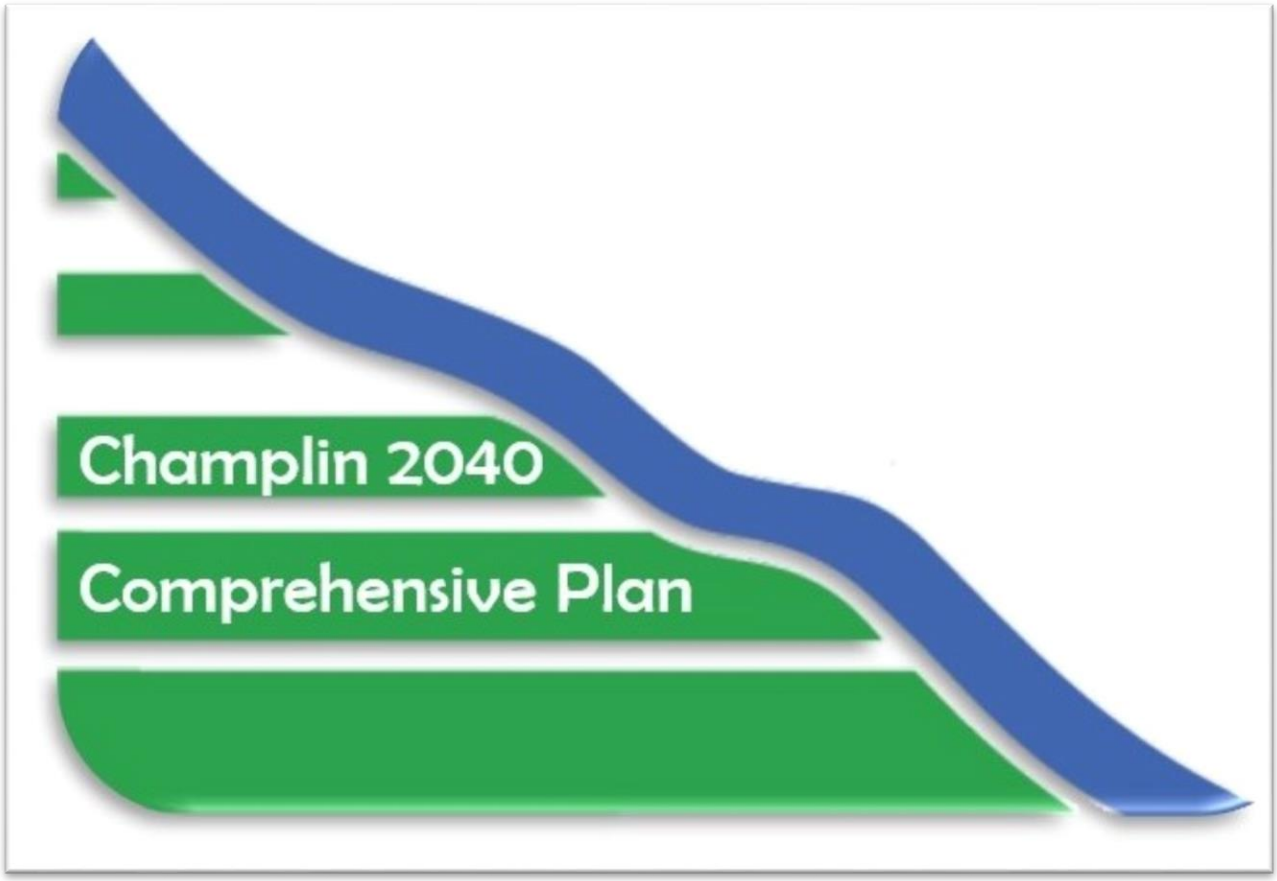
Champlin 2040
Comprehensive Plan

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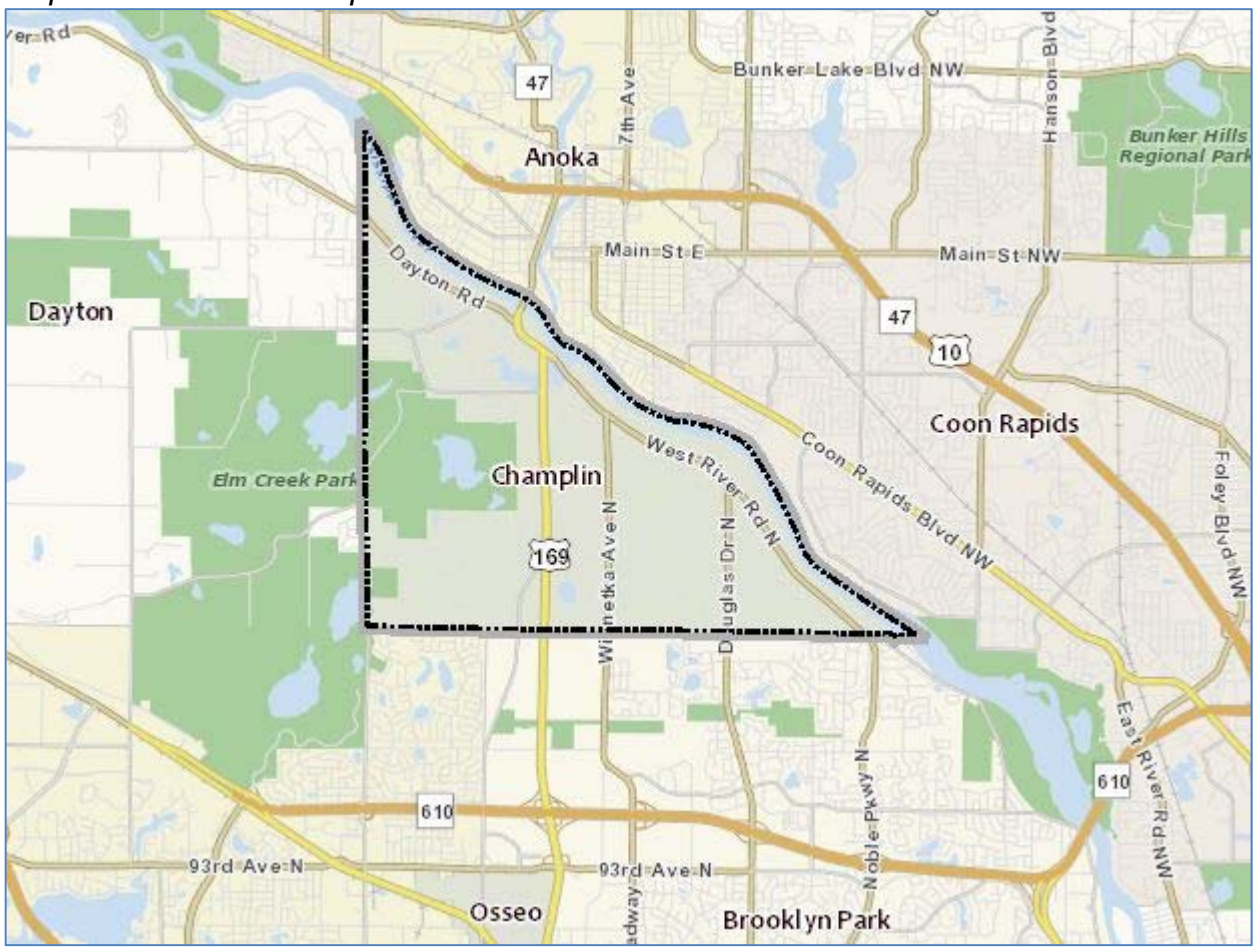
1.1 COMMUNITY OVERVIEW

The City of Champlin is located in the northern section of Hennepin County (See Map 1). Champlin, containing approximately nine square miles with an estimated 2016 population of 23,343, is considered a third ring metropolitan suburb about 20 miles from the Minneapolis Central Business District. Champlin is bordered to the north by Anoka, to the west by Dayton, to the south by Maple Grove and Brooklyn Park and to the east by Coon Rapids. The City is located entirely within the Metropolitan Urban Services Area (MUSA).

Champlin is a community dominated by detached single family residential neighborhoods. Champlin is known as a suburban "bedroom community" as many residents find employment outside of the community. Champlin's residents appreciate the benefits of suburban living with a "small-town" atmosphere, as well as the convenience of its proximity to the more urbanized areas of the metropolitan area. Champlin also contains the Elm Creek Park Reserve and the Mississippi River, which provide important ecological and recreational benefits for the community and the region.

Map 1.1: Location Map



1.2 DEFINING THE COMPREHENSIVE PLAN

The Comprehensive Plan is the document that sets the context for future growth and development in Champlin. Required by state statutes that specify its overall content and structure, the Comprehensive Plan consists of a series of interrelated chapters, or elements, analyzing the community's future land use, transportation, parks and recreation, and other infrastructure and environmental issues, needs, challenges, and opportunities. The Comprehensive Plan is important because it sets the overall policy context for future growth and development within Champlin.

The Comprehensive Plan will address growth pressures in the city, future public facilities and service needs, preservation of community character and natural resources, urban design and architectural standards, the fiscal impacts and responsibilities of new development, and other important issues affecting the quality of life and character of the city. This update of the Comprehensive Plan looks to the year 2040. Considering a future over 20 years away forces the community to broadly consider issues and opportunities facing Champlin.

1.3 WHY UPDATE THE PLAN?

The Minnesota Land Planning Act (circa 1976) made comprehensive planning mandatory for local communities in the Metropolitan Area. Under this law, all cities in the seven-county metropolitan area update their comprehensive plans a minimum of every ten years. The update cycle is tied to updates in regional plans by the Metropolitan Council.

In May 2014, the Metropolitan Council adopted **Thrive 2040**, which is a regionally based long range policy plan for regional systems, including transit, highways, and airports; wastewater services; housing; and parks and open space. Following release of Thrive 2040, the Metropolitan Council provided system statements for all local governments. Champlin received it's System Statements in October 2015. System statements explain the implications of metropolitan system plans for each individual community in the metropolitan area. They are intended to help communities prepare or update their comprehensive plan, as required by the Metropolitan Land Planning Act.

Local comprehensive plans will be reviewed by the Council for conformance to metropolitan system plans, consistency with Council policies, and compatibility with adjacent and affected governmental units. Even without this statutory mandate, it is important for Champlin to periodically review and update its plans for the future. Over the next 20 years, it is likely that Champlin will become fully developed. The Comprehensive Plan will guide what happens on these critical

last pieces of land. As Champlin matures, more attention will be needed on maintaining existing development and encouraging revitalization.

1.4 HISTORY OF THE PLAN

In 1971, the City of Champlin was created as a result of consolidating the Village of Champlin and the Township of Champlin. Prior to consolidation, the two entities were independent, each with its own laws, codes and ordinances. Upon consolidation, the City commissioned numerous studies assisting with the coordination and management of the new City's public works systems.

In 1981, the City of Champlin prepared and adopted its first Comprehensive Plan. The Plan, divided into three sections Land Use, Public Facilities and Implementation, provided a guide to manage future growth. That first plan provided an overall vision of the future based on existing uses, values and trends projected toward common goals, achievable through a variety of prescribed programs, laws and fiscal strategies.

Over the years, as the community's goals, vision and needs have changed, so has the Plan. Most of these changes have been incremental. In 1996, however, after considerable community discussion, the Plan was rewritten. The new plan, prepared in response to growing market pressures, covered a range of issues including land use, transportation, surface water management, public water supply, sanitary sewer system, natural resources, parks and recreation, community facilities, community services and housing. Also, the plan provided a growth management strategy for the orderly expansion of public utilities. The plan guided development through 2015.

In 1996, the Metropolitan Land Planning Act was amended to require local municipalities to review their Comprehensive Plans ensuring their consistency with regional growth strategies as identified in the Metropolitan Council's Regional Blueprint and forecast growth to the year 2020. Therefore, in 2002, the Comprehensive Plan was updated and forecasts were made to 2020.

In 2008, the Comprehensive Plan was again updated, this time extending forecasts to 2030. The plan responded to the Metropolitan Council's 2030 Regional Development Framework and specific Systems Statements as provided. The plan and subsequent addendums has effectively guided the City's growth and policy initiatives for the past ten years.

1.5 VISION & GUIDING PRINCIPLES

Successful long-range planning can occur only if a community has a vision of what it aspires to be. The vision reflects a consensus and shared belief that, through responsible management and balanced planning, the City can preserve

its natural resources and environment while encouraging and permitting diversified residential and non-residential development. A Comprehensive Plan vision statement differs from organizational mission statements and strategic plans in that it focuses on future development.

Below are subjects that are usually discussed in community vision statements:

- The common values of a community
- The qualities or resources that make a city unique or describe its identity
- The preferred future for each subject area of the city such as development, infrastructure, transportation system, natural environment, parks and open space

Over a series of City Council visioning work-sessions and taking input received via an on-line resident survey and a statistically valid resident phone survey the City Council developed a vision statement for the 2040 Comprehensive Plan. The vision statement uses terminology consistent with an overall community "branding" effort conducted in 2017.

2040 Vision Statement

Champlin will be a community where people live, work and play in a safe and attractive environment. We will celebrate our unique position as a small town that values and protects natural resources while fostering high-quality sustainable development, improving our transportation and utility infrastructure, and providing quality housing choices and recreational opportunities.

Guiding Principles

Guiding principles reflect the expressed values and desires of Champlin and will be used to guide the development of the Comprehensive Plan. They are the framework for achieving the community vision. Guiding principles are structured by topic; however in many cases the principles are interrelated. The recommended guiding principles are listed below.

Plan for Growth

- Guide development and redevelopment to ensure community vitality, livability and sustainability
- Growth should be sensitive to the natural resources and the availability of parks and open spaces
- Balance residential, commercial and industrial land uses that maintain a connection to the existing development pattern
- Establish development standards consistent with community desires

Encourage a Diversity of Housing Options

- Identify areas where housing growth will occur
- Educate ourselves and remain responsive to changing housing market demands
- Meet regional responsibilities for affordable housing

Protect and Enhance Open Space and the Natural Environment

- Promote the use of "green" technology and sustainable development
- Protect and improve our water resources and woodlands
- Facilitate open space preservation
- Respect the natural environment while managing growth
- Explore opportunities to connect with the Mississippi River and the Champlin Mill Pond

Provide for Parks and Recreation Opportunities

- Provide a variety of recreational opportunities for both children and adults
- Explore ways to build upon the existing park and trail system
- Provide resources to maintain and improve existing park facilities

Plan for an Effective Transportation System

- Improve resident and business mobility
- Consider the mobility needs of all persons in the planning of the transportation system
- Meet local and regional transportation needs through leadership and collaboration
- Expand and increase development of pedestrian trails and sidewalks
- Implement strategies that increase neighborhood connection and promote walkability

Throughout the Comprehensive Plan, the vision and guiding principles are translated into more specific policies and specific measures. The vision is the common thread interconnecting elements into one consistent Plan for the City's development through the year 2040.

2.1 BACKGROUND

Champlin is a third-ring Twin Cities metropolitan area suburb with an estimated 2016 population of 23,343. The City is located entirely within the Metropolitan Urban Services Area (MUSA), which means the City is served with regional sanitary sewer service.

From 1990 to 2000, Champlin experienced significant increases in population, household and employment growth. The growth rate, however, has slowed in recent years due to the limited supply of developable residential land. While it is expected that Champlin will add around 800 housing units in the 2020 to 2040 planning period, the population will not rise in proportion due to an aging of the population and a subsequent decline in the average household size. Table 1.1 represents population, household and employment information for the City of Champlin. Data from 1980 through 2010 is taken from the Census, 2016 is from City data and 2030 through 2040 are estimates provided from Metropolitan Council staff as consulted by City staff.

Table 1.1 - City Champlin Community Forecasts

	1990	2000	2010	2016	2020	2030	2040
Population	16,849	22,193	23,089	23,343	24,400	25,600	25,400
Households	5,423	7,425	8,328	8,442	8,700	9,400	9,400
People per Household	3.11	2.99	2.91	2.76	2.77	2.72	2.70
Employment	1,110	2,734	4,012	4,116	4,400	4,600	4,800

2.2 LAND USE INTRODUCTION

The Land Use chapter provides direction and policies to maintain sound development and to achieve desired change in Champlin through the year 2040. The Land Use Plan influences the future physical character of the City to enhance existing positive aspects, produce future characteristics compatible with sound existing conditions, and enrich the overall quality of the community. Land use therefore is the key element of the Comprehensive Plan. The emphasis and attention to this aspect of community development cannot be overstated. In some instances, the lack of coherent land use policies has resulted in problems relative to Incompatibility of activities and uses.

While Champlin is nearly 95 percent developed, careful land use planning remains important. Since ways of living and doing business change over time, the City must be prepared to react to those trends. In keeping with the Community Vision Statement, the Land Use Plan should accomplish the following:

- Guide development and redevelopment to ensure community vitality, livability and sustainability
- Growth should be sensitive to the natural resources and the availability of parks and open spaces
- Balance residential, commercial and industrial land uses that maintain a connection to the existing development pattern
- Establish development standards consistent with community desires

The Land Use chapter includes four sections:

1. Existing Land Use: This section examines Champlin's current distribution of land use and residential densities.

2. Future Land Use: This section describes direction for future land use to accommodate growth and maintain balanced neighborhoods.

3. Special Resource Protection. This section addresses the City's natural and cultural resources, including historic preservation, renewable energy, Mississippi River Critical Area and the Elm Creek.

4. Land Use Policies and Implementation: This section explains how the City intends to accomplish its objectives.

2.3 EXISTING LAND USE

The current land use patterns in Champlin are described through a series of land use categories. These categories were established during prior planning efforts in the City of Champlin.

Low Density Residential: This is a residential land use intended to provide land for single- and two-family residences. This is the most prevalent pattern of land use in the community and is dominated by single family detached housing. Densities within the low-density category generally range from a low of 1.5 units per gross acre up to 3.3 units per gross acre with the overall development pattern generally averaging about 2.5 units per gross acre. Permitted densities are up to five units per gross acre. The commensurate zoning districts are Single Family Residential (R-1), Two-Family Residential (R-2) and Low-Density Multi-Family Residential (R-3). Single family and two-family dwellings are permitted in this land use category.

Medium Density Residential: This land use is intended to create areas for low-density multi-family residences; to preserve and enhance transitional residential areas between lower and higher densities and to enhance transitional areas between low density and other non-residential land uses. More medium density developments have occurred recently with the increased demand in townhome and condominium styles of living. Densities within these developments typically range between six to eight units per gross acre. Permitted densities are between five and twelve units per gross acre. The commensurate zoning district is Medium Density Residential (R-4). This land use supports duplexes, townhomes, condominiums and small apartment buildings.

High Density Residential: This residential land use is intended to create, preserve and enhance areas for multi-family use of higher densities for both permanent and transient families in close proximity to major transportation and transit corridors, public community centers, shopping centers and employment centers. This pattern is reflected by older apartment developments in the Mississippi Crossings Area but also in newer developments such as the Mill Pond Gables and Champlin Shores senior housing facilities on Elm Creek and the Champlin Drive Apartments on Champlin Drive. Average densities within the High-Density category are 15 units per gross acre. Permitted densities are twelve to eighteen units per gross acre. Densities greater than 18 units per acre have been accepted by the community under a

Planned Unit Development overlay zoning, typically used for senior-oriented housing. The commensurate zoning district is High Density Residential (R-5). This land use supports apartments and large townhome or condominiums.

Commercial: The commercial land use provides for businesses, professional services, and retailers to meet the needs of residents in Champlin. Prior to 2000, most commercial development consisted of single use buildings with a sole retail business or professional service. More recent development is multi-tenant retail that has diversified the quantity and quality of retail and professional services. A majority of the commercial development has occurred along the Trunk Highway 169 corridor, clearly to take advantage of the benefits of a highly trafficked major highway. Other commercial areas are more oriented to neighborhood service delivery and are found near collector road intersections. This land use is supported by various Commercial zoning districts. Floor area ratios (FAR's) for commercial land uses are estimated at 0.4.

Office: This land use is intended to create areas for office development to provide employment opportunities in locations providing unique amenities benefiting office settings. The Commercial Office District (C-1) is most appropriate for this land use. C-1 commercial-office business district is intended for the location and development of office buildings, hotels, hospitals, clinics and public buildings. These uses shall be considered principal uses and must occupy at least 40 percent of the building square footage of the zoning district area. Related uses which are subject to more restrictive controls and for uses providing goods and services which are primarily for the use of persons employed in the district shall be considered accessory uses and shall not be permitted unless 40 percent of district area square footage is occupied by a principal use. FAR's for Office land uses are estimated at 2.5.

Industrial: This land use is intended to create areas for warehousing with office uses to provide employment opportunities and business complexes in locations accessible to high-level infrastructure. Developments along the Trunk Highway 169 Corridor near 109th Avenue highlight this land use type. Industrial land use is represented by the Industrial zoning district (I-1). Most Industrial uses have a distribution component and, as such, FAR's are estimated at 0.2.

Mixed Use: This land use is intended to permit a mix of residential, commercial and office uses in one building. The mix of uses (by acreage) is expected to be 30 percent commercial, 20 percent office and 50 percent residential. Residential densities shall have minimum densities of 40 units per gross acre with maximum densities at 50 units per acre. Higher densities may be permitted under a Planned Unit Development.

The overall design of mixed-use development areas incorporate density and promote activity. Mixed use areas can become the city's gathering space and the design may incorporate public spaces. By providing walkable mixed-use areas, stress on the transportation system is reduced. Mixed use areas can also provide a "sense of place" by creating active and vibrant developments with opportunities for interaction through successful design and site layout.

Parks/Schools/Public Open Space: This category covers all public uses. It is intended to create areas for public recreation, public education, government services and open space. The Elm Creek Park Reserve makes up a large portion of this land use

category in Champlin as over 800 acres is within corporate limits. The Open Space (OS) zoning district closely matches this land use for permanent open space areas.

Open water: Any public waters of the state as defined by Minn. Stat. 103G.005, Subd.15 (the state's county-by-county inventory of lakes, rivers and other public waterways in the public domain).

Major Right-of-Way: Right-of-way provided for Trunk Highway 169.

The following table outlines existing land uses found in Champlin broken down by acres that are developed and vacant acres that are undeveloped or that could be further developed. The existing Land Use Map is attached as Exhibit 2-2.

Table 2.1 - Existing Land Use

LAND USE CATEGORY	DEVELOPED ACRES	VACANT ACRES	TOTAL / PERCENT OF TOTAL
Low Density Residential	2,985	95	3,080 / 56.6%
Medium Density Residential	208	8	216 / 4.0%
High Density Residential	53	4	57 / 1.0%
Commercial	138	26	164 / 3.0%
Office	5	10	15 / 0.3%
Industrial	92	0	92 / 1.7%
Mixed Use	0	0	0 / 0.0%
RESTRICTED LANDS	ACRES		
Parks, Schools, Open Space	1,308		1,308 / 24.0%
Major Road Right-of-way	90		90 / 1.7%
Open Water / Wetlands	420		420 / 7.7%
TOTAL LAND AREA	**5,442**		**5,442 / 100 %**

Detached single family neighborhoods comprise over half of Champlin's land area. Attached and multi-family residential areas, located at the periphery of single-family neighborhoods along major streets, make up another 4.7 percent.

Commercial, office and industrial uses comprise six percent of the City's land area, with the largest concentrations along the Trunk Highway 169 corridor. Neighborhood scale commercial nodes are well dispersed and are typically found near arterial road intersections.

The remaining acreage (nearly 35 percent), set aside for parks, schools and public open space, major road right-of-way and public water, can be thought of as "restricted" in terms of development potential. However, they are important in providing community services and amenities. The Land Use map is attached as Exhibit 2-2.

2.4 FUTURE LAND USE

The future land use plan identifies the location and intensity of future development within the City and establishes a framework in which future development will occur. In creating this plan, the City is looking to the future, trying to guide the change that will inevitably occur rather than allowing the community to be affected by change without a plan. The Land Use Plan Map can be amended through a publicly advertised process either on its own initiative or in response to landowner application. The Land Use Plan map guides the use of property, while the City's Zoning Map and Zoning Ordinance outline specific use provisions and bulk regulations. Where inconsistency between land use and zoning exist, it is the Land Use that supersedes.

The future land use categories are consistent with existing land use categories.

Low Density Residential: This is a residential land use intended to provide land for single- and two-family residences. This is the most prevalent pattern of land use in the community and is dominated by single family detached housing. Densities within the low-density category generally range from a low of 2.0 units per gross acre up to 3.5 units per gross acre with the overall development pattern generally averaging about 2.5 units per gross acre. Permitted densities are up to five units per gross acre. The commensurate zoning districts are Single Family Residential (R-1), Two-Family Residential (R-2) and Low-Density Multi-Family Residential (R-3). Single family and two-family dwellings are permitted in this land use category.

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The overall design of mixed-use development areas incorporate density and promote activity. Mixed use areas can be the city's gathering space and the design may incorporate public spaces. By providing walkable mixed-use areas, stress on the transportation system is reduced. Mixed use areas can also provide a "sense of place" by creating active and vibrant developments with opportunities for interaction through successful design and site layout.

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Open water/wetlands: Any public waters of the state as defined by Minn. Stat. 103G.005, Subd.15 (the state's county-by-county inventory of lakes, rivers, wetlands and other public waterways in the public domain).

Major Right-of-Way: Right-of-way provided for Trunk Highway 169.

Per the Metropolitan Council's Thrive 2040 Regional Development Framework, Champlin is designated as a "Suburban" community (see Exhibit 2-1). "Suburban" communities experienced continued growth and expansion during the 1980s and early 1990s, and typically have automobile-oriented development patterns at significantly lower densities than in previous eras. Suburban communities 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.

Since receipt of the Metropolitan Council System Statements (September 2015), the City experienced new residential growth of 381 housing units on 34.6 acres or 11.1 units/acre. Much of the new growth provided medium and high-density residential housing choices. By 2040, the City is expected to grow to 9,600 households or 700 more housing units.

Overall, the future land use plan does not differ significantly in terms of land use changes. The following narratives describe key changes in the land use plan since 2008 and elements that comprise the future land use plan and development potentials.

Emery Village

Emery Village, a 144-unit condominium development located in the northwest corner of the Trunk Highway 169/117th Avenue intersection, contained a seven-acre parcel guided for high-density residential development. In 2015, the land use was amended in support of medium density residential townhomes consistent with adjacent land use.

Elm Creek Commons

Elm Creek Commons is a 39-acre commercial/retail planned unit development located west of Trunk Highway 169 between Elm Creek Parkway and 117th Avenue North. Land use for a five-acre site in the development was amended from Commercial to High Density Residential supporting a 185-unit affordable senior housing apartment development.

Northwest Area

In the northwest area of the city, 80 acres of vacant un-platted residential land is available for residential development. The area, served with public utilities and other infrastructure, is guided Low Density Residential; though the adopted Northwest Area Plan indicated that the City may support up to 60 medium density housing units or approximately 10 acres of medium density land use.

The Northwest Area Plan has guided quality development in the Northwest Area and, thus, has served its purpose. In keeping consistent with surrounding land use and

development patterns of the last ten years, the Northwest Area Plan shall be removed from the Comprehensive Plan and thus eliminating 10 acres for future medium density land use in the northwest area.

Mississippi Crossings Redevelopment Area

In 2013, the City approved an addendum to the 2030 Comprehensive Plan for 70 acres in the area adjacent to the Mississippi River and Anoka-Champlin Bridge, known as Mississippi Crossings. The Mississippi Crossings Framework Plan replaced the 3.5-acre Gateway Plan and is highlighted by a mix of uses including 299 multi-family apartments, 107,750 square feet of retail/office and a restaurant/event center. The project also includes a centralized key open space (Village Green) and ancillary open spaces.

In 2017, five acres adjacent to the Mississippi River and just south of the Anoka-Champlin Bridge were amended from Mixed Use and Medium Density Residential to High Density Residential in support of an 85-unit senior cooperative development (Applewood Pointe in Mississippi Crossings). With the project, the City identified the need to review the remaining acreage in Mississippi Crossings south of Applewood Pointe and north of Mississippi Pointe Park. This 16-acre area is envisioned for a mix of uses including high density residential (50 percent), retail/office (20 percent), restaurant (10 percent) and park (20 percent). The precise location of these future uses is not yet determined. The future land use map shall identify 16 acres in Mississippi Crossings as Mixed Use.

Seven Acre Parcel – Northwest Corner of 117th Avenue/Highway 169 Intersection

This parcel is part of the Emery Village planned development. The site is currently guided entirely for Office Use. The northerly four acres is appropriate for High Density Residential Land Use, subject to an approved site development.

Future Residential Land Use Development Summary

The City projects it will reach full development in 2040 and will have approximately 9,400 housing units. This requires an additional 700 housing units over the next 20 years. It is expected that nearly one-third of the housing units that comprise the projected growth will occur on undeveloped low density residential sites mostly located in the Northwest Planning Area, while the remaining growth will occur via scattered in-fill sites located throughout the community, a three-acre high density site (second phase of Mill Pond Gables) and redevelopment areas, specifically Mississippi Crossings (see Table 2.4). The Future Land Use Map is attached as Exhibit 2-3. It includes three modifications from the existing land use plan: 1) the Northwest Planning Area will no longer be afforded ten acres of medium density land use and thus, the area will maintain a low density residential designation; and 2) 16 acres in the Mississippi Crossings area will be guided Mixed Use in support of the City's redevelopment efforts and 3) four acres of the property located in the Northwest corner of the 117th Avenue/Highway 169 intersection will be guided from Office to High Density Residential.

The city anticipates that the medium density residential, high density residential and mixed-use areas will all development in the 2020 through 2030 time frame. The anticipated timing of scattered infill development of single-family areas is not known, but will occur prior to 2040. The City expects to be fully developed in 2040.

Table 2.3 – Future Land Use Summary

LAND USE CATEGORY	2020 (Existing)	PERCENT OF TOTAL	2021-2030	PERCENT OF TOTAL	2031 - 2040	PERCENT OF TOTAL
Low Density Residential	3,080	56.6%	3,070	56.6%	3,070	56.6%
Medium Density Residential	216	3.7%	210	3.7%	210	3.7%
High Density Residential	57	1.0%	61	1.0%	61	1.0%
Commercial	164	3.0%	164	3.0%	164	3.0%
Office	15	0.3%	11	0.3%	11	0.3%
Industrial	92	1.7%	92	1.7%	92	1.7%
Mixed Use	0	0.3%	16	0.3%	16	0.3%
RESTRICTED LANDS						
Parks, Schools, Open Space	1,308	24.0%	1,308	24.0%	1,308	24.0%
Major Road Right-of-way	90	1.7%	90	1.7%	90	1.7%
Open Water / Wetlands	420	7.7%	420	7.7%	420	7.7%
TOTAL LAND AREA	**5,442**	**100%**	**5,442**	**100%**	**5,442**	**100%**

Table 2.4 – Future Residential Land Use Development Capacity

LAND USE TYPE	MINIMUM DEVELOPMENT INTENSITY	2021 - 2030 ACRES/ UNITS	2031 - 2040 ACRES/ UNITS	TOTAL ACRES/ UNITS
Low Density Residential (1)	2.0 units/acre	95 / 190	0 / 0	95 / 190
Medium Density Residential (2)	5 units/acre	8 / 20	0 / 0	8 / 40
High Density Residential (3)(4)	12 units/acre	8 / 96	0 / 0	8 / 96
Mixed Use (5)	40 units/acre	8 / 320	0 / 0	8 / 320
In-Fill of Existing Larger Lot Low Density Residential Sites		10 / 25	10 / 25	20 / 50
TOTAL				139 / 696
Average Density	**5.0 units/acre**			

(1) Includes 80 acres in the Northwest Planning Area and other scattered undeveloped parcels located in the southwest area (5 acres) and southeast area (10 acres)
(2) Includes four acres along Dayton Road near the Cartway Road intersection and four acres in Emery Village (NW corner of Highway 169 and 117th Avenue)
(3) Second phase of Mill Pond Gables on four acres (Hayden Lake Road/Champlin Drive)
(4) Northwest Corner of 117th Avenue/Highway 169 parcel
(5) Mississippi Crossings Area totaling 16 acres (50 percent residential)

Table 2.5 – Land Use Map Changes

SITE	Current Land use	Amended Land Use	Acreage	Residential Density
Northwest Planning Area	Medium Density Residential	Low Density Residential	10	2.0 units/acre
Mississippi Crossings	Low Density Residential, Medium Density Residential	Mixed Use	16	40 units/acre
NW Corner of 117th Avenue & Highway 169	Office	High Density Residential	4	12 units/acre
		Totals	30	

2.5 SPECIAL RESOURCES PROTECTION

As required by state statute, a municipality's comprehensive plan must also include strategies for protection of special resources, including solar access, historic preservation, aggregate, and Critical Area. These strategies are discussed below.

Solar Access

Minnesota Statutes require an element for the protection and development of access to direct sunlight for solar energy systems. The purpose of this legislation is to prevent solar collectors from being shaded by adjacent structures or vegetation and to ensure that development decisions do not preclude the possible future development and use of solar energy systems. To ensure the availability of solar access, the City of Champlin will, whenever possible, protect access to direct sunlight for solar energy systems on principle structures. The City of Champlin will consider solar access in the review of site plans and planning decisions.

Aggregate Resources

The Met Council requires cities to identify the location of aggregate resources within the community based on the Minnesota Geological survey within the Comprehensive Plan. No aggregate resources were identified.

Historic Preservation

Champlin presently has no sites listed on the National Register of Historic Places according to the State Historic Preservation Office. However, there is an active Champlin Historical Society that promotes the importance of Champlin's history, while maintaining archives and historical artifacts.

Now that Champlin is nearing full development, it is important to ensure that historic resources are not destroyed, particularly identified American Indian burial mounds. The City should continue to support the efforts of the Champlin Historical Society to provide educational and recreational opportunities based on Champlin's cultural heritage.

Mississippi River Corridor Critical Area (MRCCA)

The Mississippi River corridor within Champlin was designated as a State Critical Area in 1979. In March 1981 the City adopted the plan for the Mississippi River Critical Area, in response to the *Minnesota Critical Areas Act* (Executive Order 79-19) and addressed the protection of the economic, environmental, recreational, and aesthetic values of the river corridor in the City. This Plan was updated in 2002 and was included in the Natural Resources chapter of the Comprehensive Plan.

New rules for the Mississippi River Corridor Critical Area were published on December 27, 2016. These rules replaced Executive Order 79-19 that guided development in the corridor from 1976 to 2016. The new rules will be implemented through local government MRCCA plans and ordinances. Implementation will be phased in over the next five years, first with updates to local government MRCCA plans and then with updates to their MRCCA ordinances. The City's MRCCA plan is a separate section of the Comprehensive Plan.

Elm Creek

Located in the northwest part of Champlin, Elm Creek runs from the western boundary to the Mississippi River. It drains a large watershed, including Champlin, Dayton, Maple Grove, Corcoran, Plymouth and Medina, before emptying into the Mill Pond and then into the Mississippi River. Elm Creek is associated with a large amount of open space providing vegetated open space adjacent to the water. In comparison with other watercourses, the land adjacent the Elm Creek is undeveloped. Thus, as development continues to move

west, it will be important to protect the Creek with building setbacks, natural open space dedications, housing clusters and National Urban Runoff Program (NURP) ponds.

2.6 LAND USE POLICIES

With the overall city development goals in mind, land use policies are established to prevent conflicting development patterns from reoccurring and to correct existing problems. Changes will not be rapid or dramatic. However, it is important that each change benefit the community. The following objectives and policies serve as a reference for planning and decision-making.

Goal 1: Reduced dependence upon fossil fuels, underground metals, and minerals.

Objectives:

1. Promote and encourage compact development that minimizes the need to drive. (ongoing)
2. Provide a mix of integrated community uses – housing, shops workplaces, schools, parks, civic facilities – within walking or bicycling distance. (ongoing)
3. Design human-scaled development that is pedestrian friendly. (ongoing)
4. Develop around public transit. (ongoing)
5. Facilitate home-based occupations and work that reduce the need to commute. (ongoing)

Goal 2: Reduction of activities that encroach upon nature.

Objectives:

1. Guide development to existing developed areas and away from natural resources. (ongoing)
2. Remediate and redevelop brownfield sites and other developed lands that suffer from environmental or other constraints. (as opportunities arise)
3. Promote design that respects the local and regional ecosystems and their natural functions. (ongoing)
4. Create financial and regulatory incentives for infill development; eliminate disincentives. (short-term)

Goal 3: Protect and promote options for the employment of solar energy.

Objectives:

1. Encourage the protection of existing solar collectors from shading by development and vegetation on adjoining parcels. (ongoing)
2. Discourage new development from prohibiting use of solar technologies through protective covenants. (ongoing)
3. Consider solar access in the formulation of plans for public and private landscaping. (ongoing)
4. Consider variances to zoning and subdivision standards to promote the use of solar energy. (ongoing)

Goal 4: Ensure compatibility and functional relationships among land uses.

Objectives:

1. Locate related and compatible land uses in compact, functional districts. (ongoing)

2. Provide transitional zones between distinctly differing and incompatible land use activities. (as opportunities arise/ongoing)
3. Reduce the impact of incompatible land uses, wherever possible, through redevelopment and/or relocation. (ongoing)

Goal 5: Preserve and upgrade land uses.

Objectives:

1. Analyze undeveloped and underutilized and/or blighted parcels on an individual basis to determine how they can best be utilized within the context of the area it is located and the community as a whole. (ongoing)
2. Upgrade or redevelop substandard and deteriorated commercial, industrial, and residential structures through private means and/or public assistance. (as opportunities arise)
3. Promote high quality development which makes efficient use of remaining lands. (ongoing)
4. Enforce maintenance standards. (ongoing)
5. Continue to promote the orderly infill of underutilized properties. (ongoing)
6. Continue to use the planned unit development (PUD) process to foster innovative development in the City's best interest. (ongoing)

2.7 IMPLEMENTATION

Zoning Map

State law requires that local zoning ordinances/maps be consistent with the Comprehensive Plan. In certain locations, the Zoning Map does not reflect the future land use designation. The City will work to establish consistency between the Zoning Map and Land Use Map. The Zoning Map is attached as Exhibit 2-4. The City will work to achieve consistency between the Land Use Plan and the Zoning Map in 2021.

Development Review

Upon considering developments plans, the City will review them for consistency with Comprehensive Plan visions, goals and policies. Development review is an ongoing process.

Redevelopment

Staff will monitor the physical condition and economic viability of land uses to determine if there is potential for redevelopment consistent with Land Use Plan objectives. If redevelopment potential exists, fiscal tools such as tax-increment financing and tax abatement will be considered as a way to stimulate and facilitate redevelopment.

Capital Improvement Program

The City shall continue using the Capital Improvement Program as a tool to prioritize expenditures that implement the timing and financing of public improvements consistent with the Comprehensive Plan.

Exhibit 2-1: Metropolitan Council Planning Areas Map

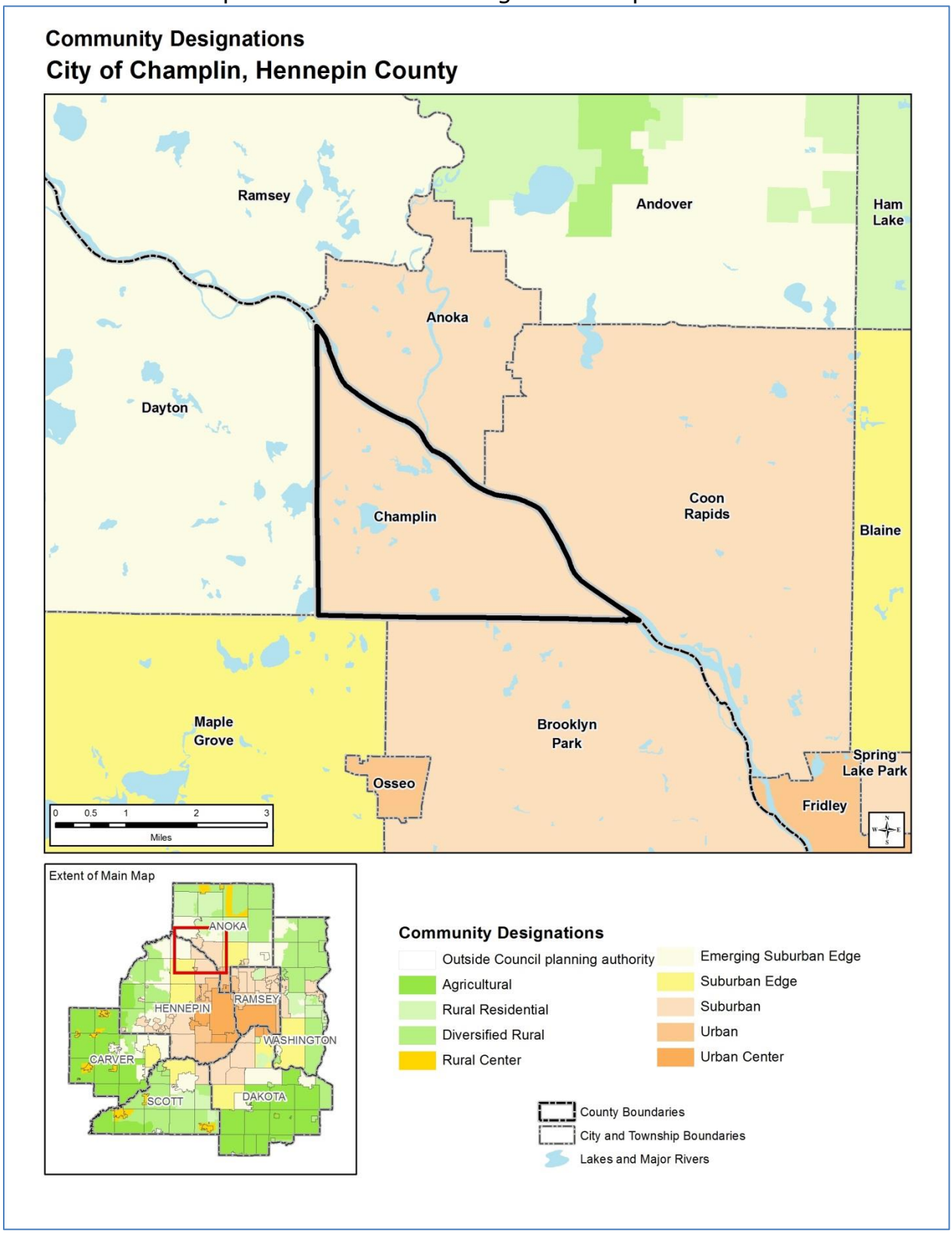


Exhibit 2-2: Existing Land Use Map

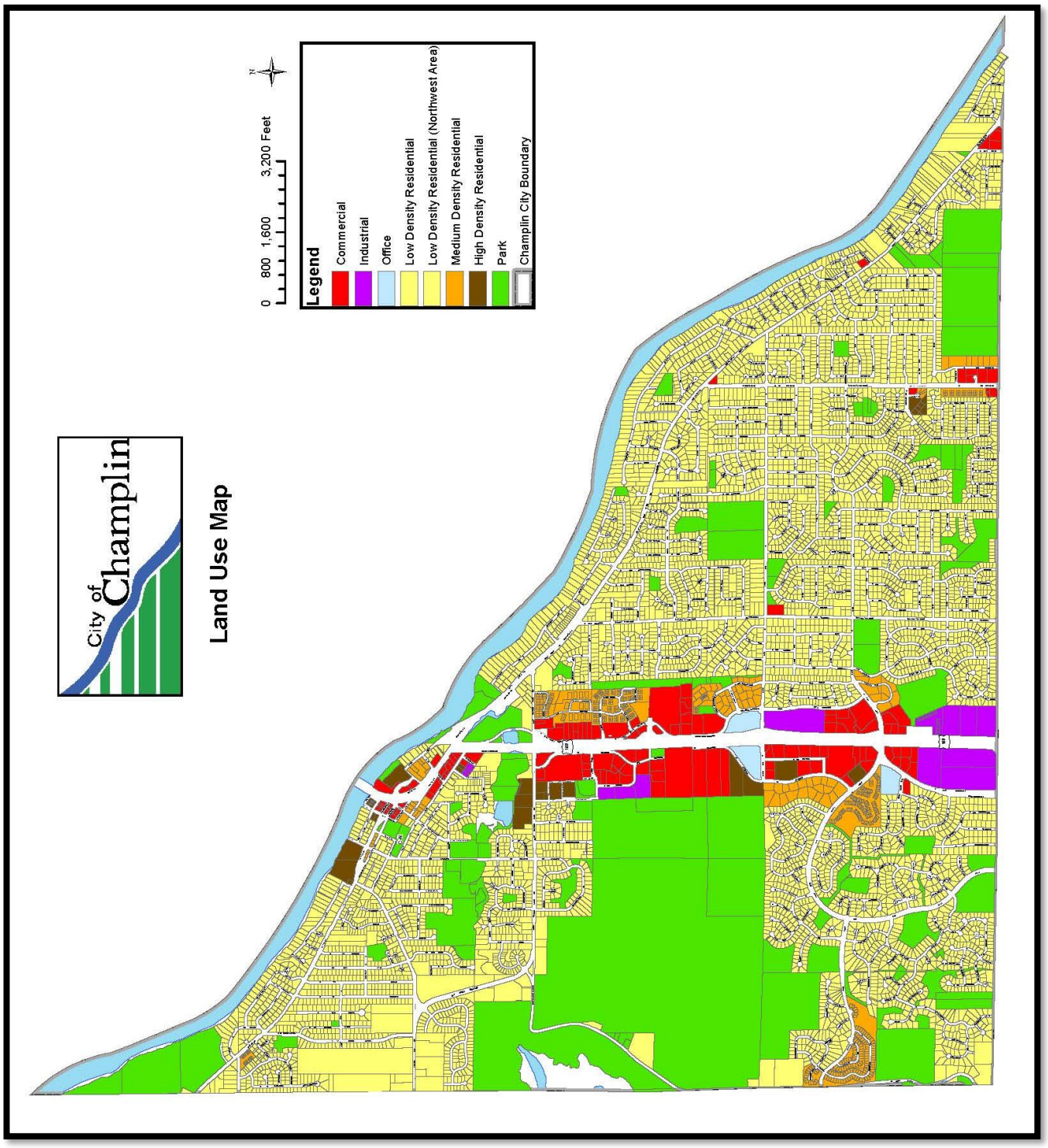


Exhibit 2-3: Future Land Use Map

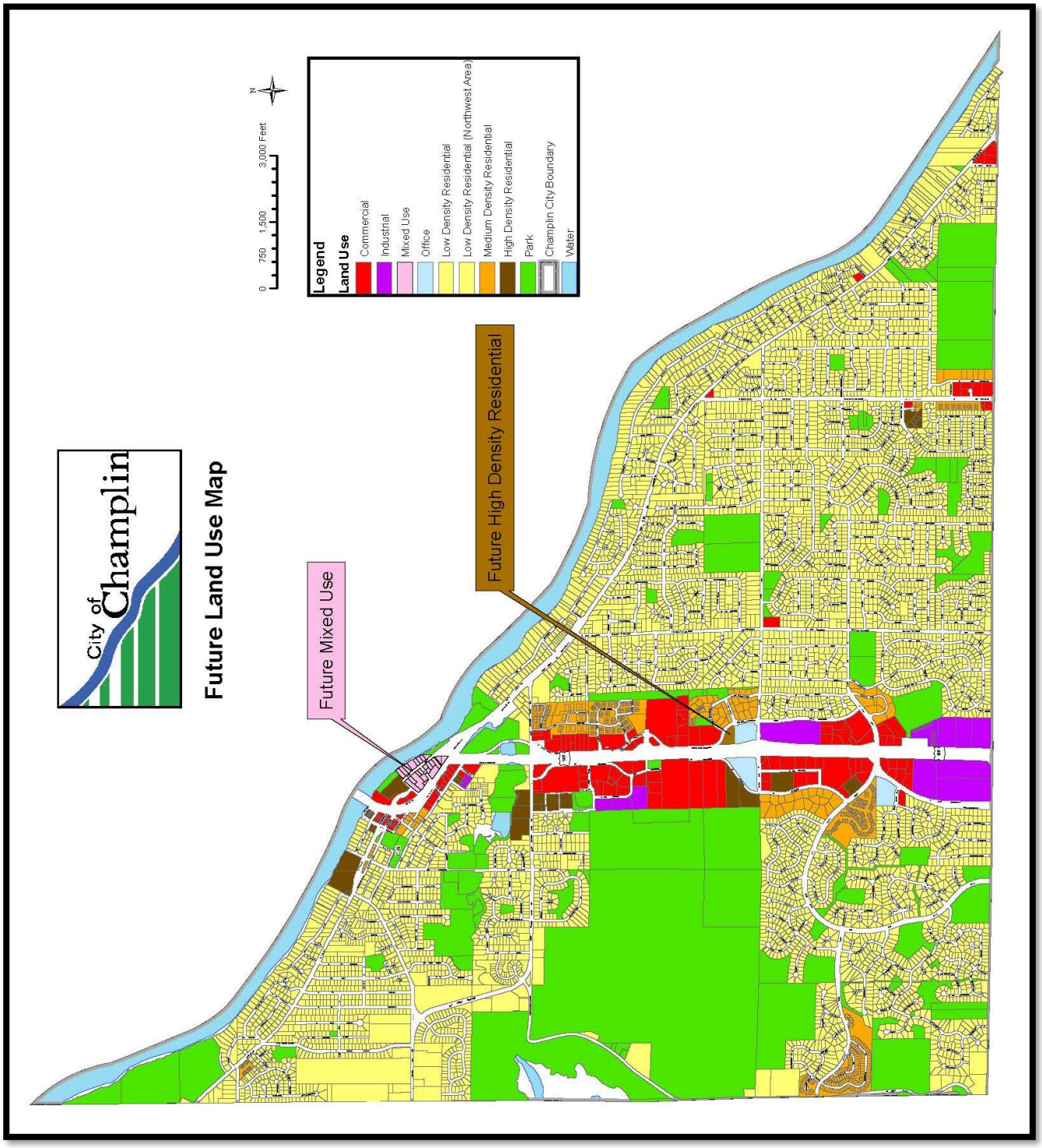
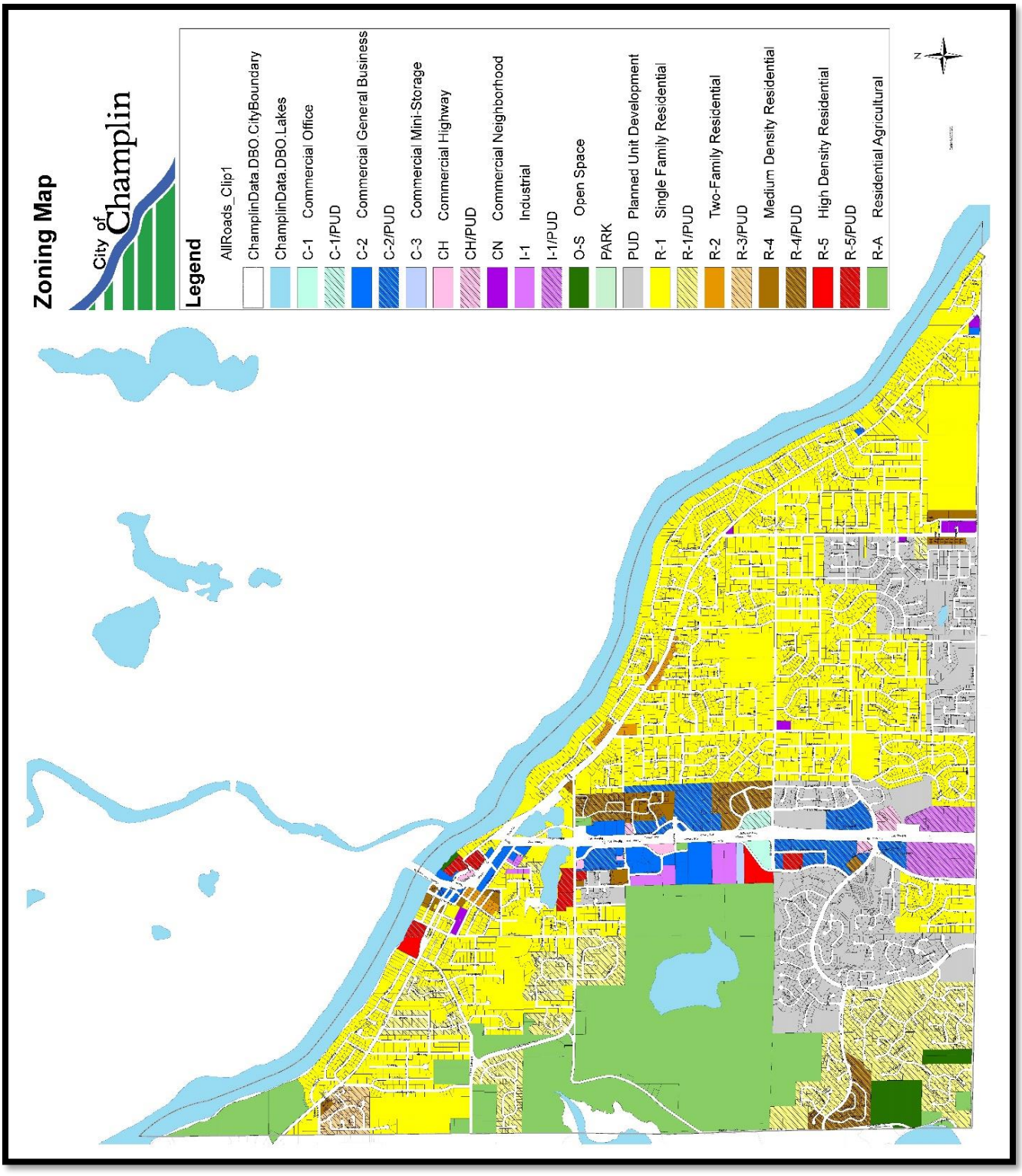


Exhibit 2-4. Zoning Map



3.1 INTRODUCTION

The Housing Plan is a blueprint to meet the City's projected housing needs. Its composition requires an analysis of the City's current housing conditions and policies for the development of life-cycle and affordable housing and the maintenance of neighborhoods and housing stock.

