



COMMUNITY  
FRAMEWORK  
**2040 Comprehensive Plan**





## **INTRODUCTION**

The Metropolitan Council requires that comprehensive plans for cities in the seven-county Metropolitan Area include a Natural Resources Plan. Such plan must address community goals, intentions and priorities concerning preservation, conservation or restoration of natural resources. Goals, objectives and policies related to the natural environment are provided in the Policy Plan chapter of this Plan.

Perhaps above all other characteristics of the community, Shorewood residents value the natural setting in which it is located and have found that protecting sensitive features such as wetlands, shorelands, floodplains and wooded areas has an aesthetic, economic, health and even psychological benefit to the community as a whole.

The natural setting makes Shorewood a very attractive place to live. Ironically, this attraction creates pressure for new development which can threaten natural amenities. Shorewood is committed to maintain its high quality natural environment.

## **NATURAL RESOURCES PLAN**

### **Soils**

Shorewood has numerous areas where poor soil conditions impose limitations on development. As prime land becomes developed, there is increasing pressure to develop on more marginal parcels. Most of the on-site sewer systems which pose environmental problems due to poor soil conditions have been connected to the public sanitary sewer system. Only a few such systems remain out of reach of City sewer, and all new development is required to connect to the City's system.

Bearing capacity for construction has been, and continues to be, an area of concern. The City requires testing in areas known for poor soil conditions or where poor soils are discovered during construction. Areas found to have questionable soils are subject to the recommendations of qualified soils engineers, as well as the requirements of the State Building Code.

The City of Shorewood has adopted standards for the control of erosion and sedimentation. In this regard, the following documents serve as a guide for the development of Shorewood's own local controls:

- MPCA Construction Stormwater Permit (Minnesota Stormwater Manual)
- MCWDs Erosion Control Permit
- MnDOT Erosion Control Handbook
- MS4 SWPPP Program



Going forward, the City will strive to use the most up-to-date standards for erosion control and sedimentation.

## Slopes

The protection of the steep slopes and specifically bluffs which lie outside of the City's shoreland districts have been identified as an issue of community importance.

The type of slopes, along with surficial soil types, should be taken into consideration in the review of all development requests. Each site should be examined for problems of this nature, and in identified problem areas, the City will require test soils to determine if soil types are a problem on lesser slopes.

The Metropolitan Council has established two policies relative to development on erodible slopes:

- Slopes which because of their surficial soil type are susceptible to severe erosion should be maintained in a natural state. Counties and municipalities should adopt regulations to maintain or replace vegetative cover of these slopes to reduce erosion and slippage.
- Slopes subject to moderate erosion should be managed to minimize erosion and slippage; management may include special design and construction methods for development or appropriated vegetative or other cover.

Considering the amount of sloping land in Shorewood, 12 percent grades will be considered a "warning flag." While development may be allowed on slopes greater than 12 percent, such development shall be subjected to special scrutiny and examined for any potential environmental impact which might occur as a result of the proposed development. The City shall evaluate grading activities based on the following criteria:

- Development on slopes greater than 12 percent shall be reviewed and approved by the City Engineer. Any documentation needed to evaluate the development shall be provided by the developer.
- On large projects development activities shall be conducted and staged to minimize soil erosion. The smallest practical increment of land shall be developed at any one time; that increment shall be subjected to erosion for the shortest period of time, not to exceed a single construction season.
- Sufficient control measures and retention facilities shall be put in place prior to commencement of each development increment to limit soil loss.
- During construction, wetlands and other water bodies shall not be used as sediment traps.



- Except in extraordinary situations, development which results in disturbed slopes exceeding 3:1 (three horizontal to one vertical) shall not be allowed. Where unavoidable, steeper slopes must be designed by qualified professionals and will be subject to review and approval by the City Engineer.

## **Tree Preservation and Reforestation**

The City of Shorewood recognizes trees and vegetation as valuable assets and that preservation and protective measures are a necessary community standard.

Shorewood's zoning regulations presently contain provisions for limiting the removal of vegetation in shoreland areas and requirements for landscaping of certain new developments. The City has adopted a tree preservation and reforestation policy which establishes the following three-part program:

1. Preservation
  - identifies which developments require tree preservation
  - identifies size and species of trees to be saved
  - adopts construction protection measures
  - considers residential clustering to preserve trees
2. Replacement
  - requires replacement of those trees identified for preservation which must be removed for road and buildings
  - establishes a required ratio between removed and replacement trees
3. Landscaping
  - increases the types of development where landscaping is required
  - increases size specifications for required landscaping
  - establishes minimum quantity requirements
  - amend subdivision regulations to require tree planting for all developments



- provides protection against invasive plant species and species which are susceptible to disease

During the development process, developers are required to submit tree inventories that become the basis for tree preservation and replacement plans. In certain instances where it is impractical or undesirable to replace trees on site, an alternative is provided that would allow developers and builders to contribute to a City fund. This fund would be used for placing trees on public property (e.g. City parks).

To ensure that existing Ordinance provisions adequately reflect desired preservation objectives, it is recommended that a review of existing tree preservation requirements be conducted.

## **Wetlands**

The City of Shorewood has been a leader in preserving its wetlands, having adopted protective regulations in the early 1970's. These rules have been updated to include the provisions of the Wetland Conservation Act (WCA). The City has also adopted regulations protecting natural buffers adjacent to wetlands and establishing building setbacks from these buffers.

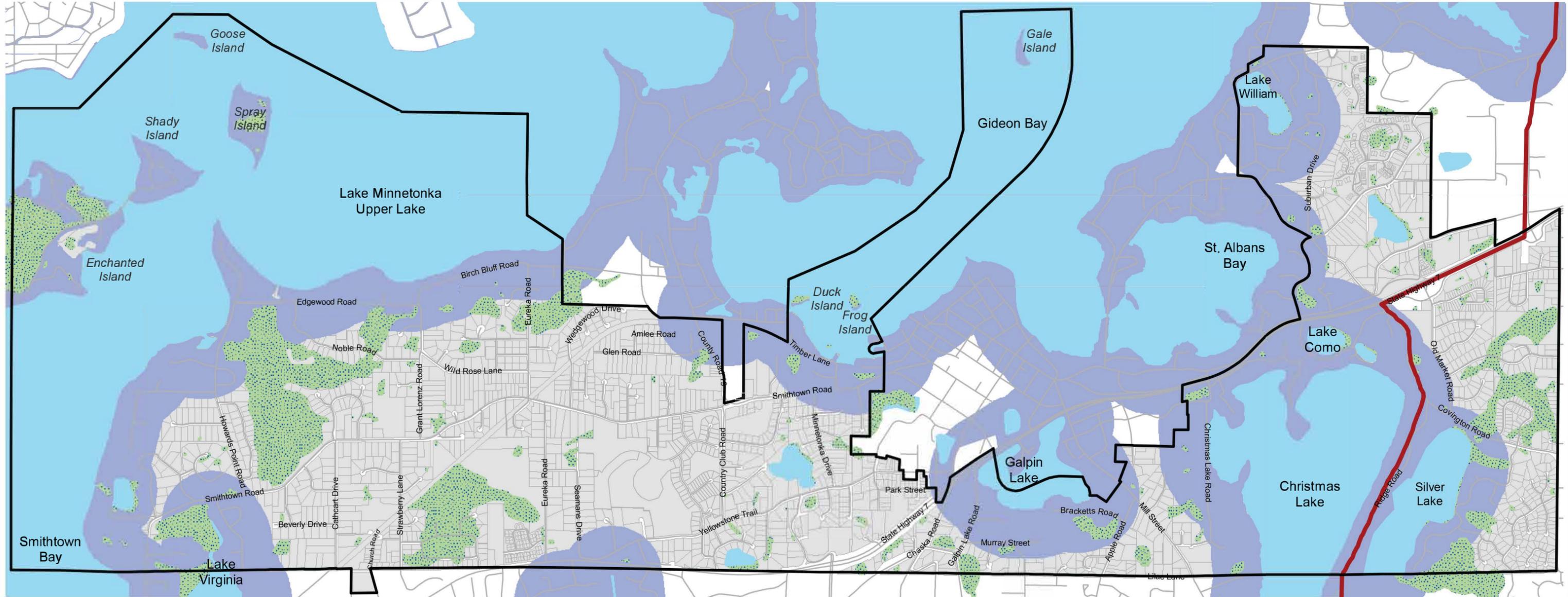
As illustrated on the map on the following page, nearly 10 percent (312 acres) of Shorewood's total land area exists as designated wetlands. Also, the City has begun enforcing the no-net-loss requirements of the Wetland Conservation Act of 1991 (WCA91).

The City has taken numerous steps to enhance the wetland protection program:

1. Adoption of the Minnesota Department of Natural Resources wetland classification system.
2. Requirement that all development proposals locate, identify and classify both City-designated wetlands and WCA91 wetlands.
3. Wetland delineations must be prepared by professionals certified by the State of Minnesota.
4. The applicable watershed districts will be the local governing unit (LGU) for administering the standards of the WCA91.

# Water Resources

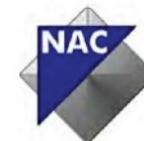
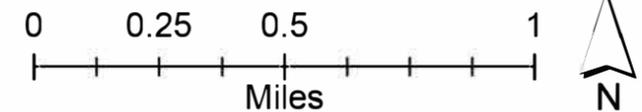
## City of Shorewood 2040 Comprehensive Plan



### Legend

-  Shorewood Boundary
-  Watershed Boundaries
-  Wetlands (National Wetland Inventory)
-  Shoreland Protection Zone (1000' from Lake)
-  Lakes

Map created: December 2022  
Data: NAC, MnDNR, Metropolitan Council



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5. The City will continue to work with the applicable watershed district and the Department of Natural Resources to enforce wetland protection laws.
6. The City may consider establishing minimum setbacks for construction adjacent to wetlands where no buffer has been dedicated. Shorewood's wetland regulations include a 35-foot natural buffer adjacent to wetlands in new development, plus a 15-foot building setback from the natural buffer area.
7. Requirement of retention ponds upstream of wetlands to collect and filter pollutants in storm water runoff before it reaches the wetlands.

## **Surface Water Quality**

The management of surface water in the City has been highlighted by community residents as a high priority issue. The City of Shorewood partners extensively with other local, regional, and state agencies to ensure the protection of surface water quality.

The City of Shorewood contains portions of two watershed districts, Minnehaha Creek Watershed District (MCWD) and the Riley-Purgatory Bluff Creek Watershed District (RPBCWD). Each watershed district has various programs and permitting related to managing and improving surface water quality. The City also works with the Minnesota Department of Natural Resources (DNR), the Minnesota Pollution Control Agency (MPCA), and various other jurisdictions to maintain and improve surface water quality and flooding control where possible.

The City of Shorewood's Local Surface Water Management Plan (Appendix B) includes the following goals, strategies, and policies for the management of stormwater within the City and to complement those of our partners at other local, county, regional, or the state agencies. The goals of the City are as follows:

1. Minimize public capital expenditures needed to correct flooding and water quality problems.
2. Identify and plan for means to effectively protect and improve surface and groundwater quality.
3. Prevent erosion of soil into surface water systems.
4. Promote groundwater recharge.
5. Protect and enhance fish and wildlife habitat and water recreational facilities.
6. Secure the other benefits associated with the proper management of surface and ground water.

To implement these goals, the Local Surface Water Management Plan also includes an assessment of existing and potential water resource-related problems and corrective actions, including storm

## *Community Framework - Natural Resources Plan*



water pond maintenance, discharging to impaired waters and aquatic invasive species. Specifically the problems and proposed corrective actions include:

| Problem   | Corrective Action  |
|---|--|
| Needed stormwater pond maintenance for improved water quality treatment, flood control, and aesthetics at Manor Park Pond.  | The City, in cooperation with MCWD, will complete a feasibility study to identify methods to improve Manor Park Pond as funds are available.   |
| Storm water discharge to the following impaired waters: Lake Minnetonka, Christmas Lake, Lake Virginia, Silver Lake, and Lake Minnewashta   | The City will work with MCWD and RPBCWD to develop and implement any necessary total maximum daily loads for the impaired waters within its boundaries.  |
| A stream in the upper Christmas Lake subwatershed that is not listed as impaired for nutrients but has a total phosphorus concentration significantly higher than state river eutrophication standards. | The City will work with MCWD to look into potential projects to reduce the total phosphorus concentration of the stream by improving the water quality of the runoff entering the stream.  |
| An established zebra mussel population in Christmas Lake and Lake Virginia.   | The City will work with MCWD to continue to educate its residents on the importance of proper boat maintenance and boat draining to reduce the spread of invasive species. The City will also consider continuing to help the Christmas Lake association fund the inspection of boats entering and leaving the Lake. |
| Silver Lake has been identified as an impaired water for nutrients/eutrophication due to a high phosphorus load.  | The City will work with RPBCWD to implement projects to reduce the phosphorus load concentration entering the lake.  |

The Local Surface Water Management Plan also includes numerous goals and detailed policies relative to review of development proposals regarding stormwater runoff. All new developments are required to construct sedimentation ponds designed to National Urban Runoff Program (NURP) standards or contribute toward the construction of sub-regional NURP facilities. Because the majority of Shorewood developed prior to the adoption of these standards and because of the number of wetland and shoreland areas in Shorewood, the City has adopted impervious surface requirements for all lots. Shorewood limits the amount of hardcover on all non-shoreland residential properties to 33 percent with nonresidential properties limited to 66 percent. Redevelopment within the City, such as tear-down and rebuilds and additions, require an infiltration feature, if the soils are conducive.

Shorewood has also committed to assisting in greater education relative to stormwater runoff. The Local Surface Water Management Plan includes an education strategy to foster responsible



water quality management practices by educating residents, business owners, City staff, City Council, and developers about proper stormwater management. Strategies include the following:

- Implementing a public education program as part of the National Pollutant Discharge Elimination System (NPDES) Phase II program.
- Updating the City’s website for water resource management information.
- Developing and distributing an annual newsletter in other City mailings aimed at fostering responsible water quality management practices. Topics may include, but are not be limited to, wetland buffers, groundwater quality and protection, controlling invasive species, water conservation and the water cycle, proper hazardous waste disposal, yard waste management, the importance of pet waste disposal, and illicit discharge.
- Collaborating with MCWD, RPBCWD, and Lake Minnetonka Conservation District (LMCD) in stormwater management education efforts.
- Providing annual training opportunities to City staff regarding maintenance and construction of best management practice (BMP) and the NPDES permit requirement.
- Conducting pre-construction meetings with contractors to review erosion control methods and inspections for projects that disturb one acre or more for City projects.
- Encouraging programs aimed at fostering responsible water quality management practices by its residents, including educating residents on the proper use of fertilizer as identified in the City’s NPDES Storm Water Pollution Prevention Plan.
- Submitting a public notice 30 days in advance for an annual public meeting to review the storm water pollution prevention plan (SWPPP), SWMP, and BMPs.
- Maintaining a means to report (by phone and/or website) construction site erosion control concerns and waste disposal infractions.
- Working with landowners through public education efforts to reduce the amount of animal or pet waste entering local water bodies.
- Preparing and distributing information on pertinent water management issues to residents at least once per year, as required as part of the NPDES Phase II program, in the City’s newsletters. This would include providing an opportunity for residents to participate in watershed management activities.

## **Shorelands and Floodplains**

A primary objective of this Comprehensive Plan is the maintenance and, where feasible, improvement of Shorewood’s lakeshore through the protection of shoreland impact zones, landscaping and shoreland buffers.

Shorewood first adopted shoreland regulations consistent with Minnesota Department of Natural Resources standards in 1985 and amended them in 1992 to reflect changes in state guidelines. The City included land within 1000 feet of lakes or 300 feet from Purgatory Creek (see Wetlands and Shorelands map) in the shoreland overlay zoning district. That overlay imposes shoreland



requirements in addition to the underlying zoning requirements. These water bodies have been classified by the Department of Natural Resources as Natural Environment (NE), Recreational Development (RD), or General Development (GD), based upon their development characteristics. Lake Minnetonka, Lake William, Galpin Lake, and Purgatory Creek are all classified GD. The remaining lakes are classified RD with the exception of Silver Lake which has a NE classification.

Having been among the first of the Lake Minnetonka communities to adopt shoreland regulations, Shorewood is committed to keeping the shoreland areas as natural as possible. Development in the shoreland district is closely monitored for compliance with site alteration requirements, hard cover restrictions and building setbacks.

Shorewood's floodplain regulations date back to 1979. These rules are intended to protect life as well as property in areas which are subject to periodic flooding. The most recent amendments were completed in 2016 to reflect changes in Federal requirements.

## **Air and Noise Pollution**

The Minnesota Pollution Control Agency (MPCA) establishes the standards for permissible levels of noise and air pollution. The only source of noise or air quality problems in Shorewood is vehicular traffic. Recorded levels have not exceeded State or Federal standards.

In several cases, air quality standards as set by the State of Minnesota are more restrictive than Federal standards. In this regard, two sets of air quality standards have been adopted. The "primary standards" are those ambient air quality levels necessary to protect public health with an adequate margin of safety. Secondary standards refer to those ambient air quality levels necessary to protect public welfare, such as prevention of air pollution damage to crops, natural vegetation, materials and structures.

Although the sources of noise and air pollution in Shorewood are limited, the City does regulate these pollutants through adoption of Minnesota Pollution Control Agency standards by reference in the Zoning Ordinance.

State standards for noise levels suggest that decibel measures of 65 dBA are the point at which action may be taken to reduce noise. No permit system has been established to control noise resulting from existing or future sources. Within the City of Shorewood, State Highway 7 has been and continues to be a primary source of noise pollution.

The Minnesota Department of Transportation (MnDOT) has two programs under which the construction noise barriers along State highways are studied.

Major Reconstruction Projects. The first program applies to major reconstruction projects in which roadways are expanded with additional lanes of traffic or are modified to have



significantly changes to the vertical or horizontal alignment of the roadway. This type of project usually requires an in-depth environmental review process in which many issues are examined, one of which is noise and noise mitigation. Under this type of project, existing and future noise levels are modeled and if levels exceed Federal Standards then mitigation is analyzed.

To have an area be eligible for mitigation, it must meet MnDOT criteria of a 5-dBA reduction with at least one home receiving at least a 7-dBA reduction in noise and meet with our cost-effectiveness of \$78,500/benefited home. As an example, if a barrier costs \$700,000 and would reduce noise levels by 5 decibels for 10 homes, the total calculated cost-effectiveness would be \$70,000, which would meet the cost effectiveness criteria and the barrier would be proposed as part of the project. It should be noted that even with a 20' high barrier, noticeable noise reductions are limited to usually 300-400' away from the barrier.

Retro-Fit Projects. The second program is commonly referred to retro-fit projects. It applies to stand-alone noise walls where major reconstruction is not planned in the near future. In this study, highway segments in the Metropolitan Area are ranked by existing noise levels, length of barrier, and number of homes adjacent to the highway. Typically funding for this program allows MnDOT to construct 1-3 sites per year. The most recent priority ranking in the Metropolitan Area was conducted in 2016, the results of which are available on the following website:

<https://www.dot.state.mn.us/environment/noise/metro.html>

## **Aggregate Resources**

There are no known aggregate resources in the City of Shorewood.

## **Renewable Energy Systems**

It is the intent of the City of Shorewood to provide a sustainable quality of life for its residents, making careful and effective use of available natural, human and economic resources and ensuring that resources exist to maintain and enhance the quality of life for future residents. In accordance with this intent, the City has chosen to encourage and promote, rather than restrict, development of renewable energy sources which have a positive impact on energy production and conservation while not adversely impacting the community or where the economic and social impacts can be mitigated.

While the City's Zoning Ordinance specifically recognizes solar, wind and geothermal (ground source heat pump) energy systems, only solar energy and geothermal systems are currently permitted. Shorewood 2040 Comprehensive Plan



## Solar Resources

As noted in the Policy Plan chapter of this document, the City of Shorewood promotes energy conservation and encourages the use of alternative energy systems in new construction. In this regard, it is important on both a regional and local scale that solar resources, and specifically the solar access be protected for the development of solar energy systems.

The City of Shorewood is also committed to becoming a more efficient community via future investment in alternative energy systems.

Recognizing the regional importance of solar energy, the Metropolitan Council requires comprehensive plans for Metropolitan Area communities to include the following information:

1. A map which illustrates the City's gross solar potential.
2. A calculation of the City's solar resources.
3. A policy (or policies) which relate to the development of access to direct sunlight for solar energy systems.
4. Strategies to be applied to implement established solar resource policies.

Solar Potential. The map below, developed by the University of Minnesota and provided by the Metropolitan Council, illustrates annual sun energy dispersed throughout the City with "high end" potential areas shown in yellow and areas having "low end" energy potential illustrated in black. Such information can be used to predict the productivity of solar installations. According to the Metropolitan Council, the primary issue in the consideration of solar energy installations is intermittent shading due to nearby structures and trees. In this regard, areas which are shown to have "high end" potential in the City are those areas with very little tree cover.

Solar Resource Calculations. The following table provides an approximation of Shorewood's solar potential expressed in megawatt hours per year (Mwh/yr). To be noted is that the calculations estimate the current potential resource of the City (prior to the removal of areas considered unsuitable for solar development or factors related to solar efficiency).



| <b>Shorewood:</b><br>Gross Solar Potential<br>(Megawatt Hours per Year)   |                                       |  |  |
|---|---------------------------------------|--|--|
| <b>Gross Potential<br/>(Mwh/yr)</b>   | <b>Rooftop Potential<br/>(Mwh/yr)</b> | <b>Gross Generation Potential<br/>(Mwh/yr)</b> | <b>Rooftop Generation Potential<br/>(Mwh/yr)</b> |
| 3,156,882   | 282,655                               | 315,688  | 28,265   |
| <p>Metropolitan Council Notes:</p> <ul style="list-style-type: none"> <li>• In general, a conservative assumption for panel generation is to use 10 % efficiency for conversion of total insolation into electric generation.</li> <li>• The rooftop generation potential does not consider ownership, financial barriers or building-specific structural limitations.</li> </ul> <p>Source: Metropolitan Council, 2017</p> |                                       |  |  |

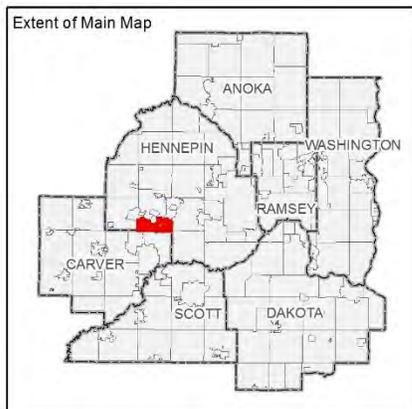
The estimated gross solar generation potential and gross solar rooftop potential are intended to convey how much electricity could be generated in the City of Shorewood using existing technology and assumptions on the efficiency of conversion. According to the Metropolitan Council, for most cities, the rooftop generation potential is equivalent to between 30 and 60 percent of a community’s total electric energy consumption. There is no minimum amount of solar resource development required for cities in the Metropolitan Area.



## Gross Solar Potential City of Shorewood, Hennepin County



1/9/2017



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

High : 1277688  
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.



Policy. The City of Shorewood recognizes that providing adequate solar (sunlight) access to properties is a priority not only for potential solar energy systems, but for the protection of property and aesthetic values as well. In this regard, the City will promote reasonable access to solar energy by controlling artificial blockage of solar radiation for optimum long-term economic and environmental benefits. Related to this issue, it should be recognized that tree preservation is also a considered a community priority.

Implementation. Solar access protection is provided for by the uniform implementation of the City's land management tools. Specifically, such protections are provided via lot and building performance standards contained within Shorewood's Zoning Ordinance. Requirements such as maximum building height and yard setback standards are implemented for the purpose of creating separation between structures and allowing equal sunlight access such that a property is not in the shadow of an adjacent building.

As noted, the City established specific regulations which accommodate solar energy systems. Such systems are a permitted accessory use in all zoning districts subject to various conditions to mitigate adverse impacts (limitations related to height, location, size, aesthetics etc.).

## NATURAL RESOURCES PLAN SUMMARY

Shorewood is committed to all efforts at maintaining the high quality of its natural environment. The City's goal in this regard is as follows:

**The City will update (amend) its guidelines and regulations and enforce existing standards to ensure preservation and protection of the natural environment.**

Shorewood has made considerable progress in natural resource protection. As a supplement to the goals, objectives and policies included in the Policy Plan chapter of this document, the following practices would continue, as indicated below:

1. Soil conditions will continue to be taken into consideration in all types of development proposals.
2. Ordinances incorporating Hennepin Conservation District standards related to filling, grading and excavating will continue to be enforced.
3. The City will continue to enforce standards regulating development on steep slopes. For example, grading or construction which results in disturbed slopes of 3:1 (three horizontal to one vertical) shall be restricted.
4. The City will continue to require tree preservation and replacement and site landscaping for all developments.



5. The requirements of the Wetland Conservation Act will continue to be actively enforced.
6. A 35-foot buffer will continue to be required adjacent to all wetlands in new developments. A 15-foot building setback from the natural buffer shall be required.
7. New developments will continue to be required to construct sedimentation ponds designed to National Urban Runoff Program (NURP) standards.
8. Shorewood will continue to expand its environmental educational programs, such as buckthorn removal, raingardens, organics collection, and recycling.
9. Shorewood's shoreland regulations will continue to be enforced in order to preserve and restore the natural character of area lakes.
10. Shorewood's floodplain regulations will be updated as necessary to reflect any changes in State or Federal requirements.
11. Shorewood will consider the establishment of regulations pertaining to wind energy systems.



## INTRODUCTION

The Land Use Plan is formulated to show logical relationships between a variety of major land use types, including residential, public, semi-public, commercial, and undeveloped open space. The locations of various land uses are a result of applying the general planning concepts and the specific policies contained in the Policy Plan. For the most part, land use patterns in the City are well-established. In this regard, it is the City's intention to implement desired future uses through zoning. In deciding the amount which is desired of each land use type, the following factors have been considered:

Community Function. Within the context of the Metropolitan Area, the primary role of Shorewood has been the provision of housing. As such, planning must be geared toward providing a quality living environment with adequate supportive services (i.e. park and recreational facilities, neighborhood convenience commercial areas, etc.).

Community Character. Shorewood's current character is primarily single family residential. Shorewood will strive to maintain its character.

Housing. Current residential development in Shorewood consists mainly of single family units. Few new housing units are available to young singles and newly married couples. While housing opportunities for the elderly have increased over the past decade, demand for such housing types continues to exist. As land becomes increasingly scarce, market forces often conflict with what would be considered affordable housing by Metropolitan Area standards. Given Shorewood's desire to maintain its low density residential character, the Land Use Plan attempts to preserve the community's present variety of housing.

Preservation of Open Space. Past planning efforts in the City assumed that any land that is not set aside for wetland protection or parks will ultimately be developed. This does not necessarily need not be the case. This section of the Comprehensive Plan explores means of establishing permanent green space areas such as the use of zoning tools, assisting neighborhoods in purchasing land, obtaining conservation easements, or outright land acquisition by the City.

Regional Growth Management Objectives. As indicated in the Policy Plan, an established goal of the City of Shorewood is to satisfy the Metropolitan Council's minimum residential density objectives for "suburban" communities. It is further the intent of the City to promote growth strategies for orderly and efficient land use which are consistent with the Metropolitan Council's *Thrive MSP 2040* regional development guide. In this regard, the Metropolitan Council has established certain land use-related expectations for designated "suburban" communities such as the City of Shorewood. These expectations are as follows:

## Community Framework - Land Use Plan

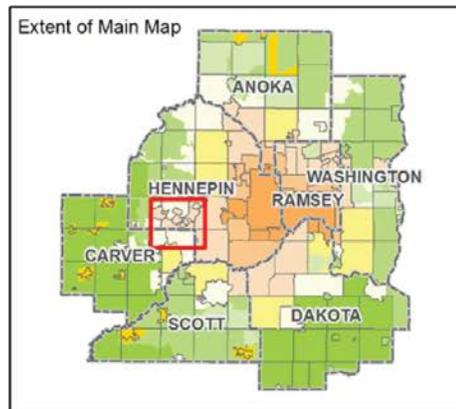
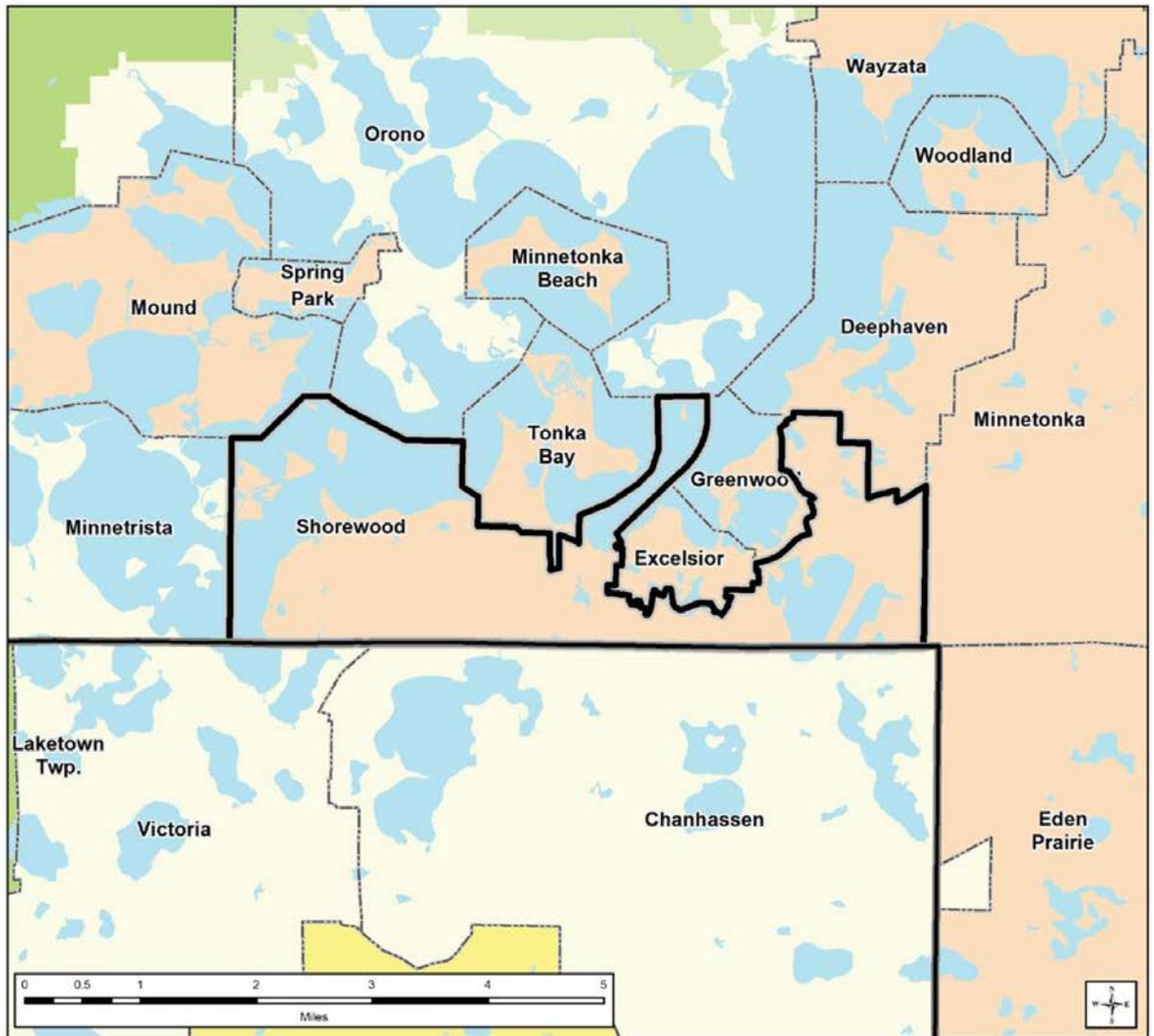
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- *Plan for forecasted population and household growth at overall average densities of at least five units per acre.*
- *Target opportunities for more intensive development near regional transit investments at densities and in a manner articulated in the 2040 Transportation Policy Plan.*
- *Identify areas for redevelopment, particularly areas that are well-served by transportation options and nearby amenities, 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 the comprehensive plans.*

Shorewood recognizes its role and responsibility in the attainment of the Metropolitan Council's regional planning objectives.

