safety of their neighborhood.

**Connection.** The physical connection between the sewer piping in a residence or building and the Municipal sanitary sewer system.

**Connection Permit.** A permit, issued by the City of Gem Lake, which allows connection to the Municipal sanitary sewer system.

**Extension.** An addition to the Municipal Sanitary Sewer System determined to be added by petition, decree or for health and safety reasons.

**Industrial Strength Charge.** An additional charge levied to the City of Gem Lake by the MCES to treat certain industrial wastes.

**Inspection Fee.** A fee paid to the City of Gem Lake to cover the costs of inspecting the new connection to the Municipal Sanitary Sewer System.

**ISTS.** Individual Sewage Treatment System

**Maintenance.** The scheduled inspection, flushing and minor repairs to the Municipal Sanitary Sewer System done on a regular basis.

**MCES.** Metropolitan Council Environmental Services, the primary operator of the regional sewer system and its successors and assigns.

**Municipal Sanitary Sewer System (MSSS).** The sanitary sewer system owned and operated by the City of Gem Lake as a public utility and convenience from which revenues will be derived.

**Permit, Changeover.** A permit that allows changing from an on-site individual sewage treatment system (ISTS) to the Municipal Sanitary Sewer System. This permit requires that the on-site system be properly disconnected and sealed.

**Replacement.** Replacing or rebuilding of sections of the sanitary sewer system, that may be found necessary due to age, damage or changing surface conditions.

**SAC Charge, Gem Lake.** A charge levied to each new user of the Municipal Sanitary Sewer System to help pay for continued maintenance of the system.

**SAC Charge, MCES.** A charge levied to the City of Gem Lake by MCES to reserve unused capacity in the sewage treatment and metro collection system.

**Sewer Contractor.** A person engaged in the business of Contractor building or repairing that portion of the house or building sewer extending from the house or building to the main sewer or other outlet.

**Surface Water.** Roof, storm, surface, ground water or water discharged from an air conditioning unit or system.

**Unit.** A method of measuring the sewage put into the sanitary sewer system as well as a method for calculating the costs for use of the system.

### **Section 3.3 Title**

**Section 3.3.1** This Ordinance shall be known as the "Municipal Sanitary Sewer System Ordinance" of the City of Gem Lake.

## **SECTION 4 DESCRIPTION AND OPERATION OF THE MUNICIPAL SANITARY SEWER SYSTEM.**

### **Section 4.1 General Operation**

**Section 4.1.1** The entire Municipal Sanitary Sewer System , operated by the City of Gem Lake shall be operated as a public utility and convenience from which revenues will be derived. It is recognized that this sewer system might be available to only portions of the city, and that it will serve only where individual sewage treatment systems are unavailable or impractical. The Municipal Sanitary Sewer System operated by the City of Gem Lake exists to serve the users of the system who have connected to this system. As defined by the State Auditor, the accounting will be as an Enterprise Fund separate from the General Fund of the City of Gem Lake. It is expected that the users of the system shall pay for its construction, maintenance, any rebuilding or repairing needed and its operation.

### **Section 4.2 Connection Required**

**Section 4.2.1** Any buildings used for human habitation or use and located on property adjacent to a municipal sewer main, or in an area through which the system extends, shall be connected to the Municipal Sanitary Sewer System within one (1) year if buildings are commercial or ten (10) years if buildings are residential from the time a connection is available to any such property.

**Section 4.2.2** Any buildings used for human habitation or use and located on property adjacent to a municipal sewer main, or in an area through which the system extends, which have an IST S determined to be failing shall be connected to the Municipal Sanitary Sewer System within six (6) months from the date said ISTS is determined to be failing.

**Section 4.2.3** All buildings constructed on property adjacent to a municipal sewer main or in an area through which such system extends, shall be provided with a connection to the Municipal Sanitary Sewer System for the disposal of all human wastes.

### **Section 4.3 Use Of Certain Buildings Restricted**

**Section 4.3(1)** No person, firm or corporation shall use any building, nor allow any other person to use such building, which building is not connected to the Municipal Sanitary Sewer System as required by Section 4.2 of the Ordinance.

### **Section 4.4 Types Of Wastes Prohibited**

**Section 4.4.1** Except as herein provided, it shall be unlawful to discharge any of the following described materials into the Municipal Sanitary Sewer System.

- a) Any liquid or vapor having a temperature higher than one-hundred fifty (150°F) degrees Fahrenheit.
- b) Any water or waste containing more than 100 parts per million of weight of fat, oil or grease.
- c) Any gasoline, benzene, naphtha, fuel oil or other inflammable or explosive liquid, solid or gas.
- d) Any garbage that is not properly shredded.
- e) Any ashes, cinders, sand, mud, straw, shaving, metal, glass, rags, feathers, plastic, wood, paunch manure or any other solid or viscous substance capable of causing obstruction to the flow in sewers or other interference with the proper operation of the sewage system.
- f) Any waters or wastes containing a toxic or poisonous substance in sufficient quantity to injure or interfere with any sewage treatment process or which constitutes a hazard to humans or animals or creates any hazard in the receiving water of the sewage treatment plant.
- g) Any waters or wastes containing suspended solids of such character and quantity that unusual attention or expense is required to handle such materials at the sewage treatment plant.
- h) Any noxious or malodorous gas or substance capable of creating a public nuisance.
- i) A grease, oil and sand interceptor shall be provided when, in the opinion of the City Engineer, that it is necessary for the proper handling of liquid wastes containing grease in excessive amount, or any inflammable wastes, sand, or other harmful ingredients; except that such interceptors shall not be required for residential dwelling units which discharge only normal wastes therefrom. Such grease and oil interceptors shall be of substantial construction, water-tight and equipped with easily removable covers which when bolted in place, shall be gas-tight and water-tight. All grease, oil and sand interceptors shall be maintained by the owner, at his expense, in continuously efficient operation at all times.

## **Section 4.5 Industrial Wastes**

**Section 4.5.1** It shall be unlawful to discharge, in the City of Gem Lake Municipal Sanitary Sewer System, any industrial wastes unless the prior approval of the City Council is obtained. The City Council may allow the discharge of industrial wastes if it finds that the proposed wastes will not be of an unusual amount or character.

## **Section 4.6 Discharge of Surface Wastes Prohibited**

**Section 4.6.1** No person shall cause to be discharged into the Municipal Sanitary Sewer System, either directly or indirectly, any roof, storm, surface or ground water of any type or kind. No water discharged from an air conditioning unit or system shall be allowed.

## **Section 4.7 Tampering With The Municipal Sanitary Sewer System**

**Section 4.7.1** No person shall maliciously, willfully, or negligently break, damage, destroy, uncover, deface or tamper with any structure, appurtenance or equipment which is a part of the Municipal Sanitary Sewer System.

## **Section 4.8 Certain Connections Prohibited**

**Section 4.8.1** No buildings located on property lying outside the City limits of the City of Gem Lake shall be connected to the Municipal Sanitary Sewer System unless express authorization for such connections is obtained from the City Council of the City of Gem Lake.

## **Section 4.9 Entry Upon Private Property**

**Section 4.9.1** The officials and duly authorized agents of the City of Gem Lake, bearing proper credentials and identification, shall at reasonable times be permitted to enter upon all properties in the city for the purpose of inspection, observation, measurement, sampling and testing in connection with the operation of the Municipal Sanitary Sewer System.

## **Section 4.10 Rates and Charges**

**Section 4.10.1** The annual charge for the use of the Municipal Sanitary Sewer System for residential users shall be the amount established by resolution of the City Council at its first meeting in January of each year.

**Section 4.10.2** The annual charge for use of the Municipal Sanitary Sewer System for commercial, industrial, institutional and all other users who are not residential users shall be that amount established by resolution of the City Council at its first meeting of each year.

**Section 4.10.3** The annual charge for use of the Municipal Sanitary Sewer System shall be based upon a UNIT system, with one unit being equal to 100,000 gallons of flow or part thereof. The following types of structures or business shall have UNIT ratings based as shown in Table 4.10(3) and as follows:

**Section 4.10(3)****TABLE I**

<b>TYPE OF STRUCTURE OR BUSINESS</b>	<b>UNIT BASIS</b>
Single Family Residence	1 Unit(s)
Multi Family Residence (Each Living Unit)	1 Unit (s)
Multi Family Assisted Living (Each Living Unit)	1.25 Unit(s)
Store	6 Unit(s)
Take-Out Food Store	7 Unit(s)
Shopping Center	7 Unit(s)
Office	½ per 1,000 sq. ft., minimum 3 Unit(s)
Bar-Restaurant	8 Unit(s)
Hospital/Medical Office	12 Unit(s)
Hotel/Motel	1.75 units per room, minimum 6 Unit(s)
Gas Station	6 Unit(s)
Auto Dealer (1-5 Employees)	1 Unit(s)
Auto Dealer (6-50 Employees)	6 Unit(s)
Auto Dealer (51 or more Employees)	12 Unit(s)
Auto Wash Rack (Per Wash Rack)	10 Unit(s)
Laundromat	10 Unit(s)
School	6 Unit(s)

\* Table based upon information provided by the U. S. Department of Energy

**Section 4.10.4** The sewer rates for commercial, industrial, institutional and all other users not covered in the rate table above shall be as follows:

**a)** For users who have municipal water, the sewer charge will be based on each one thousand (1,000) gallons, or part thereof of water consumption. The sewer use rate, per each 1,000 gallons of water, will be set by resolution of the City Council at its first meeting in January. A minimum charge for each quarter also will be set by resolution of the City Council at its first meeting in January.

**b)** For a commercial, industrial, institutional or other user that does not have municipal water, the charges shall be as follows:

**1)** The user may, at his own expense, install a meter, approved by the City Plumbing Inspector, to measure the amount of water consumption. This meter shall be installed by a Licensed Plumber and inspected by the Plumbing Inspector before any use is allowed. The rate for each 1,000

gallons will be set by resolution of the City Council at its first meeting in January.

c) If the commercial, industrial, institutional or other user has more than one source of water for one building or use, each of the sources must be metered and the total amount of water metered be used for calculating sewer rates.

**Section 4.10.5** If the industrial or commercial user does not discharge considerable waste, as a part of its essential operation, then the requirement for metering may be waived upon recommendation of the City Engineer and approval of the City Council. In such event, the charge for waste discharge of this user, shall be established by resolution of the City Council establishing the number of units to be charged for this type of user.

#### **4.11 Strength Charges For Industrial Users.**

**Section 4.11.1** The MCES has imposed an industrial user sewer strength charge upon users of the Metropolitan disposal system. The City of Gem Lake Municipal Sanitary Sewer System feeds into this disposal system. In order for the City to pay such costs, based upon strength of industrial discharge that are allocated to it by the MCES each year, it is necessary to establish a City system sewer strength charge and a formula for computation of that charge for all industrial users using the City of Gem Lake Municipal Sanitary Sewer System.

**Section 4.11.2** There is established, in addition to sewer charges based upon the volume of discharge, a sewer charge upon each person receiving waste treatment services within or served by the City, based upon strength of industrial waste discharged into the Municipal Sanitary Sewer System operated by the City of Gem Lake.

**Section 4.11.3** For the purpose of computation of the strength charge, the same strength charge formula designated by the governing body of MCES on June 15, 1976 and as amended from time to time, shall be used by the City of Gem Lake.

**Section 4.11.4** The strength charge established by this section of this Ordinance shall be paid by each industrial user receiving waste treatment services from the system operated by the City of Gem Lake. It will be billed in the same manner as the regular use charge for sewer service and be subject to the same penalties for late payment.

#### **Section 4.12 Payment Of Sewer System Charges**

**Section 4.12.1** Sewer use charges shall be billed quarterly. Statements for sewer charges, for the preceding quarterly period, shall be mailed to each user of the system on or before the 10th of January, April, July and October of each year. Such statements shall be due and payable to the City Treasurer on or before the last day of the month following the quarterly period covered by such statement.

**Section 4.12.2** If the sewer charge is not paid when due, then the following penalty shall be added to the next billing:



a) For residential sewer users, a penalty charge for each billing period of four dollars (\$4.00) or ten (10) percent of the amount due, whichever is greater.

b) For all other sewer users, a penalty charge for each billing period of ten (10) percent if paid within the first month of arrearage. After one month of arrears, the penalty charge will be twenty (20) percent of the amount due.

### **Section 4.13 Action To Collect Late Charges**

**Section 4.13.1** If any two quarters of sewer charges have not been paid when due, or if over one hundred dollars (\$100.00) of sewer charges are overdue, then a penalty charge in addition to that on Section 4.12, in the sum of twenty five dollars (\$25.00) for arrearage up to \$250.00 and fifty dollars (\$50.00) for arrearage above \$ 250.00 shall be added to the amount due.

**Section 4.13.2** All charges may be collected by action brought for that purpose in the name of the City of Gem Lake, or the City Clerk may certify to Ramsey County the amounts due (with penalties) together with a legal description of the premises served and the County shall thereupon enter such amount as part of the tax levy on said premises to be collected during the ensuing year.

### **Section 4.14 Starting Of Sewer Charges**

**Section 4.14.1** The sewer charges, described in this Ordinance, shall start thirty (30) days after a sewer connection is applied for.

## **SECTION 5 CONNECTIONS TO THE MUNICIPAL SANITARY SEWER SYSTEM**

### **Section 5.1 Connection Permit**

**Section 5.1.1** Any person desiring to connect to the City of Gem Lake Municipal sanitary sewer system, shall request such connection on a Connection Permit Application Form provided by the City Clerk. This request shall be accompanied by the required fee, plus plans, specifications and any such information as might be necessary to identify how and by whom the connection will be made.

### **Section 5.2 Connection And Inspection Fees**

**Section 5.2.1** Each Connection Permit application shall be accompanied by a Connection Fee and an Inspection Fee payable to the City of Gem Lake. The fee rate for a Connection Permit and Inspection shall be set annually by resolution of the City Council at its first meeting in January. If re-inspection of a connection is necessary after the initial inspection, a Re-inspection Fee will be charged. As provided for by Minnesota Statutes, § 444.075, subd. 3e, any unpaid connection charge or fee shall be certified to the county auditor for collection as other taxes are collected.

**Section 5.3 Need for Changeover Permit**

**Section 5.3.1** When a request is made for a residential sewer Connection Permit, where an Individual Sewage Treatment System (IST S) is now being used, a Changeover Permit shall also be required. Both the Connection Permit and the Changeover Permit shall be issued at the same time. This Changeover Permit is to ascertain that the existing Individual Sewage Treatment System is properly disconnected and sealed. The Changeover Permit Fee shall be as set annually by resolution of the City Council at its first meeting in January.

**Section 5.4 Additional Requirements For Connection Permits**

**Section 5.4.1** The following conditions shall also be certified by the City Clerk for each connection request, before a Connection permit is issued:

- a) That the lot or tract of land to which the connection will be made has been assessed for the cost of construction of the Municipal sanitary sewer system; and
- b) If no assessment has been levied for such construction costs, the proceedings of levying such assessment have been or will be completed in due course; or
- c) If no assessment has been levied and no assessment proceedings will be completed in due course, that a sum equal to the portion of the cost of constructing said sanitary sewer main, which would be assessable against said lot or tract, has been paid to the City; or
- d) If an assessment for the construction cost of the sewer has been levied, which included a UNIT connection charge for each structure then in existence, that a monetary sum equal to such unit connection charge has been paid for structures not in existence at the time of the assessment. The amount of the UNIT assessment charge shall be as established in the assessment proceedings, or if not so established for any particular type of structure, the UNIT connection charge shall be based on the following formula, using a single family residential dwelling as one UNIT.

**Section 5.4.1 d)**

**TABLE II**

<b>TYPE OF STRUCTURE</b>	<b># UNITS</b>
Each Single Family Dwelling	1 Unit(s)
Each Hotel Or Motel Unit	1/3 Unit(s)
One Mobile Home Unit Or Apartment Unit	1/2 Unit(s)
Industrial Or Commercial structures (per 1,000 s.f. area)	1/2 Unit(s) Minimum 2 Unit(s)

**Section 5.4.2** If no certification can be issued by the City Clerk, no permit to connect to the Municipal Sanitary Sewer System shall be issued, unless the applicant agrees to pay

an assessable cost, to be determined by the City Engineer, upon the same basis as any assessment previously levied against other properties for said sanitary sewer construction. If no such assessment has been levied, the assessable cost will be determined upon the basis of the uniform charge which may have been or which would be charged for similar construction of such a sewer main, determined on the basis of total assessable cost of such main allocated using one of the following basis or combination thereof as determined by the City Council:

a) Front Footage basis whereby the total cost of the project is divided by the total front footage of the project (each side of the street for frontage) to yield a per front foot charge which is then multiplied by the front footage of each benefitted property to determine the benefitted real property owner's share of the cost; or

b) Acreage basis whereby the total cost of the project is divided by the total acreage served to yield a per acre charge which is then multiplied by the acreage of each benefitted property to determine the benefitted property owner's share of the cost; or

c) Benefitted Property basis where the total cost of the project is divided by the total number of benefitted properties times their sewer unit basis from Section 4.10(3), Table I to determine the benefitted property owner's share of the cost.

## **Section 5.5 Restrictions On Connection Permits**

**Section 5.5.1** Connection permits shall be issued only to property owners or to such persons, who are duly licensed by the City of Gem Lake, to engage in the business as Sewer Contractors and who have filed bonds and insurance as required by section 9.4 of this Ordinance.

## **Section 5.6 Expiration Of Connection Permits**

**Section 5.6.1** All connection permits shall expire ninety (90) days after the date of issuance, and any and all fees forfeited, unless the work planned and authorized is in actual progress.

## **Section 5.7 Supervision And Inspections Of Connections**

**Section 5.7.1** The Senior Building Official or Plumbing Inspector shall supervise all connections made to the Municipal Sanitary Sewer System. The Plumbing Inspector shall approve all plans, specifications and materials and be responsible for checking all excavations made for the purpose of installing or repairing these connections.