Champlin is projected to have approximately 9,500 housing units by 2040. With an additional 700 housing units expected over the next 20 years, the need for viable and diverse housing is important. At the same time, as housing accounts for the largest portion of land use city-wide, every effort should be made in continuing and enhancing local preservation efforts.

3.2 HOUSING ASSESSMENT

A housing assessment is the first step in identifying Champlin's housing needs. We use Census data from 2000 and 2010 and also 2016 data from the City's GIS (Hennepin County Assessor's Data) and the Metropolitan Council. The tables below provide a "snapshot" of existing housing.

HOUSING MIX

Life-cycle housing is housing that meets the needs of all residents in various phases in life. It ranges from housing for young adults establishing new households to homes for growing families with children and housing for seniors. The tables below illustrate Champlin's housing mix and how it has changed since 2000.

Table 3.1: Residential Housing by Type, 2000 – 2016

	2000		2010		2016	
	Number	Percent	Number	Percent	Number	Percent
Single Family Detached	6,108	81.6 %	6,547	76.1 %	6,597	77.0 %
Duplex, Triplex, Quad	127	1.7 %	177	2.1 %	173	2.1 %
Townhome	669	8.9 %	1,140	13.3 %	1,186	11.9 %
Apartments	583	7.8 %	734	8.5 %	685	9.0 %
Total	**7,487**	**100 %**	**8,598**	**100 %**	**8,641**	**100 %**

Table 3.2: Housing by Tenure, 2000 - 2016

	2000		2010		2016	
	Number	Percent	Number	Percent	Number	Percent
Owner Occupied	6,648	88.9 %	7,429	86.4 %	7,186	83.2 %
Rental	839	11.1 %	1,169	13.6 %	1,455	16.8 %
Total	**7,487**	**100 %**	**8,598**	**100 %**	**8,641**	**100 %**

Champlin is predominantly a community of owner-occupied single family detached housing units. However, since 2000, the City has experienced development of townhome/condominium projects widening the range of housing opportunities for homeowners and renters.

The current housing mix is supported by residents according to a 2017 Resident Survey (attached). The survey suggests there is only one type of housing lacking, "starter homes for young families costing between $200,000 and $300,000."

HOUSING AFFORDABILITY

The Metropolitan Council, through the comprehensive plan process, requires cities to provide opportunities for affordable housing. Affordable housing is considered that which is affordable to those households making less than 80 percent of area median incomes (AMI). For instance, a housing unit is "affordable at 80% of AMI" if a household whose income is at or below 80% of AMI can live there without spending more than 30% of their income on housing. What this means in practice differs for rental and ownership units.

Affordable rents for housing units vary by the number of bedrooms in the housing unit. This is because the income limits vary by household size, and the number of bedrooms affects how many people a unit can comfortably house. Below are affordable monthly rents at the different incomes levels for 2017:

Table 3.3: Affordable Rents

Number of Bedrooms	Affordable Rent at 30% AMI	Affordable Rent at 50% AMI	Affordable Rent at 80% AMI
Studio	$450	$751	$1,201
1-BR	$483	$805	$1,288
2-BR	$579	$966	$1,545
3-BR	$669	$1,115	$1,784
4-BR	$747	$1,245	$1,992

Affordability calculation for ownership units is more complicated due to variables in monthly housing costs such as interest rates and down payments. For 2016, the following home values are considered affordable: $82,500 (30% AMI), $148,000 (50% AMI) and $235,000 (80% AMI).

Using the affordability limits above, Champlin's affordable housing stock in 2016 based on Metropolitan Council estimates is as follows:

Total Housing Units – 8,641

Table 3.4: Housing Affordability in 2016

Units affordable to households at or below 30% AMI	Units affordable to households with income 31% to 50% AMI	Units affordable to households with income 51% to 80% AMI
145	848	5,370

In total there are 328 publicly subsidized housing units in Champlin. There are three publicly subdidized apartment housing complexes providing 195 affordable housing units and another 185 affordable units under construction (The Legends of Champlin Senior Apartments).

1. Elm Creek Apartments 72 units
2. Hayden Lake Apartments – 24 units for seniors and disabled
3. River Manor Apartments – 99 units

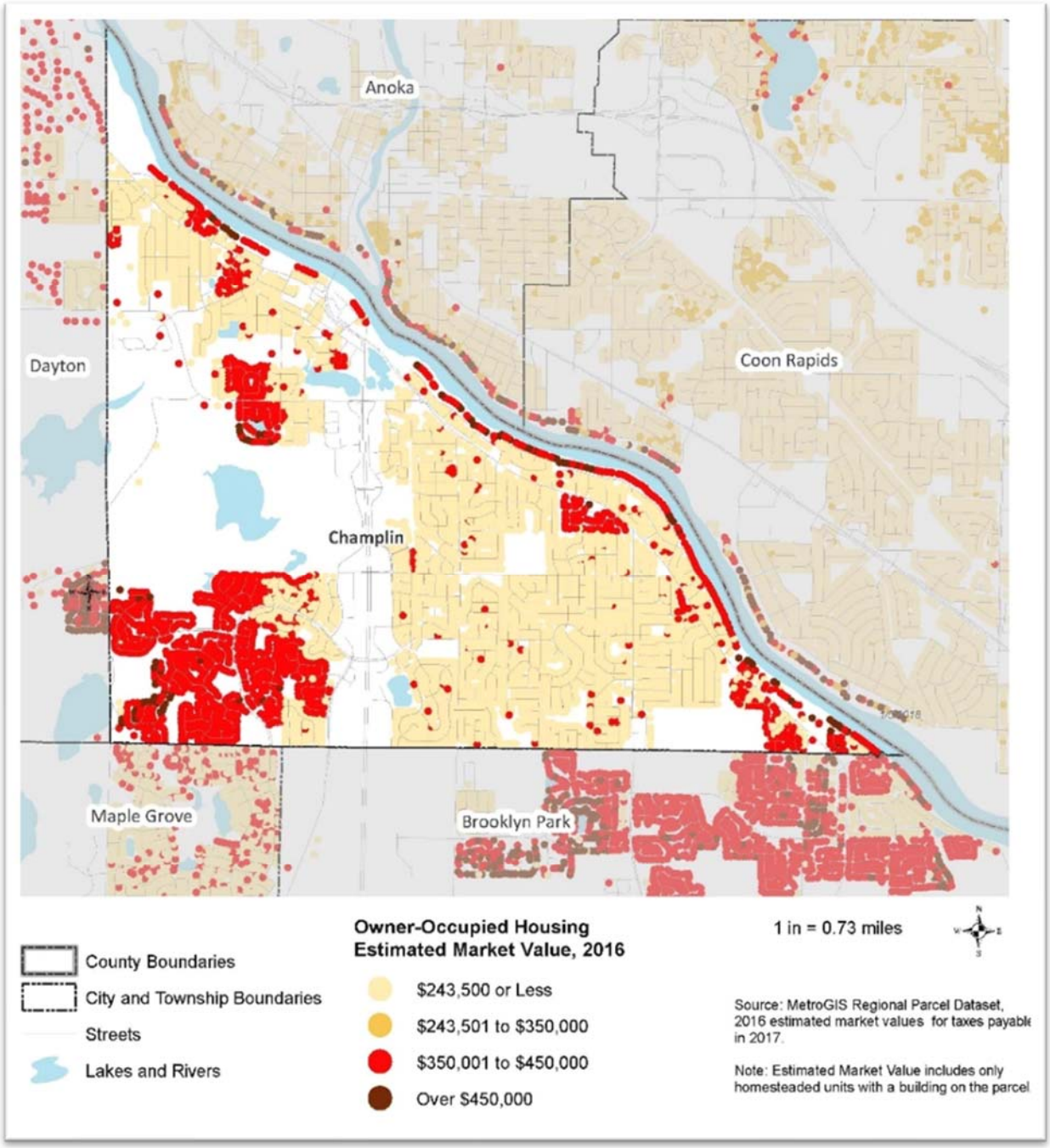
The median gross income for households in Champlin is $83,851 a year, or $6,988 a month. The median rent for the city is $1,110 a month. Households who pay more than thirty percent of their gross income are considered to be Rent Overburdened. In Champlin, a household making less than $3,700 a month would be considered overburdened when renting an apartment at or above the median rent. 46.19% of households who rent are overburdened in Champlin.

Table 3.5: Housing Cost-Burdended Households in 2016

Income at or below 30% AMI	Income 31% to 50% AMI	Income 51% to 80% AMI
224	490	540

Over 75% of the City's existing housing stock is affordable to those making 80% or less of AMI; though there is very little housing for those making less than 30% AMI. This market is difficult to attain without significant government subsidy.

The map below identifies owner-occupied housing values in Champlin.



In determining the need for future affordable housing for the planning period 2021 through 2030, the Metropolitan Council conducted a regional housing needs analysis (aka The Housing Policy Plan). The plan outlined how many newly-constructed affordable units will be required in each community to meet the forecasted demand for affordable housing. Champlin's share of the region's need

for low and moderate income housing is 201 units. This is broken down into the following categories:

Affordable Housing Need Allocation

At or below 30 percent of Area Median Incomes	115
From 31 percent to 50 percent of Area Median Incomes	66
From 51 percent to 80 percent Area Median Incomes	20
Total Units	201

Met Council staff acknowledges the difficulty in building affordable housing. In today's market, affordable housing usually requires increases in density and/or financial subsidies. The Met Council's expectations do not require that cities commit to building affordable housing but instead, require cities to provide adequate land use (i.e. medium and high density) for affordable housing to occur.

With the Comprehensive Plan update, the City must identify medium and high-density residential sites supporting 201 affordable housing units for the decade 2021 through 2030. The Land Use Plan (Section 2 – Table 2.4) identifies vacant land guided for residential densities supporting the potential of housing affordability.

- Medium Density – 8 acres (minimum density of five units per acre)
- High Density – 8 acres (minimum density of 12 units per acre)
- Mixed-Use – 16 acres (8 acres or 50 percent high density residential at 40 units per acre)

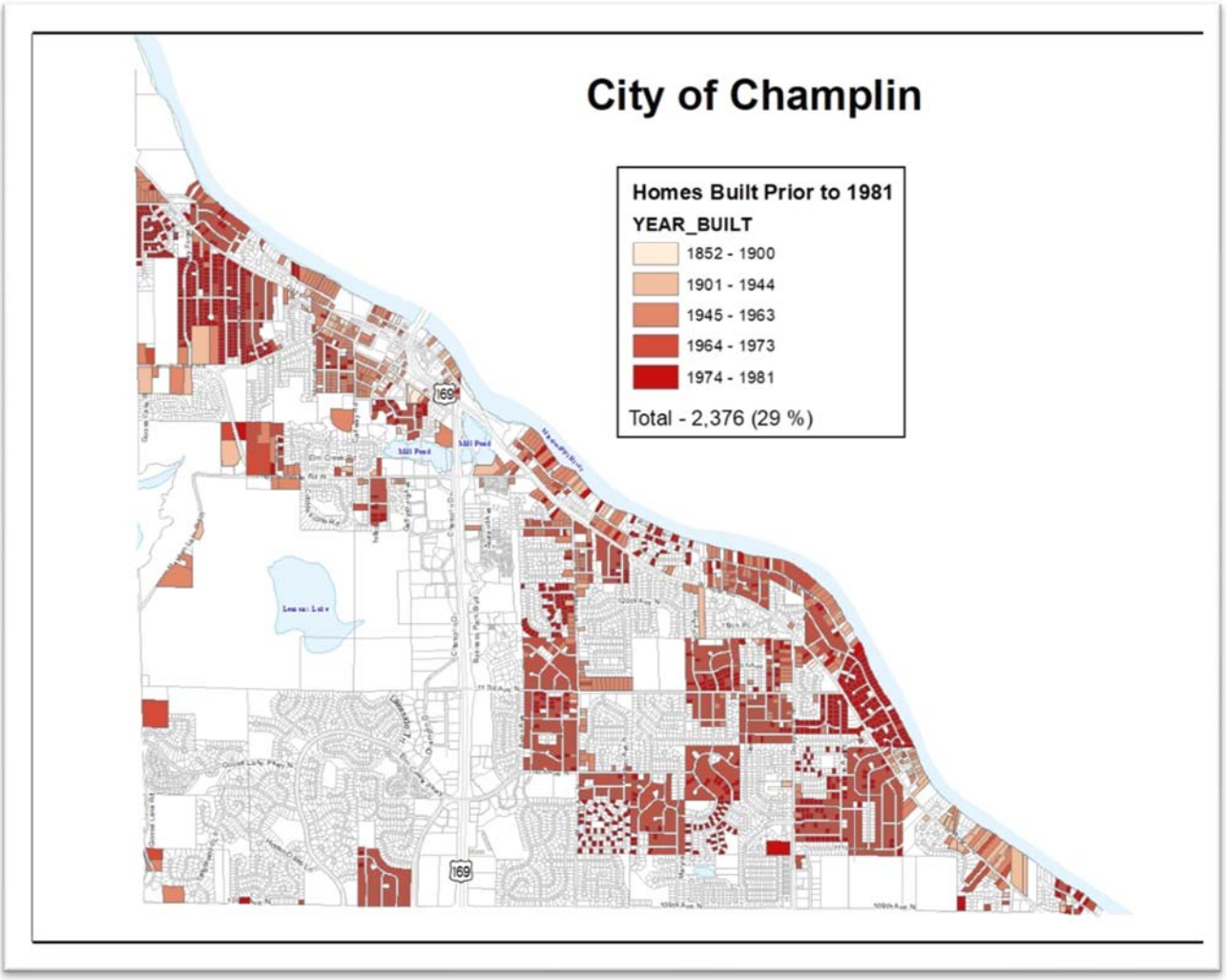
These vacant lands support 436 units of housing. The high density and mixed-used acreages are specifically needed to support affordable housing for households below 50 percent AMI.

While not guided for residential use, there are potential areas that may be suited for high density residential development. These sites are along the T.H. 169 corridor currently guided for commercial or office land use of sufficient size to support a high-density residential development. Questions have been raised suggesting that there may be too much commercially guided property, which suggests the potential for medium or high-density residential land use. In evaluating these sites, the City Council did not desire to guide the property for high density residential use. That said, however, the City did approve development of "The Legends of Champlin" in 2016, which re-guided property from Commercial to High Density Residential. The facility supports 185 units of subsidized senior housing at 70 percent of area median incomes.

HOUSING MAINTENANCE AND PRESERVATION

Over 70% of housing in Champlin was built after 1980. However, Champlin did partake in the housing boom of the late 1970's as it started to gain popularity as a suburban bedroom community. In addition, many of Champlin's apartment units were constructed in the 1960's and 1970's.

The condition of Champlin's housing stock closely reflects the age characteristics. Many of the homes built between 1960 and 1980 are seeing rehabilitation and renovation work. A number of the rehabilitation projects have utilized Community Development Block Grant (CDBG) funds for assistance. The biggest challenge for Champlin will be when the housing built in the 1980's requires reinvestment. Programs fostering housing maintenance will become increasingly important as the community ages. Programs for housing rehabilitation is supported by the 2017 Resident Survey as over 80% of respondents support the City offering a program to make funds available to homeowners for remodeling or home improvements.



Year Structure Built

	Pre-1949	1950 – 1959	1960 – 1969	1970 – 1979	1980 – 1989	1990 – 1999	2000 – Present	Totals
Owner-occupied	254	201	472	1,253	2,583	1,681	1,232	7,676
Renter-occupied	19	29	178	267	170	157	145	965
Totals	**273**	**230**	**650**	**1,520**	**2,753**	**1,838**	**1,227**	**8,641**

SUMMARY OF HOUSING NEEDS

The data and analysis above suggest the following housing needs in Champlin through 2040. The Implementation section of this Chapter lists the tools and strategies that can be used to address those needs.

1. Housing preservation and rehabilitation assistance for low-income homeowners at or below 60% AMI;
2. Rental units for large families at all affordability levels;
3. Preservation of naturally-occurring affordable housing within all bands of affordability.

3.4 HOUSING POLICY PLAN

The purpose of the Housing Policy Plan is to set a course of action for the City to ensure the availability of quality housing to those who reside and those who seek to reside in Champlin. The housing goals and policies set forth approach housing in a comprehensive manner. Provisions within this Plan include stipulations for existing housing development and the conservation of existing neighborhoods, guidelines for modest cost housing and market rate housing along with provisions for protecting the environment. The Housing Policy Plan serves as a guide in establishing housing programs.

Housing Availability:

- Goal. The City recognizes the value of its affordable housing stock and will pursue programs and plans that support and preserve these opportunities.

- Goal. The City is committed to pursuing affordable housing opportunities for all populations.

- Goal. The City acknowledges the high merits of providing lifecycle-housing opportunities for current and future residents and will provide for a balanced housing market meeting the needs of all individuals.
    - Policy: To promote housing for those of all ages and needs.
    - Policy: To support fair housing laws and programs designed to eliminate discrimination in the sale or rental of housing.
    - Policy: To discourage unnecessary delays in subdivision review by streamlining the review process.
    - Policy: To encourage innovative zoning and land use approaches to encourage development of more affordable housing.

Housing Quality:

- Goal. The City is supportive of orderly and planned community development.
- Goal. The City will encourage quality housing construction throughout the community.
- Goal. The City will encourage the preservation and rehabilitation of its housing stock to protect the integrity and long-term viability of neighborhoods.
    - Policy: To provide financial assistance to low and moderate income persons for repairs and improvements made to substandard housing.
    - Policy: To ensure that industrial, commercial and other types of development are designed compatible with housing in existing neighborhoods and residential areas.
    - Policy: To restrict housing development on wetlands, floodplains, steep slopes and other environmentally or culturally sensitive areas.
    - Policy: To encourage residential development to coincide with the development of urban facilities and services.
    - Policy: To take all reasonable steps to protect the residential community from adverse environmental impacts of air, noise, dust and odor pollution by enforcing conformance with applicable state and federal laws.
    - Policy: To ensure neighborhood safety and security through good design.

3.5 IMPLEMENTATION

The Housing Implementation Plan identifies steps the City of Champlin will take to implement the Housing Policy Plan. To be effective, the Housing Implementation Plan will include a wide range of integrated functions and activities in which the City will be involved. These functions include establishing housing objectives, developing housing programs, designing development regulations, implementing administrative procedures and establishing adequate feedback systems to monitor the applicable housing program. Implementation emphasizes maintenance of present housing conditions and the expansion of life-cycle housing opportunities.

1. *Rehabilitation and Neighborhood Preservation*

   The City will implement strategies to encourage housing rehabilitation in single family neighborhoods. The City will partner with the Center for Energy and Environment to establish a home rehabilitation loan/grant program or similar program. The program will use funds generated in an existing Housing Tax Increment District (Champlin Shores). The fund is anticipated to generate $1.5 million to support affordable housing. It is recommended that a housing maintenance and rehabilitation program be implemented in 2020.

   For rental units, the City should continue with its Rental Licensing Program to ensure property maintenance and livability standards are met.

2. *Develop Innovative Projects Under the Livable Communities Act*

   In 1995 the City of Champlin elected participation in the Livable Communities Act (LCA). LCA was enacted by the State Legislature to encourage communities to invest in local economic revitalization and affordable housing initiatives. Livable Communities goals were established by comparing city numbers to benchmarks set by the Metropolitan Council. The benchmarks are based on numbers compared with surrounding communities with similar issues and profiles. The Metropolitan Council awards funding to communities that develop unique models achieving their LCA goals. The City of Champlin should evaluate and study potential projects that could take advantage of this program to help Champlin attain its housing goals, specifically in providing affordable rental housing for large families. Prior to participating the City would need to adopt a local Fair Housing Policy.

   A Fair Housing Policy shall be established by end of year 2022.

3. *Housing Programs*

   The City will become acquainted with the array of established housing programs and funding sources available to facilitate affordable housing. The City will use programs offered by the Minnesota Housing Finance Agency

(MHFA), the Department of Housing and Urban Development (HUD), as well as local initiative funds that may be available to develop housing opportunities. Local initiatives and tools include:

- Housing revenue bonds. Tax exempt bonds will be used to fund multi-family development providing 20 % of the units for families earning 50 % or less of median income.
- Tax increment financing (TIF). TIF shall be used to write down land costs and support infrastructure for multi-family rental housing redevelopment. Specifically, TIF shall be used in support of redevelopment or rehabilitation of existing multi-family affordable housing. The City will also use TIF in support of new affordable housing development designed for larger families (three or more bedrooms).
- Community Development Block Grant (CDBG) program. The City of Champlin receives an annual allocation of CDBG funds. These funds shall be used to assist in housing rehabilitation or for development of new affordable housing.
- Consolidated request for proposals from Minnesota Housing.
- The HOME Investment Partnerships Program (HOME) is a flexible federal grant program that allows Hennepin County communities to fund affordable housing activities for very low and low-income families or individuals, homeless families, and persons with special needs. The City will collaborate with Hennepin County to use this resource in support of new affordable housing opportunities.
- Development of a Fair Housing Policy.
- First-time homebuyer, down payment assistance and foreclosure prevention programs. The EDA shall support these programs via resource allocation.
- Preservation of expiring low-income housing tax credit properties (LIHTC).
- Preserve naturally occurring affordable housing via Housing Improvement Areas and partnerships with sources of preservation financing (MN Housing, Greater Minnesota Housing Fund's NOAH Impact Fund) and local 4(d) tax incentive program.

4. Zoning

Land use and zoning regulations are among the primary tools the City can use to guide housing development. These regulations must be designed to protect the health, safety and welfare of existing residents with excluding any group due to age or income. To encourage a diversity of housing in the City, the following provisions should be implemented:

- Zero lot line development or other innovative site planning techniques
- Allowance of Planned Unit Developments
- Reduce surfacing width or depth requirements for residential streets
- Implement flexible land-clearing ordinances that protect the environment

- Establish criteria that ensure the fees are related and fairly proportional to the need for facilities and services generated by the proposed development
- Exempt or reduce fee schedules for affordable housing
- Implement a simplified and streamlined permit process
- Provisions for density bonuses if desirable objectives of the City are met such as environmental protection or affordable housing.

The use of these tools shall be included in the City's Fair Housing Policy. Zoning Ordinance amendments shall be considered by 2021.

5. Role of the Champlin EDA

The City established an HRA in January of 1981 to advise the City Council on matters pertaining to urban development, redevelopment, housing rehabilitation and affordable housing issues. In 1994, the HRA was abolished in favor of an EDA. The EDA is essentially the HRA with expanded development powers provided under law. The role of the EDA should continue to be encouraged. Future projects and roles include:

- Monitor the City's progress in implementing the Housing Element of the Comprehensive Plan.
- Invest in programs that help support the creation and maintenance of affordable housing.
- Form partnerships with other organizations involved in the development and preservation of affordable housing.

CHAPTER 4: PARK, RECREATION AND TRAIL PLAN

4.1 INTRODUCTION

Parks, trails, and open spaces are important to residents. They define neighborhoods, offer recreation opportunities, serve as open space for wildlife habitat and act as neighborhood gathering points that add a sense of community. Champlin is committed to meeting resident needs and maintaining the quality of our park system.

The Comprehensive Parks, Trails and Recreation Plan provides an analysis and decision making framework comprised of definitions, standards and policies, the application of which provides a method to evaluate existing systems and predict needs. The plan is a blueprint for decision-making, service provision and resource allocation.
The guiding principles for the plan are:

- Provide a variety of recreational opportunities for all ages;
- Explore ways to build upon the existing park and trail system; and
- Provide resources to maintain and improve existing park facilities.

The Parks, Recreation and Trail Plan consists of six sections.

1. Section One outlines community characteristics, including a summary of existing parks, the regional setting, and a list of major stakeholders and partners, a growth forecast, and an overview of park operations and potential system wide developments.

2. Section Two outlines the Park and Trail System Framework. This includes park and trail classifications, recreation facility standards and park service area criteria. These standards are used to assess and plan for community needs.

3. Section Three is a summary of the planning and public input process.

4. Section Four is a Needs Assessment and Recommendations analysis. The majority of this information pertains to the renovation and redevelopment of our park system, but also includes development of park space and trail connections.

5. Section Five establishes parks, recreation, trails and open space goals and policies.

6. Section Six is the implementation and strategy section.

SECTION 1.

4.2 COMMUNITY CHARACTERISTICS

Champlin is bordered by the Mississippi River and the City of Anoka to the north, the Elm Creek Park Reserve and the City of Dayton to the west, and the cities of Maple Grove and Brooklyn Park to the south. Champlin has 30 public parks comprising 295 acres and 25 miles of off-road trails throughout the community. The parks provide a wide range of recreational opportunities, while the trail system is a combination of off-road, on-road and internal park trails. An inventory of existing parks showing recreational facilities is attached as Table 4-1. The physical location of each park is shown in Figure 4-1.

Champlin is in the Anoka-Hennepin School District and has two public schools; Champlin Brooklyn Park Academy and Jackson Middle School, which have several athletic fields and playgrounds. The School District and City provide their own separate maintenance schedules and capital improvement purchases for their fields and facilities. The School District rents ice time from the City at the Champlin Ice Forum. Occasionally, the City and School District assist the other in resource and facility maintenance sharing upon special requests and needs.

Three Rivers Park District owns and manages the 4,900 acre Elm Creek Park Reserve, 850 acres of which lies within Champlin's city limits. Elm Creek Park Reserve is designed to provide natural resource based recreation and education opportunities.

Three Rivers Park District is the implementing agency for regional trails in and around Champlin. The trail system within the Elm Creek Park Reserve, as well as the Mississippi Gateway Regional Park, provides miles of paved internal park trails and regional trail opportunities.

NATURAL RESOURCES

The City has many natural resources including the Mississippi River, oak savanna, oak woodlands, wetlands, creeks, small ponds, various prairie areas and the newly renovated Mill Pond in 2018. The Elm Creek Park Reserve has many other natural resources that help support flora and fauna environments.

The City is fortunate to have the Elm Creek meandering through it. Significant

investments have been made to preserve the Elm Creek with the goal to preserve a "linear greenway" along its shore. It is to be noted that the City has various land acquisitions that will need to take place in order to fulfill this vision plan and create a contiguous "greenway" trail corridor.

HISTORIC AND CULTURAL RESOURCES

Champlin has a rich history with a strong connection to the Mississippi River. The Champlin Historical Society actively promotes the history and helps manage the historic Dunning School, situated on park property, in partnership with the City of Champlin.

GROWTH FORECASTS

Champlin's 2016 population was 23,343. By the year 2040, the population of Champlin is predicted to be 25,400. Table 4-2 below outlines actual household figures through 2016 and forecasts through 2040:

Table 4-2

	1990	2000	2010	2016	2020	2030	2040
Population	16,849	22,193	23,089	23,343	24,400	25,600	25,400
Households	5,423	7,425	8,328	8,442	8,700	9,400	9,400
People per Household	3.11	2.99	2.91	2.76	2.77	2.72	2.70
Employment	1,110	2,734	4,012	4,116	4,400	4,600	4,800

The City's park system is expected to support forecasted populations through 2040. Trails are added as development is completed in the northwest, commercial, and river areas in an attempt to connect neighborhoods to existing park and trail amenities. While there are no additional parks planned in the City, the future development of the last tracts of land will need to be studied to determine future park implications should proposed densities be changed. Land tracts will also need to be considered for purchase along the Elm Creek Greenway Corridor in order to make a final contiguous connection through this area, and private parcels owned along these corridors will need to be considered in these connections. Finally, property along the east and southeast side of the Mill Pond will need acquisition consideration in completing a parcel of land that would then connect Veterans Park to D.C. Chandler Park again as part of a contiguous land connection that falls in line with a master plan process for the Mississippi Commons.

GENERAL RECREATION TRENDS

Recreation interests and participation are influenced by many factors. Age, population demographics, access to facilities, amount of leisure time, interest in the environment, new recreation technology, and social trends all influence recreation participation. In general, people are looking for quality recreation close to home, but are willing to travel to obtain better quality or more specialized activities. The following recreation trends have been observed in the Twin Cities area over the last ten years:

- Yoga and personal fitness at private gyms is increasing
- Trail use has boomed (walking, running, biking and in-line skating)
- Contact and non-contact recreation activities are growing depending on the sport (i.e. lacrosse and soccer)
- Most adult team sports participation is in decline as there are many recreational opportunities or not enough time in private lives to participate
- More youth are specializing in one sport and training year-round
- Disc golf has increased in popularity
- Participation in female sports activity has increased
- Off-leash dog parks are popular
- Pickle-ball is becoming a popular pastime
- Lawn bowling is becoming a common recreational activity and gaining popularity
- Adult volleyball is increasing in popularity

RECREATION TRENDS IN CHAMPLIN

Recreation participation in Champlin will continue to grow as the community grows. The following local trends are based upon recent participation and public comments:

- Splashpad recreation for small children is recognizable in Champlin's Andrews Park
- Increase in trail use and biking
- Extended seasons of play for baseball, softball and soccer
- Increased interest in flying drones
- Use of outdoor ice has diminished as youths have other opportunities
- Increased requests for park shelter rentals has grown tremendously and in some cases requests for public meeting room space exceed our capabilities

- Increased interest in opportunities for Senior Citizens
- Our "Learn to Skate" programs continue to be popular
- Adult softball leagues are in decline but yard games are becoming more popular, as well as adult volleyball
- Pickle-ball is becoming an activity popular with older adults.

PUBLIC OPINION SURVEY

In 2017, the City of Champlin conducted a resident survey. In the survey, 89 percent of residents rate the maintenance and condition of City parks and trails as either "excellent" or "good." In discussing a specific facility, 47 percent report members of their household use the Champlin Ice Forum; and 86% of households use the City's trail system. 79% of residents support water front park amenities such as docks, a swimming area, and outdoor performance area, and rental of water recreational equipment. 75% support the idea of creating a larger meeting/banquet room with kitchen facilities such as for weddings and community events. 61% of households utilize the Mississippi River as a community natural resource. 98% of residents surveyed believed that Park Maintenance was either an essential, very important, and or somewhat important service that the City needed to provide.

IMPLICATIONS AND FUTURE TRENDS

The following are likely trends based on Champlin demographics, user input and the public opinion survey:

- Trail use will continue to increase and demand for trail expansion and connections between parks and other City locations will grow
- Individual activities will continue to be as popular as team or group activities
- Interest in natural resources and open space will grow as the City develops
- Recreation facility development and operation partnerships with athletic groups will be more important to adequately maintain facilities
- Rental facilities and buildings to reserve for private functions need to be included in park reconstructions plans

SIGNIFICANT FINDINGS

- Champlin's residential growth will occur in the northwest portion of the City
- Champlin will likely continue to have a moderate proportion of families with

children
- Partnerships with the business community, youth athletic associations and other service organizations will continue to be important for a comprehensive and efficient park system in Champlin
- Champlin will need to increase its financial investment both operationally and with capital investments to maintain a safe and well maintained park system
- Key open spaces and natural resources should be preserved in advance or in conjunction with development
- Evaluate the demand and the need for alternative recreational activities
- Residents are frequent users of Champlin parks and are generally satisfied with the park system; recreation participation will grow

Overview of Park System Operations and Potential Developments

Improvements to the park system are and will be made incrementally each year. Specific improvement projects are identified and prioritized within this plan and as a part of the City's Capital Improvement Plan (CIP). The CIP is an annual planning document that sets overall City priorities and funding.

The City of Champlin has a park system with an approximate value of $11,000,000, (which does not include the value of the land). This was determined from the League of Minnesota Cities by appraisal of park facilities done from 2016-2018. To properly maintain/replace equipment and facilities, a significant investment is made each year to help keep park infrastructure and equipment in safe and proper operating condition. As new facilities are added, this investment must proportionately increase.

The City and athletic associations may consider working cooperatively and consider sharing financial responsibility to create indoor athletic facilities. This investment would allow organized youth athletics to continue to provide adequate programming to meet the growing needs of the community. The potential development of additional facilities would also assist the park system in being able to offer indoor recreational opportunities at times when athletic associations were not using said facilities.

The City addresses playground equipment safety and accessibility concerns through a playground equipment replacement plan. This plan systematically lays out how the City will proceed with replacing equipment in the City to meet safety and accessibility concerns of existing playground equipment facilities.

The City also addresses playground equipment safety by implementing a playground safety program that inventories and inspects equipment on a routine schedule for each park structure. This was implemented in 2015 and is in accord

with the National Playground Safety Institute's policies and procedures.

The City has positive relationships with youth athletic organizations and service organizations such as the Champlin Dayton Athletic Association (CDAA), Champlin Park Baseball Association (CPBA), and Champlin Community Foundation (CCF). These partnerships, which include human resource and financial resource sharing, will continue to help make improvements to the park and recreation system at a greater pace than if the City progressed by itself.

The City has built 25 miles of off-road trails in the community. This plan outlines the potential of up to 10 miles of off-road trails as land is purchased or trails are built. The City will need to continue to maintain existing trail infrastructure in order to offer a quality trail system. There is the potential of a linear park along the Mississippi Crossings land adjacent to the river, which would incorporate a trail system from the Trunk Highway 169 bridge to Mississippi Point Park. The purchasing of homes and the development along this area will dictate when this becomes viable.

Possibly, the most important issue facing the Park System is the rejuvenation of two parks adjacent to the Mississippi River, Mississippi Point Park and D.C. Chandler Park. The reconstruction and programming for these parks are being addressed in master plans and include plans for Doris Kemp and Veterans Park as well as the Mill Pond area.

Another important issue is developing a reliable funding program to maintain facilities. Funding of the system can be accomplished through additional allocations from the General Fund, partnerships with service organizations, and grants. The main concern is that park dedication fees, once used to supplement and fund the Park Reserve Capital Improvement Fund, are declining and are not reliable. Future maintenance funding will need to be drawn from either the general funds, or from referendum measures that support the upkeep of the assets in the park system.

SECTION 2.

4.3 PARK, TRAIL AND OPEN SPACE SYSTEM FRAMEWORK

Parks, trails and open space are essential components of a healthy community. Champlin recognizes that provisions of adequate park, recreation, open space, and trail connections are essential to the health, safety, and welfare of the residents and persons working in the City.

Decisions about parks, trails and open space affect the entire community, and if planned with care, can help increase quality of life and enhance sense of community. Therefore, it is important to have a set of guidelines to use in decision-making. The following framework was prepared to act as a guide for the preparation of the park plan and for on-going decision making. The framework criteria are based on national standards. Local needs and conditions are equally as important as these minimal standards. As such, this framework should be used as a guide and should be adjusted based on community needs, trends, etc. It is assumed that residents, land developers, city staff, commissions and officials will use this framework and knowledge of local conditions as they face decisions about parks, trails or open space.

A typically accepted range (Per the National Recreation and Parks Association Guidelines), of overall park acreage per population is from a minimum of 10-acres/1,000 population to 20 or more acres per 1,000 population. These park acreage figures are for the core park system of mini-parks, neighborhood parks and playfields, and community parks and playfields. They do not include trail corridors, greenways, special use parks, school lands, regional parks or conservation areas. This overall figure should be viewed as a benchmark and should be adjusted based on local needs.

4.4 GENERAL PARK AND TRAIL CRITERIA

The following park and trail criteria are applicable to all parks. In addition, the descriptions of each park classification contain specific criteria applicable to that park type.

- The location of parks and trails will be determined by the City using the park and trail plan. Parkland shall be suitable to its intended use. This means adequate size, parcel shape, soils, slope, access and relationship to adjacent land uses
- Parkland shall be continuous and undivided by roadways, railroad tracks, pipelines, or other impassible or unusable barriers
- Parkland shall be free from any contaminants or debris.
- Trail land shall be of sufficient width and slope to accommodate 8’-10’ wide

trails and appropriate buffer areas. General guidelines include a minimum width of 20' – 30', a maximum slope of less than 5 percent, and in certain instances, an 8% grade is allowed by guidelines.

- When park land is dedicated, the developer is required to grade the park land and pave access and perimeter trails (not internal park trails) and sidewalks within the park and adjoining rights of way. All construction must meet City specifications

4.5 PARK AND TRAIL CLASSIFICATIONS

Champlin's parks and trails are classified according to their use and function and are described below.

MINI PARKS
(Rosewood and Morningside)

Mini parks are small parks (0.5 to 2 acres) which are designed to supplement neighborhood parks in specific settings where a neighborhood park is not available or a new neighborhood park cannot be provided. Mini parks typically contain children's play equipment and may also include a small open play area and/or picnic table or seating area. Mini parks typically do not include athletic fields or sports courts. In general mini parks are limited to the following situations:

- Additional park land and recreation facilities are needed and suitable land cannot be provided through a neighborhood or community park.
- Barriers such as major streets or railroads, etc. prevent convenient access to a neighborhood or community park.
- The presence of high-density residential development warrants additional parkland beyond the typical neighborhood facilities.

NEIGHBORHOOD PARKS
(Bartusch, Brittany, Elm Creek, Emery Farms, Evergreen, Harold Johnson, Heights, Josephine Nunn, Lakeside, Oak Creek, Paul Wethern, Pines, Reynolds, Richardson, Rosewood, Shores, West River Park, and Charest Woodlawn parks)

Neighborhood parks are the core building block of the Champlin Park system. Neighborhood parks are designed to provide the day-to-day recreation

facilities for a 125 to 500 acre neighborhood (1/4 to 1/2 mile radius). These parks are designed to serve approximately 300 to 650 households. Neighborhood parks are typically between four and ten acres. The parks typically contain a children's play area, a picnic area, a basketball or pickle ball court, internal park trails, a small parking area and ball fields (softball, baseball, soccer, etc.). Ball fields are typically used for informal use, but they may also be used for youth athletic associations. Some neighborhood parks may contain a hockey rink, free skating area, tennis court or other similar recreation facility.

Neighborhood parks may also include natural resources such as wetlands, wooded areas, etc. The following criteria should apply to new neighborhood parks in addition to existing neighborhood parks:

- Land shall be a contiguous area of 4 to 10 acres and shall have a length/width ratio of no more than 3/1. The parkland should have a minimum of 300 feet of frontage on a public street.
- At least 240 feet shall be contiguous frontage. The parkland shall have the general qualities needed to allow development of a quality neighborhood park.
- Land shall be centrally located within a neighborhood and easily accessed by pedestrian or bike.
- At least 75% of the total area of land shall have a slope of less than or equal to four percent (4%) and shall not be located within a storm water ponding area, drainage way or any other water body.
- At least 75% of the total land area shall be of solid sub grade, excluding areas composed primarily of peat or wetland soils.
- At least 75% of the total land area shall be of well-drained sub soils suitable to support the growth of healthy turf and athletic field use.
- The park area shall contain a minimum of four inches of topsoil depth and a minimum average depth of six inches and said topsoil shall be of a quality to support establishment of healthy turf and landscaping.

NEIGHBORHOOD PLAYFIELDS

Neighborhood playfields serve a dual function of providing recreation for neighborhoods and providing facilities for organized youth athletics. Neighborhood playfields have similar facilities as a neighborhood park, but they typically have multiple fields for youth athletic leagues. The playfields are typically larger than neighborhood parks and serve an area of between 500 and 2,000 acres (1.2 to 1 mile radius). In general, neighborhood playfields

shall meet the following criteria:

- Land shall be contiguous area of 7.5 to 15 acres and shall have a length/width ratio of no more than 3/1. The parkland should have a minimum of 600 feet of frontage on a public street. At least 400 feet shall be contiguous frontage. The parkland shall have the general qualities needed to allow development of a quality neighborhood playfield
- Land shall be centrally located within a neighborhood and easily accessed by vehicles, pedestrians or bicyclists.
- The land configuration, conditions and slope shall be conducive to recreation field development.
- At least 75% of the total area of land shall have a slope of less than or equal to four percent (4%) and shall not be located within a storm water ponding area, drainage way or any other water body.
- At least 75% of the total land area shall be of solid sub grade, excluding the area composed primarily of peat or wetland solids.
- At least 75% of the total land area shall be of well-drained sub soils suitable to support the growth of healthy turf and athletic field use.
- The park area shall contain a minimum of four inches of topsoil depth and a minimum average depth of six inches and said topsoil shall be of a quality to support establishment of healthy turf and landscaping.

COMMUNITY PARKS AND COMMUNITY PLAYFIELD CRITERIA
(Clyde Andrews, Donnie Galloway, D.C. Chandler, Jerry Ruppelius Athletic Complex, Mississippi Point, Northland, Reynolds, Doris Kemp, and Veterans Memorial Park)

Community parks and playfields provide recreation facilities for community scale recreation. That can vary from multi-field athletic complexes to a natural resource based passive park area or combinations of both. Community parks serve a two plus square mile area. Users typically drive to these parks and playfields, although some community parks may also function as a neighborhood park for the adjacent area. Passive community parks are typically located around a natural resource such as a lake, wetland, significant woodland or other resource. Community playfields are based on recreation need and their locations should have good access and be compatible for active lighted ball fields.

Community parks with active recreation uses (i.e. ball fields, sport courts, etc.) and playfields should meet the following criteria:

- Land shall be a continuous area of at least 20 acres for community parks and 40 acres for community athletic areas and shall typically have a length/width ratio of no more than 3/1 (but not in the case of Doris Kemp or Veterans Memorial Park).
- The land to be dedicated or acquired shall be suitable to its intended use. This means adequate size, parcel shape, public road frontage, soils, slope, access and relationship to adjacent land uses.
- Land shall be easily accessed by pedestrian or bike, and provide convenient and safe vehicle access to a collector or arterial street.
- For athletic complexes at least 90% of the total land area shall have a slope less than or equal to two percent and shall not contain a storm water ponding area, drainage way or any other water body.
- At least 90% of the total land area shall be of solid sub grade, excluding areas composed primarily of peat or wetland soils. In addition, the same percent of land area shall be covered with no less than six (6) inches of topsoil and shall be clear of over story vegetation.
- At least 90% of the total land area shall be of well-drained sub soils suitable to support the growth of healthy turf and athletic field use. Although Galloway Park is located in the flood plain, it is used to host athletic events, a disc golf course, and activities.
- Where possible, a larger area for a combined athletic and passive recreation park shall be dedicated/acquired. This larger site is intended to provide passive amenity-based recreation and an area for active athletic uses.

Community parks which focus on passive recreation (trails, picnicking, water based recreation, etc.) should meet the following standards:

- Land shall be a continuous area of at least 20 acres with a minimum frontage on a public street of 400 feet.
- Land shall be easily accessed by pedestrian or bike, and also provide adequate car access by roadway.
- At least 10% of the total land area shall have a slope of less than or equal to 4% and shall not contain a water detention area, drainage way or any other water body.
- At least 10% of the total land area shall be of solid upland soils, excluding areas composed primarily of peat or wetland soils.
- Desirable characteristics include varied and rolling terrain, a mix of forest

and open grasslands and scenic features such as: lakeshore, river or stream frontage, and unique environmental, historical or cultural features.

PARK / SCHOOL RECREATION AREA CRITERIA

(Richardson Park used to qualify but is now adjacent to a private school, Lil' Newtons, formerly Champlin/Dayton Elementary), Dunning Historic School House.

During Champlin's original planning and development, the City and School District worked cooperatively on recreation facility planning and park use. While there are opportunities for shared facilities in the future, as of 2017, the school district and the City maintain their own respective facilities. Shared park/school area (suitable for school and community recreation use) will be jointly selected by the School District and City and shall have the following characteristics:

- Land shall be a continuous area of 15 to 40 acres and shall typically have a length/width ratio of no more than 4/1.
- Land shall be located directly adjacent to a school site and shall be easily and safely accessed by pedestrian, bike or automobile.
- At least 80% of the total land area shall have a slope of less than or equal to two percent and shall not contain a storm water ponding area, drainage way or any other body of water.
- At least 80% of the total land area shall be of solid upland soils, excluding areas composed primarily of peat or wetland soils. In addition, the same percent of land shall have a depth of topsoil of at least six inches and shall be clear of forest vegetation.
- At least 80% of the total land area shall be of well-drained sub soils suitable to support the growth of healthy turf and athletic field use.
- Land shall not include any areas of open water that could pose a safety hazard.

SPECIAL USE PARKS (Dunning School, Doris Kemp, Veterans Memorial Park also double as these types of parks)

Special use parks and recreation areas such as community golf courses, arenas, gardens, plaza, historic sites, skate parks, BMX bike areas, disc golf, off leash dog areas, etc. are based on the unique natural, cultural, historic or community feature of recreation activity. The size, configuration and location of these parks will be determined by the City on an individual basis.