# Community Framework - Land Use Plan



## Community Designations

- |                                    |                        |
|------------------------------------|------------------------|
| Outside Council planning authority | Emerging Suburban Edge |
| Agricultural                       | Suburban Edge          |
| Rural Residential                  | Suburban               |
| Diversified Rural                  | Urban                  |
| Rural Center                       | Urban Center           |
- 
- |                              |
|------------------------------|
| County Boundaries            |
| City and Township Boundaries |
| Lakes and Major Rivers       |

## CONCEPT PLAN



The preceding principles serve as an initial reference guiding community or neighborhood planning and improvement. The next reference point is the Concept Plan. The Concept Plan forms the basis from which categorical elements of the Comprehensive Plan are developed. The plans for environmental protection, land use, transportation and community facilities will relate to the concepts set forth in this section of the document. The physical development and design concepts are derived from the established goals, objectives and policies and an assessment of the community's function within the context of the Metropolitan Area.

Shorewood has adopted as one of its goals the preservation of the community's residential and natural character. For the purpose of this Plan, a community is defined as an entity possessing a common likeness or character. Since the basic character of Shorewood is that of a residential community, it is essential that each residential neighborhood be maintained as a unit with a sense of continuity and focus. Moreover, as certain supportive services and facilities are required in order for a residential community to function properly, nonresidential uses should be likewise maintained. Thus, proper attention to each constituent part of the community is essential to the establishment of an identity or sense of community.

In order to enhance or reinforce the sense of community identity in Shorewood, it is essential that a strong sense of place be provided. In this regard, it is proposed that neighborhood parks ranging in size depending on the circumstance serve as focus or unifying elements. This concept is illustrated on the sketch shown on the following page.

In order to relate neighborhoods on a community scale, community focal points should be developed (see concept plan sketch). Typically, a community would have one central activity center to serve this purpose. However, given the elongated shape of the City of Shorewood, multiple activity centers are proposed. While these focal points already exist to a certain extent, planning for the community should recognize and attempt to enhance these activity centers.

The commercial center should remain easily accessible to all residential districts. The center should also project a unified image with individual components of the center arranged so as to create functional and complementary use relationships. Circulation within the core should be, to the extent possible, largely pedestrian-oriented. In order to increase the continuity of the center, while at the same time increasing pedestrian safety, major traffic flow should be routed around the periphery of the center, penetrating it as little as possible. Finally, commercial property maintenance should represent and reflect the vitality and stability of the entire community.

The shopping center at Lake Linden Drive and Highway 7 is a primary commercial focus for the City. More recently, the commercial areas abutting County Road 19 have come to the forefront. The City's County Road 19 Corridor Study emphasizes the issue of identity, going so far as to identify the corner of Smithtown Road and County Road 19 as "Smithtown Crossing." Smithtown Crossing is another significant entry point into the City and efforts to enhance the area should continue.

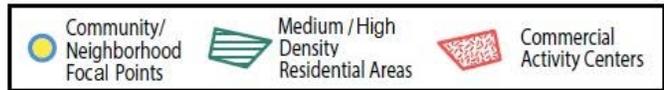
# Community Framework - Land Use Plan



The Waterford commercial area located south of Highway 7 between Vine Hill Road and Old Market Road is also considered a commercial focal point. Neighborhood and/or convenience type commercial as well as office uses should continue to be encouraged in this area.

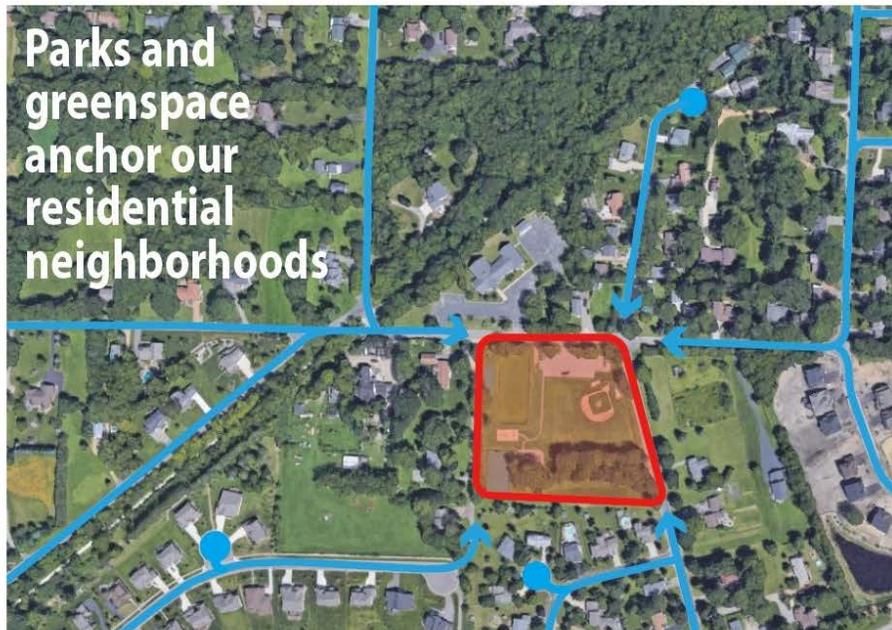
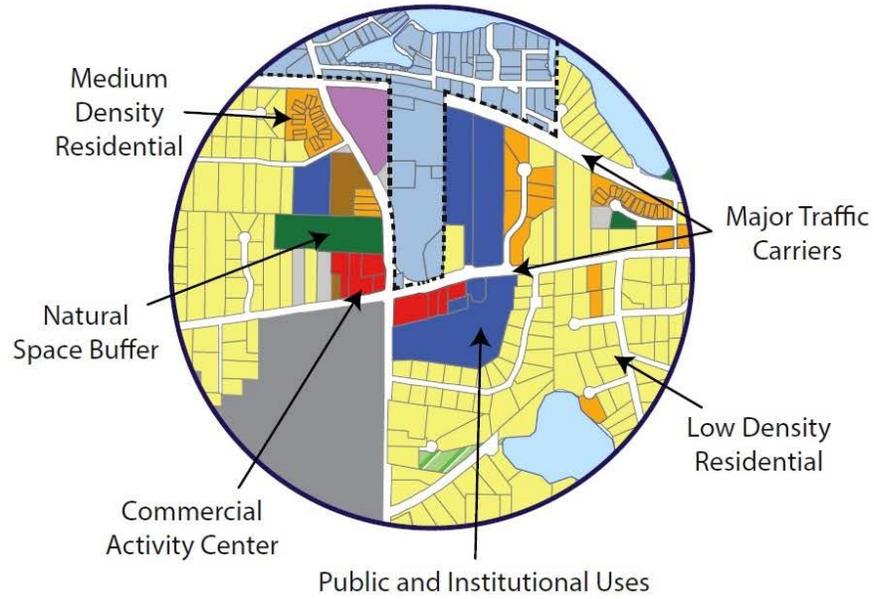


## Community Focal Points





# Land Use Transition



# Community Framework - Land Use Plan



The City Hall and surrounding City property is another community focal point and serve as the civic center for Shorewood. Development of this area should be representative of community attributes and set an example for private development in the community.

Community parks have been developed within the community to serve the recreational needs of the City. Additionally, trails developed as a result of the trail planning process serve to tie the community together.

## Land Use Classifications

The following maps illustrate Existing Land Use in Shorewood and the Land Use Plan for the community. The Land Use Plan map shows the proposed juxtaposition of a variety of land use types and densities. These land uses are described in general below.

Open Space. This category consists primarily of wetlands, conservation areas and other areas set aside from development. Open Space areas are indicated on the Existing Land Use Map. These areas are scattered throughout the community and range in size from small wetlands/ponds to large tracts of land found near Howard's Point Road and east of Christmas Lake. Protection of these natural areas is considered important, both in terms of Shorewood's natural drainage system and retention of community aesthetics.

As undeveloped land in Shorewood becomes scarcer, there is increasing interest in preserving at least some of it as permanent open space. Given the high cost of remaining land in Shorewood, the focus of the City's efforts should be acquisition of conservation easements versus outright purchase of land.

Minimum Density Residential. While the City has recognized a need for providing areas that allow a somewhat higher density than one-acre lots, there is still demand for large lots. The areas indicated on the Land Use Plan map consist of land where such development is already prevalent. Any residential infill development should be compatible with existing neighborhood densities to retain the character of neighborhoods. This is consistent with past City practices and approved comprehensive plans.

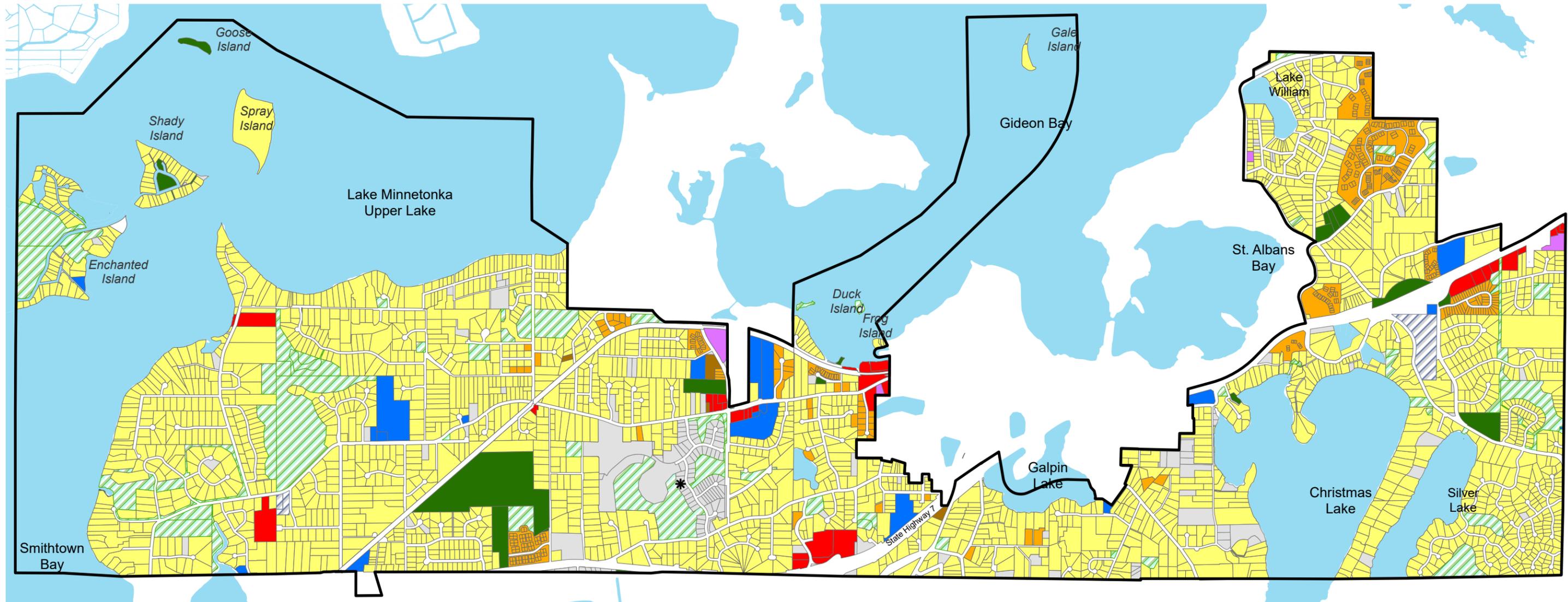
Overall density is proposed at .1 to 1 unit per acre. Most of the areas proposed as minimum density are near natural areas, such as lakes or wetlands. The City must ensure that any changes in density to surrounding areas have a minimum of impact on the lower intensity use.

The following is a summary of the City's single family residential zoning districts and the minimum lot sizes which could be applied within the Minimum Density Residential land use category. The City Council may also find other districts, including the Planned Unit Development district, consistent with the Comprehensive Plan.

|  |                    |
|--|--------------------|
| R-1A, Single-Family Residential District | 40,000 square feet |
| R-1B, Single-Family Residential District | 30,000 square feet |

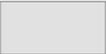
# Existing Land Use

## City of Shorewood 2040 Comprehensive Plan

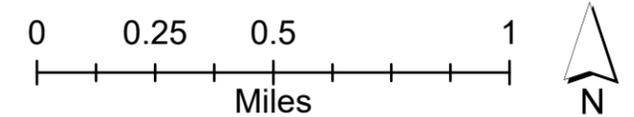


\* Platting and construction for the Minnetonka Country Club Development has begun, which includes 142 units of low density residential

### Existing Land Use

- |  |  |  |
|--|--|--|
|  Single-Family Residential   |  Industrial           |  Cemetary   |
|  Two-Family Residential      |  Public/Institutional |  ROW        |
|  Multiple-Family Residential |  Parks                |  Vacant     |
|  Commercial                  |  Open Space           |  Open Water |

Map created: December 2022  
Data: NAC, MnDNR, Metropolitan Council & Hennepin County



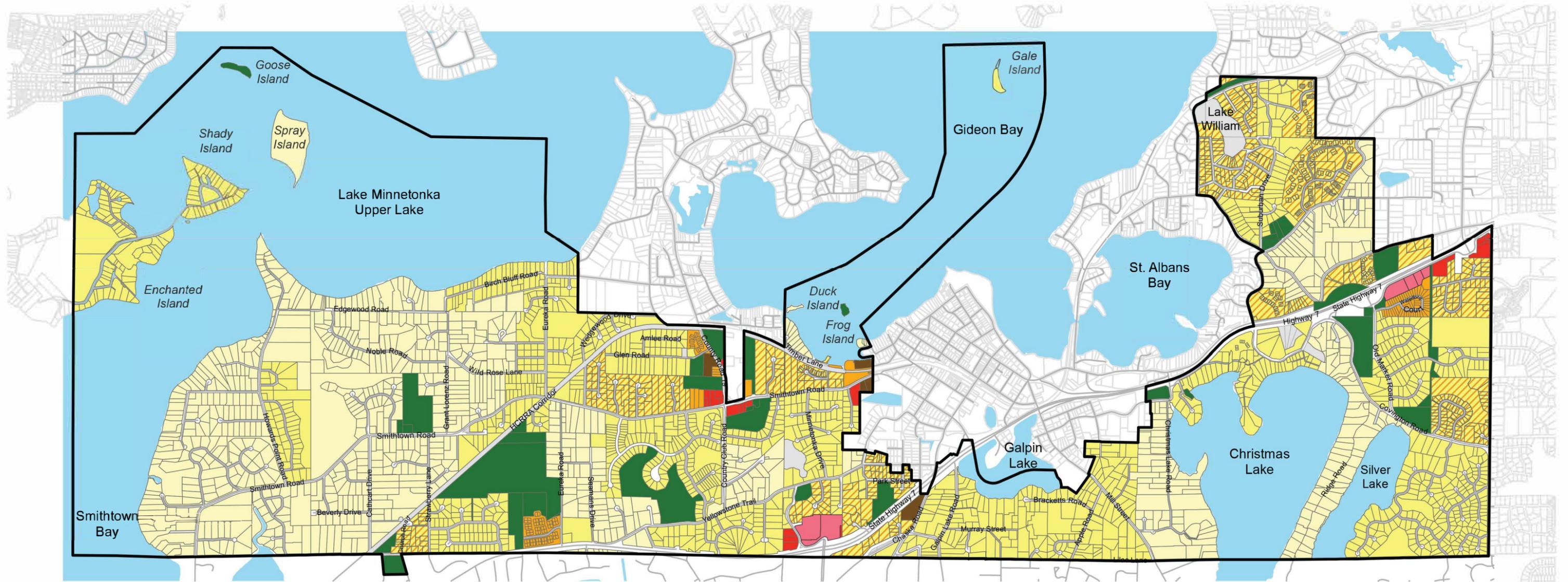
**NORTHWEST ASSOCIATED CONSULTANTS, INC.**

4150 Olson Memorial Highway, Ste. 320, Golden Valley, MN 55422  
Telephone: 763.231.2555 Website: www.nacplanning.com

# Future Land Use

## City of Shorewood

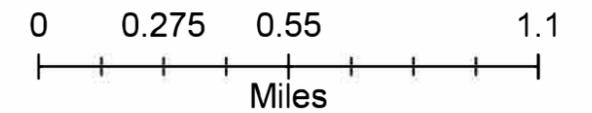
### 2040 Comprehensive Plan



### Future Land Use

- |  |                             |  |  |  |               |
|--|-----------------------------|--|--|--|---------------|
|  | Minimum Density Residential |  | High Density Residential                 |  | City Boundary |
|  | Low Density Residential     |  | Commercial                               |  |               |
|  | Low to Medium Residential   |  | Commercial-Mixed Use                     |  |               |
|  | Medium Density              |  | Public/ Semi- Public; Public/Semi-Public |  |               |

Map created: December 2022  
 Data: NAC, MNDNR, Metropolitan Council



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# Community Framework - Land Use Plan



Low Density Residential. This land use category basically consists of single or two family residential uses at a density of one to two units per acre. Most of the area designated as low density residential on the Land Use Plan is already zoned for this type of development. The following is a summary of the City's single family residential zoning districts and the minimum lot sizes which could be applied within the Low Density Residential land use category. The City Council may also find other districts, including the Planned Unit Development district, consistent with this Comprehensive Plan.

|  |                           |
|--|---------------------------|
| R-1A, Single-Family Residential District | 40,000 square feet        |
| R-1B, Single-Family Residential District | 30,000 square feet        |
| R-1C, Single-Family Residential District | 20,000 square feet        |
| R-2A, Two-Family Residential District    | 20,000/30,000 square feet |
| R-2B, Two-Family Residential District    | 15,000/20,000 square feet |

Low to Medium Density Residential. This category of land use is provided to allow residential development at a density of three to six units per acre. This density begins to allow a greater variety of housing types. Small lot single family residential, two-family homes and medium density townhouse development may be permitted in these areas.

Residential development at this density is viewed as serving two purposes: 1) proper location creates a transitional area between lower density residential uses and higher intensity uses such as commercial (see concept plan), and 2) applies the concept of locating a greater density of population nearer to activity centers and major traffic carriers.

The following is a summary of the City's residential zoning districts and the minimum lot sizes which could be applied within the Low to Medium Density Residential land use category. The City Council may also find other districts, including the Planned Unit Development district, consistent with this Comprehensive Plan:

|                                      |                           |
|--------------------------------------|---------------------------|
| R-1D, Single-Family District         | 10,000 square feet        |
| R-2A, Single and Two-Family District | 20,000/30,000 square feet |
| R-2B, Single and Two-Family District | 15,000/20,000 square feet |
| R-2C, Single and Two-Family District | 10,000/15,000 square feet |
| R-3A, Multiple Family District       | 20,000/30,000 square feet |
| R-3B, Multiple Family District       | 15,000/20,000 square feet |

Medium Density Residential. This land use category directs residential uses at densities of six to eight units per acre. Types of housing allowed in these areas would include medium density townhouse development and potentially small-scale apartment or condominium units.

The areas proposed for medium density residential are relatively limited in area and number so as to have a minimum effect on the overall density of the community. These areas include primarily the properties immediately adjacent to the existing commercial uses. Once again, the concepts of land use transition and higher density near activity centers have been applied.

# Community Framework - Land Use Plan



The following is a summary of the City’s residential zoning districts and the minimum lot sizes which could be applied within the Medium Density Residential land use category. The City Council may also find other districts, including the Planned Unit Development district, consistent with this Comprehensive Plan.

|  |                           |
|--|---------------------------|
| R-3A, Multiple Family Residential District<br>(dwellings with up to four units)  | 20,000/30,000 square feet |
| R-3B, Multiple Family Residential District<br>(up to 10 dwelling units per acre) | 15,000/20,000 square feet |

High Density Residential. This land use category represents the highest density residential use proposed within the City of Shorewood. Specifically, the category makes an allowance for residential densities ranging from eight to 30 units per acre. It is anticipated that greater densities could potentially be accommodated via planned unit development for projects which fulfill PUD development objectives and for which adequate services can be provided.

This category is applied to the existing “Shorewood Landing” senior housing facility and Shorewood Place Apartments sites. Additionally, potential redevelopment sites near the intersection of County Road 19 and Smithtown Road may be considered for high density residential use in the future. The Planned Unit Development district would likely be used to implement this district, although other options are also discussed.

Commercial. This land use category includes locations where commercial retail and service uses are desired. As in the case of the City 2030 Comprehensive Plan, the City prefers commercial uses in Shorewood be confined to cohesive, compact activity centers.

Existing commercial development in Shorewood is relatively limited. While Shorewood lacks a traditional downtown commercial center, adjacent commercial centers located in abutting communities supplement the commercial needs of Shorewood residents. Nearby Downtown Excelsior and the Tonka Village commercial strip center located in Tonka Bay are two primary examples. In recognition of such neighboring commercial uses, the demand for additional commercial services in the City of Shorewood may be limited.

The only existing commercial uses shown in the western portion of the community are an existing marina on Howard’s Point Road and an auto repair operation on Smithtown Road near Eureka Road. Both uses presently exist as lawful non-conforming activities.

While the City’s marinas are lawful non-conforming uses (which lie within residential zoning districts), they are viewed as community amenities. In this regard, the City will investigate zoning mechanisms which make an allowance for the uses in a manner which is compatible with surrounding residential neighborhoods.



Most of the commercial land use in Shorewood is located near the center of the community (along the County Road 19 corridor) and on the east end between Vine Hill Road and Old Market Road. The area near the intersection of Smithtown Road and County Road 19 is devoted primarily to auto-oriented commercial uses. The shopping center lies within the City of Tonka Bay, but serves as a general commercial area for Shorewood residents as well.

Commercial development along the County Road 19 corridor through Shorewood is prime for redevelopment. The City has expressed a strong preference to see the northwest quadrant of Smithtown Road and County Road 19 redeveloped in a unified manner. This may require the assembly of various parcels and is well-suited for a combination of multiple family residential and commercial uses. The auto-oriented strip of commercial uses on the south side of County Road 19, adjacent to Smithtown Crossing, could be redeveloped with more retail or office uses as well.

Shorewood's has a shopping district located on Highway 7 north of the intersection with Highway 41. A portion of this site is guided for future Mixed Use development, and the area surrounding the shopping center has been designated for low to medium density residential use on the Land Use Plan.

The area located on the south side of Highway 7, between Vine Hill Road and Old Market Road is primarily neighborhood and convenience-type commercial. A portion of this area is also guided for future Mixed Use.

Commercial Mixed Use. While the City aims to maintain vibrant commercial areas to serve community residents, certain commercial areas have been identified as being appropriate for the Commercial Mixed Use designation. The City has identified certain key existing commercial areas that are capable of providing for housing units in conjunction with maintaining commercial activity. These housing units would provide adequate density to aid in increasing the commercial customer base while also providing for a greater range of housing choice within the community.

These sites may merit redevelopment into mixed use, provided the development plan is appropriate for the context of the area, traffic issues are properly mitigated, and it fits within the goals and policies of the City. The City requires a minimum of 50% of the site to be maintained as a Commercial land use, to continue the important commercial presence within these areas.

Residential uses with a minimum of 15 units per acre and a maximum of 30 units per acre shall be used for a minimum of 40% of the site, provided it can be established in a manner that is consistent with the character of the immediate vicinity.

Public/Semi-Public. This land use classification includes all existing public buildings, a school, parks and recreational facilities in the community. It also includes semi-public uses like churches, cemeteries and the Xcel property on County Road 19. All areas so designated on the Land Use Plan map are already in existence. No new areas are proposed for semi-public use nor are any existing semi-public uses proposed to be eliminated. Since light rail is not anticipated in the



foreseeable future, the former Chicago and Northwestern rail right-of-way will continue to be operated by Three Rivers Park District and used for regional trail purposes.

## **Land Use/Zoning Changes**

As in the case of the Shorewood's 2030 Land Use Plan, the City's zoning map must be consistent with the proposed 2040 Land Use Plan map. To achieve such consistency, some changes to the zoning map may be necessary to implement the Land Use Plan:

Going forward, it is anticipated that the following issues should be addressed through future Zoning Code amendments:

High Density Residential Zoning District. As previously indicated, the City's zoning ordinance does not presently include a high density residential zoning district. While the City's R-3B, Multiple Family Residential zoning district makes an allowance for apartment buildings, it establishes a density cap of 10 units per acre. Considering that the "High Density Residential" land use category provided on the City's 2040 Land Use Plan makes reference to a density range of eight to 30 units, the following processing alternatives may wish to be considered to accommodate future high density residential housing projects in the City:

1. Amend the City's R-3B, Multiple Family Residential District to accommodate residential densities up to 30 units per acre.
2. Utilize PUD, planned unit development to accommodate residential development densities which exceed those allowed in the City's base zoning districts.
3. Establish a new "High Density Residential" zoning district which corresponds with the density range identified on the 2040 Land Use Plan.

Teardown and Rebuild Regulations. Like many communities throughout the country, Shorewood has become concerned about the construction of very large homes on existing lots in existing neighborhoods. While the City cannot do much about the seemingly increasing market for large homes, it can, through its zoning regulations, attempt to maintain the scale of existing neighborhoods. In this regard, the City could consider incorporating FAR (floor area ratio) into its Zoning Code. This establishes a maximum amount of building area relative to lot area, further addressing the issue of residential scale.

Alternative Energy Regulations. While the City's Zoning Code specifically recognizes solar, wind and geothermal (ground source heat pump) energy systems, specific regulations have only been established for solar and geothermal energy systems at this point. In the future, the City may also consider regulations that would allow wind systems.

While the City encourages solar energy systems, it is important that the allowance of such systems be balanced with the community's desire to protect and preserve significant trees. As noted on the

# *Community Framework - Land Use Plan*



Planning Tactics chapter of this Plan, the preservation of significant trees in the community is considered a community priority.

Construction Staging Plans. As noted in the Policy Plan, efforts should be made to limit on-street parking and protect adjoining properties from nuisance concerns associated with construction projects. In this regard, staging plans should be required for all infill development projects. Minimally, such plans should address contractor parking locations, construction material storage, construction hours, and street cleaning.

Commercial Mixed Use Zoning. The City will need to determine how to properly implement the Commercial Mixed Use land use designation. This may include modifications of existing zoning districts, establishment of new districts, or the use of innovative planning tools.

## **Residential Development Density**

As previously indicated, the Metropolitan Council’s Thrive MSP 2040 regional development guide stipulates that “suburban” communities such as Shorewood should plan for forecasted population and household growth at overall average densities of at least five units per acre. In this regard, such minimum densities apply to new residential subdivisions or redevelopment projects. To the extent possible, densities of new projects will be sensitive to and compatible with surrounding residential densities. The regional development guide also notes that higher densities are expected in locations with convenient access to transportation corridors and adequate sewer and water capacity.

The City has established certain areas for development and redevelopment that will provide additional housing units for the City in this planning period. For the purposes of this table, the areas classified as Commercial Mixed Use are established as 40% residential at 15 units per acre. Therefore, the acreages in the table only is the residential portion.

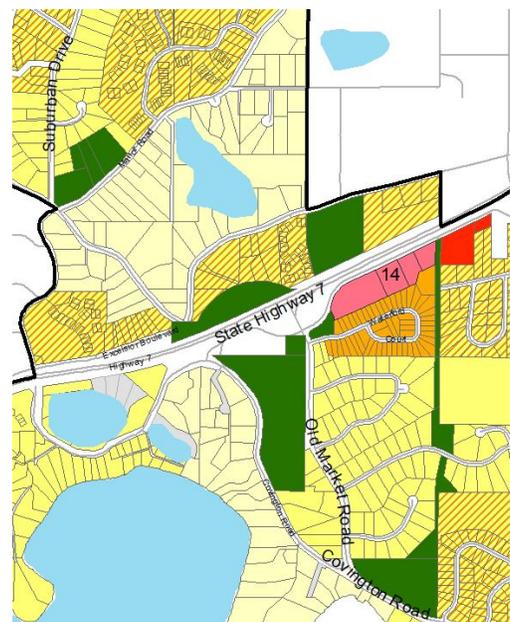
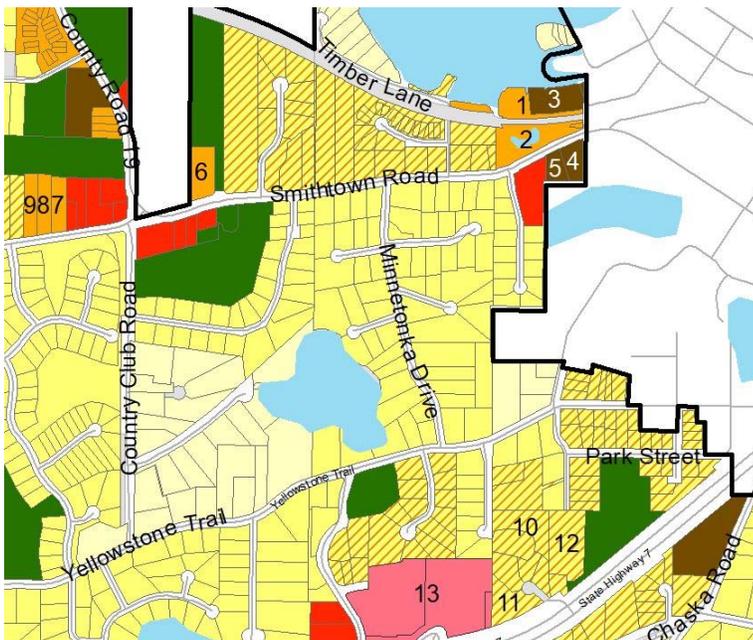
| Shorewood Staging of Residential Land Use Development |           |             |            |             |
|---|-----------|-------------|------------|-------------|
| Land Use Category                                     | 2021-2030 |             | 2031-2040  |             |
|   | Units     | Acres       | Units      | Acres       |
| Low-Medium Density Residential                        | 6         | 1.7         | 15         | 4.7         |
| Medium Density Residential                            | 12        | 2.0         | 32         | 5.2         |
| High Density Residential                              | 30        | 3.7         | 0          | 0.0         |
| Commercial Mixed Use                                  | 42        | 2.8         | 75         | 5.0         |
| <b>Totals</b>   | <b>90</b> | <b>10.2</b> | <b>122</b> | <b>14.9</b> |

# Community Framework - Land Use Plan



| Shorewood Development Capacity |                      |                    |               |
|--------------------------------|----------------------|--------------------|---------------|
| Property                       | Net Acres            | Minimum Density    | Minimum Units |
| 1                              | 1.7                  | 6                  | 11            |
| 2                              | 1                    | 6                  | 6             |
| 3                              | 1.7                  | 8                  | 14            |
| 4                              | 1                    | 8                  | 8             |
| 5                              | 1                    | 8                  | 8             |
| 6                              | 1.5                  | 6                  | 9             |
| 7                              | 1                    | 6                  | 6             |
| 8                              | 1                    | 6                  | 6             |
| 9                              | 1                    | 6                  | 6             |
| 10                             | 1.8                  | 3                  | 6             |
| 11                             | 1.7                  | 3                  | 6             |
| 12                             | 2.9                  | 3                  | 9             |
| 13                             | 12.5 (5 residential) | 15                 | 75            |
| 14                             | 7 (2.8 residential)  | 15                 | 42            |
| Totals                         | 25.1                 | 8.4 units per acre | 212           |

The location of the development sites are noted in the graphics below:





## **Land Subdivision**

Controlling the way land is subdivided goes hand in hand with zoning regulations in ensuring the quality of urban development. As Shorewood's larger tracts become developed, increasing pressure will occur to re-subdivide smaller parcels and land once considered to be marginal. The City's subdivision regulations should periodically be reviewed and updated to better address these situations. Further, all subdivisions of land should be examined for opportunities to preserve open space.