**Section 5.7.2** The inspection of all sewer connections will be done by the Plumbing Inspector.

## **SECTION 6 SAC CHARGES**

### **Section 6.1 Definition Of SAC Charge**

**Section 6.1.1** The MCES has determined a need to reserve extra capacity in the Metropolitan sewage treatment system. The City of Gem Lake sewage collection system connects to this system. A Service Availability Charge (SAC) shall be charged to the City of Gem Lake by the MCES for each new building that will be connected to the sewage collection system or for each building connected to newly constructed sewage collection systems.

**Section 6.1.2** The City of Gem Lake has determined a need to reserve additional maintenance charges for future maintenance of the Municipal Sanitary Sewer System. A City Service Availability Charge (SAC) shall be charged by the City of Gem Lake for each new building that will be connected to the sewage collection system or for each building connected to newly constructed sewage collection systems.

### **Section 6.2 How The SAC Charge Is Paid**

**Section 6.2.1** Both the MCES and the Gem Lake SAC charges shall be payable to the City of Gem Lake upon the issuance of a Building Permit for a new building that will connect to the sewage collection system or for a Connection Permit, but no charge need be paid upon the issuance of a Connection Permit if a charge was paid upon issuance of a Building Permit. SAC charges will only be made once per building, but additional SAC charges may occur if building use changes.

### **Section 6.3 Definition Of A SAC Unit**

**Section 6.3.1** One SAC unit equals two-hundred seventy-four (274) gallons of maximum potential daily wastewater flow volume. Single family houses, townhouses and each unit of a multi-family dwelling equal one (1) SAC unit. Public housing units equal 75% of one unit.

**Section 6.3.2** Apartment buildings, without potential laundry facilities in each unit, may apply for a reduction of 20%.

**Section 6.3.3** Commercial buildings are assessed SAC units based on maximum potential daily wastewater flow. The minimum capacity for such a building is one (1) SAC unit.

**Section 6.3.4** Industrial buildings are assessed SAC units based on maximum normal daily wastewater flow volume. The number of SAC units is based on the completed Industrial Sewer Connection Application (MCES 90-B).

## **Section 6.4 Administration**

**Section 6.4.1** The City Council shall annually, by resolution at its first meeting in January, determine the SAC charge for each building or connection and shall order the City Clerk or Treasurer to collect the applicable charge before issuance of a permit. The MCES will help determine SAC units if necessary and will make the final decisions regarding the correct number of units to assess.

**Section 6.4.2** The number of SAC unit charges collected each year shall be recorded by the City Clerk, and shall be made available to the MCES upon request. If after filing the required yearly report to the MCES, it is determined that a greater number of SAC units should have been assigned to a building, any additional amount of cost shall be paid by the person or company to whom the permit for that building was granted.

## **SECTION 7 MAINTENANCE AND INSPECTION, MAJOR MAINTENANCE AND/OR REPLACEMENT OF THE EXISTING MUNICIPAL SANITARY SEWER SYSTEM**

### **Section 7.1 Maintenance And Inspection Responsibilities**

**Section 7.1.1** The City of Gem Lake City Council shall be responsible for the cost and scheduling of minor maintenance, flushing and inspection of all of the Municipal Sanitary Sewer System to include:

- a) Bi-annual flushing of sewer mains.
- b) Maintaining necessary records to determine location, age and condition of all of the existing sewer mains.
- c) Video or other means of inspection of the Municipal sanitary sewer system, at least once every 15 years, or as determined by system problems or reports from flushing operations.

**Section 7.1.2** The costs of the maintenance and inspection operations shall be paid from the revenues collected from the billings for the Municipal Sanitary Sewer System operations. As this system is operated as a public utility, all costs must be paid from funds collected from user fees and accounted for in a separate Enterprise Fund for the utility and not from the General Fund of the City of Gem Lake. Rates for system users shall be set with the costs of these maintenance and inspection operations in mind.

### **Section 7.2 Costs For Major Repairs Or Replacement**

**Section 7.2.1** The costs for major repairs or replacement of portions or all of the existing Municipal Sanitary Sewer System shall be borne by the end users of the system. The system is operated as a public utility and exists to serve its users.

**Section 7.2.2** If a major repair or replacement of the existing system is necessary, all costs of replacement or major repair of any and all parts of the system shall be assessed against the properties served and buildings connected to the existing system. Whenever possible, a project for major repair or replacement will be initiated by the City Council, the City Engineer will prepare specifications, bids taken, and public hearings will occur before major repair or replacement would start.

**Section 7.2.3** In cases of emergency replacement or repair of the system, the City Council will initially arrange for payment for such replacement or repair and then assess all costs of such repairs or replacement to the system users.

## **SECTION 8 METHODS TO DETERMINE IF EXTENSIONS OF THE MUNICIPAL SANITARY SEWER SYSTEM ARE NEEDED OR NECESSARY**

### **Section 8.1 Capabilities To Expand System**

**Section 8.1.1** The City of Gem Lake Municipal Sanitary Sewer System may be expanded to serve additional areas of the City and may be expanded to collect the amounts of sewage flow as provided to the Metro Council and the MCES in the Comprehensive Municipal Plan of the City. The values of current flow and expected flow and the areas of the city served by the Municipal Sanitary Sewer System are updated to the MCES regularly.

### **Section 8.2 Methods To Do Extension Projects**

**Section 8.2.1** If any of the following events occur, the City of Gem Lake City Council may start a project for an expansion or extension of the Municipal sanitary sewer system:

- a) A legal petition, signed by two-thirds (2/3) majority of the residents of a defined area in the City of Gem Lake, is received by the City Council. The "defined area" shall be the smallest practical area in which an extension may be installed, as determined by the City Engineer.

**Section 8.2.2** The results of the Bi-Annual inspection of the Individual Sewage Treatment Systems, as outlined in Ordinance No. 67 of the City of Gem Lake, indicates that the Municipal sanitary sewer system must be extended into a defined area due to health or pollution problems.

**Section 8.2.3** Receipt of a binding decree from the County, Regional, State or Federal authorities that an extension must be made.

### **Section 8.3 Methods Used To Start An Extension Project**

**Section 8.3.1** If a valid request or requirement for a system extension is received by the City of Gem Lake City Council, the City Engineer will be instructed to estimate the costs

of a sewer extension project for the defined area. These costs and the extent of the project will be presented to the affected property owners at public hearings.

**Section 8.3.2** All costs of sewer extension projects shall be assessed to the properties that will be affected and gain or retain value by this project. The health and welfare of the affected parties and their neighborhoods should also be considered. The assessment may be done using one of the following basis or combination thereof as determined by the City Council:

a) Front Footage basis whereby the total cost of the project is divided by the total front footage of the project (each side of the street for frontage) to yield a per front foot charge which is then multiplied by the front footage of each benefitted property to determine the benefitted property owner's share of the cost; or

b) Acreage basis whereby the total cost of the project is divided by the total acreage served to yield a per acre charge which is then multiplied by the acreage of each benefitted property to determine the benefitted property owner's share of the cost; or

c) Benefitted Property basis where the total cost of the project is divided by the total number of benefitted properties times their sewer unit basis from Section 4.10(3), Table I to determine the benefitted property owner's share of the cost.

**Section 8.3.3** As this sanitary sewer system is operated as a public utility from which revenues will be derived, no City of Gem Lake funds, other than sewer system funds, shall be used for such projects.

## **SECTION 9 LICENSING OF SEWER CONTRACTORS**

### **Section 9.1 Eligibility**

**Section 9.1.1** Any person who has had at least three (3) years of experience in responsible charge of minor sewer work involving a knowledge of trenching, bracing, tunnel work, pipe laying in public streets and all other matters pertaining to and incidental to such sewer work and is a Licensed Plumber or an Unlicensed Plumber who has received and provides copies of a contractor's bond in the amount of \$25,000 issued by the State of Minnesota Department of Health for doing sewer work is eligible to receive a license as a Sewer Contractor in the City of Gem Lake.

### **Section 9.2 Application For License**

**Section 9.2.1** Any person desiring to become a sewer contractor shall make application to the City Clerk and shall, if necessary, be required to submit himself to an examination as to his qualifications before the City Engineer or Plumbing Inspector.

### **Section 9.3 Examination And Licensing**

**Section 9.3.1** The City Council may approve or reject said application, or may refer the same to the City Engineer or the Plumbing Inspector, for examination as to the applicant's qualifications. If the City Council approves the application, a license authorizing the applicant to engage in the business of sewer contracting shall be issued, but only after the execution and filing of the bond and insurance requirements and payment of the fee is accomplished.

### **Section 9.4 Bond And Insurance**

**Section 9.4.1** Before the Sewer Contractor's License is issued, the licensee shall file, with the City Clerk, the following Bond and Insurance certificate:

a) A bond in favor of the City of Gem Lake, as obligee, with an approved Corporate Surety, in the penal sum of five thousand dollars (\$5,000.00), the conditions of which bond shall be that the licensee shall keep the obligee harmless from all costs and charges that may accrue on account of the doing of any work authorized or permitted in making sewer connections in the City of Gem Lake per this Ordinance, that the licensee shall save the obligee harmless from any loss or damage by reason of improper or inadequate work performed by the licensee on projects done per this Ordinance and further that the licensee shall save the obligee harmless from any damage to utility lines, curbs, street, street surfaces or sidewalks.

b) A certificate that insurance is in force covering the licensee for the period covered by the license in the following minimum amounts: Property damage, one hundred thousand dollars (\$ 100,000.00); Public Liability, two-hundred fifty thousand dollars (\$ 250,000.00) each person; and five-hundred thousand dollars (\$500,000.00) for each accident. The certificate shall state that the policies covering the licensee shall not be canceled without ten (10) days written notice to the City of Gem Lake. 3) A certificate that worker's compensation insurance is in force covering any employee of the licensee for the period covered by the insurance.

### **Section 9.5 Re-examination**

**Section 9.5.1** Should the applicant not be approved by the City Council, he may file a second application for subsequent consideration by the City Council, with such examination as to qualifications as the City Council may require, but no applicant shall file more than two (2) applications with a period of one (1) year.

### **Section 9.6 Fees**

**Section 9.6.1** The annual license fee shall be that set annually by the City Council at its first meeting in January. Any person allowing his license to expire shall not be permitted



to do any of the work authorized under said license during the time between expiration and the issuance of a new license.

**Section 9.7 License Not Transferable**

**Section 9.7.1** A Sewer Contractor's license shall not be transferable. No person holding a license shall allow his name to be used by any other person for the purpose of obtaining permits or to do any of the work for which said license is issued.

**Section 9.8 Revocation Of License**

**Section 9.8.1** The City Council shall have the power to revoke any license upon satisfactory proof that the holder of said license has willfully violated any of the provisions of this Ordinance. A revoked license shall not be re-instated in any manner for a period of six (6) months. The failure to pay, within sixty (60) days, any legitimate claim the City of Gem Lake may have against a sewer contractor shall constitute cause for revocation of a license.

**Section 9.9 Connection To The Municipal Sanitary Sewer System**

**Section 9.9.1 License Required.** Only contractors who are licensed as Sewer Contractors by the City of Gem Lake may install sewer pipe materials for commercial/industrial structures and make final connections to the municipal sanitary sewer system for all types of structures.

**Section 9.9.2 No License Required.** No license shall be required of contractors or homeowners installing the sewer pipe materials from residential structures to the connection point.

**SECTION 10 MATERIALS TO BE USED**

**Section 10.1** The materials and construction methods described in this section of this Ordinance shall be exclusively used in making sewer connections to the Municipal Sanitary Sewer System of the City of Gem Lake:

**Section 10.1 (1)**

**TABLE III**

<b>DESCRIPTION</b>	<b>CLASS</b>	<b>SPECIFICATION</b>	<b>JOINT</b>
Polyvinyl Chloride (PVC) Sewer Pipe	SDR 35	ASTM D3034	Elastomeric Gasket
Vitrified Clay Sewer Pipe	Extra Strength	ASTM D1785	ASTM C425
Polyvinyl Chloride (PVC) Sewer Service Pipe	Schedule 40	ASTM D1785	Gasket
Cast Iron Soil Service Pipe	Service Weight	ASTM A-74	Gasket

**Section 10.1.2** Unless otherwise stated, a sanitary sewer main of eight (8 ") inch diameter shall be expected as the minimum size and service connection pipe shall be at least four (4") inches in diameter. The service connection pipe shall be installed at grades approved by the City Engineer.

## **Section 10.2 Joints And Connections**

**Section 10.2.1** Joints for cast iron pipe and vitrified clay sewer pipe or for joints or connections between different types of pipe shall be in the manner and of a kind prescribed by the City Engineer. The City shall provide a list of various types and kinds of joints and connections which are approved by the City Engineer and the types and kinds of joints that are prohibited.

## **Section 10.3 Grades**

**Section 10.3.1** Unless otherwise authorized, all house sewers shall have a grade of not less than one-eighth (1/8") inch per foot. A grade of one-quarter (1/4") inch should be used whenever practical. The contractor shall check grades before construction proceeds and he shall install the house sewer by exposing the wye at the sewer main or the service stub and at the property line. He shall connect to the wye or service stub and shall lay the house sewer line from the wye or service stub to the building. Whenever possible the connecting sewer shall joint the building at an elevation which is below the basement floor of such building.

## **Section 10.4 Alignment**

**Section 10.4.1** No connecting sewer shall contain bends or a combination of bends which at any point shall be greater than forty-five (45°) degrees and no more than two (2) bends, regardless of angle, shall be permitted in any single house connection except where manholes or clean-outs are constructed at such points and in the manner as directed by the City Engineer. No connecting sewer shall be laid parallel to any bearing wall or footing unless it is placed at least three (3') feet from any such bearing wall or footing. No connecting sewer shall be laid within twenty (20') feet of any existing well unless cast iron soil pipe is used.

## **Section 10.5 Trenching And Backfilling**

**Section 10.5.1** All excavations shall be open trench work unless otherwise authorized by the City Engineer. The foundation of the trench shall be formed to prevent any subsequent settlement of the pipes. If the foundation is good and firm earth, the earth shall be pared and molded to give a full support to the lower third (1/3) of the pipe. Bell holes shall be dug to provide sample space for bells. Care must be exercised in back filling below the center line of the pipe in order to give it proper support. Back filling shall be placed in layers and solidly tamped or packed to two (2') feet above the pipe. Back filling shall not be done until the section to be back filled has been inspected by the City Engineer, his representative and the Plumbing Inspector.

## **Section 10.6 Use Of Old House Sewers**

**Section 10.6.1** Old house sewers or portions thereof may be approved for use by the City Engineer. The City Engineer may request that the old sewer be excavated for the purpose of facilitating inspection.

## **Section 10.7 Existing Individual Sewage Treatment System**

**Section 10.7.1** No house sewer shall be laid across or over any existing cesspool or septic tank unless the existing cesspool or septic tank shall first be pumped clean and filled with earth to the surrounding ground level. Where a sewer connection is laid across or over an existing cesspool or septic tank, only cast iron solid pipe, conforming to ASTM Standard Specifications shall be used for that portion of the connecting sewer.

**Section 10.7.2** The contents of the existing cesspool or septic tank shall not be discharged into the City of Gem Lake Municipal Sanitary Sewer System, but must be disposed of outside the City Limits.

## **Section 10.8 Connections At Wye only**

**Section 10.8.1** Every connecting sewer shall be connected to the Municipal Sanitary Sewer System at the wye designated for the property served by the connection, except where otherwise expressly authorized by the City Engineer. All connections made at point other than the designated wye shall be made only under the direct supervision of the City Engineer and in such a manner as he may direct.

## **Section 10.9 Tunneling**

**Section 10.9.1** Tunneling for a distance of not more than six (6) feet is permissible in yards, courts or driveways of any building site. When pipes are driven, the drive pipe shall be at least one size larger than the pipe to be laid.

## **Section 10.10 Independent System Required**

**Section 10.10.1** The drainage and plumbing system of each new building and of new work installed in an existing building shall be separate from and independent of that of any other building except where provide for in Section 10.11 of this Ordinance. Every Building shall have an independent connection with the sanitary sewer system when such is available.

## **Section 10.11 Exception To Requirement Of Independent System**

**Section 10.11.1** Where one building stands to the rear of another building on an interior lot, and no private sewer is available or can be constructed to the rear building through an adjoining alley, court, yard or driveway, the building drain from the front building may be extended to the rear building and the whole will be considered as one building drain.

Where such a building is extended, a clean out shall be provided immediately inside the rear wall of the front building.

### **Section 10.12 Repair Of Public Right-Of-Way**

**Section 10.12.1** For each connection permit issued, a deposit of five hundred dollars (\$500.00) shall be paid to the City Clerk, for restoration of public right-of-way before starting of the project. This deposit will be returned upon satisfactory completion of the connection. Forfeiture of the deposit does not exonerate the permit holder from satisfactory completion of the work.

### **Section 10.13 Costs And Expenses For Installation And Connection**

**Section 10.13.1** All costs and expenses incident to the installation and connection to the Municipal Sanitary Sewer System shall be borne by the owner. The owner shall indemnify the City of Gem Lake for any loss or damage that may directly or indirectly be occasioned by the installation of the sewer connection, including the restoring of streets and street surface.

## **SECTION 11 VIOLATIONS AND PENALTIES**

**Section 11.1** The City of Gem Lake shall have the right to enforce all sections of this Ordinance by injunction or by any other legal remedy, including the right to prohibit the use of the Municipal Sanitary Sewer System by a person violating or operating contrary to these provisions.

**Section 11.2** Any person, firm, corporation or voluntary association which violates or refuses to comply with any of the provisions of this Ordinance shall be guilty of a misdemeanor, and upon conviction thereof be subject to a fine of not more than One Hundred Dollars ( \$100.00) and cost for every offense or to imprisonment not exceeding ninety (90) days. Each day that a violation is permitted to exist shall constitute a separate offense.