GREENWAY AREAS
(Oxbow, Elm Creek Greenway Trail Corridor)

Greenways are privately or publicly owned corridors of open space that often

follow natural land or water features and which are primarily managed to protect and enhance natural resources. Greenways are typically planned to establish a system of inter-linked natural resource features and corridors. Greenway widths will vary depending upon the charter of the land and the intent of the resource protection strategy. It is important to assure a wide enough corridor for the greenway to meet its intended function (i.e. a wildlife migration corridor may need to be wider than a stream corridor).

LINEAR PARKS
(Mississippi Crossings Area)

Linear parks typically function as trail corridors. Land for linear parks should be provided within new subdivisions when the park plan shows a potential off-road trail corridor. Linear parks may also function as open space, wildlife corridors or a combination of uses depending upon their location and character. Linear parks used for trails should be wide enough as warranted to support a trail corridor and wider areas should provide sufficient upland to locate a trail and support facilities such as picnic areas, seating areas, open lawn areas, etc., at suitable locations. The character, alignment and width of the linear park will be dependent upon the function, resource area, terrain and the proposed subdivision. Trails located along waterways should be designed as such to accommodate potential changes in the waterway corridor. It is possible that Mississippi Point Park and D.C. Chandler fall under the definition of a linear park in the future depending upon the development that occurs along the Riverfront in their respective areas. This area may be contiguous with the area that is now part of the Mississippi Crossings that could someday become a linear park if the homes in these areas on the river bluff line are purchased with the intent of creating a linear park and trail system.

TRAILS

Trails are classified based on their function, design, and location (See Table 4-3). The most popular trails are for pedestrians and bicycles. There are separated trails (parallel sidewalks and bikeways) within the same corridor, combined trails (pedestrians and bikes on the same trail), bike lands (paved shoulder next to the street), unpaved natural trails and special use trails (cross country ski, horse, and snowmobile). Trail classifications, existing and proposed trail alignments and criteria are summarized in the Park and Trail Map (See Exhibit 4.2). The trail plan is designed to connect neighborhoods, parks, schools and commercial areas. The major trails can be used for recreation and transportation purposes. Trails within parks will be determined as part of the specific park design. The trail system within the City will also coincide and connect in various spots to the Mississippi River Trail, a federal/state trail, and trails in the Elm Creek Park Reserve, and the West Mississippi River Regional Trail that is proposed and Three Rivers Park District.

Table 4-3 Trail Classification System

Trail Classifications	Location and Use	Surface	Width	Slope
Class I – Separate pedestrian and bicycle trails.	Off-street	Bituminous or bituminous and concrete	5-6 feet for pedestrians 8-10 feet for bicycles	0-5% pedestrian 0-3% bike
Class II – combined pedestrian and bicycle trail	Off-street	Bituminous	10 feet	0-3% average
Class III - Bikeway lane	ON-street – one way per side	Striped lane next to vehicle lane	8-10 feet	Slope to match road
Nature trail	Within parks and conservation areas	Aggregate, wood chip or turf	4-6 feet	0-5% desirable 10% maximum
Cross country ski trail	Within parks and conservation areas	Snow	10-14 – varies for one or two way	0-15%+ depending upon difficulty
Snowmobile trail	Off-street	Snow	10-14 feet	0-10%+
Horse trail	Off-street	Turf or wood chips	10 feet	0-10%+

PARK AND TRAIL DEDICATION

When new residential, commercial or industrial subdivisions are built, the City requires the dedication of park land or trails where shown on the Champlin Park and Trail Plan maps or as recommended by the Champlin City Council. Where general park service area locations are shown on the Park Plan map, the exact extent and location of the park land will be determined and recommended through detailed analysis and reviewed by City staff. Where no park or trail land is dedicated, the City will require cash in lieu thereof in any amount determined by the City Park Dedication Ordinance. Where a mix of cash and land dedication is required, the City will calculate the pro-rated cash dedication share based on the land dedication amount.

SECTION 3.

4.6 PLANNING AND PUBLIC INPUT PROCESS

Over several months, the City gathered information from a wide variety of sources that have influence over or have a stake in Champlin's parks and recreation. The following sources were used to provide insight relevant to issues associated with growth and parks, open space, trails and recreation.

Park and Recreation Commission - The Champlin Parks and Recreation Commission oversaw preparation of the plan. The Commission worked with City staff and the community and provided guidance and input. Their continued energy and commitment will be instrumental as they guide park and recreation, renovation and development in the future.

City Staff - City staff visited each park and many trail corridors to map and document existing conditions and to plan for future improvements. City Park Management, Programming, Maintenance, Planning, Engineering and Community Development staff participated in plan preparation or review.

Public Opinion Survey - In 2017, Decision Resources Inc., conducted a statistically relevant survey of Champlin residents. The survey included questions about recreation facility use, satisfaction and priorities for the future.

Focus Group Meetings - Focus group sessions were held with user and stakeholder groups including the Champlin Dayton Athletic Association (CDAA), Champlin Park Youth Hockey Association (CPYHA), Champlin Dayton Rebels Soccer Club (CDSC), Champlin Senior Club, Champlin Historical Society and Community Education (Anoka Hennepin School District 11).

City Online Survey – In late 2017, the City initiated an online survey regarding the Comprehensive Plan. The survey included questions pertaining to parks and recreation.

SECTION 4.

4.7 NEEDS ASSESSMENT AND RECOMMENDATIONS ANALYSIS

This section analyzes Champlin's existing park, trail and open space needs based upon the Park System Framework contained in Section 2. The community input, growth forecasts and recreation trends are used in conjunction with the framework standards to define existing and future park needs. Recommended trail locations are determined by analysis of destinations (parks, schools, neighborhoods, shopping, etc.), the planned roadway network, the physical terrain and barriers and opportunities.

COMMUNITY INPUT SUMMARY

The following is a summary of the public input received by staff, Park and Recreation commission meetings, governmental agencies (i.e. Hennepin Co.) and public opinion survey both currently and during earlier comprehensive plan revisions:

- Increase the maintenance and rehabilitation of the existing facilities. Continue to provide off-road trail connections. (Please see recommendations regarding areas to be developed below).
- Consider areas for alternative forms of recreation like skateboarding, pickle-ball and disc golf/mini disc golf.
- Continue to provide recreational opportunities for the community's senior citizens
- Continue to irrigate athletic areas to provide safe and healthy turf for recreational and competitive competition.
- Consider other facilities to host community events and larger gatherings.
- Continue to provide and improve a location for senior citizens in the community to gather and recreate on a daily basis.
- Continue to examine the need for more rental space for reservations and commercial use.
- Some youth sports are experiencing a longer playing season creating facility scheduling difficulties when facilities are "multi-use".
- Mississippi Crossings Plan established an outline to connect Mississippi Point, Doris Kemp, DC Chandler, and Veteran's Memorial Parks into one continuous Park. The City should continue to evaluate the feasibility of this concept and proceed as reasonably responsible. This will require acquisition of Richard Brown's property or a portion thereof.
- Use of Galloway Park for organized activities should be considered
- only after improvements are made to the school district facilities and after determining if there remains a need to provide additional athletic facilities (especially indoor facilities). Galloway Park should be kept as natural open

space. Should the efforts by the City to construct additional soccer fields in the community become unsuccessful, Galloway Park could serve as a location for this organized activity. Galloway Park is an acceptable site for this activity because it has the least impact on the natural surrounds and aesthetics of the park.

- The City should consider the merits of a greenway along the Elm Creek Corridor as the northwest area develops. This is partially being accomplished beginning in 2017-2019. This will involve purchasing property along this area as opportunities become available.
- The construction of a performance area should be considered to provide for small community gatherings such as the Park and Recreation Department offering music and events.
- The City should consider construction of an open sided picnic shelter at Brittany Park to provide residents in southeast Champlin access to this amenity. The usage of the northern part of this park should be assessed for further field usage.

BASEBALL AND SOFTBALL FIELD NEEDS

The Champlin Dayton Athletic Association (CDAA) and Champlin Park Baseball Association (CPBA) offer youth athletic baseball and softball programs in the community. Both associations mostly schedule events (games & practices) Monday–Thursday, mid-April-July. On some occasions events have been scheduled on Sundays. This excludes weekend tournament play.

Currently the fields available to CDAA and CPBA in Champlin (includes CPHS) totals 26 fields with a capacity of approximately 36+ events per evening depending upon daylight, age group/game time length, and game scheduling(namely start and end times). The exception would be lighted fields. The three-year average of Champlin residents participating in CDAA baseball and softball was 1,659 in 2008, and is currently approximately 799 for the years 2015, 2016, and 2017.

While youth baseball and softball participation is slowly in decline, City fields and facilities should be able to accommodate participation with the expectation that the City of Dayton will eventually build more fields and facilities.

The most cost-effective way for the CDAA to accommodate the anticipated growth, would be to expand the days of the week events schedule to include Friday, Saturday, and Sunday. With the possibility of multiple events being scheduled on Saturday and Sunday, there should be an adequate number of facilities to provide youth baseball and softball without the need to add additional facilities.

The challenge for the City will be to continue to aggressively maintain these facilities on a daily basis to provide safe facilities. The fact that some of these facilities may need to be used nearly every day, long
term maintenance and capital improvement planning are critical to be able to properly maintain said facilities. User fees need to be expected to increase with the cost of living increases.

Most of the potential growth to the CDAA Baseball and Softball program will come from the cities of Dayton and Brooklyn Park. As these communities develop, the CDAA will need to position itself to gain a proportionate amount of access to facilities in these communities to meet their growing facility needs.

ADDITIONAL PARKS

Park locations in the City are geographically positioned to efficiently serve the residents in the adjacent neighborhoods (Exhibit 4.3). The City has 30 parks (with one private park at the Reserve at Elm Creek). Based on a needs assessment and proposed land uses there are no plans to develop additional parks.

However, as the final larger land tracts are proposed for development, an assessment will need to be provided to the Parks and Recreation Commission regarding the density and number of overall residents these tracts will house for density. The Parks and Recreation Commission will then need to make a recommendation to the City Council upon the data provided regarding the proposed developments. The location of these areas and the number of residences proposed will also assist in determining whether new park facilities and dedicated park land need to be set aside and incorporated in the development plans, but again no additional parks are expected at this time. The Reserve at Elm Creek installed, a private playground, pool and recreational area for their neighborhood. This is not included in

the overall park quantity count but was built to service the 100+ homes in that development. The remaining tracts of land, particularly the tracts of land on the northwest and west side of the City, (when they develop), will need to have a trail assessment for connections to these areas and to the larger trail system. It is assumed that these tracts will produce single residence additions. Based on parks in each area, the final density will determine if there are additional park lands and trails required in these areas.

SOCCER FIELD NEEDS

The Champlin Dayton Athletic Association (CDAA) and The Force Soccer Club administer youth recreational soccer in the community. CDAA schedules events

(games & practices) Monday – Thursday during July and August. The Force administers youth soccer April-June and in September and October in the fall.

CDAA currently has 1,136 number of soccer players and The Force is projected to have roughly 500 soccer players in their first season as a combined organization in 2018 (previously Rebels Soccer Club and The Northwest Kickers Club).

There is a need for additional soccer fields as this sport is continuing to expand and heavy usage requires the turf/fields to be rotated. This allows field substitution and schedule modifications for particular fields each season to perform proper turf renovation and allow highly used turf time to recover.

FOOTBALL FIELD NEEDS

The Champlin Dayton Athletic Association (CDAA) administers youth football in the community. The CDAA schedules events (games & practices) Monday – Thursday during August – October and occasionally on Saturday and Sunday. There are approximately 320 participants registered in CDAA football. The group utilizes both Andrews and Northland Parks (two fields total in the City park system) as well as school district fields for games.
There is a need in the park system to add additional football practice green space. Richardson Park will have practice green space added in 2017, as well as Northland Park as part of other repurposing projects. Other parks such as Brittany Park will also be reviewed in the future
for other field/green space.

LACROSSE

The Champlin Park Youth Lacrosse Association is practicing and hosting games at Galloway Park and U12 games at Andrews Park. Staff has assisted the association with field needs since 2014 and continues to communicate with the association and provide additional space as is available in the system.

ICE FORUM

The Champlin Park Youth Hockey Association (CPYHA) administers youth competitive and recreational hockey in the community. The CPYHA schedules events (games & practices) Monday – Sunday from September – March. Parks & Recreation Staff offer public skating and a "Learn to Skate Program" to residents who enjoy ice-skating.

One of the main issues that the City faces at the Ice Forum, is regarding the R-22 refrigeration system for its ice plant. As of 2020, R-22 will no longer be

manufactured per the Environmental Protection Agency. Because of the mandate for the cessation of R-22 manufacturing, staff is planning for the reconstruction of the refrigeration system.

The City is analyzing the possibility of converting the ice plant to an ammonia type refrigeration plant. The cost of this conversion is significant and money is being sought for this conversion at both the State and Federal levels to assist in meeting the expenditures necessary in completing this process. The conversion will require the Ice Forum be shut-down while improvements are made and this is thought to be a six month undertaking.

As of 2018, a feasibility study has produced the baseline cost figures necessary to update the ice plant at roughly $1.5 million. A secondary analysis is also being performed by the Honeywell Corporation to determine if the Champlin Ice Forum is eligible for a "drop-in" type of refrigerant that would be compatible with the current system in the ice plant. Should this become an option, staff will also weigh the pros and cons associated with reconfiguring various parts of the ice plant to accept this proprietary refrigerant.

TRAIL SYSTEM NEEDS

The construction of the off-road trail system is extremely valuable. The City should continue to provide additional off-road trails. The development of an inter-connecting off-road trail system will help guide development of a safe and efficient trail and sidewalk system that can assist the City and developers in planning pedestrian travel routes to and from neighborhoods, commercial areas and parklands. In 2017, a trail paving index was created and trails were evaluated, graded, and planned for particular maintenance or reconstruction. This will assist City staff to continue to maintain these trails as necessary.

Trail connections will need to be considered in the larger land tract areas that are to be developed. Once proposed for development, these land tracts and the densities for housing will need to be brought forth for review if different than the single family residences that are planned for at this time. There are various other smaller tracts of land that will need to be evaluated for more trails including the Greenway Corridor should these land tracts be either developed or purchased for park and recreational purposes. The West Mississippi Regional River Trail is also being planned as of 2016, and will be a Three Rivers Park District and a Hennepin County project that will ultimately need City Council final approval. The final master plan was completed in May of 2018 and is attached. (Please see Addendum 1). This project is proposed to run the course of West River Road and Dayton River Road. Other land tracts east of TH 169 along the eastern shoreline of the Mill Pond will be parcels that could potentially connect D.C. Chandler to Veterans Park. It is anticipated that if this land is acquired, that accompanying

covenants restricting various types of construction may be included. However, it is thought that trails would not be included in these restrictions, and that these trails would provide a great amenity to many people walking around this area for recreation.
Our trail system will require much financial resourcing to keep the system at a level with ratings above satisfactory, and therefore will require a trail maintenance program to be approved on an annual basis.

Mississippi Crossings and Commons Area

Staff is objectively looking at areas in the Mississippi Crossings and Commons areas that will produce meaningful access points to the Mississippi River. Significant investments are being made in acquiring land and planning for the possible usages with the river as the focal resource. Much effort is being placed in reviewing options and weighing opportunities for maximizing this area.

SECTION 5.

4.8 GOALS AND POLICIES

PLANNING

Goals:

- To develop and adopt a Comprehensive Park and Recreation Plan based on the needs and demands of all segments of Champlin's population.

- To coordinate the efforts of local, state and federal governments and agencies to plan and develop the Park and Recreation System.

Policies:

1. That the Park and Recreation Plan be a responsive and dynamic document. It will be based on a five to ten year planning period.
2. That the Park and Recreation Plan seek to be compatible with adjacent local community plans and metropolitan, state and federal plans and programs.
3. That the description and standards established in the park classification system be the basis for development of the park and recreation system.
4. That park and recreation services and facilities be provided where recreational opportunity is deficient or non-existent. This shall be done in conjunction with the resources of the volunteer- based organizations and the private sector, where appropriate.
5. That the utilization of City staff be maximized in the planning process, with outside assistance sought when special capabilities are needed.
6. That this plan is supportive of current facilities and usage policies that guide the Parks and Recreation Department operations.

SYSTEM MANAGEMENT

Goals:

- To develop and adopt a philosophy for development and management of the park and recreation system.

Policies:

1. That uniform park and recreation maintenance standards shall be developed and applied consistently throughout the City.
2. The City crews shall be utilized in maintenance and development of the

park and recreation system and that contracted service will be used when it is financially responsible to do so.

3. That community volunteer organizations shall be encouraged to participate in park and recreation development whenever appropriate.
4. That the City direct city recreation programs and coordinate athletic activities in conjunction with local athletic associations.
5. That the City provide the Park and Recreation Commission with the background information, technical data and staff recommendations on significant park and recreation issues.
6. That the City review all pertinent information, analyze the alternatives and make recommendations to the City Council on park and recreation issues.
7. That the City inform the City's residents on any major issues or improvements, via Parks and Recreation Commission meetings.
8. That the City consider the increased maintenance, planning, and recreational requests, inquiries, and demands made by the City and its residents, and determine appropriate responses according to available resources and man power.

PARKS

Goals:

- To promote park development that will best encourage and/or control use.
- To provide a well-balanced park and recreation system.
- To strengthen the image of the Parks as an overall system, which provides community services and recreational facilities.

Policies:

1. To offer a variety of activities in the park and recreation system including cultural, conservation, passive, active and organized recreation areas.
2. To acquire parkland and create a trail system (and develop existing parks) at a level commensurate with the needs of Champlin's population.
3. To establish and promote high quality design standards in the development of the park system.
4. Joint use of facilities shall be encouraged by incorporating school facilities with park and recreation programs whenever possible.
5. To encourage multi-use park and recreation facilities that will maximize accessibility and use by area residents.
6. To allow the conversion of park and public open lands to other uses only

when no feasible alternative exists. When such conversion is unavoidable, the taking agency shall pay for the replacement of land and facilities to serve the needs of the people in that area.

7. Specific development priorities be reclassified annually.
8. Consistent with economic realities, innovative park development shall be encouraged.
9. Ongoing information and education processes shall be conducted, making the residents aware and knowledgeable of park and recreation facilities and programs.
10. Parkland shall be acquired in accordance with the City Park and Recreation Plan.
11. Require park dedication from all developers pursuant to City Ordinance.
12. Wetlands and storm water ponding areas shall not be accepted as fulfillment of park dedication requirements.

13. Provide public access into City park areas by a variety of transportation means.
14. A consistent signing policy shall be developed for all park and recreation areas, buildings, etc., including directional and informational signs.

TRAIL SYSTEM

Goals:

- To promote safe, convenient and coordinated facilities for alternative means of transportation throughout the City of Champlin.

- To provide Champlin residents with sections of trail that focus on recreational value and harmony with the natural environment.

Policies:

1. To coordinate the park and recreation system through the use of a citywide trail plan.
2. To plan bicycle and pedestrian access to parks, open space areas, schools and neighborhood shopping areas to encourage maximum use of these facilities.
3. To encourage the utilization of utility easements and transportation right-of-ways for trail development.
4. To provide ramped curbs to meet accessibility standards and to accommodate bicyclists.
5. That trails be bituminous or concrete, except in nature areas, and be multi-use facilities when uses are compatible.
6. That trails be integral to larger scale development and shall be installed

and paved at the developers' expense. These trails shall connect to the existing and proposed extensions of the Champlin trail system.

7. That the Champlin trail system be coordinated with the trail systems for surrounding cities, Hennepin County, the Metropolitan Council and Three Rivers Park District.
8. That all existing and proposed trails shall be mapped, reviewed and updated annually.

RECREATION

Goals:

- To provide a safe, pleasant recreational system, which will offer a variety of facilities and programs for all age groups in the community for all seasons of the year.

Policies:

1. To encourage the development of programs for all compatible outdoor and indoor recreational activities.
2. That recreation programs shall be accessible to all members of the community.
3. That regulations and policies regarding the use of Champlin park and recreation facilities shall be developed, then enforced, by the Park and Recreation Department.
4. Athletic activities shall be coordinated with the local athletic associations whenever appropriate.
5. That fees obtained for specific recreation programs and events shall be used to support those programs and events.
6. That some community-based recreation programs (i.e. Father Hennepin Festival) shall be designed to be self-supporting.
7. That fees obtained for the use of park and recreation facilities shall be directed to maintenance, development, acquisition or administration.
8. That fees obtained for youth recreational programs cover the cost of putting on the program. These costs include part time staff, supplies, admissions, etc.
9. That fees obtained for adult recreational programs will be used to support those programs and events.

CITIZEN INPUT

Goals:

- To implement a planning process incorporating citizens at all levels.
- To promote citizen interest and involvement in City Park and Recreation programs.

Policies:

1. To encourage citizens to serve on the Park and Recreation Commission and its subcommittees.
2. To provide park and recreation improvement programs designed for participation of both community groups and individuals of all ages.
3. To promote discussion with community organizations as part of the review and update process of the Park and Recreation Plan and reclassification of priorities.
4. That the community shall be encouraged to participate in the planning of major park improvements and that neighborhood meetings shall be held to gather input before implementation of the applicable improvement.
5. That a sampling of community attributes be completed periodically as to provide the park and recreation system with community input.
6. To encourage the use of social media to distribute information regarding recreation activities and park facilities through all available communication outlets.
7. To recognize the stewardship of various individuals and organizations who make contribution to the park and recreation system (i.e. Adopt-A-Park).

FUNDING AND EXPENDITURES

Goals:

- To fund replacement and upgrades to the park and recreation system utilizing an annual transfer from the general fund.
- To maximize the benefits received from the expenditure of funds allotted for park and recreation facilities and programs.
- To capitalize upon the many sources of grants and aid at the local, state and federal levels.
- To encourage financial participation from those groups who actively use the

park and recreation system.

- To work with the Champlin Community Foundation, CDAA, CPBA, and neighboring cities which allow residents, businesses and other foundations to make tax-deductible donations towards improvements in the Champlin Park and Recreation Facilities.

Policies:

1. That a ten year Park and Recreation Capital Improvement Program (CIP) be adopted and annually updated with the City's CIP.
2. That the provisions of facilities for non-resident and profit motivated or special interest groups be made self- sustaining through user charges.
3. That user charges for resident groups be incurred to cover operation costs.
4. That all user charges collected be directed to park and recreation maintenance development and renovation.
5. That all cash obtained as park dedication fees shall be directed to the park reserve fund to be used for park and recreation projects.
6. That creative methods of funding for parks and recreation projects be encouraged. This includes obtaining funds or other assistance from private foundations, business, industry, residents and community organizations.
7. That serious effort will be made to program City funds for parks and recreation consistent with increasing maintenance and rehabilitation costs.
8. That a funding plan be developed to ensure the replacement of park and recreation facilities as they age and are in need of major maintenance or upgrade.
9. That enterprise operations be established for those park and recreation facilities that can be supported by revenues and if revenues are generated more than expenditures, that those revenues be used to improve the facility.
10. Park Bond Referendum as a way to introduce programs and facilities.

SECTION 6.

4-9 IMPLEMENTATION AND STRATEGY

Goals:

To implement the Park and Recreation Plan to ensure proper development of park and recreation facilities and programs.

Policies:

1. To promote review of the Park and Recreation Plan (a chapter in the overall Comprehensive Guide Plan) by adjacent affected agencies and units of government.
2. That a public hearing shall be held on the Park and Recreation Plan, and that following the public hearing process, the City Council shall formally adopt said plan.
3. To employ modern legal and administrative tools (subdivision and zoning regulations, capital improvements programming, budgeting, etc.) to further the goals and support the policies of the Park and Recreation Plan.

IMPLEMENTATION STRATEGIES –

1. Review and prioritize trail needs and determine schedule and funding framework. In 2017, an asphalt and trail indexing system was created to evaluate trail conditions. In 2018, a sidewalk evaluation will be performed to address conditions of the sidewalk system that doubles as hard surface areas that connect various trail systems in the City.
2. Review and evaluate each planned development project to ensure it provides appropriate park dedication, open space preservation and trail connections to the planned City-wide trail and greenway system.
3. Increase the General Fund Transfer to the Park Reserve Fund to amounts that support level of service standards that cover staffing and maintenance needs.
4. Consider youth athletic association user fees as costs to maintenance and operations. Proportional increases as deemed necessary will occur as costs require.
5. Replace playground equipment every 20 years or as needed.
6. Utilize the capital improvement plan to forecast maintenance requirements to properly fund the necessary improvement projects associated with longevity, safety, and new park improvements.
7. Encourage financial contribution from athletic associations.

8. Assume Arena Fund will need $50,000 each year to help operate and maintain the facility over the next 10 years. Apply for Grants to convert current R-22 system to ammonia.
9. Park Bond Referendum could be considered in the future to help support, maintain and expand the park and recreational opportunities in the community, including the renovation to Mississippi Point Park and D.C. Chandler Park.
10. Adjust expenditures according to the actual funding received.

PARK CAPITAL IMPROVEMENTS

A ten-year Park and Recreation Capital Improvement Program is adopted and annually updated. The Capital Improvement Program is attached at Exhibit 4-3. This program includes prioritized costs associated with the park, recreation and trail system. The order of priority for development of the park and recreation system is directed to be consistent with the increasing community needs and priorities. These needs and priorities are assessed by evaluation of existing infrastructure by staff including opportunities for the public, evaluation of current recreational programs and facility conditions, and analysis of future City growth projections.

The City looks for funding from a variety of sources. Park dedication fees (received in lieu of parkland dedication) and funds allocated from the general fund are the predominant funding sources. The City also actively pursues grants and aid from the local, state and federal government sources, and funds or other assistance from private foundations, business, industry, and community organizations. Special park and recreational opportunities may also be considered for bond issues.

The Parks, Recreation and Trail Master Plan expands and completes the City's trail system. These expansions include approx. 5-10 miles of trail linkages and expansions within the City when the proposed West Mississippi Regional River Trail is constructed by Three Rivers Park District in coordination with Hennepin County.

Development of these additional miles of trails will be expected to occur as development progresses and or the county or state perceive the need for regional or state trail connections in or through Champlin. An example of such regional trail connection is the West Mississippi River Regional Trail Project that is being planned by Three Rivers Park District in coordination with Hennepin County. Exact locations of the trails will be determined through the site planning and PUD process, so as to meet the basic intent of the plan and the proposed project's specific needs. Trails within new developments may occur along roadways, within greenway corridors or as part of utility/trail easements.

Andrews Park Ward 3

Location	7200 – 117th Ave N
Size	43.72 acres
Classification	Community Park
Adjacent Land Use	Residential

Existing Facilities

- 2 Concession Stands
- 2 Enclosed Shelter
- 1 Warming House
- 2 Sand Volleyball Courts
- 3 Soccer Fields
- 2 Hockey Rinks
- 5 Ballfields
- 4 Tennis Courts
- 1 Football Field
- Nature Area
- Open Play Area
- Picnic Area
- Play Equipment
- Free Skating Rink
- Trails
- Splash Pad

Proposed Facilities Improvement/Changes

- Volleyball Courts for Adult Athletics
- East Driveway Gate

Bartusch Park	Ward 4
Location	11050 Quebec Ave N
Size	14.19 acres
Classification	Neighborhood Park
Adjacent Land Use	Residential
Existing Facilities	• 1 Basketball Court • 1 Sand Volleyball Court • Nature Area • Open Play Area • Play Equipment • Trails
Proposed Facilities	• Basketball court resurfacing

Notes & Comments

- Playground equipment scheduled for 2024/25
- Consideration should be given to remove the sand volleyball court

Brittany Park Ward 4

Location 11005 Brittany Drive

Size 17.49 acres

Classification Community Park

Adjacent Land Use Residential

Existing Facilities

- 1 Warming House (Temporary)
- 1 Basketball Court
- 1 Hockey Rink
- 2 Ballfields
- Nature Area
- Open Play Area
- Play Equipment
- Skating Rink
- Trails

Proposed Facilities

- Add Soccer Field to North
- Reconstruct Parking Lot
- Reposition Trail System
- Irrigate North Part of the Park
- Reposition or rebuild existing hockey rink
- Resurface basketball court

Notes & Comments

DC Chandler Park Ward 3

Location 685 West River Road

Size 4.06 acres

Classification Neighborhood Park

Adjacent Land Use Residential, Park

Existing Facilities

- 2 Tennis Courts
- Nature Area
- Open Play Area
- Trails

Proposed Facilities

- Reconstruct/Repurpose Entire Park
- Park is Under Planning Review by the City Council.
- Reconstruction to occur in 2019-2021
- Remove existing tennis courts

Notes & Comments

- Play equipment was removed in 2002
- Park has old restroom facilities that are currently not being used

Galloway Park	Ward 1
Location	1335 Dayton Road
Size	54.84 acres
Classification	Community Park
Adjacent Land Use	Residential

Existing Facilities

- Nature Area (Prairie)
- Open Play Area
- Trails
- Athletic Fields
- Disc Golf Course

Proposed Facilities

- Possible Extension of Disc Golf from 9 to 18 holes.
- Potentially irrigated fields

Notes & Comments

- Park could have additional infrastructure added but will need an athletic association partner to help fund proposed improvements.

Doris Kemp Park Ward 1

Location 921 Hwy 169

Size 16.62 acres

Classification Community Park

Adjacent Land Use Commercial, Park

Existing Facilities

- Nature Area
- Picnic Area
- Fishing Pier
- Flower Garden
- Trails

Proposed Facilities

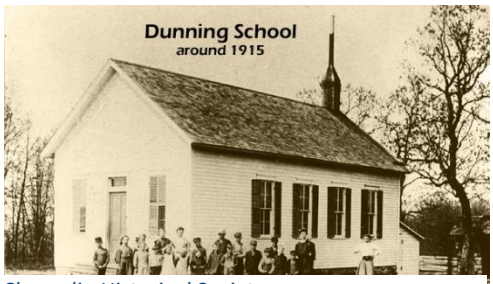
- Possible Picnic Shelter
- Remove Existing Deck Platform

Notes & Comments

- Additional investments in the flower beds in cooperation with the Champlin Garden Club

Dunning School

Location	10908 West River Road
Size	1.0 acres
Classification	Historic Park
Adjacent Land Use	Residential
Existing Facilities	• Historic Building
Proposed Facilities	• 2017 exterior is being repaired from donation funding



Champlin Historical Society

Notes & Comments

- Continued maintenance improvements are necessary to preserve the building for future generations as conditions warrant.

Elm Creek Terrace Park Ward 1

Location	50 Trussel Ave N
Size	1.3 acres
Classification	Neighborhood Park
Adjacent Land Use	Residential
Existing Facilities	• Open Play Area • Play Equipment
Proposed Facilities	• • • •

Notes & Comments

- Playground equipment upgrade scheduled for 2027

Emery Village Park Ward 3

Location Emery Village Drive

Size 2.08 acres

Classification Neighborhood Park

Adjacent Land Use Residential

Existing Facilities

- Open Play Area
- Play Equipment
- Basketball Court
- Trails

Proposed Facilities

- Paint Basketball Courts

Notes & Comments

- Developed in 2006, scheduled for new equipment in 2026.

Evergreen Park Ward 4

Location 11304 Florida Ave N

Size 4.47 acres

Classification Neighborhood Park

Adjacent Land Use Residential

Existing Facilities

- 1 Basketball Court
- 1 Sand Volleyball Court
- Open Play Area
- Play Equipment
- Trails

Proposed Facilities

- Possibly Mini Disc Golf Course

Notes & Comments

- Playground equipment upgrade scheduled for 2029
- Basketball court repainted and reconstructed in 2017

Harold Johnson Park Ward 2

Location	9801 Elm Creek Parkway
Size	5.69 acres
Classification	Neighborhood Park
Adjacent Land Use	Residential
Existing Facilities	• 1 Basketball Court • Open Play Area • Play Equipment • Trails
Proposed Facilities	• • • •

Notes & Comments

- Playground equipment upgrade scheduled in 2033
- Trails updated in 2016 and 2017

Heights Park	Ward 1
Location	710 Parkview Lane
Size	3.29 acres
Classification	Neighborhood Park
Adjacent Land Use	Residential
Existing Facilities	• 1 Basketball Court • Open Play Area • Play Equipment • Trails
Proposed Facilities	• • • •

Notes & Comments

- Basketball Court repainted in 2017

Highpointe Park Ward 2

Location 10200 Goose Lake Parkway

Size 9.72 acres

Classification Neighborhood Park

Adjacent Land Use Residential

Existing Facilities

- 2 Tennis Courts
- 1 Ballfield
- Open Play Area
- Play Equipment
- Trails
- Sliding Hills

Proposed Facilities

-
-
-
-
-
-

Notes & Comments

- Playground equipment replacement scheduled in 2030
- Drainage swale cut down and trees planted in 2017
- Trails re-built in 2018

Jerry Ruppelius Athletic Complex Ward **2**

Location	10951 Elm Creek Parkway
Size	15.17 acres
Classification	Community Park
Adjacent Land Use	Residential
Existing Facilities	• 1 Soccer Field • 2 Ballfields • Open Play Area • Picnic Shelter • Youth Athletic Storage Facility • Play Equipment • Batting Cages
Proposed Facilities	

Notes & Comments

- Basketball court repainted in 2016

Josephine Nunn Park Ward 1

Location	12790 Monticello Lane N
Size	34.19 acres
Classification	Neighborhood Park
Adjacent Land Use	Residential
Existing Facilities	• Nature Area • Open Play Area • Play Equipment • Trails
Proposed Facilities	• • • •

Notes & Comments

- Playground equipment replaced in 2028
- Pave Trails as part of potential Elm Creek Greenway Corridor

Lakeside Park	Ward 2
Location	9410 Lakeside Trail
Size	2.8 acres
Classification	Neighborhood Park
Adjacent Land Use	Residential, Elm Creek Park Reserve

Existing Facilities

- 1 Basketball Court
- Nature Area
- Open Play Area
- Play Equipment
- Trails

Proposed Facilities

-
-
-
-

Notes & Comments

- Playground equipment scheduled for replacement in 2036. Equipment was replaced in 2012
- Basketball court was repainted in 2016

Mississippi Point Park Ward 1

Location 651 West River Road

Size 7 acres

Classification Community Park

Adjacent Land Use Residential

Existing Facilities

- Nature Area
- Boat Launch
- Shore Fishing
- Picnic Area
- Trails

Proposed Facilities

- Performance Center
- Picnic Shelter
- Bridge to D.C. Chandler in Lower Park
- Boat Docks

Notes & Comments

- Under planning and proposal with City Council in 2017/18.

Morningside Park	Ward 1
Location	13100 Union Terrace Lane
Size	0.5 acres
Classification	Neighborhood Park
Adjacent Land Use	Residential
Existing Facilities	• Play Equipment
Proposed Facilities	• • • •

Notes & Comments

- Consideration should be given to repurposing this park property.

Northland Park Ward 2

Location 8001-114th Avenue
North

Size 15.95 acres

Classification Community Park

Adjacent Land Use Residential

Existing Facilities

- 1 Warming House
- 1 Basketball Court
- 1 Football Field
- 2 Hockey Rinks
- 3 Ballfields
- Open Play Area
- Play Equipment
- Skating Rink
- Trails

Proposed Facilities

- Sand Volleyball Court
- Picnic Shelter
- Pave Trails in Ball Field Area
-
-

Notes & Comments

- Exterior of warming house needs upgrade in the next 5 years
- Interior was reconstructed in 2017
- New boards and rink in 2018
- Paint basketball court in 2018

Oak Creek Park	Ward 3
Location	1306 Pleasant View Lane
Size	2.51 acres
Classification	Neighborhood Park
Adjacent Land Use	Residential, Church
Existing Facilities	• 1 Basketball Court • 1 Ballfield • Open Play Area • Play Equipment • Trails • 1 Pickle ball Court
Proposed Facilities	• • • •

Notes & Comments

- Servant of Christ Church allows users to park in their parking lot to access the facilities.
- New trails and basketball court painted in 2017

Oxbow Park	Ward 4
Location	5250-109th Avenue North
Size	39.9 acres
Classification	Community Park
Adjacent Land Use	Residential, School
Existing Facilities	• Nature Area • Trails
Proposed Facilities	•

Notes & Comments

- Trails graded in 2016

Wethern Park Ward 1

Location 13325 Valley Forge Lane

Size 3.55 acres

Classification Neighborhood Park

Adjacent Land Use Residential

Existing Facilities

- 1 Basketball Court
- 1 Ballfield
- Play Equipment
- Trails
- 2 Pickle Ball Courts

Proposed Facilities

-
-
-
-

Notes and Comments

- Pickle Ball was added in 2016 and trails to the west

Pines Park Ward 4

Location 6001-115th Avenue
North

Size 2.71 acres

Classification Neighborhood Park

Adjacent Land Use Residential

Existing Facilities

- 1 Basketball Court
- 1 Hockey Rink
- 1 Ballfield
- Play Equipment
- Trails
- U9/U10 Soccer Field

Proposed Facilities

- Paved parking area
-
-
-

Notes & Comments

- Playground equipment scheduled for replacement in 2031
- Basketball court to be painted in 2018

Reynolds Park Ward 1

Location 821 Cartway Road

Size 5.33 acres

Classification Neighborhood Park

Adjacent Land Use Residential

Existing Facilities

- 1 Ballfield
- Open Play Area

Proposed Facilities

- Trail Head from Southwest Parking Lot

Notes & Comments

- Ball field was renovated in 2014/15
- Cartway Trail connection in 2017

Richardson Park Ward 1

Location 302 Colburn Street

Size 2.83 acres

Classification Neighborhood Park

Adjacent Land Use Residential, Commercial

Existing Facilities

- 1 Warming House
- 1 Hockey Rink
- 1 Soccer/Football field
- 2 Tennis Courts
- Skating Rink

Proposed Facilities

- Remove Existing Warming House and Add Temporary Warming House
- Re-position Hockey Rink to Allow U9/10 Soccer Field, and Football Practice Green Space
- Re-light and LED the Park and Tennis Courts
- Ball Field to be Eliminated

Notes & Comments

- Park to be reconstructed in 2018

Rosewood Park Ward 1

Location 618 West River Parkway

Size 0.23 acres

Classification Neighborhood Park

Adjacent Land Use Residential

Existing Facilities

- Play Equipment

Proposed Facilities

-
-
-
-

Notes & Comments

- Playground equipment scheduled for replacement in 2029

Shores Park Ward 3

Location 7003 River Shore Lane

Size 1.41 acres

Classification Neighborhood Park

Adjacent Land Use Residential

Existing Facilities

- 1 Basketball Court
- Open Play Area
- Play Equipment
- Trails

Proposed Facilities

-
-
-
-

Notes & Comments

- Play equipment scheduled for 2025
- Basketball court resurfaced in 2016

Veteran's Memorial Park

Ward 1

Location 505 East Hayden Lake Road

Size 1.74 acres

Classification Community Park

Adjacent Land Use Residential, Commercial, Park

Existing Facilities

- Picnic Area
- Veteran's Memorial
- Picnic Shelter
- Trails

Proposed Facilities

-
-
-
-

Notes & Comments

- Constructed additional Veterans Memorial in 2016
- Consider larger picnic shelter for weddings in the future
- Tree for Christmas lighting in 2017

West River Park Ward 3

Location 12109 Mississippi Drive

Size 3.3 acres

Classification Neighborhood Park

Adjacent Land Use Residential

Existing Facilities

- 1 Basketball Court
- 1 Ballfield
- Open Play Area
- Play Equipment
- Trails

Proposed Facilities

- Paved parking area
-
-
-

Notes & Comments

- Basketball court repainted in 2016

Woodlawn Park Ward 2

Location 11217
Independence Avenue

Size 6.2 acres

Classification Neighborhood Park

Adjacent Land Use Residential

Existing Facilities

- 1 Basketball Court
- 1 Hockey Rink
- 1 Ballfield
- Open Play Area
- Play Equipment
- Trails
- Warming House
- Paved parking lot

Proposed Facilities

-
-
-
-

Notes & Comments

- Basketball court repainted in 2016

Exhibit 4.1: Champlin Parks

Park Name	Address	Classification	Acreage	Ball Fields	Basketball Courts	Boat Launch	Fishing Area	Gardens	Historic building	Hockey Rinks	Nautre Area	Open Play Area	Open Skate Area	Picnic Area/Grills	Picnic Shelter	Play Equipment	Playing Surfaces	Skate Park	Tennis Courts	Trails	Volleyball Courts	Warming House
Andrews Park	7200 - 117th Ave N	Community	43.72	5	1	0	0	0	0	2	X	X	1	1	1	X	5	0	4	X	2	1
Bartusch Park	11050 Quebec Ave N	Neighborhood	14.19	0	1	0	0	0	0	0	0	X	0	0	0	x	0	0	0	?	0	0
Brittany Park	11005 Brittany Drive	Neighborhood	17.49	2	1	0	0	0	0	1	0	X	1	0	0	X	0	0	0	0	0	1
D.C. Chandler Park	685 West River Road	Neighborhood	4.06	0	0	0	0	0	0	0	0	X	0	0	0	0	0	0	2	0	0	0
Donie Gallowway Park	1333 Dayton Road	Community	54.84	0	0	0	0	0	0	0	0	X	0	0	0	0	2	0	0	X	0	0
Doris A. Kemp Park	921 Hwy 169	Community	16.62	0	0	0	X	X	0	0	0	X	0	1	0	0	0	0	0	X	0	0
Dunning School	10980 West River Road	Historic	0.5	0	0	0	0	0	X	0	0	0	0	0	0	0	0	0	0	0	0	0
Elm Creek Terrace Park	50 Trussel Ave N	Neighborhood	1.34	0	0	0	0	0	0	0	0	X	0	0	0	0	0	0	0	0	0	0
Emery Farms Park	11780 Emery Village Dr. N.	Neighborhood	2.08	0	0	0	0	0	0	0	0	X	0	0	0	X	0	0	0	0	0	0
Evergreen Park	11304 Edgewood Ave N	Neighborhood	4.47	0	1	0	0	0	0	0	0	X	0	0	0	x	0	0	0	0	0	0
Harold Johnson Park	9801 Elm Creek Parkway	Neighborhood	5.69	0	1	0	0	0	0	0	0	X	0	0	0	X	0	0	0	X	0	0
Champlin Heights Park	710 Parkview Lane	Neighborhood	3.27	0	1	0	0	0	0	0	0	X	0	0	0	X	0	0	0	0	0	0
Highpointe park	10200 Goose Lake Parkway	Neighborhood	9.72	1	0.5	0	0	0	0	0	0	X	0	1	0	X	0	0	0	0	0	0
Jerry Ruppelius Athletic Complex	10951 Elm Creek Parkway	Community	15.17	2	1	0	0	0	0	0	0	X	0	0	1	X	1	0	0	0	0	0
Josephine Nunn Park	12790 Moticello Lane N.	Neighborhood	34.19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lakeside park	8410 Lakeside Trail	Neighborhood	2.82	0	1	0	0	0	0	0	0	X	0	1	0	X	0	0	0	0	0	0
Missisippi Point Park	651 West river Road	Community	7	0	0	1	X	0	X	0	0	0	0	1	0	0	0	0	0	X	0	0
Morningside Park	13100 Union Terrace Lane	Neighborhood	0.49	0	0	0	0	0	0	0	0	X	0	0	0	X	0	0	0	0	0	0
Northland Park	8001 - 11th Ave. N.	Community	15.95	3	1	0	0	0	0	2	0	X	1	0	0	X	1	1	0	0	0	1
Oak Creek Park	1306 Pleasant View Lane	Neighborhood	2.51	1	0.5	0	0	0	0	0	0	X	0	0	0	X	0	0	0	X	0	0
Oxbow Park	5250 - 109 Ave. N.	Undeveloped	39.9	0	0	0	0	0	0	0	X	0	0	0	0	0	0	0	0	X	0	0
Paul Wethern Park	13325 Valley Forge Lane	Neighborhood	3.55	1	1	0	0	0	0	0	0	X	0	0	0	X	0	0	0	0	0	0
Pines Park	6001 - 114th Lane N	Neighborhood	2.71	1	1	0	0	0	0	0	0	X	0	0	0	X	0	0	0	0	0	0
Reynolds Park	821 Cartway Road	Community	5.33	1	0	0	0	0	0	0	0	X	0	0	0	0	0	0	0	0	0	0
Richerdson Park	302 Colburn Street	Neighborhood	2.83	1	0	0	0	0	0	1	0	X	1	0	0	0	0	0	2	0	0	1
Rosewood park	618 West River Parkway	Neighborhood	0.23	0	0	0	0	0	0	0	0	X	0	0	0	X	0	0	0	0	0	0
Shores park	7003 River Shore Lane	Neighborhood	1.41	0	0.5	0	0	0	0	0	0	X	0	0	0	X	0	0	0	0	0	0
Veterans's Memorial park	505 E. Hayden Lake Road	Community	1.74	0	0	0	0	X	0	0	0	0	0	0	0	0	0	0	0	0	0	0
West River park	12109 Mississippi Drive	Neighborhood	3.36	1	1	0	0	0	0	0	0	X	0	0	0	X	0	0	0	0	0	0
Woodlawn Park	11217 Independence Ave	Neighborhood	6.2	1	1	0	0	0	0	1	0	X	1	0	0	X	0	0	0	0	0	1
			323.38	20	14.5	1	2	2	2	7	2	25	5	5	2	19	9	1	8	7	2	5

City of Champlin Park Area Coverage

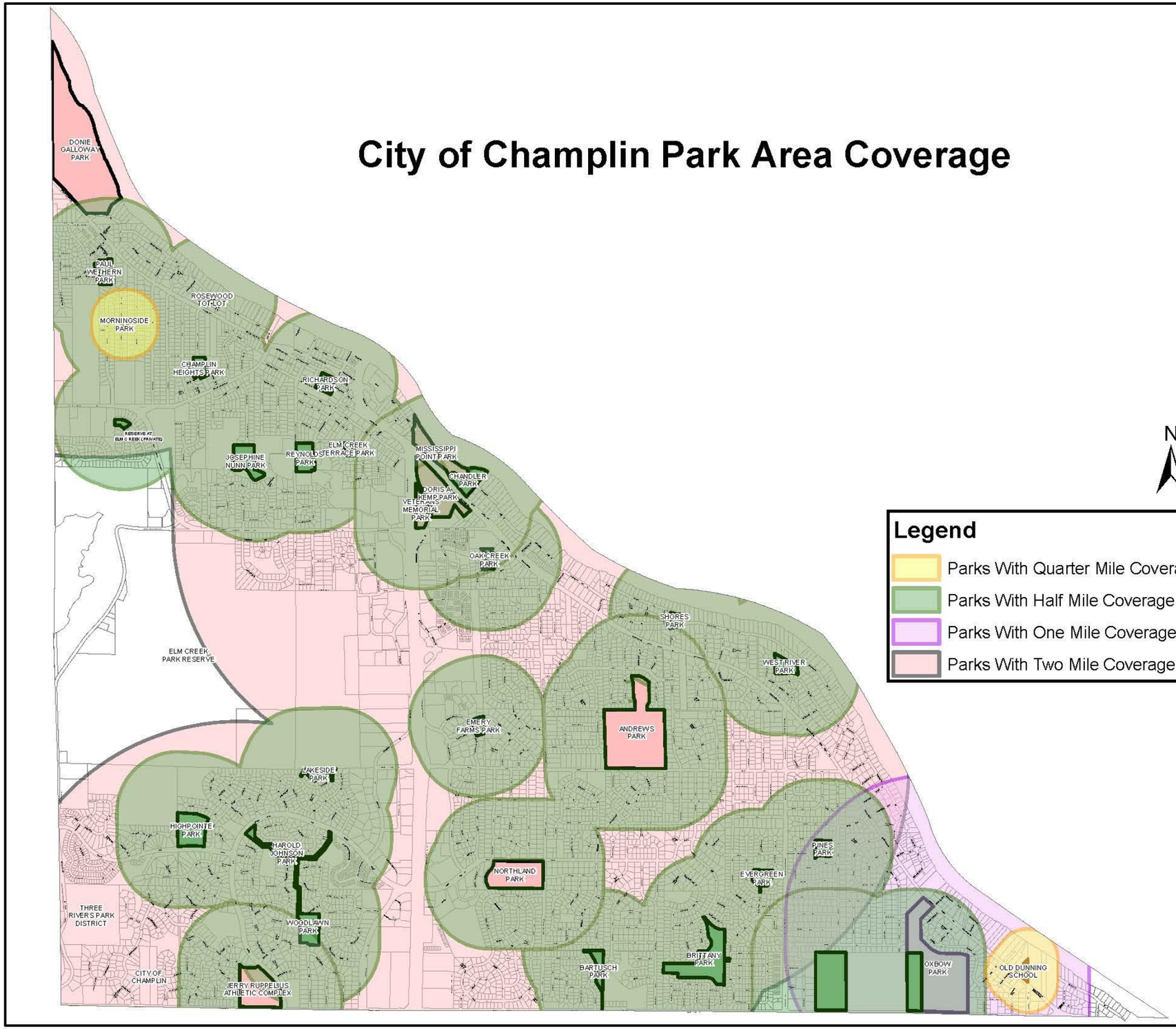
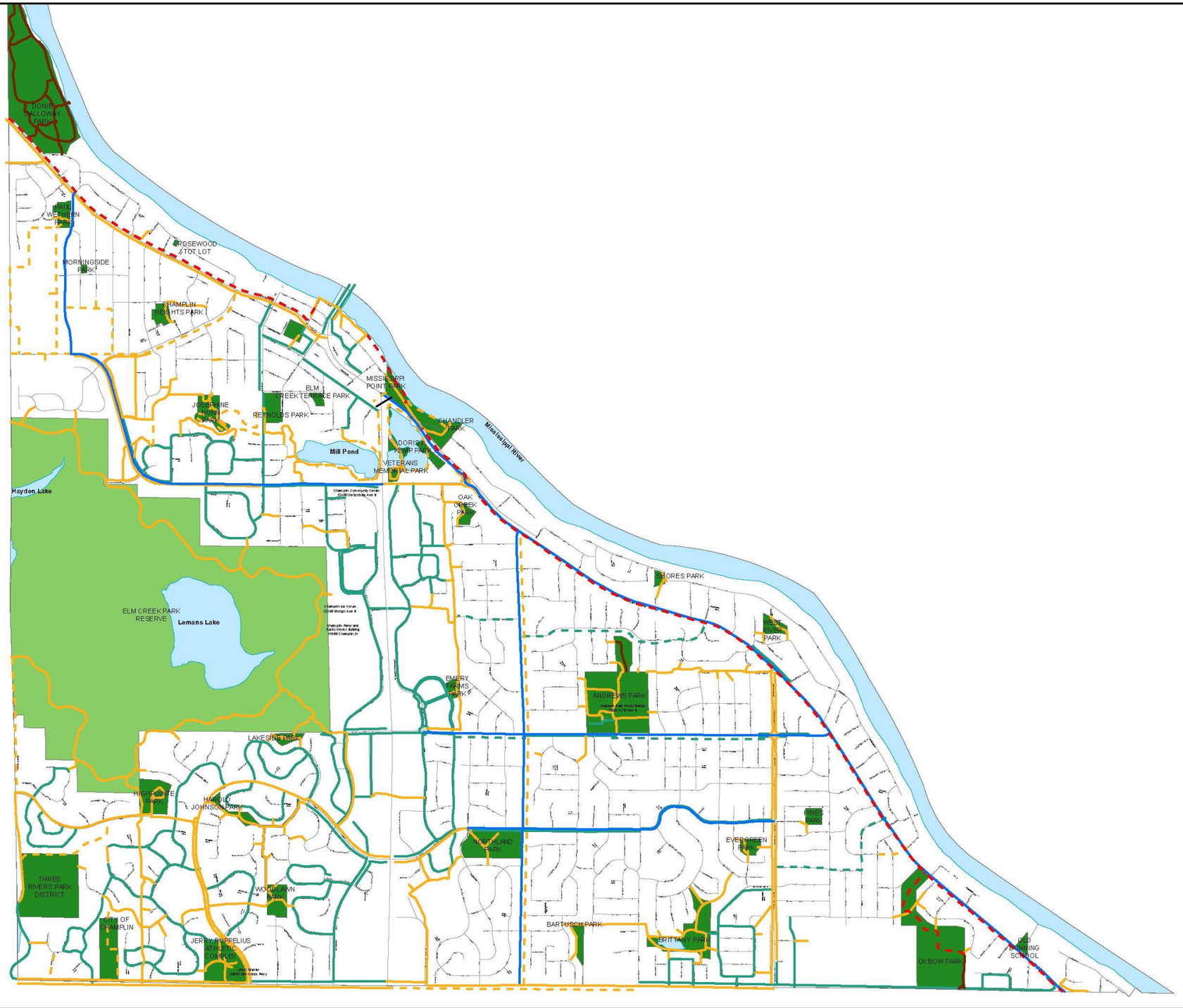