The current Subdivision Code requires developers to extend streets and utilities as necessary to accommodate the development of adjacent properties. Also, the Code prohibits private streets except where determined "to be absolutely essential to the enjoyment of property rights." With these rules in mind, the review of all subdivision requests should consider how nearby land might develop in the future. In all cases, steps should be taken to ensure that new subdivisions do not negatively impact surrounding neighborhoods and street systems.

To address City concerns related to narrow street widths, related on-street parking and sidewalks/trails, Shorewood could develop a local street template.

More often than not, when one landowner is ready to subdivide its property, the adjoining landowner is not. Timing then becomes an obstacle to avoid detrimental, piece-meal development. The City can, in certain instances, overcome such obstacles by carefully crafting development agreements and restrictive covenants that provide for future development. For example, public right-of-way can be required for future streets with provisions that further development will result in street and utility assessments. Also, planned unit development can be used as a tool to accommodate the different timing of various landowners' development requests.

As smaller pieces of land are re-subdivided, lot configurations become a problem. Backlot divisions, flag lots and gerrymandered property lines undermine the benefits of building setbacks and disrupt continuity of open spaces. All subdivisions, regardless of size, should adhere to good planning and design principles. To this end, the use of formal platting procedures will be encouraged, while lot splits with metes and bounds descriptions will be approved only in the very simplest of cases.

## **Tree Preservation**

As previously noted, the preservation of Shorewood's natural features is considered a community priority. With this in mind, the City's should periodically review the Tree Preservation and Reforestation Policy to ensure that existing policies adequately reflect desired preservation objectives.

Presently, the terms and provisions of the Tree Preservation and Reforestation Policy apply to all activities which require the issuance of a Land Disturbance Permit. At some point, the City should



consider formerly incorporating the “policy” provisions into the City’s Zoning and Subdivision Codes.

## **Housing Variety/Affordability**

Shorewood’s attempts to provide affordable housing have been thwarted in the past by market forces. The desirability of the area, coupled with scarcity of available land make it very difficult to achieve housing that is considered affordable by Metropolitan Area standards. The City’s efforts have been focused on preserving the existing housing stock. For example, limitations have been imposed relative to combining small buildable parcels of land into larger lots. With respect to housing variety, the City may consider updating its current zoning regulations to accommodate and encourage senior housing that includes dependent living such as assisted living and dependent care facilities.

The Metropolitan Council has forecast affordable housing needs for all cities and townships within the seven-county Metropolitan Area for the period from 2021-2030. The housing plan element of local comprehensive plans is required to reflect the allocated portion of the forecasted demand for affordable housing. Shorewood’s share of this affordable housing allocation is 48 units for the referenced time period.

The City has guided 3.7 acres for development as High Density Residential at 8 units per acre (30 units). The City has guided an additional 19.5 acres as Commercial Mixed Use, which allows for a minimum of 40% and a maximum of 50% residential development at 15 units per acre. This results in a minimum of 7.8 acres (40% of 19.5) for residential uses (117 units). In total, these land use designations will provide for 147 units of affordable housing based on density. Of the Mixed Use Areas, 2.8 acres (42 units) are anticipated for redevelopment within the 2021-2030 staging period, which gives the City 72 units of affordable housing based on density during this stage.

Programs, initiatives, and actions relative to housing are included in the Housing chapter of this Plan.

## **Lake Access**

In 1988, after considerable study, the City adopted zoning controls that addressed the use of old existing fire lanes within the community. Originally platted as public rights-of-way leading to Lake Minnetonka and Lake William, these lanes have been classified and regulated based upon their historic use. This effort concluded that the fire lanes should not be vacated, but rather should be preserved for public use.

Access to Shorewood’s lakes is also provided by a marina and two yacht clubs as described below:

Howard’s Point Marina. While limited in size, Howard’s Point Marina is considered a community amenity. In this regard, its continuance as a functional marina is encouraged.



Upper Minnetonka Yacht Club. Like Howard's Point Marina, the Upper Lake Minnetonka Yacht Club located on Enchanted Island is considered a community amenity.

Shorewood Yacht Club. The City recently relaxed a restriction on the mooring of power boats at the Shorewood Yacht Club, located on the north side of County Road 19, east of Timber Lane. Over the next several years, the City will monitor activity at the Yacht Club to determine if such activities are compatible with surrounding residential uses.

While the marina and yacht clubs are lawful non-conforming uses (which lie within residential zoning districts), they are viewed as community amenities. In this regard, they should continue to function as they have in the past, but not be expanded due to their residential neighborhood context and limited accessibility. In this regard, the City will investigate zoning mechanisms which make an allowance for the uses in a manner which is compatible with surrounding residential neighborhoods.

The Minnesota Department of Natural Resources and the LMCD continue to search for lake access parking spaces adjacent to Lake Minnetonka. The City should cooperate with these agencies to provide small, scattered facilities compatible with nearby land uses.

### **Historic Preservation**

From a land use perspective, historic structures oftentimes have not only local significance but regional importance as well. In this regard, The Metropolitan Council suggests that 2040 comprehensive plan updates include a plan for the protection of historic sites.

The City of Shorewood recognizes that historic assets help to promote community pride and create a sense of community. In this regard, the City of Shorewood should consider the creation of an inventory of historically significant features, landmarks and buildings and evaluate tools for preserving these areas and structures. Where feasible, the City could potentially assist with the acquisition of historically significant sites or structures, in order to provide educational or recreational opportunities.

# Community Framework - Land Use Plan



## Population and Household Projections Based Upon Land Use Plan

The following table shows the acreages of various categories of land use based upon the Existing Land Use Map and the 2040 Land Use Plan.

| <b>Shorewood Forecasts</b>   |             |               |       |       |       |
|------------------------------|-------------|---------------|-------|-------|-------|
|                              | 2010 Census | 2018 Estimate | 2020  | 2030  | 2040  |
| Population                   | 7,307       | 7,693         | 7,600 | 7,800 | 8,000 |
| Households                   | 2,658       | 2,845         | 2,800 | 2,910 | 3,000 |
| Employment                   | 1,113       | 1,600         | 1,600 | 1,600 | 1,600 |
| Source: Metropolitan Council |             |               |       |       |       |

| <b>Shorewood Existing Land Use</b> |        |        |
|------------------------------------|--------|--------|
| Land Use                           | Acres  | Pct    |
| Single-Family Residential          | 2169.5 | 72.86% |
| Two-Family Residential             | 137.2  | 4.61%  |
| Multiple-Family Residential        | 7.1    | 0.24%  |
| Commercial                         | 54.7   | 1.84%  |
| Industrial                         | 8.8    | 0.30%  |
| Public/Institutional               | 69.4   | 2.33%  |
| Parks                              | 99.3   | 3.33%  |
| Open Space                         | 280.5  | 9.42%  |
| Cemetery                           | 2.6    | 0.09%  |
| ROW                                | 35.6   | 1.20%  |
| Vacant                             | 85.7   | 2.88%  |
| Open Water                         | 27.2   | 0.91%  |
|                                    | 2977.6 | 100%   |

| <b>Shorewood Future Land Use</b> |          |        |
|----------------------------------|----------|--------|
| Land Use                         | Acres    | Pct    |
| Minimum Density Residential      | 1141.703 | 38.34% |
| Low Density Residential          | 1110.797 | 37.31% |
| Low to Medium Residential        | 349.7    | 11.74% |
| Medium Density Residential       | 37.8     | 1.27%  |
| High Density Residential         | 9.7      | 0.33%  |
| Commercial                       | 18.7     | 0.62%  |
| Commercial Mixed Use             | 19.5     | 0.65%  |
| Public/Semi-Public               | 226.7    | 7.61%  |
| ROW                              | 35.6     | 1.20%  |
| Open Water                       | 27.4     | 0.92%  |
|                                  | 2977.6   | 100%   |

## *Community Framework - Land Use Plan*



The amount of land shown as undeveloped is somewhat deceiving in that there is a considerable amount of land included in developed categories which has potential for additional development. For example, an existing home on a three-acre lot could eventually, and often likely will be, re-subdivided into several residential lots. Therefore, the best way to project future land use, and ultimately population, is by comparing the Vacant and Underdeveloped Land map with the 2040 Land Use Plan. The Vacant and Underdeveloped Land map illustrates not only undeveloped land, but also “underdeveloped” land, that is, land already accounted for in a land use category, but which has potential for further development.

The Metropolitan Council provides forecasts for population, households, and employment which are shown on the table below. The Metropolitan Council forecasts that Shorewood has the potential for 3,000 households (or 155 additional households) by the year 2040.

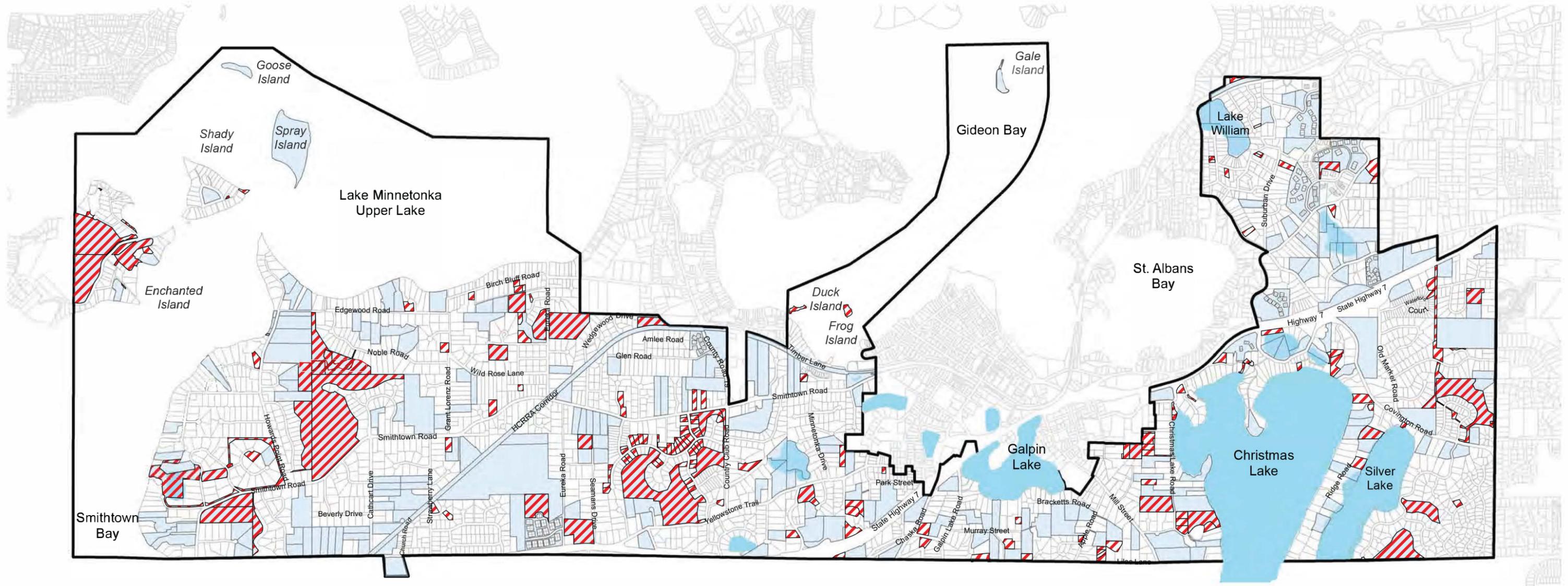
| <b>Population Projections, 2010 – 2040</b> |                        |                            |                          |                          |                          |
|--|------------------------|----------------------------|--------------------------|--------------------------|--------------------------|
| <b>City of Shorewood</b>                   |                        |                            |                          |                          |                          |
|  | <b>2010<br/>Census</b> | <b>2018<br/>(estimate)</b> | <b>2020<br/>Forecast</b> | <b>2030<br/>Forecast</b> | <b>2040<br/>Forecast</b> |
| Population                                 | 7,307                  | 7,693                      | 7,600                    | 7,800                    | 8,000                    |
| Households                                 | 2,658                  | 2,845                      | 2,800                    | 2,910                    | 3,000                    |
| Household Size                             | 2.75                   | 2.70                       | 2.71                     | 2.68                     | 2.67                     |
| Employment                                 | 1,113                  | 1,600                      | 1,600                    | 1,600                    | 1,600                    |
| Source: Metropolitan Council               |                        |                            |                          |                          |                          |

The Metropolitan Council estimates that the 2018 average household size for Shorewood was 2.70 persons per household. For the seven-county region, the Metropolitan Council projects a decline in household size to 2.46 persons per household in 2020 and 2.43 in 2030 and 2040. While this may be true for the region as a whole, the decline in household size in Shorewood is expected to be less considering the City is predominantly comprised of single-family homes.

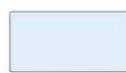
The projections referenced above do not account for redevelopment where several existing lots are combined then re-subdivided to create additional lots. While this requires extraordinary cooperation between property owners, it will increasingly occur as land prices continue to outstrip the value of some of the older housing stock.

# Vacant and Undeveloped Land

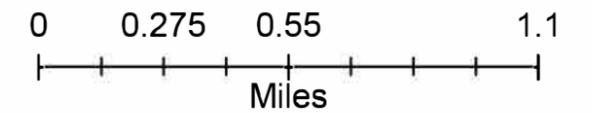
## City of Shorewood 2040 Comprehensive Plan



### Vacant and Undeveloped

-  Vacant or Open Space
-  Parcels over 80,000 SQFT
-  City Boundary

Map created: December 2022  
Data: NAC, MNDNR, Metropolitan Council



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## Future Study Areas

Prior to establishing development plans for certain areas, the City may need to conduct specific area plans. The three acre Medium Density area west of County Road 19 needs to be reviewed to confirm the site can accommodate this density due to its location and configuration. Prior to establishing firm controls regarding the Mixed Use areas, the City will need to conduct studies related to land use and traffic.



## CHAPTER SUMMARY

The Land Use Chapter sets forth goals, objectives and policies which serve as a guide for how land within the City is to be developed and used. Shorewood has established itself as a predominantly residential community. Any nonresidential activities which are allowed should be located and designed to support a quality living environment. The City's land use goals are as follows:

- **The City shall establish a pattern of land uses which is consistent with the residential and recreational functions of the community.**
- **The land use plan shall promote harmonious relationships between various land uses (e.g. homes, commercial outlets, churches, parks, schools, etc.) through proper development and locational planning.**
- **Land use regulations shall discourage land uses which are inconsistent with the residential and natural character of the community.**

The following summary of recommendations is reflective of the City's goals, objectives and policies:

1. Create and enhance focal points within City neighborhoods.



2. Concentrate commercial development in the following primary locations:
  - A. Smithtown Road / County Road 19
  - B. Lake Linden Drive / Highway 7
  - C. South of Highway 7 between Vine Hill Road and Old Market/Road
3. Require commercial development to be consistent with the residential character of the community.
4. Allow for mixed use development within commercial areas where appropriate for the site.
5. Promote the use of sound planning and design principles, including planned unit development.
5. Coordinate the development of small land parcels to ensure that access and utility service comply with City standards.
6. Maintain a Land Use Plan to illustrate the relationship of various densities of residential development and non- residential uses.
7. Keep the City's land use controls (e.g. Zoning and Subdivision Ordinances) up to date as a means to implement the Land Use Plan.
8. Identify areas which are best suited for planned unit developments.
9. Require formal platting procedures for the subdivision of land, allowing metes and bounds divisions only in the simplest of cases.
10. Establish zoning provisions which are intended to accommodate the continuance of the City's marinas in a manner which is compatible with surrounding neighborhoods.
11. Promote and implement programs for the preservation of open space.



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## **INTRODUCTION**

Shorewood is a suburban, residential community. Less than one percent of the City is devoted to commercial uses. As a predominantly residential community, housing is an important aspect of this Comprehensive Plan.

Past planning efforts in Shorewood have focused on housing quality and maintaining the character of existing neighborhoods. Residential densities have historically been kept low to minimize the demand for public utilities and services. This has also resulted in low traffic volumes relative to other suburban communities in the Metropolitan Area.

Over the past several years, attention has been given to the lack of housing options, particularly to accommodate an increasing elderly population. Shorewood's zoning regulations have been amended to address senior housing.

Also, to be noted is that the City of Shorewood is willing to work with other Lake Minnetonka cities to address housing issues from a sub-regional perspective.

As in the case of other Development Framework chapters of this Plan, the Housing Plan considers housing-related issues identified in the Planning Tactics chapter and the goals, objectives and policies included in the Policy Plan.

## **HOUSING PLAN**

### **Housing Condition and Maintenance**

While some minor housing maintenance issues exist in the City, housing conditions are not considered significant enough to warrant the preparation and adoption of a maintenance code at this time. Nevertheless, the City may want to consider the adoption of a "point of sale" ordinance in the future. This type of regulation attempts to identify certain deficiencies in housing at the time of sale, putting buyers on notice of problems. The objective is to create an incentive for property sellers to improve maintenance conditions prior to the sale.

Often more noticeable than the condition of structures is the outside maintenance of property. Shorewood has historically addressed problem sites on a complaint basis. Although this "neighborhood standard" method has worked reasonably well, it is recommended that local nuisance ordinances be reviewed and periodically updated. The City's annual spring clean-up event is also viewed as an effective tool for encouraging residents to maintain their properties.

In 1993, the City adopted a rental housing code that presently affects approximately 300 rental units in the City. This code establishes standards and a licensing procedure for all types of rental dwellings. The program has been successful in that a number of rental units were improved. The



City has received no tenant complaints since the adoption of the code. Continuation of this effort is recommended.

For many years, Shorewood has allocated a portion of its Community Development Block Grant (CDBG) funds for rehabilitation of substandard housing. The CDBG program is administered by Hennepin County. Since the early 1990's, the City has had seven households which received a total of \$90,000 to fund home repairs for persons in need of assistance. Not only is it suggested that the CDBG program be continued, it is recommended that it and other assistance programs be better publicized on the City's website.

Other housing/renovation programs which are available to the City include the following:

- Minnesota Fix Up Fund. Through this statewide program, funds are available to City residents that offer loans at below market interest rates to homeowners. The fix up fund was established to improve the basic livability and/or energy efficiency of the borrower's home. Eligible project included interior or exterior improvements, general remodeling or maintenance items.
- Minnesota Housing Rehabilitation Loan Program. This Statewide program assists low income homeowners in financing basic home improvements that directly affect the safety, habitability, energy efficiency or accessibility of their homes. Eligible improvements include, but are not limited to, electrical wiring, furnace replacement and plumbing repairs.

## Variety of Housing Options

Shorewood's housing stock consists primarily of large lot, single-family homes. While the City's development regulations have historically encouraged this type of housing, a strong market for larger single-family homes has had an even greater influence on housing type in Shorewood.

The City has attempted to introduce some variety in lot size, housing type, and value in the past. For example, in the mid 1980's, the Near Mountain development in the southeast area of the City was approved which called for a mixture of single-family homes on lots ranging from one quarter to three-quarters of an acre in size. The project also included quadraminiums and townhouses in the original plan. Citing a very strong market for single-family homes, the developer ultimately requested that the quadraminiums and townhouses be eliminated from the project, resulting in 70 fewer units by the time it was completed. Similarly, houses in the Covington Vine Ridge neighborhood were built larger and were more expensive than originally suggested by the developer, this despite quarter acre lot sizes.

Some variety of housing types was achieved in the 1990's. A number of two-family dwellings were built in the Waterford area and on Lawtonka Drive, west of Timber Lane. The Seasons senior housing project offers low-maintenance twinhomes for residents who qualify under Federal Fair



Housing Act guidelines. Shorewood Ponds provides “step down” single-family, attached cottages in four-unit buildings as an option to seniors 62 years of age and older. This community currently has a waiting list of households eager to purchase dwellings in the subdivision.

More recently, the City approved the Minnetonka Country Club housing project which involved the redevelopment of the former 117-acre Minnetonka Country Club golf course site located south of Smithtown Road and west of Country Club Drive. The project was approved in 2016 and calls for the construction of 142 single family residential homes upon the property. Of the 142 homes, 103 are considered traditional and 39 are targeted toward empty-nesters. Lot sizes within the project range from 7,200 square feet to 45,780 square feet.

Although these projects have increased the variety of housing types in Shorewood to some degree, housing values remain high relative to Metropolitan Area standards, even though higher densities have been allowed. Housing values in Shorewood have risen steadily over the years. In 2014, the median housing value for owner-occupied units was \$391,600. In 2015, housing values had risen to \$401,400 and by 2017, the median value increased to \$428,000. Given the limited amount of land remaining for development in the City, the relatively high cost of utilities and often soil correction, the high value of land in the Lake Minnetonka area, this trend is anticipated to continue.

Future opportunities for increasing housing variety in Shorewood are limited. Consequently, maintenance of the existing mixture of housing will be important. In this regard the City’s policy of keeping house sizes proportionate to lot size should continue to be implemented. This simply means that smaller lots will accommodate smaller houses.

The City acknowledges that the City of Shorewood, within its municipal boundaries, is not necessarily consistent with regional housing goals. When the City of Shorewood is viewed as part of a larger South Lake Minnetonka community, a relatively traditional model town emerges. Excelsior serves as the downtown core, with multiple-family housing and small, urban lots. Shorewood, Tonka Bay, Greenwood and Deephaven exist as surrounding suburbs with larger lots and lower densities. Higher density project in any of the adjacent communities, like new proposals in Tonka Bay on County Road 19 directly adjacent to Shorewood properties, also affect the market for higher-density residential in Shorewood.

## **Senior Housing**

In the early 1990’s, the City recognized that there was shortage of housing options in Shorewood and that senior citizens who were no longer able remain in their single-family homes, were not able to relocate to a senior housing facility within the Shorewood. In 1991, a study was prepared for the City which demonstrated that a market existed for senior housing in the Lake Minnetonka area. In response to an increasing elderly population and recognizing the importance of keeping senior citizens in the community, the City set a goal to promote the development of safe, healthy and affordable housing options for seniors.



In conjunction with the referenced study, Shorewood updated its zoning regulations to address senior housing. It was determined that the impact of senior housing on streets, parks and utility services was less than that of other types of residential development. Consequently, senior housing is now allowed to be built at somewhat higher densities than otherwise provided by existing zoning. The City also reduced the park dedication fees and sewer connection charges for senior housing in order to minimize development costs.

The City then actively sought developers of senior housing to build in Shorewood. Response was limited, however, due to several factors: 1) limited funding resources; 2) relatively high land costs in the area; 3) lack of municipal water; and 4) conflict with many residents' desire to retain a low-density character throughout the City. Nevertheless, the following senior housing projects presently exist in the City:

- The Seasons (24 units)
- Shorewood Ponds (62 units)
- Shorewood Landing (105 units)

In total, 191 senior housing units are provided within the preceding facilities. This accounts for approximately seven percent of the City's total housing units.

It is important to note that, as part of a recent cooperative effort, land which previously straddled a municipal boundary shared by the Cities of Shorewood and Excelsior was recently conveyed to the City of Excelsior to accommodate *The Waters of Excelsior* senior housing project. *The Waters of Excelsior* project includes 115 units and, due its location adjacent to the City of Shorewood, is expected to supplement the community's senior housing needs.

In administering the current zoning regulations, a number of issues have arisen. For example, there is some question, given land and development costs, as to the feasibility of developing senior housing on land zoned for one-acre lots (R-1A zoning district). Finally, the site analysis used to identify sites suitable for senior housing is considerably outdated. Some land previously considered as suitable has since been developed. New sites for affordable housing will be considered as they become available.

Many seniors wish to stay in their homes as long as possible. Their ability to do so is enhanced by services provided within the community. For example, programs such as "Meals on Wheels" are administered through Senior Community Services. Transit services such as "Metro Mobility" and "Dial-a-Ride" are also available. The City will continue to work with surrounding communities and various agencies to ensure that these services remain available to seniors.



## Affordability

The City of Shorewood recognizes its responsibility to provide opportunities for its share of the region’s need for low and moderate-income housing. Affordable housing provides housing options for a diverse population.

As noted in the Inventory chapter of this Plan, the Metropolitan Council defines the terms “affordable housing” and “low income” as follows:

Affordable Housing. *Housing is “affordable” for low and moderate-income households when they pay no more than 30 percent of gross household income on housing.*

Low Income. *A household is considered “low income” if it makes 80% or less of the median income of the seven-county region.*

The tables below depict the number affordable housing units, publicly subsidized units and the number of households burdened by housing costs in the City of Shorewood. Such numbers, as provided by the Metropolitan Council, relate to a 2016 housing count of 2,857 units.

| AFFORDABILITY  |  |  |
|--|--|--|
| Units affordable to households w 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 |
| 79   | 51   | 306  |

| PUBLICLY SUBSIDIZED UNITS     |                                  |  |  |
|-------------------------------|----------------------------------|--|--|
| All publicly subsidized units | Publicly subsidized senior units | Publicly subsidized units for people with disabilities | Publicly subsidized units – all others |
| 0                             | 0                                | 0  | 0                                      |

| HOUSING COSTS BURDENED HOUSEHOLDS |                          |                          |
|-----------------------------------|--------------------------|--------------------------|
| Income at or below 30% of AMI     | Income 31% to 50% of AMI | Income 51% to 80% of AMI |
| 127                               | 93                       | 108                      |

Source: Metropolitan Council 2016 Housing Estimates



The Metropolitan Council’s Thrive MSP 2040 Plan (Housing Element) assigns a low and moderate-income housing need for the City of Shorewood for the decade of 2021 through 2030. Specifically, the Council has identified a need for 48 new affordable units within this timeframe. Of these new units, 23 need to be affordable to households earning at or below 30 percent of the area median income, 16 need to be affordable to households earning 31 to 50 percent of the area medium income and 9 need to be affordable to households earning 51 to 80 percent of the area median income. These needs are summarized in the table below:

| <b>AFFORDABLE HOUSING NEED ALLOCATION (2021-2030)</b> |                             |                             |
|---|-----------------------------|-----------------------------|
| Income at or below<br>30% of AMI                      | Income 31% to<br>50% of AMI | Income 51% to<br>80% of AMI |
| 23  | 16                          | 9                           |

The City has guided 3.7 acres for High Density Residential development at a minimum of 8 units per acre or more. This would provide for 30 units of affordable housing by acreage. An additional 19.5 acres are identified as Commercial Mixed Use which requires a minimum of 40% of the property (7.8 acres) to be residential development at a minimum of 15 units per acre. Of this 7.8 acres, 2.8 (42 units) is staged for development within the 2021-2030 timeframe. This results in 72 units of affordable housing being provided by density within the 2021-2030 staging period.

In regard to rental units, the definition of an affordable unit varies depending upon the number of bedrooms in the unit. Like owner-occupied housing, the affordability limit for renter-occupied housing is 80 percent of the area median income (AMI). For rental units, affordability is based upon the number of bedrooms in the unit. For the year 2017, the Metropolitan Council’s affordability rates were as follows:

| <b>Rental Housing<br/>Affordability Limits, 2017<br/>City of Shorewood</b> |                 |
|--|-----------------|
| <b>Number of Bedrooms</b>  | <b>80 % AMI</b> |
| Efficiency   | \$1,265         |
| 1 Bedroom  | \$1,356         |
| 2 Bedroom  | \$1,627         |
| 3 Bedroom  | \$1,880         |
| 4 Bedroom  | \$2,097         |
| Source: Metropolitan Council   |                 |

According to the Metropolitan Council, the median rent paid in the City of Shorewood in 2016 was \$1,139. Consequently, most of the rental housing is affordable based on the standards in the above table.



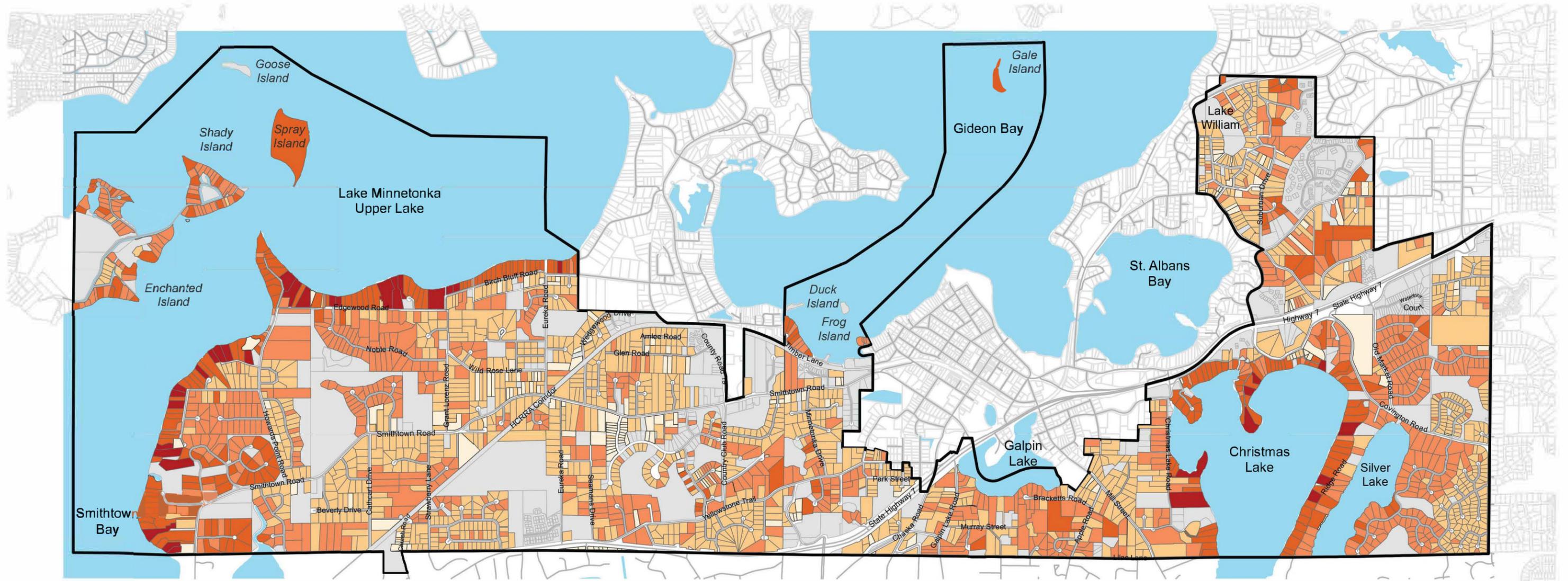
With the preceding Metropolitan Council directives in mind, the City finds it important to understand the number of affordable housing units which presently exist in the City. For 2017, the Metropolitan Council has determined that homes with a purchase price of \$243,500 or less are considered “affordable” in the seven-county metropolitan area. According to the Metropolitan Council, 2,770 housing units existed in the City in 2016. Of these units, 2,527 were owner-occupied. Of these, 478 units had a value of \$243,500 or less. As a result, 17 percent of the City’s existing owner-occupied housing stock at that time was considered “affordable.”