## **SECTION 12 APPEALS**

**Section 12.1** Application. Application to appeal a sewer bill shall be made on forms provided by the City Clerk, who shall forward completed applications that include the required information to the City Council, which shall act as the Board of Appeals for review.

**Section 12.2** Deadline for Application. Appeals must be made in writing and submitted to the City Clerk within 15 business days of the date the sewer bill was placed in the United States Mail by the City.

**Section 12.3** Review Process. The City Clerk shall refer the Applications to the City Council and establish a date for hearing on the Application. All Applications shall be processed within 30 days of receipt of the Application by the City Clerk.

**Section 12.4** Notice. Notice of the purpose, time and place of a hearing shall be mailed at least 10 days before the date of the hearing to the Applicant.

**Section 12.5** Decision. The decision of the City Council acting as Board of Appeals to grant or deny the appeal requires majority vote of the members present. Decisions of the City Council on appeals shall be final.

### **SECTION 13 ADOPTION, AMENDMENT AND ENACTMENT**

**Section 13.1** Adopted by the City of Gem Lake City Council this 28th day of March, in the year 1994 and placed in effect on the 28th day of March in the year 1994.

**Section 13.2** Amended by the City of Gem Lake City Council this 21st day of January, in the year 2003 and placed in effect on the 12th day of February in the year 2003.

**Section 13.3** Amended by the City of Gem Lake City Council this 14th day of July, in the year 2004 and placed in effect on the 28th day of July in the year 2004.

**Section 13.4** Amended by the City of Gem Lake City Council this \_\_\_\_ day of \_\_\_\_\_, in the year 2013 and placed in effect on the \_\_\_\_ day of \_\_\_\_\_ in the year 2013.

ENACTED:

**Robert Uzpen**

Robert Uzpen, Mayor

ATTEST:

**William Short**

William Short, City Clerk

CITY OF GEM LAKE  
ORDINANCE NO. 64 LEGEND

The Sanitary Sewer System Ordinance of the City of Gem Lake was originally enacted by the City Council as City of Gem Lake Ordinance No. 64 on 28 March 1994. Since that time, the City Council has adopted several changes in keeping with the changing times and needs and wishes of the community. The following table is added to Ordinance No. 64 as an historic reference to those changes. All changes shown below have been incorporated into Ordinance No. 64 and placed in the public domain or made available to the public following the dates shown.

ORDINANCE	ORDINANCE TITLE & DESCRIPTION	REVISED
64	An Ordinance Regulating The Operation Of The Municipal Sanitary Sewer System; Requiring Connections To Be Made To The Municipal Sanitary Sewer System; Establishing Regulations As To Type And Kinds Of Waste That May Be Disposed Of In The Municipal Sanitary Sewer System; Prohibiting The Discharge Of Any type Or Kind Of Surface Waters Into The Municipal Sanitary Sewer System; Prescribing Rates And Charges For Sewage Disposal Services; Providing For The Issuance Of Permits For and Supervision Of All Connections To The Municipal Sanitary Sewer System; Prescribing Certain Materials And Methods To Be Used For Said Connections; Providing For Licensing Of Sewer Contractors; and, Prescribing Penalties For The Violation Of The Provisions Of This Ordinance	03/28/1994
81	An Ordinance Amending Ordinance No. 64 By Recodifying And Expanding Section 3.2 Definitions, Upgrading References To The Metropolitan Council Environmental Services, Recodifying Table 5.41(4)d, and Providing For Administration Of The Ordinance.	01/21/2003
64D	City Clerk Magnuson recodified by adding the word Section to each section and subsection consistent with other ordinances and amended section numbering of Section 13 to properly reflect codification. Section 12 was added for purposes of codification only. No words, language or content were amended in any way that would affect the content of this ordinance.	04/06/2004
64E	64E An Ordinance Amending Ordinance No. 64 By Adding and Amending Definitions, Connection Requirements, Rates and Charges, Contractor Licensing and Cost Assessment and incorporating changes into Ordinance No. 64 as Ordinance No. 64E.	07/14/2004
93	An Ordinance amending Ordinance 64E by adding a provision to the existing text of Section 5.2.1 providing for the certification of unpaid connection charges to the County Auditor.	02/10/2009

# Appendix C

City of Gem Lake, Ramsey County, Minnesota Ordinance No. 67D

**CITY OF GEM LAKE, RAMSEY COUNTY, MINNESOTA  
ORDINANCE NO. 67D**

**AN ORDINANCE TO THE CITY OF GEM LAKE MUNICIPAL CODE REGARDING  
SUBSURFACE SEWAGE TREATMENT SYSTEMS.**

The City Council of the City of Gem Lake approves the following addition to the Gem Lake Code of Ordinances. This ordinance replaces Ordinance 67 C in its entirety.

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**SECTION 1: INTRODUCTION**

This is an Ordinance authorizing and providing for sewage treatment and soil dispersal in unsewered areas of the City. It establishes:

1. Minimum standards for and regulation of Individual Sewage Treatment Systems (ISTS) and mid-sized Subsurface Sewage Treatment Systems (MSTS) (collectively referred to as SSTS) in unsewered areas of the City of Gem Lake incorporating by reference minimum standards established by Minnesota statutes and administrative rules of the Minnesota Pollution Control Agency (MPCA),
2. Requirements for issuing permits for installation, alteration, repair or expansion of SSTS,
3. Requirements for all SSTS permitted under the revised Minnesota Rules, Chapters 7080 and 7081 to be operated under an approved management plan,
4. Standards for upgrade, repair, replacement, or abandonment of SSTS,
5. Penalties for failure to comply with these provisions,
6. Provisions for enforcement of these requirements, and
7. Standards which promote the health, safety and welfare of the public as reflected in Minnesota Statutes, Sections 115.55, 145A.05, the City Comprehensive Plan and the City Zoning Ordinance.

**SECTION 2: TITLE, PURPOSE AND INTENT**

1. **Title:** The City ordains the City Code the “City of Gem Lake Subsurface Sewage Treatment System (SSTS) Ordinance.”
2. **Purpose:** The purpose of this Ordinance is to establish minimum requirements for regulation of ISTS and MSTS for the treatment and dispersal of sewage within the applicable jurisdiction of the City to protect public health and safety, groundwater quality, and prevent or eliminate the development of public nuisances. It is intended to serve the best interests of the City’s citizens by protecting its health, safety, general welfare, and natural resources.
3. **Intent:** It is intended by the City that this Ordinance will promote the following:
  - (a) The protection of lakes, rivers and streams, wetlands, and groundwater in the City of Gem Lake essential to the promotion of public health, safety, welfare, socioeconomic growth and development of the City.
  - (b) The regulation of proper SSTS construction, reconstruction, repair and maintenance to prevent the entry and migration of contaminants, thereby protecting against the degradation of surface water and groundwater quality.

(c) The establishment of minimum standards for SSTS placement, design, construction, reconstruction, repair and maintenance to prevent contamination and, if contamination is discovered, the identification and control of its consequences and the abatement of its source and migration.

(d) The appropriate utilization of privy vaults and other non-water carried sewage collection and storage facilities.

(e) The provision of technical assistance and education, plan review, inspections, SSTS surveys and complaint investigations to prevent or control water-borne diseases, lake degradation, groundwater related hazards, and public nuisance conditions.

### **SECTION 3: AUTHORITY**

This Ordinance is adopted pursuant to Minnesota Statutes, Section 115.55; Minnesota Statutes, Section 145A.05; or successor statutes, and Minnesota Rules, Chapter 7080, Chapter 7081, Chapter 7082, or successor rules.

### **SECTION 4: EFFECTIVE DATE**

The provisions set forth in this Ordinance shall become effective on passage by the City Council.

### **SECTION 5: DEFINITIONS**

The following words and phrases shall have the meanings ascribed to them in this Section. If not specifically defined in this Section, terms used in this Ordinance shall have the same meaning as provided in the standards adopted by reference. Words or phrases that are not defined here or in the standards adopted by reference shall have common usage meaning. For purposes of this Ordinance, the words "must" and "shall" are mandatory and the words "may" and "should" are permissive.

**Authorized Representative:** An employee or agent of the City of Gem Lake.

**Class V Injection Well:** A shallow well used to place a variety of fluids directly below the land surface, which includes a domestic SSTS serving more than twenty (20) people. The U.S. Environmental Protection Agency and delegated state groundwater programs permit these wells to inject wastes below the ground surface provided they meet certain requirements and do not endanger underground sources of drinking water. Class V motor vehicle waste disposal wells and large-capacity cesspools are specifically prohibited (see 40 CFR Parts 144 & 146).

**Cluster System:** A SSTS under some form of common ownership that collects wastewater from two or more dwellings or buildings and conveys it to a treatment and dispersal system located on an acceptable site near the dwellings or buildings.

**City:** City of Gem Lake, Ramsey County, Minnesota.

**City Council:** The City of Gem Lake City Council.

**Department:** The City of Gem Lake Department designated by the City to administer SSTS.

**Design Flow:** The daily volume of wastewater for which a SSTS is designed to treat and discharge.

**Flood Plain:** The channel or beds proper and the areas adjoining a wetland, watercourse or lake which a regional flood may have or could hereafter cover. Floodplain areas within the City shall include all areas shown as zone A or zone AE on the flood insurance rate map. Refer to the City Floodplain Ordinance for further definitions.

**Failure to Protect Groundwater:** At a minimum, a SSTS that does not protect groundwater is considered to be a seepage pit, cesspool, drywell, leaching pit, or other pit; a SSTS with less than the required vertical separation distance, described in Minnesota Rules, Chapter 7080.1500 Subd. 4 D and E; and a system not abandoned in accordance with Chapter 7080.2500. The determination of the threat to groundwater for other conditions must be made by a Qualified Employee or an individual licensed pursuant to Section 40-237 hereof.

**Imminent Threat to Public Health and Safety:** At a minimum a SSTS with a discharge of sewage or sewage effluent to the ground surface, drainage systems, ditches, storm water drains, or directly to surface water; SSTS that cause a reoccurring sewage backup into a dwelling or other establishment; SSTS with electrical hazards; or sewage tanks with unsecured, damaged, or weak maintenance access covers. The determination of protectiveness for other conditions must be made by a Qualified Employee or a SSTS inspection business.

**ISTS:** An individual sewage treatment system having a design flow of no more than 5,000 gallons per day.

**Industrial Waste:** Sewage containing waste from activities other than sanitary waste from industrial activities including, but not limited to, the following uses defined under the Standard Industrial Classification (SIC) Codes established by the U.S. Office of Management and Budget.

SIC CODE(S)	INDUSTRY CATEGORY
753-7549	Automotive Repairs and Services
7231-7241	Beauty Shops, Barber Shops
7211-7219	Laundry Cleaning and Garment Services
4011-4581	Transportation (Maintenance only)
8062-8069	Hospitals
2000-3999	Manufacturing
2000-2099	Food Products
2100-2199	Tobacco Products
2400-2499	Lumber and Wood Products, except Furniture
2500-2599	Furniture and Fixtures
2600-2699	Paper and Allied Products
2700-2799	Printing, Publishing, and Allied Industries
2800-2899	Chemicals and Allied Products
2900-2999	Petroleum Refining and Related Industries
3000-3099	Rubber and Miscellaneous Plastics
3100-3199	Leather Tanning and Finishing

3000-3099	Rubber and Miscellaneous Plastics
3100-3199	Leather Tanning and Finishing
3200-3299	Stone, Clay, Glass, and Concrete Products
3300-3399	Primary Metal Industries
3400-3499	Fabricated Metal Products (except Machinery, and Transportation Equipment
3500-3599	Industrial and Commercial Machinery and Computer Equipment
3700-3799	Transportation Equipment
3800-3899	Measuring, Analyzing, and Controlling Instruments; Photographic, Medical and Optical Goods; Watches and Clocks
3900-3999	Miscellaneous Manufacturing Industries

**Malfunction:** The partial or complete loss of function of a SSTS component, which requires a corrective action to restore its intended function.

**Management Plan:** A plan that describes necessary and recommended routine operational and maintenance requirements, periodic examination, adjustment, and testing, and the frequency of each to ensure system performance meets the treatment expectations, including a planned course of action to prevent an illegal discharge.

**MDH:** Minnesota Department of Health

**Minor Repair:** The repair or replacement of an existing damaged or faulty component/part of a SSTS that will return the SSTS to its operable condition. The repair shall not alter the original area, dimensions, design, specifications or concept of the SSTS.

**MSTS:** A “midsized subsurface sewage treatment system” under single ownership that receives sewage from dwellings or other establishments having a design flow of more than 5,000 gallons per day to a maximum of 10,000 gallons per day.

**Notice of Noncompliance:** A written document issued by the Department notifying a system owner that the owner’s onsite/cluster treatment system has been observed to be noncompliant with the requirements of this Ordinance.

**MPCA:** Minnesota Pollution Control Agency.

**Qualified Employee:** An employee of the state or a local unit of government, who performs site evaluations or designs, installs, maintains, pumps, or inspects SSTS as part of the individual’s employment duties and is registered on the SSTS professional register verifying specialty area endorsements applicable to the work being conducted.

**Record Drawings:** A set of drawings which to the fullest extent possible document the final as built location, size, and type of all SSTS components including the results of any materials testing performed and a description of conditions during construction of the system.

**Sewage:** Waste from toilets, bathing, laundry, or culinary activities or operations or floor drains associated with these sources, including household cleaners and other constituents in amounts normally used for domestic purposes.

**SSTS:** Subsurface sewage treatment system Including an ISTS or MSTs.

**State:** The State of Minnesota.

**Treatment Level:** Treatment system performance levels defined in Minnesota Rules, Chapter 7083.4030, Table III for testing of proprietary treatment products, which include the following:

Level A: cBOD5 < 15 mg/L; TSS < 15 mg/L; fecal coliforms < 1,000/100 mL.

Level A-2: cBOD5 < 15 mg/L; TSS < 15 mg/L; fecal coliforms N/A

Level B: cBOD5 < 25 mg/L; TSS < 30 mg/L; fecal coliforms < 10,000/100 mL.

Level B-2: cBOD5 < 25 mg/L; TSS < 30 mg/L; fecal coliforms N/A

Level C: cBOD5 < 125 mg/L; TSS < 80 mg/L; fecal coliforms N/A.

**Type I System:** An ISTS that follows a standard trench, bed, at-grade, mound, or graywater system design in accordance with MPCA rules, Minnesota Rules, Chapter 7080.2200 through 7080.2240.

**Type II System:** An ISTS on a lot located in a floodplain, a privy or a holding tank in accordance with MPCA rules, Minnesota Rules, Chapter 7080.2250 through 7080.2290.

**Type III System:** An ISTS having acceptable flow restriction devices to allow its use on a lot that cannot accommodate a standard Type I soil treatment and dispersal system in accordance with MPCA rules, Minnesota Rules, Chapter 7080.2300.

**Type IV System:** An ISTS, having an approved pretreatment device and incorporating pressure distribution and dosing, that is capable of providing suitable treatment for use where the separation distance to a shallow saturated zone is less than the minimum allowed in accordance with MPCA rules, Minnesota Rules, Chapter 7080.2350.

**Type V System:** An ISTS, which is a custom engineered design to accommodate the site taking into account pretreatment effluent quality, loading rates, loading methods, groundwater mounding, and other soil and other relevant soil, site, and wastewater characteristics such that groundwater contamination by viable fecal organisms is prevented in accordance with MPCA rules, Minnesota Rules, Chapter 7080.2400.

**Unsewered Area:** Any area within the City not served by a municipal sanitary sewer collection system permitted by the MPCA.

## **SECTION 6: SCOPE**

This Ordinance regulates the siting, design, installation, alterations, operation, maintenance, monitoring, and management of all SSTS within the City's applicable jurisdiction including, but not necessarily limited to individual SSTS and cluster or community SSTS, privy vaults, and other non-water carried SSTS. All sewage generated in unsewered areas of the City shall be treated and

dispersed by an approved SSTS that is sited, designed, installed, operated, and maintained in accordance with the provisions of this Ordinance or connected to municipal sanitary sewer when it is available in accordance with the City Sanitary Sewer Ordinance. The City Engineer, or his or her designee, shall determine if municipal sanitary sewer is available.

#### **SECTION 7: JURISDICTION**

The jurisdiction of this Ordinance shall include all property within the City limits.

#### **SECTION 8: ADMINISTRATION**

1. **City Administration:** The Department shall administer the SSTS program and all provisions of this Ordinance. At appropriate times, the City shall review or revise or update this Ordinance as necessary. The City shall employ or retain under contract qualified and appropriately licensed professionals to administer and operate the SSTS program.
2. **State of Minnesota:** Where a single SSTS or group of SSTS under single ownership within one-half mile of each other, have a design flow greater than 10,000 gallons per day, the owner or owners shall make application for and obtain a State Disposal System permit from the MPCA. For any SSTS that has a measured daily flow for a consecutive seven-day period which equals or exceeds 10,000 gallons per day, a State Disposal System permit is required. SSTS serving establishments or facilities licensed or otherwise regulated by the State shall conform to the requirements of this Ordinance.

#### **SECTION 9: LIABILITY**

Any liability or responsibility shall not be imposed upon the City or any of its officials, employees, or other contract agent, its employees, agents or servants thereof for damage resulting from the defective construction, operation, or abandonment of any SSTS regulated under this rule by reason of standards, requirements, or inspections authorized hereunder.

#### **SECTION 10: MEASUREMENT OF DISTANCES**

Unless otherwise specified in this division, all distances shall be measured horizontally.

#### **SECTION 11: INTERPRETATION OF CERTAIN ITEMS**

For the purposes of this division, certain terms or words used shall be interpreted as follows: The words "shall" and "must" are mandatory; the words "should" and "may" are permissive.