Exhibit 4-2: Parks and Trails Map



Revised
May 2019

Exhibit 4-3: Capital Improvement Plan

Department	#	Priority	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
REPLACE RUBBER FLOORING	*ICE-036*	n/a										15,000	*15,000*
SOUND SYSTEM	*ICE-037*	n/a	25,000										*25,000*
SEATING	*ICE-038*	n/a				5,000							*5,000*
CONCESSION STAND EQUIPMENT	*ICE-039*	n/a			5,000							12,000	*17,000*
BOARD REPLACEMENT	*ICE-041*	n/a		180,000									*180,000*
OUTSIDE RINK ACCESS IMPROVEMENTS	*ICE-043*	n/a										15,000	*15,000*
SCOREBOARD	*ICE-044*	n/a										25,000	*25,000*
DOMESTIC WATER HEATERS	*ICE-045*	n/a		10,000	10,000			10,000					*30,000*
ARENA LIGHTING	*ICE-048*	n/a	10,000										*10,000*
BATHROOM UPDATES	*ICE-050*	n/a					5,000					5,000	*10,000*
DOOR HARDWARE	*ICE-051*	n/a			10,000								*10,000*
LOCKER ROOM UPDATES	*ICE-052*	n/a	5,000					5,000					*10,000*
REFRIGERANT UPDATE	*ICE-053*	n/a		760,000									*760,000*
ICE FORUM Total			65,000	980,000	486,000	300,000	31,000	15,000	30,000			418,000	***2,325,000***
PARKS													
WARMING HOUSE REPAIR	*ANDREWS-03*	n/a			20,000								*20,000*
SPECTATOR PROTECTION	*ANDREWS-21*	n/a	20,000										*20,000*
PICNIC BUILDING	*ANDREWS-33*	n/a		5,000						5,000			*10,000*
PROGRAMMING BUILDING RENOVATIONS	*ANDREWS-38*	n/a											*5,000*
SPLASH PAD CONTROLLER	*ANDREWS-41*	n/a	5,000										*5,000*
ANDREWS SOCCER FIELDS	*ANDREWS-43*	1	10,000								10,000		*20,000*
REPLACE PLAYGROUND EQUIPMENT	*BARTUSCH-01*	n/a						65,000					*65,000*
PAVE PARKING LOT	*BRITTANY-03*	n/a	20,000										*20,000*
PICNIC SHELTER/PROGRAM BUILDING	*BRITTANY-10*	n/a				15,000							*15,000*
REPLACE HOCKEY RINK	*BRITTANY-12*	n/a	35,000										*35,000*
REPLACE HOCKEY RINK LIGHTS (1)	*BRITTANY-13*	n/a	25,000										*25,000*
NORTH END IRRIGATION ADDITION	*BRITTANY-16*	2		25,000									*25,000*
PARK REBUILD AS PART OF COMMONS (MISSISSIPPI SIDE)	*CHANDLER-03*	n/a			3,500,000								*3,500,000*
FACILITY LIGHTING	*ELM ATHL-05*	n/a								90,000			*90,000*
PARKING LOT	*GALLOWY-01*	n/a						110,000					*110,000*
JRAC BALLFIELD UPGRADES	*JRAC-01*	n/a			10,000	10,000							*20,000*
MISSISSIPPI POINT PARK COMMONS PROJECT	*MISS PT-10*	3	2,685,579	1,982,050									*4,667,629*
REMODEL WARMINGHOUSE	*NORTHLND-04*	n/a				15,000							*15,000*
SOFTBALL FIELD/PLAYGROUND SHELTER	*NORTHLND-26*	n/a							30,000				*30,000*

Department	#	Priority	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
PAVE PARKING LOT	PINES PK-02	n/a			50,000								50,000
REPLACE PARK BENCHES	PK & REC-03	n/a			5,000								5,000
REPLACE PICNIC TABLES	PK & REC-04	n/a	5,000		5,000				5,000				15,000
GRILLS	PK & REC-05	n/a								2,500			2,500
PLAYGROUND EQUIPMENT	PK & REC-14	n/a	0	45,000	0	50,000	0	50,000	0	45,000	30,000	0	220,000
SPRAY PARK	PK & REC-17	n/a	5,500		5,500					10,000			21,000
TIER 1 SKATE PARK UPGRADES	PK & REC-21	n/a			30,000								30,000
FRISBEE GOLF COURSE	PK &REC-22	n/a		5,000									5,000
BOCCE BALL COURT	PK &REC-23	n/a				0							0
VAN	PK &REC-26	n/a	25,000										25,000
REPAIR EXISTING FENCE	PK &REC-28	n/a	6,000	7,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000		48,000
LAND ACQUISITION	PK &REC-29	n/a	350,000	250,000	0	0	0	0	0	0	0		600,000
SEALCOAT TRAILS/PARKING LOTS	PK &REC-30	n/a	15,000	10,000	0	10,000	0	10,000	0	10,000	0	10,000	65,000
DOCK MISS PT PARK	PK &REC-32	n/a	100,000										100,000
COLOR COAT TENNIS COURTS	RICHARDSN-0 6	n/a						10,000					10,000
ADD SOCCER/FOOTBALL LED LIGHTS	RICHARDSN-1 4	n/a					40,000						40,000
BASKETBALL COURTS	SHORES-02	n/a									8,000		8,000
OVERLAY PKWY TRAILS	TRAIL SYS-05	n/a	60,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000		140,000
TRAIL DEVELOPMENT	TRAIL SYS-13	3	25,000	80,000									105,000
TRAIL 114TH/WISCONSIN TO TH 169	TRAIL SYS-15	n/a	20,000										20,000
TRAIL ALONG WRR	TRAIL SYS-21	n/a	35,000										35,000
EXISTING TRAILS SYSTEM REPAIRS	TRAIL SYS-22	n/a	45,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000		125,000
TRAIL REPAIR	WEST RIV-07	n/a	10,000										10,000
TRAIL DEVELOPMENT (BERRYKNOLL ADD.)	WETHERN-02	n/a					25,000						25,000
BASKETBALL COURTS	WETHERN-03	n/a									10,000		10,000
BASKETBALL COURT	WOODLN-04	n/a									8,000		8,000
PARKS Total			3,502,079	2,429,050	3,650,500	125,000	90,000	270,000	60,000	192,500	91,000	10,000	***10,420,129***

POLICE

OFFICE FURNITURE	POL-001	3	5,000	5,000		5,000		5,000		6,000			26,000
STATE COMPUTER COMPONENTS	POL-006	1		1,000		1,000	1,000			1,500			4,500
MARKED PATROL VEHICLES	POL-012	3	99,000	68,000	68,000	68,000	69,000	70,000	110,000	70,000	70,000	70,000	762,000
UNMARKED POLICE VEHICLES	POL-014	n/a		25,000				30,000				30,000	85,000
LASER RADAR	POL-016	2	5,200	5,200	7,200	5,200	7,200	5,200	7,300	5,200	7,300	5,200	60,200
CITY RADIOS CAR AND PORTABLES	POL-017	3	0	8,000	8,000	30,000	30,000	30,000	30,000	30,000	30,000	30,000	226,000
POLICE VEHICLE SETUPS/EQUIPMENT	POL-021	1	58,850	52,000	36,000	36,000	36,000	59,000	55,000	37,000	36,000	36,000	441,850
A.E.D. EQUIPMENT	POL-023	n/a	4,000				4,200	8,400	8,400	8,400	4,200	4,200	41,800
OUTDOOR WARNING SIRENS	POL-028	1	10,000	25,000		25,000		25,000		25,000		25,000	135,000

SECTION 5: ENVIRONMENTAL RESOURCES/RESILIENCE

5.1 INTRODUCTION

The Environmental Resources component of the Comprehensive Plan is intended to guide the use of the physical environment, protect and enhance environmental quality and promote a greater understanding of the physical environment. Since all human activity takes place in the physical environment, the health of the community is dependent on the health and well-being of the environment.
Natural resources serve as neighborhood enhancements, economic development, image, beautification, parks, recreation and leisure enjoyment. Natural resources include but are not limited to trees, wildlife, wetlands, waterways, ponds, soils, and ground water.

Champlin is fortunate to have two major natural areas that were former wildlife management areas owned by the State, along with four other significant natural resource areas. The Mississippi River and the Three Rivers Park District, Elm Creek Park Reserve property provide the City with unique natural amenities uncommon to many other communities. Further, the Elm Creek, Oxbow Park and Galloway Park have a combination of wild and cultivated Minnesota native plants and pollinator friendly landscapes, established trees used by wildlife and public waters which the City has committed significant resources to improving.

Champlin has existing land uses including agricultural, commercial and residential development throughout the City. As the City develops and redevelops it will
work to improve the natural environment through repair and preservation of natural features. Community growth will be balanced with environmental improvements and protection through development projects that recognize and spotlight environmental features, such as the Mississippi River, Elm Creek, Mill Pond, lakes, wetlands and woodlands through good design. The City will analyze an entire development and the purpose of a resource and allow encroachments when there is minimal damage and overall benefit.

ENVIRONMENTAL SOURCES/RESILIENCE GUIDING PRINCIPLES

Protect and Enhance Open Space and the Natural Environment

- Promote the use of "green" technology and sustainable development
- Protect and improve our water resources and woodlands
- Facilitate open space preservation
- Respect the natural environment while managing growth
- Explore opportunities to connect with the Mississippi River and the Champlin Mill Pond

5.2 NATURAL RESOURCES

Several environmental features make the City of Champlin unique. The development and protection of these environmental characteristics is important for the future of the City.

OPEN SPACE

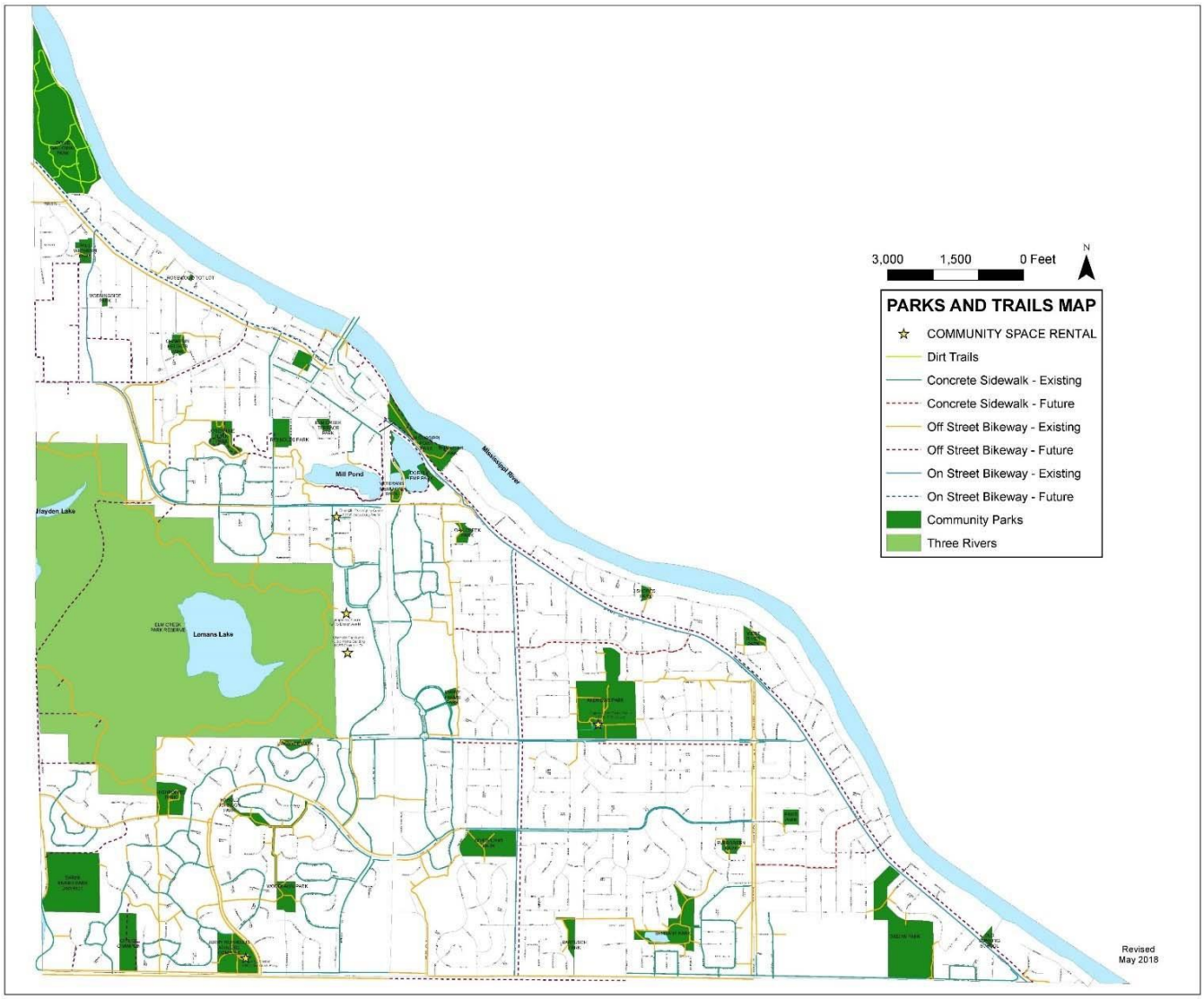
Champlin contains nearly 1,200 acres of parks and open space (23 percent of total land area). These open spaces are well-distributed throughout the City (see Figure 5.1). The preservation of open space areas is important to the diversity of Champlin's environment. The Elm Creek Park Reserve, Oxbow Park, Galloway Park, and numerous sump lots provide natural settings for wildlife and vegetation growth. Natural open spaces provide for passive recreation and aesthetic beauty.

As the City develops open spaces with prairie consideration should be given to planting pollinator friendly plants. The treatment and/or removal of diseased trees and removal of invasive species is also part of the City's open space management objective.

The Three Rivers Park District, managed Elm Creek Park Reserve, in Champlin is a significant community amenity. Three Rivers Park District governs the use of the Park Reserve. It is important for the City to protect the Reserve through the regulation of uses abutting it. Access from Champlin is important for the residents; however, the number of access points is limited to protect the natural features of the Park Reserve.

Oxbow Park and Oxbow Creek are important natural features to Champlin. Combined with the City's prairie restoration program, this area provides a unique educational opportunity for residents of Champlin and students within the Anoka- Hennepin School District. Along with the environmental benefit of the park, the area also serves as the storm water outlet for a large portion of southeastern Champlin and northeastern Brooklyn Park.

Figure 5.1: Parks and Open Space Map



Open Space Management Policies

1. Champlin has adequate and well-distributed parks and open spaces. Per the Parks, Recreation and Trails Plan, no additional open space is needed.
2. Coordinate and collaborate with Three Rivers Park District to allow for the continued use of the Elm Creek Park Reserve by the residents of Champlin.
3. Regulate development of property adjacent to the natural open spaces through the zoning ordinance and via the Planned Unit Development (PUD) process.

4. Monitor the border areas between development and open space to ensure that no dumping of material occurs that may damage the environment of the areas.
5. Enhance open space areas through planting of prairie grass, pollinator plants and natural/native vegetation.
6. Remove and/or treat diseased trees and remove invasive species.

FOREST AND WOODLANDS

Trees conserve energy, clean the air, protect rivers and streams and provide a home for wildlife. The City of Champlin's woodlands line the Mississippi River shore, diminishing as they stretch to the southeast. Champlin's primary woodland areas border the City's other two natural watercourses – Elm Creek and Oxbow Creek – appearing more sporadically in clusters around the south side of Lemans Lake. Figure 4.2 depicts the Minnesota Land Cover Classification for Champlin.

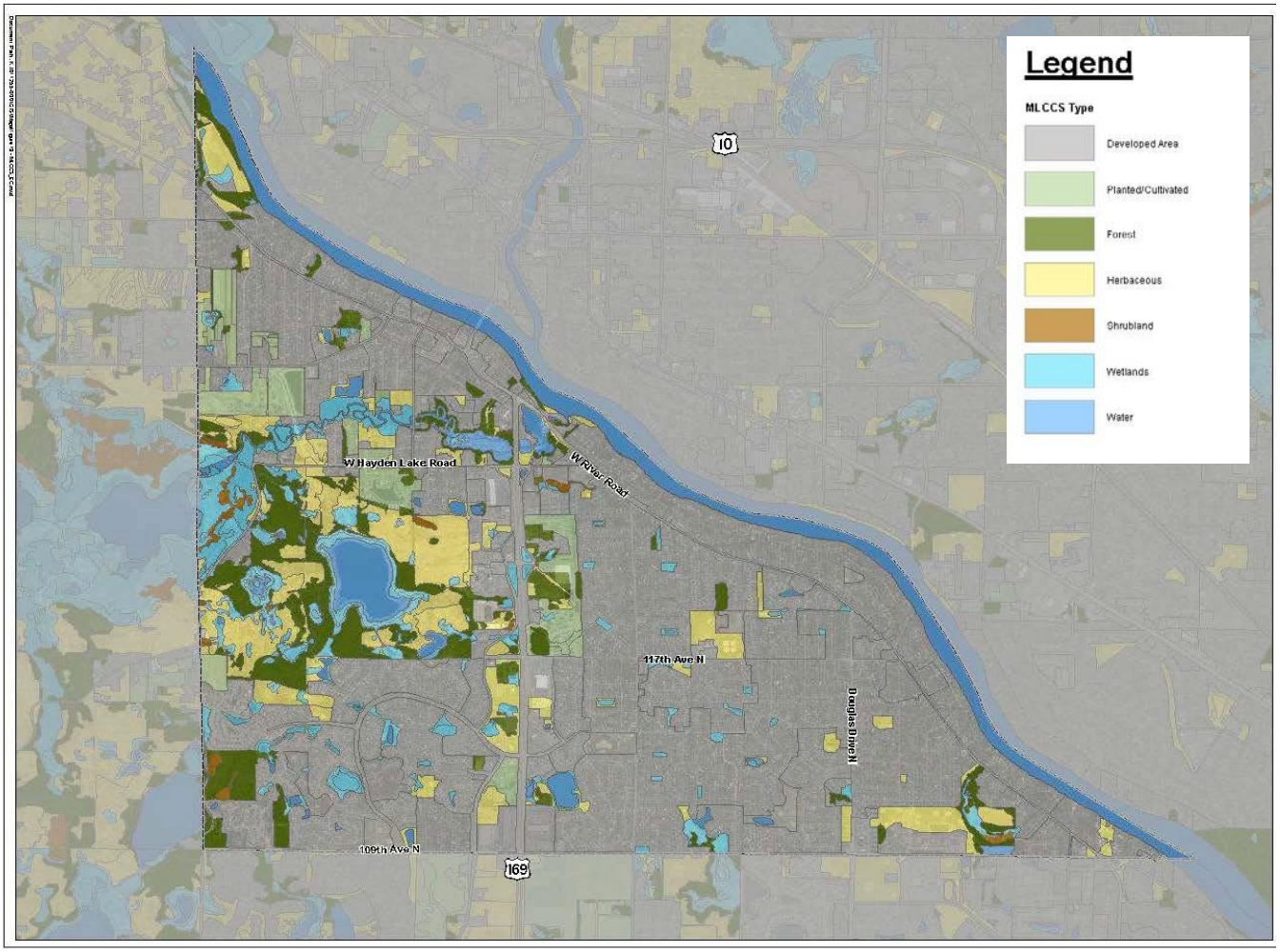
The concern for protecting woodlands extends beyond the recreational and aesthetic benefits. Woodlands moderate climatic conditions, such as high winds and flooding and thereby assist in protecting the watershed from siltation and erosion. In addition, the ground within a woodland area can act as a filter to recharge groundwater reservoirs. The trees act as a natural air filter while moderating temperature extremes.

In some instances, ease of design and reduced construction costs may lead to clear-cutting and leveling sites for home construction. In existing wooded areas, where it is desirable to preserve as much of the woodland ecology as possible, cluster development should be encouraged and plats designed to minimize tree removal.

Although woodlands are subject to the potential threat of urban development, experts have recognized that disease, natural disasters and an aging tree population must be considered as threats to tree loss. With the spread of Emerald Ash Borer, Dutch Elm Disease and Oak Wilt, there is concern of losing natural stands of trees. Buckthorn causes the diminishing of native trees and should be removed. To reduce the effects of tree disease, the City of Champlin will encourage the planting of a wide variety of tree species with a specific focus

on trees native to Champlin.

Figure 5.2: Land Cover Classification Map



Forest and Woodland Management Policies

1. During public and private construction, the removal of trees should be limited with replanting required where tree removal is in excess of established maximums.
2. Subdivision regulations shall require identification of existing trees and trees to be removed with priority on maintaining a variety of trees and trees native to Minnesota. Tree replacement plans should include a variety of types of trees with a focus on trees native to Minnesota.
3. Cluster developments should be encouraged in areas containing forests or woodlands to preserve the maximum number of trees and trees identified as having a high value.
4. Clear cutting of trees shall be prohibited with limited exception granted exclusively by permit.

5. Continued tree planting for residential, commercial and industrial projects shall be required with a focus on planting a variety of trees and trees native to Minnesota.
6. Encourage the replacement of trees lost to disease with the planting of a variety of trees, with an emphasis on trees native to Champlin.
7. Implement the disease and invasive species control plan to minimize the loss of existing trees.
8. Increase the public land and boulevard planting programs.

WATER RESOURCES

Preservation of the water resources within and adjacent to the City of Champlin takes on many dimensions. Champlin's water resources do not end with the actual water surfaces such as the Mississippi River, Elm Creek or Oxbow Creek; it includes the land that surrounds the resources (shorelands), natural low areas that often times contain aquatic vegetation and water (wetlands), non-surface water (groundwater), areas that contain seasonal water or event water (floodplains) and man-made water courses (drainage swales and storm sewers). Because of the interconnection among the variety of water resources, it is important to preserve them all.

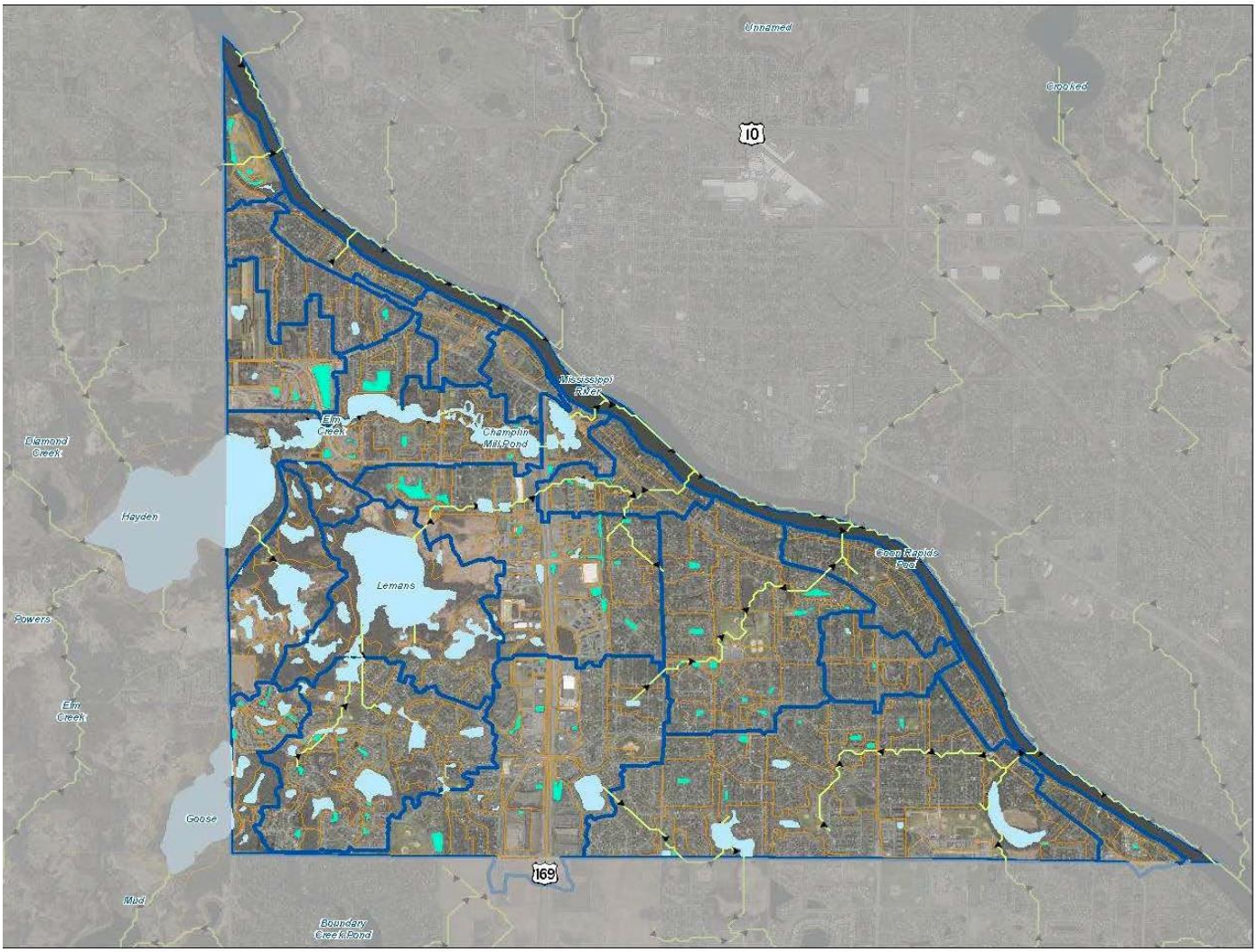
The City has developed a Surface Water Management Plan (attached as **Appendix A**). This Plan protects water resources and is a required plan by regulating agencies including the BWSR Bureau of Water and Soil Resources, Elm Creek Watershed and West Mississippi Watershed.

<u>Natural Watercourse</u>

A natural watercourse is a channel for water movement, such as creeks, streams or rivers. The City of Champlin contains three major natural watercourses that provide natural enhancement to the community, natural preserves and storm

water protection. The primary watercourse is the Mississippi River and the other two are Elm Creek and Oxbow Creek, both of which flow to the Mississippi River.

Figure 5.3: Surface Water Drainage District Map



The Mississippi River is by far the most important natural watercourse in Champlin. Not only does it provide an amenity and recreational feature not found in many metropolitan communities, it is the main water body for all storm water. Both watersheds in Champlin; Elm Creek and West Mississippi, outlet to the Mississippi River. Because of this, it is important to protect and preserve the Mississippi River water flow. In protecting the Mississippi River, it is important to preserve the banks and outlets.

The Elm Creek is located in the northwest part of Champlin and runs from the western boundary to the Mississippi River. It is part of a large watershed including: Champlin, Dayton, Maple Grove, Corcoran, Plymouth and Medina. The Elm Creek travels through the Mill Pond and then into the Mississippi River. Elm Creek is associated with a large amount of open space providing vegetated open space adjacent to the water. The City has invested significant resources in improving the streambank and water quality of the Elm Creek. As development continues to move west, it will be important to protect the Creek with building setbacks, natural open space dedications, housing clusters, National Urban Runoff Program (NURP) ponds and Infiltration Basins.

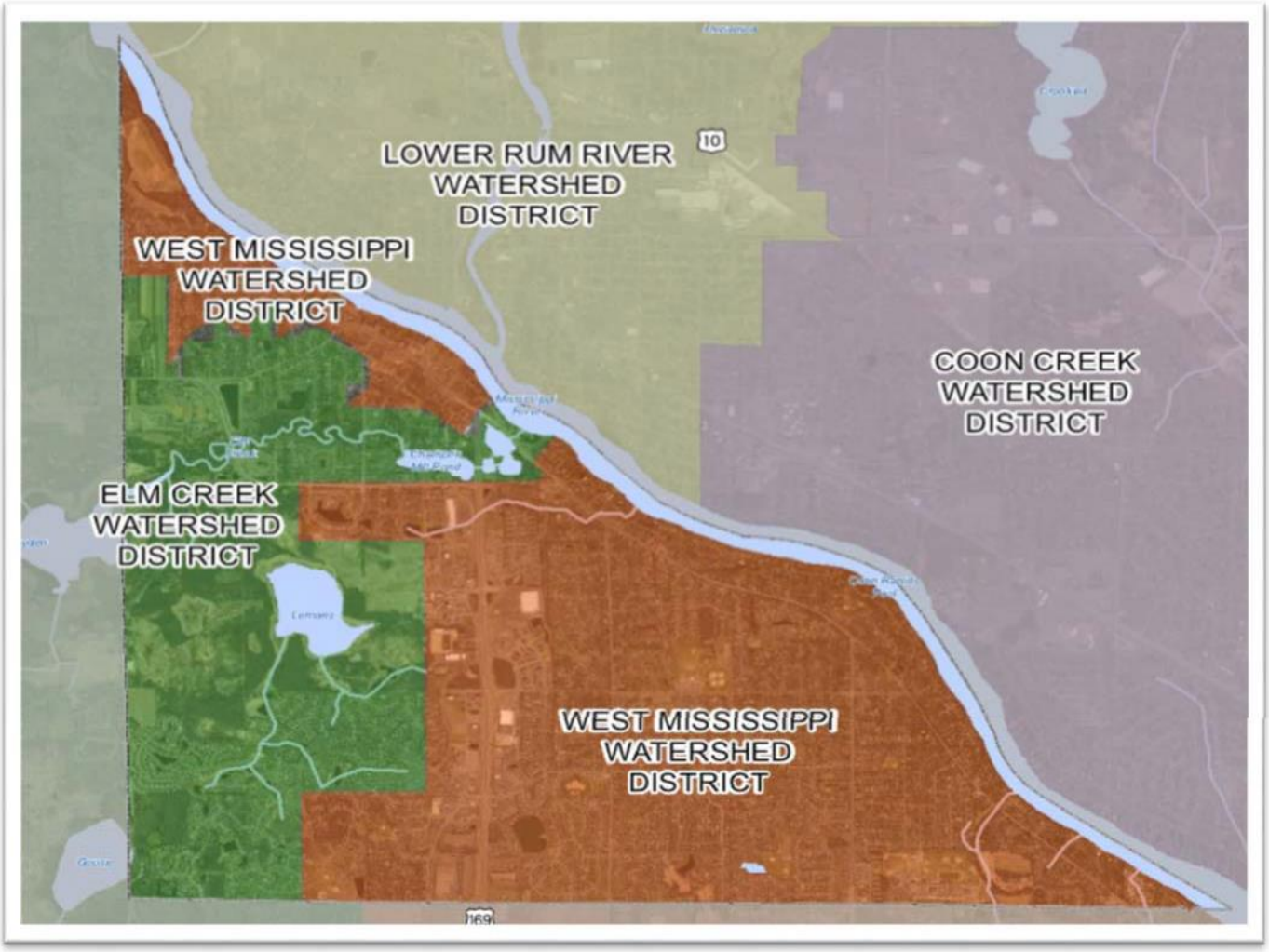
Elm Creek Bridge at Josephine Nunn Park

Oxbow Creek, located in the southeastern part of Champlin, is a natural watercourse that runs from Champlin's southern border to the Mississippi River. A majority of the Creek is located within the Oxbow Nature Park. Oxbow Park provides a natural setting for the Creek. Oxbow Creek is part of Champlin's storm water system creating the need to preserve the entire watercourse in the future to allow for the proper flow to the Mississippi River. With storm water runoff in the area increasing, there may be a need to better define the watercourse to protect the natural environment and development surrounding it.

The Mississippi River, as it flows through the Twin Cities Area, is exciting because of the contrast in both natural and man-made features. From a shallow stream, scattered with sand bars and sandy banks, to a commercially navigable river with rock bluffs; from rural open space to commercial and industrial developments; and from residential subdivisions to heavily wooded natural areas; the varied uses and features dictate the need for the State Critical Area designation of the Mississippi River corridor. The portion of the Mississippi River running through

the Cities of Champlin, Anoka, Dayton and Ramsey represent the northern most reach of the Critical Area.

Figure 5.4: Watershed District Boundaries



The City's Surface Water Management Plan requirements are guided by Champlin's StormWater Management Guidelines/ordinances and Watershed Districts/State Agency rules.

The Surface Water Management Plan addresses:

- Flood Prevention
- Water Quality Improvement
- Promote Ground Water Recharge
- Preservation of Lakes and Streams
- Reduction of Erosion and Sedimentation
- Protect and Enhance Fish and Wildlife Habitat

Water Resources / Water Protection Strategies

- Implementation of Storm Water Guidelines for Water Quality
- Improved Native Buffer Requirements
- Ground Water Recharge through Infiltration
- Improved Monitoring Program
- Capital Improvements for Water Quality
- Education of Public through Projects and ERC initiatives Progress towards meeting goals for Pollutant Load Reduction

Shoreland

The Minnesota Municipal Shoreland Regulations apply to all lands within 300 feet of the ordinary high-water mark of rivers and creeks and 1,000 feet of lakes. The City of Champlin has two areas the Elm Creek and Mill Pond which are subject to these rules. The regulations have created three shoreland categories, each with separate development standards. Shoreland property in Champlin has been designated General Development. The City is committed to working with the DNR and the Elm Creek Watershed District to apply all shoreland regulations that are determined appropriate for the Elm Creek and Mill Pond.

2018 Mill Pond Restoration

Water Quality Projects

1. Mill Pond Shoreline and Aquatic Habitat Restoration 2017
2. Elm Creek Dam 2016
3. Elm Creek Phase I 2012-13 (Jo Nunn Park)
4. Independence Raingarden 2017
5. Storm Water Asset Management Program (SWAMP) 2018

To protect the Mississippi River, the Mississippi River Corridor Critical Area Plan outlines the need for land use controls (lot size, setbacks, density, building heights, public access, re-evaluation of land use and site review standards), including the protection of natural vegetation and river banks.

ERC Programs: Earth Day Cleanup - Recycling Programs -Grants - Farmers Market and Special Events - Natural Resource Speakers

Education: Mill Pond Citizen Science Projects - Elm Creek Dam /Mill Pond Information Boards - Raingarden Workshops- City Newsletter Articles

Floodplain

The State of Minnesota adopted the Flood Plain Management Act in 1969. The Act requires all local units of government to adopt, enforce and administer a Flood Plain Ordinance. The Flood Plain Act was in response to the financial and personal losses resulting from floods. In order to stop the continued escalation of public costs related to flooding, the emphasis in Flood Plain Management was shifted from flood controls (dikes, channelization, etc.) to regulatory controls (zoning and subdivision regulations). The regulatory approach establishes guidelines requiring that part of the flood plain, which is more susceptible to flooding (floodway), be left in a natural state or developed under intense restrictions. In the less susceptible parts (flood fringe), a broader range of land use activities can be permitted.

There are two areas subject to flooding in Champlin. Along Elm Creek, there is a floodway and flood fringe extending south of the present creek channel toward the Mississippi River. In February of 2018, FEMA revised the flood plain boundaries removing approximately 60 acres from the flood hazard area. These revisions were made possible by the reconstruction of the Elm Creek Dam constructed in 2016. The Mississippi River also has small areas designated floodway and flood fringe, the most sizable being in the northwest stretch of the River.

Elm Creek Dam

Wetlands

Wetlands are governed by the Wetland Conservation Act of 1991(WCA). Local Governing Units (LGUs) are required to administrate the rules. The intent of the WCA is to promote not net loss of wetlands.

Wetlands are low lying areas dominated by hydrophytic vegetation or covered with shallow or intermittent waters. Swamps, marshes, bogs and other low lying areas are wetlands, and may occur as part of a river, stream, drainage way or as a low area of upland. Wetlands serve as floodwater storage and retention areas, nutrient assimilation, sediment entrapment, ground water recharge, low flow augmentation, aesthetics and recreation, shoreland anchoring and erosion control.

Because of the number of uses of wetlands and the growing concern regarding the loss of wetlands throughout the State, the legislature adopted the 1991 Wetland Conservation Act. The intent of the Act is a net increase in the number of Minnesota wetlands. The implementation strategy is to preserve wetlands

through avoidance or the replacement of wetlands as required by the Wetland Conservation Act.

The City of Champlin contains wetlands that have been published by the US Fish and Wildlife Service. Wetlands and Lakes are shown on the DNR Public Waters/wetland inventory map. Also, in 2009 the City of Champlin completed a Functional Assessment of Wetland with in the City. This assessment was utilized by the by West Mississippi Water Management Commission in developing their Wetland Management Plan.

The City prepared a wetland inventory in 2009. There are two existing wetland inventories on hand including the National Wetland Inventory (NWI) and the Protected Waters Inventory (DNR).

The size and location of wetlands are important in determining the value in maintaining water quality, minimizing flood damage and preserving natural habitat.

- Habitat Restoration
- Water Quality Improvement
- Public Education
- Public Access and Recreation
- Meeting Regulatory Requirements

Groundwater

The City has an active ground water protection plan. The water supply plan is contained in Section 7.

Water Preservation Policies

1. The City adopted Storm Water Management Design Guidelines to meet NPDES II requirements.
2. Prepared an inventory of wetland areas in the City.

3. Encourage the maintenance of the natural environment of the River and encourage uses, which will not be a cause of deterioration of this natural environment.
4. Preserve adequate area for impoundment of flood waters in the flood plain.
5. Consider adopting the DNR's state shoreland regulations.
6. Continue to enforce the floodplain restrictions.
7. Require riverfront land use activity to preserve and enhance the River corridor area.
8. Protect resources through enforcement of existing legislation, new regulations and design guidelines.
9. Create development and improvement design guidelines to achieve the vision articulated in the Plan.
10. Require the extensive use of plant materials on riverfront areas to control erosion.
11. Natural watercourses shall be maintained to handle storm water runoff.
12. Preserve and manage the use of wetlands and major aquifer recharge areas to insure the continued performance of their natural functions.
13. Preserve natural drainage ways and recharge areas to insure the continued performance of their natural functions.
14. Subdivision regulations shall require protection of natural watercourses should meet minimum standards established by the DNR.
15. Comprehensive storm water drainage plans shall be completed prior to urban development.
16. Review developments as to their effects on the groundwater and prohibit development that will adversely affect it.

SOIL PRESERVATION

When land is designated for a particular use, it is essential that consideration be given to the limitations of various soil types. Soils vary greatly in composition, and this variation in soil properties impacts its productive capacity, it ability to support heavy loads and its ability to hold shape after excavation.

The Natural Resources Conservation Service has mapped and classified the soils of Hennepin County. The information is published in the Hennepin County Soil Survey. These soil classifications have been categorized according to suitability for urban development and can provide the following information:

1. Suitability of soils for intensive residential, commercial, industrial, recreation or agricultural land uses; and
2. Suitability of soils for building foundations.

Soil conditions that impact development are classified as slight, moderate and severe. Slight means that the soil conditions are minor and can be easily corrected. Moderate indicates that the soil conditions are limiting; but with proper design and planning limitation can be corrected for the intended use. Severe indicates that soil properties are not suitable for development and corrective measures require soil reclamation, intensive maintenance and/or special design.

Within Champlin, there are several areas containing severe soil limitations for urban development. According to the Hennepin County Soil Survey, the major problems are erosion of slopes with gradients that exceed 18 percent and high ground water levels.

Soil Preservation Policies

1. Developers shall follow the adopted NPDES II Rules and City Storm Water Guidelines.
2. Encourage residential and agricultural soil management practices that minimize siltation and pollution of rivers, lakes and streams.
3. Soil survey information shall be used as a basis for determining appropriate land use and building design.
4. Grading, filling and any topographical alteration shall not be permitted without a permit from the City.

SLOPE PRESERVATION

Regulating development on hillsides has not been a major concern of the northern suburbs of the Metropolitan Area due to the availability of flat land. The slopes, soil, vegetation and underlying geological formation of hillsides determine their susceptibility to erosion. Removal of vegetation from slops alters soil stability and increases erosion and siltation. Erosion is also caused by rain, wave action, and changes in the water elevation.

Champlin contains a few areas that are considered to have steep slopes. The Mississippi River bank, particularly in the north part of the City, and slopes of property in the southwest part of the City. Erosion is of special concern along the Mississippi River bank as some properties are experiencing problems aggravated by periods of high water and motorboat wakes.

It is necessary to identify slopes subject to erosion. Poorly designed or hillside

developments frequently result in a substantial cost to the public. Development standards are necessary to minimize this problem. Slopes prone to severe erosion should be protected by requiring developers to obtain a permit prior to any construction, grading or filling. Property owners planning to develop slopes subject to erosion should provide information demonstrating that proper construction will occur and that vegetative cover will be replaced.

RARE SPECIES

One of the species in Champlin in the Rare Features database is Blanding's Turtles (Emys blandingii). Blanding's turtles use upland areas up to and over a mile distant from wetlands, as well as wetlands. Uplands are used for nesting, basking, periods of dormancy, and traveling between wetlands. Because of the tendency to travel long distances over land, Blanding's turtles regularly travel across roads and are therefore susceptible to collisions with vehicles. Any added mortality can be detrimental to populations of Blanding's turtles, as these turtles have a low reproduction rate that depends upon a high survival rate to maintain population levels. Other factors believed to contribute to the decline of this species include wetland drainage and degradation, and loss of upland habitat to development.

The City shall adhere to recommendations from the DNR's Blanding's Turtle Fact Sheet for avoiding and minimizing impacts of this rare turtle.

5.3 ENERGY CONSERVATION

Most of the nation's and Champlin's energy comes from non-renewable sources such as petroleum, nuclear, coal, and natural gas. These resources are in limited supply as well as having been linked to negative environmental impacts. The City of Anoka Electric Utility, Connexus Energy, and Xcel Energy supply electricity to Champlin and have consistently worked to increase use of renewable-based systems. The City will continue to support those efforts as well as support residents and businesses to implement personal alternative energy systems.

SOLAR ACCESS

The City of Champlin has installed a solar system at its municipal campus. This project provides electricity to the grid. Along with serving as a demonstration project for the

community.

The City is committed to allowing business and resident access to direct sunlight for solar energy systems. Solar energy collectors are permitted uses in all of the City's zoning districts. Residents and businesses are encouraged to include such systems as part of their homes or buildings.

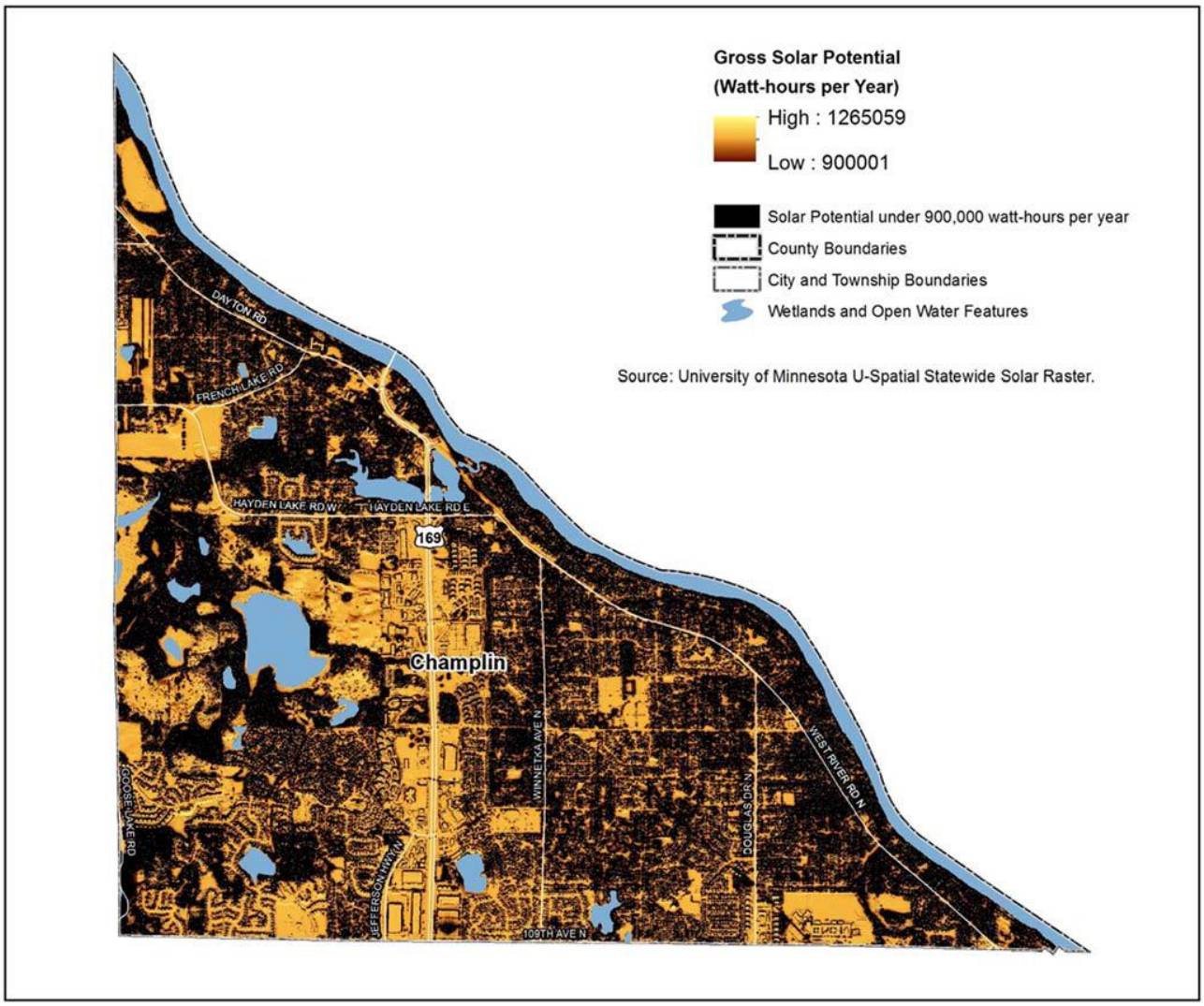
Gross and Rooftop Solar Resource Calculations

The gross solar potential and gross solar rooftop potential are expressed in megawatt hours per year (Mwh/yr), and these estimates are based on the solar map. These values represent gross totals; in other words, they are not intended to demonstrate the amount of solar likely to develop within Champlin. Instead, the calculations estimate the total potential resource before removing areas unsuitable for solar development or factors related to solar energy efficiency.