Between 2008 and 2016, the City added 105 owner-occupied housing units and 105 renter-occupied units. While the owner-occupied units were added at a relatively consistent rate over this time period, all 105 renter-occupied units were added in 2016. Within this time period, none of the added housing units (owner and renter-occupied) were considered affordable.

Housing values within the City are depicted on the map on the following page. The map specifically identifies locations of single family homes which exceed the affordable housing threshold (\$243,500) and locations of homes which are considered affordable. The City of Shorewood routinely encounters teardowns of lower value single family homes and replacement with new, higher value homes. This activity results in a reduction in the number of affordable single-family homes in the City. Between 2008 and 2016, 52 units were demolished and new homes built on the lots. Not all of the homes demolished met the criteria for affordable as several were on riparian lots on Lake Minnetonka, but the number of demolitions speaks to a trend to redevelop affordable homes in Shorewood.

# Estimated Market Value of Single Family Homes

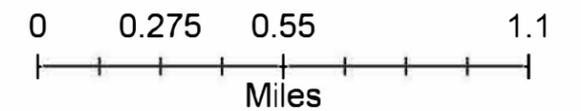
## City of Shorewood 2040 Comprehensive Plan



### Estimated Market Values



Map created: December 2022  
Data: NAC, MNDNR, Metropolitan Council



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The City of Shorewood understands the intent of the Metropolitan Council's affording housing allocation (48 units between 2021 and 2030) and supports the idea of providing alternative housing choices in the community. There are, however, conditions which are unique to the Shorewood which raise questions related to the ability of the community to realistically reach the noted affordable housing objectives. These include the following:

1. A limited amount of land exists within the City for development (vacant parcels and redevelopment sites).
2. Current market conditions and land values in the City are such that new rental housing would likely demand higher rents.
3. Much of the City of Shorewood is not served by mass transit. This condition is not expected to change in forthcoming years.
4. Presently, the City Shorewood has a limited amount of commercial land. With no plans to increase the amount of land devoted to such uses, minimal employment opportunities exist for persons to live and work in the City.

## Housing Programs

To achieve the housing goals of this Plan, the following will be considered:

### **Programs which provide for the maintenance, management and preservation of existing housing stock:**

#### Rental Licensing and Inspection Program.

The City of Shorewood has an active rental licensing and inspection program to ensure that its rental housing stock is maintained and provides a safe living environment.

City Ordinances. The City's Zoning Ordinance establishes minimum performance standards which are intended to ensure continued property maintenance.

The City of Shorewood will continue to enforce its ordinances which relate to property upkeep/maintenance.

Local Funding Sources. The City of Shorewood may, if deemed appropriate by City Officials, explore programs offered through the Twin Cities Habitat for Humanity and Minnesota Housing and Finance Agency.



Repair and Rehabilitation Support. The Community Action Partnership of Suburban Hennepin (CAPSH) provides home repair and rehabilitation assistance to County residents who meet certain eligibility requirements.

The City of Shorewood recognizes the existence of this program and is supportive of residents who choose to pursue program assistance.

## **Programs which provide access to public programs and financial programs:**

Referrals. One of the simplest and most cost-effective ways to serve households in need of affordable housing is by making effective referrals. Being aware of programs and services or being able to provide appropriate references is considered beneficial.

Shorewood's Planning Department will strive to remain familiar with the relevant programs and provide effective referrals.

Homebuyer Assistance Programs. Homebuyer assistance programs funded directly by Hennepin County HRA are currently not available.

The City of Shorewood encourages residents to contact the Minnesota Homeownership Center regarding homebuyer assistance programs which are currently available.

Foreclosure Prevention. The Community Action Partnership of Suburban Hennepin (CAPSH) provides foreclosure counseling to County residents.

The City of Shorewood recognizes the existence of this service and is supportive of residents who choose to pursue foreclosure counseling.

Energy Assistance. The Community Action Partnership of Suburban Hennepin (CAPSH) administers the energy assistance program for County residents who meet the eligibility requirements.

The City of Shorewood recognizes the existence of this program and is supportive of residents who choose to pursue program assistance.

## **Programs which support senior housing:**

Tax Increment Financing. Cities may create a housing district to create a tax increment financing district. The tax increment financing bonds issued on the district are used to support the construction of affordable housing. Property taxes received above the original tax value (increment) from the development are utilized to finance these bonds. The property tax revenue that otherwise would be available to pay for City services would be restricted and not available to pay for the services.



Considering that two large senior housing projects have recently opened within or near the City of Shorewood, the market may not support additional senior housing developments at this time. The City may, however, support the use of tax increment financing in the future depending on the project location, the extent of the request, etc.

Referrals. Shorewood’s Planning Department will strive to have the ability to refer residents to applicable senior housing programs which are outside of the City’s scope of services.

## **Programs which expand housing options:**

Comprehensive Planning. As stated in the Policy Plan, the City of Shorewood will strive to present a variety of housing options which meet the needs of varying segments of its population. In this regard, the Land Use Plan directs a variety of residential densities (housing types) through future development or redevelopment.

Zoning and Subdivision Ordinances. The City’s Zoning and Subdivision Ordinances will be used to implement the land use directives of the Comprehensive Plan. In this regard, opportunities for land uses which are promoted in the Plan are provided via the establishment of zoning districts which make an allowance for the directed land uses.

To be noted is that the City has the ability to provide “flexibility” from its zoning and subdivision regulations through planned unit development (PUD). Through PUD, the City specifically has the ability to allow increased residential densities for projects which fulfill a variety of PUD objectives which are intended to result in a higher quality development project than that which would otherwise be allowed through standard zoning.

Land Banking and Site Assembly. Land banks are nonprofit or governmental entities created to acquire, manage, maintain, and repurpose properties that are vacant, abandoned, underutilized, or foreclosed to a productive use. Banking and site assembly can provide an opportunity to ensure that vacant property is maintained and does not negatively impact the area. Such efforts also provide an opportunity to influence the ultimate use of the property.

There is very little vacant or abandoned property within the City of Shorewood which is in need of assembly, holding or maintenance. As a result, the City does not anticipate utilizing land banking and site assembly and cannot anticipate precise circumstances in which it would do so. The City may, however, consider doing so if opportunities arise and City Officials determine that such an effort is appropriate (to support economic development, including potential opportunities for affordable housing).



## **Programs which promote affordable housing needs:**

Comprehensive Planning. As stated in the Policy Plan, the City of Shorewood will attempt to satisfy the Metropolitan Council’s affordable housing directives of 48 new units between 2021 and 2030. The Land Use Plan directs high density residential use upon a number of undeveloped sites and sites which are expected to be redeveloped at some future point. In this regard, the Land Use Plan provides opportunities for future affordable housing.

Zoning and Subdivision Ordinances. As previously indicated, the City’s zoning and subdivision regulations will be used to implement the land use directives of the Comprehensive Plan. As a result, uses directed for high density residential use by the Plan, will be implemented via the application of corresponding zoning districts.

Development Authorities. The Hennepin County Housing and Redevelopment Authority (HRA) provides services for affordable housing and redevelopment.

While the City of Shorewood has not utilized such services in the recent past, it would consider partnering with the HRA in the future.

Tax Abatement. Local governments are permitted to offer tax abatement for a public benefit, including the creation of housing which is affordable to low and moderate-income households. If a portion of the tax collected from a property is abated, such amount would need to be offset through increased taxes levied on other properties.

Recognizing the of administrative needs and potential impacts on the City’s remaining tax capacity, the City of Shorewood does not anticipate using tax abatement.

Livable Communities Act Programs. Livable Communities Act programs are intended to provide incentives for addressing various issues facing the seven-county Metropolitan Area. Metropolitan Area municipalities which elect to participate in the Livable Communities Program are eligible to compete for funding for community development activities.

Unlike many other Lake Minnetonka communities, the City of Shorewood does not participate in the Livable Communities Program. Such current exclusion is based upon Shorewood’s lack of available building sites. The City may, however, consider the possible benefits of program participation at some future date.

Minnesota Housing Consolidated Request for Proposals. The Minnesota Housing Finance Agency provides a request for proposal (RFP) on an annual basis whereby developers of affordable housing projects can apply for funding to construct such housing.



The City of Shorewood is supportive of developers who apply for funds to support the development of housing units which meet the City's needs for affordable housing.

Community Development Block Grants (CDBG). The U.S. Department of Housing and Urban Development (HUD) provides CDBG funds to communities with over 45,000 residents for the use of providing and maintaining affordable housing. Hennepin County HRA administers these CDBG funds through a pool with various communities. The City of Shorewood pools its Community Development Block Grant funds into the Hennepin County program for housing rehabilitation assistance.

The City of Shorewood believes that addressing housing issues in a cooperative manner with other Hennepin County communities is worthwhile and is therefore willing to participate in such cooperative efforts.

Home Investment Partnerships Program (HOME). The HOME is a flexible federal grant program that allows Hennepin County to fund affordable housing activities for very low and low-income families or individuals, homeless families, and persons with special needs.

The City of Shorewood recognizes the importance of this program and is supportive of residents who choose to pursue program assistance.

Affordable Housing Incentive Funds (AHIF). AHIF funds are administered by the Hennepin County Housing and Redevelopment Authority. This loan program funds the development of affordable housing units for very low-income households.

The City of Shorewood recognizes the existence of AHIF funds and is supportive of developers who apply for such funds to support development of housing units which meets the City's affordable housing needs.

4(d) Tax Program. The 4(d) Tax Program provides a property tax rate reduction for rental properties which include affordable housing units. This program is administered through the Minnesota Housing Finance Agency.

The City of Shorewood encourages owners of eligible rental properties which include affordable housing units to seek 4(d) Tax program assistance.

Fee Waivers or Adjustments. Cities have the ability to waive or reduce fees to reduce the cost of construction of affordable housing. Conversely, State rules require that city fees must correlate to the cost of providing the services.

Fee waivers or reductions could create a deficiency in the funding for services, causing the City to rely on general funds to make up the deficiency. For this reason, the City of Shorewood will not consider a fee waivers or reduction for affordable housing projects.



West Hennepin Affordable Housing Land Trust. The mission of the West Hennepin Affordable Housing Land Trust (dba Homes Within Reach) is to use the Community Land Trust practice to provide permanently affordable homeownership for low to moderate income working families that would otherwise be unable to purchase a home in the suburban communities of Hennepin County; offering both communities and homebuyers the ability to sustain long-term affordable homeownership. The Land Trust service area is the 44 communities of suburban Hennepin County and is currently active in twelve (12) suburban communities in Hennepin County.

If approached, the City Shorewood will evaluate and determine if joining the West Hennepin Affordable Housing Land Trust is an appropriate partnership (to meet the City's housing affordable housing objectives).

Housing Bonds. A Housing Redevelopment Authority (HRA) has the ability to issue bonds that help administer affordable housing developments or programs. Cities and counties may make or purchase loans using the proceeds of the bond sales for activities such as new construction, acquisition, and rehabilitation, or refinancing bond debt. The City does not plan to issue housing bonds but rather rely on the other programs noted within this chapter.

## **Educational Programs:**

Organizations, Partnerships and Initiatives. Participation in housing-related organizations, partnerships and initiatives with other stakeholders provides learning opportunities. In this regard, discussions of housing needs with other cities, counties, the Metropolitan Council is considered beneficial for all involved. Recognizing the value of such collaborations, the City of Shorewood has taken the following steps:

- The City of Shorewood partners with the Hennepin County Housing and Redevelopment Authority.
- City Staff are members of various professional organizations which provide resources and educational opportunities related to housing including the Minnesota Chapter of the American Planning Association.
- City Officials routinely take part in trainings related to land use and housing and are active in groups with other city officials.



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## CHAPTER SUMMARY

As a predominantly residential community, housing and issues related to housing are an important aspect of Shorewood's Comprehensive Plan. Following are the City's goals relative to housing:

- **Provide safe, healthy and quality housing that respects the natural environment of the community.**
- **Maintain the present variety of housing options and provide sufficient housing types, sizes and values to meet the needs of varying segments of the population.**
- **Maintain and strengthen, where necessary, the character of individual neighborhoods within the community.**
- **Address local and sub-regional housing issues through cooperative efforts with neighboring communities through organizations such as the Lake Minnetonka Area Cooperating Cities.**
- **Promote safe, healthy and affordable housing options.**

Following are recommendations intended to achieve these goals:

1. Review local development regulations, and amend as necessary, to promote a balanced housing supply.
2. As opportunities present themselves, attempts shall be made to satisfy the Metropolitan Council's affordable housing directives (48 new units between 2021 and 2030).
3. Identify locations for alternative residential housing types and densities.
4. Make available to residents and property owners educational programs on such topics as renter/landlord rights, home buying, home maintenance, etc.
5. Continue the City's rental housing license program to maintain current standards for rental housing.
6. Consider the adoption of a "point of sale" ordinance to address housing maintenance issues.
7. Promote private sector maintenance, rehabilitation and redevelopment of existing properties through improved communication of available community services and financial assistance programs.



8. Continue to allow accessory apartments to allow seniors to remain in their single family homes.
9. Encourage housing types that are designed to appeal to senior citizens to allow existing residents to downsize and remain in the City of Shorewood.
10. Maintain programs for housing condition to protect the health and safety of residents and ensure stability of neighborhoods.
11. Maintain code enforcement programs to improve and strengthen the character of neighborhoods.
12. Undertake both proactive and reactive code enforcement to maintaining the City's existing housing stock.
13. Rehabilitate substandard housing units whenever possible.
14. Work with Hennepin County to administer programs which provide financial assistance for the rehabilitation of substandard housing units within the community (as funding sources and market conditions permit).
15. Redevelop of substandard housing whenever compatible with adjacent land uses and economically feasible.
16. Establish and maintain regulations for development upon lawful nonconforming lots.
17. Require construction management plans for all residential infill projects. Minimally, such plans shall address contractor parking locations, construction material delivery and storage, street cleaning and construction hours.
18. Protect lower density residential neighborhoods from encroachment or intrusion of incompatible land uses as well as nonresidential use categories, through adequate buffering and separation.
19. Respect and maintain the character of individual residential neighborhoods.
20. Protect residential developments from and locate them away from sources of adverse environmental impacts including noise, air and visual pollution.
21. Minimize home occupations, commercial and other nonresidential activities so as to be invisible within residential neighborhoods.



22. Accessory buildings within the community shall be of a compatible design and size to maintain a residential character. These buildings shall be limited exclusively to residential uses and related activities.
23. Minimize outdoor storage where possible and allow it only conducted in an orderly, confined and limited fashion which is consistent with City Code requirements.
24. Aggressively eliminate violations of property maintenance standards that infringe upon residential neighborhood quality, pose public health and safety problems and threaten neighboring property values.
25. Encourage owner occupied housing.
26. Address Shorewood's housing needs, as well as the needs of the overall Lake Minnetonka sub-region, by providing and maintaining a variety of housing types, styles and values.
27. Prevent polarizing age distribution within the Lake Minnetonka sub-region through the provision of diverse housing that reflects life-cycle stages and economic considerations.
28. Encourage a range of property values and rent rates within the Lake Minnetonka sub-regional housing as a means of diversifying the stock and sustaining individual communities in the area.
29. Develop housing for special needs populations (e.g., elderly, physically challenged) within the Lake Minnetonka sub-region and provide financial assistance programs as funding sources and market conditions allow.
30. Give due attention to the directives of the Metropolitan Council for new or redeveloped housing projects.



## **INTRODUCTION**

The purpose of the Transportation Plan is to set a multimodal transportation vision through the year 2040. The City's multimodal transportation system includes facilities for vehicles, freight, walking, bicycling and transit. Facilities are operated by a number of agencies, including the City of Shorewood, Hennepin County and the Minnesota Department of Transportation (MnDOT).

As the owners of the transportation network in Shorewood (i.e. City of Shorewood, Hennepin County and MnDOT) advance their respective Capital Improvement Programs (CIPs), this Plan is intended to serve as an important resource and reference in establishing priorities and advancing transportation projects for implementation. Advancing these projects from a planning to implementation phase will require collaborative discussions among the City, County, MnDOT, adjacent communities, Metropolitan Council, residents and others to conduct traffic studies, finalize designs, preserve rights-of-way, obtain environmental clearances and leverage necessary financial resources.

Effective transportation planning is an important part of the City's Comprehensive Plan. Residents must be provided with transportation facilities and services which meet mobility needs in an efficient and safe manner. Transportation facilities, at the same time, need to be planned and constructed so as to limit negative social, environmental, and aesthetic impacts to the greatest degree feasible. In addition, residents who cannot or choose not to drive need to have transportation options to meet their daily needs.

This transportation chapter has been prepared in compliance with State of Minnesota Statutes and applicable Metropolitan Council guidelines. As part of this Plan, the City has reviewed existing and future conditions for each mode and identified safety, operations, and network improvements that will be important to address over the 2040 planning horizon. Goals, objectives and specific strategies have been identified collaboratively by the City, Hennepin County, MnDOT and citizens within the framework of Metropolitan Council requirements.

Although emphasis in this element of Shorewood's Comprehensive Plan is placed on the street circulation plan, there are a number of other transportation related components that deserve consideration. They include mass transit, pedestrian/bicycle circulation, freight, railroads and aviation.



The vision and associated strategies outlined in this Plan were established by considering existing and forecasted conditions, City of Shorewood priorities and regional travel patterns.

## Objectives

There are three primary objectives of this Transportation chapter:

- To provide guidance for City staff and elected officials regarding the planning and implementation of effective transportation facilities and systems.
- To give private citizens and businesses background on transportation issues and allow them to be better informed regarding the City's decision-making on transportation issues.
- To communicate Shorewood's perspectives and intentions regarding transportation planning issues to other government agencies.

The preparation of the document also has provided stakeholders with the opportunity to have input into the transportation planning process.

## Transportation Glossary

**CIP:** Capital Improvement Program – five-year plan for capital investments in the transportation system and in other capital assets owned by the City (equipment, buildings, etc.).

**CR:** County Road – county-owned roadway that does not receive State funding.

**CSAH:** County State Aid Highway – county-owned roadway that receives State Aid funding.

**LRT:** Light Rail Transit – public transportation mode consisting of rolling train stock on an exclusive right-of-way

**MnDOT:** Minnesota Department of Transportation.

**RBTN:** Regional Bicycle Transportation Network – existing and planned regional bicycle network established by the Metropolitan Council.

**TH:** Trunk Highway – State highway owned and operated by MnDOT.

**TPP:** Transportation Policy Plan – Regional transportation plan for the Twin Cities metropolitan region, developed by the Metropolitan Council.



## SUMMARY OF REGIONAL STRATEGIES

This plan has been prepared to be consistent with the regional transportation strategies outlined in the Metropolitan Council 2040 Transportation Policy Plan (TPP). The TPP is a regional plan that evaluates the existing transportation system, identifies transportation challenges to the region, and sets regional goals, objectives, and priorities to meet the transportation needs of current residents while accommodating the region's anticipated growth. The TPP also guides local agencies in coordinating land use and transportation and established regional performance measures and targets.

### The TPP is guided by the following goals:

- **Transportation system stewardship:** Sustainable investments in the transportation system are protected by strategically preserving, maintaining, and operating system assets.
- **Safety and Security:** The regional transportation system is safe and secure for all users.
- **Access to Destinations:** People and businesses prosper by using a reliable, affordable, and efficient multimodal transportation system that connects them to destinations throughout the region and beyond.
- **Competitive Economy:** The regional transportation system supports the economic competitiveness, vitality, and prosperity of the region and State.
- **Healthy Environment:** The regional transportation system advances equity and contributes to communities' livability and sustainability while protecting the natural, cultural, and developed environments.
- **Leveraging Transportation Investment to Guide Land Use:** The region leverages transportation investments to guide land use and development patterns that advance the regional vision of stewardship, prosperity, livability, equity, and sustainability.

The TPP acknowledges funding is a key constraint. Current transportation revenue will not meet the region's transportation needs through 2040. As a result, the TPP includes two long-term investment scenarios: a fiscally-constrained scenario that identifies projects anticipated to be



funded based on current revenue projections, and an increased revenue scenario that identifies project priorities should additional transportation funding become available.

Under the current fiscally constrained revenue scenario, the TPP is focused on operations and maintenance of the existing transportation system. Investments in highway mobility and access are limited to those that address multiple TPP goals and objectives.

The increased revenue scenario would allow additional investments in operations and maintenance, as well as regional mobility, access, safety, and bicycle/pedestrian improvements. However, congestion cannot be greatly reduced under even the increased revenue scenario. Under both scenarios, proposed investments are focused on areas of the metro with the greatest existing and future challenges and anticipated growth.

The Metropolitan Council classifies Shorewood under the Suburban Community Designation. Based on *Thrive MSP 2040*, Suburban areas are expected to plan for forecasted population and household growth at average densities of at least five units per acre for new development and redevelopment. These communities are also expected to target opportunities for more intensive development near regional transit investments. The TPP does not include any planned regional investments in Shorewood.

## Planned Functional Classification

Recommended changes to the functional classification system will be adopted by the City as part of the adoption of the overall Comprehensive Plan Update. Changes that involve “Other” Minor arterials, Major Collectors or Minor Collectors may be made without the approval of another agency, provided these changes are consistent with State and County Plans. However, the changes and the resulting functional classification should be officially reported to the Metropolitan Council under separate communication to ensure that the Metropolitan Council has the opportunity to update their records. The City is proposing the following changes:

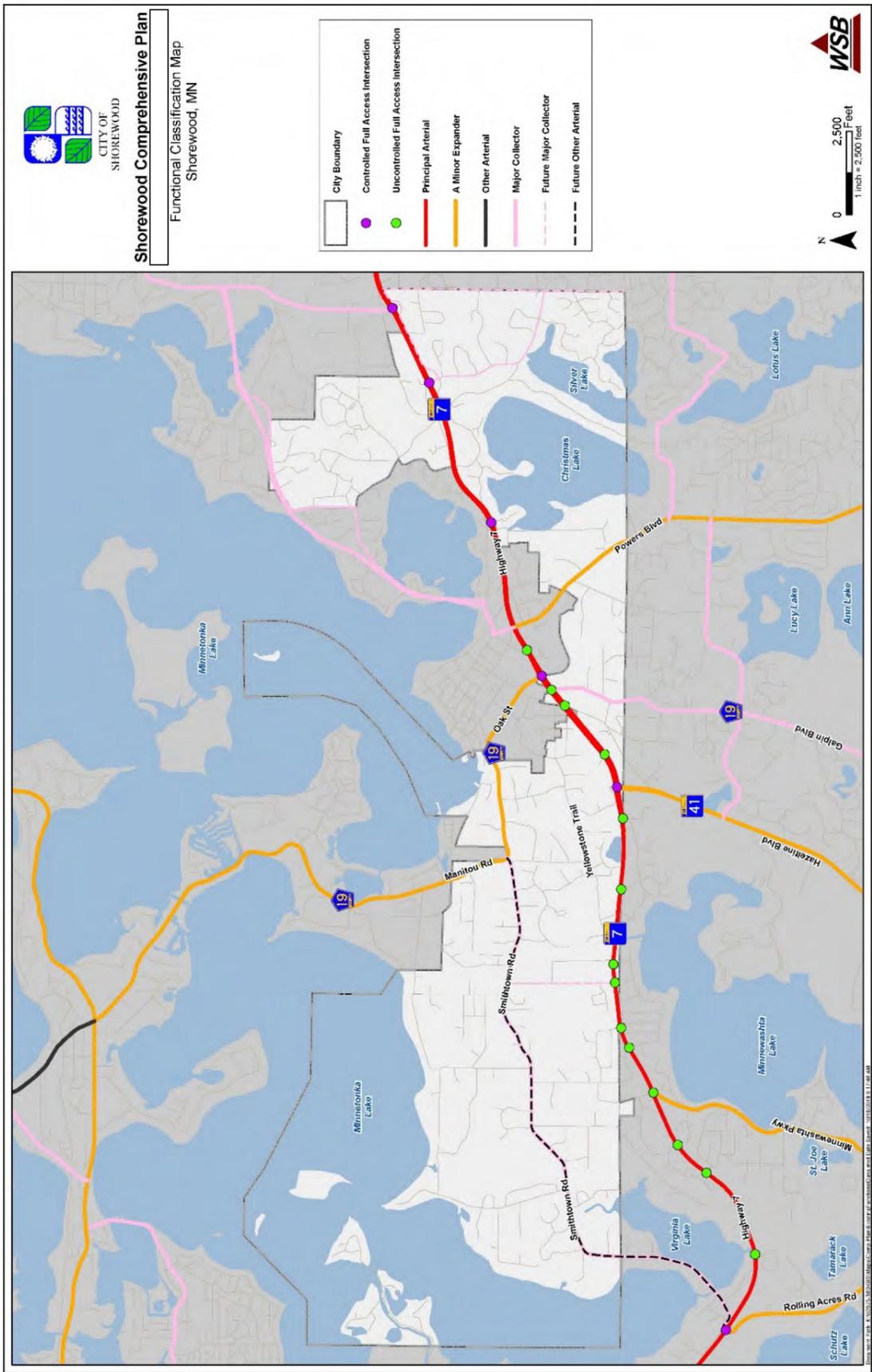
- Smithtown Road: CASH 19 to City Limits – Major Collector to “Other” Arterial
- Vine Hill Road: TH 7 to City Limits - Local Street to Major Collector
- Old Market Road: TH 7 to Vine Hill Road – Local Street to Major Collector
- Eureka Road: Smithtown Road to TH 7 – Local Street to Major Collector
- Delton Avenue: Minnetonka City limits to Old Market Road – Local Street to Major Collector

## *Community Framework - Transportation*

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Any proposed change to a Principal Arterial or 'A' Minor Arterial designation will need to be approved by the Transportation Advisory Board (TAB) of the Metropolitan Council. Since these changes are likely to involve either State or County roadways, the City should work closely with these agencies to ensure that the process of approval is carried forward. No functional classification changes are recommended within the city at this time.





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## **Jurisdictional Classification / Municipal State Aid Streets**

Roadways are classified on the basis of which level of government owns and has jurisdiction over the given facility. The three levels of government that have involvement are the State of Minnesota (Mn/DOT), Hennepin County, and the City of Shorewood. Mn/DOT owns/maintains the Trunk Highway (TH) system and Hennepin County the County State Aid Highway (CSAH) and County Road (CR) system. The City owns/maintains the local streets, including Municipal State Aid (MSA) streets.

Cities in Minnesota with populations greater than 5,000 are eligible to receive Municipal State Aid (MSA) funding from the state Highway User Tax Distribution Fund. The basic purpose of this program is to help local governments construct and maintain collector and arterial roadways which have consistent design standards, and which are well integrated into the overall network of collector and arterial roadways. The State Aid system typically consists of a maximum of 20% of the City's roadway mileage.

The State Aid office of MnDOT has established clearly defined design requirements for MSA streets. These requirements ensure that capacity, operational, and safety goals are met in a uniform manner from community to community, and that street systems are well coordinated with each other. Based on State Statute, Sections 169.80 and 169.87, MnDOT does not allow cities to restrict truck traffic on MSA streets.

**Figure 2** provides a map depicting the jurisdictional classification of the overall roadway network serving Shorewood and its residents and businesses





## Existing Roadway Capacity and Safety

Roadway capacity and roadway safety are two key indicators of how well the roadway system is meeting the city’s transportation needs. The sections below provide information to better understand capacity and safety issues within Shorewood.

### Existing Roadway Capacity

A roadway’s capacity indicates how many vehicles may use a roadway before it experiences congestion. Capacity is largely dependent upon the number of lanes. The table below lists planning-level thresholds that indicate a roadway’s capacity (measured in annual average daily traffic, AADT). Additional variation (more or less capacity) on an individual segment is influenced by a number of factors including: amount of access, type of access, peak hour percent of traffic, directional split of traffic, truck percent, opportunities to pass, and amount of turning traffic, the availability of dedicated turn lanes, parking availability, intersection spacing, signal timing and a variety of other factors.

#### Planning-level Urban Roadway Capacities

| Arterial Roadways                        | Daily Two-way Volume |                  |
|--|----------------------|------------------|
|  | Lower Threshold      | Higher Threshold |
| Two-lane Undivided                       | 10,000               | 12,000           |
| Two-lane Divided or Three-lane Undivided | 15,000               | 17,000           |
| Four-lane Undivided                      | 18,000               | 22,000           |
| Four-lane Divided or Five-lane Undivided | 28,000               | 32,000           |

Source: FHWA Highway Capacity Manual and WSB Experience from Previous Projects

### Existing Capacity Problems on Arterial Roads

At the planning level, capacity problems are identified by comparing the existing number of lanes with current traffic volumes. The table on the following page shows existing number of lanes on collector and arterial roadways within the city.

Daily traffic volumes are based on 2016 conditions from the MnDOT State Aid traffic volume maps supplemented with 2017 data from the City of Shorewood and Hennepin County.



As shown in the table, TH 7 has either four or five lanes (with turn lanes) and CSAH 19 has 2 or 3 lanes (with turn lanes) throughout the City. All other Arterial or Major Collector roadways have two lanes.

### Existing number of lanes on arterial roads

| Functional Classification | Roadway Name                             | Location                               | Number of Lanes |
|---------------------------|--|--|-----------------|
| <b>Principal Arterial</b> | TH 7                                     | Minnetonka Border to Chanhassen Border | 4 / 5           |
|                           | CSAH 82 (Mill St)                        | Chanhassen Border to Excelsior Border  | 2               |
| <b>“A” Minor Expander</b> | CSAH 19 (Oak St/Smithtown Rd/Manitou Rd) | Excelsior Border to Tonka Bay Border   | 2 / 3           |
|                           | Smithtown Road                           | CSAH 19 to Victoria Border             | 2               |
| <b>Major Collector</b>    | Galpin Lake Road                         | Chanhassen Border to TH 7              | 2               |
|                           | Minnetonka Blvd                          | Deephaven Border to Greenwood Border   | 2               |

The only roadway that is approaching capacity is CSAH 19 north of Smithtown Road. All other Arterials and Major Collectors in Shorewood currently exhibit traffic volumes below or within the range of the planning level capacity thresholds shown in the previous table. This indicates that these roadways are typically not experiencing high levels of congestion.

The methodology described above is a planning-level analysis that uses average daily traffic volumes and is not appropriate for all traffic conditions. Traffic conditions that do not fit the average daily traffic criteria (i.e., weekend travel, holiday travel, special events, etc.) are likely to produce different levels of congestion. Further, this methodology does not take into account specific geometric conditions that exist at the intersection nodes, potential peaking characteristics of these roadways or directional flow disparities, which can greatly impact the order of magnitude of the deficiency (either meaning there is not a deficiency, or it is more significant than what is indicated by the ADT alone). However, for purposes of the transportation planning process, this volume to capacity (v/c) methodology is widely accepted and applicable. For detailed design consideration of access management, intersection traffic control and congestion



mitigation, the city may require a traffic study providing detailed operational analysis for specific developments.