#### **SECTION 12: RETROACTIVITY**

- (a) **All SSTS.** Except as explicitly set forth in Section (b), all provisions of this Ordinance shall apply to any SSTS regardless of the date it was originally permitted.
- (b) **Existing Permits.** Unexpired permits which were issued prior to the effective date shall remain valid under the terms and conditions of the original permit until the original expiration date or until a change in system ownership whichever is earlier.

- (c) **Two Soil Treatment and Dispersal Areas.** All lots created after January 23, 1996, must have a minimum of two soil treatment and dispersal areas that can support trenches, seepage beds, mounds, and at-grade systems as described in Minnesota Rules, Chapters 7080.2200 through 7080.2230 or site conditions described in Chapter 7081.0270, Subd. 3 through 7. If an additional soil treatment and dispersal area is available on lots created on or before January 23, 1996, it shall be identified in the site evaluation.
- (d) **Existing SSTS without Permits:** Existing SSTS with no permits of record shall require a permit and be brought into compliance with the requirements of this Ordinance regardless of the date they were originally constructed.

### SECTION 13: UPGRADE, REPAIR, REPLACEMENT, AND ABANDONMENT

- (a) **SSTS Capacity Expansions.** Expansion of an existing SSTS must include any system upgrades that are necessary to bring the entire system into compliance with the prevailing provisions of this Ordinance at the time of the expansion.
- (b) **Bedroom Additions.** A compliance inspection is required prior to issuance of a permit for a bedroom addition. If the system is found to be non-compliant, the owner shall upgrade, repair, or replace the existing system prior to issuance of the permit for the bedroom addition.
- (c) **Failure to Protect Groundwater.** A SSTS that is determined not to be protective of groundwater in accordance with Minnesota Rules, Chapter 7080.1500, Subd.4.B shall be upgraded, repaired, replaced or abandoned by the owner in accordance with the provisions of this Ordinance within three (3) months of receipt of a Notice of Noncompliance. If the Department determines that extenuating circumstances exist, this timeframe may be extended to eighteen (18) months from receipt of a Notice of Noncompliance.
- (d) **Imminent Threat to Public Health or Safety:** A SSTS that is determined to be an imminent threat to public health or safety in accordance with Minnesota Rules, Chapter 7080.1500, Subd.4A shall be upgraded, repaired, replaced or abandoned by the owner in accordance with the provisions of this Ordinance within three (3) months of receipt of a Notice of Noncompliance. In the event of an imminent threat to Public Health or Safety, a mitigation plan will be submitted to the department immediately upon discovery. If the Department determines that extenuating circumstances exist, this timeframe may be extended to ten (10) months from receipt of a Notice of Noncompliance.
- (e) **Abandonment.** Any SSTS, or any component thereof, which is no longer intended to be used, must be abandoned in accordance with Minnesota Rules, Chapter 7080.2500.

### SECTION 14: SSTS IN FLOODPLAINS

SSTS shall not be located in a floodplain.

### SECTION 15: CLASS V INJECTION WELLS

All owners of new or replacement SSTS that are considered to be Class V injection wells, as defined in the Code of Federal Regulations (CFR), Title 40, Part 144, are required by the Federal Government to submit SSTS inventory information to the Environmental Protection Agency as described in CFR40, Part 144. Further, owners are required to identify all Class V injection wells in property transfer disclosures.

#### **SECTION 16: SSTS PRACTITIONER LICENSING**

No person shall engage in site evaluation, inspection, design, installation, construction, alteration, extension, repair, maintenance, or pumping of SSTS without an appropriate and valid license issued by MPCA in accordance with Minnesota Rules, Chapter 7083 except as exempted in 7083.0700.

#### **SECTION 17: PROHIBITIONS**

- (a) **Occupancy or Use of a Building without a Compliant SSTS.** It is unlawful for any person to maintain, occupy, or use any building intended for habitation in an unsewered area that is not provided with a wastewater treatment system that disposes of wastewater in a manner that complies with the provisions of this Ordinance.
- (b) **Sewage Discharge to Ground Surface or Surface Water.** It is unlawful for any person to construct, maintain, or use any SSTS system regulated under this Ordinance that results in raw or partially treated wastewater seeping to the ground surface or flowing into any surface water. Any surface discharging system must be permitted under the National Pollutant Discharge Elimination System program by the MPCA.
- (c) **Sewage Discharge to a Well or Boring.** It is unlawful for any person to discharge raw or treated wastewater into any well or boring as described in Minnesota Rules, Chapter 4725.2050, or any other excavation in the ground that is not in compliance with this Ordinance.
- (d) **Discharge of Hazardous or Deleterious Materials.** It is unlawful for any person to discharge into any treatment system regulated under this Ordinance any Industrial Waste, or hazardous or deleterious material that adversely affects the treatment or dispersal performance of the system or groundwater quality.

#### **SECTION 18: STANDARDS ADOPTED BY REFERENCE**

The City hereby adopts by reference Minnesota Rules, Chapters 7080, 7081, 7082 and 7083 in their entirety as now constituted and from time to time amended. This adoption does not supersede the City's right or ability to adopt local standards that are in compliance with Minnesota Statute 115.55.

#### **SECTION 19: AMENDMENTS TO THE ADOPTED STANDARDS**

- (a) **Determination of Hydraulic Loading Rate and SSTS Sizing.** Table IX from Minnesota Rules, Chapter 7080.2150, Subd. 3(E) entitled "Loading Rates for Determining Bottom Absorption Area for Trenches and Seepage Beds for Effluent Treatment Level C and Absorption Ratios for Determining Mound Absorption Areas Using Detail Soil Descriptions" and Table IXa from Minnesota Rules, Chapter



7080.2150 are herein adopted by reference shall be used to determine the hydraulic loading rate and infiltration area for all SSTS permitted under this Ordinance.

- (b) **Compliance Criteria for Existing SSTS.** SSTS built after March 31, 1996 or existing SSTS located in a Shoreland area, existing wellhead Protection area, or serving a food, beverage, or lodging establishment as defined under Minnesota Rules, Chapter 7080.1100, Subd. 84 shall have a three-foot vertical separation between the bottom soil infiltrative surface and the periodically saturated soil and/or bedrock. Existing systems that have no more than a fifteen (15) percent reduction in this separation distance (a separation distance no less than 30.6 inches) to account for settling of sand or soil, normal variation of separation distance measurements and interpretation of limiting layer characteristics may be considered compliant under this Ordinance. The vertical separation measurement shall be made outside the area of system influence but in an area of similar soil. Minnesota Rules, Chapter 7080.1500, Subd.4.
- (c) **Holding Tanks.** Sewage holding tanks may be considered for installation on previously developed sites, as a temporary method for periods of up to one (1) year, during which time measures are being taken to provide municipal sewer service or the installation of an approved system as provided in this Ordinance. Holding tanks may be considered on a permanent basis for nonresidential, low -water use establishments generating less than one hundred fifty (150) gallons per day of waste, subject to approval by the department and the issuance of a certificate of compliance. Holding tanks may also be considered for floor drains for vehicle parking areas and existing facilities potentially generating hazardous waste.
- (d) **Setbacks.** The following setback requirements are in addition to the setbacks required in Table VII in Minnesota Rules Chapter 7080.2150.F:

Table VII: Minimum setback distances (feet)		
Feature	Sewage tank, holding tank, or sealed privy	Absorption area or unsealed privy
Above-ground swimming pools	10	10
In-ground swimming pools	10	20
Shoreland Bluff lines (18% slope)	20	20

The following setback requirements are in addition to the setbacks required in Table II Minnesota Rules Chapter 7081.0270 Subpart 2:

Table II: Minimum setback distances (feet)		
Feature	Sewage tank, holding tank, or sealed privy	Absorption area or unsealed privy
Above-ground swimming pools	10	10

In-ground swimming pools	10	20
Shore land Bluff lines (18% slope)	20	20

Variances to building setbacks included in Minnesota Rules, Chapter 7080 and 7081 may only be considered through the normal City variance process. Variances to shoreland setbacks may be considered through the Shoreland Ordinance. Variances to well and water line setbacks are governed by the MDH.

- (e) **Licensed Professional Engineer Required.** The design of SSTS regulated under Minnesota Rules, Chapter 7081 shall be completed by a licensed Minnesota Professional Engineer, who is also licensed by the MPCA as an Advanced Designer.

**SECTION 20: VARIANCE REQUESTS**

A property owner may request a variance from the standards as specified in this Ordinance pursuant to the requirements provided in Minnesota State Statutes. The City shall consider the requirements of Minnesota Rules Chapter 7082.0300, subd. 2 and 3 when considering such variances. Variances that pertain to the standards and requirements of the State of Minnesota must be approved by the affected State Agency pursuant to the requirements of the State Agency.

**SECTION 21: PERMIT REQUIRED**

It is unlawful for any person to construct, install, modify, replace, or operate a SSTS without the appropriate permit from the Department. The issuing of any permit, variance, or conditional use under the provisions of this Ordinance shall not absolve the applicant of responsibility to obtain any other required permit.

**SECTION 22: CONSTRUCTION PERMIT**

A construction permit shall be obtained by the property owner or an agent of the property owner from the Department prior to the installation, construction, replacement, modification, alteration, repair, or capacity expansion of a SSTS. The purpose of this permit is to ensure that the proposed construction activity is sited, designed, and constructed in accordance with the provisions of this Ordinance by appropriately certified and/or licensed practitioner(s).

- (a) **Activities Requiring a Construction Permit.** A construction permit is required for installation of a new SSTS, for replacement of an existing SSTS, or for any repair or replacement of components that will alter the original function of the system, change the treatment capacity of the system, change the location of the system, or otherwise change the original system’s design, layout, or function.
- (b) **Activities Not Requiring a Permit.** A construction permit is not required for minor repairs or replacements of system components that do not alter the original function of the system, change the treatment capacity of the system, change the location of the system, or otherwise change the original system’s design, layout, or function.

- (c) **Construction Permit Required to Obtain Building Permit.** For any property on which a SSTS permit is required, approval and issuance of a valid SSTS Construction Permit must be obtained before a building or land use permit may be issued by the Department.
- (d) **Conformance to Prevailing Requirements.** Any activity involving an existing system that requires a Construction Permit shall require that the entire system be brought into compliance with this Ordinance.
- (e) **Permit Application Requirements.** Construction Permit applications shall be made on forms provided by the Department and signed by the applicant and an appropriately certified practitioner including the practitioner's certification number and date of expiration. The applications shall include the documents listed in items 1 through 8 below.
  - (1) The correct address and legal description of the property where the proposed work is to take place.
  - (2) The name and contact information (mailing address, telephone number, and e-mail address) of the property owner.
  - (3) The name, contact information, and MPCA License Number of the SSTS Designer responsible for the system design.
  - (4) Site Evaluation Report as described in Minnesota Rules, Chapter 7080.1730 and on the Department's permit application.
  - (5) Design Report as described in Minnesota Rules, Chapter 7080.2430 and on the Department's permit application.
  - (6) Site Plans for the existing and proposed system.
  - (7) Management Plan as described in Minnesota Rules, Chapter 7082.0600.
  - (8) Permit fee.
- (f) **Application Review and Response.** The Department shall review a permit application and supporting documents. Upon satisfaction that the proposed work will conform to the provisions of this Ordinance, the Department shall issue a written permit authorizing construction of the SSTS as designed. In the event the applicant makes a significant change to the approved application, the applicant must contact the Department prior to initiating or continuing construction, modification, or operation to determine whether an amended application will be necessary, as determined by the Department. If determined necessary, the applicant shall file an amended application detailing the changed conditions for approval prior to initiating or continuing construction, modification, or operation for approval or denial. If the permit application is incomplete or does not meet the requirements of this Ordinance the Department shall deny the application. A notice of denial shall be provided to the applicant, which must state the reason for the denial.
- (g) **Permit Expiration.** The Construction Permit is valid for a period of no more than one year from its date of issue. Satisfactory completion of construction shall be determined by receipt of final record drawings and a signed certification that the construction or installation of the system was completed in reasonable conformance with the approved design documents by a qualified employee of the Department or a licensed inspection business, which is authorized by the Department and independent of the owner and the SSTS installer.

- (h) **Extensions and Renewals.** The Department may grant an extension of the Construction Permit if the construction has commenced prior to the original expiration date of the permit. The permit may be extended for a period of no more than six (6) months.
- (i) **Transferability.** A Construction Permit shall not be transferred to a new owner. The new owner must apply for a new Construction Permit in accordance with this section.
- (j) **Suspension or Revocation.** The Department may suspend or revoke a Construction Permit issued under this section for any false statements, misrepresentations of facts on which the Construction Permit was issued, or unauthorized changes to the system design that alter the original function of the system as determined by the Department, change the treatment capacity of the system, change the location of the system, or otherwise change the original system's design, layout, or function. A notice of suspension or revocation and the reasons for the suspension or revocation shall be conveyed in writing to the permit holder. If suspended or revoked, installation or modification of a treatment system may not commence or continue until a valid Construction Permit is obtained.
- (k) **Posting.** The Construction Permit shall be posted on the property in such a location and manner so that the permit is visible and available for inspection until construction is completed and certified.

## SECTION 23: OPERATING PERMIT

- (a) **SSTS Requiring an Operating Permit.** An Operating Permit shall be required of all owners of new holding tanks, Type IV Systems, Type V Systems, MSTs, or any other system deemed by the Department to require operational oversight. Sewage shall not be discharged to these systems until the Department certifies that the system was installed in substantial conformance with the approved plans, receives the final record drawings of the system, and a valid Operating Permit is issued to the owner.
- (b) **Permit Application Requirements.**
  - (1) Application for an Operating Permit shall be made on a form provided by the Department including:
    - a. Owner name, mailing address, telephone, and email address
    - b. Construction Permit reference number and date of issue
    - c. Final record drawings of the treatment system
    - d. Owners of holding tanks must submit a copy of a valid executed monitoring and disposal contract with a licensed maintenance business
  - (2) Owners of holding tanks shall provide to the Department a copy of a valid monitoring and disposal contract executed between the owner and a licensed maintenance business, which guarantees the removal of the holding tank contents in a timely manner that prevents an illegal discharge in accordance with Minnesota Rules, Chapter 7082.0100, Subd. 3G. This requirement is waived if the owner is a farmer who is exempt from licensing under Minnesota Statutes, section 115.56, subdivision 3, paragraph (b), clause (3).
  - (3) All SSTs existing prior to the effective date of this Ordinance shall require an operating permit upon transfer of ownership, replacement, any modification or expansion that requires a permit, or following any SSTs enforcement action.

- (c) **Department Response.** The Department shall review the record drawings, operation and maintenance manual, management plan, maintenance and servicing contract, and any other pertinent documents as appropriate for accuracy and completeness. If any deficiencies are identified, the operating permit shall be denied until the deficiencies are corrected to the satisfaction of the Department.
- d. **Operating Permit Terms and Conditions.** The Operating Permit shall include the following:
- (1) System performance requirements
  - (2) System operating requirements
  - (3) Monitoring locations, procedures and recording requirements
  - (4) Maintenance requirements and schedules
  - (5) Compliance limits and boundaries
  - (6) Reporting requirements
  - (7) Department notification requirements for non-compliant conditions
  - (8) Valid contract between the owner and a licensed maintenance business
  - (9) Disclosure, location and condition of acceptable soil treatment and dispersal system site
  - (10) Descriptions of acceptable and prohibited discharges
- (e) **Permit Expiration and Renewal**
- (1) Operating Permits shall be valid for the specific term stated on the permit as determined by the Department.
  - (2) An Operating Permit must be renewed prior to its expiration. If not renewed, the Department may require the system to be removed from service or operated as a holding tank until the permit is renewed. If not renewed within ninety (90) calendar days of the expiration date, the City may require that the system be abandoned.
  - (3) Application shall be made on a form provided by the Department including:
    - a. Applicant name, mailing address, telephone number, and e-mail address.
    - b. Reference number of previous owner's operating permit.
    - c. Any and all outstanding Compliance Monitoring Reports as required by the Operating Permit.
    - d. Certified treatment system inspection signed and/or sealed by a certified designer, maintenance contractor, or operator at the discretion of the City.
    - e. Any revisions made to the operation and maintenance manual.
    - f. Payment of application review fee as determined by the City.
- (f) **Amendments to Existing Permits not Allowed.** The City may not amend an existing permit to reflect changes in this Ordinance until the permit term has expired and is renewed, unless an amendment is necessary to eliminate an imminent threat to public health or safety.
- (g) **Transfers.** The Operating Permit may not be transferred. A new owner shall apply for an Operating Permit. The Department shall not terminate the current permit until sixty (60) calendar days after the date of sale unless an imminent threat to public health and safety exists. To consider the new owner's application, the Department may require a performance inspection of the treatment system certified by a service provider or qualified employee.
- (h) **Suspension or Revocation.**
- (1) The Department may suspend or revoke any operating permit issued under this

section for any false statements or misrepresentations of facts on which the Operating Permit was issued.

- (2) Notice of suspension revocation and the reasons for revocation shall be conveyed in writing to the owner.
  - (3) If suspended or revoked, the Department may require that the treatment system be removed from service, operated as a holding tank, or abandoned in accordance with Section 40-276.
  - (4) At the Department's discretion, the operating permit may be reinstated or renewed upon the owner taking appropriate corrective actions.
- (i) **Compliance Monitoring**
- (1) Performance monitoring of a SSTS shall be performed by a licensed inspection business or licensed service provider hired by the holder of the operating permit in accordance with the monitoring frequency and parameters stipulated in the permit.
  - (2) A monitoring report shall be prepared and certified by the licensed inspection business or licensed service provider. The report shall be submitted to the Department on a form provided by the Department on or before the compliance reporting date stipulated in the operating permit. The report shall contain a description of all maintenance and servicing activities performed since the last compliance monitoring report as described below:
    - a. Owner name, mailing address, telephone number, and e-mail address.
    - b. Operating Permit number
    - c. Average daily flow since last compliance monitoring report
    - d. Description of type of maintenance and date performed
    - e. Description of samples taken (if required), analytical laboratory used, and results of analyses
    - f. Problems noted with the system and actions proposed or taken to correct them
    - g. Name, signature, license and license number of the licensed professional who performed the work.