The gross solar generation potential and the gross solar rooftop generation potential for Champlin are estimates of how much electricity could be generated using existing technology and assumptions on the efficiency of conversion. The conversion efficiency of 10% is based on benchmarking analyses for converting the Solar Suitability Map data to actual production, and solar industry standards used for site level solar assessment. Champlin's community totals are shown in the table below:

	Gross Potential (Mwh/yr)	Rooftop Potential (Mwh/yr)	Gross Generation Potential (Mwh/yr)	Rooftop Generation Potential (Mwh/yr)
Champlin	10,493,166	1,060,416	1,049,316	106,041

Figure 5.5: Champlin Solar Potential Map



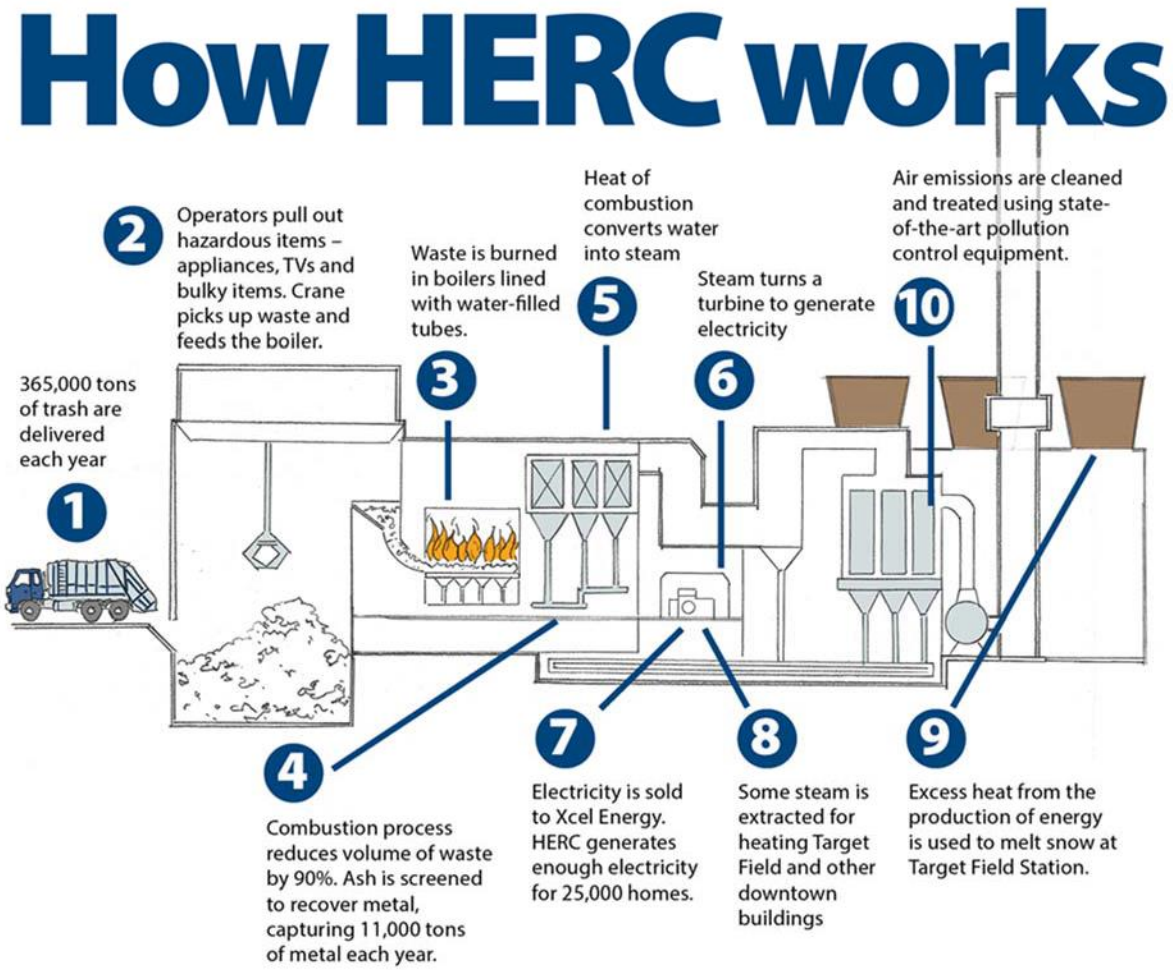
WIND

Wind turbine generated power has been a popular energy choice for utility companies in recent years, albeit in rural areas. As individual wind system technology improves, the City will work with businesses and residents who would like to own and operate such systems on their properties in the suburban environment. City ordinance does limit the height of structures on certain zoning districts.

BIOMASS

Biomass can be used to generate electricity and heat. Resources include solid

waste, landfill gas, wood waste and agricultural byproducts. Champlin contracts for disposal of its solid waste at the Hennepin Energy Recovery Center (HERC).



GREEN BUILDINGS

Many businesses and residents have included environmentally-friendly or sustainable components into constructing or remodeling buildings or homes. These components could include the use of recycled or re-used materials, sustainable or low-impact materials, low-consumption utilities, sky-lights or

properly placed windows, and energy-saving mechanical equipment and appliances. Champlin will continue to encourage residents and businesses to implement the U.S. Green Building Council's design guidelines for sustainability. The following is from the USGBC's website (www.usgbc.org) describing LEED:

The Leadership in Energy and Environmental Design (LEED) Green Building Rating System™ is the nationally accepted benchmark for the design, construction, and operation of high performance green buildings. LEED gives building owners and operators the tools they need to have an immediate and measurable impact on their buildings' performance. LEED promotes a whole-building approach to sustainability by recognizing performance in five key areas of human and environmental health: sustainable site development, water savings, energy efficiency, materials selection, and indoor environmental quality.

The City is committed in including these design guidelines in public facilities owned and operated by the City and encourages our governmental partners (Hennepin County, school districts, state, and federal governments) to do the same on projects within Champlin. Any sustainable design that would yield long-term energy savings is strongly encouraged, provided that it is cost-effective to do so.

LAND USE

As described in the Land Use Plan (Section 2) and the Transportation Plan (Section 5), the City is encouraging land use choices that allow for walking and bicycling short trips, rather than driving. Pedestrian connections (sidewalks and trails) between residential areas and business areas will provide a safe, convenient, environmentally-friendly neighborhood.

Alternative Energy Policies

1. Examine current building heights, lot sizes and setbacks in order to ensure the protection of solar access rights of all residents.
2. Establish a minimum degree of solar access protection by adopting policies and regulations establishing solar access protection.
3. Establish land use regulations for the protection of solar access to rooftops and south building elevations in all new residential developments and to rooftops for commercial and industrial uses.
4. The City of Champlin does not have the authority to require that public utilities offer a off peak electrical program. However, the City is open to the development of charging stations and would support the development of off-peak electrical programs developed by electrical providers.

5.4 IMPLEMENTATION STATEMENTS: NATURAL RESOURCES

1. Adopt ordinances consistent with Minnesota Rules for the Mississippi River Corridor Critical Area. The Ordinance revisions are planned for consideration in late 2020.
2. Explore the need for a Wetland Ordinance. A Wetland Ordinance is

planned for consideration in late 2020.

3. Monitor future development to minimize adverse environmental impact on Champlin's natural amenities. On-going.
4. Encourage the use of alternative energy sources.
5. Review proposed development to reduce pollutants in groundwater and storm water runoff.
6. Promote policies to protect and improve air quality.
7. Increase public awareness of the proper methods to care for hazardous waste materials, methods or solid waste reduction and recycling.
8. Encourage alternative transportation to decrease environmental impact.
9. Preserve historic and archeological sites as required by State and Federal law.
10. The City will incorporate citizen science.
11. The City will continue to sponsor and/or support community events focused on improving water quality (i.e. Earth Day clean-up event).

LOCAL SURFACE WATER MANAGEMENT PLAN

FOR THE

CITY OF CHAMPLIN, MINNESOTA

FINAL DRAFT
January 2019

Prepared By:

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763-541-1700 (Fax)

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SECTION 1

1. EXECUTIVE SUMMARY

1.1. Local Surface Water Management Plan Purposes

This Local Surface Water Management Plan (Surface Water Management Plan, LSWMP, SWMP) will serve as a comprehensive planning document to guide the City of Champlin in protecting its surface water resources, as well as provide a guide to the City, its residents, and developers on surface water management. This plan has been created to meet the requirements detailed in Minnesota Statutes 103B and Minnesota Rules 8410, administered by the Minnesota Board of Water and Soil Resources. This plan is also consistent with the goals and policies of the Metropolitan Council's *Water Resources Management Policy Plan*, and the watershed districts having jurisdiction within the City: Elm Creek Watershed Management Commission and Shingle Creek/West Mississippi Watershed Management Commission. This plan may be periodically amended to remain current with local practices and policies. The purposes of the water management programs are to:

- Protect, preserve, and use natural surface and groundwater storage and retention systems;
- Improve water quality and address any existing TMDLs;
- Minimize public capital expenditures needed to correct flooding and water quality problems;
- Identify and plan for means to effectively protect and improve surface and groundwater quality;
- Prevent erosion of soil into surface water systems;
- To promote groundwater recharge, where beneficial;
- Protect and enhance fish and wildlife habitat and water recreational opportunities; and
- Secure the other benefits associated with the proper management of surface and groundwater.

The Champlin Local Surface Water Management Plan addresses these purposes.

1.2. Executive Summary

The Champlin Surface Water Management Plan is organized as follows:

- ***Section 1.0 Executive Summary*** provides background information and summarizes the plan contents.
- ***Section 2.0 Land and Water Resource Inventory*** the physical setting; the history, natural resources and land uses within the City.
- ***Section 3.0 Agency Cooperation*** outlines other governmental controls and programs that affect stormwater management.
- ***Section 4.0 Assessment of Issues and Corrective Actions*** presents existing and potential water resource related concerns within the City. Corrective actions were identified for each issue.
- ***Section 5.0 Goals and Policies*** outlines the City's goals and policies pertaining to water management.
- ***Section 6.0 Implementation Program*** presents the implementation program for the

City of Champlin, which includes defining responsibilities, prioritizing, and listing the program elements.

- ***Section 7.0 Financial Considerations*** outlines the continued administration of this plan with respect to plan updates and amendments.

- ***Section 8.0 Amendment Procedures*** discusses the procedures to be followed if this plan is amended.

- ***Appendices*** are included in the back of the plan and are summarized below. These documents are included because they provide supporting information to the main body of the plan, are useful information, and/or are required to be included in this plan update. Direct website links to relevant reports or documents are provided throughout the report as appropriate.

    - Appendix A – Figures
    - Appendix B – Relevant City Ordinances
    - Appendix C – NPDES MS4 Documents
    - Appendix D – Stormwater Management Design Guidelines
    - Appendix E: Water Resource Related Agreements
    - Appendix F: Wetland Management Strategies
    - Appendix G: Wetland Seed Mix
    - Appendix H: Stormwater System Modeling Information
    - Appendix I – Elm Creek Watershed Management Commission Rules
    - Appendix J – Shingle Creek/West Mississippi Watershed Management Commission Rules

Website hyperlinks are provided throughout this report as additional material is referenced.

1.3. Personnel Contacts

To implement this plan, a coordinated water resource management approach must be used. This approach utilizes the services of personnel within the City and surrounding communities, as well as personnel associated within Elm Creek Watershed Management Commission and Shingle Creek/West Mississippi Watershed Management Commission.

The primary implementation responsibility will lie with the appropriate staff members at the City. Assistance from the surrounding municipalities, Watershed District, and Conservation District will also be expected. Outlined below are the names, addresses, and telephone numbers of personnel having responsibilities for overseeing or implementing various aspects of the Surface Water Management Plan.

City of Champlin
Todd Tuominen
11955 Champlin Drive
Champlin, MN 55316
(763) 421-8100

Elm Creek Watershed Management Commission
Judie Anderson
3235 Fernbrook Lane N
Plymouth, MN 55447
(763) 553-1144

Shingle Creek and West Mississippi River Watershed Management Commission
Judie Anderson
3235 Fernbrook Lane N
Plymouth, MN 55447
(763) 553-1144

Metropolitan Council
Judy Sventek
390 Robert St. North
St. Paul, MN 55101
(651) 602-1156

Wetland Conservation Act (WCA)
City of Champlin
11955 Champlin Drive
Champlin, MN. 55316
(763) 421-5256

SECTION 2

2. LAND AND WATER RESOURCE INVENTORY

2.1. Location and History

The City of Champlin is located in northeast Hennepin County along the Mississippi River **(Figure 1)**. Total area within the corporate limits is approximately 8.7 square miles. The City is bordered by Dayton, Maple Grove, Brooklyn Park, and Coon Rapids. The major transportation corridors within Champlin are along U.S. Highway 169 and County Road 12.

Champlin is considered a developed community by the Met Council. The majority of the City's land use is low density housing. **Table 2.1** shows the current and projected population through 2040.

Table 2.1 Champlin Population

Year	Population	Households
2010	23,089	8,328
2016	23,343	8,442
2020	23,200	8,800
2030	24,200	9,500
2040	24,000	9,600

Sources: Metropolitan Council Population/Household Estimates

2.2. Physical Setting

2.2.1. Topography and Geology

The southwestern portion of Champlin can be described as gently rolling with large depressions containing wetlands, the largest of which is Lemans Lake. From the northwest to the southeast, the topography is relatively flat, with a notable exception being the bluffs overlooking the Mississippi River. The terrain is characteristic of a glacial outwash plain.

Stormwater runoff from the City is generally directed from higher elevations to depression areas, especially in the southwest portion of the City located in the Elm Creek Watershed. **Figure 2** shows the extent of the watershed district boundaries. Specific drainage patterns are discussed in **Section 2.3.3**.

The dominant geological feature in Champlin is the remnant of the deteriorating Grantsburg sublobe of the Wisconsin glaciation, which stagnated over the area some 16,000 years ago. This feature is referred to as the Emmons-Faribault moraine. This moraine is characterized by a rolling topography with a relief of 20 to 30 feet, and is characteristic of the southwestern part of the city. Postglacial deposits consist of very fine to medium sand and minor silt. The remainder of the City is part of the Mississippi Valley outwash plain. This area is characterized by a nearly level topography that was formed by glacial till deposited by the meltwater from the rapidly receding glacier. Depressions formed by the melting ice became lakes which, through the process of natural eutrophication, have evolved into shallow wetlands.

According to the Bedrock Geologic Map and Bedrock Topographic Map of Hennepin County (Minnesota Geologic Survey, 1992), the uppermost geologic formation of the City is comprised of unconsolidated sediment deposits from the Quaternary Period, which began approximately two million years ago.

The unconsolidated quaternary deposits of glacial and post glacial material conceal the bedrock

within the City. All of the bedrock formations are marine sedimentary rocks of the Early Paleozoic era when shallow seas covered southeastern Minnesota. Large-scale block faulting caused the formation of an elongated, northeast-trending basin beneath what was to become the Twin Cities Metropolitan Area.

The bedrock is comprised of St. Lawrence and Franconia formations and Jordan Sandstone. Depth to the bedrock within the city limits is predominantly 100 to 150 feet, decreasing to 51 to 100 feet near the Mississippi River. Along the eastern border of the City, there lies a deep bedrock valley where the depth to bedrock approaches 300 feet.

Additional geological information can be found in the Hennepin County Geologic Atlas.

2.2.2. Soils

The Soil Conservation Service (SCS) published the most recent *Soil Survey of Hennepin County Minnesota* in 2003. The *Soil Survey* provides mapping and physical properties for soil types found in Champlin. The *Soil Survey* was added to the Soil Survey Geographic (SSURGO) Database in 2005, providing digital access to the information.

Most soils within Champlin are classified as hydrologic soil group (HSG) A or B, having high infiltration rates and are a benefit for stormwater management. However, quick infiltration rates allow for unrestricted water movement through the soils without removing contaminants. This can create an increased susceptibility to ground water contamination. The HSG classification map is shown in **Figure 3**. The four HSG soil classifications are defined as follows:

Group A - These soils have high infiltration rates even when thoroughly wetted. The infiltration rates range from 0.8 to 1.63 inches per hour. These soils consist chiefly of deep, well drained to excessively drained sands and gravel. Group A soils have a high rate of water transmission, therefore resulting in a low runoff potential.

Group B - These soils have moderate infiltration rates ranging from 0.3 to 0.45 inches per hour when thoroughly wetted. Group B soils consist of deep moderately well to well drained soils with moderately fine to moderately coarse textures.

Group C - These soils have slow infiltration rates ranging from 0.2 to 0.3 inches per hour when thoroughly wetted. Group C have moderately fine to fine texture.

Group D - These soils have very slow infiltration rates ranging from 0 to 0.06 inches per hour when thoroughly wetted. Group D soils are typically clay soils with high swelling potential, soils with high permanent water table, soils with a clay layer at or near the surface, or shallow soils over nearly impervious material.

Recommended infiltration rates were taken from the Minnesota Stormwater Manual.

2.2.3. Climate and Precipitation

The climate within the Twin Cities Metropolitan Area is typical of a humid continental climate with moderate precipitation and wide daily temperature variations. Without the buffering influence of large bodies of water, cold winters and hot summers predominate. An area where climate change has been recorded in the Twin Cities is in rainfall intensities and rainfall depths. The Metropolitan Area has seen more intense rainfalls the last two decades and even the average rainfalls are shown to be more intense.

The total average annual precipitation in the Metropolitan Area is approximately 30.6 inches recorded over a 30-year period from 1981-2010. The total average annual snowfall is approximately 54.4 inches. Additional climatological information for the area can be obtained from the Minnesota State Climatology Office at http://www.climate.umn.edu/.

Rainfall frequency estimates are used as design tools in water resource projects. Rainfall frequencies are summarized in *Technical Paper No. 40, Rainfall Frequency Atlas of the United States*, published by the U.S. Weather Bureau in 1961. This document was updated in 2013. Atlas 14 is the new document used as reference for rainfall frequencies. It has been adopted by the City and watersheds in their respective stormwater management rules. **Table 2.2** lists rainfall frequencies for Champlin.

Table 2.2 Atlas 14 Rainfall Depths and Frequency

Recurrence Interval (yrs)	24-hr Rainfall Depth (in)
1	2.5
2	2.9
5	3.6
10	4.3
25	5.3
50	6.2
100	7.2

The City of Champlin uses the 10-year storm event for storm sewer design and the 100-year storm event for storage/ponding requirements and evaluating freeboard.

Additional precipitation information for the area can be obtained from the National Oceanic and Atmospheric Administration (NOAA) website.

2.2.4.Land Use

The City's existing land use practices include residential, commercial, industrial, and private and public open spaces. The dominating land use is low density residential housing. Parks and open space are the next dominant feature of the City. The western one-third of the city is predominantly park land (Elm Creek Park Preserve) with some remaining agricultural areas. The City is entirely within the MUSA area and most of the residences and businesses in the City are served by public water and sewer systems. **Figure 4** shows the 2016 existing land use for Champlin.

Champlin's proposed land use plan is currently being updated with the 2040 Comprehensive Plan. This is expected to be complete by the end of 2018. The Land Use Plan is central to the Comprehensive Plan. It guides how specific properties might develop. Because the City is 95% developed, redevelopment is also an important component of land use planning. **Figure 5** shows the proposed land use plan.

The proposed land use map projects land use to the year 2040 and becomes the basis of important local and regional planning decisions made by the City and outside agencies such as the Metropolitan Council. According to state law, development proposals must conform to the land use plan or an amendment to the land use plan must be sought. Additional land use information can be found in the City's 2040 Comprehensive Plan on the City's website.

Land use data is an important factor for estimating surface water runoff. The hard or impervious surface areas associated with each land use greatly affects the amount of runoff generated from an area. Future land use development and redevelopment indicate those areas that may be available for water resource enhancement and where improvements should be a priority. Significant changes in land use can increase runoff due to added impervious surfaces. However, changes in land use also allow for the construction of stormwater BMPs.

2.3. Water Resources Data

2.3.1. Wetlands

Wetlands are shown on the National Wetland Inventory Maps published by the US Fish and Wildlife Service. Wetlands and lakes are also shown on the DNR Public Waters/Wetlands inventory map. This information is shown on **Figure 6.**

The Shingle Creek/ West Mississippi Watershed Management Commission (SC/WMWMC) completed an inventory and assessment of high quality reference wetlands to develop a Wetland Management Plan for the area. The reference wetland in Champlin is DNR Public Wetland 249W located along the southern border of the City with Brooklyn Park. The City completed the full wetland functional assessment of the remaining wetlands in 2009.

In 1992, as part of the City's first generation Surface Water Management Plan, water bodies and wetlands were assessed based on their sensitivity to storm water input based on the wetland's type and vegetation. Management categories to address water quality issues were then developed. With the anticipated completion of a function and value assessment of the wetlands, the wetland categories for each wetland may change. The City's wetland management strategies are outlined in **Section 5.**

Wetland Conservation Act of 1991 (WCA) - Local Government Units (LGUs) are responsible for administering the rules. The intent of the WCA is to promote no net loss of wetlands. The City acts as the LGU for wetland matters.

2.3.2. Major Water Bodies

There are several major water bodies that convey and store water within and through the City (**Figure 6**). These water bodies include:

- Mississippi River and associated wetlands: The River is the northeastern border of the City. Recreational activities include boating and fishing on the River. The River corridor also provides wildlife habitat for the area.
- Lemans Lake: Lemans Lake is within the Elm Creek Park Reserve owned by Three Rivers Park District. The area provides wildlife habitat. This Lake is classified as a Class III for Wildlife and Interpretation.
- Mill Pond: Mill Pond is associated with Elm Creek, which is listed as an impaired water. Trails are located adjacent to Mill Pond for passive recreation activity. The ECWMC completed a TMDL study for the entire Elm Creek Watershed in December 2016. A multi-phase restoration project was initiated to address the impairments in both Elm Creek and Mill Pond.

- Phase 1: Included Elm Creek stream restoration and Mill Pond dam replacement. This phase completed 900 linear feet of stream bank restoration along Elm Creek to repair stream bank erosion, reduce downstream sedimentation, increase dissolved oxygen, and provide habitat to sensitive species, such as Blandings Turtle. The Mill Pond dam replacement was listed on the MnDNR's Significant Hazard Dam Structures. The reconstructed dam improves flood control, providing safer working conditions for operation, repairs eroding stream banks and provides a more consistent water level for aquatic vegetation and aquatic habitats. The project also reduced the flood hazard area by approximately 60 acres.This phase was completed in 2016
- Phase 2: Includes the Mill Pond shoreland and aquatic restoration. This phase is currently being completed and includes removing sediment in Mill Pond to improve dissolved oxygen and water quality, enhancing the fishery, increasing public access and restoring the upland, riparian and aquatic habitat zones.
- Phase 3: Include Elm Creek Stream Restoration. This project phase is scheduled to be completed in the winter of 2018-2019 and include stabilization of 3,000 linear feet of stream bank upstream of Mill Pond. The project will extend up to termination of the Phase 1 project and will provide a habitat structure that will reduce downstream sedimentation and provide native habitat improvements.
- Phases 4 and 5: Include Elm Creek Stream Restoration. This project include 7,297 linear feet of stream habitat restoration. Riparian areas will be restored with native planting buffers. The City will continue to work with ECWMC and Hennepin County to implement the TMDL and improve the water quality of Mill Pond and downstream waters.

- Elm Creek and associated wetlands: Champlin is the last community that Elm Creek flows through prior to discharging to the Mississippi River. Areas around the creek are publicly and privately owned. This water body is classified as a Class III for Wildlife and Interpretation.
- Oxbow Creek and associated wetlands: Oxbow Creek is within Oxbow Park. The area provides habitat and trails for passive recreation of the Creek. This site also includes restored prairie areas.

2.3.3. Drainage Systems

The primary conveyance for all drainage districts is an extensive system pipe infrastructure. **Figure 7** in Appendix A shows the City's subwatershed drainage areas. The City of Champlin can be divided into nine major subwatersheds and further divided into many smaller watersheds. The subwatershed delineations utilized City topographic mapping, storm sewer as-builts, aerial photos, and field investigations.

Stormwater drains either into Elm Creek or Mill Pond and Oak Creek via Leman's Lake, which then flows into the Mississippi River. Ultimately, all drainage from the City makes its way to the

Mississippi River. The remainder of the City is within the West Mississippi River Watershed and storm water from this portion drains to the Mississippi River via Oxbow Creek, Oak Creek, or via storm sewers.

Additional information regarding watershed delineation studies within the City can be found in the following reports or studies:

- Elm Creek Watershed Management Plan
- Shingle Creek and West Mississippi Watershed Commissions Management Plan

2.3.4. Hydrologic Modeling (Water Quantity)

The City's hydrologic/hydraulic system consists of ponds, wetlands, and storm sewer pipe systems within multiple subwatersheds that drain towards the Mississippi (**Figure 8**). The City is planning to update the model for Atlas-14 conditions and to account for any land changes. The updated model may be used to identify potential drainage problem areas within the City. The City is divided into numerous subwatershed areas, which are shown on **Figure 7.** The watershed inventory and hydrological modeling information is available in **Appendix H.**

Additional information regarding water quantity within the City can be found in the following studies:

- Northwest Area Infrastructure Analysis, 2002
- Northwest Area Feasibility Study, 2005

2.3.5.Landlocked Basins

The City has a number landlocked areas. These include the following ponds or subwatersheds are shown in **Appendix H.**

- 8T-P3.3
- 5T-3
- 4T-29
- 2T-P16
- 2T-P17
- 2T-P21
- 2T-P20
- DNR 22W (8V-P4.1)
- 8V-P3
- 9T-6: The structure at 4.1 has a pumped outlet that needs to be re-designed.
- 1T-P10.

The City will evaluate these areas. If there are no flooding concerns, no outlet is necessarily needed and this area likely provides infiltration of storm water. If the area does flood or causes other problems, the City will study the feasibility of providing an outlet for the area. This process is further described in the implementation portion of this Plan.

2.3.6.Monitored Water Quality and Quantity Data

The City will continue to support monitoring of surface waters within its jurisdictional boundaries and outside these boundaries for waters to which the City discharges. Data will be obtained through cooperation and coordination with other various agencies, including the Minnesota

Pollution Control Agency, cities adjacent to Champlin, the Metropolitan Council, the Minnesota Department of Natural Resources, Shingle Creek/West Mississippi Watershed Management Commissions, Elm Creek Watershed Management Commission, and Three Rivers Park District.

Figure 9 shows monitoring stations located within the City. Other water quality information can be found from ECWMC, WMWMC, Metropolitan Council, and the Minnesota Pollution Control Agency on the following websites:

- Metropolitan Council monitoring information, including the Citizen-Assisted Monitoring Program (CAMP), can be found at their website
- Minnesota Pollution Control Agency's Citizen Lake Monitoring Program (CLMP) information can be found at their website

The City is in the process of developing the WSB Stormwater Asset Management Program (SWAMP). This program uses construction as-builts, pond inventory, drainage areas, field inspections, and storm sewer maps to rank BMPs based on cost/benefit pollutant removal efficiency. Basins are prioritized based on a set of parameters and a schedule can be determined for maintenance needs. The program is continually updated to include new BMPs, updated stormwater infrastructure or changed drainage areas. The City will be able to incorporate SWAMP to include the following:

- Scheduling, tracking, and storing MS4 infrastructure inspections
- Budget stormwater inspection and maintenance activities
- Track TSS and TP load reductions
- Prioritize inspection and maintenance activities through a ranking system
- Provide information to the public on BMP maintenance priorities and schedules
- Compliance for written procedure and treatment effectiveness requirements as part of the MS4 permit

The SWAMP is being done in coordination with the watersheds to remain consistent with their TMDL and WRAPS studies and other water quality reports.

2.3.7. Impaired Waters

The Minnesota Pollution Control Agency (MPCA) is required to publish a list of impaired waters; these are lakes and streams in the state that are not meeting federal water quality standards. For each water body on the list, the MPCA is required to conduct a study to determine the allowable Total Maximum Daily Load (TMDL) for each pollutant that exceeds the standards. Impaired waters in Champlin, or those receiving discharge from Champlin, are summarized in **Table 2.3** and shown in **Figure 16**.

Table 2.3 – Impaired Waters

Impaired Water	Affected Use	Pollutant and Year Added	TMDL Status
Mississippi River (07010206-805)	Aquatic Consumption, Aquatic Recreation, Aquatic Life	Mercury in Fish Tissue (1998), PCB in Fish Tissue (2002), Excess Nutrients (2016), Fecal Coliform (2006)	Mercury: Complete Fecal Coliform and Nutrients: Underway

Elm Creek (07010206-508)	Aquatic Life, Aquatic Recreation	Chloride (2014), Dissolved Oxygen (2004), Escherichia coli (2010), Fishes and Aquatic Macroinvertebrate Bioassessments (2014)	All are complete (Elm Creek WRAPS)
Goose Lake (27-0122-00)	Aquatic Recreation	Excess Nutrients (2018)	Complete (Elm Creek WRAPS)

The 2007 Mercury TMDL is a statewide effort to reduce mercury for fish consumption. In 2016, the Elm Creek Watershed TMDL and WRAPS reports were approved. These reports designate categorical load reductions for Elm Creek and Goose Lake. The City will be required to update this surface water management plan to incorporate the findings of any additional approved TMDL study and will also be required to amend their MS4 permit and Storm Water Pollution Prevention Plan. This must be done within 18 months of the approved TMDL date.

2.3.8. Groundwater

Within the City, groundwater wells serve the City and private water needs. Each of these wells has a ground water appropriation permit from the DNR. There are 8 public water supply wells within the City. **Figure 10** shows the locations of the DNR permitted ground water appropriation sites within the City. Specific information related to each of these permits can be found at the DNR's website.

The City's Wellhead Protection Plan (WHP) Part I was completed and approved by the Minnesota Department of Health (MDH) in 2014 and Part II was approved in 2015. Part I of the WHP delineated the Wellhead Protection Areas, the drinking water supply management areas (DWSMA), and the vulnerability assessments for the system's wells and aquifers within the DWSMA. Part II of the City's WHP includes an inventory of potential contaminant sources within the DWSMA, a discussion of potential contaminant source management strategies, and reviews the City's alternative water supply contingency strategy. Some of the potential contaminant source management strategies identified include properly sealing abandoned or damaged wells, educating owners of storage tanks about the importance of spill prevention, and educating the public on the importance of wellhead protection planning. Both WHP Parts I and II can be found at City Hall.

The City continues to implement this plan and evaluate its water services. Information from the SCWMWMC contains information about groundwater quality within the City of Champlin as follows:

GWMAP Number/ depth (feet)	**Aquifer**	**Aquifer Group**	**Chloride (mg/L)**	**Manganese (mg/L)**	**Nitrate (mg/L)**	**Iron (mg/L)**
Drinking Water Standard			***250.0***	***0.0500***	***10.0***	***0.3000***
01201/ 78.0	Water table	Surficial Quaternary	13.00	0.6165	<0.5	0.9321
01202/ 229.0	Jordan	Cambrian	4.89	0.1283	<0.5	0.4254
01227/ 95.0	Buried artesian	Buried Quaternary	1.32	0.8061	1.6	0.6099

	aquifer					
01212/ 220.0	Franconia	Cambrian	127.35	<0.0005	6.9	0.0510
01211/ 540.0	Mount Simon	Cambrian	4.6	0.0280	<0.5	1.1497

Additional ground water resource data for areas within the City is available by reviewing the content of two reports as outlined below:

- "Hennepin County Comprehensive Ground Water Plan", completed in March 1994, contains information about groundwater within the County. This Plan has not been adopted.
- "Hennepin County Geologic Atlas", completed in 1989 and last updated in 2018, contains information on aquifers, depth to groundwater table, and areas sensitive to groundwater pollution.

The City will be required to incorporate the requirements of the Wellhead Protection Plan into their Stormwater Pollution Prevention Program (SWPPP) for areas located within vulnerable source water protection areas (NPDES MS4 General Permit). Vulnerable Source Water Protection areas are those areas susceptible to contamination of the water supply from activities at the land surface and are based on the following three components: geologic sensitivity, well construction maintenance and use, and water chemistry and isotopic composition.

For areas of vulnerability, the City will incorporate the guidance developed by the MDH on evaluating proposed stormwater infiltration projects in vulnerable source water protection areas and also the guidance located within the Minnesota Stormwater Manual on designing infiltration BMPs while protecting groundwater. This will be of a particular concern in areas where infiltration is being considered in soils suitable for rapid infiltration adjacent to municipal and private wells.

Figure 11 shows the surface water/groundwater interaction as analyzed by regional screening performed by the Met Council in their report, Evaluation of Groundwater and Surface-Water Interaction: Guidance for Resource Assessment. The Council intends on completing this process again in the future as new information becomes available.

2.3.9. Public Areas for Water Based Recreation and Access

There are a number of water bodies that provide active recreation such as fishing and passive recreation such as walking and wildlife viewing. These recreational resources are outlined below:

Mississippi River: The Mississippi River provides boating, fishing, and hiking opportunities within the City. There is a DNR boat access point to the Mississippi River in Champlin at Mississippi Point Park. The Mississippi River is also a State Canoe Route operated by the DNR Division of Trails and Waterways.

Elm Creek Park Reserve: Elm Creek Park Reserve is partially within the City of Champlin. The park is managed by the Three Rivers Park District and contains many miles of trails and passive water-based recreation opportunities. Lemans Lake is within the Park.

Elm Creek and associated wetlands: Champlin is the last community that Elm Creek flows through prior to discharging to the Mississippi River. Champlin's Mill Pond is located near the end of Elm Creek before discharging into the Mississippi River. Areas around the creek are publicly and privately owned. There are some public trails near the Creek.

Oxbow Creek and associated wetlands: Oxbow Creek is within Oxbow Park. The area provides habitat and trails for passive recreation of the Creek.

Additional information regarding recreational opportunities within the City can be obtained by visiting the City of Champlin's Park and Recreation website.

2.4. Natural Resources Data

2.4.1. Fish and Wildlife Habitat

Champlin provides habitat for a variety of small mammals, reptiles, birds, amphibians, and insects. These natural areas primarily include the areas around Lemans Lake, near the Elm Creek Park Reserve, and the Mississippi River floodplain.

A large-scale restoration project for the Mill Pond was substantially completed in 2018. Goals of this project include creating and restoring habitat for fish and wildlife species, improving the terrestrial, riparian, and aquatic vegetative community, improving aesthetics of the Mill Pond, and improving water quality to address impairments. Specific improvements include excavating portions of the Mill Pond to increase water column depth and provide cold water habitat for gamefish. Root wads, fish stick structures, and cobble substrate were also added to provide habitat complexity, young of year refugia, and increase the forage base for gamefish and panfish species.

Since 2008 the Mill Pond has been stocked by MN DNR six (6) times with adult bluegill and black crappie as part of the Fishing in the Neighborhood (FiN) program in an effort to bolster fish populations and provide fishing opportunities.

Electrofishing and netting surveys between 1978 and 2017 show that the fish assemblage in Mill Pond consists of a variety of species. These species include black bullhead, black crappie, bluegill, common carp, northern pike, pumpkinseed, white crappie, white sucker, yellow bullhead, golden redhorse, golden shiner, silver redhorse, yellow perch, bowfin, green sunfish, hybrid sunfish, largemouth bass, and white crappie. Telemetry surveys in 2017 and 2018 showed a significant nexus between Hayden Lake, Elm Creek, and the Mill Pond.

The City adopted the Mississippi River Corridor Plan in 1981. In 1999, it was updated to respond to Mississippi National River and Recreational Area (MNRAA). Therefore, the Mississippi River Corridor Plan includes updates from MNRAA.

2.4.2. Mississippi River Critical Area Corridor

The Minnesota State Legislature enacted the Critical Areas Act in 1973 and an executive order (79-19) was signed in 1976 declaring the Mississippi River corridor a Critical Area (MRCCA). New rules for the MRCCA were published in December 2016 which replaces the previous executive order. The new rules will be implemented through local government MRCCA plans and ordnances.

The executive order states the following purposes for the Critical Area designation:

- To protect and preserve a unique and valuable state and regional resource for the benefit of the health, safety and welfare of the citizens for the state, region, and nation;
- To prevent and mitigate irreversible damage to this state, regional and national resource;
- To preserve and enhance its natural, aesthetic, cultural, and historical value for the public use;
- To protect and preserve the river as an essential element in the national, state and

regional transportation, sewer and water and recreational systems; and
- To protect and preserve the biological and ecological functions of the corridor.

In 1976, four corridor districts were established, corresponding to the following different types of land use along the Mississippi River: rural open space district, urban developed district, urban open space district, and urban diversified district. Each district has its own set of guidelines. The Critical Area Act requires that each city having jurisdiction over land within the Critical Area develop a Critical Area Plan. The new MRCCA rules from 2016 include the regulations and guidelines that each city must incorporate in its Critical Area Plan.

The City of Champlin has developed a Mississippi River Corridor Area Overlay District as part of City ordinances. This can be found in **Appendix B**. Additional information can be found on the DNR website.

The City of Champlin' MRCCA Rulemaking Districts are shown in **Figure 12**. This data was developed by the Minnesota Department of Natural Resources. Additional information on the City's Critical Area Plan can be found in the City's 2040 Comprehensive Plan.

2.4.3.MLCCS

The Minnesota Land Cover Classification System, or MLCCS, categorizes urban and built up areas in terms of land cover rather than land use. MLCCS serves as a tool for City staff to integrate natural area preservation into land planning, land use, and zoning decisions. The City is dominated primarily by developed area with herbaceous areas as the next majority land classification. The remaining areas are planted/cultivated land and forested areas north of the City and along the Mississippi River and various creeks. **Figure 13** provides MLCCS coverage for Champlin.

2.4.4.Unique Features and Scenic Areas

Unique features and scenic areas include State designated Scientific and Natural Areas, designated scenic areas, areas containing rare and endangered species, and historic areas. The City contains no Scientific and Natural areas or designated scenic areas. Information from the DNR Natural Heritage Database shows that Blandings turtles have been noted near the Mill Pond area, Lehmans Lake, and Goose Lake. Information from the County Biological Survey shows areas of Oak Forest, mixed hardwood swamps, and wet meadow. These areas are primarily associated with the Elm Creek Park Reserve. Additionally, the City contains the Schmidt Wildlife Management Area. The Mississippi River is also part of the Mississippi National River Recreation Area (MNRAA) and the Mississippi River Critical Area. **Figure 14** shows areas of the City that are ranked for their biodiversity, along with the Metro Conservation Corridor, identified by the Met Council.

2.5. Floodplain Management

FEMA completed the map modernization process for its Flood Insurance Study (FIS) and Flood Insurance Rate Maps (FIRMs) to identify flood risk within Hennepin County in 2016. Any Letter of Map Amendment (LOMA) and Letter of Map Revision (LOMR) can be located on the mapping function of FEMA's website.

The first phase of the three-phase Mill Pond restoration project included the dam and bridge reconstruction project in 2016 which helped to reduce the floodplain in the area by 60 acres. This reduction in the floodplain improved flood protection along West River Road and for 110 residents and businesses along Elm Creek. A LOMR was accepted by FEMA for this area in

February of 2018.

The City of Champlin has developed Floodplain Management Regulations. A copy of these regulations can be found in **Appendix B**. These regulations generally prohibit uses or activities within the floodplain that include structures or fill or that obstruct flood flows or cause increased flood elevations.

Figure 15 illustrates the FEMA floodplain boundaries for the City of Champlin.

SECTION 3

3. AGENCY COOPERATION

There are a number of local, State, and Federal agencies that have rules and regulations related to local water management. The City recognizes the roles of these other agencies and will cooperate, coordinate, and when possible partner with these agencies. This section describes the City's current surface water management program and practices and identifies the agencies and organizations having roles in the City's management of these resources.

Current regulations and policies that govern surface water management within Champlin include the engineering design standards document, which is consistent with MIDS, and previous surface water management plans. **Table 3.1** summarizes the City's regulatory controls regarding surface water.

Table 3.1 – Regulatory Control

Official Control	Responsibility	Mechanism
Stormwater Management	City, Watershed District (WD)	City Ordinance Chapter 110, Article II – Grading and Sedimentation Control; City of Champlin Stormwater Management Design Guidelines
Erosion and Sediment Control	City, WD, PCA	City Ordinance Chapter 110, Article II – Grading and Sedimentation Control
Shoreland	City, WD, MnDNR	City Ordinance Chapter 114 – Floodplain Regulations
Floodplain	City, WD, MnDNR, FEMA, USACE	City Ordinance Chapter 114 – Floodplain Regulations
Wetlands	WD as LGU, MnDNR, USACE, BWSR	City Ordinance Chapter 126, Article III, Division 6 – Conservancy Districts
Illicit Discharge	City, WD	City Ordinance Chapter 35 – Stormwater System
Grading and Drainage	City Grading Permit, WD	City Ordinance Chapter 110, Article II – Grading and Sedimentation Control
**Acronyms are defined in the sections below*		

Additional City ordinances relevant to surface water management include:

- Sec. 126-348 Mississippi River Corridor

3.1. Support Agencies

This plan is in conformance with, but does not restate all other agency rules that are applicable to water resource management. The following agencies deal with or regulate water resources throughout the City.

- Hennepin County
- West Mississippi Watershed Management Commission
- Elm Creek Watershed Management Commission
- Minnesota Department of Health (MDH)
- Minnesota Pollution Control Agency (MPCA)
- Board of Water and Soil Resources (BWSR) and the Wetland Conservation Act (WCA)
- Minnesota Department of Natural Resources (MnDNR)

- US Army Corps of Engineers (USACE)
- Minnesota Department of Agriculture
- US Fish and Wildlife Service
- Minnesota Environmental Quality Board
- Metropolitan Council
- Minnesota Department of Transportation (MnDOT)
- U.S. Environmental Protection Agency (EPA)
- Federal Emergency Management Agency (FEMA)
- Natural Resources Conservation Service (NRCS)
- U.S. Geological Survey (USGS)

While these other agencies' rules, policies, and guidelines are not all restated in this Plan, they are applicable to projects, programs, and planning within the City. The MPCA Minnesota Stormwater Manual, which is a document intended to be frequently updated, is also incorporated by reference into this Plan and can be found at www.pca.state.mn.us/water/stormwater/stormwater-manual.html.

3.2. NPDES Permitting Process

The MPCA has designated the City of Champlin as an NPDES Phase II MS4 community (MN Rules Chapter 7090). Champlin's application for permit coverage was extended in 2013 and again in 2018. The permit outlines Champlin's Stormwater Pollution Prevention Plan (SWPPP) to address six minimum control measures:

- Public education
- Construction site runoff control
- Public involvement
- Post-construction runoff control
- Illicit discharge detection and elimination
- Pollution prevention in municipal operations

The City's SWPPP contains several best management practices within each of the listed control measures. Some of these best management practices include:

- Inspection of outfalls
- Street sweeping
- Inspection of post-construction BMPs
- Storm sewer system mapping
- Resident education

Many of the goals and policies discussed in this local surface water management plan are directly related to requirements listed in the NPDES program. As a result, the implementation section of this plan repeatedly references items listed in the City's SWPPP (**Appendix C**).

3.3. Comparison of Regulatory Standards

Applicable developing and redeveloping property within Champlin is subject to review and approval from Elm Creek WMC and West Mississippi WMC. Each watershed has established rules governing stormwater management and protection of natural resources. Currently, these rules are fairly consistent with the City design standards.

3.3.1.City of Champlin

In 2015, Champlin developed their Stormwater Management Design Guidelines. This document was written to meet the City's goals outlined in the SWPPP and to be consistent with watershed rules. A copy of these design standards can be found in **Appendix D.**

3.3.2. Elm Creek Watershed Management Commission

Elm Creek Watershed Rules and Regulations and Watershed Management Plan were last updated in 2015. The City will continue to coordinate with Elm Creek WMC for review and permitting of the stormwater management aspect of developments. A copy of the Elm Creek WMC District Rules can be found in **Appendix I.**

3.3.3. West Mississippi Watershed Management Commission

The West Mississippi WMC Watershed Plan was jointly adopted in 2013 with Shingle Creek WMC. Their rules and standards were also adopted in 2013. A copy of the West Mississippi WMC District Rules can be found in **Appendix J.**

3.3.4. Wetland Management

The watershed management commissions are currently the Local Government Unit (LGU) for the Wetland Conservation Act. The City will take over this role by 2019 and will begin to administer WCA permits. WCA regulations generally focus on the prevention or mitigation of wetland fill, while watershed standards focus on wetland buffers and stormwater impacts.

3.4. Water Resources Related Agreements

The City has entered into water resource-related agreements that govern in part how the City must manage its water resources. These agreements include agreements between the City and adjoining communities or agreements it may have with other governmental units or private parties. Listed below is a description of the water resource related agreements which the City has entered into. A copy of these agreements or appropriate portions thereof are included in **Appendix E.**

a. **Agreement to establish the Shingle Creek and West Mississippi Watershed Management Commissions**: This Joint Powers Agreement (JPA) outlines the purpose and responsibilities of the Commissions

b. **Agreement to establish the Elm Creek Watershed Management Commission:** This JPA outlines the purpose and responsibilities of the Commission.

c. **Maintenance Agreement for Stormwater and Infiltration Maintenance for Goose Lake Road**: The agreement between the cities of Champlin and Dayton. This agreement states that the cities agree to maintain the infiltration basin and storm water management system associated with the Goose Lake Road project.

4. AREAS OF CONCERN AND CORRECTIVE ACTIONS

Outlined below is an assessment of existing and potential water resource-related problems that are known at this time. These problems have been identified based on an analysis of the land and water resource data collected as part of this plan preparation and through information from the City. A description of any existing or potential problem within the topic area has been listed and future corrective actions have been incorporated into an implementation plan. **Figure 16** shows locations of specific areas of concern listed below.

A. Lake and stream water quality

1. The City discharges storm water to the following water bodies that have been listed as impaired by the Minnesota Pollution Control Agency (MPCA):
   - Elm Creek – dissolved oxygen, chloride, fecal coliform **(Map Label #5)**
   - Mississippi River – mercury, PCB's, nutrients, fecal coliform **(Map Label #6)**
   - Lake Pepin –Turbidity, eutrophication
   - Goose Lake – Excess nutrients, TP **(Map Label #7)**

   Corrective Actions: The Elm Creek TMDL and WRAPS reports were released in 2015 to address the impairments for Elm Creek and Goose Lake. The City will collaborate with the Elm Creek Watershed Management Commission (ECWMC) to implement projects identified in the WRAPS report to address these TMDLs. Specific projects are listed in **Table 6-1**. Stormwater BMPs will be continually added during street improvement projects where feasible to limit nutrient discharge to Elm Creek and the Mississippi River. Specific projects to address nutrient impairments are identified in **Table 6.1**.

   To address the fecal coliform impairment for Elm Creek and the Mississippi River, the City will continue to educate its residents on the importance of cleaning up after their pets to reduce pollutants entering the stormwater system. The City will also continue to enforce its pet waste ordinance. BMPs that are constructed will continue to provide some removal of fecal coliform prior to stormwater discharge into receiving water bodies.

   The City shall work with the Watershed Management Commission(s) and the Pollution Control Agency (PCA) to develop a Total Maximum Daily Load (TMDL) for additional impaired waters within their boundaries. Once the TMDL report is complete for each water body and impairment, the City will complete a feasibility study to identify actions to be undertaken to address the TMDL.

2. The ECWMC has identified water quality concerns at Mill Pond (**Map Label #3)** and Lehmans Lake (**Map Label #4**).

   Corrective Actions: The City will continue to require storm water treatment as part of development and redevelopment to address water quality concerns in Mill Pond and Lehmans Lake.

   If funding becomes available, the City will work with the ECWMC to implement upstream water quality projects for Mill Pond. The City is currently completing a water quality restoration and treatment project for Mill Pond.

   The Mill Pond is associated with Elm Creek, which is listed as an impaired water. The City of Champlin supports the ECWMC in its efforts to implement the WLA's identified in the TMDL and WRAPS Studies. The results of the studies and implementation of corrective measures is for areas upstream of the Mill Pond are vital to the City's goals of returning the Mill Pond to a quality swimmable recreational water body. The City's goals are to improve water quality within the Elm Creek as a primary objective. Without the Watershed Commission and member MS4 Cities implementing strategies and meeting WLA requirements to improve water quality of the Elm

Creek upstream of the Mill Pond, there are few options for the City to construct projects that would meaningfully address the ultimate objective. However, the City's goal will be dependent in some respects on the achievement of the ECWMC's goals to improve the water quality in the tributary drainage area entering the Mill Pond.

The City will work with the Three Rivers Park District if funding becomes available to implement upstream water quality improvements for Lehmans Lake. The City has recently completed improvements to Beaver Pond upstream and continues to perform periodic monitoring of the water quality in the lake.

3. The stormwater wetland located near Trillium Court N is in need of maintenance to remove deposited sediment. **(Map Label #12)**

   Corrective Action: The City will perform a pond survey to determine the extent of the cleanout and if the pond contains any contaminated materials. A project will be completed to clean out deposited sediment to the pond can perform as designed.