## Identified Capacity and Safety Concerns

The primary issue locations are identified below:

1. **Trunk Highway System Congestion:** Peak-period congestion occurs on the Trunk Highway segments passing or adjacent to the City including TH 7 and TH 41.

Current traffic volume on TH 7 ranges from 20,000 to 35,000. With the number of streets and access locations, together with the traffic volume levels, the mainline congestion and queuing at existing signalized and un-signalized intersections provides a source of localized congestion on the City street system.

The City will continue to work with MnDOT, Hennepin County and adjacent Cities in reviewing and improving traffic flow on TH 7. Specific intersections that the City will continue to monitor and support future improvements include:

- TH 7 at Minnewashta Parkway/Church Road
- TH 7 at Vine Hill Road

2. **Traffic Committee:** In 2015 and 2017 the City Council established a “Traffic Committee” to advise the City Council on traffic issues, with an initial focus on the review of the Smithtown Rd., Country Club Road, Yellowstone Trail and Lake Linden Drive corridors. A summary of the findings and improvement alternatives include:



### **Smithtown Road at County Club Road**

#### ***Dual Roundabout (Country Club Road and CSAH 19) -***

Includes reconstruction of both CSAH 19 and County Club Rd with two interconnected roundabouts. This improvement would involve significant design, right of way impacts and coordination with Hennepin County.

***Signalized intersection coordinated with CSAH 19*** - Includes a traffic signal at the intersection of Smithtown Road and Country Club Road with additional lanes on Country

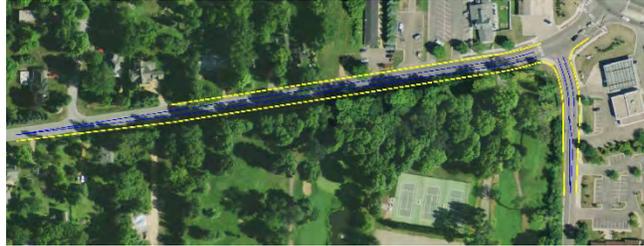


Club Road and Smithtown Road. Signal coordination with CSAH 19 intersection would require review and approvals with Hennepin County.

## **Smithtown Road**

### ***Widen roadway from Wooden Cleek to Country Club Road***

- Includes addition of a left turn lane, a through/right turn lane and a separated bike/pedestrian path without addition of any traffic control at Country Club Road.



## **Country Club Road**

***Widen roadway approaching Smithtown Rd*** - Includes addition of a left turn lane and right turn lane without addition of any traffic control at Country Club Rd.

***Widen add bike lanes with 25 mph Speed Limit*** - Includes widening Country Club Road to provide a through lane in each direction with a minimum 6 foot on road bike lanes with a 25mph speed limit. An off road bike trail was added adjacent to County Club Road from Smithtown Road to Lake Mary Trail as part of the Mattamy development.

## **Yellowstone Trail – County Club Rd to Lake Linden Drive**

***Stop Sign Enhancements*** - Change existing stop signs to Blinker Stop signs at County Club Road and Lake Linden Drive intersections

***Improve Sight Lines*** - Cut back trees along corridor especially at intersections

***Intersection Improvements*** - At the Lake Linden Drive intersection add a street light, a pedestrian crosswalk, and pedestrian crossing signs.

## **Yellowstone Trail – West of Lake Linden Drive**

***Improve Sight Lines*** - Trim trees and add additional curve signing at Seamans Drive (delineate curve).

***Improve Sight Lines*** - Realign Yellowstone Trial at Seamans Drive to a 90 degree intersection with Blinker Stop signs.



## **Lake Linden Drive**

***Improve Sight Lines*** - Fix grade changes north of Cub development access for left turning vehicles.

## **Lake Linden Drive at Cub Entrance/TH 7/TH 41**

***Access Improvements*** - Close Cub development exit from the east at frontage road (Lake Linden Drive) maintaining inbound movement.

***Roadway Improvement*** - Widen Lake Linden Drive eastbound to two approaching lanes (one right turn/through to westbound TH 7 and to TH 41 and one left turn to eastbound TH 7) and one exiting lane westbound.

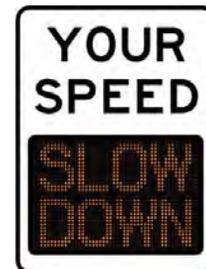
***Roadway Realignment*** - Move the westbound right turn lane from the intersection at TH 41 to a free right with acceleration lane at approximately the existing Lake Linden Drive extended. (Movement would be removed from the TH 7/TH 41 intersection)

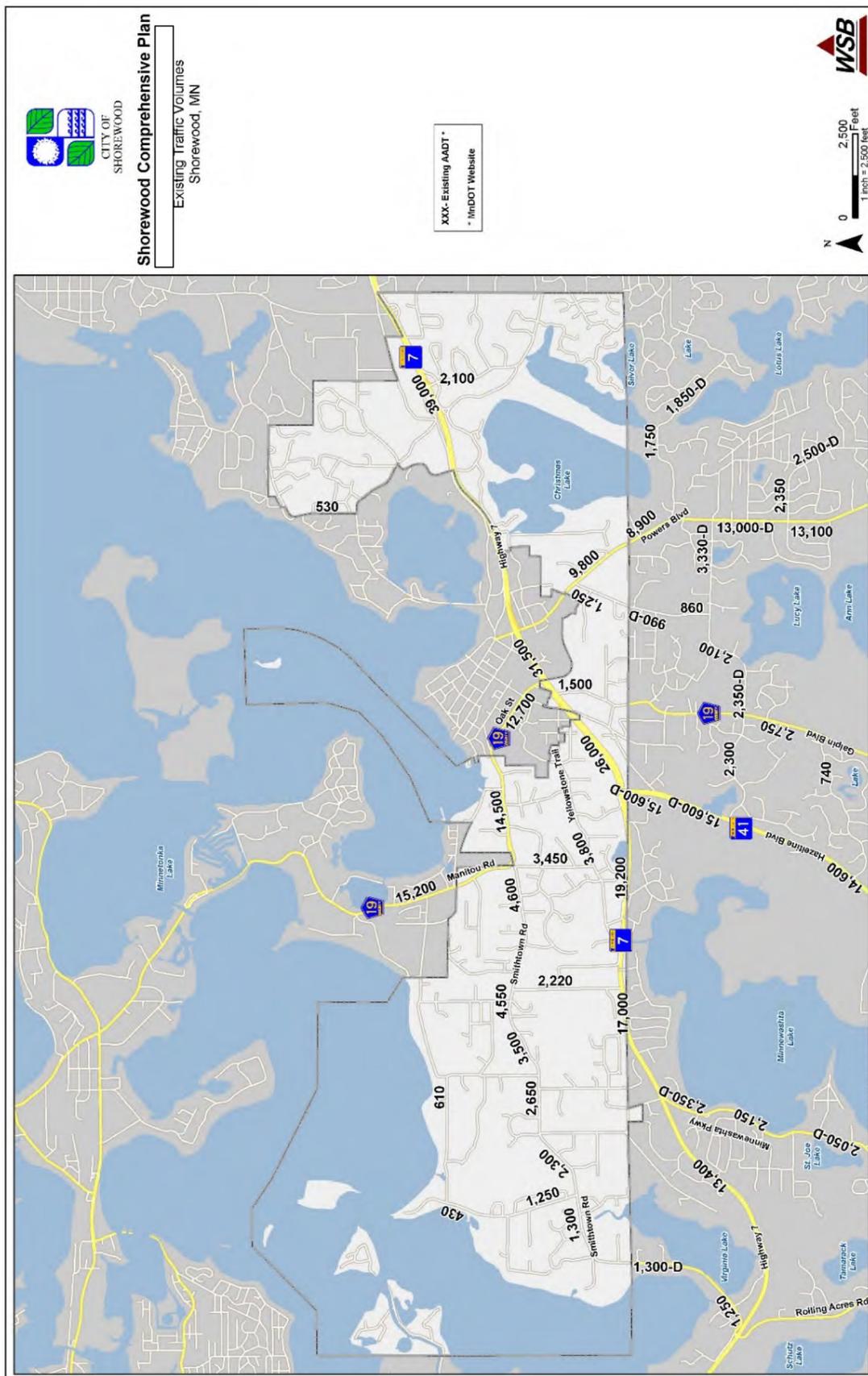
## **Miscellaneous**

***Technology Improvements*** - Remove use of Country Club Road, Yellowstone Trail and Lake Linden Drive from Google Maps directions.

***Enforcement*** - Improve/Enhance enforcement of speeding and traffic control on area roadways.

***Traffic Calming*** - Add Driver Feedback speed control signs at selected locations on Yellowstone Trail and Lake Linden Drive







## **Access Management**

The purpose of access management is to provide adequate access to adjacent land development while maintaining acceptable traffic flow on higher level roadways. Access management consists of carefully controlling the spacing and design of public street intersections and private access points to the public roadway system. Arterials, being designed for higher speed and longer distance trips, generally have reduced or restricted access while local streets can accommodate much greater access. Collector roadways fall in between arterials and local roadways regarding the amount of access that is permitted.

The agency with jurisdiction over a roadway sets access management guidelines. Access to TH 7 must meet MnDOT access management guidelines and is permitted subject to conditions. See the table on the following page for MnDOT Access Management Guidelines.

Hennepin County has established access management guidelines for urban areas (within the 20-year MUSA boundary) and rural areas (outside the MUSA boundary). Hennepin County access management guidelines are displayed in the table on page 148. Hennepin County requires permits for new driveway access to county roads and when land uses change at a site adjacent to a county road. Hennepin County typically requires that new access points meet its guidelines; however, the county can make exceptions to the guidelines with sufficient justification.

## **Driveway Access on City Streets (Collectors and Local Roads)**

Driveways contribute to accidents and reduced traffic flow on major streets in municipalities because they add to the number of locations where vehicle conflicts can occur. Hence, it is desirable to have guidelines in place that:

- Limit the number of driveways to those that are actually needed to safely accommodate the traffic generated by each development.
- Provide adequate spacing between driveways so conflicts (and resulting accidents) between vehicles maneuvering at adjacent driveways do not arise.
- Ensure proper design to accommodate driveway traffic and minimize vehicle conflicts without significantly reducing roadway capacity.

Occasionally topographic features of a particular site or the needs of a particular land use may require special access features in a proposed development. The City may wish to withhold approval of these developments or site changes until a study has been made of the potential



impacts on the affected roadways and the adequacy of the proposed access design is determined. The City may require that the following steps be included in the traffic study for the site:

- Estimate site traffic generation and future non-site traffic.
- Determine directional distribution of trips.
- Estimate turning movements at driveway and the resulting level of service.
- Analyze current and future access requirements.
- Provide necessary geometric and operational improvements to safely accommodate the site’s access requirements without negative impacts to traffic operation on the adjoining roadways

***MnDOT Access Management Manual***

**Summary of Recommended Street Spacing for IRCs**

| Category   | Area or Facility Type     | Typical Functional Class      | Public Street Spacing   |                        | Signal Spacing    |
|------------|---------------------------|-------------------------------|---|------------------------|-------------------|
|            |                           |                               | Primary Full-Movement Intersection                              | Secondary Intersection |                   |
| <b>3</b>   | <b>Regional Corridors</b> |                               |   |                        |                   |
| <b>3AF</b> | Non-Interstate Freeway    | Principal and Minor Arterials | Interchange Access Only (see Section 3.2.7 for interim spacing) |                        | Interim           |
| <b>3A</b>  | Rural                     |                               | 1 mile  | 1/2 mile               | See Section 3.2.5 |
| <b>3B</b>  | Urban/Urbanizing          |                               | 1/2 mile  | 1/4 mile               | 1/2 mile          |
| <b>3C</b>  | Urban Core                |                               | 300-660 feet, dependent upon block length                       |                        | 1/4 mile          |



## Hennepin County Access Spacing Guidelines

| Access Type   | Movements Allowed      | Rural Arterial         |                       |                       | Urban and Urbanizing Arterial |                       |                       |
|---|------------------------|------------------------|-----------------------|-----------------------|-------------------------------|-----------------------|-----------------------|
|   |                        | Greater than 7,500 ADT | Less than 7,500 ADT   | Collector             | Undivided                     | Divided               | Collector             |
| Single family residential driveway or farm field entrance     | Full movements allowed | 1/4 mile (1,320 feet)  | 1/8 mile (660 feet)   | 1/8 mile (660 feet)   | Not allowed                   | Not allowed           | 1/8 mile (660 feet)   |
|   | Limited access         | Not allowed            | Not allowed           | Not allowed           | Not allowed                   | Not allowed           | 1/16 mile (330 feet)  |
| Low Volume Driveway (less than or equal to 500 trips per day) | Full movements allowed | 1/4 mile (1,320 feet)  | 1/8 mile (660 feet)   | 1/8 mile (660 feet)   | Not allowed                   | Not allowed           | 1/8 mile (660 feet)   |
|   | Limited access         | Not allowed            | Not allowed           | Not allowed           | Not allowed                   | 1/8 mile (660 feet)   | 1/16 mile (330 feet)  |
| High Volume Driveway (greater than 500 trips per day)         | Full movements allowed | 1/4 mile (1,320 feet)  | 1/4 mile (1,320 feet) | 1/8 mile (660 feet)   | 1/4 mile (1,320 feet)         | 1/4 mile (1,320 feet) | 1/8 mile (660 feet)   |
|   | Limited access         | Not allowed            | Not allowed           | Not allowed           | Not allowed                   | 1/8 mile (660 feet)   | Not allowed           |
| Low Volume Public Street (less than or equal to 2,500 ADT)    | Full movements allowed | 1/4 mile (1,320 feet)  | 1/4 mile (1,320 feet) | 1/8 mile (660 feet)   | 1/4 mile (1,320 feet)         | 1/4 mile (1,320 feet) | 1/8 mile (660 feet)   |
|   | Limited access         | Not allowed            | Not allowed           | Not allowed           | Not allowed                   | 1/8 mile (660 feet)   | Not allowed           |
| High Volume Public Street (greater than 2,500 ADT)            | Full movements allowed | 1/2 mile (2,640 feet)  | 1/4 mile (1,320 feet) | 1/4 mile (1,320 feet) | 1/4 mile (1,320 feet)         | 1/4 mile (1,320 feet) | 1/4 mile (1,320 feet) |
|   | Limited access         | Not allowed            | Not allowed           | Not allowed           | Not allowed                   | 1/8 mile (660 feet)   | Not allowed           |



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## **FUTURE ROADWAY SYSTEM**

This section addresses future roadway improvement needs and roadway design guidelines.

### **Roadway Capacity – Traffic Forecasting**

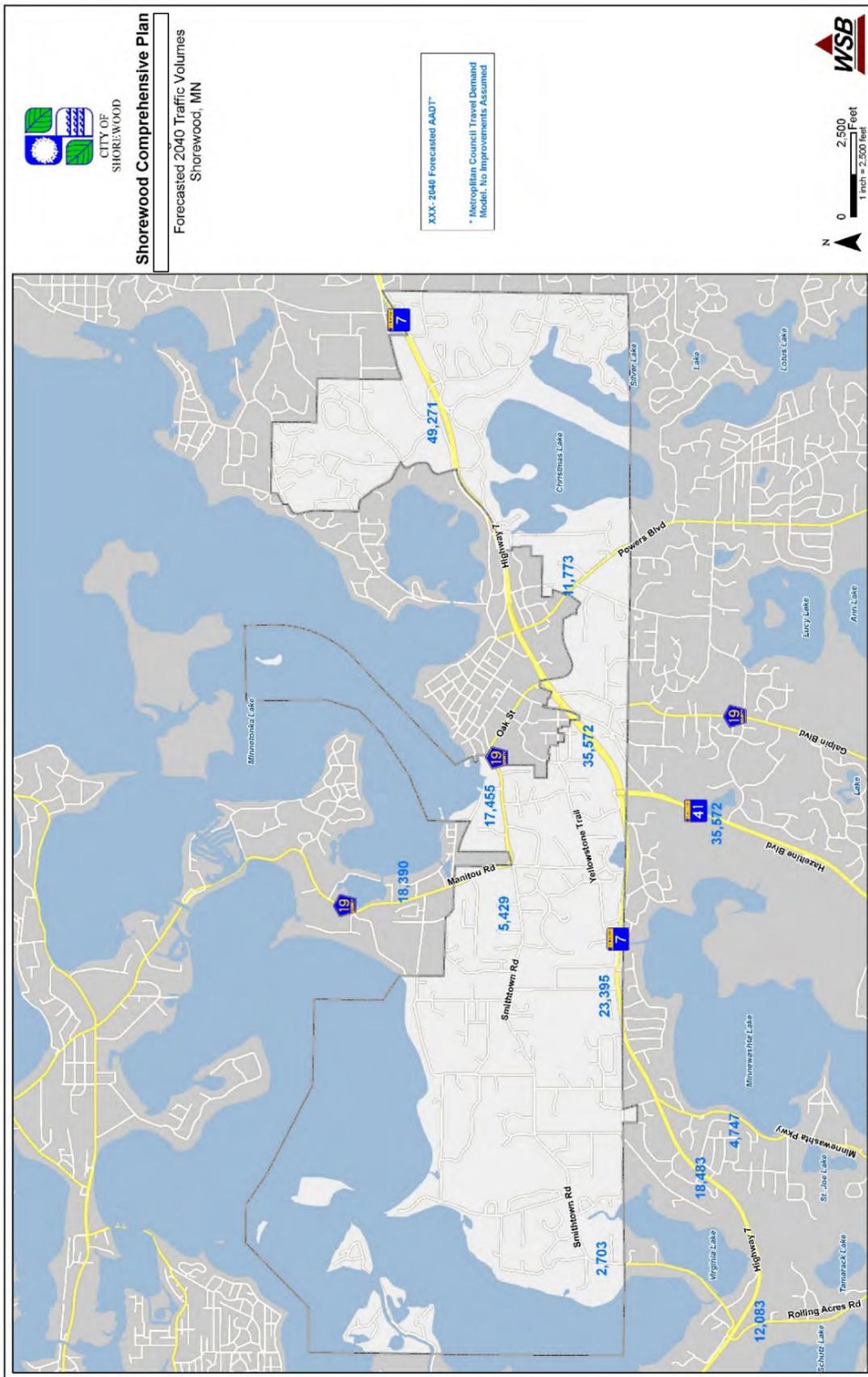
To determine future roadway capacity needs, year 2040 traffic forecasts were prepared using the Metropolitan Council travel demand model. The model was refined for application specifically for Shorewood. The 2040 projections were compared against the assumed 2040 roadway network to see where roadway segment capacity deficiencies may result. The 2040 roadway network assumed for this analysis is the same as the current roadway network, as the City and County Capital Improvement Programs (CIPs) do not include any projects that add significant capacity to the roadway network.

While the travel demand model is a valuable tool for identifying future traffic based on the proposed land use impacts, it is not meant for use in detailed traffic operations studies. For a more accurate representation of the transportation impacts from specific developments, detailed traffic studies should be conducted to determine the operational impacts on adjacent roadways and intersections.

A central concept of travel demand forecasting is the use of Transportation Analysis Zones (TAZs). Each forecast study area, in this case the City of Shorewood, is divided into a series of TAZs. Each TAZ has land use data which indicates trip generation and trip attraction including population, household, and employment data. The map on the next page displays Metropolitan Council TAZs within Shorewood.

The results of the Shorewood modeling process are summarized on page 151, which displays 2040 projected average daily traffic volumes. The table on page 152 provides the initial population, household, and employment allocations by TAZ assumed in the Metropolitan Council model.







Metropolitan Council Current TAZ Data - City of Shorewood (Raw Data - Unadjusted)

| TAZ | 2010 Census |             |            | 2020 Forecast |             |             | 2030 Forecast |             |             | 2040 Forecast |             |             |
|-----|-------------|-------------|------------|---------------|-------------|-------------|---------------|-------------|-------------|---------------|-------------|-------------|
|     | Population  | Households  | Employment | Population    | Households  | Employment  | Population    | Households  | Employment  | Population    | Households  | Employment  |
| 959 | 184         | 72          | 32         | 217           | 72          | 168         | 221           | 74          | 168         | 226           | 76          | 168         |
| 960 | 2920        | 1012        | 251        | 2844          | 1012        | 207         | 2880          | 1038        | 207         | 2924          | 1059        | 207         |
| 961 | 116         | 49          | 3          | 123           | 49          | 72          | 128           | 52          | 72          | 133           | 54          | 72          |
| 962 | 892         | 341         | 481        | 1092          | 397         | 600         | 1122          | 413         | 600         | 1151          | 426         | 600         |
| 964 | 616         | 226         | 7          | 746           | 311         | 16          | 766           | 323         | 16          | 785           | 333         | 16          |
| 965 | 1688        | 580         | 135        | 1607          | 576         | 286         | 1686          | 612         | 286         | 1760          | 642         | 286         |
| 968 | 891         | 378         | 54         | 973           | 383         | 251         | 998           | 398         | 251         | 1023          | 410         | 251         |
| 969 | 0           | 0           | 0          | 0             | 0           | 0           | 0             | 0           | 0           | 0             | 0           | 0           |
| 972 | 0           | 0           | 0          | 0             | 0           | 0           | 0             | 0           | 0           | 0             | 0           | 0           |
| 375 | 0           | 0           | 0          | 0             | 0           | 0           | 0             | 0           | 0           | 0             | 0           | 0           |
|     | <b>7307</b> | <b>2658</b> | <b>963</b> | <b>7602</b>   | <b>2800</b> | <b>1600</b> | <b>7801</b>   | <b>2910</b> | <b>1600</b> | <b>8002</b>   | <b>3000</b> | <b>1600</b> |



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## **2040 Future Roadway Capacity Improvement Needs**

To identify the need for potential future capacity improvements, Metropolitan Council 2040 forecasts were compared to planning-level roadway capacities for Principal and A-Minor Arterial Roadways. Planning-level roadway capacities used for this analysis were discussed previously. Based on this comparison, the only roadways that will be experiencing congestion are: TH 7 east of TH 41 and CSAH 19 through the City. All other local City roadways have adequate capacity to accommodate forecasted Metropolitan Council 2040 travel demands.

As noted previously, this methodology is a planning-level analysis and some traffic conditions do not fit the average daily traffic criteria (i.e., weekend travel, holiday travel, special events, etc.) and are likely to produce different levels of congestion. For detailed design consideration of access management, intersection traffic control and congestion mitigation, the city may require a traffic study providing detailed operational analysis for specific developments.

## **Roadway Design and Right of Way Standards**

This Transportation Plan does not attempt to show locations of new local streets other than those that exist currently. Location of new local streets would be determined with the development. However, in reviewing development requests, the City should carefully consider the following recommendations:

1. In new subdivisions, as opposed to simple re-subdivisions, all lots should abut on a publicly dedicated street. Exceptions should only be approved by PUD or Variance, subject to the following criteria. While it is the City's policy to discourage private streets, in certain limited cases of lot re-subdivision, the City has adopted the policy that as many as three lots may be allowed access by private easement, subject to the following criteria:
  - a. The land to be subdivided is not capable of being divided into more than three lots.
  - b. Consideration is given to surrounding undeveloped property.
  - c. A 50-foot easement and adequate turn-around must be provided.
  - d. Legal provisions are made for the use and maintenance of the road.
  - e. Where private roads are approved, protective covenants will be required stating that the City will not take over or maintain them.



- f. The minimum width of the paved surface for private streets shall be 20 feet where adequate off-street parking is provided. Where the potential exists for on-street parking the minimum shall be 24 feet.
2. Subdivision circulation patterns should be examined from a broader perspective than just the individual site. In this regard, consideration must be given to surrounding undeveloped property as well as existing street patterns to ensure that the most efficient transportation network is achieved.
3. All streets should meet the minimum design standards established by the City. Existing standards such as minimum road width and length of cul-de-sac streets have been evaluated in terms of safety (emergency vehicles access) and street maintenance (snowplowing). The minimum right-of-way width for local streets is 50 feet and that the maximum length for cul-de-sac streets should be 700 feet.
4. In areas where existing streets have substandard right-of-way widths, the City shall acquire, to the extent possible, additional right-of-way through the subdivision process

For local streets the following criteria should be used to evaluate appropriate pavement widths:

### 24-foot street

- use in areas where zoning requires lots to be 20,000 square feet in area or larger
- on-street parking restricted to one side
- consider additional parking restrictions for through streets

### 28-foot street

- use in areas where zoning allows lots smaller than 20,000 square feet in area
- on-street parking restricted to one side

### 32-foot street

- use in areas where abutting properties are occupied or zoned for two-family or multiple-family dwellings or on through streets where on-street bicycle/pedestrian traffic is a factor
- if on-street parking is allowed on both sides of street, consider separated bicycle/pedestrian facilities



It should be noted that streets currently exist which are less than 24 feet in width. While substandard streets may be maintained at their current design, in no case shall streets be reconstructed at width less than 20 feet. Substandard streets shall be evaluated based on their use characteristics (i.e. land use intensity, on-street parking, bicycle/pedestrian traffic, etc.).

The City recognizes that it may not be feasible to reconstruct existing streets to the preceding standards. Specifically, existing streets may be rebuilt to their existing width (but not less than 20 feet). Curb and gutter will be installed where necessary for drainage purposes or where traffic dictates.

The City has completed a long-term pavement inventory which quantifies and prioritizes improvements and establishes a long-term strategy for financing those improvements. The plan includes a process for evaluating reconstruction projects, including early identification of project obstacles (i.e. lack of right-of-way) and early neighborhood involvement. In this regard, the City's standard Planning Process of strategy, inventory, policy planning, project planning, and implementation should be employed.

Based on the City's Subdivision Regulation minimum street right of way width has been established as follows:

- Arterial Street = 100 feet
- Collector Street = 60 feet
- Local Street = 50 feet

## **Traffic Calming**

Traffic calming is an approach which is generally used to accomplish one or more of the following primary objectives:

- Reduce speeds on local streets.
- Reduce cut-through (non-local) traffic levels on local streets.
- Improve safety and usability for non-motorized traffic.

Under certain circumstances, traffic calming can be used on collector level roadways to reduce speeds, primarily at intersections. However, the focus is on "returning neighborhood streets to the neighborhood."



Traffic calming measures are best evaluated and implemented within the context of the overall transportation network serving the City. However, the types of measures identified below should be kept in mind as possible “tools in the toolbox:”

- Traffic circles/roundabouts



- Lateral lane shifts – roadway striping
- Curb extensions/neckdowns at intersections



- Raised crosswalks



- Diverters – close access to street





- Driver feed-back (dynamic) speed signs



Traffic calming measures should be reviewed on a case-by-case basis but should be evaluated within the context of the overall street network and from the perspective broad based policy objectives.

The City has developed and adopted an evaluation process to document processes and procedures for locating and installing traffic devices, to include: signage, pavement markings and traffic calming devices specifically within neighborhoods to address speeding, traffic control (stop signs) and cut through traffic issues.

## EXISTING AND PLANNED NON-MOTORIZED TRANSPORTATION NETWORK

This section addresses network needs for walking and bicycling within the City of Shorewood. This section also addresses the needs of people using wheelchairs and assistive mobility devices such as mobility scooters, as they are considered pedestrians.

Enhancing the non-motorized elements of Shorewood's transportation system is a key goal in terms of improving transportation sustainability in the city and in the region. This approach gives residents an alternative to driving, supports transportation options for people who do not have consistent access to a personal vehicle, and encourages healthy activities and lifestyles

Complete streets are a process for developing a transportation network that best accommodates all modes of transportation. Planners and designers must systematically consider all modes when developing their long-range plans and short-term maintenance and construction projects. The City of Shorewood supports considering implementing a complete street process in roadway reconstruction projects where appropriate and feasible.

**“Complete Streets”** are streets that are designed, built and operated to enable safe access for all users, in that pedestrians, bicyclists, motorists and public transportation users of all ages and abilities are able to safely move along and across the street right-of-way.



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## **Existing and Planned Non-Motorized Transportation Network**

The non-motorized transportation network in Shorewood consists of sidewalks and multi-use paved trails. Sidewalks are located along selected local streets, providing connections to the trail system. Multi-use paved trail segments are also located along several key roadways. Existing Bicycle and Pedestrian Network facilities are illustrated on page 160.

Sidewalks and/or trails are recommended to be located adjacent to all new roadways within Shorewood to accommodate pedestrian and other non-motorized movement in a safe manner, separate from vehicular traffic. The City supports completing gaps in the system network when consistent with the City's trail plan as funding is available.

## **Planned Regional Non-Motorized Transportation Network**

The Metropolitan Council 2040 TPP encourages the use of bicycles as a mode of transportation and establishes a Regional Bicycle Transportation Network (RBTN) to establish an integrated network of on street bikeways and off-road trails that complement each other to improve conditions for bicycle transportation at the regional level. The RBTN identifies Tier 1 and Tier 2 alignments where existing regional or other trails exist or where a specific alignment has been identified. The RBTN also identifies Tier 1 and Tier 2 corridors where specific alignments have not yet been defined.

Within Shorewood, the RBTN includes two Tier 1 RBTN corridors and one Tier 2 RBTN corridor. The Tier 1 corridors include: The Lake Minnetonka LRT Regional Trail running east/west through the City, linking the City of Hopkins and Carver Park Reserve, and; CSAH 19 north of Lake Minnetonka LRT Regional trail to the City of Tonka Bay. The Tier 2 corridor generally extends east-west along the TH 7 corridor and is consistent with planned improvements identified in Hennepin County's 2040 Bicycle Transportation Plan. With both of these corridors, existing land use patterns and major roadway barriers do not provide other opportunities for an efficient and successful bikeway route.

## **Non-Motorized Transportation Design Considerations**

Design dimensions for sidewalks are recommended to be five-feet or wider, with a minimum of a four-foot wide boulevard between the sidewalk and the curb. Increased separation improves pedestrian comfort and provides space for street signs and snow storage.

Several types of bicycle facilities exist within the metropolitan area, with each having its own benefits and limitations depending on the surrounding environment and intended audience. Bicycle facilities include: off-street facilities, protected bikeways, buffered bicycle lanes, conventional bicycle lanes, bicycle boulevards, and wide paved shoulders.



Multi-use trails are recommended to be a minimum of eight-feet wide. Regional trails are recommended to be a minimum of ten-feet wide due to higher use and the design requirements to comply with federal funding. Trails must have a two-foot wide clear zone on either side to reduce hazards for bicyclists and provide a recovery zone if a bicyclist leaves the edge of the trail. The clear zone can be paved or turf surface. No signs, furnishings, trees, or other obstructions can be in the clear zone.

Paved shoulders should be a minimum of four-feet wide if intended for bicycle and pedestrian use. Four-foot wide shoulders are adequate on streets with traffic volumes below 1,000 vehicles per day. Six- to eight-foot shoulders are recommended when traffic volumes exceed 1,000 vehicles per day. A wider shoulder improves pedestrian and bicyclist safety and comfort when vehicle traffic speeds and volumes are higher.