## **SECTION 24: ABANDONMENT CERTIFICATION**

(a) **Purpose**

The purpose of the System Abandonment Certification is to ensure that a treatment system no longer in service is abandoned within a reasonable time following decommissioning and in a manner that protects public health, safety and water quality. It also terminates all permits associated with the system.

(b) **Abandonment Requirements**

- (1) Whenever the use of a SSTS or any system component is discontinued as the result of a system repair, modification, replacement or decommissioning following connection to a municipal or private sanitary sewer, or condemnation or demolition of a building served by the system, further use of the system or any system component for any purpose under this Ordinance shall be prohibited.
- (2) Continued use of a treatment tank where the tank is to become an integral part of a replacement system or a sanitary sewer system requires the prior written approval of the Department.

- (3) An owner of a SSTS must retain a licensed installation business to abandon all components of the treatment system within sixty (60) calendar days of discontinued use. Abandonment shall be completed in accordance with Minnesota Rules, Chapter 7080.2500. No prior notification to the Department of an owner's intent to abandon a system is necessary.
- (4) A report of abandonment certified by the licensed installation business shall be submitted to the Department. The report shall include:
  - a. Owner's name, mailing address, telephone number, and e-mail address.
  - b. Property address
  - c. System construction permit and operating permit
  - d. The reason(s) for abandonment
  - e. A brief description of the abandonment methods used, description of the system components removed or abandoned in place, and disposition of any materials or residuals.
- (c) **Abandonment Certificate.** Upon receipt of an abandonment report and its determination that the SSTS has been abandoned according to the requirements of this Ordinance, the Department shall issue an abandonment certificate. If the abandonment is not completed according the requirements of this Ordinance the City shall notify the owner of the SSTS of the deficiencies, which shall be corrected within thirty (30) calendar days of the notice.

## SECTION 25: MANAGEMENT PLANS

- (a) **Purpose:** The purpose of management plans is to describe how a particular SSTS is intended to be operated and maintained to sustain the performance required. The plan is to be provided by the certified designer to the system owner when the treatment system is commissioned.
- (b) **Management Plan Requirements:** Management plans are required for all new or replacement SSTS. The management plan shall be submitted to the Department with the construction permit application for review and approval within 30 days of planned start of construction. The Department shall be notified of any system modifications made during construction and the management plan revised and resubmitted at the time of final construction certification.
- (c) **Required Contents of a Management Plan:** Management plans shall include:
  - (1) Operating requirements describing tasks that the owner can perform and tasks that a licensed service provider or maintainer must perform;
  - (2) Monitoring requirements;
  - (3) Maintenance requirements including maintenance procedures and a schedule for routine maintenance;
  - (4) Statement that the owner is required to notify the Department when the management plan requirements are not being met;
  - (5) Disclosure of the location and condition of the additional soil treatment and dispersal area on the owner's property or a property serving the owner's residence;
  - (6) A description of the system and each component;
  - (7) A description of how the system functions;
  - (8) A site plan of the system;
  - (9) Equipment specifications;

- (10) Emergency operating procedures in the event of a malfunction;
- (11) A troubleshooting guide
- (d) **Requirements for Systems not operated Under a Management Plan:** SSTS that are not operated under a management plan or operating permit must have treatment tanks inspected and provide for the removal of solids if needed every three years. Solids must be removed when their accumulation meets the limit described in Minnesota Rules, Chapter 7080.2450. System owners shall be required to submit a MPCA Septic Tank Maintenance Reporting Form to the Department every three (3) years.

## SECTION 26: COMPLIANCE INSPECTION PROGRAM

- (a) **Department Responsibility.** It is the responsibility of the Department, or its agent, to perform various SSTS compliance inspections periodically to assure that the requirements of this Ordinance are met.
  - (1) SSTS compliance inspections must be performed:
    - a. To ensure compliance with applicable requirements;
    - b. To ensure system compliance before issuance of a permit for addition of a bedroom unless the permit application is made during the period of November 1 to April 30, provided a compliance inspection is performed before the following June 1 and the applicant submits a Certificate of Compliance by the following September 30;
    - c. For all new SSTS construction or replacement;
    - d. For an evaluation, investigation, inspection, recommendation, or other process used to prepare a disclosure statement if conducted by a party who is not the SSTS owner. Such an inspection constitutes a compliance inspection and shall be conducted in accordance with Minnesota Rules, Chapter 7082.0700 using the SSTS inspection report forms provided by MPCA.
  - (2) All compliance inspections must be performed and signed by the service provider or qualified employees.
  - (3) The Department shall be given access to enter a property at any reasonable time to inspect and/or monitor the SSTS system. As used in this paragraph, "property" does not include a residence or private building. The Department shall notify the owner of the Department's intent to inspect the SSTS least two (2) days in advance of the intended inspection.
  - (4) No person shall hinder or otherwise interfere with the Department's employees in the performance of their duties and responsibilities pursuant to this Ordinance. Refusal to allow reasonable access to the property by the Department shall be deemed a separate and distinct offense.
- (b) **New Construction or Replacement.**
  - (1) Compliance inspections must be performed on new or replacement SSTS to determine compliance with Minnesota Rules, Chapters 7080 or 7081.
  - (2) It is the responsibility of the SSTS owner or the owner's agent to notify the Department two (2) calendar days prior to any permitted work on the SSTS.
  - (3) Installation inspections shall be made at each installation, prior to any work having been covered by backfill. Work that is backfilled prior to the required inspection may be ordered to be uncovered whenever necessary to determine compliance.



- (4) The licensed installer shall be responsible for notifying the department a minimum of twenty four (24) hours before the time the work is ready for inspection or reinspection.
- (5) When, upon inspection, any part of the system is determined not to be in compliance with this division, written notice shall be provided by the Department indicating the deficiency and the required corrections.
- (6) Noted deficiencies shall be properly corrected and reinspected before any other work on the project is continued.
- (7) SSTS found not to be in compliance with Minnesota Rules, Chapter 7080.1500, Subd. 4A or Chapter 7081.0080, Subd. 3 must be repaired or replaced within ten (10) months.
- (8) No system shall be placed or replaced in service until final inspection and approval of the installation.
- (9) The contractor, upon completion of the installation, shall file with the department as-built drawings indicating the location of system components dimensioned from a permanent reference point.
- (10) A minimum of three construction inspections are required for mounds in accordance with the following:
  - a. When the original soil under the mound has been roughened, but prior to placement of the sand fill. Enough of the proposed sand fill must be present to be viewed.
  - b. After placement of rock and piping but prior to cover.
  - c. Final inspection, when the job is completed.
- (11) SSTS that are determined to have operation or monitoring deficiencies must immediately be maintained, monitored or otherwise managed according to the operating permit.
- (12) A Certificate of Compliance for new SSTS construction or replacement shall be issued by the Department if the Department has reasonable assurance that the system was built in accordance with the applicable requirements as specified in the construction permit.
- (13) The Certificate of Compliance must include a certified statement by the service provider or qualified employee who conducted the inspection that the SSTS is or is not in compliance with the Ordinance requirements. If the SSTS is determined not to be in compliance with the applicable requirements, a Notice of Noncompliance must be issued to the owner which includes a statement specifying those Ordinance provisions with which the SSTS does not comply.
- (14) The Certificate of Compliance or Notice of Noncompliance must be submitted to the Department no later than fifteen (15) calendar days after the date the inspection was performed. The Department shall deliver the Certificate of Compliance or Notice of Noncompliance to the owner or the owner's agent within fifteen (15) calendar days of receipt from the service provider or qualified employee. No SSTS shall be placed into operation until a valid certificated of compliance has been issued.
- (15) Certificates of Compliance for new construction or replacement shall remain valid for five (5) years from the date of issue unless the Department finds evidence of noncompliance.

**(c) Existing Systems**

- (1) Compliance inspections shall be required when any of the following conditions occur:
  - a. When a construction permit is required to repair, modify, or upgrade an existing system;
  - b. Any time there is an expansion of use of the building being served by an existing SSTS which may impact the performance of the system;
  - c. Any time there is a change in use of the property being served by an existing SSTS which may impact the performance of the system;
  - d. At any time as required by this Ordinance or the Department deems appropriate such as upon receipt of a complaint or other notice of a system malfunction.
- (2) Compliance inspections of existing SSTS shall be reported on the inspection report forms provided by MPCA. The following conditions must be assessed or verified:
  - a. Water-tightness assessment of all treatment tanks including a leakage report;
  - b. Vertical separation distance between the bottom of the soil treatment and dispersal system and the periodically saturated soil or bedrock including a vertical separation verification report;
  - c. Sewage backup, surface seepage, or surface discharge including a hydraulic function report.
  - d. Safety assessments of tanks and covers.
  - e. Any other issues deemed to impact public health and safety or is non-protective of the ground water.
- (3) The Certificate of Compliance must include a certified statement by a service provider or qualified employee, indicating whether the SSTS is in compliance with the Ordinance requirements. If the SSTS is determined not to be in compliance with the applicable requirements, a Notice of Noncompliance must include a statement specifying those Ordinance provisions with which the SSTS does not comply. A construction permit application must be submitted to the Department if the required corrective action is not a minor repair.
- (4) The Certificate of Compliance or Notice of Noncompliance must be submitted to the Department no later than fifteen (15) calendar days after the date the inspection was performed. The Department shall deliver the Certificate of Compliance or Notice of Noncompliance to the owner or the owner's agent within fifteen (15) calendar days of receipt from the service provider or qualified employee.
- (5) Certificates of Compliance for existing SSTS shall remain valid for three (3) years from the date of issue unless the Department finds evidence of noncompliance.

**(d) Periodically Saturated Soil Disagreements:** Disputes involving documented discrepancies on the depth of the periodically saturated soil for SSTS design or compliance purposes shall be resolved according to Minnesota Rules, Chapter 7082.0700, subd. 5.

**(e) Cost of**

- (1) The department shall conduct an annual maintenance inspection. The cost of Inspection of SSTS in the City shall be the sole responsibility of the Property Owner and shall be as established by the City of Gem Lake Counsel and from time to time amended by resolution. An invoice for fees associated with Annual Inspections will be provided at the time of inspection by the Qualified Employee. Any fees for Annual Inspection which remain unpaid for more than sixty (60) days by the Property Owner to the City may, along with

related administrative fees, by certified to Ramsey County for assessment against the real property upon which the SSTS is located.

- (2) On or before the first day of September (September 1<sup>st</sup>) of each year the City Clerk shall list the total unpaid charges for each Remedial Action taken against each separate lot or parcel to which they are attributable under this Ordinance. The City Council may then charge all or any portion of such charges plus an additional administrative fee of Fifty (\$50.00) Dollars against the real property involved as a special assessment under applicable Minnesota Statutes for certification to the County Auditor for collection in the following year with that year's current taxes payable.

**(f) Transfer of Properties**

- (1) Whenever a conveyance of land including a structure that is required to have a SSTS occurs, which includes property foreclosures and tax forfeited transfers, the following requirements shall be met:
  - a. A compliance inspection shall have been performed and a Certificate of Compliance shall have been submitted to the Department within three (3) years for SSTS older than five years or within five (5) years if the system is less than five years old, prior to the intended sale or transfer of the property, unless evidence is found identifying the SSTS as an Imminent Threat to Public Health and Safety or Failing to Protect Groundwater.
  - b. The compliance inspection must have been performed by a service provider or qualified employee following procedures described in Section 26.
  - c. The seller of the property must disclose in writing information about the status and location of all known SSTS on the property to the buyer on a form acceptable to the Department.
  - d. If the seller fails to provide a Certificate of Compliance, the seller shall provide the buyer sufficient security in the form of an escrow agreement to assure the installation of a compliant SSTS. The security shall be placed in an escrow with a licensed real estate closer, licensed attorney-at-law, or Federal or State chartered financial institution. The amount escrowed shall be equal to one hundred fifty percent (150%) of a written estimate to install a compliant SSTS as provided by a licensed SSTS installer, or the amount escrowed shall be equal to one hundred ten percent (110%) of the written contract price for the installation of a compliant SSTS provided by a licensed SSTS installer. After a compliant SSTS has been installed and a Certificate of Compliance issued, the Department shall provide the escrow agent a copy of the Certificate of Compliance. The escrow may also be used to connect to a municipal sanitary sewer collection system permitted by the MPCA if the Department determines that an extension of the municipal sanitary sewer collection system to serve the property is feasible.
- (2) A Certificate of Compliance is not required if the sale or transfer involves the following circumstances:
  - a. The affected tract of land is without buildings or contains no dwellings or other buildings with plumbing fixtures.
  - b. The transfer does not require the filing of a Certificate of Real Estate Value, as described in Minnesota Statutes, Section 272.115, Subdivision 1.

- c. The sale or transfer completes a contract for deed or purchase agreement entered into prior to the effective date of this Ordinance. This subsection applies only to the original vendor and vendee on such a contract.
  - d. All dwellings or other buildings are served by a municipal sanitary sewer collection system permitted by the MPCA.
- (3) All property conveyances subject to this ordinance occurring during the period between November 15th and April 15th, when SSTS compliance cannot be determined due to frozen soil conditions, shall require a winter agreement, which includes an application for a SSTS permit and an agreement to complete a compliance inspection by the following June 1st by a licensed inspection business. If upon inspection the SSTS is found to be in compliance, the permit fee will be refunded. If upon inspection the system is found to be non-compliant, an escrow agreement must be established in accordance with paragraph (1) d. above, and a compliant SSTS installed within the timeframe outlined in the Notice of Noncompliance.
- (4) The responsibility for completing the compliance inspection under paragraph (1) a. above, or for upgrading a system found to be non-compliant shall be determined by the buyer and seller. Buyer and seller shall provide the Department with a signed statement indicating responsibility for completion of the compliance inspection and for upgrading a system found to be non-compliant.
- (5) The issuance of permits, Certificates of Compliance, or Notices of Noncompliance shall not be construed to represent a guarantee or warranty of the system's operation or effectiveness. Such permits or certificates only represent that the system has been designed and installed in compliance or non-compliance with the provisions of these standards and regulations.

## SECTION 27: VIOLATIONS

- (a) **Cause to Issue a Notice of Violation.** Any person, firm, agent, or corporation who violates any of the provisions of this Ordinance, or who fails, neglects, or refuses to comply with the provisions of this Ordinance, including violations of conditions and safeguards, or who knowingly makes any material false statement or knowing omission in any document required to be submitted under the provisions hereof, shall be guilty of a misdemeanor and upon conviction thereof, shall be punishable as defined by Minnesota State Statutes. Each day that a violation exists shall constitute a separate offense.
- (b) **Notice of Violation.** The Department shall serve, in person or by mail, a notice of violation to any person determined to be violating provisions of this Ordinance. The notice of violation shall contain:
- (1) A statement documenting the findings of fact determined through observations, inspections, or investigations;
  - (2) A list of specific violation(s) of this Ordinance
  - (3) Specific requirements for correction or removal of the specified violation(s);
  - (4) A mandatory time schedule for correction, removal and compliance with this Ordinance.
- (c) **Cease and Desist Orders.** Cease and desist orders may be issued when the Department has probable cause that an activity regulated by this or any other City Ordinance is being or has been conducted without a permit or in violation of a permit. When work has been stopped by a cease and desist order, the work shall not resume until the reason for the work

stoppage has been completely satisfied, any administrative fees paid, and the cease and desist order lifted.

#### **SECTION 28: PROSECUTION**

In the event of a violation or threatened violation of this Ordinance, the City may, in addition to other remedies, initiate appropriate civil action or proceedings to prevent, prosecute, restrain, correct or abate such violations or threatened violations and the City Attorney shall have authority to commence such civil action. The Department and City Attorney may take such actions as may be necessary to enforce the provisions of this Ordinance.

#### **SECTION 29: STATE NOTIFICATION OF VIOLATION**

In accordance with state law, the Department shall notify the MPCA of any inspection, installation, design, construction, alteration or repair of a SSTS by a licensed/certified person or any septage removal by a licensed pumper that is performed in violation of the provisions of this Ordinance. If there is known contamination of groundwater, the City also may notify the MDH for a possible well advisory.

#### **SECTION 30: COSTS AND REIMBURSEMENTS**

If the Department is required to remove or abate an imminent threat to public health or safety, the Department may recover all costs incurred in removal or abatement in a civil action, including legal fees; at the discretion of the City Council, the cost of an enforcement action under this Ordinance may be assessed against the real property on which the public health nuisance was located.

#### **SECTION 31: RECORD KEEPING**

The City shall maintain a current record of all permitted systems. The record shall contain all permit applications, issued permits, fees assessed, variance requests, certificates of compliance, notices of noncompliance, enforcement proceedings, site evaluation reports, design reports, record drawings, management plans, maintenance reports, an annual list of all sewage tanks installed in the City sorted by licensed installation businesses, and other records relevant to each system.

#### **SECTION 32: ANNUAL REPORT**

The Department shall provide an annual report of SSTS permitting activities to MPCA no later than February 1 for the previous calendar year.

#### **SECTION 33: FEES**

From time to time, the City Council shall establish fees for activities undertaken by the Department pursuant to this Ordinance. Fees shall be due and payable at a time and in a manner to be determined by the Department.

**SECTION 34: INTERPRETATION**

In their interpretation and application, the provisions of this Ordinance shall be held to be minimum requirements and shall be liberally construed in favor of the City and shall not be deemed a limitation or repeal of any other powers granted by Minnesota Statutes.