B. Flooding and storm water rate control concerns

1. Stabilization issues along the Mississippi River have occurred along the trail near Donie Galloway Park within subwatershed 4P-2. (**Map Label #1)**

   Corrective Actions: The City has implemented various streambank protection measures and will continue to investigate the feasibility of future stabilization options if this issue continues.

2. The storm sewer outlet for subwatershed 9T-6 will continue to be a pumped outlet that does not always meet the needs of the subwatershed. The outlet drains into the MnDOT shared storm sewer system. (**Map Label #2)**

   Corrective Actions: The City will complete an analysis to address the pump capacity and subwatershed runoff for this outlet structure. It is anticipated reconstruction of this outlet structure is needed to upgrade the system.

3. The City has a number of landlocked basins or subwatersheds as follows:

8T-P3.3	5T-3	4T-29
2T-P16	2T-P17	2T-P21
2T-P20	8V-P4.1	8V-P3
9T-6	1T-P10	

   Corrective Actions: The City will evaluate each area. If there are no flooding concerns, no outlet would be necessary. If the area does flood or causes other problems, the City will study the feasibility of providing an outlet for this area.

4. The stormwater pond located near 4366 Perry Ave occasionally backs up into neighboring properties and streets. The existing outlet is unable to discharge water at a quick enough rate through the downstream wetland. This pond and wetland area was recently tested and shown to contain contaminated material as well. **(Map Label #10)**

   Corrective Action: The City will identify options for outlet improvements and a pond/wetland dredging project to provide the needed drainage through the area and limit pond backups.

5. Stormwater runoff has formed a drainage ditch along Woodlawn Trail near Overlook Court N. During rain events, runoff backs up into backyards and Woodlawn Park. **(Map Label #11)**

Corrective Action: The City will identify options to improve drainage through this area.

6. Storm sewer located along Parkside Tail is under capacity and frequently floods the adjacent roadway. **(Map Label #14)**

   Corrective Action: The City will assess the needed storm sewer capacity for this area and will look to upgrade the system during a street reconstruction project.

7. The stormwater pond located near Goose Lake Parkway is in need of outlet improvements and occasionally backs up into adjacent lots. **(Map Label #15)**

   Corrective Action: The City will look to install an outlet control structure to prevent any future pond backups; possibly a submerged outlet.

8. 7T-P4 overtops the low point on Tanglewood Lane and causes street flooding.

   Corrective Action: The City will identify options to improve the street drainage and provide a better functioning emergency overflow for the pond.

D. Impacts of storm water quality on fish and wildlife resources

1. Stormwater quality can have an impact on fish and wildlife resources.

   Corrective Actions: The City has completed a wetland function and values assessment to assess the impacts of storm water quality on wetland resources and the TMDL studies will evaluate the impact of storm water on impaired waters.

E. Impacts of erosion and sedimentation on water resources

1. Erosion at the Oak Creek outlet/West River Road has been noted as a concern in the past.

   Corrective Actions: The City undertook a channel stabilization project to add riprap near the outlet Oak Creek outlet. The City will continue to monitor additional erosion issues along West River Road and will address as needed.

2. There are old storm sewer outlets to the Mississippi River in various locations that are in need of maintenance or replacement.

   Corrective Actions: The City will review each outlet and conduct maintenance or upgrades as needed.

3. The Oak Creek outlet beneath Pribble Street N accumulates sediment from continuous erosion occurring upstream. Due to the surrounding properties, there is a lack of access to maintain this area. **(Map Label #9)**

   Corrective Action: The City will identify causes of the upstream erosion and will address as necessary. The City will also consider installing upstream sumps during street reconstruction projects to catch sediment from the roads prior to discharging into Oak Creek.

4. The stormwater pond located near Highview Court N has a sediment delta that has formed near the inlet. **(Map Label #13)**

   Corrective Action: The City will schedule a pond maintenance project to clean out the deposited sediment and will identify any upstream erosion issues that could be contributing to the excess sediment.

F. Impact of land use practices and development on water resource issues

1. Most of the subwatersheds in the City are fully developed. These areas developed prior to the requirement to incorporate storm water management BMP's into the design and storm water runoff enters the river without treatment.

   Corrective Actions: West Mississippi Watershed Management Commission completed a watershed assessment for three developed subwatershed within Champlin. Various stormwater management measures were identified to incorporate additional water quality treatment. Specific projects are listed in Table 6-1. The City has also completed the installation of numerous rain gardens within the 1-V subwatershed. When street reconstruction or redevelopment projects are proposed, the City will investigate additional BMP's that can be incorporated to provide pretreatment for storm water prior to discharge to the Mississippi River.

2. The ECWMC is concerned about protecting the Mississippi River corridor.

   Corrective Actions: The City will work with the ECWMC to adopt and implement rules regarding the River corridor.

G. Adequacy of existing regulations to address adverse impacts on water resources

1. The City has adopted ordinances related to floodplain regulation, illicit discharge, surface water management, native vegetation planting, wetland management and erosion control. These ordinances need to be kept up to date as requirements change. A copy of the ordinances can be found in **Appendix B**.

   Corrective Action: The City will continually evaluate these ordinances and will update them as needed. The City will continue to enforce all ordinances as necessary.

2. The City currently has limited funding sources available to complete projects related to water resources.

   Corrective Action: Stormwater funds and special assessment funding are not adequate to implement the studies, programs, and capital improvements outlined in this plan. The City will continue to apply for grants to fund the implementation of capital improvements identified in this management plan. The City will consider increasing the current stormwater utility rate to fund future implementation items.

H. Identification of potential problems which are anticipated to occur in the next 20 years

1. Inspecting and maintaining existing stormwater infrastructure throughout the City.

   Corrective Actions: The City of Champlin is responsible for maintenance of its stormwater system in conformance with the MCPA's MS4 Program. This includes maintenance of pipes, outlets, constructed ponds, lakes, wetlands, ditches, swales, and other drainage ways. Proper maintenance will ensure that the stormwater system continues to provide the necessary flood control and water quality treatment. The City will look to develop and refine the inspection program to make better use of existing asset management technology. Refer to **Appendix C** for a copy of the City SWPPP. Other units of government are responsible for maintaining the stormwater systems under their control.

2. Increasing prevalence of polycyclic aromatic hydrocarbons (PAHs) in stormwater ponds from runoff of roadways and other surfaces.

Corrective Action: As stormwater ponds are inspected and maintained, the City will identify any ponds that are contaminated and follow protocol for disposal of dredged material. The City also bans the use of materials for paved surfaces that contain PAHs for future development and redevelopment.

3. Accumulation of debris and material on City streets.

   Corrective Action: The City will continue to sweep debris and salt from streets twice annually and more frequently for those areas along lakes and streams. More information regarding street sweeping activities can be found in the SWPPP which is located in **Appendix C.**

4. Elevated levels of chloride concentrations have been found in stormwater ponds, surface water bodies, and groundwater throughout the Twin Cities Metro Area. At levels exceeding the water quality standards, chloride can be toxic to aquatic life and can make drinking water sources not economically feasible to treat.

   Corrective Action: The City will continue to implement chloride best management practices such as reducing salt use on roadways, education to private business owners about correct salt application, and improve policies designating salt usage. The City will continue to track and implement ways to reduce road salt usage based on its MPCA Level 1 and 2 Smart Salt Certifications.

5. Prioritizing inspection and maintenance of stormwater ponds as well as determining the performance of existing stormwater ponds throughout the City.

   Corrective Action: The City of Champlin will implement the Stormwater Asset Management Program (SWAMP) that identifies and prioritizes pond maintenance activities and BMP inspections. This program will need to be updated regularly to result in an updated prioritization of pond inspection and maintenance activities. In addition, the program will estimate the current treatment provided by each pond to determine if the desired amount of treatment is being achieved. This program will help meet the MS4 permit requirements related to the management of stormwater ponds.

I. Availability and adequacy of existing technical information to manage water resources

1. The development of this Comprehensive Surface Water Management Plan has provided additional technical information to the City related to storm water management.

   Corrective Actions: The City will continue to update the hydrologic/hydraulic model and GIS database as new development and redevelopment occur.

2. The City's current hydrologic/hydraulic model does not incorporate Atlas 14 (updated precipitation probability information) rainfall data. This data was recently released by NOAA in 2013.

   Corrective Actions: The City will consider updating their current models with the newest Atlas 14 rainfall data in the next 5 years. The City will also continue to implement Atlas 14 in the review and approval of new or redevelopment projects.

5. ESTABLISHMENT OF GOALS AND POLICIES

The City has developed a number of goals, strategies, and policies for the management of stormwater within the City. These goals and policies have been developed to complement county, regional, and state goals and policies and to assist the City in protecting valuable water resources. The goals of the City are as follows:

Goals

1. To prevent flooding.
2. To reduce to the greatest practical extent the public capital expenditures needed to correct flooding and water quality problems.
3. To improve water quality.
4. To reduce erosion and sedimentation from surface flows.
5. To preserve wetlands, lakes, and streams.
6. To promote groundwater recharge.
7. To protect and enhance fish and wildlife habitat and water recreational opportunities.
8. To secure the other benefits associated with the proper management of surface water.

In order to achieve the City's goals for managing stormwater, four strategies were developed. These strategies will assist the City in targeting its main audiences for the purposes of stormwater management as follows:

Strategies

Cooperation with other agencies: This strategy recognizes that the City is not alone in managing stormwater within its boundaries. There are a number of other local, state, and federal agencies that also have rules and regulations related to stormwater management. Through this strategy, the City has recognized these other agencies' role in this endeavor and will cooperate and coordinate with these agencies as necessary.

Education: This strategy includes educating various groups within the City about proper stormwater management. Education of residents, City Staff, City Council, business owners, and developers is included in this strategy to assist in meeting the City's goals. The City is also active with the Citizen Science Program is partnership with local schools.

Regulation: Much of stormwater management comes in the form of regulations put on new or redevelopment within the City. These regulations will also assist the City in achieving their water management goals. Policies related to the management of stormwater are included in the regulation strategy.

Internal operations: The final strategy relates to the internal operations of the City. By outlining policies related to how the City's operations will treat and manage stormwater, the City can work to achieve its stormwater management goals.

The City has identified target audiences for the policies outlined in each strategy. The target audiences and strategies are as follows:

AUDIENCE	STRATEGY
Public – Residents and Business Owners	Education, Regulation
City Staff and City Council	Cooperation, Education, Operation
Developers	Education, Regulation
Review Agencies	Cooperation

Based on the target audience and the strategy, the City has developed a number of policies. These policies are outlined below.

Additionally, projects within the City will require review and permits from the Elm Creek Watershed Management Commission (ECWMC) or the Shingle Creek/West Mississippi Watershed Management Commission (SCWMWMC). Projects will be required to meet each WMC's requirements. The rules for these WMC's are contained in **Appendix I and Appendix J** and on each WMC's web-site.

B. EDUCATION

The purpose of the education strategy in meeting the City's goals is to foster responsible water quality management practices by educating residents, business owners, City Staff, City Council, and developers about proper stormwater management. If these targeted audiences recognize their role in responsible stormwater management in their homes, businesses, and practices, it is another means for the City to meet its goals. This education strategy has also been designed to be in conformance with the NPDES requirements.

STRATEGY: EDUCATION	
Policy No.	***Policy***
1	The City will continue to implement its public education as part of the NPDES Phase II program.
2	The City will develop and update its website for stormwater management information, volunteer opportunities, public meeting notices related to stormwater management, the City's SWPPP, and contact information for stormwater issues.
3	The City will develop and distribute a quarterly newsletter and include information in other City mailings aimed at fostering responsible water quality management practices. Topics may include, but 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 ● Pet waste disposal ● Illicit discharge
4	The City will collaborate with ECWMC, SCWMWMC, and other entities to implement stormwater management education efforts.
5	The City will provide annual training opportunities to City Staff regarding housekeeping and construction BMPs and the NPDES permit requirements.

6	The City will conduct pre-construction meetings with contractors to review erosion control methods and inspections for projects that disturb one acre or more for City projects.

7	The City will submit a public notice 30 days in advance and hold an annual public meeting to review the SWPPP, Surface Water Management Plan, and BMPs.
8	The City will maintain a phone line and website link to report construction site erosion control concerns and waste disposal infractions. The phone number is 763-421-8100 and a link is on the City's website.

C. REGULATION

The policies developed in this strategy outline specific stormwater management elements that are required to be implemented through the development and/or permitting process. The regulation strategy is targeted at the public, developers, City Staff, and City Council.

Additionally, projects within the City will require review and permits from the Elm Creek Watershed Management Commission (ECWMC) or the Shingle Creek/West Mississippi Watershed Management Commission (SCWMWMC). Projects will be required to meet each WMC's requirements. The rules for these WMC's are contained in **Appendix I and Appendix J** and on each WMC's web-site. The trigger for permit review/permit by the WMC's is outlined below:

SCWMWMC	Projects with 1 acre or more of detached single-family residential development o Review for projects between 1 and 15 acres may be reviewed by the City. Projects greater than 15 acres are required to be reviewed by the Commission. Projects with 0.5 acres or more of other development projects excluding detached single-family residential development o Review for projects between 0.5 and 5 acres may be reviewed by the City. Projects greater than 5 acres are required to be reviewed by the Commission. Linear projects creating or acre or more of new impervious Plans of any land development adjacent to or within a DNR Public Water/Wetland/ Watercourse Plans for any land development or site work within a 100-year floodplain Review is requested by City Single family developments with more than 15 acres that drain to more than one watershed
ECWMC	Plans of any land development that disturb more than one acre of land Road projects that increase impervious surface by one acre or more Plans of any land development adjacent to or within a DNR Public Water/Wetland/ Watercourse Any culvert installation or replacement, bridge construction, stream cross-section alteration or activity requiring a DNR Waters Permit Projects with the 100-year floodplain

- Review is requested by the City
- Land disturbing activities that drain to more than one watershed

STRATEGY: REGULATION	
No.	***Policy***
Rate Control	
1	Future discharge rates from new development and redevelopment will not exceed existing discharge rates for the 2-year, 10-year, and 100-year critical storm events for the project location as set forth in NOAA Atlas 14 Volume 8 or its successor.
2	Design calculations for the 2-, 10-, and 100-year critical storm event must be submitted to the City for review and approval.
3	The design of major stormwater storage facilities shall accommodate a 100-year critical duration event.
4	The design of new local storm sewer systems shall be based on a 10-year critical duration rainfall event.
5	For collection systems not designed to meet rate control standards (i.e. catch basins) a clogging factor of 50% will be utilized in sizing intake structures.
6	An emergency spillway (emergency outlet) from ponding areas shall be installed a minimum of 1 foot below the lowest building opening and shall be designed to have a capacity to overflow water at an elevation below the lowest building opening at a rate not less than 3 times the 100-year peak discharge rate from the basin or the anticipated 100-year peak inflow rate to the basin, whichever is higher.
Flood Control	
7	For new development, the basement floor elevation will be two feet above the elevation of any known historic high groundwater elevations for the area and the 100-year high surface water elevation in the area. Information on historic high groundwater elevations can be derived from any reasonable sources including piezometer data, soil boring data, percolation testing logs, etc.

8	Any new development or redevelopment building construction within the City will maintain a minimum building opening elevation 3 feet above the projected 100-year high water elevation for the area. If this 3 foot building opening freeboard requirement is considered a hardship, the standard could be lowered to 2 feet if the following can be demonstrated: ● That, within the 2-foot freeboard area, stormwater storage is available which is equal to or exceeds 50% of the stormwater storage currently available in the basin below the 100-year elevation. ● That a 25% obstruction of the basin outlet over a 24 hour period would not result in more than 1 foot of additional bounce in the basin. ● An adequate overflow route from the basin is available that will provide assurance that one foot of freeboard will be maintained for the proposed low building opening.
9	For areas with landlocked basin, the area shall be modeled to accommodate a back-to-back 100-year, 24-hour rainfall event; and the 100-year, 10-day runoff event. The highest water elevation in the basin from this analysis shall be the 100-year high-water level.
10	The City prohibits filling activities within the 100-year floodplain that will cause an increase in the stage of the 100-year or regional flood or cause an increase in the flood damages in the reach affected unless floodplain mitigation at a 1:1 ratio is provided. Additional detail is provided in the City's floodplain ordinance on the City's website.
11	A plan review and permit is required for any project that is within the 100-year floodplain, upland flood storage area, or changes the timing, storage, or carrying capacity of any tributaries in the 100-year floodplain.
12	Any 100-year floodplain area on private property will be covered by a drainage and utility easement or outlot dedicated to the City upon development or redevelopment.
Water Quality Treatment	
13	Stormwater must be treated prior to discharge to remove 60% of phosphorus and 85% of total suspended solids. Treatment can be provided in on-site or regional systems and through permanent ponding or a combination of BMP's that will meet these requirements.

14	If a permanent water quality pond is used to meet water quality requirements, the pond is required to meet the following requirements: - Water quality features consistent with NURP criteria and best management practices - A permanent wet pool with dead storage of at least the runoff from a 2.5-inch storm event - Permanent pool depth of 4 to 10 feet - 3:1 pool length to width ratio or greater with an irregularly shaped shoreline - 10:1 side slopes for a 10-foot bench at the normal water elevation - 3:1 to 20:1 side slopes for the remainder of the pond - Skimming device designed to prevent migration of floatables and oils for at least the 2-year event - Maintenance areas allowing access to remove sediment - Permanent pool volume greater than or equal to 2.5-inch rainfall over the watershed assuming full development - A 10-foot buffer comprised of mainly native plant species is required around storm ponds to provide additional water quality, minimize encroachment into the ponds, and reduce geese populations from access adjacent lawn areas. Seeding information for these buffers is contained in **Appendix G.**
15	New stormwater management ponds, infiltration areas, and treatment devices shall be covered by drainage and utility easements or outlots that are dedicated to the City. Rain gardens and other alternative BMP's may or may not be placed into easements, depending on the entity responsible for maintenance.
Infiltration/ Volume Control	
16	Stormwater runoff abstraction via infiltration, evapotranspiration, capture, and/or reuse of stormwater runoff is required in the amount equivalent to 1.1 inches of runoff generated by the new impervious surface. Runoff must be infiltrated within 48 hours.
17	Pretreatment of stormwater is required prior to discharge to an infiltration system.
18	Infiltration will not be allowed in areas where the existing or past land uses have the potential to contaminate the stormwater runoff, where the soils are not suitable for infiltration, or in areas where there is less than three feet of separation between the bottom of the infiltration system and the groundwater.
19	The City will encourage Low Impact Development (LID) techniques for new development and redevelopment by working with project proposers. New development and redevelopment shall consider and incorporate to the extent practical and feasible LID techniques that have been reviewed and approved by the City. A maintenance plan for these features will be submitted to the City for review and approval.
20	A post-construction percolation test must be performed on each infiltration practice and must demonstrate that the constructed infiltration rate meets or exceeds the design infiltration rate prior to the project acceptance by the City.
21	Areas of permanent pools tend to lose infiltration capacity over time and will not be accepted as an infiltration practice.

22	Where infiltration is not advisable or infeasible due to site conditions, biofiltration must be provided for that part of the abstraction volume that is not abstracted by other BMPs. Where biofiltration is infeasible, at a minimum filtration through a medium that incorporates organic material, iron fillings or other material to reduce soluble phosphorus must be provided.
Wetlands	
23	The City acts as the Local Government Unity (LGU) for the Wetland Conservation Act (WCA).
24	For new development or redevelopment projects, a minimum 20-foot/ average 30-foot buffer of native vegetation is required around wetlands and DNR Public Waters and Watercourses, excluding the Mississippi River.
25	A 50-foot buffer with native vegetation is required around Elm Creek for any new development. Redevelopment is required to attempt to accommodate this buffer as reasonable and practical.
26	Maintenance is allowed of an unimproved access strip through the buffer that is not more than 20 feet in width for recreational access to the wetland or water body.
27	Public trails are allowed within the buffer provided the total buffer width is maintained around the trail.
28	Management of noxious weeds or invasive species is allowed within the buffer. Planting of gardens or non-native species is not allowed within the buffer.
29	The City anticipates completing a wetland functions and values assessment using the most recent version of the Minnesota Routine Assessment Method (MnRAM). Based on the results of this assessment, the wetland management policies in **Appendix F** will apply.
Groundwater	
30	The City will cooperate with the Department of Health to ensure that all unsealed or improperly abandoned wells within the City are properly sealed.
31	Infiltration areas will not be allowed within 400 feet of a community water well or within 100 feet of a private well or within a 1-year time of travel zone in a wellhead protection area. The City will continue to implement its Wellhead Protection Plan.
32	The City will continue to comply with Hennepin County's 1994 Groundwater Management Plan.
Erosion and Sediment Control	
33	The City has an adopted erosion control ordinance that requires a permit for any land disturbing activity, including new home construction. Exemptions are outlined within the ordinance and include activities that result in less than 50 cubic yards of disturbance or filling. The City ordinance is included in **Appendix B** and on the City's website.

34	The City will conduct erosion control inspections in conformance with the NPDES permit for all projects that require an NPDES construction permit.

D. INTERNAL OPERATIONS

The City's internal operations can have a significant impact on stormwater management. This strategy is targeted primarily at the City with some areas targeted at the public and/or another agency. These policies are aimed at operation and maintenance activities associated with water resource management within the City.

STRATEGY: INTERNAL OPERATIONS	
No.	***Policy***
1	The City will sweep the streets at least twice annually and record the results. Areas that need more frequent sweeping will be swept as needed.
2	The City will inspect 20% of its stormwater treatment basins, structural pollution control devices, outfalls, and ponds every year on a rotating basis. Maintenance will be conducted as necessary.
3	Stormwater runoff to a landlocked area that cannot handle the increased runoff must maintain runoff volumes to the existing conditions.
4	Outlets for landlocked areas will be allowed provided the outlet complies with wetland and floodplain regulations; the basin provides storage below the outlet for the back-to-back 100-year, 24-hour event; and that there are no downstream impacts.
5	The City prefers to use regional detention and treatment areas rather than site specific detention areas where feasible. The City recognizes that development of these areas will likely be incorporated into development activity and may not be initiated independently by the City. If no regional system is available, development and redevelopment will be required to provide on-site systems.
6	The City requires as-builts of all ponding areas and designated emergency overflows.
7	The City will review its erosion control ordinance and make revisions as needed to address the SWPPP and other regulations as needed. Ordinances can be found in **Appendix B** and on the City's website.
8	The City will review and update its stormwater management ordinance and floodplain ordinance as needed. Ordinances can be found in **Appendix B** and on the City's website.
9	The City will continue to enforce its illicit discharge ordinance. This illicit discharge ordinance can be found in **Appendix B** and on the City's website.

10	The City will maintain and update its storm sewer map, including storm sewer pipes, outfalls, ponds, conveyances, water bodies on an annual basis.
11	The City will annually conduct visual inspections of stormwater discharges on City-owned land and record results of inspections in conformance with the City's MS4 SWPPP.
12	The City will contact the MPCA State Duty Officer to report any hazardous material spills or discharges in conformance with the City's MS4 SWPPP.
13	The City will quarterly inspect and maintain any exposed stockpiles and storage areas on City property to prevent erosion and discharge into the storm sewer system or water body in conformance with the City's MS4 SWPPP.
14	The City will maintain and submit annual inspection reports, maintenance reports, and other needed documentation in conformance with the NPDES permit.
15	The City Staff will annually review and adjust as necessary mowing, fertilizing, and herbicide application practices to reduce organic and pollutant discharges to the storm sewer and water bodies.
16	The City will review road salt application practices and consider alternative products as they become available.
17	The City will cooperate with the MPCA and other outside organizations to develop Total Maximum Daily Load (TMDL) plans for the listed impaired waters that receive stormwater from the City. The City will implement TMDL studies that affect land use within its borders as these studies are completed.
18	The City will work with the ECWMC, SCWMWMC, and adjoining communities to address intercommunity drainage issues if and when they occur.
19	The City will work with ECWMC to remove deadfall in Elm Creek if the ECWMC undertakes a cooperative project with the upstream cities.
20	The City will protect threatened and endangered species in conformance with State and Federal laws.
21	The City has adopted the Mississippi River Corridor Plan in 1981. In 1999, it was updated to respond to Mississippi National River and Recreational Area (MNRAA). These guidelines are included in the City's Comprehensive Plan.
22	The City will implement SWAMP to track and report inspection and maintenance activities of the City's BMPs and to schedule MS4 infrastructure inspections.

6. IMPLEMENTATION PROGRAM

6.1. Overview

Champlin has developed its implementation program to address issues identified earlier in this Surface Water Management Plan (SWMP). This program reflects the needs and concerns of many stakeholders including the City Council, City Staff, citizens, and watersheds. The program also considers Champlin's ability to fund these items through its general levy and stormwater utility. The implementation program consists of the following components:

- Capital Improvement Projects (CIP)
- Operation and Maintenance
- Official Controls
- Monitor and Study

Capital Improvements consist of "on-the-ground" projects intended to remedy issues identified as current problems and to continually provide storm system improvements, new/redevelopment, street reconstructions, parks projects and more. The capital projects focus on phosphorus reduction within the TMDL subwatersheds and any additional areas identified in the City's Non-Degradation Report. Projects within the TMDL subwatersheds are the highest priority for the City. Flood protection is also a high priority for capital improvement projects.

Operation and Maintenance items consist primarily of the general maintenance of Champlin' drainage system including ponds, storm sewer, creeks, and culverts. Operation and maintenance also includes activities related to NPDES MS4 Permit compliance such as BMP maintenance and inspections, annual meetings, SWPPP updates, and SWPPP implementation.

Official Controls include ordinance and policy revisions intended to achieve water quality and quantity benefits. Each proposed implementation item has a specific driver, which are identified in the tabulated implementation program later in this section. Over time, codes must be updated to remain consistent with goals, policies and practices. City ordinances are revised as needed to stay current with the MS4 permit requirements and revisions to the watershed district rules.

Monitor and Study items consist primarily of projects designed to collect water resource data such as water quality monitoring projects, and projects to evaluate cost benefits for various stormwater treatments or planning opportunities. These types of projects also include relevant partnerships and collaborations with the City.

6.2. 10-Year Implementation Plan Priorities

Table 6.1 presents Champlin's Implementation Program. More importantly, the Implementation Program aligns with the City's goals and policies presented in this SWMP. **Table 6.1** presents implementation items in each of the four functional areas of Capital Improvements (CIP), Operation and Maintenance, Official Controls and Monitor and Study. The implementation program incorporates Champlin' Storm Water Pollution Prevention Plan (SWPPP) through direct reference of items that have a financial impact. The City will update the implementation program in conjunction with its annual MS4 public meeting. As the City's CIP is reevaluated, **Table 6.1** may be updated, which does not require an amendment to this SWMP.

A three-tiered approach has been adopted that priorities projects as "High", "Medium", or "Low". This method is based on the following criteria:

High Priority:

- Flood problem area that has structures inundated during events having intensities less than that associated with a 1% chance storm.
- Projects with the highest Benefit relative to Project Cost.
- Projects that should be completed soon to meet regulatory or permit requirements.
- Projects that are needed to address significant public safety concerns.
- Projects that are needed to finish or upgrade the construction of the City's storm water infrastructure system to meet long-term improvement plans.
- Projects that should be constructed now so as to be in conjunction with other projects that will result in a reduction in cost or impact to the public.
- Projects for which funding is now available or will be available in the next few years.

Medium Priority:

- Flood problem areas with structures that do not flood but have limited freeboard in less than 1% rainfall events and high potential for increased water elevations if system obstructions occur during the rainfall event.
- Projects with a high Benefit relative to Project Cost.
- Projects that must be completed soon, but not immediately to meet regulatory or permit requirements.
- Projects that are needed to address public safety concerns.
- Projects that are needed to finish or upgrade the construction of the City's storm water infrastructure system to meet long term improvement plans, but timing for construction should be delayed to accommodate other planning or project work.
- Projects that should be constructed soon and/or scheduled so as to be in conjunction with other projects that will result in a reduction in cost or impact to the public.

Low Priority: These projects meet the criteria listed above, but are not urgent, have lower Benefit to Cost Ratios, can be delayed until other work can be done at the same time, or must be delayed until funds become available.

TABLE 6.1

SURFACE WATER MANAGEMENT IMPLEMENTATION PLAN

No.	Project Description	10 Year Total Cost Estimate [1,3]	Possible Funding Sources [2]	Proposed Cost By Year[1]										Comments
				2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	
Capital Improvement Projects (CIP)														
1	Drainage regrading and system modification along Wood Lawn Park Trail	$200,000	Stormwater Utility, Grants, Watershed Partnerships								$200,000			Identified in the 2004 SWMP
2	Implement upstream water quality BMP's to address water quality concerns in Mill Pond	$115,000	Stormwater Utility, Grants, Watershed Partnerships			$35,000			$35,000			$45,000		Identified in the 2004 SWMP
3	Construct storm water management and water quality improvements with Douglas Drive Reconstruction	$121,600	Stormwater Utility, Grants, Watershed Partnerships				$121,600							Identified in the 2004 SWMP
4	Implement upstream water quality BMP's to address water quality concerns in Elm Creek	$180,000	Stormwater Utility, Grants, Watershed Partnerships		$40,000			$40,000			$50,000		$50,000	Identified in the 2004 SWMP, STM SWR-35
5	Implement upstream water quality BMP's to address water quality concerns in Lehmans Lake	$130,000	Stormwater Utility, Grants, Watershed Partnerships			$40,000			$40,000			$50,000		Identified in the 2004 SWMP, STM SWR-36
6	Provide BMP for French Lake Road	$145,000	Stormwater Utility, Grants, Watershed Partnerships									$145,000		Identified in the 2004 SWMP, STM SWR-18
7	Repair and replace the storm sewer south of West River Road on Oak Creek.	$100,000	Stormwater Utility, Grants, Watershed Partnerships							$100,000				Stm Sewer - 23 City's 2018-2027 CIP
8	Reconstruct the storm sewer lift station near 123rd and Champlin Drive	$100,000	Stormwater Utility, Grants, Watershed Partnerships		$100,000									Stm Sewer - 30 City's 2018-2027 CIP
9	Stormwater BMPs as part of the City's regular street improvement projects.	$600,000	Stormwater Utility, Grants, Watershed Partnerships	$60,000	$60,000	$60,000	$60,000	$60,000	$60,000	$60,000	$60,000	$60,000	$60,000	Stm Sewer - 37 City's 2018-2027 CIP

No.	Project Description	10 Year Total Cost Estimate [1,3]	Possible Funding Sources [2]	Proposed Cost By Year[1]										Comments
				2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	
10	Elm Creek upstream TMDL project - Phase III. Includes stabilization of 3000 linear feet of stream banks upstream of Mill Pond. To be completed in partnership with MnDNR, ECWMC, and Hennepin County.	$280,000	Stormwater Utility, Grants, Watershed Partnerships		$280,000									Stm Sewer - 39 City's 2018-2027 CIP
11	Elm Creek Strem Restoration Phase IV - Includes 4600 linear feet of stream habitat restoration located upstream of Mill Pond. To be completed in partnership with MnDNR, ECWMC, and Hennepin County.	$350,000	Stormwater Utility, Grants, Watershed Partnerships			$350,000								
12	Elm Creek Strem Restoration Phases V - Includes repairing stream habitat restoration located upstream of Mill Pond. To be completed in partnership with MnDNR, ECWMC, and Hennepin County.	$300,000	Stormwater Utility, Grants, Watershed Partnerships					$300,000						
13	Mississippi Crossings installation of a rain garden	$6,750	Stormwater Utility, Grants, Watershed Partnerships		$6,750									Stm Sewer - 40 City's 2018-2027 CIP
14	Infiltration tree trenches to be installed along the Mississippi Crossings	$100,000	Stormwater Utility, Grants, Watershed Partnerships		$100,000									Stm Sewer - 41 City's 2018-2027 CIP
15	Galloway Park river bank stabilization	$51,000	Stormwater Utility, Grants, Watershed Partnerships				$51,000							Stm Sewer - 44 City's 2018-2027 CIP
16	Mississippi Crossings stormwater pond, Phase III	$67,000	Stormwater Utility, Grants, Watershed Partnerships		$67,000									Stm Sewer - 45 City's 2018-2027 CIP
17	Implement Stormwater Control Measures identified in the 7V subwatershed identified in hthe Champlin Watershed Assessment report. The City will look into partnering with WMWMC to complete these projects.	$1,156,000	Stormwater Utility, Grants, Watershed Partnerships		$160,000		$65,000		$600,000		$52,000	$9,000	$270,000	Champlin Watershed Assessment, 2014
18	Implement Stormwater Control Measures identified in the 4V subwatershed identified in hthe Champlin Watershed Assessment report. The City will look into partnering with WMWMC to complete these projects.	$341,000	Stormwater Utility, Grants, Watershed Partnerships			$195,000		$6,000		$140,000				Champlin Watershed Assessment, 2015

No.	Project Description	10 Year Total Cost Estimate [1,3]	Possible Funding Sources [2]	Proposed Cost By Year[1]										Comments
				2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	
19	Implement Stormwater Control Measures identified in the 2T subwatershed identified in hthe Champlin Watershed Assessment report. The City will look into partnering with WMWMC to complete these projects.	$314,250	Stormwater Utility, Grants, Watershed Partnerships		$30,000	$30,000	$76,500	$30,000	$30,000	$9,000	$30,000	$48,750	$30,000	Champlin Watershed Assessment, 2016
20	Trillium Court stormwater wetland maintenance. The City will perform a pond survey and clean out sediment of the pond.	$123,500	Stormwater Utility					$3,500	$120,000					Section 4, Area of Concern #12
21	Perry Ave stormwater pond improvements. The City will identify options for outlet improvements and a pond/wetland dredging project to provide the needed drainage through the area and limit pond backups.	$25,000	Stormwater Utility		$25,000									Section 4, Area of Concern #10
22	Goose Lake Parkway outlet improvements. The City will look to install an outlet control structure to prevent any future pond backups.	$10,000	Stormwater Utility			$10,000								Section 4, Area of Concern #15
23	Tanglewood outlet improvements. The City will look at catch basin capacity and EOF functionality.	$5,000	Stormwater Utility		$5,000									

No.	Project Description	10 Year Total Cost Estimate [1,3]	Possible Funding Sources [2]	Proposed Cost By Year[1]										Comments
				2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	
Operation and Maintenance														
24	City Website - Update and maintain the City's website with stormwater management information.	$60,000	Stormwater Utility	$6,000	$6,000	$6,000	$6,000	$6,000	$6,000	$6,000	$6,000	$6,000	$6,000	
25	Education Program: The City will provide stormwater education and outreach programs for residents within the City as part of the NPDES MS4 permit. The City or its designee will raise awareness to the audience involved by providing information on stormwater pollution prevention, effects of illicit discharges, best management practices, components of the SWPPP and outside entity resources available to City residents and business owners. Includes distribution of a quarterly newsletter.	$90,000	Stormwater Utility	$9,000	$9,000	$9,000	$9,000	$9,000	$9,000	$9,000	$9,000	$9,000	$9,000	
26	Annual Meeting - Hold annual public meeting combined with City Council Meeting or other public participation/involvement event to solicit public input on the SWPPP, discuss its effectiveness, or amendments. Explore new venues and enhance meeting effectiveness and participation. Effectiveness will be evaluated based upon the amount of resident feedback received.	$8,000	Stormwater Utility	$800	$800	$800	$800	$800	$800	$800	$800	$800	$800	
27	Storm Sewer System Mapping - Update storm sewer map and GIS database to meet the requirements of Part II.D.4. of the MS4 General Permit. Identify outfalls, including unique identification (ID) number assigned by the permittee, and an associated geographic coordinate. Update pond inventory and submit to MPCA.	$150,000	Stormwater Utility	$15,000	$15,000	$15,000	$15,000	$15,000	$15,000	$15,000	$15,000	$15,000	$15,000	
28	Illicit Discharge Inspections - Identify areas that are high-priority outfalls and around high-risk establishments (fast food restaurants, dumpsters, car washes, mechanics, and oil changes). The City will integrate those sites into its annual MS4 inspection activities.	$50,000	Stormwater Utility	$5,000	$5,000	$5,000	$5,000	$5,000	$5,000	$5,000	$5,000	$5,000	$5,000	
29	Parking Lots & Street Cleaning - Sweep City maintained streets 2 times per year	$825,000	Stormwater Utility	$80,000	$80,000	$80,000	$80,000	$80,000	$85,000	$85,000	$85,000	$85,000	$85,000	
30	Storm Sewer Inspection Program - Conduct one inspection of all City-owned ponds and outfalls prior to expiration date of the MS4 General Permit. Annually inspect of 100% of structural pollution control devices. Annually inspect 20% of known public outfalls, sediment basins and ponds each year on a rotating basis.	$90,000	Stormwater Utility	$9,000	$9,000	$9,000	$9,000	$9,000	$9,000	$9,000	$9,000	$9,000	$9,000	

No.	Project Description	10 Year Total Cost Estimate [1,3]	Possible Funding Sources [2]	Proposed Cost By Year[1]										Comments
				2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	
31	TMDL Review & Implementation - Champlin will work cooperatively with the Minnesota Pollution Control Agency and other outside organizations to develop and implement all future TMDL implementation plan(s) for impaired waters designated under Section 303(d), receiving MS4 discharges from within or adjacent to the City.	$10,000	Stormwater Utility	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000	
32	Mississippi River Outlet Maintenance - Review and conduct frequent maintenance on older storm sewer outlets to the Mississippi River.	$120,000	Stormwater Utility			$40,000			$40,000			$40,000		
33	Model Updates - Continue to update and maintain the City's hydrologic/hydraulic model. Includes any data sharing with the watersheds on updates to their models.	$40,000	Stormwater Utility	$4,000	$4,000	$4,000	$4,000	$4,000	$4,000	$4,000	$4,000	$4,000	$4,000	
34	Stormwater Systems Maintenance Training Program - Training focused on parking lot and street cleaning, storm drain systems cleaning, road salt materials management.	$8,000	Stormwater Utility	$800	$800	$800	$800	$800	$800	$800	$800	$800	$800	
35	Road Salt Application Review - The City will record the annual activities of the salt distribution program and adjust current practices as necessary.	$12,000	Stormwater Utility	$1,200	$1,200	$1,200	$1,200	$1,200	$1,200	$1,200	$1,200	$1,200	$1,200	
36	Select Priority Areas - Evaluate the City's existing program and select 3 priority areas to provide focused outreach (e.g., specific TMDL reduction targets, promoting residential BMPs, etc.)	$10,000	Stormwater Utility	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000	
37	Storm Sewer Upgrades - Includes yearly maintenance and upgrades to the City's existing storm sewer system.	$500,000	Stormwater Utility	$45,000	$45,000	$45,000	$45,000	$45,000	$55,000	$55,000	$55,000	$55,000	$55,000	
38	Critical Lake Watersheds - The City will perform additional street sweeping in those areas that drain directly to the lakes.	$150,000	Stormwater Utility	$15,000	$15,000	$15,000	$15,000	$15,000	$15,000	$15,000	$15,000	$15,000	$15,000	
39	Pond Surveys - The City will annually complete pond surveys to schedule and prioritize the necessary maintenance projects. This effort will be assisted by the SWAMP Application.	$31,500	Stormwater Utility		$3,500	$3,500	$3,500	$3,500	$3,500	$3,500	$3,500	$3,500	$3,500	

No.	Project Description	10 Year Total Cost Estimate [1,3]	Possible Funding Sources [2]	Proposed Cost By Year[1]										Comments
				2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	
40	Annual Pond Cleanout - The City will perform yearly cleanout of ponds identified for maintenance with the SWAMP program.	$1,475,000	Stormwater Utility		$150,000	$150,000	$150,000	$150,000	$175,000	$175,000	$175,000	$175,000	$175,000	
41	Stormwater Asset Management Program (SWAMP) - Annual Maintenance of the City's Program	$27,000	Stormwater Utility		$3,000	$3,000	$3,000	$3,000	$3,000	$3,000	$3,000	$3,000	$3,000	
42	Chloride Management - The City will promote and adopt strategies included in the TCMA Chloride Management Plan.	$20,000	Stormwater Utility	$2,000	$2,000	$2,000	$2,000	$2,000	$2,000	$2,000	$2,000	$2,000	$2,000	
Official Controls														
43	Stormwater Compliance Inspections - Implement written procedures, checklist and responsible persons to ensure that at least 10% of inspections conducted annually are performed at deemed high priority inspection sites (e.g., near sensitive receiving waters, projects larger than 5 acres)	$10,000	Stormwater Utility	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000	
44	Ordinance Updates - The City will continually review their ordinances related to stormwater, illicit discharge, erosion and sediment control, wetlands, and floodplains for consistency with state and watershed requirements. Updates will be made as needed.	$50,000	Stormwater Utility	$5,000	$5,000	$5,000	$5,000	$5,000	$5,000	$5,000	$5,000	$5,000	$5,000	
45	Policy and Procedure Review - Ongoing review of policy and procedures designed to meet wasteload allocation requirements. Identified in the Elm Creek WRAPS report.	$15,000	Stormwater Utility	$1,500	$1,500	$1,500	$1,500	$1,500	$1,500	$1,500	$1,500	$1,500	$1,500	
46	Improve Riparian Vegetation - The City will look to increase riparian buffers and enforce DNR buffer rules on 100% of streams and tributaries.	$16,000	Stormwater Utility			$8,000				$8,000				
47	Update Stormwater Utility Fee - The City will review the implementation of proposed programs and improvements identified in this plan and will determine the potential need to revise the existing stormwater utility fee.	$7,500	Stormwater Utility		$2,500			$2,500			$2,500			
48	Ordinance Enforcement - Enforce stormwater related ordinances, including the erosion control ordinance and conduct pre-con meetings with contractors to ensure compliance.	$80,000	Stormwater Utility	$8,000	$8,000	$8,000	$8,000	$8,000	$8,000	$8,000	$8,000	$8,000	$8,000	

No.	Project Description	10 Year Total Cost Estimate [1,3]	Possible Funding Sources [2]	Proposed Cost By Year[1]										Comments
				2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	
49	Construction Site Implementation of Stormwater and Erosion and Sediment Control BMPs - Review and evaluate the efficacy of construction site stormwater and erosion control plans through regular (weekly to monthly) inspections for construction sites to ensure compliance with City ordinances. Document all inspections and enforcement actions (public and private) and keep on file at City.	$100,000	Stormwater Utility	$10,000	$10,000	$10,000	$10,000	$10,000	$10,000	$10,000	$10,000	$10,000	$10,000	
Monitor and Study														
50	Complete a feasibility study for Donie Galloway Park stabilization and flooding concerns if identified as an issue.	$35,000	Stormwater Utility, Grants, Watershed Partnerships										$35,000	Section 4, Area of Concern #1
51	Complete landlocked subwatershed analysis for the existing landlocked areas to determine the need for an outlet	$50,000	Stormwater Utility, Grants, Watershed Partnerships						$50,000					
52	Groundwater Monitoring - Maintain water quality sampling requirements mandated by MDH and analyze trends in water chemistry, looking for any possible degradation of quality or changes in aquifer hydraulics. Evaluate the water quality monitoring strategy and results to ensure that they are consistent with federal and state requirements yet also take into account local conditions.	$35,000	Stormwater Utility, Grants, Watershed Partnerships	$3,500	$3,500	$3,500	$3,500	$3,500	$3,500	$3,500	$3,500	$3,500	$3,500	Identified in the City's Wellhead Protection Plan
53	Perform an analysis to address the pump capacity and the storm sewer outlet for the 9T-6 subwatershed and determine if a reconstrction of the outlet structure is needed.	$40,000	Stormwater Utility, Grants, Watershed Partnerships			$40,000								Section 4, Area of Concern #2
54	Subwatershed Assessment Studies - Partner with ECWMC to complete urban BMP subwatershed assessments and identify feasible retrofit projects. These studies will be used to help identify projects to meet TMDL goals for waterbodies within Elm Creek Watershed.	$80,000	Stormwater Utility, Grants, Watershed Partnerships				$35,000						$45,000	Identified in the Elm Creek WRAPS report

No.	Project Description	10 Year Total Cost Estimate [1,3]	Possible Funding Sources [2]	Proposed Cost By Year[1]										Comments
				2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	
	Hydrologic/hydraulic model update - Update the City's current models with Atlas 14 rainfall data.	$50,000	Stormwater Utility				$50,000							
55	Complete a feasibility study to improve drainage through a drainage ditch along Woodlawn Trail near Overlook Court N. During rain events, runoff backs up into backyards and Woodlawn Park.	$15,000	Stormwater Utility, Grants, Watershed Partnerships								$15,000			Section 4, Area of Concern #11
	TOTAL	$9,016,100		$283,800	$1,256,550	$1,188,300	$839,400	$822,300	$1,395,300	$737,300	$829,800	$818,050	$910,300	

[1] Cost estimates are preliminary and subject to review and revision as engineer's reports are completed and more information becomes available. Table reflects 2017 costs and does not account for inflation. Costs generally include labor, equipment, materials, and all other costs necessary to complete each activity. Some of the costs outlined above may be included in other operational costs budgeted by the City.

[2] Funding for stormwater program activities projected to come from following sources - Surface Water Management Fund, Developers Agreements, Grant Funds, General Operating Fund, or Special Assessments.

[3] Staff time is not included in the cost shown.

7. FINANCIAL CONSIDERATIONS

Implementation of the proposed regulatory controls, programs and improvements that are identified in this plan will have a financial impact on the City. To establish how significant this impact will be, a review of the means and ability of the City to fund these controls, programs and improvements is necessary. Outlined below is a list of various sources of revenue that the City will consider in implementing the water resource management efforts outlined in this plan.

For 2018-2027, the projects, programs, and studies outlined in **Table 6.1** are estimated to cost about $9,016,100. Potential funding sources are listed below:

- City's Stormwater Utility Fund
- Special assessments for local improvements made under the authority granted by Minnesota Statutes Chapter 429.
- Revenue generated by Watershed Management Special Tax Districts provided for under Minnesota Statutes Chapter 473.882.
- Watershed District Levies from cooperation and partnership on projects with the watershed management commissions
- Grant monies that may be secured from various local, regional, County, State, or Federal agencies. This would include MnDOT, MPCA, Metropolitan Council, MnDNR and others.
- Tax abatement
- Developer funds
- Neighboring cities
- Other sources could include tax increment financing, state aid, etc.

The City will use funds generated from its Stormwater Utility as the primary funding mechanism for its implementation program including; maintenance, repairs, capital projects, studies, etc. The City will continue to review the stormwater utility fee annually and adjust based on the stormwater related needs of the City and other available funding mechanisms. The City will explore additional revenue sources as they become available and from those options listed above to cover additional funding needs.

8. AMENDMENT PROCEDURES

8.1. Review and Adoption Process

Review and adoption of this Surface Water Management Plan will follow the procedure outlined in Minnesota Statutes 103B.235:

> 'After consideration but before adoption by the governing body, each local government unit shall submit its water management plan to the watershed management organization[s] for review for consistency with the watershed plan. The organization[s] shall have 60 days to complete its review.'
>
> 'Concurrently with its submission of its local water management plan to the watershed management organization, each local government unit shall submit its water management plan to the Metropolitan Council for review and comment. The council shall have 45 days to review and comment upon the local plan. The council's 45-day review period shall run concurrently with the 60-day review period by the watershed management organization. The Metropolitan Council shall submit its comments to the watershed management organization and shall send a copy of its comments to the local government unit.'
>
> 'After approval of the local plan by the watershed management organization[s], the local government unit shall adopt and implement its plan within 120 days, and shall amend its official controls accordingly within 180 days.'

8.2. Plan Amendments and Future Updates

This Local Surface Water Management Plan will be incorporated into the City's 2040 Comprehensive Plan update in 2018. The Plan is intended to be in effect for 10 years, at which time an updated plan will be required. Following review by the watershed management commissions and the formal adoption process outlined above, the Champlin SWMP will be current.

The City of Champlin may revise/amend the plan in response to City-identified needs or any future amendments to the watershed plans. Minor changes to the plan will not require a re-submittal for agency review. Minor changes to the Plan shall be defined as changes that do not modify the goals, policies, or commitments expressly defined in this plan by the City. Adjustment to subwatershed boundaries will be considered minor changes provided that the change will have no significant impact on the rate or quality in which storm water runoff is discharged from the City boundaries.

Major plan amendments shall be made known to the following parties and will proceed according to the process set forth in Section 8.1.

1. City Administrator and City Engineer
2. Affected Watershed Management Commissions within the City
3. Metropolitan Council
4. Public within the City through a public hearing process

Appendix B

City of Champlin, MN

Mississippi River Corridor Critical Area Plan

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SECTION I: INTRODUCTION

The Mississippi River Corridor Critical Area (MRCCA) is a joint state, regional and local program providing coordinated planning and management for a 72 mile stretch of the Mississippi River through the seven-county metropolitan area and 54,000 acres of surrounding land across 30 local jurisdictions.

The MRCCA is home to a full range of residential neighborhoods and parks, as well as river-related commerce, industry, and transportation. Though the river corridor has been extensively developed, many intact and remnant natural areas remain, including bluffs, islands, floodplains, wetlands, riparian zones, and native aquatic and terrestrial flora and fauna. These resources and values are protected through development standards and criteria implemented via local land use plans and zoning ordinances.