As non-motorized facilities are planned and designed, the City should consult additional planning and design resources, including:

- Hennepin County Bicycle Transportation Plan
- Hennepin County Pedestrian Plan
- Hennepin County Bottineau LRT/Metro Blue Line Extension Bicycle Study
- MnDOT Bikeway Facility Design Manual
- MnDOT Complete Streets Implementation Resource Guide
- Minnesota Manual on Uniform Traffic Control Devices
- Guide for the Development of Bicycle Facilities – American Association of State Highway and Transportation Officials
- Guide for the Planning, Design, and Operation of Pedestrian Facilities – American Association of State Highway and Transportation Officials
- Public Rights of Way Accessibility Guidelines (PROWAG) – US Access Board

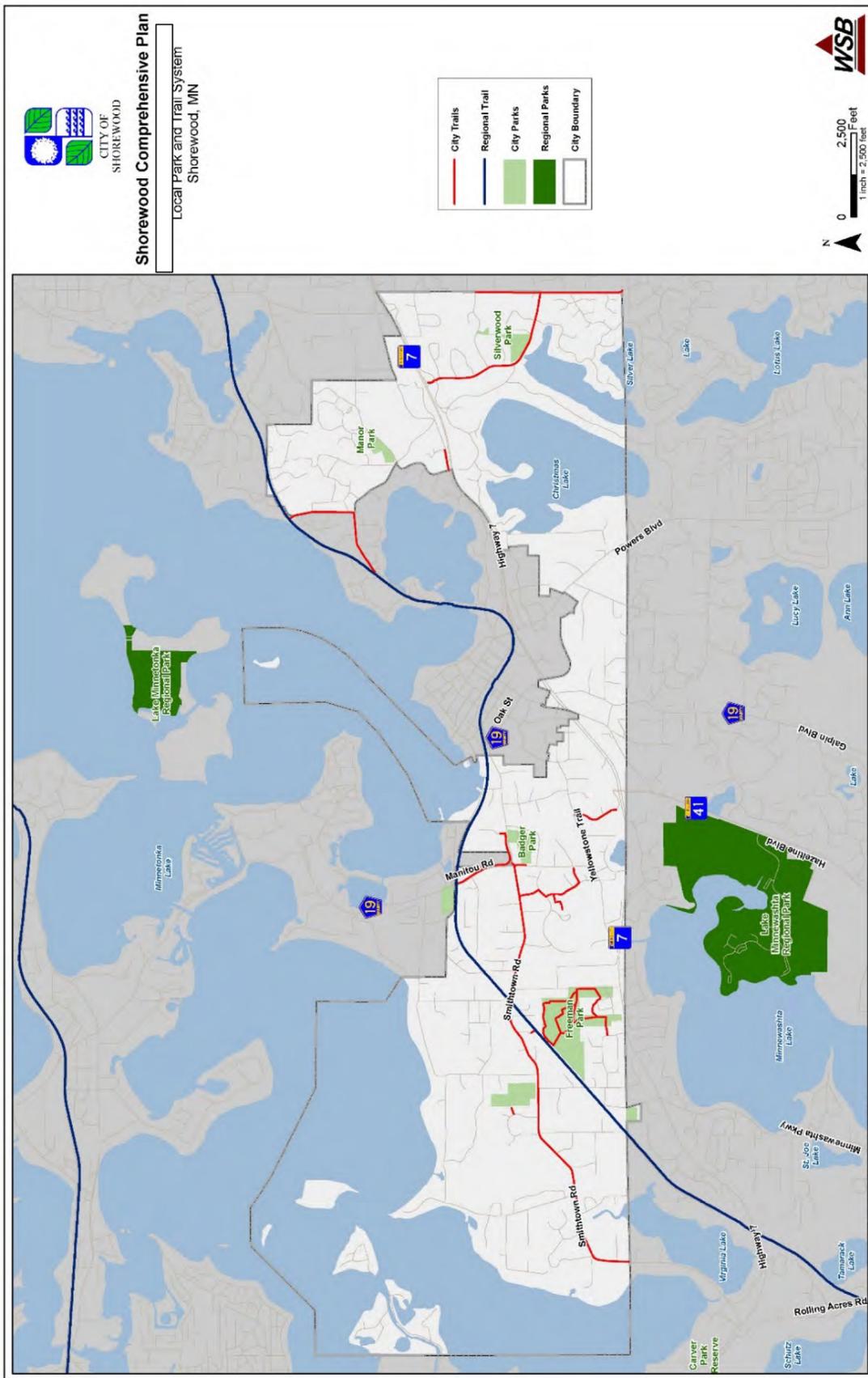
Accessibility is a very important consideration for non-motorized design. All new pedestrian and bicycle facilities must meet the ADA (Americans with Disabilities Act) accessibility guidelines established in PROWAG. The guidelines in PROWAG address the design needs of people with physical and/or visual impairments. Accessibility will become increasingly important over the next 20 years due to demographic changes. Baby boomers are aging and the population over age 65 is increasing. People over 65 are more likely to have physical and/or visual impairments that affect their ability to get around. To address accessibility issues, it is recommended that the City

## *Community Framework - Transportation*

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develop and implement an ADA transition plan to bring sidewalks, trails, and intersections into compliance with ADA.





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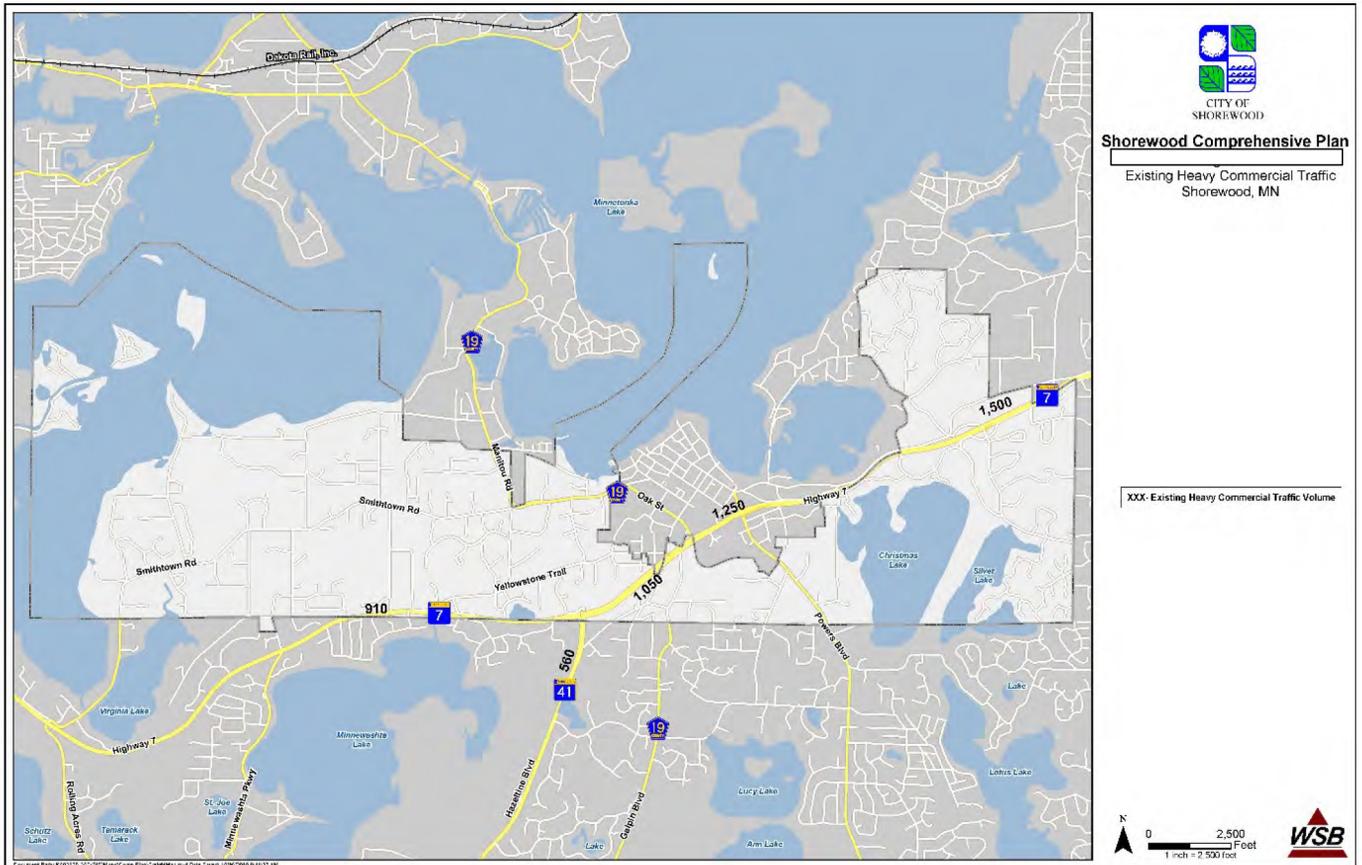
## **FREIGHT**

Freight transportation in Shorewood is primarily served by arterial roadways. The graphic below shows the City's freight system and potential freight generators.

There are no large freight traffic generators or intermodal facilities within the city. Most truck is passing through Shorewood on trips to, from, and through the Twin Cities. Freight traffic generators within Shorewood are located along the TH 7. Freight generators include concentrations of commercial land uses along TH 7.

The graphic below also shows Heavy Commercial Average Annual Daily Traffic (HCAADT) within the City of Shorewood. TH 7 carries a number of heavy commercial vehicles (1250/1500 east of TH 41 and 910 west of TH 41).

The Metropolitan Council 2040 TPP acknowledges several freight challenges that impact the city and the region. Freight traffic is expected to increase and place pressure on the region's highway and rail systems. While land use adjacent to the city's primary freight routes is generally compatible with these uses (industrial, commercial, etc.), there are several areas of existing and planned single-family residential housing or mixed use that lie adjacent to the arterial roadways.



## TRANSIT

### Existing Transit Service

The City of Shorewood is located within Transit Market Areas 4 and 5 in the Transit Capital Levy District, as shown in the 2040 Transportation Policy Plan (TPP). Dial-a-ride services from Metro Mobility and Transit Link are both available in Shorewood.

Scheduled transit service for Shorewood residents is currently provided by Metro Transit (a division of the Metropolitan Council). The table below outlines the existing transit service in the City of Shorewood.



**Existing Transit Serving Shorewood**

| Route Number | Service Route/Area   | Service Description |
|--------------|--|---------------------|
| 670          | Minneapolis, Hopkins, Minnetonka and Excelsior                         | Express             |
| 671          | Minneapolis, Tonka Bay, Excelsior, Greenwood, Deephaven and Minnetonka | Express             |

One Park and Ride facility is located within the City of Shorewood. The facility is located off of TH 7 on Denton Avenue and Vine Hill Road. shows the existing Transit Facilities in and adjacent to the City of Shorewood.

**Transitway Service**

LRT projects are very capital intensive because they require dedicated right-of-way with rail and electric power installations, and the cars themselves are expensive. Due to the costs involved, LRT corridors generally need to be on a regional scale to justify the necessary investments. Therefore, the planning and implementation of LRT systems are primarily the responsibility of the Metropolitan Council and the metro-area counties. Because of their size, the cities of Minneapolis and St. Paul have also been very involved in the planning process for certain corridors.

The TPP’s transit investment plan does not show any transitway investments planned for the City of Shorewood in the current revenue scenario. The transitway corridor which has the most relevance for City of Shorewood is the Green Line Extension (Southwest Light Rail Corridor). This corridor is a 15-mile route between Eden Prairie and downtown Minneapolis that passes through Minnetonka, Hopkins and St. Louis Park approximately 7 miles from the City of Shorewood.





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## **AVIATION**

Cities are responsible for airspace protection to reduce hazards to air travel within its part of the region. There are no existing or planned aviation facilities within the City of Shorewood. The closest airport to Shorewood is the Flying Cloud Airport; one of seven publicly owned airports in the Metropolitan Airports Commission (MAC) system. The airport's role in the MAC system is to serve as a reliever to the Minneapolis-St. Paul International Airport, and serve personal, recreational, and some business aviation users in the northwest metropolitan area. MAC is updating the airport's long-term comprehensive plan to align with existing and forecasted activity levels. Due to the distance from Shorewood, no existing or future impacts from the airport are forecasted that may otherwise affect the City of Shorewood.

Given the distance to the nearest airports, there are no radio beacons or other air navigation aids located in off-airport locations in Shorewood. The city is not within the area of influence of any of the airports identified above, and is therefore not subject to associated land use restrictions.

Any proposed structure over 200 feet shall require notification to the Federal Aviation Administration (FAA) at least 30 days prior to construction, using FAA Form 7460-1 "Notice of Proposed Construction or Alteration," as defined under code of federal regulations CFR - Part 77. The City's zoning code limits structure height; therefore, it is unlikely that any structures in the city will require FAA notification. The City will support, as necessary, compliance with FAA and Metropolitan Council requirements concerning visual and/or electronic interference with airport communications, air traffic operations, and other aviation land-use capability guidelines. There are currently no heliports in Shorewood any known plans to construct one.

Seaplane and ultra-light operations are allowed on the surface water of Lake Minnetonka. Seaplane traffic in Shorewood has not been identified as a problem at the present time. However, as use of Lake Minnetonka increases, the potential for problems to arise also increases. This use of the lake should be monitored and at such time it is determined to be a problem, a regional study on the topic should be conducted to determine if there is a need for a specialized area of the lake to handle seaplane operations. This study should be a joint effort between all lake communities and may best be handled by the Lake Minnetonka Conservation District.

## **CONCLUSION AND NEXT STEPS**

The purpose of this Transportation Plan is to set a multimodal transportation vision for the City of Shorewood through the year 2040. Goals and specific strategies have been identified



collaboratively by the City, Hennepin County, MnDOT and citizens within the framework of Metropolitan Council requirements. The vision and associated strategies outlined in this plan were established by considering existing and forecasted conditions, City of Shorewood priorities, regional travel patterns and a variety of other factors.

As the owners of the transportation network in the City of Shorewood (i.e. City of Shorewood, Hennepin County and MnDOT) advance their respective Capital Improvement Programs (CIPs), this plan is intended to serve as an important resource and reference in establishing priorities and advancing transportation projects for implementation. Advancing these projects from a planning to implementation phase will require collaborative discussions among the City, County, MnDOT, adjacent communities, Metropolitan Council, residents and others to conduct traffic studies, finalize designs, preserve rights-of-way, obtain environmental clearances and leverage necessary financial resources. The following are key objectives the City should consider with this transportation plan:

1. Revise the existing roadway Functional Classification system as follows:
  - a. Smithtown Road: CASH 19 to City Limits – Major Collector to “Other” Arterial
  - b. Vine Hill Road: TH 7 to City Limits - Local Street to Major Collector
  - c. Old Market Road: TH 7 to Vine Hill Road – Local Street to Major Collector
  - d. Eureka Road: Smithtown Road to TH 7 – Local Street to Major Collector
  - e. Delton Avenue: City of Minnetonka Boarder to Old Market Road – Local Street to Major Collector
2. The only roadway that is approaching capacity is CSAH 19 north of Smithtown Road. All other Arterials and Major Collectors in Shorewood currently exhibit traffic volumes below or within the range of the planning level capacity thresholds. The City should work with Hennepin County on future design considerations for CSAH 19.
3. As development or re-development continues, the City should determine detailed design consideration of access management, intersection traffic control and congestion mitigation, the City should require a traffic study providing detailed operational analysis be completed.
4. The City should continue to work with MnDOT, Hennepin County and adjacent Cities in reviewing and improving traffic flow on TH 7. Specifically at Minnewashta Parkway/Church Road and at Vine Hill Road.

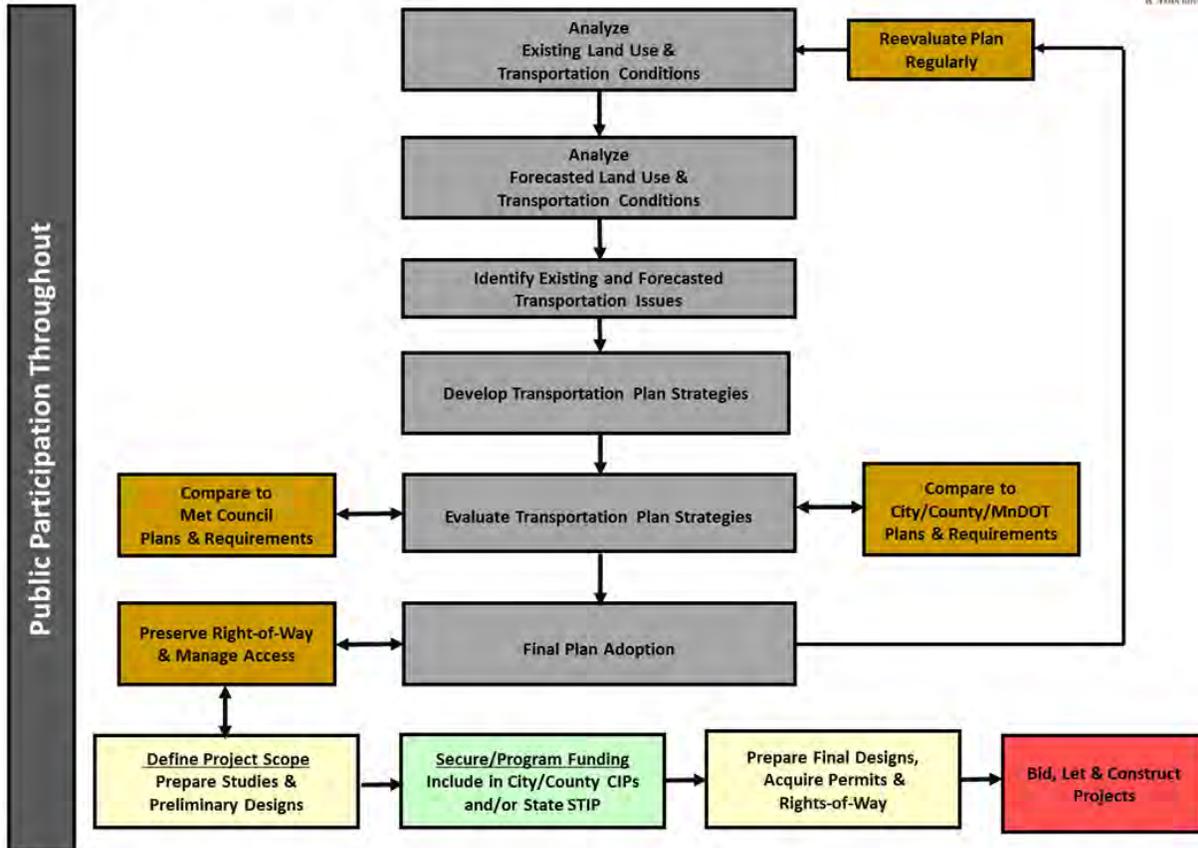


5. The conclusions and recommendations identified by the “Smithtown Rd., Country Club Road, Yellowstone Trail and Lake Linden Drive” Traffic Committee should continue to be implemented.
6. Roadway design and right of way standards will follow the requirements outlined in the City’s Subdivision Ordinance.
7. Traffic calming can be used on some local and collector level roadways to reduce speeds, primarily at intersections. Traffic calming measures should be reviewed on a case-by-case basis but should be evaluated within the context of the overall street network and from the perspective broad based policy objectives.
8. The City has developed and adopted an evaluation process to document processes and procedures for locating and installing traffic devices, to include: signage, pavement markings and traffic calming devices specifically within neighborhoods to address speeding, traffic control (stop signs) and cut through traffic issues.
9. The City of Shorewood supports considering implementing a complete street process in roadway reconstruction projects where appropriate and feasible.
10. Sidewalks and/or trails should to be located adjacent to all new roadways within Shorewood to accommodate pedestrian and other non-motorized movement in a safe manner, separate from vehicular traffic when consistent with the City’s trail plan as funding is available.
11. Design and construction for sidewalks and trails will follow City, Hennepin County and MnDOT standards.

The figure below outlines the entire planning and project development process required for transportation projects from concept plans to construction implementation.



## Transportation Planning Process





## INTRODUCTION

### Purpose

The Water Plan describes the City's existing water distribution system and water demand, projects future water demand through the year 2040, and proposes infrastructure improvements to accommodate that demand. This Plan has been prepared according to the guidelines established by the Metropolitan Council and the Minnesota Department of Natural Resources (DNR). The Water Supply Plan (included here by reference) follows the template provided by the DNR, while this Comprehensive Water Plan expands upon the template and provides further information for City and Metropolitan Council planning.

This Comprehensive Water Supply Plan has been prepared according to the guidelines established by the Metropolitan Council and the Minnesota Department of Natural Resources (DNR) per Minnesota Statute 473.859, which requires water supply plans to be completed by all local units of government in the seven-county Metropolitan Area. The Shorewood Water Supply Plan is included by reference and conforms to the template provided by the DNR, while this Comprehensive Plan expands upon the template and provides further information for City and Metropolitan Council planning.

### Background

The scope of this study includes the population projections from the City's overall Comprehensive Plan, consistent with the Metropolitan Council Environmental Services (MCES) City System Statement, to project water system demands for the City of Shorewood through the year 2040. The 2040 service area was defined based on the Land Use Plan prepared for the City's 2040 Comprehensive Plan. Existing and future water demands were calculated for the City based on the historical data and the Thrive MSP 2040 Plan population projections.

### Data Available

The following sources of information were used to prepare this report:

- Water Supply Plan for the City of Shorewood, prepared by WSB & Associates, Inc.
- MCES System Statement for the City of Shorewood
- Water usage data as reported by the City to the DNR's Minnesota Permitting and Reporting System (MPARS)



- Wellhead Protection Plan for the City of Shorewood Water Use Categories and Definitions

General water use categories and definitions used in this report, as defined by the Department of Natural Resources, are as follows:

- **Residential** uses consist of water being used for normal household purposes, such as drinking, food preparation, bathing, washing clothes and dishes, flushing toilets, and watering lawns and gardens.
- **Institutional** uses consist of those for hospitals, nursing homes, day care centers, and other facilities that use water for essential domestic requirements. This includes public facilities and public metered uses. Institutional water-use records are typically maintained for emergency planning and allocation purposes.
- **Commercial** uses consist of water used by motels, hotels, restaurants, office buildings, and commercial facilities.
- **Industrial** uses consist of water used for thermoelectric power (electric utility generation) and other industrial uses such as steel, chemical and allied products, food processing, paper and allied products, mining, and petroleum refining.
- **Wholesale deliveries** consist of bulk water sales to other public water suppliers.
- **Unaccounted water** is the volume of water withdrawn from all sources minus the volume sold.
- **Non-essential water uses** as defined by Minnesota Statutes 103G.291, include lawn sprinkling, vehicle washing, golf course and park irrigation, and other non-essential uses. Some of the above categories also include non-essential uses of water.

## Community Engagement

The City of Shorewood has implemented regulation to reduce demand and improve efficiency in its water system. During May 1<sup>st</sup> through September 30<sup>th</sup> each year, residents can water lawns only before 11:00 a.m. and after 4:30 p.m. per Shorewood City Code, Chapter 9: Section 903.12 Subd. 2. This regulation helps prevent wasteful irrigation and reduces summer season water demands. A critical water deficiency ordinance has also been established in Shorewood City Code, Chapter 9: Section 903.12 Subd. 1.

The Minnehaha Creek Watershed District (MCWD) provides education about rain gardens and native and drought tolerant landscaping and has a cost share program to encourage clean-water landscaping.



The City has implemented the following education and outreach programs:

- Consumer Confidence Reports prepared annually
- Shore Report, the City newsletter, prepared each month
- Information available at utility and public buildings and on the City website (<http://www.ci.shorewood.mn.us/>)

### Wellhead Protection

Long-term preventative programs and measures for the City's existing water system will help reduce the risk of emergency situations. The City of Shorewood has a number of programs to help reduce these risks. This includes a Wellhead Protection Plan (WHPP) that was adopted in December of 2015 and is due to be updated in 2025. It lists the following goals:

1. Maintain or improve the current level of water quality so that the municipal water supply will continue to meet or exceed all applicable state and federal water quality standards.
2. Continue to supply sufficient water quantity for system users and emergency needs.
3. Provide and promote activities that protect the source water aquifer that provides water to the municipal system. This will include increased public awareness of the Wellhead and Source Water Protection Program and groundwater-related issues as well as management of the identified potential contaminant sources and conveyance mechanisms within the Drinking Water Supply Management Area (DWSMA).
4. Continue to collect data to support future wellhead and source water protection efforts.

In order to achieve these objectives, the WHPP lists the following measures to be implemented:

- Well Management
  - Promote proper sealing of abandoned, unused, unmaintained, or damaged wells
  - Identify remaining unlocated wells within the DWSMA
  - Educate the public about proper well management
  - Identify new high-capacity wells within the DWSMA
  - Continue to monitor the water quality from the City's wells
  - Update the Inner Wellhead Management Zone (IWMZ) surveys
  - Monitor and work to minimize impacts within the IWMZ area
- Public Education
  - Foster public support for and understanding for the WHPP
  - Develop an understanding for the location of the gas and oil pipelines within the DWSMA



- Storage Tank Management
  - Educate owners of the nine (9) storage tanks greater than 1,100 gallons within the moderate vulnerability area of the DWSMA on the importance of spill prevention
- Data Collection
  - Continue to collect and maintain local geologic and hydrogeologic data
  - Evaluate the water quality monitoring strategy and results
  - Maintain up to date information about wells and potential contaminant sources within the DWSMA
- Land Use Planning and Zoning
  - Consider the location of the DWSMA during land use planning and zoning
- Implementation
  - Track and report WHPP activities
- Evaluation
  - Evaluate the WHPP

### **GROWTH AND DEMAND PROJECTIONS**

The City of Shorewood is projected to experience gradual growth and development. The City's projected population and water demands are listed in the following table. The population projections were calculated using the Metropolitan Council estimated rate of growth through the year 2040 for the City of Shorewood and the known population and population served values from 2016. As of 2016, any new population growth will be serviced by the municipal water system. The total per capita water demand of 109 gallons per capita per day was calculated from the average 2012-2016 demand. A peaking factor of 2.6, which is the City's average 2012-2016 peaking factor, was applied to calculate maximum day demand. The maximum day demand is expected to reach 1.165 million gallons per day by the year 2040.

It is important to note that there are several connections located in the south-central part of Shorewood that receive water from the Cities of Chanhassen, Excelsior, and Tonka Bay. The City estimates that 151 persons are served by intercommunity connections. Given the peaking factor and the total per capita water demand used in this study, the connections supplied by neighboring communities require an estimated maximum day demand of 0.043 million gallons per day. This maximum demand flow was removed from the City-wide maximum demand displayed in the table on the following page, prior to distributing total maximum demand between the East and West systems based on historical water pumping data.



The expected increase in demand through the year 2040 was assigned to each system based on the location of expected development or redevelopment.

**Projected Annual Water Demand**

| Year | Projected Population Served | Projected Per Capita Water Demand (GPCD) | Projected Average Demand (MGD) | Total Projected Maximum Demand (MGD) | East System Projected Maximum Demand (MGD) | West System Projected Maximum Demand (MGD) |
|------|-----------------------------|--|--------------------------------|--------------------------------------|--|--|
| 2017 | 3,880                       | 109                                      | 0.423                          | 1.100                                | 0.591                                      | 0.465                                      |
| 2018 | 3,890                       | 109                                      | 0.424                          | 1.102                                | 0.592                                      | 0.468                                      |
| 2019 | 3,900                       | 109                                      | 0.425                          | 1.105                                | 0.592                                      | 0.471                                      |
| 2020 | 3,910                       | 109                                      | 0.426                          | 1.108                                | 0.592                                      | 0.473                                      |
| 2021 | 3,920                       | 109                                      | 0.427                          | 1.111                                | 0.592                                      | 0.476                                      |
| 2022 | 3,930                       | 109                                      | 0.428                          | 1.114                                | 0.592                                      | 0.479                                      |
| 2023 | 3,940                       | 109                                      | 0.429                          | 1.117                                | 0.592                                      | 0.481                                      |
| 2024 | 3,950                       | 109                                      | 0.431                          | 1.119                                | 0.593                                      | 0.484                                      |
| 2025 | 3,960                       | 109                                      | 0.432                          | 1.122                                | 0.593                                      | 0.487                                      |
| 2030 | 4,010                       | 109                                      | 0.437                          | 1.136                                | 0.594                                      | 0.500                                      |
| 2040 | 4,110                       | 109                                      | 0.448                          | 1.165                                | 0.596                                      | 0.   |

**GPCD** = gallons per capita per day      **MGD** = million gallons per day

**PROPOSED IMPROVEMENTS**

The City of Shorewood’s water system will require maintenance and trunk watermain expansions through the year 2040. The next table lists the improvements proposed, along with estimated dates of implementation and costs, in order to maintain the City’s system. The City will consider expanding its water distribution system where feasible and where additional looping will improve distribution.



**Proposed Capital Improvements**

| Year | Improvement                                     | Estimated Cost* |
|------|---|-----------------|
| 2018 | Boulder Bridge Building                         | \$60,000        |
|      | Boulder Bridge Well Motor Control Center        | \$200,000       |
|      | Well House Water Meters                         | \$6,000         |
|      | SE Area Well Residing                           | \$45,000        |
|      | Water Mains                                     | \$750,000       |
| 2019 | Amesbury Well Anti-Corrosion and Pipe Coatings  | \$30,000        |
|      | Well House Water Meters                         | \$12,000        |
|      | Boulder Bridge Dehumidifier                     | \$5,000         |
| 2020 | Boulder Bridge Well Motor                       | \$45,000        |
|      | Boulder Bridge Anti Corrosion and Pipe Coatings | \$30,000        |
|      | Well House Water Meters                         | \$6,000         |

*\*Values listed include both direct and indirect costs.*

**Proposed Distribution**

To provide service to future and existing developments, the City will need to expand trunk watermain in several areas. Areas in need of expansion through the year 2031 were identified in the 2012 Water Distribution Plan Update, included with this report by reference. The main goal of the 2012 Water Distribution Plan was to provide recommendations for the City’s water system expansion including a Capital Improvement Plan cost forecast for watermain segments, alternative construction methods to reduce overall project costs, policy alternatives to encourage residents to connect to the City’s distribution system, and alternatives for funding the expansion of the system. The plan projected a \$26 million investment to expand the water distribution network over a twenty-year time span. The majority of the plan focused on the expansion of the system by proposing the addition of lateral watermain (8-inch diameter and smaller) to provide general distribution of water to properties, with a few trunk mains (10-inch diameter and greater) to provide water distribution to networks of lateral watermain.

The City of Shorewood anticipates expansion of the water distribution system by neighborhood request and where needed to provide looping for the existing system.



**INTRODUCTION**

The Sanitary Sewer Plan projects future wastewater flows, and outlines the timing and sequence of future improvements to accommodate those flows. It also allows the City and the Metropolitan Council to build and improve their sanitary sewer collection and treatment systems so that development can occur in the most efficient and cost-effective manner. The City of Shorewood’s Sanitary Sewer Plan was developed to align with the Metropolitan Council’s Thrive MSP 2040 Water Resources Policy Plan. The Thrive MSP 2040 Plan was approved in May 2015 and outlines regional goals for the wastewater system, including environmental sustainability, water reuse, and water conservation. Additionally, the Thrive MSP 2040 Plan includes population, household, and employment projections, and projected wastewater flows.

Despite projected population increases, the Metropolitan Council forecasts that sanitary sewer flows from the City of Shorewood will decrease by approximately 5% by the year 2040 due to decreasing water use trends. This Sanitary Sewer Plan outlines the locations in which the Metropolitan Council can expect to see changes in wastewater flows, allowing the Council to determine if capacity upgrades will be required at regional wastewater treatment plants and interceptors. This plan also serves as a guiding document for City infrastructure improvements and expansion.