**SECTION 35: 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.


**SECTION 36: ABROGATION AND GREATER RESTRICTIONS**

It is not intended by this Ordinance to repeal, abrogate, or impair any other existing City Ordinance, easements, covenants, or deed restrictions. However, where this Ordinance imposes greater restrictions, the provisions of this Ordinance shall prevail. All other Ordinances inconsistent with this Ordinance are hereby repealed to the extent of the inconsistency only.

WHEREUPON, the above ordinance was adopted at the regular City Council Meeting for the City of Gem Lake, Ramsey County Minnesota, made by Councilmember Lindner and seconded by Councilmember Artig-Swomley.

**ATTEST**

I, William Short, the duly qualified City Clerk of the City of Gem Lake, County of Ramsey, State of Minnesota, do hereby certify that the foregoing ordinance is a true and accurate representation of action taken by the City Council of the City of Gem Lake on the date first written.

  
\_\_\_\_\_  
William Short, City Clerk

  
\_\_\_\_\_  
Date

# Appendix D

City of Gem Lake, Minnesota Ordinance No. 129

**City of Gem Lake**  
**Municipal Water and Sanitary Sewer System**  
**Ordinance Number 129**

**Municipal Water and Sanitary Sewer System.** The City's municipal systems consisting of lift stations, manholes, collection piping, service piping, force main, and associated appurtenances located within the public right-of-way and applicable easements shall be operated as a public utility and convenience from which revenue shall be derived, subject to the provisions of this chapter. This chapter shall be referred to as the City's Utility Regulations.

**Compliance with Regulations.** No person, firm or corporation shall connect any water or sanitary sewer service to the municipal systems or make use of the systems except in the manner provided in this chapter. All connections to or extensions of the systems shall be in accordance with relevant portions of the Minnesota Building Code, Minnesota Plumbing Code, and City of Gem Lake Standard Details for utility construction.

**Sanitary Sewer and Water Fund.** There is also created and the City shall maintain on the official books and records of the City a separate and special fund to be designated as the Sanitary Sewer Fund, and a special fund to be designated as the Water Fund which shall be held and administered by the City separate and apart from all other funds until the purposes for its creation have been accomplished.

**Connections with Sewer Required.**

- (A) **Existing Structures.** Any buildings presently used or capable of being used for human habitation or in which a toilet or other plumbing facilities for disposal of human waste is installed and located on property adjacent to a sewer main, or in the platted block through which the system extends, shall be connected to the Municipal Sanitary Sewer System within one year from the date on which a connection is available to such building. Where the property owner has failed to connect to the sanitary sewer system within ten years or within six months if the septic system fails, the following procedures shall be followed:
- (1) The property owner shall be notified that it is the intent of the City to connect the property to the sanitary sewer system and assess the cost of connection against the property owner. The notice shall be mailed by registered mail to the property address.



- (2) The cost of the improvement shall include all costs incurred by the City in order to connect the property to the main sewer line and shall include City permit and connection charges which must be submitted to the Metropolitan Council Environmental Services.
- (B) New Structures. All buildings hereafter constructed within the City on property adjacent to a sewer main or in a platted block through which the Municipal Sanitary Sewer System extends, shall be provided with a connection to the sewer system for disposal of all human waste before occupancy of the building shall be allowed or a certificate of occupancy issued.
- (C) Sewer Not Available. Where sewer is not available to a building, the building shall be connected to and deliver waste to an individual sewage treatment system.

**Municipal Sanitary Sewer System Charges**. A portion of the cost of constructing and maintaining the municipal sanitary sewer system shall be recovered by the imposition of special assessments pursuant to Minnesota Statute 429, a connection charge, and a sewer availability charge (SAC) on behalf of the Metropolitan Council.

- (A) Connection Charge. A connection charge, as determined from time to time by City Council ordinance, shall be collected when housing units are connected to the Municipal Sanitary Sewer System. In addition, before a connection permit will be issued, the City shall determine that one of the following conditions exist:
- (1) The lot or tract of land to be served by such connection has been assessed for the cost of construction of the sanitary sewer main with which the connection is made; or
  - (2) If no special assessment has been levied for such construction cost, the proceedings for levying the special assessments have been or will be commenced and completed in due course; or
  - (3) If no special assessment has been levied, and no special assessment proceedings will be completed in due course, a sum equal to the portion of the cost of construction of the sanitary sewer main which would be assessable against said lot or tract has been paid to the City; or

- (4) If none of the above conditions are met, no permit to connect to any sanitary sewer main shall be issued unless the applicant shall pay an additional connection fee which shall be equal to the portion of the cost of construction of the said sanitary sewer main which would be specially assessed against said lot or tract served by such connection. Said assessable cost is to be determined by the Engineer upon the same basis as any special assessment previously levied against other property for said main. If no special assessment has been levied, the assessable cost will be determined upon the basis of the uniform charge which may have been or which shall be charged for similar connection with said sanitary sewer main.
- (B) The Metropolitan Council has established sewer service availability and connection charges (SAC) for all buildings constructed or connected to the Metropolitan Disposal System.

#### **Connections with Water Required**

- (A) **Existing Structures.** Any buildings presently used or capable of being used for human habitation or in which a toilet or other plumbing facilities for disposal of human waste is installed and located on property adjacent to a water main, or in the platted block through which the system extends, shall be connected to the Municipal Water System within ten years from the date on which a connection is available to such building. Where the property owner has failed to connect to the s system within ten years the following procedures shall be followed:
  - (1) The property owner shall be notified that it is the intent of the City to connect the property to the water system and assess the cost of connection against the property owner. The notice shall be mailed by registered mail to the property address.
  - (2) The cost of the improvement shall include all costs incurred by the City in order to connect the property to the main water line and shall include City permit and connection charges which must be submitted to the Metropolitan Council Environmental Services.
- (B) **New Structures.** All buildings hereafter constructed within the City on property adjacent to a water line or in a platted block through which the Municipal Water System extends, shall be provided with a connection

to the water system before occupancy of the building shall be allowed or a certificate of occupancy issued.

**Municipal Water System Charges** A portion of the cost of constructing and maintaining the municipal water system shall be recovered by the imposition of special assessments pursuant to Minnesota Statutes 429, trunk water facilities charges, and connection charges.

- (A) **Trunk Water Facility Charges.** The trunk water facility charge shall be collected when the property is platted, subdivided or otherwise developed. These charges are required to be paid to the City prior to the City accepting the lateral water mains, pipes and appurtenances constructed by the property owner. The charge is calculated as a lump sum amount determined by multiplying a front foot charge, as determined from time to time by the City Council ordinance, times the lineal feet of all streets within or abutting the plat, subdivision or development and shall be computed by the Engineer and paid by the property owner to the City prior to the issuance of any building permit.
  
- (B) **Connection Charge.** A connection charge, as determined from time to time by City Council ordinance, shall be collected when housing units are connected to the municipal water system. In addition, before a connection permit will be issued, the City shall determine that one of the following conditions exist:
  - (1) The lot or tract of land to be served by such connection or tap has been specially assessed for the cost of constructing the water main and trunk water systems with which the connection is made; or
  - (2) If no special assessment has been levied for such construction cost, the proceedings for levying special assessments have been or will be commenced in due course; or
  - (3) If no special assessment has been levied, and no special assessment proceedings will be completed in due course, a sum equal to the portion of the cost of constructing the water main and trunk water system, which would be assessable against said lot or tract, has been paid to the City; or
  - (4) If none of the above conditions are met, no permit to tap or

connect to any water main or trunk water system shall be issued unless the applicant shall pay an additional connection fee which shall be equal to the portion of the cost of constructing the water main and trunk water system which would be assessable against said lot or tract serviced by the connection. The assessable cost is to be determined by the Engineer upon the same basis as any assessment previously levied against other property for the water main and trunk water system. If no assessment has been levied, the assessable cost will be determined upon the basis of the uniform charge which may have been or which shall be charged for similar tapping or connection with said main and trunk system, determined on the basis of the total assessable cost of the water main and trunk water system, allocated on a frontage basis, plus the cost of service or services.

**Connection Permits.** A permit must be obtained to connect to the municipal systems. The connection permit fee, as established by Gem Lake City Council ordinance, shall be submitted at the time of permit application. All permits for service installations shall be made by the owner of the property, or his duly authorized agent and shall state the size and location of the service connection and all other information as required. The applicant shall pay to the City prior to the issuance of the permit, the total amount of fees or deposit required for the installation of the service connection as herein provided. No permit shall be issued except to a licensed plumber, certified pipe layer, or homeowner performing work on his or her own premises. City inspections are required for all connections to, and extensions of, the municipal systems.

**Statements for Water and Sanitary Sewer Use Charges.**

- (A) Water and Sanitary sewer use charges, as determined from time to time by City Council ordinance shall be payable quarterly. Such statements shall be due and payable on or before the first day of the second month following receipt of the billing. Where service is for less than a quarterly period, the quarterly charge shall be pro-rated on a monthly basis. . If a water meter is found to have been operating in a faulty manner, the amount of water used will be estimated in accordance with the amount used previously in comparable periods of the year.
- (B) **Penalties for Delinquent Payments.** A penalty equal to 10% of the amount due shall be added to accounts not paid in full on or before the first day of the second month following the billing period and to each quarterly billing thereafter until the amount of the delinquent account plus accrued penalty is paid in full or otherwise certified to the County

Auditor as a delinquent account.

- (C) Annual Certification of Delinquent Accounts. Each year the City shall prepare a list of delinquent service charge accounts, including accrued penalties thereon, in the form of an assessment roll. The City Council shall annually review the delinquent service charge assessment roll and adopt an appropriate resolution directing that the assessment roll be certified to the County Auditor as a lien against the premises served and directing that the County Auditor collect the assessment as part of the ensuing year's tax levy.

**Service Charges relating to Municipal Water Utility.** When actions or activities of water customers require coordination with or a call out of City utility personnel (e.g. turning water supply on/off at curbs tops), a water service charge shall be assessed to the utility account. When the call out occurs outside of normal business hours, it will be deemed an emergency call out. The service charges for regular and emergency call outs will be established by Gem Lake City Council ordinance.

**Discontinuance of Water Service.**

- (A) Conditions. The City reserves the right to discontinue service to any consumer of the municipal water system whenever:
- (1) The owner or occupant of the premises served, or any persons working on any pipes or equipment thereon which are connected with the water system, has violated or threatens to violate or causes to be violated, any of the City's water utility regulations.
  - (2) In the judgment of the City or its designee, such action is necessary to protect the purity of the municipal water supply or the safety of the water system and/or life, health, or safety of its consumers.
  - (3) Any charge for water, service, meter, or other financial obligation imposed on the present or former owner or occupant of the premises served, is paid.
  - (4) The owner or occupant of the premises served has made fraudulent statements or misrepresentations in connection with an application for service.
  - (5) The property is unsecured and/or vacant.

- (B) Procedure. Prior to shut off, the property will be posted, and the owner and/or occupant of the property shall be mailed notice to the last address shown on the application on file with the City and current billing statements. Said notice shall advise the owner and/or occupant of the reason for the proposed shut off and that a hearing may be requested in writing within ten (10) days of the date shown on the notice given to them. It shall further provide that failure to request a hearing in writing to the City shall be deemed a waiver and that the water will be shut off upon the expiration of the ten (10) days.

**Authorized Water Shut Downs.** The City shall not be liable for any deficiency or failure in the supply of water to consumers, whether occasioned by shutting the water off for the purpose of making repairs or connections, or from any other cause whatever. In case of fire, or alarm of fire, water may be shut off to insure a supply for firefighting. When making repairs to existing infrastructure or construction of new infrastructure, water may be shut off at any time and kept shut off as long as necessary.

**Maintenance of Service Pipe.** It shall be the responsibility of the consumer or owner to maintain the service pipe from the curb box into the house or building. In the case of failure upon the part of any consumer or owner to repair any leak occurring in the pipe within twenty-four (24) hours after verbal or written notice by the City thereof, the water will be shut off. When the waste of water is great, or when damage is likely to result from the leak, water may be turned off immediately pending repairs.

**Treatment of Prohibited Wastes.** Where it is determined that any waste discharged or to be discharged has certain characteristics or elements which are or may be harmful to the structures, processes, or operation of the sanitary sewer system or persons operating it, such discharge shall be discontinued or the waste shall be treated prior to its discharge into the system in a manner which will eliminate such characteristics or elements.

**Surface or Ground Water.** It shall be unlawful for any owner, occupant, or user of any premises to direct into or allow any storm water, surface water, ground water, well water, or water from industrial or commercial air conditioning systems to drain into the City's sanitary sewer system. Roof drains, foundation drains, sump pumps, and other forms of surface drainage shall not be connected to or discharged to the sanitary sewer system. The City shall periodically perform Inflow and Infiltration (I&I) inspections to verify that connections to the City's

sanitary sewer system are in compliance with the provisions of this section.

**Prohibited Waste Discharge.**

- (A) No person shall discharge, cause, or allow to be discharged into the sanitary sewer system, any waste containing concentrations in excess of the following:

<u>Pollutant</u>	<u>Limitations (Maximum for any operating</u>
<u>day) Cadmium</u>	2.0 mg/l
Chromium, total	8.0
mg/l Copper	6.0
mg/l	
Cyanide, total	4.0 mg/l
Lead	1.0 mg/l
Mercury	0.1 mg/l
Nickel	6.0 mg/l
Zinc	8.0 mg/l
Temperature	150°F (65°C)
pH	5.00—10.00

- (B) No person shall discharge, cause, or allow to be discharged into the sanitary sewer system any wastes which contain any of the following:
- (1) More than 100 mg/l of fats, wax, grease or oils (hexane soluble), whether emulsified or not, or containing substances which may solidify or become viscous at temperatures between 32 degrees and 150 degrees Fahrenheit (0 and 65 degree centigrade) at the point of discharge into the sewer system.
  - (2) Liquids, solids, or gases which by reason of their nature or quantity are or may be sufficient to cause fire or explosion or be injurious in any other way to the sanitary sewer system or to the operation of the system. At no time shall two successive readings on an explosimeter, at the point of discharge into the sewer system, be more than five percent nor any single reading over ten percent of the lower explosive limit (L.E.L.).
  - (3) Any noxious or malodorous solids, liquids or gases, which either singly or by interaction with other wastes, are capable of creating a public nuisance or hazard to life, or are or may be sufficient to

prevent entry into a sewer for its maintenance and repair.

- (4) Any toxic substance, chemical elements or compounds in quantities sufficient to interfere with the biological processes of efficiency of treatment works, or that will pass through a treatment works and cause the effluent therefrom or the water into which it is discharged, to fail to meet applicable state or federal standards.
- (5) Garbage that has not been ground or comminuted to such a degree that all particles will be carried freely in suspension under flow conditions normally prevailing in public sewers, with no particle greater than one-half inch in any dimension.
- (6) Radioactive wastes or isotopes or such half-life of concentrations that they are in noncompliance with present or future regulations issued by the appropriate authority having control over their use and which will or may cause damage or hazards to the system or personnel operating it.
- (7) Solid or viscous wastes which will or may cause obstruction to the flow in a sewer, or other interference with the proper operation of any disposal system, such as grease, uncomminuted garbage, animal guts or tissues, paunch manure, bones, hair, hides or fleshings, entrails, whole blood, feathers, ashes, cinders, sand, spent lime, stone or marble dust, metal, glass, straw, shavings, grass clippings, rags, spent grains, spent hops, waste paper, wood, plastic, gas, tar, asphalt, residues from refining or processing of fuel or lubricating oil, gasoline, naphtha, and similar substances.
- (8) Any waste from septic tanks or similar facilities.
- (9) Any mineral acids, waste acid pickling or plating liquors from the pickling or plating of iron, steel, brass, copper or chromium, or any other dissolved or solid substances which will or may endanger health or safety, or attack or corrode any part of the sanitary sewer system.
- (10) Liquids or vapors having a temperature higher than 150 degrees Fahrenheit immediately prior to discharge into the sewer system.
- (11) Phenols or other taste- or odor-producing substances in concentrations which will or may cause the effluent from the



treatment works or the water into which it is discharged to fail to meet applicable state or federal standards.

- (12) Materials which exert or cause:
  - (a) Unusually high concentrations of inert suspended solids or of dissolved solids.
  - (b) Excessive discoloration.
  - (c) Unusually high volume of flow or concentration of waste exceeding five times the average daily concentration of flow during normal operation.
- (13) Unusually high concentrations of suspended solids, BOD, COD, or chlorine requirements, in such quantities as to constitute a significant load on the treatment works.
- (14) Any substance which is not amenable to treatment to reduction by the type of sewage treatment processes employed to a degree sufficient to permit the effluent from the treatment works and the water into which it is discharged to meet applicable state and federal standards. If prohibited waste is discharged into the systems the offending party shall pay for all clean up and be fined an additional 25% of the clean-up charge. If payment is not made, the Financial Officer will certify to the County Auditor as a lien against the premises served and directing that the County Auditor collect the assessment as part of the ensuing year's tax levy.

**Waste Trap and Separators.** Oil, grease, and sand waste traps and separators shall be installed for the proper discharge of waste water containing excessive amounts of oil, grease, sand, or flammable liquids when required by the Minnesota Plumbing Code, Minnesota Rules, Chapter 4715, the Regional Administrator of the Metropolitan Council, or when the city determines such traps or separators are necessary. Waste traps and separators shall be maintained in efficient operating conditions by the owner and at the owner's expense, through the periodic removal of any accumulated residue. If a trap or separator is not properly maintained, the city may have the system, including affected city sewers, cleaned at the owner's expense.

**Tampering with Municipal Systems is Prohibited.** No person shall maliciously, willfully, or negligently damage, destroy, uncover, deface, or tamper with any part of the Municipal Sewer or Water Systems.