History of the MRCCA and Rulemaking

The MRCCA encompasses many of the Twin Cities metropolitan area's most significant natural and cultural resources, including: water, navigational capabilities, scenic views, geology and soils, vegetation, minerals, flora and fauna, cultural and historic resources and land and water-based recreational resources. The MRCCA is home to a full range of residential neighborhoods, as well as river-related commerce, industry, and transportation. Though the river corridor has been extensively developed, many intact and remnant natural areas remain, including geomorphological features such as bluffs, islands, floodplains, wetlands, riparian zones, and native aquatic and terrestrial flora and fauna.

To manage and protect these vital resources, in 1976 Governor Wendell Anderson designated the MRCCA by Executive Order 130 under authority of the Critical Areas Act of 1973. The designation was renewed by Governor Albert Quie in 1979 by Executive Order 79-19, and made permanent that same year by resolution of the Metropolitan Council. The MRCCA covers a 72-mile stretch of the Mississippi River through the Twin Cities Metropolitan Area, extending from the townships of Dayton and Ramsey in Hennepin and Anoka counties to the north and extending downstream to Ravenna Township, just south of Hastings in Dakota County. The legal boundary of the MRCCA is established in Executive Order 79-19.

Land use in the MRCCA is currently regulated by local governments through local MRCCA plans and ordinances as directed by Executive Order 79-19. Executive Order 79- 19 established four land use districts within the MRCCA and set standards and guidelines to be used by local governments when preparing plans and regulations. By the early 1980s, all local governments within the MRCCA had adopted MRCCA plans, and all but a few had adopted MRCCA ordinances.

In 1988, Congress established the Mississippi National River and Recreation Area (MNRRA), a unit of the National Park System. MNRRA shares the same boundaries as the MRCCA. In establishing MNRRA Congress found that "the Mississippi River Corridor within the Saint Paul-Minneapolis Metropolitan Area represents a nationally significant historical, recreational, scenic, cultural, natural, economic, and scientific resource" and that there was a national interest in the "preservation, protection and enhancement of those resources for the benefit of the people of the United States. The National Park Service, in its 1995 Comprehensive Management Plan for the MNRRA, determined it would not acquire significant land holdings or establish land use regulations for the MNRRA but would instead rely on state and local administration of Executive Order 79-19 to protect the resources. In 1991, the Minnesota Legislature reaffirmed its commitment to a permanent MRCCA designation by recognizing the MNRRA as a state-designated critical area.

In 1995, Governor Arne Carlson issued Reorganization Order 170 transferring administrative responsibility for the MRCCA from the Environmental Quality Board (EQB) to the DNR. This order transferred rulemaking authority for the management of the MRCCA to the DNR. In 2009, the Legislature directed the DNR to establish rules for the MRCCA. Based on input throughout an extensive public involvement process, the DNR completed draft rules in 2011. However, the rulemaking process was put on hold that same year before a notice of intent to adopt rules was issued. The DNR was unable to publish a notice of intent to adopt rules within 18 months of the date of the legislative directive, and its authority to complete the rulemaking lapsed. In 2013, the Legislature revised State Statute and directed the DNR to resume rulemaking, The DNR launched this new rulemaking effort in 2013 shortly after the close of the legislative session. Based on input received during this period, the DNR made additional revisions to the working draft rules and produced a final draft of the proposed MRCCA rules.

Summary of MRCCA Designation & Rulemaking:

- **1973** - Minnesota passes Critical Areas Act of 1973.
- **1976** - Governor Wendell Anderson designates 72-mile stretch of the Mississippi River through the metro area and its adjacent corridor a Critical Area. Executive Order 130.
- **1979** - Governor Albert Quie continues the designation. Executive Order 79-19 and the Metropolitan Council acts to make designation permanent.
- **1988** - Congress establishes the Mississippi National River and Recreational Area (MNRRA) as unit of NPS (MNRRA shares same boundary as MRCCA).
- **1991** - MNRRA designated a state critical area per Critical Areas Act.
- **1995** - Governor Arne Carlson shifts administrative responsibility for the MRCCA from EQB to DNR.
- **2009** - Legislature amends MN Statutes, § 116G.15 and directs DNR to conduct rulemaking for the MRCCA, but rulemaking authority lapses
- **2011** - DNR develops draft rule after participatory stakeholder process, but rulemaking authority lapses 2013 Legislature directs DNR to resume rulemaking process in consultation with local governments.
- **2013** - Legislature directs DNR to resume rulemaking process in consultation with local governments.
- **2017** – MRCCA Rules become effective January 4.

Designated Goals of the MRCCA Rules include:

1. Protect and preserve the Mississippi River and adjacent lands that the legislature finds to be unique and valuable state and regional resources for the benefit of the health, safety, and welfare of the citizens of the state, region, and nation;
2. Prevent and mitigate irreversible damages to these state, regional, and natural resources;
3. Preserve and enhance the natural, aesthetic, cultural, and historical values of the Mississippi River and adjacent lands for public use and benefit;
4. Protect and preserve the Mississippi River as an essential element in the national, state, and regional transportation, sewer and water, and recreational systems; and
5. Protect and preserve the biological and ecological functions of the Mississippi River corridor.

Previous MRCCA Planning Efforts

Champlin first adopted an MRCCA plan, then called the Mississippi River Critical Area Plan, in 1980 in collaboration with the cities of Anoka and Ramsey to meet the requirements of Executive Order 79-19. The plan was updated during Champlin's 2003 Comprehensive Planning process and again as part of the 2008 Comprehensive Plan. Since 1980, many of the first plan's recommendations have been implemented and regulations remained relevant in 2008 as well as today. Development has been carefully managed and regulated via the City's Conservancy District Ordinance, Floodplain Ordinance and other land use/zoning controls.

The following summarizes these programs:

Conservancy District Ordinance

Champlin's primary tool for regulating corridor development is the Conservancy District Ordinance. It is the purpose and intent of the ordinance to prevent damage to natural resources and to preserve and enhance their values to the public. This ordinance is a product of the 1980 Critical Area Plan and in general met the intent of the Critical Area Executive Order, with some modifications to fit the local situation.

Floodplain Ordinance

The Floodplain Management Act was passed in 1969 as a tool to minimize damages due to flooding. Using standards established by the DNR, the City put in place a Floodplain Ordinance that regulates development within floodplain areas. Maps prepared by the Federal Insurance Administration in 1977 were first used to delineate floodplain areas. The maps were updated in 2004 and in 2016. With the map updates followed an update of the City's Floodplain Ordinance.

Land Use Plan

The land use plan for Champlin takes into consideration all the environmental constraints, state and metropolitan requirements, as well as local concerns such as:

established or emerging development patterns; physical characteristics of the site and setting; accessibility, availability or timing of essential public services; impact on or compatibility with adjoining properties, neighborhoods and communities; economics of developer and public bodies; ability to positively alter present undesirable development and growth patterns; and expansion of open space.

The riverfront in Champlin is almost entirely developed. The shoreline development has been almost exclusively single-family homes with some apartments in the older developed areas. Most of the shoreline within the developed area is privately owned, with the exception of Galloway Park, Mississippi Point Park and Chandler Park. All homes in the Critical Area are served by public sewer. Although the developed neighborhoods along the river do not have the planning flexibility available in the undeveloped areas, some important issues such as building heights, existing river access, existing land uses, utilities, and site plan review procedures need consideration.

Surface Water Management Plan

The Mississippi River Corridor is managed in accordance with state regulations for clean water, including surface water. The City of Champlin is divided into two distinct watersheds for the purpose of classifying trunk conveyance systems that hydraulically connect retention basins and manage the flow of stormwater. The two watersheds are the Elm Creek Watershed and the West Mississippi Watershed.

Currently all surface water is managed by the Champlin Surface Water Management Plan. The plan includes a layout of the storm sewer trunk system and ponding areas with major and minor drainage districts defined. The general objectives of the Champlin Surface Water Management Plan are as follows:

1. To prevent flooding;
2. To reduce to the greatest practical extent the public capital expenditures necessary to control excessive volumes and rates of runoff;
3. To improve water quality;
4. To reduce erosion and sedimentation from surface flows;
5. To preserve wetlands, lakes, and streams;
6. To promote groundwater recharge;
7. To protect and enhance fish and wildlife habitat;
8. To provide water recreational opportunities;
9. To enhance the natural beauty of the landscape; and
10. To secure benefits associated with the proper management of surface water.

The Plan specifically addresses concerns for wetland preservation and enhancement through a set of goals and policies that are in compliance with the local, state, and federal wetland regulations. Under the guidance of staff, an inventory and classification of a significant number of wetlands and water bodies within the City was accomplished. The incorporation of wetlands into the storm sewer system includes recommendations to improve water quality, such as regional ponding and localized infiltration, while maintaining adequate protection against the 100-year flood.

MRCCA Plan Update

The following MRCCA plan documents existing conditions in the Mississippi River Corridor and develops strategies to preserve and enhance the environmental, scenic, historical, cultural, biological and scientific values, to enhance public outdoor recreation opportunities and communicate the significance of the Mississippi River. The plan provides general direction to the decision-makers and staff of the City on how to handle river corridor decisions in an informed manner consistent with corridor goals and policies.

The public input process for this plan was included in the outreach activities for the 2040 Comprehensive Plan. At a 2017 City Council work session, Councilmembers reviewed selected policies and goals, including those that impact the MRCCA. The items reviewed received overall positive responses and, as such, many of the goals and policies are carried forward from the previous MRCCA plan. The plan elements were also discussed in a 2018 joint meeting with the Environmental Resources Commission and City Council.

In addition, in the fall of 2017 the Champlin initiated two resident surveys. The surveys, designed to measure the community's quality of life including residents' thoughts and opinions on community characteristics, city services and community engagement, found that 90 percent of Champlin residents felt that it was very important to improve connections to the Mississippi River. Further, 89 percent of residents supported Mississippi River water quality efforts. Clearly Champlin residents place high value on the MRCCA as both a natural environment and a place to recreate and have meaningful access.

SECTION II: LAND USE DISTRICTS

Executive Order 79-19 established four land use districts within the MRCCA and standards and guidelines to assist local governments when preparing plans and regulations. Because the original four districts became less consistent with development patterns, 2017 rules established six new districts that more accurately represent existing and planned future development. The six districts include: Rural & Open Space District, River Neighborhood District, River Towns & Crossings District, and Separated from River District, Urban Mixed District, and Urban Core District. Each district reflects the character and development along the river and planned and future development. Different dimensional standards (building height, river setback, and bluff setback) are applied to each district. These standards are administered through local zoning ordinances.

Districts are important for managing the MRCCA because they help protect the Mississippi River as a natural and cultural resource. The standards defined in each district take the existing characteristics into account and keep buildings and other development away from sensitive shoreline areas and areas prone to soil erosion and slope failure. Keeping a distance between sensitive shoreline areas and the development helps to maintain the river's water clarity and quality and reduce sediment runoff. Height provisions help preserve scenic views.

The six districts are established based on the natural and built character of different areas of the river corridor. Descriptions of the districts are as follows:

Rural and open space district (CA-ROS).

The rural and open space district (CA-ROS) is characterized by rural and low-density development patterns and land uses, and includes land that is riparian or visible from the river, as well as large, undeveloped tracts of high ecological and scenic value, floodplain, and undeveloped islands. Many primary conservation areas exist in the district.

The CA-ROS district must be managed to sustain and restore the rural and natural character of the corridor and to protect and enhance habitat, parks and open space, public river corridor views, and scenic, natural, and historic areas.

River neighborhood district (CA-RN).

The river neighborhood district (CA-RN) is characterized by primarily residential neighborhoods that are riparian or readily visible from the river or that abut riparian parkland. The district includes parks and open space, limited commercial development, marinas, and related land uses.

The CA-RN district must be managed to maintain the character of the river corridor within the context of existing residential and related neighborhood development, and to protect and enhance habitat, parks and open space, public river corridor views, and scenic, natural, and historic areas. Minimizing erosion and the flow of untreated storm water into the river and enhancing habitat and shoreline vegetation are priorities in the district.

River towns and crossings district (CA-RTC).

The river towns and crossings district (CA-RTC) is characterized by historic downtown areas and limited nodes of intense development at specific river crossings, as well as institutional campuses that predate designation of the Mississippi River Critical Corridor Area and that include taller buildings.

The CA-RTC district must be managed in a manner that allows continued growth and redevelopment in historic downtowns and more intensive redevelopment in limited areas at river crossings to accommodate compact walkable development patterns and connections to the river. Minimizing erosion and the flow of untreated storm water into the river, providing public access to and public views of the river, and restoring natural vegetation in riparian areas and tree canopy are priorities in the district.

Separated from river district (CA-SR).

The separated from river district (CA-SR) is characterized by its physical and visual distance from the Mississippi River. The district includes land separated from the river by distance, topography, development, or a transportation corridor. The land in this district is not readily visible from the Mississippi River.

The CA-SR district provides flexibility in managing development without negatively affecting the key resources and features of the river corridor. Minimizing negative impacts to primary conservation areas and minimizing erosion and flow of untreated storm water into the Mississippi River are priorities in the district.

Urban mixed district (CA-UM).

The urban mixed district (CA-UM) includes large areas of highly urbanized mixed use that are a part of the urban fabric of the river corridor, including institutional, commercial, industrial, and residential areas and parks and open space.

The CA-UM district must be managed in a manner that allows for future growth and potential transition of intensely developed areas that does not negatively affect public river corridor views and that protects bluffs and floodplains. Restoring and enhancing bluff and shoreline habitat, minimizing erosion and flow of untreated storm water into the river, and providing public access to and public views of the river are priorities in the district.

Urban core district (CA-UC).

The urban core district (CA-UC) includes the urban cores of Minneapolis and St. Paul.

The CA-UC district must be managed with the greatest flexibility to protect commercial, industrial, and other high-intensity urban uses, while minimizing negative impacts to primary conservation areas and minimizing erosion and flow of untreated storm water into the river. Providing public access to and public views of the river are priorities in the district.

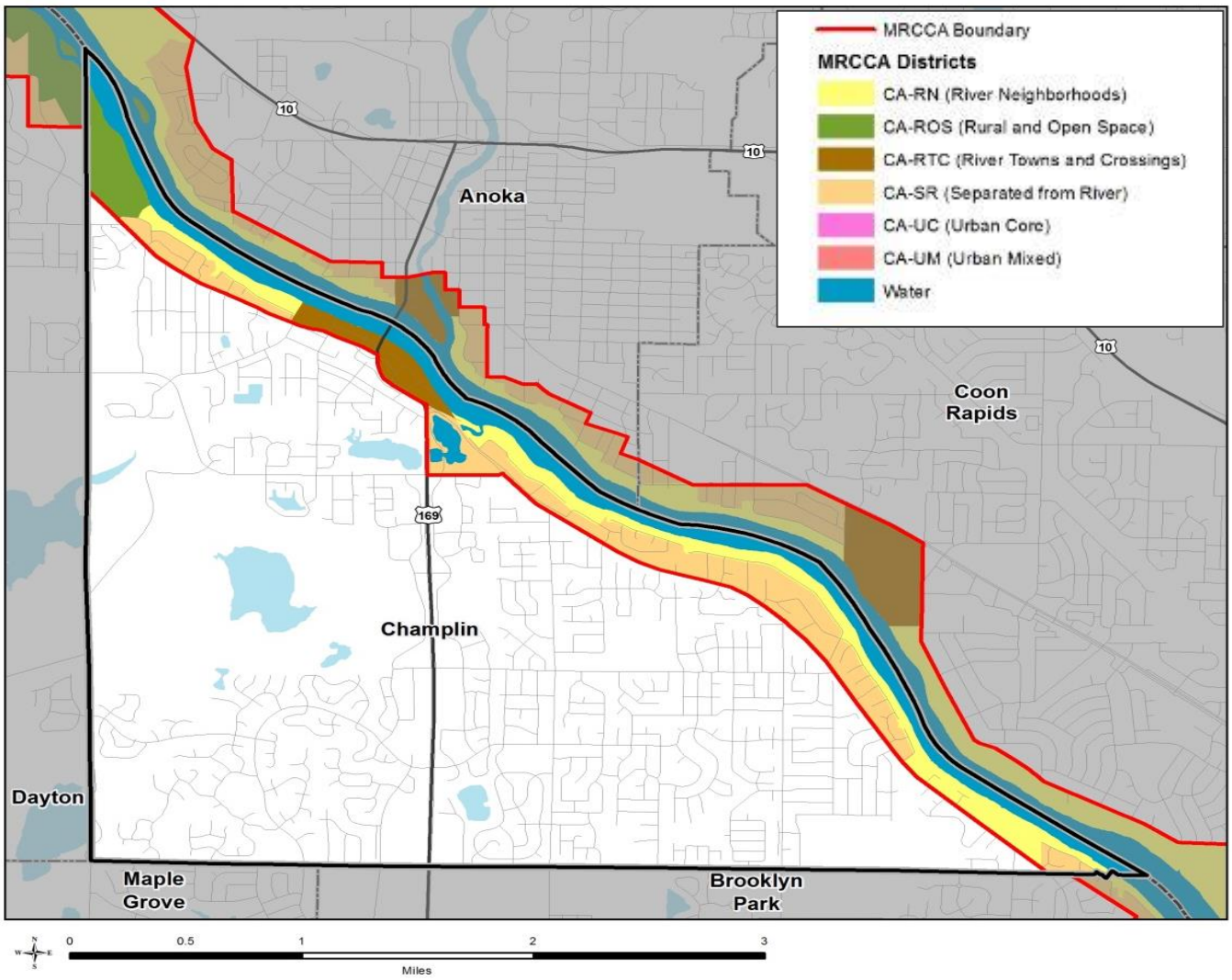
Champlin has 588 acres of land in the MRCCA designated as four different districts: River Neighborhoods (CA-RN), Separated from River (CA-SR), River Towns & Crossings (CA-RTC), and Rural and Open Space (CA-ROS).

CA-RN: Much of the land directly adjacent to the river is designated as CA-RN, which is described as "developed residential lands and existing/planned parkland that are visible from the river, or that abut riparian parkland." In Champlin, this district includes mainly single-family residences that back up on to the river, but also includes Mississippi Pointe Park and Chandler Park. There is a total of 210 acres designated CA-RN.

CA-SR: Inland from the CA-RN District is the CA-SR District, which is described as "land that is separated from and not visible from the river." This district includes mostly single-family homes in the residential areas adjacent to riverfront homes. There is a total of 277 acres designated CA-SR.

CA-RTC: Land designated in the River Towns & Crossings district, which the DNR describes as "historic downtown and river crossing commercial areas" is found directly north and south of the Anoka-Champlin Bridge. Much of the acreage falls in the area known as Mississippi Crossings, which is planned for redevelopment with a mix of high-density residential uses, restaurants, a hotel and event center.

CA-ROS: Rural & Open Space district, which is "rural undeveloped and developed low density residential land that is riparian or visible from the river, often contains tracts of high quality ecological resources." Galloway Park is the only site located in the CA-ROS district.



Land Use Districts in the Mississippi River Critical Area

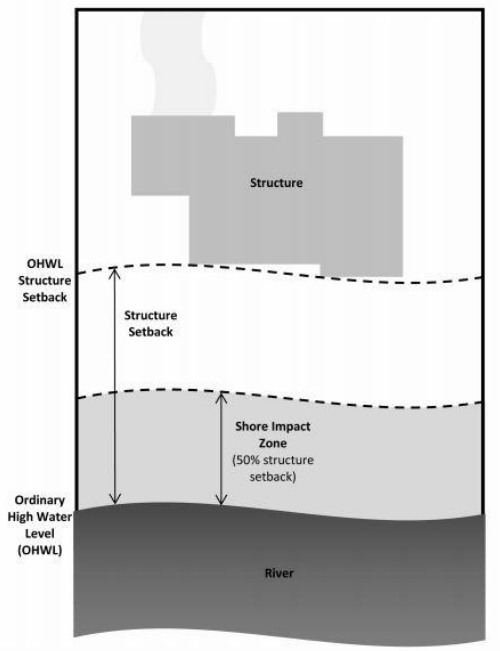
Land Use	Acreage	Percentage	Lineal Footage
Rural Open Space (CA-ROS)	60 acres	10%	3,600 feet
Separated from River (CA-SR)	277 acres	46%	NA
River Neighborhoods (CA-RN)	210 acres	35%	24,700 feet
River Towns and Crossings (CA-RTC)	61 acres	10%	4,400 feet
Total	608 acres	100%	32,700 feet

SECTION III: PRIMARY CONSERVATION AREAS - RESOURCE MANAGEMENT

Primary Conservation Areas (PCAs) are key natural and cultural resources and features that are to be protected through MRCCA plans and ordinances. Examples of these resources and features include shore impacts zones (SIZ), bluff impact zones (BIZ), floodplains, wetlands, natural drainage routes, unstable soils and bedrock, native plant communities, cultural and historic properties, significant vegetative stands, scenic views, publicly owned parks, trails and open spaces, among other resources. PCAs are important as they help ensure that resources and features are given priority consideration for protection.

Shore Impact Zones

A shore impact zone is defined as the land located between the ordinary high-water level (OHW) of Mississippi River and a line parallel to it at a setback of 50 percent of the required structure setback (see diagram below). The shore impact zone in Champlin is predominantly 50 feet wide from the OHW. Though in the CA-RTC district, the shore impact zone is 35 feet wide from the OHW.



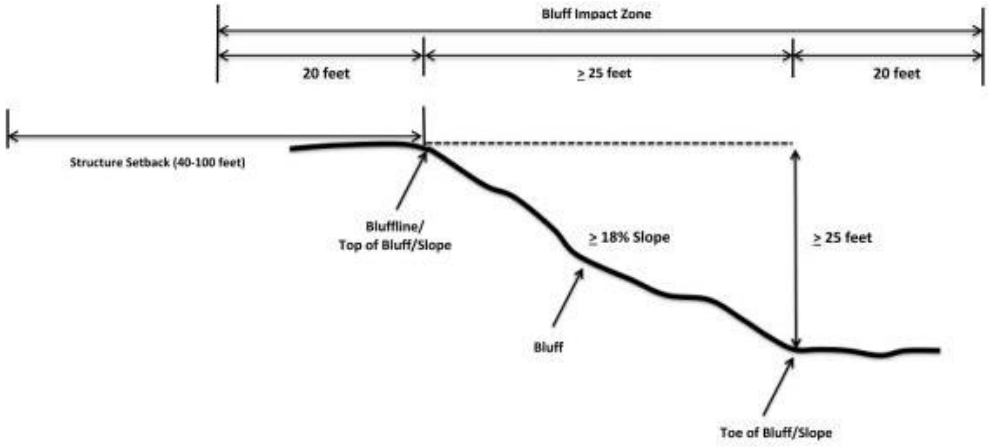
Bluff Impact Zones

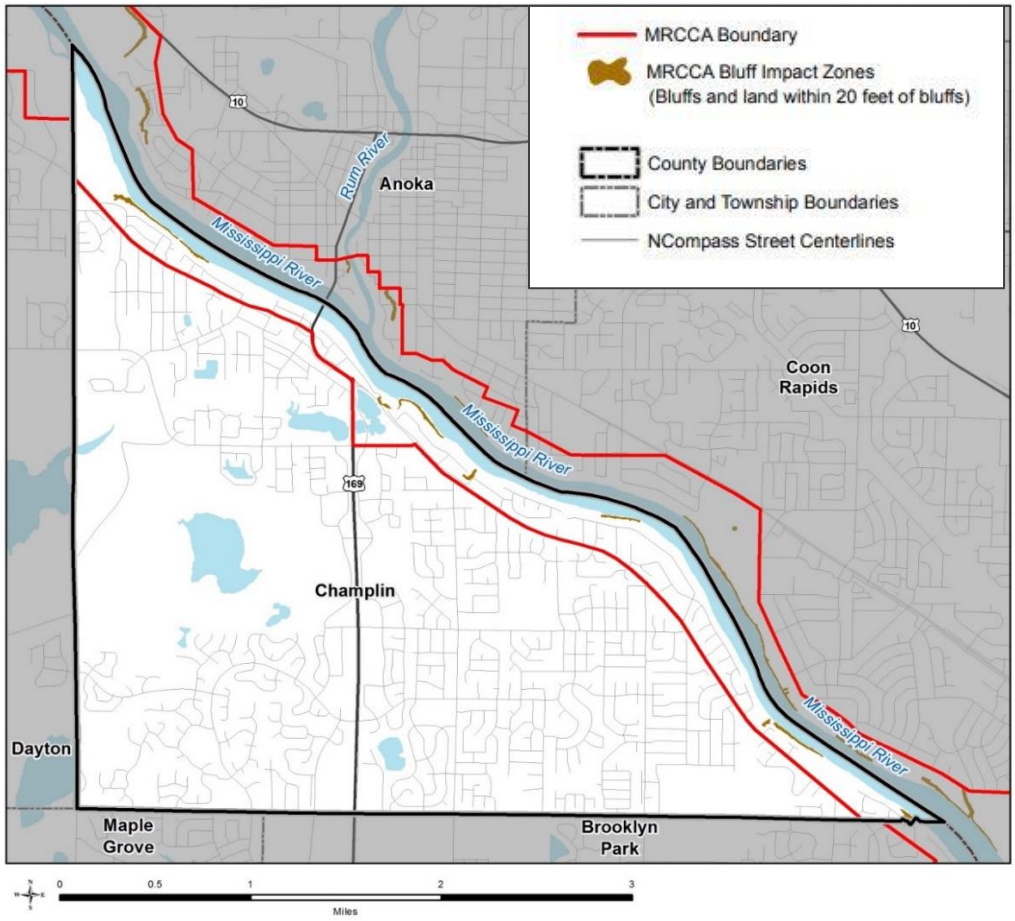
The protection of bluffs in the MRCCA is important to reducing erosion and slope failure, as well as maintaining wildlife habitat, native vegetation and the corridor's scenic character. As a PCA, bluffs and the associated bluff impact zones within 20 feet of the bluffs are regulated by the MRCCA program. Buffs are defined as "a slope that rises at least 25 feet above the ordinary high water level or toe of the slope to the top of the slope and the grade of the slope averages 18 percent or greater, measured over a horizontal distance of 25 feet." (See diagram below)

In Champlin, bluffs are found along the River corridor in three areas: 1) northwest in Galloway Park and adjacent neighborhoods; 2) in and south of Chandler Park; and 3) on

slopes of property in the southwest part of the City. From the top of the bluff inland, the terrain is generally flat or gently sloping.

Regulating development near the bluff is important. Removal of vegetation from the bluff top alters soil stability and increases erosion and siltation. Erosion is of special concern along the Mississippi Riverbank as some properties experience problems aggravated by periods of high water, motorboat wakes and storm water runoff.





Wetlands and Floodplains

Wetlands are low lying areas, which are normally covered with shallow or intermittent waters. Swamps, marshes, bogs, and other low-lying areas are all wetlands, and may occur as part of a river, stream, drainage way, or as a free-standing low area.

Few wetlands are located within the Mississippi River Corridor in the City of Champlin. However, the National Wetland Inventory indicates a small segment of shallow marsh in Galloway Park as well as wooded swamp adjacent to the Mill Pond and at Galloway Park.

In recent years attitudes regarding wetlands have changed a great deal. Wetlands are no longer thought of as wastelands and producers of disease. The reason for this dramatic change in attitudes is the recognition of the important role the wetlands play in our environment. The importance of wetlands can be summarized as follows:

1. Wetlands affect the quality of water by acting as a filter and storing organic materials in the leaves of aquatic plants.
2. Wetland areas are also important for natural ponding. These areas help recharge the water table and reduce peak storm water runoff flows, thereby reducing the flooding potential.
3. Wetlands provide an essential breeding, nesting, and feeding ground for wildlife.
4. Marshes occurring in upland depression areas can reduce soil erosion by dissipating the velocity of the runoff.

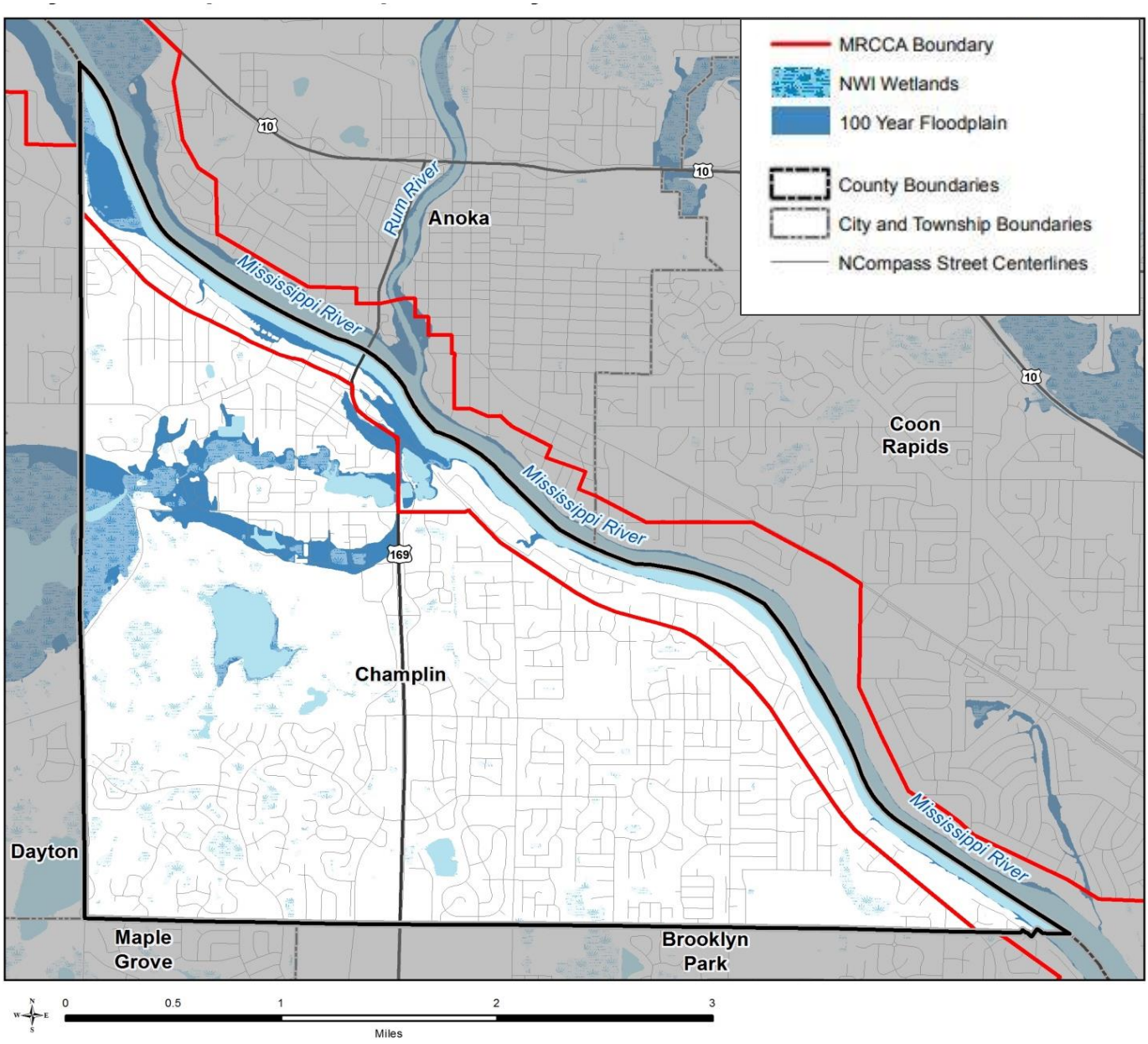
The size and location of wetlands are important in determining the value in maintaining water quality, minimizing flood damage, and preserving wildlife habitat. Champlin adheres to all Federal wetland regulations does not allow the dredging or filling of wetlands without a permit.

The State of Minnesota adopted the Flood Plain Management Act in 1969. The act requires all local units of government to adopt, enforce, and administer a Flood Plain Ordinance. The Flood Plain Act was in response to growing concern over the financial and personal losses resulting from floods.

Flood plains of rivers and streams were originally formed by nature and are a result of flood flows during excessive snowmelt or rainfall. Over a period of time, as more and more development occurs in or along the flood plain, flood heights and velocities increase which result in economic losses.

All people are affected by the problems created by flooding since clean-up costs, flood control costs, and reconstruction of streets and public utilities are all paid with public funds. In order to stop the continued escalation of public cost related to flooding, the emphasis in flood plain management was shifted from flood controls (dikes, channelization, etc.), to regulatory controls (zoning ordinances and subdivision regulations). The regulatory approach establishes guidelines prohibiting development in that part of the flood plain which is most susceptible to flooding (floodway) and in the less susceptible parts (flood fringe) permitting a broader range of land use activities.

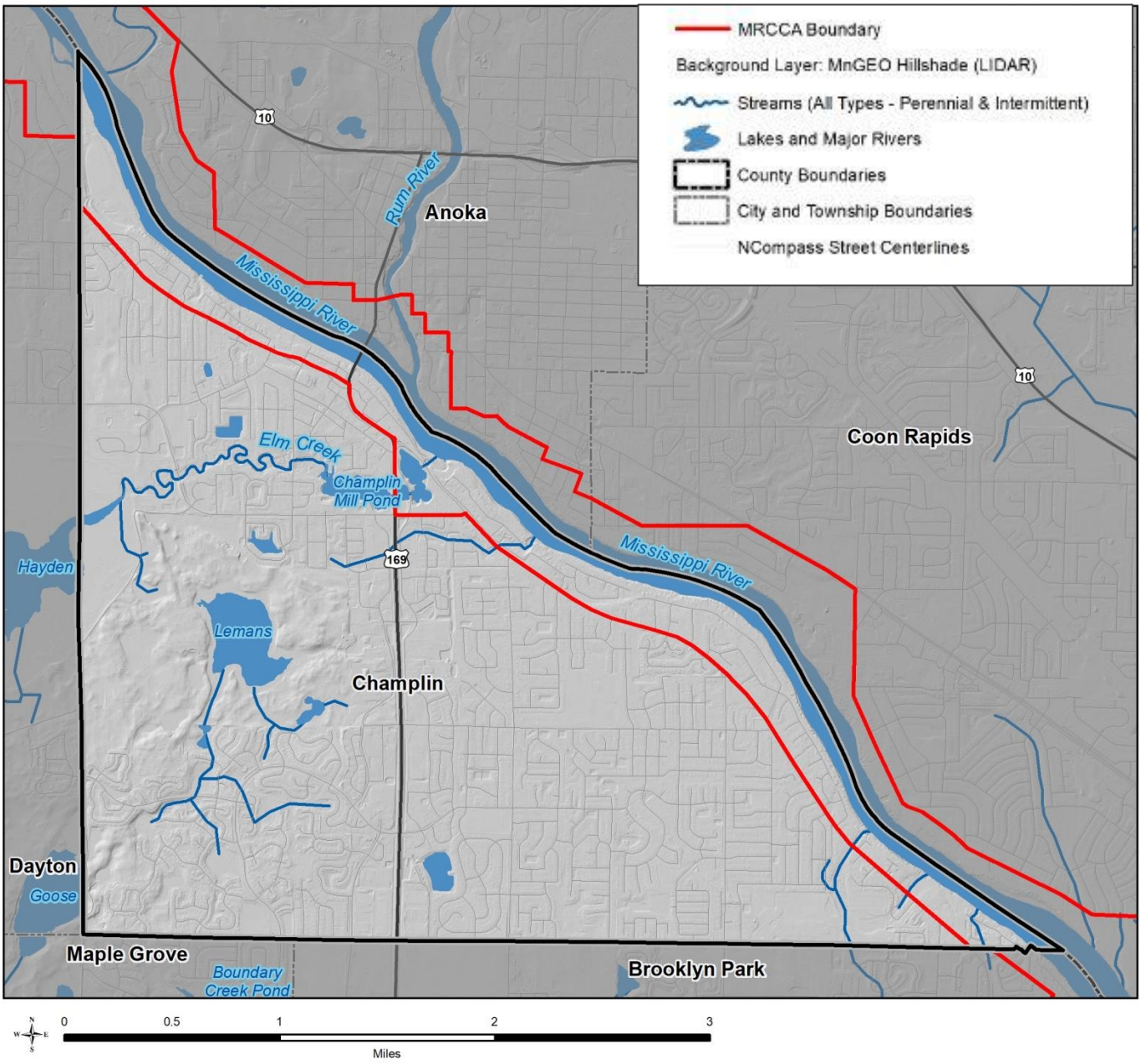
Champlin has fairly high banks along most of the Mississippi River, so a very small percentage of the Critical Area is subject to flooding. Champlin has adopted a Flood Plain Ordinance, which has been approved by the Minnesota Department of Natural Resources.



Natural Watercourses

A natural watercourse is a channel for water movement, such as creeks, streams, or rivers. Champlin's primary watercourse flowing into the Mississippi River is the Mill Pond, which is fed from the Elm Creek. Through preservation of natural watercourses, and with proper management, it is possible to protect the quality and supply of water, as well as reduce the cost associated with sewer construction and other public costs.

Preservation of natural watercourses is an essential part of any program to improve the quality of stormwater runoff, however, the conservation efforts must extend beyond the streams and creeks themselves, and consideration must be given to the entire watershed, including wetlands, lakes, reservoirs, and ground water resources. Particular attention should be paid to the Elm Creek and the Mill Pond due to their direct contribution to the Mississippi River. The City of Champlin shall utilize its Storm Water Management plan as a guide to achieve the best use of its existing water resources.



Soils

When land is designated for a particular use, it is essential that consideration be given to the limitations of the various soil types. Soils vary greatly in composition, and this variation in

soil properties affects its productive capacity, its ability to support heavy loads, its ability to serve as a medium for waste disposal, and to hold its shape and slope after excavation.

Soil limitations for urban development have been classified as slight, moderate, and severe. Slight means that the limitations that exist are minor and can be easily corrected. Moderate indicates that the soil conditions are not favorable, but with proper design and planning, these limitations can be corrected. Severe indicates that soil properties are not suitable for development and corrective measures would require major soil reclamation, intensive maintenance, or special design. This information, when mapped, should be used in determining reasonable land uses.

According to the Hennepin County Soil and Water Conservation District, areas with severe soil limitations are subject to flooding or have a high-water table for at least a part of the year. Most of the areas with severe soil problems are outside the flood plain. Development in the areas must meet established requirements.

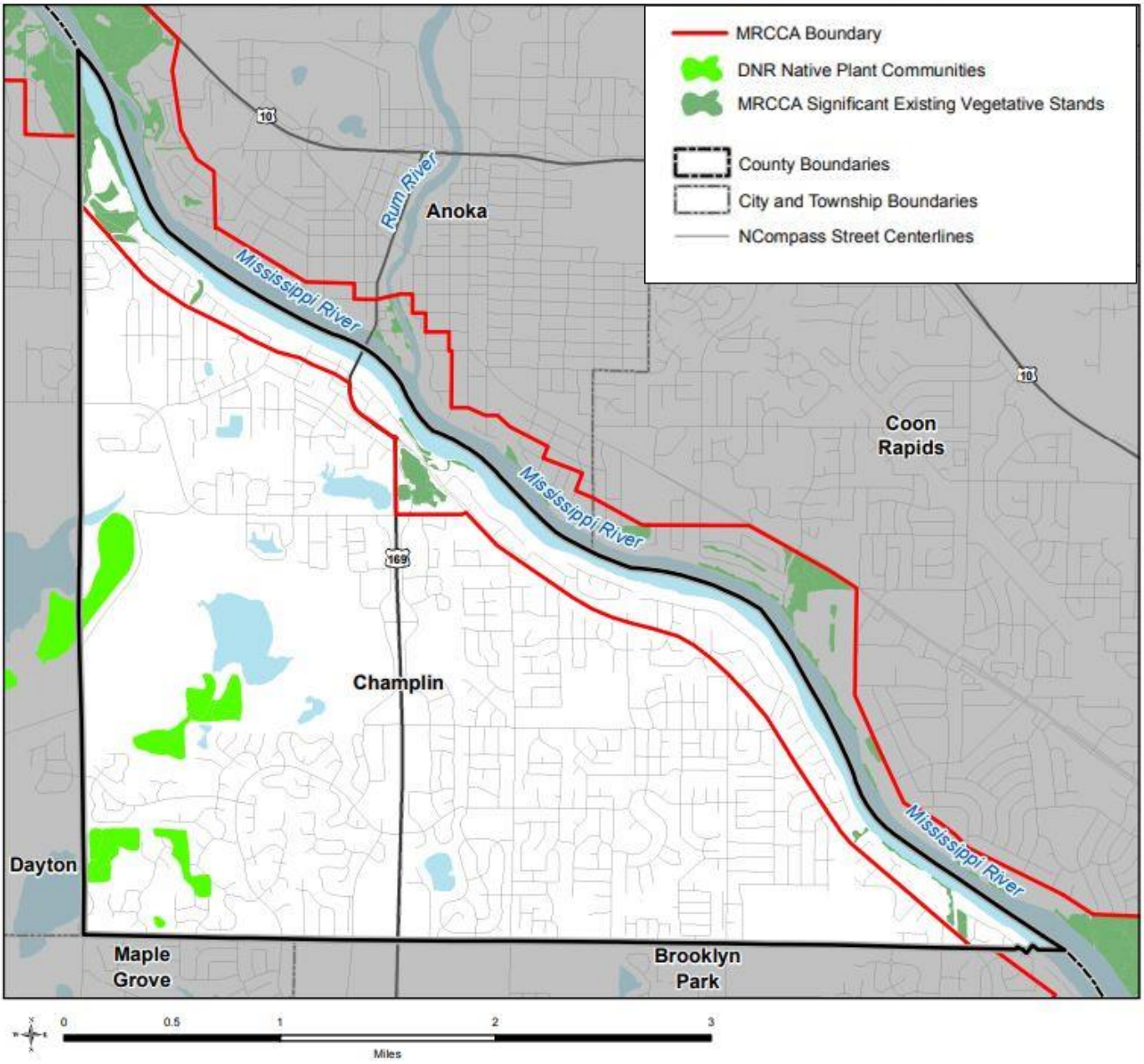
As state previously, sandy soil is a characteristic of Champlin's Critical Area Corridor. Serious erosion problems exist along the river and proper precautions must be taken to minimize the problems.

Native Plant Communities and Significant Vegetation Stands

Champlin has several large native plant communities that exist outside of the MRCCA. These areas are mostly contained in the Elm Creek Park Reserve and are under management of Three Rivers Park District.

There are five significant vegetative stands in the MRCCA. To the north, Galloway Park contains a mix of overstory hardwood trees. Galloway Park is a passive City-owned park and, as such, the existing woodlands are protected. There is also an area around the Mill Pond and Mississippi Pointe Park that is wooded. This area is also under public ownership. The publicly held vegetative stands offer animal habitat and provide for erosion control. Tree resources here have been preserved over the years.

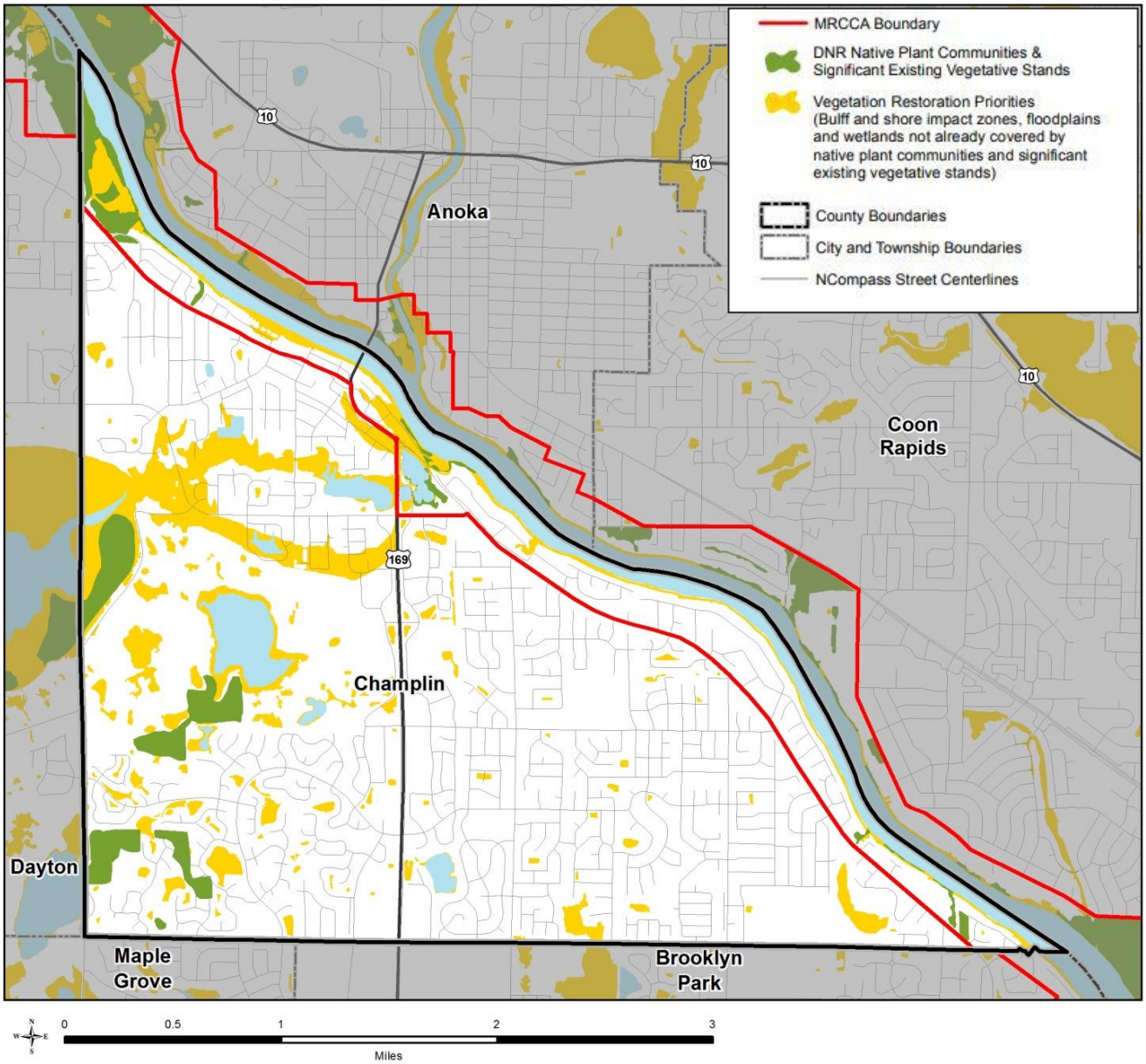
The three other vegetative stands in the MRCCA are wooded natural drainage ways supporting storm water management. These natural drainage ways are protected via the City's Floodplain Ordinance, Wetland Ordinance and are under drainage and utility easements.



Priorities for Restoration

Restorative measures in the river corridor are often necessary for maintaining water quality and resource integrity. Development and redevelopment present opportunities to prevent erosion, stabilize slopes, and restore natural vegetation. Vegetation plays a large role in slowing stormwater runoff, preventing erosion, filtering nonpoint source pollution, preventing establishment of invasive species, protecting habitat, maintaining stability of bluffs and steep slopes, and maintaining corridor character consistent with each management district. Identifying priorities for natural vegetation restoration is important for maintaining the health of the river and its surrounding land and ensuring that new development or redevelopment does not have negative impact on the corridor.

Even though no formal studies or reports have been completed, priorities for vegetation restoration were identified through a GIS-based process that includes determining the primary conservation areas (PCAs) with no natural vegetation, overlaying native plant communities and significant existing vegetation stands, and reviewing areas where non-vegetative PCAs are still visible. The result is areas with no or limited natural vegetation that are particularly sensitive to vegetation removal or at risk of erosion which serve as a restoration priority area. Restoration priority areas in Champlin include Galloway Park to the north and around the Mill Pond as well as the shore impact zone for residential properties.



Open Space and Recreational Facilities

Municipalities in the MRCCA are required to encourage creation, connection, and maintenance of open space and recreation facilities, and identify potential public access points and trail

locations in their plans. While the majority of the land surrounding the river is single-family homes public access to the Mississippi River in the older neighborhoods is limited. Private property extends up to the river's edge, and as a result it is not practical to consider bike trails or walkways; but it is possible to provide vantage points to the river by maintaining rights-of-way. The existing rights-of-way should not receive intensive recreational improvement but should be maintained for access to the river.

Mississippi Commons
The Mill Pond has been described as the "jewel" of Champlin. Four parks surrounding the Mill Pond are separated by West River Road, cutting off pedestrian access between them. New facilities would be envisioned for Mississippi Commons. Water quality in the Mill Pond would be improved. In addition, the centerpiece of Mississippi Commons might be a facility for arts, history and the river.

The Metropolitan Council's role in meeting park and recreational needs is limited basically to planning. The Metropolitan Council is concerned with regional park needs, regional trails, and special features such as undeveloped river islands. The Council is responsible for prioritizing regional acquisition and improvement programs. Of particular importance to Champlin is the Trail Policy Plan, which has designated trails along the Mississippi River.