**FORECASTS**

**Population**

The Metropolitan Council publishes population and sewer usage forecasts for each city in the Metropolitan Area. These forecasts help cities prepare infrastructure for growth and promote continued maintenance of municipal infrastructure. The forecast data in the Population Projections table is from the Metropolitan Council’s Local Planning Handbook Community Page for Shorewood. Nearly the entire population of Shorewood is served by the public sanitary sewer system, save the few Individual Sewage Treatment Systems (ISTS) described in Chapter 3. For the purposes of this analysis, the City assumed that the entire population is sewered.

Population, households, and employment are all projected to increase gradually over the next few decades. The population of the City is projected to increase by approximately three percent between now and the year 2040. The following table shows estimates of which MCES Meters and Interceptors can expect to see growth and an increase in sanitary flow, based on existing land use and potential for development/redevelopment.

**Population Projections**

| Year | Total (Entirely Sewered) |            |            |
|------|--------------------------|------------|------------|
|      | Population               | Households | Employment |
| 2010 | 7,307                    | 2,658      | 1,113      |
| 2020 | 7,600                    | 2,800      | 1,600      |
| 2030 | 7,800                    | 2,910      | 1,600      |
| 2040 | 8,000                    | 3,000      | 1,600      |



**Projected Wastewater Flows**

**Household and Employment Projections by MCES Meter & Interceptor**

| Meter        | Interceptor | 2020         |              | 2030         |              | 2040         |              |
|--------------|-------------|--------------|--------------|--------------|--------------|--------------|--------------|
|              |             | Households   | Employment   | Households   | Employment   | Households   | Employment   |
| M412         | 7016        | 157          | 405          | 157          | 405          | 157          | 405          |
| M415         | 7017        | 1,144        | 368          | 1,162        | 368          | 1,178        | 368          |
|              | 7017-1      | 271          | 667          | 339          | 667          | 388          | 667          |
|              | 7017-2      | 117          | 54           | 122          | 54           | 127          | 54           |
|              | 7017-3      | 223          | 33           | 228          | 33           | 233          | 33           |
|              | 7017-4      | 52           | 0            | 53           | 0            | 54           | 0            |
| M416         | 6-GW-649    | 94           | 0            | 95           | 0            | 97           | 0            |
| M417         | 7017        | 41           | 49           | 43           | 49           | 45           | 49           |
| M420         | 7017        | 15           | 0            | 15           | 0            | 15           | 0            |
| M424         | 6-DH-645    | 138          | 0            | 140          | 0            | 143          | 0            |
|              | 6-DH-645A   | 168          | 0            | 170          | 0            | 172          | 0            |
| M439         | 7017        | 290          | 23           | 294          | 23           | 297          | 23           |
| M455         | 6-MT-647    | 90           | 0            | 92           | 0            | 94           | 0            |
| <b>Total</b> |             | <b>2,800</b> | <b>1,600</b> | <b>2,910</b> | <b>1,600</b> | <b>3,000</b> | <b>1,600</b> |

The wastewater flow is treated at the Blue Lake WWTP. The Total Wastewater Projections table lists projected total average wastewater flow from Shorewood to the Blue Lake WWTP, as estimated by this Sanitary Sewer Plan and by the MCES Water Resources Policy Plan (WRPP). Note that the projections used in this report, based on MCES meter data and unmetered flow estimates, are different from the flows projected in the WRPP. This is because the MCES WRPP projections were based on flow data from 2010, a year in which the City of Shorewood had uncharacteristically high wastewater flows. The projections used in this report are based on flow data from 2012-2016, which is more recent and captures a wider period of time.

**Total Wastewater Projections**

|                            | 2020 Average Flow<br>(MGD) | 2030 Average Flow<br>(MGD) | 2040 Average Flow<br>(MGD) |
|----------------------------|----------------------------|----------------------------|----------------------------|
| <b>Sanitary Sewer Plan</b> | 0.77                       | 0.79                       | 0.81                       |
| <b>MCES WRPP</b>           | 0.93                       | 0.91                       | 0.89                       |



**SANITARY SEWER DESIGN CRITERIA**

**Land Use**

Detailed information and figures regarding Shorewood’s land use are included in the Land Use Plan. Using existing land use, metering data, and future land use information, current and future flows were calculated and divided by meter service area as described below. This analysis considered the land use designations listed in the Assumed Wastewater Flow by Land Use Type Table. The largest development within Shorewood is the redevelopment of the Minnetonka Country Club site into 142 single-family residential lots, which was approved in 2016.

**Estimated Average Flows – Existing**

The existing wastewater flows within the City were estimated based on a combination of MCES meter data and land use designations. The MCES meter data provides flow rates for broad metersheds. The City estimated flow rates for the smaller sanitary sewer sub-districts and lift station service areas by calibrating flow estimates based on land use designations and acreages with the MCES meter data.

**Estimated Average Flows – 2040 Build Out**

Once existing flows were estimated, future flows were projected based on Land Use Plan. Parcels that are planned to be developed were assigned wastewater flow rates in accordance to their land use type. The following table lists the assigned flows, which include design considerations for inflow and infiltration (I/I). More information on I/I and how it relates to the sanitary sewer system is provided later in this section.

Future flows were added to existing flows to determine if existing pipe capacities will be sufficient. Recommendations are provided later in this section to address locations where development will lead to pipes that are under capacity.

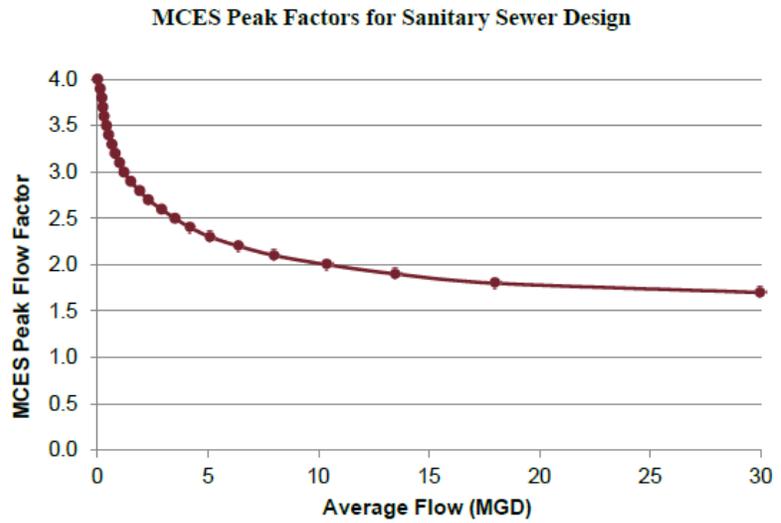
**Assumed Wastewater Flow by Land Use Type**

| <b>Land Use</b>                   | <b>Daily Flow<br/>(gallons/acre)</b> |
|-----------------------------------|--------------------------------------|
| Minimum Density Residential       | 99                                   |
| Low Density Residential           | 270                                  |
| Low to Medium Density Residential | 450                                  |
| Medium Density Residential        | 810                                  |
| High Density Residential          | 1,440                                |
| Public/Institutional              | 600                                  |
| Commercial                        | 800                                  |
| Office                            | 800                                  |
| Industrial and Utility            | 800                                  |
| Park                              | 0                                    |



**Peak Flow Factors**

To ensure that the sanitary sewer system is capable of handling flow fluctuations throughout the day, peak flows are calculated using peak factors based on average flows. The peak factors are provided by the Metropolitan Council and scale based on average flows. Pipes that serve small generator customers are more likely to experience large fluctuations in flows. Therefore, the peak factor decreases as average flow increases. The Metropolitan Council peak flow factors for sanitary sewer design used in this report are shown in the graphic below. Note that historical peak factors calculated from MCES meter data, as available, are used in lieu of the standard peak factors to calculate existing peak flows.



**Intercommunity Flows**

Some of Shorewood's sewers discharge into other communities. For some of the cities, Shorewood has no agreement on charging or collecting fees, including Excelsior, Greenwood, and Deephaven. Shorewood has some agreements with Minnetonka, Tonka Bay and Chanhassen for either reimbursements or direct utility charges to residents. The Sanitary Intercity Flows & Agreements map shows the interconnections, although properties served directly by the MCES interceptors passing through the City are not included.

Intercommunity Flows

| Inflow to Shorewood |           | Outflow from Shorewood |           |
|---------------------|-----------|------------------------|-----------|
| From                | Metershed | To                     | Metershed |
| Chanhassen          | M415      | Minnetrista            | M455      |
| Greenwood           | M424      | Victoria               | M439      |
|                     |           | Tonka Bay              | M420      |
|                     |           | Excelsior              | M417      |
|                     |           | Greenwood              | M416      |
|                     |           | Deephaven              | M424      |
|                     |           | Minnetonka             | M412      |

There is inflow into Shorewood from Chanhassen in metershed M415. There is no agreement for this area and no billing. If any additional agreements are written in the future, this will be provided to the Metropolitan Council. This includes the following areas:

- Chaska Road (Chanhassen Sub-sewer shed NO-12): 43 residential lots plus Minnetonka Middle School.
- Murray Hill Road (Chanhassen Sub-sewer shed NO-11): 30 residential lots.
- Apple Road (Chanhassen Sub-sewer shed NO-9): 106 residential lots.



- Summit/Hummingbird (Chanhassen Sub-sewer shed NO-10): 9 residential lots
- Galpin Blvd/Galpin Lake Rd (Chanhassen Sub-sewer shed NO-10, other than 9 lots indicated above): flows directly to Metropolitan Council gravity line.
- Mill Street (Chanhassen Sub-sewer shed NO-8): flows directly to Met Council gravity line.
- Ridge Road (Chanhassen Sub-sewer shed NO-1 thru NO-7): flows directly to Met Council gravity line.
- Washta Bay Road (Chanhassen Sub-sewer shed MW-7): flows directly to Met Council gravity line.
- Strawberry Lane/Church Road (Chanhassen Sub-sewer shed MW-1): flows directly to Met Council gravity line.

The flow that enters Chanhassen from Shorewood is also in metershed M415. Some of this is covered in the agreements dated January 25, 1993 and July 19, 1993 for 1030 Holly Lane. Chanhassen bills this homeowner directly. Another agreement dated July 26, 1993 covers five homes including 6150, 6155, 6170, and 6195 Deer Ridge. Chanhassen also directly bills these homeowners. There are also properties at 21220, 21200, 21115, 21125, and 21135 Christmas Lane as well as 1010 and 1050 Holly Lane which are not covered by an agreement.

There is flow coming from Greenwood into Shorewood, as well, in metershed M424. This flow is not covered by an agreement and is not billed. There is also flow from Shorewood to Minnetrista in metershed M455, to Victoria in metershed M439, and Minnetonka in metershed M412. There is flow from Shorewood to Greenwood in metershed M416 and Deephaven in M424 that have no agreements.

The flow from Shorewood to Tonka Bay in metershed M420 is covered by an agreement that states: “Users connected to the Tonka Bay sewer system shall comply with Tonka Bay ordinances governing the use of the Tonka Bay sewer. In the event Shorewood desires to bill and collect said user fees, it shall be Shorewood’s obligation to remit to Tonka Bay that amount which would be due (to) Tonka Bay if Tonka Bay billed directly.”

Tonka Bay bills Shorewood for this flow. This area includes 25360, 25370, 25380, 25480, 25485, 25510, 25530, 25535, 25545, 25560, and 25585 Birch Bluff Road as well as 5290, 5295, 5320, and 5325 Lee Circle. There is a separate agreement dated May 13, 1992 that covers 24200 Smithtown Road. Shorewood and Excelsior formerly had an agreement to interchange sewer and water service which has been suspended. There is currently no billing agreement between the two cities. When a new agreement is made, it will be shared with the Metropolitan Council. The following properties are served by sewer that flows into Excelsior. The 1971 agreement covered 58 residential parcels and one church. The 1973 agreement covered 26 residential parcels and five commercial properties. Directly west of Excelsior are the following properties being served:

South side of Smithtown Road/CR 19/Oak St pursuant to the 1973 agreement:

- There are 14 residential lots on Wood Duck Circle (5600, 5620, 5640, 5660, 5665, 5680, 5685, 5700, 5705, 5720, 5725, 5740, 5742, and 5745) plus 3 commercial properties located at 23575 Smithtown Rd, and 23425 and 23445 County Road 19. The Shorewood gravity sewer line appears to discharge directly into Metropolitan Council gravity line within the Excelsior municipal boundary.
- North side of Smithtown Road/CR 19/Oak St: There are three commercially used properties in this area including 23400 and 23500 Smithtown Road. There is also a vacant parcel that does not



have a sewer connection. Again, the Shorewood gravity sewer line appears to discharge directly into Metropolitan Council gravity line within Excelsior municipal boundary.

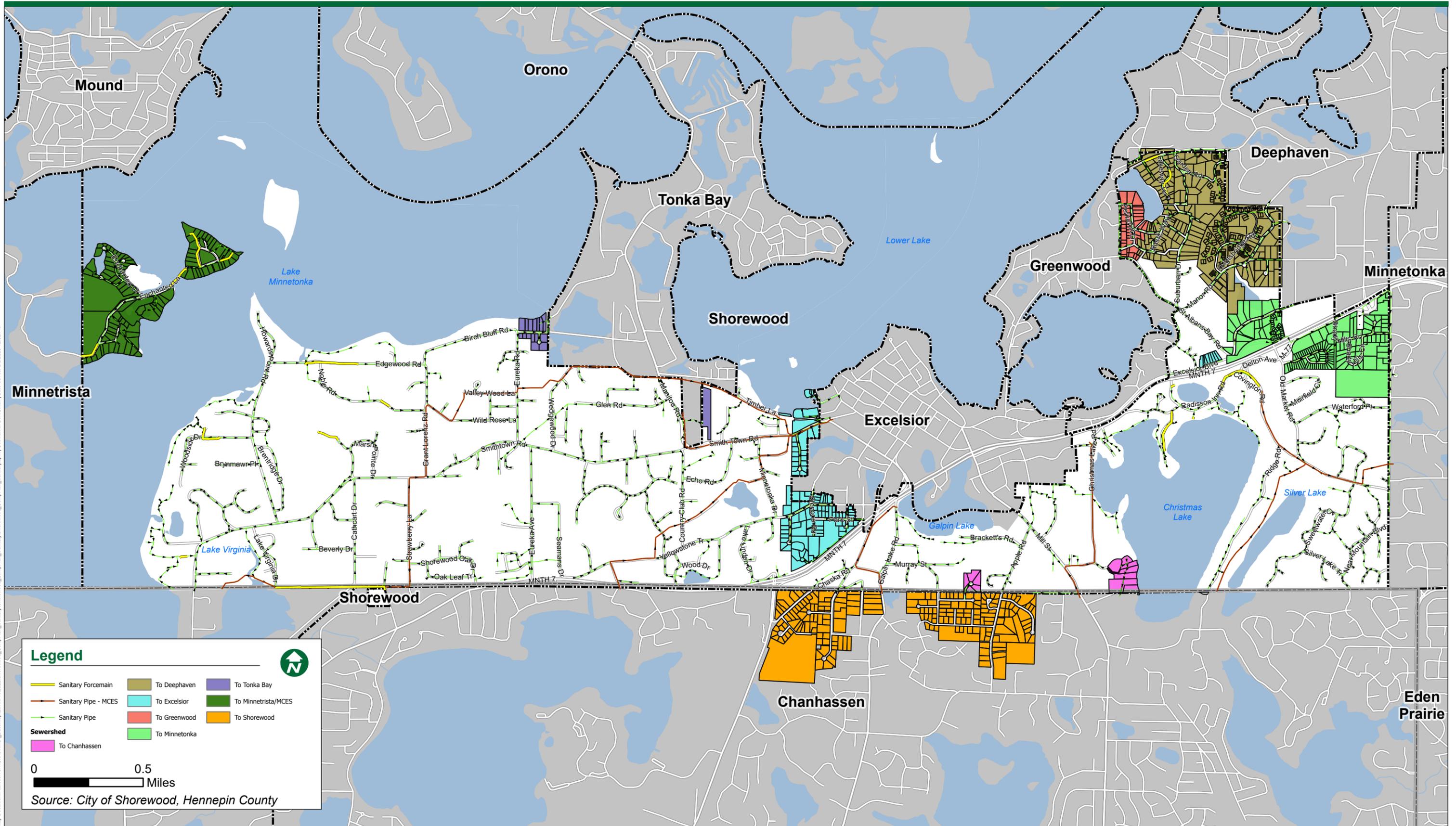
- Also within this area, there are four residential lots (454, 452, 450, and 448 Lafayette Avenue).

Further south, there are several residential lots being served by sewer that flows into Excelsior pursuant to the 1971 agreement:

- 23120, 23125, 23145, 23240, 23255, 23260, 23290, 23320, 23340, 23350, and 23400 Park Street
- 5905, 5915, 5925, 5950, 5960, and 5965 Grant Street (5965 is currently vacant)
- 23155, 23285, 23310, 23335, 23350, 23355, 23360, 23370, 23405, and 23425 Academy Avenue
- 5840, 5855, 5860, 5865, 5885, 5920, 5935, 5950, 5955, 5960, 5975, 5980, 5985, 5995, and 6065 Glencoe Road
- 23530, 23535, 23580, 23585, 23640, and 23645 Yellowstone Trail
- 23290 (church not a residence) and 23450 Highway 7
- 6045, 6065, and 6085 High Pointe Road
- 5950, 5955, 5960, 5970, 5975, 5980, and 5990 Charleston Circle

Then on the east side of Excelsior, there are eight residential lots served also pursuant to the 1973 agreement:

- 20520, 20522, 20540, 20542, 20550, 20552, 20560, and 20562 Excelsior Boulevard



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**SANITARY SEWER TRUNK RECOMMENDATIONS**

The firm capacity, existing flow, projected flow, and projected residual capacity for each of the City’s lift stations are listed in the table below. The existing wastewater flows were estimated based on metering and billing data from MCES for 2012-2016 and the land use designations within each lift station’s service area. The increase in projected flows was estimated based on the land use designations of areas that are expected to develop or redevelop by 2040. Standard MCES peak factors for sanitary sewer design were used to calculate peak flows, except for those lift stations located within metershed M415, where a historical peak factor calculated from MCES meter data was used to calculate existing peak flows. The standard peak factors were applied to calculate all 2040 peak flows.

**Lift Station Capacity Analysis**

| LS No. | Lift Station Location | Firm Capacity (gpm) | Existing Average Flow (gpm) | Existing Peak Flow (gpm) | 2040 Average Flow (gpm) | 2040 Peak Flow (gpm) | 2040 Residual Capacity (gpm) |
|--------|-----------------------|---------------------|-----------------------------|--------------------------|-------------------------|----------------------|------------------------------|
| 5      | Edgewood Rd           | 250                 | 28.6                        | 192                      | 28.6                    | 137                  | 113                          |
| 6      | Smithtown Rd          | 90                  | 7.8                         | 32                       | 7.8                     | 32                   | 58                           |
| 7      | Woodside Ln           | 90                  | 5.5                         | 31                       | 5.5                     | 22                   | 68                           |
| 8      | Birch Bluff Rd        | 250                 | 5.7                         | 33                       | 5.8                     | 24                   | 226                          |
| 9      | Minnetonka Blvd       | 92                  | 1.3                         | 5.4                      | 1.3                     | 5.4                  | 87                           |
| 10     | Lakeway Terrace       | 150                 | 7.8                         | 32                       | 8.3                     | 34                   | 116                          |
| 11     | Radisson Rd           | 200                 | 8.4                         | 60                       | 8.4                     | 44                   | 156                          |
| 12     | Christmas Lake Point  | 95                  | 2.2                         | 13                       | 2.2                     | 9.0                  | 86                           |
| 13     | Radisson Entrance     | 30                  | 0.1                         | 0.7                      | 0.2                     | 0.8                  | 29                           |
| 15     | Enchanted Ln          | 135                 | 7.2                         | 43                       | 7.2                     | 43                   | 92                           |
| 16     | Shady Island Rd       | 110                 | 0.8                         | 14                       | 0.8                     | 14                   | 96                           |
| 17     | Shady Island Cr       | 100                 | 1.2                         | 4.9                      | 1.2                     | 4.9                  | 95                           |
| 18     | Shady Island Point    | 110                 | 1.3                         | 5.2                      | 1.3                     | 5.2                  | 105                          |
| 20     | Noble Rd              | 80                  | 1.9                         | 11                       | 1.9                     | 7.7                  | 72                           |

The Trunk Sewer Capacity Analysis table lists the capacity, existing wastewater flow, 2040 projected flow, and residual capacity of the City’s trunk sewers. The City identified trunk sewers based on the sewer mains that convey the majority of the wastewater flow generated in each metershed. Peak factors used to calculate peak flows are based on the recommended MCES factors displayed in the graphic on the previous page. This report does not analyze the capacity of the MCES interceptor sewers that pass through the City of Shorewood.

As seen in the two tables above, there are no required upgrades to the existing list stations and trunk sewers to provide service through the specified planning period. Additionally, no new trunk sewers and lift stations will be needed. Lateral sewers may be extended as development or redevelopment occur.

MCES Interceptor Facility Forecasts



**Trunk Sewer Capacity Analysis**

| Location              | Diameter | Trunk Capacity (gpm) | Existing Average Flow (gpm) | Existing Peak Flow (gpm) | 2040 Average Flow (gpm) | 2040 Peak Flow (gpm) | 2040 Residual Capacity (gpm) |
|-----------------------|----------|----------------------|-----------------------------|--------------------------|-------------------------|----------------------|------------------------------|
| Enchanted Ln          | 9"       | 532                  | 11                          | 42                       | 11                      | 42                   | 488                          |
| Grant Lorenz Rd       | 15"      | 1,130                | 43                          | 174                      | 43                      | 174                  | 953                          |
| W 62 <sup>nd</sup> St | 10"      | 679                  | 56                          | 224                      | 56                      | 225                  | 488                          |
| Vine Hill Rd          | 9"       | 562                  | 35                          | 140                      | 35                      | 140                  | 419                          |
| Minnetonka Blvd       | 9"       | 562                  | 21                          | 84                       | 22                      | 86                   | 474                          |

The MCES interceptors used by each meter service area, as well as the 2040 forecasted flow to those interceptors, are listed in the following table. Note that the total flow listed may not correspond to the flow at every point along the interceptor, as the flow may accumulate along the interceptor path through the metershed. Also, note that the flow listed is only the flow generated in Shorewood and does not include any flows from neighboring communities that may also discharge into the metershed.

**Projected 2040 MCES Interceptor Use**

| Meter | Interceptor | 2040 Average Flow (MGD) | 2040 Peak Flow (MGD) |
|-------|-------------|-------------------------|----------------------|
| M412  | 7016        | 0.050                   | 0.202                |
| M415  | 7017        | 0.319                   | 1.149                |
|       | 7017-1      | 0.119                   | 0.463                |
|       | 7017-2      | 0.031                   | 0.124                |
|       | 7017-3      | 0.061                   | 0.245                |
|       | 7017-4      | 0.014                   | 0.054                |
| M416  | 6-GW-649    | 0.023                   | 0.092                |
| M417  | 7017        | 0.020                   | 0.079                |
| M420  | 7017        | 0.002                   | 0.009                |
| M424  | 6-DH-645    | 0.036                   | 0.143                |
|       | 6-DH-645A   | 0.042                   | 0.167                |
| M439  | 7017        | 0.081                   | 0.324                |
| M455  | 6-MT-647    | 0.015                   | 0.061                |

**I/I Analysis**

Shorewood’s sanitary sewer system currently consists of approximately 60 miles of sanitary main, fourteen lift stations, and 2.6 miles of forcemain, which were installed from the early 1970’s onward. Those lift stations that have not been rehabilitated since the early 1970’s, and the surrounding sanitary sewers, are more susceptible to I/I. An estimated 29% of the residential housing within the City was built before 1970. Of the pre-1970 era private services, none have been evaluated for I/I aside from the sump pump inspections mentioned previously.



The amount of clearwater flow generated within the City was estimated by calculating the average annual and peak quarter I/I rates, equal to the average wastewater flow minus the base wastewater flow, using data from 2012-2016. The average flow, both annual and quarterly, was calculated from MCES meter data. Because much of the wastewater flow in the City of Shorewood is unmetered, the finest time scale for which flow estimates are available is quarterly. The peak quarter flow was determined for each year from 2012-2016 and those five values were averaged to give the peak quarter flow listed in the following table. The base flow was approximated as the winter water usage, which was calculated as the average water pumped in December through February from 2012-2016 times a historical ratio of water used to water pumped (presented as Total Water Delivered divided by Total Water Pumped in the City’s Water Supply Plan). Because the City has two separate water systems, West and East, a separate I/I estimate was made for each system based on the corresponding sanitary sewer districts.

**I/I Estimate**

|                                   | <b>West System</b> | <b>East System</b> |
|-----------------------------------|--------------------|--------------------|
| Average Annual Flow (MGD)         | 0.207              | 0.161              |
| Peak Quarter Flow (MGD)           | 0.245              | 0.195              |
| Base Sanitary Flow (MGD)          | 0.101              | 0.129              |
| Average Annual I/I Rate (MGD (%)) | 0.106 (51%)        | 0.032 (20%)        |
| Peak Quarter I/I Rate (MGD (%))   | 0.144 (59%)        | 0.066 (34%)        |

**I/I Reduction**

The City’s strategy for preventing excess I/I includes requiring all development to conform to City standards. City code prohibiting the discharge of storm water to the sanitary sewer system and requiring the disconnection of existing I/I sources is excerpted below.

**904.09 PROHIBITED DISCHARGES INTO THE SANITARY SEWER SYSTEM.**

Subd. 1. Prohibited connections. No person shall discharge or cause to be discharged, directly or indirectly, any storm water, surface water, ground water, roof runoff, subsurface drainage or cooling water to any sanitary sewer. Any person having a roof drain, sump pump, unauthorized swimming pool discharge, cistern overflow pipe or surface drain connected and/or discharging into the sanitary sewer shall disconnect and remove any piping or system conveying the water to the sanitary sewer system. In addition, the City has routine activities directed at recognizing and correcting I/I. The City’s annual Street Improvement Projects include sewer televising, chimney seal installation, pipe lining, and manhole grouting. Some of the specific projects completed by the City of Shorewood to reduce I/I are shown in the next table. The costs listed only include sanitary sewer improvements.

Given the public sanitary sewer and lift station improvements that have been completed to date, it is estimated that the majority of the remaining I/I in the system is from private sources. The City uses the sewer televising completed as part of its annual Street Improvement Projects to identify properties contributing I/I to the public system and works with property owners to remedy or eliminate these sources.



**I/I Activities Completed**

| <b>Project</b>  | <b>Cost</b> |
|---|-------------|
| 2007 Wedgewood Dr, Teal Cir, Mallard Ln Improvements      | \$7,369     |
| 2009 Reconstruction of Lift Station 16                    | \$85,594    |
| 2010 Smithtown Ln, Harding Ln, Harding Ave Rehabilitation | \$5,014     |
| 2014 Utility & Street Improvements – Sunnyvale Ln         | \$66,413    |
| 2014 Mill and Overlay Improvement Project (chimney seals) | \$4,375     |
| 2015 Mill and Overlay Improvement Project (chimney seals) | \$4,288     |
| 2015 Star Ln, Star Cir Improvements                       | \$14,026    |
| 2016 Mill and Overlay Improvement Project (chimney seals) | \$4,950     |

Although the rehabilitation that has been completed to date resulted in a reduction, the remaining I/I continues to be a concern and will be addressed. The City will continue to proactively identify I/I sources and take corrective actions. The City has budgeted \$70,000 annually for I/I reduction projects in addition to its other sanitary sewer improvement projects.

**COST ESTIMATES AND FINANCING**

The Capital Improvements table, below, lists the proposed capital improvements and their estimated costs. Because the City of Shorewood sanitary sewer system is largely built out, the capital improvements consist of maintaining and rehabilitating the existing system.

**Capital Improvements**

| <b>Year</b> | <b>Description</b>             | <b>Location</b> | <b>Estimated Cost</b> |
|-------------|--------------------------------|-----------------|-----------------------|
| Annual      | I/I Reduction                  | -               | \$70,000              |
| 2019        | Lift Station 20 Rehabilitation | Noble Road      | \$135,000             |
| 2020        | Lift Station 7 Rehabilitation  | Woodside Road   | \$120,000             |
| 2021        | Lift Station 10 Rehabilitation | Lakeway Terrace | \$140,000             |



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**SUMMARY AND OUTCOMES**

The analysis is intended to provide assistance in planning for wastewater collection and treatment. The City anticipates that the design flows and criteria outlined will be used for utility planning as development continues. Tables and figures can be used to create budget-level estimates and schematic representations of infrastructure improvements, with specific sizing and routing to be determined during the design phase.



## **INTRODUCTION**

Community facilities and services include lands, buildings, services and systems. The condition and availability of community facilities and services enhance the quality of life in the City. Community facilities should be well-planned and developed in a manner which serves as a good example for private development.

The purpose of this chapter is to present plans for the type and location of various community facilities. The Community Facilities Plan is not concerned with detailed schemes of development, operation, or programs of the various uses, rather, this Plan is offered as a general framework within which detailed plans and specific decisions regarding community facilities can be made and identify any future land needs. Many community facilities and services are most efficiently and economically provided on a joint basis with other nearby jurisdictions.

To be noted is that plans related to transportation, water supply, sanitary sewer and surface water management are technically considered “community facilities.” Due to the amount of detail provide in such plans, they are provided as independent chapters of this Plan, or in the case of the Local Surface Water Management Plan, as an appendix. In this regard, plans for the following community facilities are provided in this chapter:

- Parks and Recreation
- Public Safety
- Solid Waste
- Natural Gas, Electrical Service, Cable Television and Street Lighting
- Municipal Buildings
- Schools



## **PARKS AND RECREATION PLAN**

### **Introduction**

At present, Shorewood's park system contains five major park facilities and a number of smaller areas which provide additional recreational opportunities. The City's park system contains approximately 100 acres of usable recreational land. Additional land exists which is part of the park system but is not considered suitable for active development. These areas, which contain wetlands or steep terrain, compliment the overall active park system by providing substantial areas of open space.

### **Classification System**

Shorewood has a variety of park types which are components of the City's overall park system. As a basis for examining existing parks and projecting future park needs, a regional system of park classification is utilized. The following table, provided for reference in the Metropolitan Council's Thrive 2040 Regional Parks Policy Plan, provides a description of various types of regional and local park facilities.