**Cross-Connection Control.** Cross-connection between the municipal water system and other systems, private wells, or equipment containing water or other substances of unknown or questionable safety are prohibited, except when and where, as approved by the City, suitable backflow prevention devices are installed, tested, and maintained to ensure proper operation on a continuing basis as per the following requirements:

- (A) A backflow prevention device is to be owned, tested, and maintained by the customer/owner of the premises being served.
- (B) Installation, maintenance, and testing of backflow preventers shall be according to the State of Minnesota Plumbing Code.
  - (1) It is required that reduced pressure zone backflow preventers be tested annually and overhauled at intervals not to exceed five years. Testing shall be performed by a qualified backflow tester. A licensed plumber qualified in backflow testing shall perform all internal maintenance to the device. Test results shall be furnished to the City.
  - (2) A person who is recognized by the Minnesota Department of Health as a backflow preventer tester is considered by the City to test backflow preventers and certify them to be functional.
- (C) Failure to comply with the provisions of this section shall be cause to discontinue water service.

**Water Use Restrictions.** A sprinkling ban is adopted in order to encourage water conservation, and to insure availability of an adequate supply of City water without incurring unnecessary capital expenditures.

- (A) Water Use Restriction. Except as hereinafter provided, the watering of lawns, gardens, and shrubs is prohibited from May 15 through September 15 annually.
  - (1) Exceptions.
    - (a) Property with odd numbered postal addresses may water on odd numbered days.
    - (b) Property with even numbered postal addresses may water on even numbered days.
    - (c) Private wells may be used on any day.
    - (d) Watering newly sodded or seeded yards is allowed upon a receipt of an exemption permit from the Public Works Department for a period of two weeks.

- (e) Attended watering of plants, shrubs, and gardens may be watered by hand on any day.
- (B) Enforcement. Violations of the water use restrictions will result in a warning letter for first violation, and the imposition of administrative fines that will be reflected on the next utility bill or in the issuance of a citation in accordance with adopted Council ordinance.
- (C) City Council Resolution. During dry weather periods, the City Council may impose additional restrictions on the use of City water by the adoption of an appropriate resolution. Any violation of the water restriction resolution shall be referred to the City Attorney for prosecution as a misdemeanor.

**Private Wells.** The use of private wells may continue after connection is made to the water system, provided there is no means of cross-connection between the private well and the municipal supply at any time. Hose bibs that will enable a cross-connection of the two systems are prohibited on internal and external piping. The threads on the boiler drain of the well volume tank shall be removed or the boiler drain hose bib replaced with a sink faucet. When both private and City systems are in use, outside hose bibs shall not be installed on piping connected to the municipal system.

**Operation of Fire Hydrants.** No person other than authorized City employees shall operate fire hydrants or interfere in any way with the water system without first obtaining a permit to do so from the City, subject to the following conditions:

- (A) Permit. A hydrant meter permit to use a fire hydrant for the purpose of purchasing water from the City is required. The permit shall state the applicant's name and address, phone number, location of the work site, and type of work being conducted.
- (B) Deposit. The applicant shall be required to make a deposit, as determined by City ordinance, to guarantee payment for water used and to cover breakage and/or damage to the hydrant or meter. Charges will be deducted from the deposit, and a billing or refund will be generated.
- (C) Charges. The applicant shall pay rental charges for each thirty-day-period or fraction thereof, and water use charges as determined by City Council ordinance.

**Water Service Contractors.** A license is required. All water service work shall be

performed by certified contractors licensed by the appropriate State authority. This section shall not apply to homeowners performing work on their own premises.

**Water Meters.** Except for extinguishing of fire, no person except authorized City employees shall use water from the water supply system or permit water to be drawn therefrom unless the same be metered by passing through a meter supplied or approved by the City. Only persons authorized by the City shall connect, disconnect, take apart, or in any manner change or cause to be changed, or interfere with any such meter or the action thereof.

- (A) Charge. At the time of the initial connection to the municipal water system, a charge for water meters shall be paid to the City by customers before delivery of the water meter for installation. Said charge shall be determined by City Council ordinance.
- (B) Maintenance. The City shall retain ownership of water meters and shall be responsible for standard maintenance and repair. Costs associated with replacement, repair, or adjustment of a meter due to any act, carelessness, or neglect of the owner or occupants of the premises shall be charged against and collected from the water consumer. Water service may be discontinued until the cause is corrected and the amount charged is collected.
- (C) Testing. Upon written request, the City will re-read water meters and test the meter for accuracy, if necessary. In case a test should show an error of over five percent of the water consumed in favor of the City, a correctly registering meter will be installed and adjustments to water billing statements will be considered. In case the test shows an accurate measurement of water or an error in favor of the consumer, the expenses of making such a test, and the additional costs, if any, will be included on the next quarterly statement. The meter testing charges will be established by City Council ordinance.
- (D) City Access. Authorized City employees shall have access at reasonable hours of the day to all buildings and premises connected to the municipal water system for the purpose of maintenance of water meters without charge to the water consumer. In the event the water consumer denies authorized City employee access, the water consumer will, at their own cost, provide for meter replacement or maintenance by a licensed plumber, and said licensed plumber shall be required to provide documentation to City as to validity of the work performed.

**Certain Connections Prohibited.** No buildings located on property lying outside the limits of the City of Gem Lake shall be connected to that portion of the systems of the City discharging into the Met Council Sanitary sewer system, except that the City may permit the installation, maintenance, and operation of a sanitary sewer service connection between its public sewer system and the following described real property, lying beyond the corporate limits of the City, and situated in the City/Village of Gem Lake, County of Ramsey, State of Minnesota, to-wit:

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The connection of any of the above-described areas of the sanitary sewer system of the City is dependent upon express authorization for such connection being obtained from the City Council.

**Maintenance of Sewer Service.**

- (A) Liability. The City assumes ownership of the sanitary sewer service from the main collector line to the connection. If based on an inspection by the City this portion of the sewer service requires repair the City shall assume all costs associated with the repair. The owner of the premises shall be liable for all repairs required to the portion of the sewer service from the connection point to the residence.
- (B) Maintenance. The owner of the premises is responsible to maintain the sewer service from the main collector to the residence in functioning condition.

**City Access.** Authorized City employees shall have access at reasonable hours of the day to all buildings and premises connected to the municipal sanitary sewer system for the purpose of infiltration and inflow inspections without charge to the sanitary sewer consumer. In the event the sanitary sewer consumer denies authorized City employees access, the sanitary sewer consumer will, at their own cost, provide for infiltration and inflow inspections by a licensed plumber,

and said licensed plumber shall be required to provide documentation to City as to validity of the work performed.

**Non-Compliance Surcharge.** A quarterly surcharge, as determined by City Council ordinance, shall be added to the utility billing statement for a property where:

- (A) An inspection has not been allowed or certification provided within 30 days after notice by the City.
- (B) The necessary installations, inspections, and/or repairs have not been made within the time specified.

A surcharge will be added for every quarter during which the property is not in compliance, whether the non-compliance has been for the entire quarter or a portion thereof.

**Water Service Lines.** In order to eliminate a health or safety hazard from private property, the City is authorized to install or repair water service lines from a City water main to a private dwelling or to contract for such work. The cost of installing or repairing water service lines may be specially assessed against the benefited property and the City may issue obligations to defray the expense of such work all pursuant to the provisions of Minnesota Statutes Chapter 429 and its subdivisions.

WHEREUPON, the above ordinance was adopted at the regular City Council meeting for the City of Gem Lake, Ramsey County, Minnesota, on August 23, 2016, by a motion made by Councilmember Lindner, seconded by Councilmember Bosak.

ATTEST:

I, William Short, the duly qualified City Clerk of the City of Gem Lake, County of Ramsey, State of Minnesota, do hereby certify that the foregoing ordinance is a true and accurate representation of action taken by the City Council of the City of Gem Lake on the date first written.



William Short, City Clerk

11 / 20 / 16

Date

# Appendix E

Vadnais Heights Utility Service Connection Agreement

**UTILITY SERVICE CONNECTION AGREEMENT BETWEEN  
THE CITY OF VADNAIS HEIGHTS, A MUNICIPAL CORPORATION AND POLITICAL  
SUBDIVISION OF THE STATE OF MINNESOTA AND THE CITY OF GEM LAKE, A  
MUNICIPAL CORPORATION AND POLITICAL SUBDIVISION OF THE STATE OF  
MINNESOTA**

**MUNICIPAL WATER AND SANITARY SEWER SYSTEM CONNECTIONS  
AGREEMENT FOR  
PROPOSED VILLAS OF GEM LAKE DEVELOPMENT**

I. PARTIES – This agreement, dated the 17<sup>th</sup> day of April, 2018, is entered into, pursuant to the provisions of Minn. Stat. § 412.321 by and between the City of Vadnais Heights, a municipal corporation and political subdivision of the State of Minnesota (herein "Vadnais Heights") and the City of Gem Lake, a municipal corporation and political subdivision of the State of Minnesota (herein "Gem Lake").

II. RECITALS – Vadnais Heights and Gem Lake share a common border along Ramsey County Road E from Labore Road to the east to Minnesota State Trunk Highway 61. Vadnais Heights has extended its 12 inch water main and a 8 inch/12 inch sanitary sewer along this common border. Gem Lake is considering a development of 18 acres along the north side of County Road E.

The development is named the Villas of Gem Lake and will consist of approximately 30 single family residential lots (herein "Villas"). Gem Lake has requested the extension of Vadnais Heights municipal water and sanitary sewer system to serve the Villas as depicted on the attached Exhibit A.

III. PURPOSE – The purpose of this agreement is to define the scope of each party's authority and responsibility in relationship to the construction, maintenance and use of a connection by Gem Lake to the Vadnais Heights municipal water and sanitary sewer system relating to the Villas.

IV. TERMS – Now, therefore, pursuant to the statutory authority granted to each party and in consideration of the undertakings herein expressed, the parties agree as follows:

A. Project The project shall consist of the construction of a single sanitary sewer



and a single water main connection and extensions in the general vicinity of County Road E and English Street to serve the Villas. The project includes north ward extension of the Vadnais Heights water main and sanitary sewer beneath County Road E. A valve, meter pit and meter for water utility will be required near the north right of way line of County Road E. The specific locations and methods of connections to the Vadnais Heights' sanitary sewer and water mains shall be approved by the Vadnais Heights City Engineer. The water valve and meter shall be within reinforced concrete manhole to measure the usage of water from the Villas.

In the event that the property east of Daniels Road is considered for future development in Gem Lake, the City of Gem Lake will plan for access to County Road E to the intersection of International Drive. Ramsey County has provided correspondence dated September 15, 2017, outlining that a road connection toward International Drive must be accommodated and planned for the future.

The Developer shall deed Outlot A to the City of Gem Lake for trial and parks, drainage and utility purposes and to create a future public right-of-way between the roadway in the development and Daniels Farm Road, if required by the City of Gem Lake. The future right-of-way if required, shall be located at the northeast corner of Outlot A as shown on the plans.

- B. Plans and Specifications – Gem Lake, at its sole cost, shall be responsible for preparing plans and specifications and for administering the project. Project plans and specifications shall insure that appropriate metering devices will be installed. Project plans and specifications shall be approved by the Vadnais Heights City Engineer prior to the start of construction. All State plumbing codes must be met for individual house connections to utilities. No sump pump discharge can be directed to the sanitary sewer system.
- C. Construction of Project – Gem Lake, at its sole cost, shall construct the project pursuant to the approved final plans. All utility work must be constructed by a licensed and bonded contractor capable of completing the work. All improvements must be inspected by Gem Lake or its designated professionals to insure the approved plans are met. Vadnais Heights representatives shall be invited to the preconstruction meeting, allowed to inspect the project at reasonable times during the period of construction,

and thereafter, to insure compliance with the approved final plans. Upon completion of the project, Gem Lake or the developer, at its sole cost, shall provide Vadnais Heights with paper and electronic construction record drawings containing and properly illustrating the project utilities as constructed, including field verified locations.

- D. Maintenance and Ownership– Gem Lake shall be responsible for all maintenance of the complete sanitary sewer and water main system within the proposed Villas development, including all portions of the sanitary sewer and water main system extended beneath County Road E. This includes the water valve and meter for flow measurement. Gem Lake shall own and maintain the sanitary sewer and water mains described above as public utilities and agrees to maintain the system in good working order and in accordance with all applicable local, State and Federal standards customary for these types of improvements. Vadnais Heights will flush the water main hydrants as part of their seasonal City wide program, but any and all necessary repairs will be Gem Lake’s sole responsibility. Gem Lake or its designees will be responsible for all Gopher One Call field locations and information requests. Gem Lake shall report to the Vadnais Heights City Engineer any defects which occur in the Gem Lake public utility system serving the Villas. Gem Lake shall make the necessary arrangements to have an on-call contractor available on a 24-hour basis for system repairs. The Vadnais Heights City Engineer may designate any defect as requiring an emergency repair if it will have significant impact on the use of the Vadnais Heights sanitary sewer or water system by Vadnais Heights property owners or, if the defect will result in unmonitored use of the Vadnais Heights utility systems. In the event of an emergency, repair procedures shall be undertaken by Gem Lake as soon as reasonably possible, and nothing herein shall prevent Vadnais Heights from taking appropriate steps to protect the security of the Vadnais Heights utility system and the health, safety and welfare of Vadnais Heights residents and property.
- E. Fees - Gem Lake shall pay Vadnais Heights for any and all fees, charges or costs which might otherwise be imposed on development requiring sanitary sewer and water main services as detailed and described by the attached Exhibit B. The lump sum payment shall be made prior to the connections to Vadnais Heights municipal sanitary sewer and water system.
- F. Use Charges - Gem Lake shall be responsible for all operation and maintenance costs of the utility fees associated with the development. Gem Lake shall pay the

base fees charged to all Vadnais Heights residents plus an additional 25 % for of all water utility fees as indicated in the most current published list of Vadnais Heights utility fees and as amended on a yearly basis. The sanitary sewer charges will be based on water meter readings in off peak season. Written notification from City of Vadnais Heights must be given to City of Gem Lake 90-days prior to fee changes. A water meter at the entry point of the proposed development shall be read by Vadnais Heights personnel for the purpose of determining water use. That water use charge will be billed to Gem Lake. It will be Gem Lake's responsibility to invoice and collect the necessary costs from their residents as they deem appropriate. Sanitary sewer charges will be determined based on water usage and readings from the sanitary sewer meter information.

G. Permitted Connections – This agreement shall apply only to the 18 acre Villas of Gem Lake development depicted on Exhibit A. Only residential structures within this development shall be connected to the Vadnais Heights utility system. No extensions or uses of Vadnais Heights municipal sanitary sewer and water service beyond the limits of the proposed Villas development are permitted without specific negotiation and amendments to this agreement and as approved by both cities.

H. Quality of Service Provided —City of Vadnais Heights must provide quality of water and service equal to or better than which it provides the residents of Vadnais Heights.

1. The City of Vadnais Heights agrees to furnish and deliver to Gem Lake its water requirement on a demand basis. Demand Basis is defined as a continuous supply of water for the entire 24 hour per day at the City of Vadnais Heights line pressure.

2. The quality of water furnished to Gem Lake by the City of Vadnais Heights shall be the same as treated water supplied by the City of Vadnais Heights to its water consumers and shall meet all state and federal drinking water standards.

3. In the event the City of Vadnais Heights sells water to another municipality and as a result the City of Vadnais Heights is required to increase water capacity then the new municipality shall have the same obligations as Gem Lake. There shall not be any additional cost to Gem

Lake resulting from the new municipality needs.

- I. Vadnais Heights Codes and Resolution – Gem Lake shall comply with all provisions of Vadnais Heights City Code relating to its sanitary sewer and water utility system, including establishment and enforcement of water use restrictions; and any amendments to such chapters, except as herein modified. All Vadnais Heights codes and resolutions referred to in this agreement are hereby incorporated. Nothing herein shall be construed to limit the authority of Vadnais Heights to adopt or amend its ordinances and resolutions. Any restrictions imposed on Vadnais Heights by any State or Federal agencies on any and all aspects of water or sanitary sewer consumption or use shall be equally met by Gem Lake.
- J. Effective Date - This agreement shall become effective upon approval of an appropriate resolution by each City and shall continue in force and effect until terminated as hereinafter provided.
- K. Arbitration - Vadnais Heights will not accept any conditions which include arbitration proceedings.
- L. Termination by Vadnais Heights - This agreement may be terminated by Vadnais Heights in the event that:
  - 1. Gem Lake violates the terms of this agreement, the provisions of Vadnais Heights City Code relating to the it's sanitary sewer or water system; or amendments thereto; and, such violations continue for ten (10) days after Gem Lake receives a written notice of violation from the Vadnais Heights City Engineer.
  - 2. Gem Lake fails to properly maintain the sanitary sewer or water main system serving the Villas development.
  - 3. Gem Lake fails to pay use charges within ninety (90) days of the billing date.
  - 4. Gem Lake authorizes extension of water service to any development or additional uses outside the boundaries of the proposed Villas of Gem Lake development as shown by Exhibit A without prior review and approval by the Vadnais Heights City Council. Vadnais Heights review shall be limited to a determination

of whether the Vadnais Heights sanitary sewer and water system can adequately serve such additional development without adversely impacting Vadnais Heights own demands for sanitary sewer and water service and whether the additional capacity can be provided in an economical manner. Vadnais Heights determinations on these utility issues and the ability to serve shall be final.

5. Gem Lake fails to begin the construction of the sanitary sewer and water main connections by December 31, 2019.

M. Termination by Gem Lake - This agreement may be terminated by Gem Lake by providing Vadnais Heights a thirty (30) day written notice of intent to terminate. All costs associated for services provided up to the final day of termination must be paid by Gem Lake.

N. Terms of Termination/Separability -

1. This agreement may be terminated, with or without cause, by either party upon sixty (60) days' prior written notice provided to the City Administrator or Mayor of the other City. The date of termination shall be stated in the notice.
2. Upon termination, any and all records or property of the respective cities will be returned to the appropriate city.
3. This agreement is governed by the laws of the State of Minnesota.
4. In the event that any provision of this agreement is held invalid, the other provisions remain in full force and effect.

O. Force Majure - Neither party shall be held responsible for performance of this agreement if the party's performance is prevented by acts or events beyond the party's reasonable control. This includes, but is not limited to, severe weather and storms, earthquakes, tornados or other natural weather occurrences, strikes and other labor unrest, power failures, electrical power surges or current fluctuations, nuclear or other civil or military emergencies or acts of legislative, judicial, executive or administrative authorities.

- P. Authority and Binding Effect - Both parties represent and warrant that the individuals executing this agreement on behalf of each of the parties have the full power and authority to execute and perform this agreement. Further, this agreement constitutes a legal, valid and binding obligation enforceable in accordance with its terms.
- Q. Interruption of Service - All parties acknowledge that water service can be interrupted due to, among other things, main breaks, equipment failures, weather conditions, maintenance, repairs or improvements. Vadnais Heights cannot guarantee that there will be no interruptions in service or that any specific pressures or fluctuations in pressure will or will not occur. Gem Lake agrees that Vadnais Heights shall not be liable or responsible for any losses or damage, consequential or otherwise, resulting from any such interruptions in service or fluctuations in pressure. Each City will be responsible to notify its own residents regarding any interruption of service.
- R. Successors and Assigns - All terms, covenants and conditions of this agreement shall be binding upon and inure to the benefit of and be enforceable by the parties hereto and their respective successors. This agreement and the rights and obligations of any party hereunder shall not be assignable except with the written consent of the other party hereto, which consent shall not be unreasonable withheld.

Any notice, request, demand, statement or consent required or permitted to be given shall be in writing, shall be signed by or on behalf of the party giving notice and shall be personally delivered or sent by certified mail, return receipt requested, to the other party to the following address:

City of Vadnais Heights, Attn. City Administrator  
City Hall  
800 East County Road E  
Vadnais Heights, Minnesota 55127

City of Gem Lake, Attn. Mayor  
City Hall  
4200 Otter Lake Road  
Gem Lake, Minnesota 55110

Any such notice shall be conclusively deemed to have been given and received on the day on which it was delivered. Either party may, from time to time, furnish in writing to the other party such notice of a change in the address or individual to whom such notices should be given.

This agreement is intended to be performed in accordance with, and only to the extent permitted by, all applicable laws, ordinances, rules and regulations. If any provision of this agreement, or the application thereof to any person or circumstance, shall be for any reason and to any extent, be invalid or unenforceable, the remainder of the agreement and the application of such provision to other persons or circumstances shall not be affected thereby, but rather, shall be enforced to the extent permissible by law.

This agreement may be amended, superseded, renewed or extended only by a written document executed by both parties. The failure of any party at any time or times to require performance on any provision hereof shall in no manner affect its right at a later time to enforce the same. No waiver by any party of the breach of any term or covenant contained in this agreement, whether by conduct or otherwise, in any one or more instances, shall be deemed to be, or construed as, a further or continuing waiver of any breach, or a waiver of the breach of any other term or condition herein.

- S. Indemnification - The City of Gem Lake agrees to assume sole liability for any negligent or willful misconduct of their assigned Employee(s) while performing the assigned duties within the jurisdiction of either city. Each City agrees to indemnify, defend, and hold harmless the other from any claims, causes of action, damages, loss, cost or expenses, including reasonable attorney's fees, resulting from or related to the actions of each city, its officers, agents or employees in the execution of the duties outlined in this agreement, except as qualified by the previous sentence. Nothing in this agreement shall constitute a waiver of the statutory limits on liability set forth in Minnesota Statutes Chapter 466 or a waiver of any available immunities or defenses.

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IN WITNESS WHEREOF, the parties have hereunto set their hands.

**CITY OF VADNAIS HEIGHTS, MINNESOTA**

Pursuant to authority granted by  
Council Resolution No. 18-04-76 adopted  
on the 17th  
day of April, 2018.

Bob Fletcher

Bob Fletcher, Mayor

Date: 4/17/18

K. Watson

Kevin Watson, City Administrator

Date: 4/17/18

**CITY OF GEM LAKE, MINNESOTA**

Pursuant to authority granted by Council  
Resolution No. 11 adopted on the  
17th day of April, 2018.

Robert Uzpen

Robert Uzpen, Mayor

Date: 4-17-18

Jim Lumbardt  
City Clerk

Date: 4/17/18

EXHIBIT  
**A**

# VILLAS OF GEM LAKE

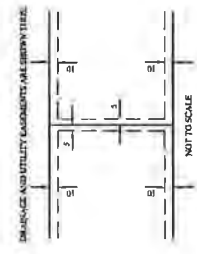
HUNTERS RUN OF GEM LAKE

TAG #	LENGTH	BETA	BEARING / CHORD BEARING	CHORD DISTANCE
1	15.80	$\Delta = 171.35^\circ$	$N46^\circ 52' 25" W$	15.80
2	63.52	$\Delta = 57^\circ 45' 10"$	$S57^\circ 54' 22" W$	62.78
11	15.83		$S57^\circ 21' 19" W$	

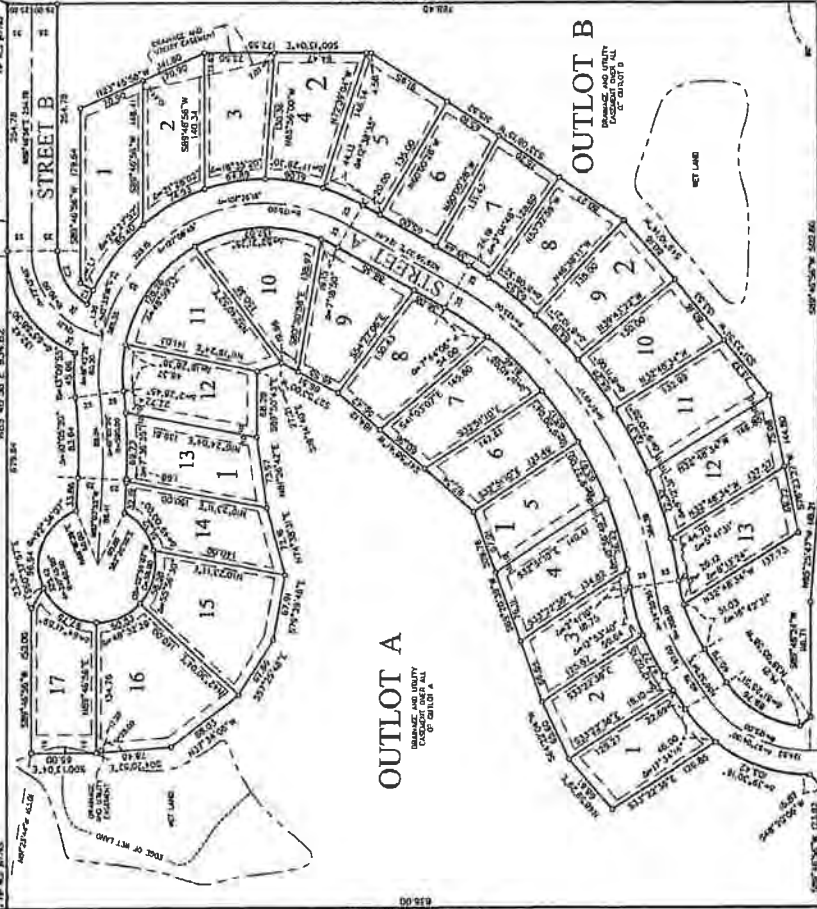


The bearings for the bearings shown in this plan are based on the North Magnetic Pole for the year 2011. The bearings for the bearings shown in this plan are based on the North Magnetic Pole for the year 2011. The bearings for the bearings shown in this plan are based on the North Magnetic Pole for the year 2011.

- Dimension (12 inch by 12 inch) shown in red ink
- Dimension (12 inch by 12 inch) shown in blue ink
- Dimension (12 inch by 12 inch) shown in black ink
- Dimension (12 inch by 12 inch) shown in red ink



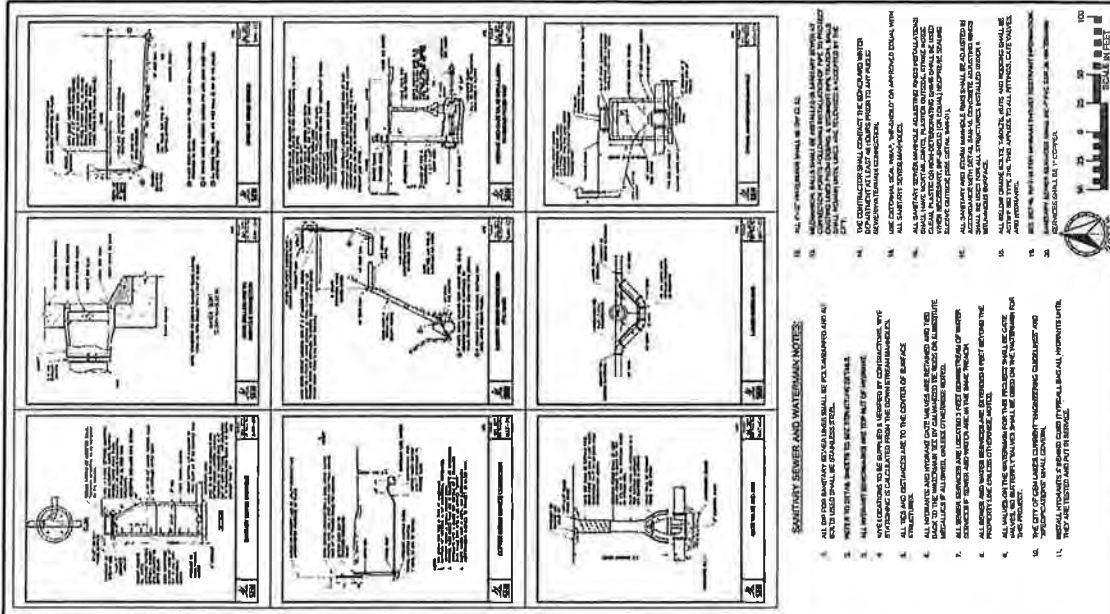
Notes: 1. Set in width and adjoining lot lines, unless otherwise indicated, and 10 feet in width and adjoining public ways and other easements, unless otherwise indicated, as shown on this plan.



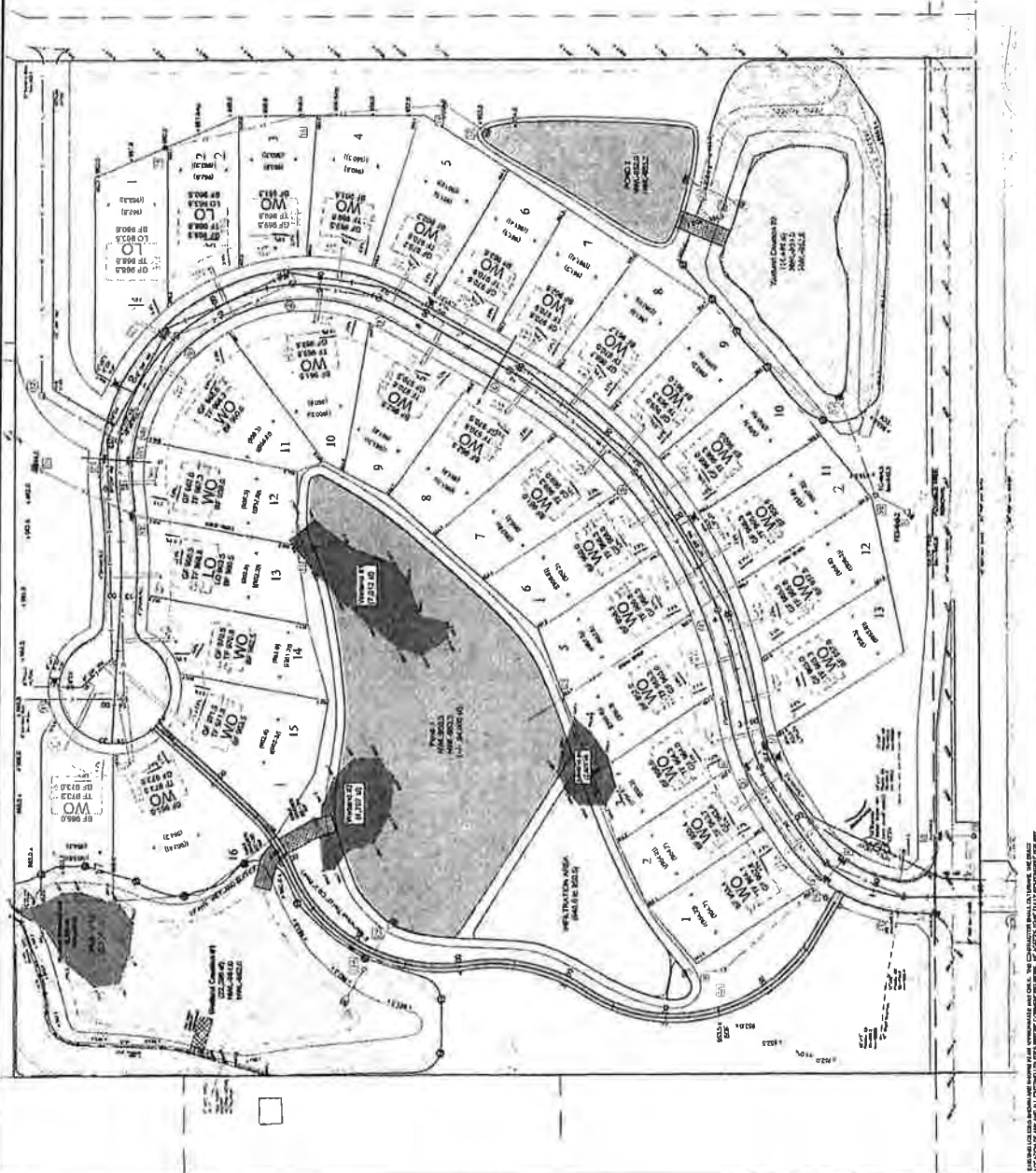
HUNTERS RUN OF GEM LAKE  
DANIELS FARM ROAD  
HUNTERS RUN OF GEM LAKE  
COUNTY ROAD E EAST  
COUNTY ROAD E EAST  
MONTMORENCY HILLS  
CITY VIEW GARDEN LOTS  
ANTHONY RIVARD ADDITION  
MONTMORENCY HILLS  
CITY VIEW GARDEN LOTS

SATHRE-BERGQUIST, INC.





- SEWER, WATERMAIN, AND WATERMAIN NOTES:**
- ALL OPEN BENCH MARKS SHALL BE EXISTING UNLESS NOTED OTHERWISE.
  - ALL WATER MAINS SHALL BE 12" DIAMETER UNLESS NOTED OTHERWISE.
  - ALL WATER MAINS SHALL BE 150 LB. STEEL PIPE UNLESS NOTED OTHERWISE.
  - ALL WATER MAINS SHALL BE 150 LB. STEEL PIPE UNLESS NOTED OTHERWISE.
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**FINAL SEWER AND WATERMAIN PLAN**  
**VILLAS OF GEM LAKE**  
**LANDMARK OF GEM LAKE, LLC**

FILE NO. 5  
 SHEET 17

**SATHRE-BERGOUST, INC.**  
 100 SOUTH BROADWAY, MINNEAPOLIS, MN 55402 (612) 338-2800

DATE: 10/10/04  
 DRAWN BY: [Signature]  
 CHECKED BY: [Signature]  
 IN CHARGE: [Signature]

WE HEREBY CERTIFY THAT THIS PLAN OR SPECIFICATION WAS PREPARED BY US OR UNDER MY DIRECT SUPERVISION AND THAT I AM A LICENSED PROFESSIONAL ENGINEER IN THE STATE OF MINNESOTA.

USE INCLUDES: CONVEYANCE, DISTRIBUTION, RECORD CONFORMANCE OF INFORMATION OF THIS PROJECT IS STRICTLY PROHIBITED WITHOUT THE WRITTEN AUTHORIZATION OF SATHRE-BERGOUST, INC. AND SHALL BE THE SOLE RESPONSIBILITY OF THE USER. SATHRE-BERGOUST, INC. ACCEPTS NO LIABILITY FOR DAMAGES OR LOSSES RESULTING FROM LEGISLATIVE USE.

# Exhibit B

The proposed Enclave at Gem Lake development is an 18 acre parcel. It is shown to be subdivided into 30 single family residential lots. The dimensions of the 18 acre parcel are 915 feet along County Road E in an east-west direction and 860 feet perpendicular to County Road E in a north-south direction.

As per past Vadnais Heights practice in assessing undeveloped property for sanitary sewer and water main service, the following costs will be due by Gem Lake. All costs must be paid in full to Vadnais Heights before utility construction commences.

## Water Main Charges

Frontage	\$52 per front foot X 915 feet = \$ 47,580
Area	\$ 209 per acre X 18 acres = \$ 3762
Unit	\$200 x 30 units = \$6000

Subtotal water \$ 57,342

## Sanitary Sewer Charges

Frontage	\$56 per front foot X 915 feet = \$ 51,240
Area	\$ 193 per acre X 18 acres = \$ 3474
Unit	\$35 x 30 units = \$1050

Subtotal sanitary \$ 55,764

**Total Charges Due to Vadnais Heights \$ 113,106**

All costs are in 2018 dollars, so an inflation factor of no less than 2 % will be applied to all future figures.

The number of units for this calculation will be adjusted accordingly if the number of lots increases or decreases.

These figures do not include any fees due to Ramsey County, State or Federal agencies for permits or sanitary sewer or water availability.



## Building a Better World for All of Us<sup>®</sup>

Sustainable buildings, sound infrastructure, safe transportation systems, clean water, renewable energy and a balanced environment. Building a Better World for All of Us communicates a company-wide commitment to act in the best interests of our clients and the world around us.

We're confident in our ability to balance these requirements.

[Join Our Social Communities](#)