# Community Framework - Community Facilities Plan



| Component                    | Use  | Service Area   | Size                                    | Site Attributes  | Site Location  |
|------------------------------|--|--|---|--|--|
| <b>Local Facilities</b>      |  |  |   |  |  |
| Mini-park                    | Specialized facilities that serve a concentrated or limited population or specific group such as tots or senior citizens.  | Less than 1/4-mile radius  | < 1 acre                                |  | May be publicly or privately owned and/or incorporated into a development site, such as apartment, |
| Neighborhood park/playground | Area for intense recreational activities such as field games, court games, crafts, apparatus area, skating, and neighborhood centers.  | ¼ to ½ mile radius to serve a population of 4,000 – 5,000 (one neighborhood) | < 25 acres                              | Physical geography suited for intense development.   | Proximity to elementary schools or residential neighborhoods.                                      |
| Community playfield          | Area for intense recreational facilities such as athletic fields and swimming pools; could include a neighborhood use.   | 3 - 5 neighborhoods or one community   | 25 - 50 acres                           | Physical geography suited for intense development.   | Proximity to secondary schools and other public facilities.  |
| Community park               | Area of natural or ornamental quality for outdoor recreation such as walking, viewing, sitting, picnicking; could have some field and court games.   | 3 - 5 neighborhoods or one community   | 25 - 100 acres                          | Affords natural features with varied physical geographic interest.                             | Proximity to community facilities and resources.   |
| County park                  | Area of natural or ornamental quality for outdoor recreation such as walking, viewing, sitting, picnicking; could have some field and court games.   | County   | 25 - 100 acres                          | Affords natural features with varied physical geographic interest.                             | Proximity to community facilities and resources and/or where resource occurs                       |
| Conservancy lands            | Area of natural quality such as watercourses and wetlands that are preserved for environmental or aesthetic benefits to the community and/or because of the negative environmental or economic effects of development in them. | Municipality, township, county   | Variable, based on extent of resources. | Natural resources that merit preservation and that would be negatively affected by development | Where resource occurs.   |

# Community Framework - Community Facilities Plan



| Component  | Use  | Service Area  | Size   | Site Attributes   | Site Location   |
|--|--|---|--|---|---|
| <b>Local Facilities</b>                            |  |   |  |   |   |
| Local linear parks, trail, corridors and parkways  | Area developed for one or more varying modes of recreational travel such as hiking, biking, snowmobiling, horseback riding, cross-country skiing, canoeing and driving.                            | A neighborhood or several neighborhoods in a city or township | Contained within one city or township. Width and length minimums vary by locality. | On- or off-road trails that may or may not traverse scenic areas while assuring the trail treadway has no adverse effect on the natural resource base | Where needed to link neighborhoods to components of the local or regional recreation system and/or community facilities such as schools, libraries, commercial areas and to link to adjacent municipalities.  |
| County linear parks, trail, corridors and parkways | Area developed for one or more varying modes of recreational travel such as hiking, biking, snowmobiling, horseback riding, cross-country skiing, canoeing and driving.                            | Several cities and/or townships in a county                   | Traverses one or more municipalities. Width and length minimums vary by county.    | On- or off-road trails that may or may not traverse scenic areas while assuring the trail treadway has no adverse effect on the natural resource base | Often found adjacent to major roadways within the county. Other locations where needed to link cities to components of the local or regional recreation system and/or community facilities such as schools, libraries, commercial areas and to link to adjacent counties. |
| <b>Regional Facilities</b>                         |  |   |  |   |   |
| Regional park                                      | Area of natural or ornamental quality for nature-oriented outdoor recreation such as picnicking, boating, fishing, swimming, camping and trail uses.   | 3 - 5 communities   | 200 - 500 acres (100 minimum)  | Complete natural setting contiguous to water bodies or watercourses where possible.   | Where natural resource occurs particularly water  |
| Regional park reserve                              | Area of natural quality for nature-oriented outdoor recreation such as viewing and studying nature, wildlife habitat, conservation, swimming, picnicking, hiking, boating, camping and trail uses. | County, multicounty area                                      | 1000+ acres; sufficient area to encompass the resource envisioned for preservation | Diversity of unique resources, such as topography, lakes, streams, marshes, flora, fauna.   | Where natural resource occurs.  |
|  |  |   |  |   |   |

# Community Framework - Community Facilities Plan



| Component                  | Use  | Service Area                   | Size  | Site Attributes  | Site Location  |
|----------------------------|--|--------------------------------|---|--|--|
| <b>Regional Facilities</b> |  |                                |   |  |  |
| Regional destination trail | Area developed for one or more varying modes of nonmotorized recreational travel such as hiking, biking, horseback riding, cross country skiing, and canoeing. | The entire metropolitan region | Sufficient corridor width to protect natural resources and can safely accommodate trail use. Sufficient length to be a destination itself, or to serve as a link between regional parks system units. | When feasible, off-road trails that utilize human made and/or natural linear resources such as utility corridors, railroad and highway rights of way, stream / river valleys, or at the edges of forest or prairie. On-road trails are acceptable when off-road trails are not feasible. | Preferably adjacent to high-quality natural areas. The trail treadway should be placed where it has no adverse impact on the natural resource base.  |
| Regional linking trail     | Area developed for one or more varying modes of nonmotorized recreational travel such as hiking, biking, horseback riding, cross country skiing, and canoeing. | The entire metropolitan region | Sufficient corridor width to protect natural resources and can safely accommodate trail use. Sufficient length to link regional parks system units.   | When feasible, off-road trails that utilize human made and/or natural linear resources such as utility corridors, railroad and highway rights of way, stream / river valleys, or at the edges of forest or prairie. On-road trails are acceptable when off-road trails are not feasible. | Linkages between components of the regional parks system. When feasible, linking trails should attempt to connect to population, economic and social centers along its route. The trail treadway should be placed where it has no adverse impact on the natural resource base. |

# Community Framework - Community Facilities Plan



| Component                  | Use   | Service Area               | Size   | Site Attributes                                       | Site Location   |
|----------------------------|---|----------------------------|--|---|---|
| <b>Regional Facilities</b> |   |                            |  |   |   |
| Special recreation feature | Area that preserves, maintains, and provides specialized or single purpose recreational activities, such as nature center, marina, zoo, conservatory, arboretum, display gardens, hunter training education facilities, downhill ski area, sites of historic or archeological significance, and bridging facilities. Bridging facilities are specialized or single-purpose facilities that are intended to attract and introduce new outdoor recreation users to the Regional Parks System. | Regional metropolitan area | Specific standard applicable to desired feature. | Appropriate to particular special recreation feature. | Where most advantageous for the special recreation feature and the overall park system. |



## **Existing System Analysis**

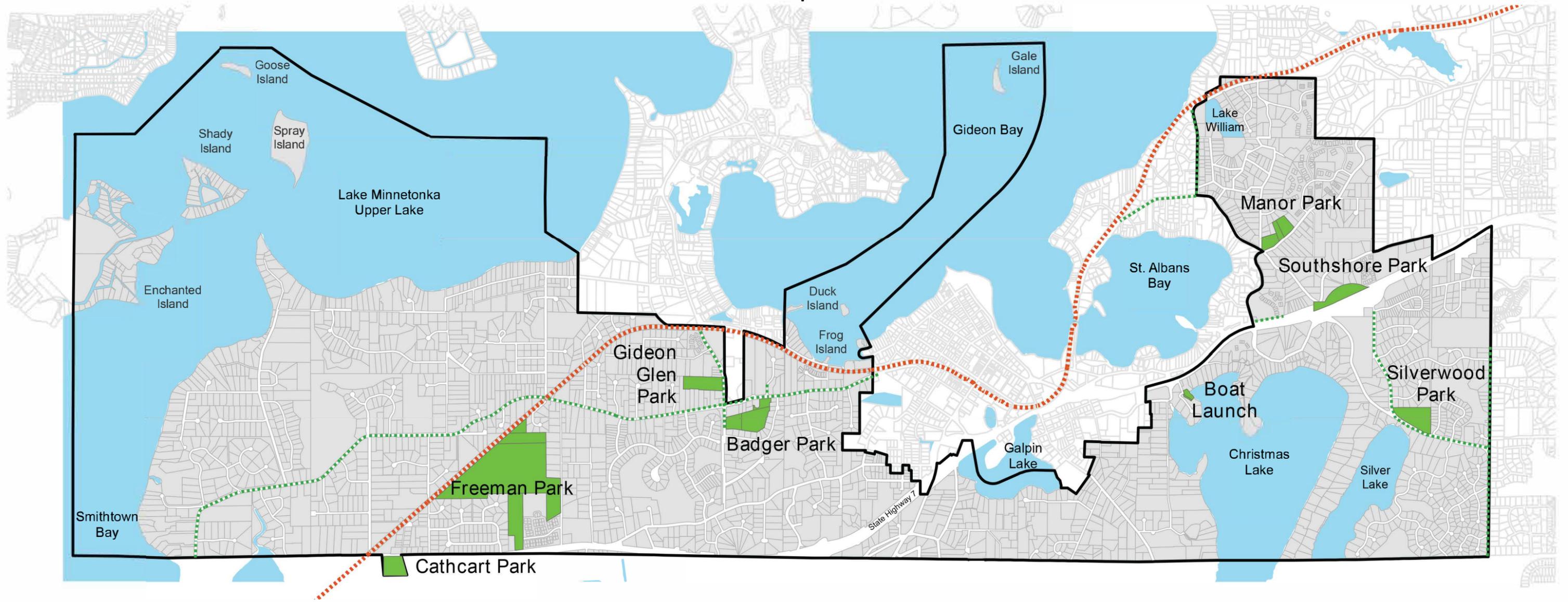
Shorewood is approaching full development. In their preliminary 2017 population estimates, the Metropolitan Council references a City of Shorewood population of 7,708 persons. Of interest is that such estimate exceeds the Metropolitan Council's 2040 population forecast for the City (7,600 persons) as provided in the City's system statement. Given the fact that the City is not expected to see significant additional residential growth and that few vacant land parcels remain in the community, Shorewood is not expected to add new park sites. The City's existing parks are considered adequate in size and location to meet the future needs of the community.

Shorewood residents are generally well-served by the existing park system. With the exception of the islands and a small pocket south of Galpin Lake, most areas of the community are within a one-half to one-mile radius of neighborhood park facilities. As a result, the focus of future park planning will be on developing existing parks, as opposed to acquiring more land, with one possible exception.

The City remains open to considering organization-supported expansion of Freeman Park as well as other existing sites. Also, as land becomes available through tax forfeiture, vacation of public right-of-way, donations and/or other means, it will be examined for possible inclusion in the park system.

# Local Parks and Trail System

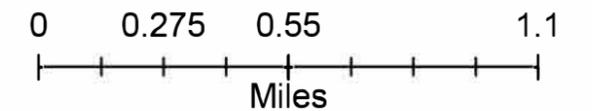
City of Shorewood  
2040 Comprehensive Plan



## Local Park and Trail System

- ..... Local Trail
- ..... Lake Minnetonka LRT Regional Trail
- Parks
- City Boundary

Map created: December 2022  
Data: NAC, MNDNR, Metropolitan Council



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## Existing Park Classifications

A considerable amount of planning has gone into Shorewood's park system as master plans for each of the City's parks have been developed. These master plans considered the classification system for local and regional parks which were previously identified. The following is an overview of Shorewood's existing park classifications:

**Neighborhood Parks.** Four of Shorewood's existing parks; Cathcart, Badger, Manor and Silverwood fall into this category. In addition, facilities at Freeman Park also serve the nearby neighborhoods, as do facilities at Minnewashta School.

**Community Playfields.** The Minnetonka School District has historically been heavily involved in providing playfields for local recreation. Within the City of Shorewood, Minnewashta Elementary School functions in part as a community playfield. Freeman Park is viewed as satisfying the majority of the community's need for playfields, but Badger, Cathcart and Manor Parks also satisfy this need.

**Community Park.** Besides its neighborhood functions, Freeman Park is the only community park in Shorewood's park system. Given the proximity of various regional parks, the need for an additional community park in Shorewood is not anticipated.

**Conservancy Lands.** Shorewood's wetland system, while not suitable for active recreation, is preserved for its aesthetic value, as well as its environmental benefit.

**Special Uses.** Crescent Beach along Lake Minnetonka and the Christmas Lake access on Merry Lane are essentially single-purpose recreational facilities (or special use parks). Crescent Beach is used exclusively for swimming, while the Christmas Lake access is used for fishing and the launching of boats. Both sites provide winter access to the lakes.

South Shore Community Park was previously used as a skate park, but the community found that purpose was no longer needed. A new master plan should be prepared to determine the appropriate role for such park.

Gideon Glen Park also fulfills a function of a special use park as it serves as a natural / environmental interpretive center.

**Linear Park.** While not a City-owned park, the Lake Minnetonka LRT Regional Trail fulfills a linear park function by providing walking / bicycle trail linkages within and outside of the City's municipal boundary.



## Existing Parks and Plan Recommendations

Ten sites constitute the core of the Shorewood's park system. They include the following:

|   |                     |
|---|---------------------|
| Cathcart Park                             | 4.8 acres           |
| Freeman Park                              | 67.8 acres          |
| Badger Park (including City Hall)         | 10.2 acres          |
| Crescent Beach (joint use with Tonka Bay) | .4 acres            |
| Manor Park                                | 4.5 acres           |
| Silverwood Park                           | 8.1 acres           |
| South Shore Community Park                | 3.4 acres           |
| Merry Lane Access                         | .5 acres            |
| Gideon Glen                               | <u>5.8 acres</u>    |
| <b>Total</b>                              | <b>105.5 acres*</b> |

\* Land area devoted to LRT Trail not included in acreage calculation

|                                    |                  |
|------------------------------------|------------------|
| Lake Minnetonka LRT Regional Trail | 2.7 lineal miles |
|------------------------------------|------------------|

In addition to the preceding parks, Minnewashta Elementary School also has a playground. Ten fire lanes, which have been held by the City, provide lake access and limited recreational opportunities to various neighborhoods. The City has also adopted a Trail Plan (as provided in the Transportation Chapter of the Comprehensive Plan). Recently, a trail segment was constructed along Smithtown Road which extends from the City's southern boundary (in the southeast corner of the City) to Country Club Road.

The following is an overview of each of the primary parks and recommendations for future improvements:



**Badger Park (10.2 Acres).** Badger Park is a neighborhood park which functions as part of the “City Campus” and is integral to the community services provided at City Hall and the Shorewood Community and Event Center. The park focuses on organized sports, with limited individual/pick-up opportunities and is currently undergoing renovations.

The park serves both the surrounding neighborhood and the Shorewood Community Center. The park is currently undergoing renovations (as shown below) which are scheduled to be completed in 2019.

*Facilities include:*

- Multi-purpose field for lacrosse, soccer and football
- Playground equipment
- Tennis/pickle ball courts
- Picnic tables
- Open space, mowed and natural wooded area with a short nature trail by a stream
- Permanent restrooms and water-fountain (to be completed by 2019)
- Paved parking shared with Shorewood Community and Event Center and City Hall, short nature trail looping through wooded area on the east edge of the park
- Short paved looped trail (to be completed in 2019)
- Shelter (to be completed in 2019)

*Population served:* Badger Park serves persons of all ages.

*Recommendation for further action:*

- Increase programming within the Shorewood Community and Event Center which takes advantage of the facilities in Badger Park.

# Community Framework - Community Facilities Plan



The Shorewood Community and Event Center



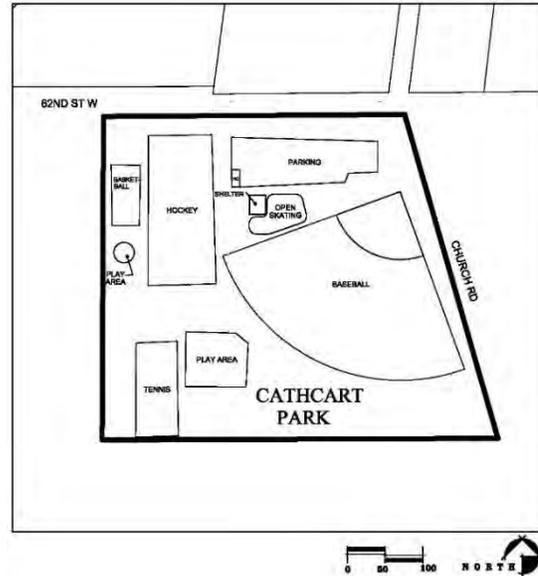
Badger Park Playground (pre-renovation)



**Cathcart Park (4.8 acres).** Cathcart Park is a neighborhood park with a mixture of uses, including organized sports and individual/pick-up opportunities.

*Facilities include:*

- Little League baseball field
- Hockey rink and seasonal warming house
- Family skating rink
- Basketball court
- Playground equipment
- Tennis court
- Picnic tables
- Open space
- Community adopt-a-garden
- Portable restrooms (no running water)
- Paved parking for 38 vehicles



*Population served:*

- Cathcart Park focuses primarily on the activities of youth and young adults, i.e., hockey, Little League and soccer.
- It serves the neighborhood and, through organized sports, a wider range of youth in the community.
- While the park's tennis court offers a recreational opportunity to adults, it is uncertain to what extent the court is used.

*Recommendations for further action:*

- Add pickle ball striping to the tennis court (as a recreational opportunity for seniors).
- Add additional parking.
- Pave the hockey rink for street hockey.

# Community Framework - Community Facilities Plan



**Manor Park (4.5 acres).** Manor is a neighborhood park focusing on informal activities, with limited organized sports opportunities.

*Facilities include:*

- Pond skating rink/warming house
- Playground equipment
- Tennis/pickle ball court
- Picnic tables and shelter
- Open space
- One community adopt-a-garden
- Restrooms/water fountain
- Parking for 23 vehicles
- Softball field/multi-purpose field
- Shirley Rice Memorial Garden
- Sand volleyball court

*Population served:* Manor Park serves persons of all ages.

*Recommendations for further action:*

- Explore installation of horseshoe pits and bocce ball.
- Explore installation of perimeter walking trail.
- Provide needed dredging of the pond.
- Consider amphitheater or another central park feature.



Shirley Rice Memorial Garden



**Silverwood Park (8.1 acres).** Silverwood is a small neighborhood park utilized by young children and their families.

*Facilities include:*

- Playground equipment
- Slide
- Sledding hill
- Free skate on the pond
- Community adopt-a-garden
- Portable restrooms (no running water)
- Picnic shelter, tables and grills
- Practice tennis court
- Half basketball court with practice wall for tennis
- Trail
- Paved parking for 11 vehicles

*Population served:* Silverwood Park can serve all ages but primarily serves families with young children.



Silverwood Park playground and slide



**Freeman Park (67.8 acres).** Freeman Park is Shorewood's principal community park. It measures 68 acres in size and accommodates a wide variety of both active and passive recreational activities. The park's north fields in particular provide an opportunity for a variety of organized sports.

*Facilities include:*

- Softball fields (3)
- Baseball fields (2)
- Babe Ruth baseball field
- Soccer fields (6+ - depending on field layout)
- Volleyball courts (2)
- Multi-use building (Eddy Station) with warming house, restrooms and concessions
- South concessions building
- Portable restrooms
- Free skating rink
- Picnic shelter
- Playground (2)
- Picnic tables
- Trails
- Off-street parking for approximately 390 vehicles
- Community gardens



*Population served:* Reflective of its diverse range of active and passive recreational opportunities, Freeman Park caters to persons of all ages. The park hosts baseball, softball and soccer games which are part of organized leagues, functions as a neighborhood park for the immediate area and provides open space and wooded walking trails for passive park uses. Freeman Park serves approximately 140,000 users on an annual basis. The park is adjacent to the Lake Minnetonka LRT Regional Trail.

*Recommendations for further action:*

- Expand parking facilities near the south end of the park or work with sports organizations to provide off-site parking.
- Provide signage for the connection to the adjacent Lake Minnetonka LRT Regional Trail and directional signage on the trails.
- Replace the south playground and consider equipment options for different age groups.



# Community Framework - Community Facilities Plan

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North Fields



Freeman Park multi-use building



Freeman Park playground



**South Shore Community Park (3.4 acres).** South Shore Community Park is as unique a recreational facility as the process that led to its creation. The park was previously used as a skate park, but due to aging infrastructure and lack of use, the City removed the skate park facilities. Future use of the park will require study by the City Council, Parks Commission and residents.

*Facilities include:*

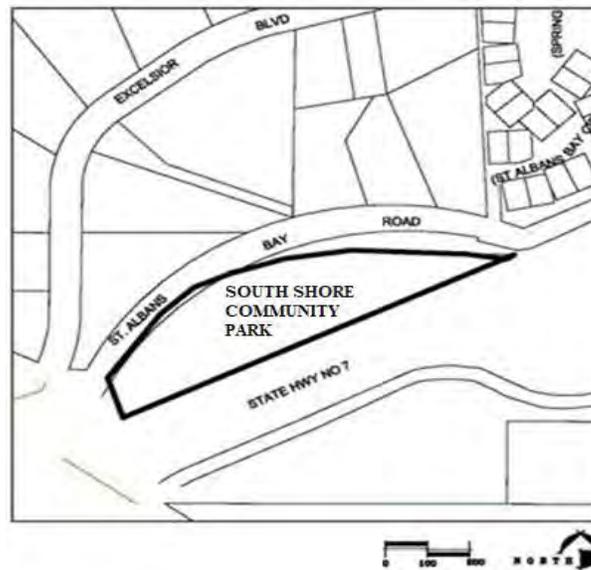
- Open space
- Community Gardens
- Water fountain

*Population Served:*

The South Shore Community Park primarily serves adults.

*Recommendations for further action:*

- Investigate potential future uses and facilities within the park which are compatible with its size and location next to State Highway 7.
- Develop a new park master plan to determine the appropriate role of the park.
- Consider a name change with the new master plan.
- Increase the size of the community gardens.





**Gideon Glen Park (5.8 Acres).** Gideon Glen Park overlays 5.8 acres of land and features native trees, shrubs, grasses and wildflowers and a maple basswood forest, all of which are remnants of the “big woods” that once covered the Lake Minnetonka region of the State. Owned by the City of Shorewood, the park site was restored in 2005 in partnership with the Minnehaha Creek Watershed District (MCWD), Hennepin County, Metropolitan Council and Lake Fellowship of Unitarian-Universalists.

*Facilities include:*

- An approximate 600-foot crushed rock walking trail
- Overlook locations with benches
- Educational opportunities
- Restored wetlands
- A stormwater pond (which captures pollutants)

*Population served:* Gideon Park serves persons of all ages.

*Recommendations for further action:*

- Increase public education and learning opportunities.
- Seek out additional research projects.
- Add more interpretive signage.





Gideon Glen Park Photograph Source: Lake Minnetonka Magazine - April 2015

**Lake Minnetonka LRT Regional Trail (2.7 lineal miles).** In total, the Lake Minnetonka LRT Regional Trail stretches 15 miles between the City of Hopkins and the Carver Park Reserve with 2.7 lineal miles located within the City of Shorewood. More specifically, the trail passes through the communities of Shorewood, Minnetonka, Deephaven, Greenwood, Excelsior, and Victoria. The aggregate trail offers scenic views and a convenient transportation route for pedestrians and bicyclists.

The trail is managed by the Three Rivers Park District.

*Recommendations for further action:*

- Investigate means with the Three Rivers Park District to improve the upkeep of lands which flank the Lake Minnetonka LRT Regional Trail (within the trail trial right-of-way) and recommend removal of invasive species.
- Encourage adjacent communities to provide winter trail maintenance.
- Encourage the Three Rivers Park District to consider paving the trail with public input from the citizenry of the affected cities.



## **General Recommendation**

The City should continue to work with adjacent communities and the School District to maintain a clear understanding of the total recreational needs of the area. The South Shore area has a highly cooperative recreational and transportation system that will continue to require constant coordination (playfields, parks, and trails). The Park Commission and City Council should continue to monitor the needs of area residents in implementing the City's park and recreation plan. The City will also need to continue responding to the strong local interest for the expansion of the Shorewood trail system.

The City should also study whether additional parks are needed or desired on Shady or Enchanted Islands.



## SOLID WASTE

As mentioned in the Transportation Chapter, garbage trucks have been identified as inflicting more damage to City streets than any other type of vehicle. In response to this issue, the City is examining the current solid waste collection system and considering options to improve collection.

The City presently licenses refuse haulers and limits pickup activities to one specified day of the week, thus eliminating the presence of curbside refuse on the remaining days. The City has a contract with a single hauler to pick up recycling City-wide. In the future, the City should explore organized hauling to further reduce the number of trash collection vehicles on City streets and in neighborhoods.

## NATURAL GAS, ELECTRICAL SERVICE, CABLE TELEVISION AND STREET LIGHTING PLANS

All areas of the community are currently serviced by natural gas, electricity and cable television service, or have such services available. As such, provision of these services will not influence development in Shorewood. The thrust of these efforts should be concentrated toward the elimination of overhead wiring. The City requires the underground placement of all utilities where practical. In previously developed areas, plans for placement of underground utilities should be incorporated with future roadway improvements. The City may also want to initiate a more aggressive program for systematically eliminating overhead wiring within the next 10 to 15 years.

Residents appear to be split on the issue of street lighting. Consequently, no comprehensive program of installing street lights is suggested. The City has adopted the following policies in response to neighborhood demands for street lighting:

1. Location. The City recognizes that street lighting in certain locations is necessary to promote safe travel for vehicular and pedestrian traffic. However, it is not the intent of the City to install street lights for the purpose of deterring criminal activity. Based on this the City will consider the authorization of placing street lights on City streets only at: 1) intersections; 2) the ends of cul-de-sacs; 3) sharp turns; and 4) steep grades.
2. Requests for Street Lighting. While requests will be considered from any resident, it is recommended that a petition of neighboring residents be submitted with the request.
3. Cost of Street Lighting. The City agrees to pay the cost of monthly electric service for an authorized street light. It will not pay for the installation of the light or for extending power to the proposed location of the light, or for any light other than a standard street light.



## CHAPTER SUMMARY

Community facilities and services include lands, buildings, services and systems which are provided on a public or semipublic basis. The City's goals in this regard are as follows:

- The City shall provide those basic facilities and services which ensure the health, safety and general welfare of the public, the cost of which facilities and services are most efficiently shared by the general public.
- The efforts of varying government agencies shall be coordinated to avoid duplication of efforts, unnecessary expense and improper location of public facilities.
- Maintain a sound financial planning program for capital improvements, relating such improvements to actual need, proper location and timing.

The following is a summary of recommendations intended to achieve the preceding goals.

### Parks and Recreational Open Space

1. Shorewood's park and recreational open space system shall be classified in accordance with standards established by the Metropolitan Council.
2. Funding for park maintenance and necessary improvements (as determined by the City) shall be considered a community priority.
3. The allocation of funds for park improvements for specific facilities will be made on the basis of balancing overall community park needs of Shorewood residents with the specific needs of each facility.
4. The community shall provide for an appropriate balance among active, passive, and cultural recreational areas and activities, tailored to the needs of the total population.
5. Recreational facilities and a year-round program of activities suited to the varied recreational needs of all age groups within the community shall be provided.
6. Parks and recreational facilities shall be distributed throughout the community, based upon neighborhood needs and characteristics of each planning and development district.
7. Sufficient park land to fulfill the needs of the present and projected future population of the community shall be acquired and reserved. Park development shall be undertaken as residential development demands and as funds are available.



8. Recreational open space improvements shall be programmed in accordance with a capital improvement program, updated on an annual basis.
9. Parks shall be designed and maintained with proper lighting, landscaping, shelter design, etc., to ensure a high degree of public safety and protection of public property.
10. Where necessary, parks shall be screened, fenced and/or buffered for the safety and protection of the user as well as adjacent property owners.
11. Parks shall be improved and developed to take maximum advantage of natural features of Shorewood.
12. Safe and convenient pedestrian, bicycle and vehicular access and adequate parking to serve recreational facilities shall be provided.
13. The use of motorized recreational vehicles shall be limited to designated areas.
14. Park and open space facilities and programming shall be planned and developed in cooperation and coordinated with similar services of surrounding communities, the school district, private organizations and the metropolitan area as a whole.
15. Studies on a periodic basis shall be undertaken to analyze the effectiveness and comprehensiveness of the community recreation program. These studies should serve as the basis for recreation open space planning and programming.
16. Continual citizen participation in the planning, development and operation of recreational open space shall be maintained.
17. The City shall employ a pro-active approach to park development.
18. When opportunities arise, Shorewood shall consider the acquisition of parcels adjacent to the City's existing public beach (Crescent Beach) and conversion of such parcels to park land.
19. The City shall investigate means with the Three Rivers Park District to improve the upkeep of lands which flank the Lake Minnetonka LRT Regional Trail (within the trail right-of-way).



## Lakeshore Use

1. Lake Minnetonka shall be considered a community recreational facility and appropriate actions shall be taken to permit utilization of the lake by all City residents.
2. Regulations shall be enforced to ensure accessibility to area lakes while at the same time minimizing any potential impact on surrounding uses and adjacent property owners.
3. In order to protect and preserve the amenity provided by area lakes, the City shall encourage uniform land use regulation and enforcement of lakeshore use.

## Governmental Buildings and Facilities

1. Cooperation and coordination shall be promoted and actively pursued between governmental units in the provision of public facilities and services.
2. The full utilization of investments in public facilities and services shall be achieved prior to making new public investments.
3. Public facilities and services shall be located to the greatest extent possible so as to offer ease of access and minimal response time.
4. All public facilities shall be developed, improved and maintained according to the highest adopted standards of design and performance to serve as examples for private development.
5. All public buildings shall be designed and maintained to be safe, secure and resistant to vandalism while maximizing public and city usability.
6. Those areas, places, buildings, structures and other objects such as Indian mounds having significant architectural, historical, community or aesthetic interests and values shall be restored and preserved, as defined under the Minnesota Historic Sites Act of 1965, as may be amended.
7. Adequate screening, landscaping, and buffering of facilities shall be accomplished in order to minimize their impact on surrounding uses and enhance the community and areas in which they are located.
8. As part of future community facility improvement efforts, consideration shall be given to the creation or establishment of a visible and identifiable physical feature which distinguishes the City of Shorewood from the Cities of Excelsior and Tonka Bay.



9. The City shall examine alternatives and develop a plan for the future use of the Shorewood Community and Event Center which compliments the adjacent park use.
10. The City of Shorewood shall seek and implement creative ideas for its public spaces which pay homage to the community's history and identity.
11. The City shall strive to make efficient use of its various municipal buildings by evaluating, on a periodic basis, the space needs of various City functions (to ensure adequacy).

## Public and Semi-Public Utilities

1. City public utilities will be reviewed with the Capital Improvement Program each year.
2. Demand for urban services shall be anticipated, with emphasis to conserving existing facilities, in order to facilitate orderly, fiscally responsible extension of service systems.
3. Easements for utility systems shall be located according to uniform standards, providing for ease of access for maintenance and repair and minimal disruption of other activities or areas.
4. All utility systems and possible utility and service needs shall be periodically monitored and all existing systems shall be maintained to assure a safe and high-quality standard of service on an ongoing basis.
5. The impact of required utility facilities and services shall be minimized upon surrounding uses.
6. Underground installation of all new utility services shall be required and when economically feasible, existing overhead systems shall be converted to underground.
7. Coordination among all utility improvement programs shall be constantly pursued.
8. Telecommunication facilities shall utilize existing tower structures where feasible.
9. Benefiting property owners shall assume the burden of improvements made by the City in their behalf.
10. When opportunities present themselves, the City will consider the burying of existing and new power lines to reduce the frequency of power loss during storm events.



## Energy

1. Encourage use of alternative energy forms in new construction.
2. Continue to disseminate information on governmental energy conservation programs and helpful ideas on personal energy conservation methods.
3. Where practical, promote overall energy conservation in the community development process.
4. The City of Shorewood will, by example, attempt to become a more energy efficient community via future investment in such systems.
5. Create a program to encourage installation of alternative energy systems (solar and geothermal) and clarify procedures.

## Solid Waste

1. The City of Shorewood shall continue to evaluate its solid waste collection system and consider options to improve collection services.
2. The City shall explore organized solid waste hauling to further reduce the number of collection vehicles on City streets and neighborhoods.

## Collaboration

1. To the extent possible, the City of Shorewood shall collaborate with nearby lake communities in regard to the handling of shared services.