Inventory of Existing Parks within the Critical Area

Park	Function	Agency	Size	Activity
Galloway Park	Community	City of Champlin	72 acres	Ball fields, trails, and passive areas.
Mississippi Pointe Park / Chandler Park	Community	City of Champlin	10 acres	Boat launching, canoeing, picnicking, and fishing
Doris Kemp Park	Community	City of Champlin	3 acres	Trails, fishing, and passive viewing
Veteran's Memorial Park	Community	City of Champlin	2 acres	Trails, picnicking, and passive areas
River Shores	Mini	City of Champlin	1 acre	Undeveloped
Public Rights-of-way	Mini	City of Champlin	5 acres	Undeveloped

First, the responsibility of providing additional public lands along the river should not be viewed exclusively as a County or State responsibility. Although it is not necessary to maintain public access or ownership of all undeveloped it is not necessary to maintain public access or ownership of all undeveloped riverfront property, the following standards should be applied in these areas:

Trails are addressed in Champlin's Comprehensive Park and Trail Plan. It is anticipated that trails will be located to provide residents with access routes to recreational, educational and commercial facilities.

Water-Oriented Uses

Water-oriented uses such as recreational marinas, public recreational uses, and other river-dependent uses can provide a community with economic, recreational, and cultural benefits. They can also contribute to external impacts like traffic, hours of operation, noise, and surface water use. Water-oriented uses are important because they provide an opportunity for residents and businesses to take advantage of the river and use it for purposes that require water access. Access to the river for water-oriented uses gives the community a unique advantage over others in the metro area.

In Champlin, the land adjacent to the river is primarily developed low-density residential, institutional, or park and recreational land. Water-oriented use of the river is solely boating made accessible by private docks along riverfront homes and by the public boat launch located in Mississippi Point Park. This public boat launch allows for public recreational use of the river. While the launch is heavily used in the summer, it has little impact on the river corridor and its surrounding land.

With small-scale floating docks, opportunities to publicly access the river and store boats are increased while disruption to the river is minimized. When designed properly, dock construction can be done in a way that protects water quality, minimizes visual impact, and avoids increasing runoff and erosion.

Public River Corridor Views

Public River Corridor Views (PRCVs) is a term defined as "views towards the river from public parkland, historic properties, and public overlooks, as well as views toward bluffs from the opposite shore." Public views of the river corridor are an important scenic resource and the development of the term assists local governments and stakeholders with identifying and protecting these resources. They are important because, as a PCA, they help maintain public viewing access of the river corridor even as communities grow and development occurs. Local governments are required to identify these scenic resources and protect those identified views through ordinance requirements and ordinance administration. The City of Champlin has little public access to the river outside of the Mississippi Pointe/Chandler Park area. Most of the river frontage is privately owned with single-family homes backing up onto the river. PRCVs exist along the corridor where the public is able to access and view the river. The aerial on the next page identifies to the two locations. Photos are also provided.

The first location at Mississippi Pointe Park is particularly notable as you can view a long distance to the north and can see the Champlin-Anoka Bridge. Maintaining shorter vegetation along this shoreline is encouraged.

The second, at Chandler Park, is the highest bluff in Champlin. The bluff is protected by a vegetative buffer and, as such, does not offer overlook opportunity. Its scenic value is likely best realized from across the River in Anoka. Removal of vegetation here is discouraged as it would diminish the view as a natural riverfront edge.

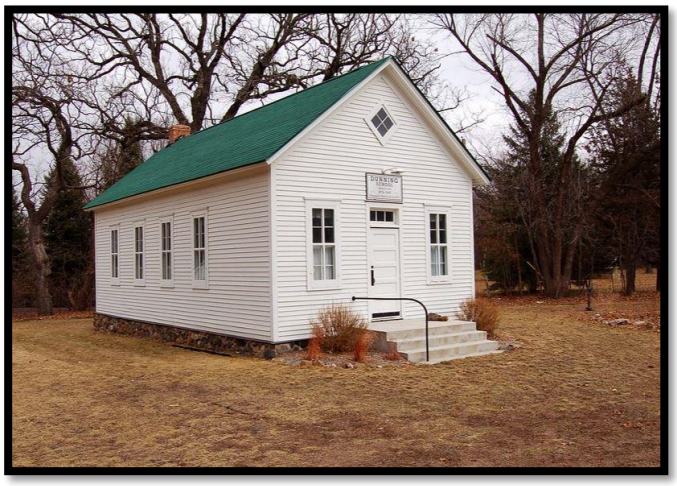
View from Mississippi Pointe Park (late May photo)

View from Chandler Park (late May photo – heavy tree cover)

There are areas along the southern reaches of Champlin that have views of bluffs along the Coon Rapids Dam Regional Park. The view of these bluffs shows a natural riverfront edge that exists in few places along the corridor. The heavily vegetated bluff creates an attractive natural landscape. Removal of vegetation would diminish this view.

Cultural and Historic Properties

The Mississippi River forms the northeastern boundary of Champlin. Originally called "Father of Waters" by Native Americans, the river has significance in United States history. The river has served as a transportation route since the first canoe. By 1000 A.D., Minnesota Native Americans used the river to trade with tribes in the Illinois and Ohio River valleys. In 1690, Father Lewis Hennepin was the first missionary and fur trader to explore the river through Champlin. In 1821, soldiers used the river to float logs from the 200-foot tall white pines growing for the construction of Fort Snelling. From the 1860s to the early 1940s is when much of the construction of single-family homes along the river began. Per the State Historic Preservation Office, the Anoka-Champlin bridge is the only historic site. However, not listed, Champlin is widely known for having been a steamboat landing spot and milling operations. In addition, a culturally significant old one-room schoolhouse is located in the corridor. The schoolhouse, known as Dunning School, has been preserved through many community efforts.



Dunning School Today

Transportation and Utilities

The Mississippi River is primarily used as a recreational means of transportation with the City of Champlin. There are no barge terminals or fleeting areas north of the Coon Rapids Dam. The roadway system is primarily comprised of local streets that connect residential neighborhoods to north/south routes like West River Road and Dayton Road.

Champlin has completed a Transportation Plan in the 2040 Comprehensive Plan. The purpose of a Transportation Plan is to develop a road network allowing for the expedient movement of people and goods from one place to another, either within or through the community. The Plan, in effect, is an implementation tool for the proposed Land Use Plan since the latter determines development intensity, while the former determines the road improvements necessary to accommodate that development. Within the Critical Area, the traffic patterns have essentially been established, and major changes will not be proposed in this report.

The individual streets and highways comprising the transportation system vary widely in their functions. These functions require different standards of design and construction as the intended volumes and speeds of traffic increase or decrease. The function classification system specifies five types of roadways and will not include local streets. The three roadways to be inventoried are U.S. Highway 169 and Hennepin County Road 12 (West River Road and Dayton Road).

U.S. Highway 169 carries both heavy commuter and tourist traffic. The highway has been designated

as an intermediate arterial and provides the only crossing of the Mississippi River north of Interstate 694. The narrow bridge and limited width of Ferry Street in Anoka create traffic congestion problems in Champlin. Intersections and driveways in close proximity to the bridge intensify the congestion.

There are two separate roadways controlled by separate governmental jurisdiction: U.S. Highway 169 and Hennepin County Road 12. Because these roads all parallel the Mississippi River, they have been designated part of the Great River Road system. According to the Metropolitan Council's Functional Classification System County Road 12 is a minor arterial with two lanes and unimproved shoulders. Several sections of the road are hazardous due to inadequate visibility, poor intersection design, encroachment of development, and the numerous accesses.

The City of Champlin provides municipal water and sewer services to all of Champlin located within the Critical Area Corridor.

The major drainage way in Champlin is Elm Creek. Champlin has storm sewer systems, which drain into the Mississippi River. The storm sewer systems also include several ponding basins. There are several utility crossings, but of most concern from an aesthetic standpoint are power line crossings. Northern States Power and City of Anoka Electric provide services to this area. Of the four transmission line crossings, two are submerged cables on the floor of the river.

Within Champlin there are no existing or planned power generating facilities and just one major transmission line crossing the river. As power demands increase, there may be the need for additional crossings. Utility companies should be encouraged to use submarine cables where possible in existing corridors rather than creating new crossings.

The issue of storm water drainage was discussed earlier in the report under the section on natural watercourses. Champlin should utilize its' Comprehensive Surface Water Management Plan prior to any development within a watershed. Identification of wetlands and drainage ways is needed to reduce drainage costs and maintain environmental areas in the community.

Key Issues and Opportunities

The MRCCA will continue to be an important part of Champlin's future. Over the next ten years, few changes are likely to occur as the city as the riverfront is essentially fully developed. The residential neighborhoods along the river will be maintained. The riverfront location presents an opportunity for high value homes. Improvements to existing homes and the development of new homes may occur over the next decade. As the planned park renovations occur, it will be a challenge to preserve the river views, public access, and recreational opportunities.

The main area anticipated for change is identified as Mississippi Crossings.

- The 160-acre Mississippi Crossings area abuts the Mississippi River south of the historic Anoka-Champlin bridge and sits at the north end of the six-mile Mississippi River Recreational Pool.

- In the mid-1800's, the Crossings was a landing area for migrating steamboats and home to the Anoka-Champlin ferry service. In the 1900's, the area blossomed into a vibrant central business district surrounded by growing neighborhoods. More recently, the Crossings has consisted of obsolete commercial structures, dilapidated apartment buildings and vacant lots. Since 1980, the area has seen limited re-investment, declining tax base while city services have grown.
- In 1999, a 26-member citizen task force recommended the City rejuvenate the Mississippi riverfront and old business district. In 2009, the City adopted a Redevelopment Plan that proposed a series of mixed-use and residential and commercial developments along the riverfront. Besides the historic, cultural and geographical significances, the site offers panoramic views of the Twin Cities region.
- While the City has since moved on from the adopted Redevelopment Plan, the Plan did lead to the acquisition and demolition of key properties in the area, including eight apartment buildings. Many of these properties were purchased during a soft real estate market at assessed market values. Eminent domain was not used in the acquisition of properties.
- Recently, there's been a lot of progress in the Mississippi Crossings area. Below are a few projects that have been completed or are in the pipeline:

    - In 2016, the City completed a $6.5 million reconstruction of the Elm Creek Dam. The Dam received The American Council of Engineers Associations (ACEA) Grand Award for quality design and aesthetics. Besides reconstructing an unsound dam, the project removes 60 acres from the floodplain, saving dozens of homeowners and businesses from buying flood insurance.
    - In 2017, United Properties began construction on a $30 million, 5-story, 85-unit senior cooperative community near the Anoka-Champlin bridge. The development is known as Applewood Pointe of Champlin at Mississippi Crossings
    - In 2018, the City and MnDOT completed reconstruction of the T.H. 169 corridor from Hayden Lake Road to the Anoka-Champlin bridge.
    - Also, in 2018, the City completed a $6.3 million clean-up of the Mill Pond. The project, funded by the State of Minnesota, the Legislative-Citizens Commission on Minnesota Resources (LCCMR), the Elm Creek Watershed and the City of Champlin, deepened the fishery and provided shoreland restoration and connection to the water body.
    - Remaining acreage in Mississippi Crossings is planned for a mix of high-density residential uses, restaurants, a hotel and event center. The redevelopment goal is to provide meaningful access to the Mississippi River.

Maintaining environmental quality will continue to be a challenge as new development and changes occur in the MRCCA. Renovations to the area present the issues of managing stormwater, maintaining water quality, and reducing soil erosion. While future natural occurrences that impact the river and riverfront are unknown, area updates present an opportunity to combat these occurrences. With proper planning, ongoing maintenance, and a focus on the restoration of vegetation and the shoreline, actions can be made to protect the health of the river and preserve it as a natural and cultural resource for decades to come.

SECTION IV: GOALS AND POLICIES

Designated goals of the MRCCA program include:

1. Protect and preserve the Mississippi River and adjacent lands that the legislature finds to be unique and valuable state and regional resources for the benefit of the health, safety, and welfare of the citizens of the state, region, and nation;
2. Prevent and mitigate irreversible damages to these state, regional, and natural resources;
3. Preserve and enhance the natural, aesthetic, cultural, and historical values of the Mississippi River and adjacent lands for public use and benefit;
4. Protect and preserve the Mississippi River as an essential element in the national, state, and regional transportation, sewer and water, and recreational systems; and
5. Protect and preserve the biological and ecological functions of the Mississippi River corridor.

General

Policies that recognize the importance of the MRCCA and help to further its goals include:

1. The City will give appropriate attention to water quality and ensure elimination of non-point sources of pollution.
2. Manage surface water drainage to maintain river water quality.
3. Improve quality of surface water runoff received by streets and watercourses through Best Management Practices. Manage the use of chemical fertilizers and application of salt to streets in winter.
4. Minimize direct overland surface water runoff.
5. Encourage and support special events that bring people to the river.
6. Promote tourism in the river corridor.
7. Encourage investments in river corridor improvements.

Districts/Land Use

Policies with the intent of guiding land use and development and redevelopment activities consistent with the management purpose of each district include:

1. The City shall guide land use/development consistent with the management purpose of each district.
2. Minimize site alteration within the corridor.
3. Ensure new development in the river corridor has a relationship to the river, a need for a river location, or the capability of enhancing the river.

Primary Conservation Areas (PCAs)

Policies with the intent of protecting, prioritizing, and minimizing the impact to PCAs are as follows:

General Policies

1. Protect PCA's and minimize impact to PCA's from public and private development and land use activities.
2. Support mitigation of impacts to PCA's through subdivisions, variances, CUPs and other permits.
3. Support alternative design standards that protect PCA's, such as conservation design, transfer of development rights, or other site design techniques.
4. Permanent protection measures (such as public acquisition, conservation easements, deed restrictions, etc.) that protect PCA's shall be a priority

Shore impact zones

1. Enforce the zoning code restricting development within the shore impact zones.
2. Encourage native landscaping and restoration of natural shorelines.
3. Provide an uninterrupted vegetated shoreline where practical by encouraging preservation and replacement of natural plant materials.

Wetlands, floodplains, and areas of confluence with key tributaries

1. Protect wetlands in accordance with Surface Water Management Plan.

Natural drainage routes

1. Maintain the land around natural drainage routes and creeks to reduce river water pollution due to soil erosion.
2. Encourage new development and reconstructions to employ stormwater management practices on site to reduce stormwater runoff into the river.

Bluff and bluff impact zones

1. Restrict development along bluffs and in their associated bluff impact zones.
2. Encourage steep slopes to be used for open space uses.

Significant Existing Vegetative Stands

1. Identify and protect areas of significant vegetation, unique vegetative species and wildlife habitats within the corridor and retain existing vegetation and landscaping.
2. Protect natural resources with preservation areas on public land and work to restore wildlife habitat, particularly for threatened and endangered species, and preserve biological diversity in all areas of the corridor, especially development projects.
3. Removal of natural vegetation shall be discouraged, as development shall be located to preserve the natural features of the site and to preserve significant trees or plant communities (including remnant stands of native trees or prairie grasses or plant communities that are rare to the area or of particular value).

4. Natural vegetation shall be restored to the extent feasible after any construction project is completed to retard surface runoff and soil erosion and to provide screening. Adequate erosion protection measures such as trees and vegetation plantings on slopes shall be used to ensure that soil loss levels do not degrade the protected water body.
5. Restoration of removed Native Plant Communities and natural vegetation in riparian areas shall be a priority during development.

Cultural and historic properties

1. Protect archaeological resources, historic structures, and cultural landscapes in their present condition.
2. An opportunity exists to tell the story of early Champlin. Interpretation pieces should be explored when feasible. Funding sources for these pieces include the National Park Service, City of Champlin, DNR, Champlin Historical Society, non-profit groups or resident/business donations.

Unstable Soils & Bedrock

1. Restrict development within areas of unstable soils and bluff impact zones.

Public River Corridor Views (PRCVs)

Policies with the intent to protect and minimize impacts to PRCVs include:

1. The City will continue to enforce the controls on billboards that exist in the zoning ordinance. Specifically prohibited are off-premises advertising signs and billboards that would be visible from the river.
2. Structure site and location shall be regulated to ensure that riverbanks, bluffs and scenic overlooks remain in their natural state, and to minimize interference with views of and from the river, except for specific uses requiring river access.
3. The City will prevent development that blocks or has a significant negative impact on key scenic views and encourages design which preserves, enhances, or creates key scenic views.
4. Require that riverfront development preserves a natural appearance while minimizing interference with views to and from the river.
5. Protect and minimize impacts to PRCV's from public and private development activities.
6. Protect and minimize impacts to PRCV's from public and private vegetation management activities.
7. Protect PRCV's located within the community and identified by other communities (adjacent or across the river).

Restoration Priorities

Policies with the intent of restoring native and natural vegetation and stabilizing soil include:

1. The City will work with the Metropolitan Council, Department of Natural Resources, Army Corps of Engineers, and neighboring cities to ensure adequate erosion control along the corridor.
2. The City will encourage property owners along the river to replace diseased trees with new plantings and introduce appropriate vegetation on riverbanks and steep slopes to control erosion.
3. Provide an uninterrupted vegetated shoreline where practical by encouraging preservation and replacement of natural plant materials.
4. Protect native and existing vegetation during the development process and require restoration when vegetation is removed. Priorities for restoration shall include stabilization of erodible soils, riparian buffers, and bluffs or steep slopes.
5. Sustain and enhance ecological functions during vegetation restorations.
6. Evaluate development sites for erosion prevention and bank/slope stabilization and require restoration as part of the development process.

Water-Oriented Uses

Policies with the intent to protect water-oriented uses and minimize the conflict between those uses and other land uses include:

1. Require that riverfront development is compatible with riverfront uses and preserves a natural appearance while minimizing interference with views to and from the river.
2. Access to the riverfront shall be incorporated, where appropriate, in new development and redevelopment activities within the MRCCA.

Open Space & Recreational Facilities

Policies with the intent encourage the creation and maintenance of open space and recreational facilities and public access to the river include:

1. Preserve natural areas when designating parks and open space.
2. Maintain existing City, County, and State park lands and trail facilities within the corridor.
3. Encourage connections to the river corridor trail system and existing park land from more inland residential neighborhoods.
4. Provide carefully designed, safe, and accessible public facilities that complement their river corridor context.
5. Provide high quality and sustainable open space, public plazas, historic landscapes, interpretive facilities, and related facilities in the river corridor.
6. Identify and encourage connection of CA-SR district land to existing and planned parks and trails for LGUs with developable land in CA-SR districts.
7. Encourage that land dedication requirements be used to acquire land suitable for public river access.

Transportation & Public Utilities

Policies with the intent to minimize the impact of transportation facilities and public utilities on the MRCCA include:

1. Design new or modified transportation facilities to complement planned land and water uses and to not stimulate development incompatible with the river corridor.
2. Ensure future development emphasizes continuous open space, minimizes utility and infrastructure needs and crossings (including transportation river crossings and concentrates them at existing crossings where possible), and allows for scenic vistas, trails and walkways.
3. Encourage, where practical, the placing of utilities underground. In planning and designing the construction or reconstruction of all public transportation facilities in the river corridor, give consideration to scenic overlooks for motorists, safe pedestrian crossings and facilities along the river corridor, access to the riverfront in public ownership and aesthetically pleasing details, including railings, lighting, paving, and landscaping.
4. Minimize impacts to PCA's and PRCV's from solar and wind generation facilities, public transportation facilities and public utilities.

SECTION V: IMPLEMENTATION ACTIONS

Resident Education

In an effort to encourage residents within the City of Champlin to practice sustainable lawn management practices and disposal of household hazardous waste and to utilize best management practices for shoreland protection, the following programs should be developed:

1. The City will distribute information to residents on responsible practices to protect water resources within the community. The program shall educate residents on the proper use of fertilizer and encourage residents to use fertilizer having no phosphorous content. In addition, the City should encourage the use of alternatives to manicured lawns.
2. The City will develop a program providing information to homeowners on proper disposal and use of yard waste in an environmentally responsible manner. It will also describe proper disposal of household hazardous waste, including waste oil, paints and solvents.
3. The City shall collect information on best management practices for shoreland protection. This information shall be passed on to river corridor homeowners upon request and through public information campaigns.
4. The City will promote and encourage homeowners with properties adjacent to drainage ways, ponds, wetlands and the Mississippi River to establish a vegetative buffer strip at the shoreline. The strip should consist of native plants that limit erosion and nutrient transport across the buffer strip. The success of this program will be directly related to the availability of funding and technical assistance.

Ordinance Updates (MRCAA Overlay)

1. The City shall adopt, administer, and enforce plans and ordinances consistent with Minnesota Rules pertaining the Mississippi River Corridor Critical Area.
2. The City shall amend the zoning map to reflect the new MRCCA districts.

PCA's

1. Develop handouts that easily identify the location of PCA's.
2. Establish a process and procedure for processing applications with potential impacts to PCA's. The procedure shall include identifying the information that must be submitted, determining appropriate mitigation methods, establish evaluation criteria for protecting PCA's and developing administrative procedures for integrating DNR and local permitting of riprap, walls and other hard armoring.

Public River Corridor Views

1. Ensure that information on the location of PRCV's is available to property owners.
2. Establish procedures for processing applications with potential impacts to PRCV's, including: identifying the information that must be submitted and how it will be evaluated; and determine appropriate mitigation procedures/methods for CUP's and variances.
3. Work with adjacent communities to protect views other communities have identified that are valuable.

Restoration Priorities

1. Ensure that information on the location of natural vegetation restoration priorities is readily available to property owners to understand how relevant ordinance requirements apply to their property for project planning and permitting.
2. Establish a vegetation permitting process that includes permit review procedures to ensure consideration of restoration priorities identified in this plan in permit issuance, as well as standard conditions requiring vegetation restoration for those priority areas.
3. Establish process for evaluating priorities for natural vegetation restoration, erosion prevention and bank and slope stabilization, or other restoration priorities identified in this plan in CUP, variances and subdivision/PUD processes.
4. Seek opportunities to restore vegetation to protect and enhance PRCV's identified in this plan.
5. Seek opportunities to restore vegetation in restoration priority areas identified in in this plan through the CUP, variance, vegetation permit and subdivision/PUD process.

Open Space and Recreational Facilities

1. Develop a system for reviewing, tracking, and monitoring open space required as part of the subdivision process.

Transportation and Public Utilities

1. Include transportation facilities in the capital improvement program, if applicable, identify which facilities, or portions of facilities, are in the MRCCA.
2. Incorporate specific design and placement conditions into local permits for solar and wind generation facilities and essential and transmission services (if allowed or within the community's permitting authority) that minimize impacts to PCAs and PRCVs

Capital Improvement Plan

Where appropriate, the City shall utilize the capital improvement plan to accomplish the objectives set forth in the MRCCA Plan. As a planning document, the Capital Improvement Plan provides guidance for city projects and expenditures.

6.1 INTRODUCTION

The City of Champlin is located in Hennepin County, Minnesota, approximately 20 miles northwest of downtown Minneapolis. It encompasses a land area of approximately nine square miles, with its northeast boundary defined by the Mississippi River. Champlin is located entirely within the Metropolitan Urban Services Area (MUSA). The major roadway through Champlin is Trunk Highway (TH) 169, a north-south Principal Arterial roadway which crosses the Mississippi River directly north of Champlin. TH 169 connects Champlin to the rest of the region via major regional roadways TH 610 and I-94/694 to the south and TH 10 to the north.

6.1.1 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 establishes 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.

Funding is a key constraint that is acknowledged in the TPP. 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 projects 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.

Champlin is classified by the Metropolitan Council under the Suburban community designation. Suburban communities saw their primary era of development during the 1980s and early 1990s as the Baby Boomers formed families and entered their prime earning years. With growing interest and demand for multimodal travel, local governments in Suburban communities will continue to develop a network of streets, sidewalks, trails, and roadways that are more integrated and connected to the regional transportation system.

The TPP's Highway Current Revenue Scenario identifies a pavement preservation project on TH 169 through Champlin and the replacement of the TH 169 bridges over Elm Creek. This work was underway in 2018. There are no other highway projects identified in the Current Revenue Scenario.

The TPP's Transit Investment Plan does not show any transitway investments planned for Champlin in the current revenue scenario, although the existing Northstar Commuter Rail Line and the proposed Blue Line Light Rail Transit (LRT) Extension Transitway are identified in adjacent communities and may attract ridership from Champlin.

6.1.2 Purpose of Plan

For the most part, the transportation system is sufficient to meet existing needs. This Transportation Plan (Plan) evaluates and addresses existing conditions and future roadway improvement needs, as well as non-roadway issues and requirements involving issues such as transit, freight, aviation, and non-motorized transportation. The Plan also provides several strategies to address current and future transportation needs.

There are three primary objectives of this Plan:

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

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

6.2 EXISTING CONDITIONS – MOTORIZED TRANSPORTATION

The sections below provide information of the existing roadway and transit network in Champlin. The roadway network provides an overview of existing roadway jurisdiction, functional classification, and existing traffic and level of service. The transit network provides an overview of current public transit service routes, park-and-ride facilities, and other transit services.

6.2.1 Roadway Network

Roadway Jurisdiction

Roadways are classified on the basis of which level of government owns and has jurisdiction over them. In the case of Champlin, roadways are under the jurisdiction of the Minnesota Department of Transportation (MnDOT), Hennepin County, or the City. **Exhibit 6-1** depicts the existing roadway jurisdiction.

Functional Classification

The functional classification system is a roadway and street network that distributes traffic from neighborhood streets to collector roadways, then to arterials, and ultimately the metropolitan highway system. Roads are placed into categories based on the degree to which they provide **access** to adjacent land versus provide higher-speed **mobility** for "through" traffic. Functional classification is a traditional cornerstone of transportation planning. Within this approach, roads are located and designed to perform their designated function.

The current roadway functional classification map for Champlin as identified by the Metropolitan Council is presented in **Exhibit 6-2.** The roadway system presently consists of six functional roadway classifications:

- Principal Arterial
- "A" Minor Arterial
- "B" Minor Arterial
- Major Collector
- Minor Collector
- Local Street

Within Champlin, there are three sub-categories of "A" Minor Arterials: Reliever, Expander, and Connector. The Metropolitan Council has a fourth sub-category, Augmenter, but there are no Augmenters in Champlin. These sub-categories correspond with the Metropolitan Council's allocation of federal funding roadway improvements, but do not translate into specific design characteristics or requirements. The "A" Minor Arterial sub-category classifications are determined by the Metropolitan Council.

For Arterial roadways, the Metropolitan Council has designation authority. Local agencies may request that their roadways become arterials (or are downgraded from arterial to collector) by coordinating with the Metropolitan Council, but such designations or re-designations must be approved by the Metropolitan Council. The agency that has jurisdiction over a given roadway has the authority to designate collector status.

<u>Principal Arterials</u>
Principal Arterials are the highest roadway classification and are considered part of the metropolitan highway system. The primary function of these roadways is to provide mobility for regional trips, and they do not provide a significant land access function. They are intended to interconnect regional business concentrations in the metropolitan area, including the central

business districts of Minneapolis and St. Paul. These roads also connect the Twin Cities with important locations outside the metropolitan area. Principal arterials are generally constructed as limited access freeways in developed areas, but may also be constructed as multiple-lane divided highways. In Champlin, TH 169 (a four-lane divided expressway) is the only Principal Arterial roadway.

"A" Minor Arterials

These roads connect important locations within the City of Champlin with access points of the metropolitan highway system and with important locations outside the city. These Arterials are also intended to carry short to medium trips that would otherwise use Principal Arterials. While "A" Minor Arterial roadways provide somewhat more access than Principal Arterials, their primary function is still to provide mobility rather than to land-use access. The "A" Minor Arterial roadways in Champlin are identified in **Table 6.1.**

Table 6.1 - "A" Minor Arterial Roadways

Roadway	"A" Minor Type (Existing Number of Lanes)	From	To
Dayton Road (CSAH 12)	Connector (2-4 Lanes)	Western City Limit	TH 169
West River Road (CSAH 12)	Expander (2 Lanes)	Winnetka Avenue (CR 103)	109th Avenue
West River Road (CSAH 12)	Reliever (2 Lanes)	Hayden Lake Road	Winnetka Avenue (CR 103)
Winnetka Avenue (CR 103)	Reliever (2 Lanes)	109th Avenue	West River Road (CSAH 12)
Douglas Drive (CSAH 14)	Expander (2-4 Lanes)	109th Avenue	West River Road (CSAH 12)
East Hayden Lake Road	Reliever (2 Lanes with Continuous Center Turn Lane)	TH 169	West River Road (CSAH 12)

"B" Minor Arterials

Like "A" Minor Arterials, these roadways also serve more of a mobility function than access function. However, they are not eligible for federal roadway improvement funding. There are two "B" Minor Arterial roadways in Champlin; 109th Avenue (2-4 lanes) between Goose Lake Road and West River Road (CSAH 12), and South Diamond Lake Road (2 lanes) from the

western city limits to Dayton Road (CSAH 12). Both roadways will continue become more important due to anticipated population growth in the City of Dayton as they are both part of east-west route connections to TH 169.

Major and Minor Collectors

Collector roadways provide a balance of the mobility and land-use access functions discussed above. They generally serve trips that are entirely within the city and connect neighborhoods and smaller commercial areas to the arterial network. Minor Collectors generally are shorter in length, with lower volumes and lower speeds than Major Collectors. Current Collector roadways are depicted in **Exhibit 6-2**.

Local Streets

Local streets provide extensive access to adjacent land uses, but very limited mobility. They are low-volume and low-speed. Local streets are depicted in **Exhibit 6-2**.

Existing Roadway Volume, Capacity, Safety, and Connectivity

Roadway Segment Volume and 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 and whether a roadway is divided. **Table 6.2** below lists planning-level thresholds that indicate a roadway's capacity. 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, amount of turning traffic, availability of dedicated turn lanes, parking availability, intersection spacing, signal timing and a variety of other factors.

Table 6.2 - Planning-Level Urban Roadway Capacities

Facility Type		Daily Two-way Volume	
		Lower Threshold	Higher Threshold
Arterials	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
Expressways and Freeways	Four-lane Expressway	42,000	50,000
	Four-lane Freeway	60,000	80,000
	Six-lane Freeway	90,000	120,000

At the planning level, capacity issues are identified by comparing the existing number of lanes with current traffic volumes. **Exhibit 6-3** illustrates the existing number of lanes on arterial roadways within Champlin. **Exhibit 6-4** illustrates existing daily traffic volumes on Principal Arterial, "A" Minor Arterials and other major roadways within Champlin.

Most of the arterials in Champlin currently exhibit traffic volumes below or within the range of the planning level capacity thresholds shown in **Table 6.2**; however, TH 169 does exhibit daily traffic volumes that meet or exceed capacity thresholds, and currently experiences higher levels of congestion during peak travel periods. Dayton Road (CSAH 12) is also approaching capacity thresholds in segments between the west city limits and TH 169.

Safety Conditions

Exhibit 6-5 presents the locations and frequencies of crashes based on MnDOT crash data for the period 2011–2015. Safety and operational issues within Champlin predominantly occur on TH 169, which also handles the highest amount of daily traffic. Signalized intersections with TH 169 (109th Avenue, 114th Avenue, 117th Avenue, 120th Avenue, Hayden Lake Road, and Dayton Road) experience the highest rate of crashes and crash severity. There was one fatal crash reported during this timeframe which involved a rear end collision between a motorcycle and car on TH 169 at the 114th Avenue intersection.

On-going monitoring of crashes and further study is recommended to identify specific safety issues and design, intersection control or other countermeasures that could be effective at reducing the rate and severity of

crashes at these and other locations. The City of Champlin will continue to work with MnDOT and Hennepin County to identify potential safety and operational improvements that may be identified as part of planning studies or implemented as part of programmed improvements.

Roadway Connectivity

In general, the City of Champlin has multiple north-south and east-west routes that provide reasonable access and connectivity within Champlin. However, there are few continuous routes that provide connections beyond Champlin, with the majority of traffic relying on TH 169 to access the rest of the region. In addition, growth in Dayton and the presence of Elm Creek Park Reserve results in more traffic concentrated on Dayton Road and Hayden Lake Road in western Champlin to connect to TH 169.

While TH 169 provides needed access to the region, it can also serve as a barrier to local traffic. Crossing TH 169 is limited to at-grade signalized intersections, which may be congested with traffic entering/exiting TH 169. Traffic signals are also operated to benefit flows on TH 169, so cross traffic is required to wait longer before crossing TH 169. Local connectivity would be enhanced in Champlin with the ability to cross TH 169 via an overpass or underpass.

6.2.2 Transit

Champlin is located within Transit Market Area III as identified in the Metropolitan Council 2040 TPP. Transit service in Market Area III is primarily commuter express bus service with some fixed-route local service providing basic coverage. General public dial-a-ride services are available where fixed-route service is not viable.

Existing Bus Service and Park-and-Ride Facilities

Current scheduled transit service and facilities are depicted in **Exhibit 6-6**. Transit service in Champlin is provided by Metro Transit and Maple Grove Transit. The current service is express service to downtown Minneapolis. There are two express routes with stops in Champlin, Route 766, and Route 782.

Route 766

Route 766 is operated by Metro Transit and runs from Anoka or Champlin to downtown Minneapolis. It stops at the two park-and-ride lots in Champlin; one at Richardson Park, and the other at West River Road and 117th Avenue North (both depicted in **Exhibit 6-6**). During

the morning runs, it proceeds from the Champlin stops through Brooklyn Park and Brooklyn Center to downtown Minneapolis via the West River Road and I-94. In the afternoon rush, it operates in the reverse direction. During weekdays, buses run every 10-30 minutes during the commuter rush periods (6-9 a.m. and 3-6:30 p.m.) with four additional mid-day trips and three evening trips.

Route 782
Route 782 is operated by Maple Grove Transit. It has one stop in Champlin at 109th Avenue and Nathan Lane. It proceeds through Maple Grove to downtown Minneapolis via Zachary Lane and I-94. There are five buses into downtown in the morning and five return buses in the afternoon.

There are two park-and-ride facilities in Champlin. The park-and-ride facility at West River Road and 117th Avenue has been in operation since 1984 and currently has capacity for 151 parked vehicles. In 2017, Metro Transit reported that the usage was 44 vehicles.

The park-and-ride facility at Richardson Park has been in operation since 1993 and currently has capacity for 66 vehicles. According to Metro Transit's 2017 Annual Regional Park-and-Ride System Report, the usage was 19 vehicles in 2017.

Park-and-ride facilities in Brooklyn Park and Maple Grove also attract Champlin residents as they may provide more frequent service, have ample parking, offer additional rider amenities, and provide shorter times on the bus. For example, the Highway 610 and Noble Parkway park-and-ride opened in 2014 with 1,000 parking spaces and its express route (768) only has one stop prior to downtown Minneapolis.

Northstar Commuter Rail

Northstar Commuter Rail provides passenger service between Big Lake and downtown Minneapolis. Currently, it has five trains into Minneapolis in the morning, and five trains out in the afternoon, with average headways (time between trains) of approximately 30 minutes during the morning and afternoon peak-travel times. Due to the dedicated right of way and limited stops, this service makes commute to and from downtown Minneapolis much more convenient, shorter, and reliable.

Two Northstar Commuter Rail stations are in close proximity to Champlin. The Anoka Station is located at Johnson Street and 4th Avenue. This station

is a one-and-a-half-mile drive from the TH 169 Bridge across the Mississippi River and has a parking capacity of 525 vehicles. The Coon Rapids – Riverdale Station is located at Northdale Boulevard south of Main Street (CSAH 14), approximately a three-mile drive from the TH 169 Bridge over the River. It has a parking capacity of 455 vehicles. Both locations are easily accessible to Champlin residents and are going against the primary traffic flow across the TH 169 Bridge during the a.m. and p.m. peak-travel times.

Other Transit Services

Dial-a-ride service is provided by Transit Link. Transit Link provides curb-to-curb service to the public where regular transit service is not available. Dial-a-ride services can be combined with fixed route services. Transit Link serves the seven-county metro region.

ADA service is provided by Metro Mobility, operated by the Metropolitan Council, for those who have difficulty driving. Rides are provided with ADA-equipped vans and need to be scheduled ahead of time. They can be used for medical visits, shopping, or other needs.

Transit Advantages

There is one small segment of bus-only shoulder identified in the 2040 TPP within Champlin. The segment is identified along the northbound side of West River Road between Hayden Lake Road and TH 169. There are currently no bus routes that utilize this roadway segment. Beyond Champlin, bus-only shoulders existing along TH 10 and TH 169 south of I-94/694. Bus-only shoulders are planned along TH 169 between I-94/694 and TH 610. These shoulders improve mobility and reliability for express bus routes.

6.3 FUTURE ROADWAY IMPROVEMENTS AND NETWORK PLANNING

6.3.1 Programmed Roadway Improvements

The following improvements are currently programmed in City of Champlin Capital Improvement Plan with anticipated construction years:

- Highway 169 Elm Creek Bridges replacement project from East Hayden Lake Road to the Mississippi River (2017-2018)
- Highway 169 pavement rehabilitation project from Highway 610 to East Hayden Lake Road (2018)
- 109th Avenue reconstruction from Jefferson Highway to Winnetka Avenue (2023)
- East Hayden Lake Road reconstruction from Highway 169 to West River Road (2025)
- French Lake Road reconstruction from West Hayden Lake Road to Dayton Road (2035)

6.3.2 Roadway Studies and Plans

The following previous and recent studies have been completed that discuss long-term transportation needs:

Principal Arterial Intersection Conversion Study

In February 2017, MnDOT and the Metropolitan Council completed the *Principal Arterial Intersection Conversion Study*. The study focused on intersections along non-freeway principal arterial roadways that are priorities for grade separations, and categorized specific locations into low, medium, or high investment priorities for conversion to grade separation. The purpose of the study was to assist in prioritizing investments for these types of projects in the future.

Two intersections along TH 169 between 109th Avenue and the Mississippi River bridge in Champlin were evaluated in the study. The 109th Avenue intersection was rated as a medium priority for grade separation and the Hayden Lake Road intersection was rated as a low priority for grade separation. With several closely-spaced at-grade intersections within Champlin, grade separation north of 109th Avenue is unlikely. Additional dialogue is needed with the City, MnDOT, Metropolitan Council, and Hennepin County on how to proceed with future improvements along the TH 169 corridor.

Northwest Metro Corridor and River Crossing Study

A new river crossing between TH 169 and TH 101 has been discussed and studied for many years. Most recently, it was addressed in the *Northwest Metro Corridor and River Crossing Study* (2004). This document identified three build alternatives to be carried further in the Environmental Impact Statement (EIS) process. All three connect I-94 south of the River with TH 10/TH 169 north of the River. They have a River crossing in the vicinity of Vicksburg Lane in Dayton, roughly equidistant between the TH 101 and TH 169 river crossings.

The City of Champlin strongly supports this process to identify and develop a new Mississippi River crossing. The analysis performed in the *Northwest Metro Corridor and River Crossing Study* suggests that it would reduce travel demand at the current TH 169 crossing. However, it appears that this crossing will not be constructed prior to 2040 and is not assumed in the analysis for this chapter.

6.3.3 2040 Traffic Forecasting

To determine future roadway capacity needs, year 2040 traffic forecasts were prepared using the Metropolitan Council travel demand model. The 2040 projections were compared to the expected 2040 roadway capacity for various roadway links to identity where 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 Plans (CIPs) do not include any projects that add significant capacity to the roadway network.

Traffic forecasts are based on the use of Transportation Analysis Zones (TAZs). The TAZs for Champlin, as defined by the Metropolitan Council, are presented on **Exhibit 6-7**. The anticipated land-use patterns discussed in the land use chapter were assumed for the 2040 transportation projections. The Transportation Analysis Zone (TAZ) socioeconomic data projected for 2040 conditions are presented in **Table 6.3**. The results of the Metropolitan Council travel demand model process are summarized in **Exhibit 6-8**, which displays Metropolitan Council 2040 projected average daily traffic volumes compared to the existing daily traffic volumes obtained by MnDOT.

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.

Table 6.3 - 2040 Champlin TAZ Socioeconomic Data

	2010 Census			2020 Forecast			2030 Forecast			2040 Forecast		
TAZ	Pop.	HH	Emp.	Pop.	HH	Emp.	Pop.	HH	Emp.	Pop.	HH	Emp.
814	602	257	27	748	290	33	845	342	40	886	342	45
815	1577	556	5	1597	627	52	2088	735	58	2288	735	62
816	1061	401	114	1265	484	136	1429	542	174	1483	542	210
817	2991	1214	1427	3679	1243	1456	3385	1283	1423	3385	1283	1400
818	3139	1046	531	2684	1070	629	2658	1103	614	2653	1103	605
819	999	358	298	1035	366	445	1050	382	475	1018	382	507
820	619	211	478	602	216	387	605	224	407	581	224	424
821	1894	757	429	2411	787	517	2121	815	571	2133	815	624
822	1287	503	64	1378	589	125	2355	784	171	2384	784	211
823	2050	674	114	1873	696	64	1866	713	78	1804	713	91
824	1564	516	53	1485	528	60	1500	548	64	1450	548	67
825	3110	1040	77	3120	954	64	3208	1007	67	2956	1007	70
826	1679	603	349	1730	624	384	1702	650	402	1626	650	422
827	517	192	46	793	226	48	788	272	56	753	272	62
2040 Land Use Totals	**23,089**	**8,328**	**4,012**	**24,400**	**8,700**	**4,400**	**25,600**	**9,400**	**4600**	**25,400**	**9,400**	**4800**
Metropolitan Council Forecasts	**23,089**	**8,328**	**4,012**	**24,400**	**8,700**	**4,400**	**25,600**	**9,400**	**4,600**	**25,400**	**9,400**	**4,800**

Source: Metropolitan Council

2040 Congestion Conditions

Based on the projected 2040 traffic volumes and the assumed 2040 roadway network, an analysis of anticipated future congestion conditions was performed. The projected congestion conditions are depicted on **Exhibit 6-9** which shows that the anticipated areas of unacceptable congestion, defined as Level of Service (LOS) E or F, are as follows:

- West River Road (CSAH 12) from West Hayden Lake Road to Douglas Drive (CSAH 14) – LOS E
- TH 169 from the southern city limits to Mississippi River crossing – LOS F
- Winnetka Avenue from 109th Avenue to 117th Avenue – LOS E
- Dayton Road (CSAH 12) from the western city limits to French Lake Road – LOS F

At this time, there are no programmed roadway expansions for any of these roadways that would address the future capacity issues.

6.3.4 Future Roadway Improvements

Recommended Roadway Capacity Improvements

Based on the 2040 congestion (LOS) analysis summarized above, recommended roadway improvements, over and above the programmed and planned improvements identified previously, are presented on the Future Number of Roadway Lanes (**Exhibit 6-10**) and summarized in **Table 6.4**.

Discussions with Hennepin County staff have indicated that current 2-lane county roadways that have existing or future capacity issues may be candidates for future 3-lane road conversions (one lane in each direction with a continuous center turn lane) or 2-lane roads with additional turn lanes at key intersections. Further analysis and coordination will be needed with the County to evaluate these roadways.

Table 6.4 - Recommended Roadway Capacity Improvements - 2040

Roadway	Segment	Improvement	Lead Agency
West River Road (CSAH 12)	Hayden Lake Road to Douglas Drive (CSAH 14)	Conversion to 3-lane	Hennepin County
Dayton Road (CSAH 12)	West City Limits to TH 169	Conversion to 3-lane	Hennepin County
Winnetka Avenue (CR 103)	109th Avenue to 117th Avenue	Conversion to 3-lane	Hennepin County/City of Champlin

Traffic Signals/Roundabouts

Background on Roundabouts

Roundabouts are an alternative to traffic signals as a form of traffic control at intersections. The City has recently constructed roundabouts at several locations. Roundabouts are being increasingly used both nationally and throughout the metro area. In many circumstances, roundabouts can handle more vehicles per hour than traffic signals, and with greater safety levels. Roundabouts promote a continuous flow of traffic, because motorists only yield before entering the roundabout, rather than having to stop at a traffic signal through the full red phase. A study by the Insurance Institute for Highway Safety indicates that roundabouts reduce crashes by 75 percent at intersections where stop signs or signals were previously used for traffic

control. The crashes that do take place are significantly less severe because they typically happen at lower speeds than is the case with signalized intersections. As more roundabouts are built throughout the metropolitan area, drivers will become increasingly familiar and comfortable with their operations.

Future Traffic Signals/Roundabouts

New traffic signals will be installed at the West River Road/Winnetka Avenue and Winnetka Avenue/109th Avenue as noted in the City's 2018-2027 Capital Improvement Plan (CIP) and as traffic volumes warrant.

Other locations where intersection traffic control may be needed in the form of a traffic signal or roundabout are:

- West River Road and 109th Avenue
- West River Road and Winnetka Avenue
- 109th Avenue and Winnetka Avenue
- 109th Avenue and Jefferson Highway
- Champlin Drive and Hayden Lake Road
- 114th Avenue and Winnetka Avenue
- Elm Creek Crossing and French Lake Road
- Dean Avenue and Cartway Road
- 120th Avenue and Champlin Drive
- South Diamond Lake Road and Dayton Road

Decisions on these locations will need to be based on traffic engineering analysis and coordination with other government agencies. Prior to the installation of a signal system or roundabout at any of these locations, an Intersection Control Evaluation (ICE) would have to be prepared evaluating the degree to which warrants prescribed in the *Minnesota Manual on Uniform Traffic Control Devices* are met.

TH 169 Support Projects

As discussed previously, TH 169 is projected to become increasingly congested in the future, and MnDOT does not plan to expand it due to funding constraints. MnDOT intends TH 169 ultimately to be a freeway design all the way north to 109th Avenue, which will bring high traffic volumes into Champlin, where TH 169 will have a non-freeway design.

In light of these factors, the City will continue to review roadway improvement approaches and projects involving TH 169. These are briefly summarized below:

- New River crossing – A new crossing of the Mississippi River between TH 101 and TH 169 has been in the planning stages for many years. *Analysis in the Northwest Metro Corridor and River Crossing Study* indicates that this crossing would significantly reduce travel demand on TH 169. The City strongly supports the process to plan and ultimately construct a new river crossing within the earliest feasible timeframe.
- Adjacent Collector improvement projects – The local Collector roadways on either side of TH 169 (Champlin Drive to the west and Business Park Boulevard to the east) will increasingly act as relievers to TH 169 as congestion conditions on that roadway worsen. It is recommended that the City review, on an on-going basis, potential improvements to these adjacent Collectors to improve their capacity, operating, and safety characteristics.
- TH 169 intersection operations and improvements – As traffic levels increase on TH 169, the operation of its intersections with City streets will need to be monitored. The City will work with MnDOT to ensure that signal phasing provides efficient and equitable operations between the highway and the Collector cross streets that are very important to the City's roadway network. The City will also coordinate with MnDOT to evaluate geometric improvements such as added turn lanes.

6.3.5 Future Functional Classification Network

The Metropolitan Council works with cities and public agencies to change the functional classification of roadways. Any changes in the roadway functional classification is documented in the Metropolitan Council's 2040 Transportation Policy Plan. The 2040 Transportation Policy Plan does not propose any changes to Champlin's existing roadway functional classification system.

The City finds that the functional classification of a couple of roadways should be evaluated for reclassification on the Metropolitan Council's regional map. These are summarized in **Table 6.5**. The City understands that any changes to the "A" Minor Arterial system initiated by the City require approval from the Transportation Advisory Board and support from impacted agencies.

Table 6.5 - Future Roadway Functional Classification

Roadway	Segment	Evaluation
French Lake Road/Hayden Lake Road (CSAH 121)	From West City Limit to TH 169	Evaluate "B" Minor Arterial classification due to its extension into Dayton as an east-west connection to TH 169. This reclassification would require coordination with Hennepin County and the City of Dayton.
Jefferson Highway	From 109th Avenue to Elm Creek Parkway	Evaluate "B" Minor Arterial classification. This reclassification would require coordination with the City of Brooklyn Park.
South Diamond Lake Road	From West City Limits to Dayton Road	Evaluate "A" Minor Arterial classification due to its extension into Dayton as an east-west connection to TH 169. This reclassification would require coordination with Hennepin County and the City of Dayton.
109th Avenue	From West River Road to Zachary Lane	Evaluate "A" Minor Arterial classification as a key east-west connection to TH 169. This reclassification would require coordination with the City of Brooklyn Park and the City of Maple Grove.

6.3.6 Future Jurisdictional Classification Issues

Hennepin County has identified a potential turnback of Winnetka Avenue (CR 103) from the County to the City of Champlin. If this turnback does take place pending discussions between the City and the County, the City would expect that appropriate improvements be made prior to the jurisdictional transfer to ensure compliance with City and State Aid standards. This includes ensuring that the entire length of the roadway has an urban section design with curb and gutter.

6.3.7 Access Management

Access management refers to balancing the need for access to local land uses with the need for mobility and safety on the roadway network. Arterials generally have limited access; collectors allow a greater degree of access given their combined mobility/access function, and local streets allow the

most access of the roadway functional categories. Appropriate access control preserves the capacity on arterial streets and improves safety by reducing the need for traffic to divert to local streets. It separates local turning movements from higher-speed "through" traffic, concentrating traffic linkages at intersections controlled with traffic signals, roundabouts, or other measures.

MnDOT and Hennepin County managed roadways in Champlin are identified in **Exhibit 6-1**. For MnDOT roadways (i.e., TH 169), MnDOT access management guidelines apply. Similarly, for County roadways, Hennepin County's access management guidelines apply. MnDOT and Hennepin County guidelines are included in **Appendix T-1**. The City of Champlin, through its ordinances, enforces appropriate access to local roadways.

6.3.8 Right of Way Needs

It is very important to preserve adequate right of way for roadways in developing or redeveloping areas. This minimizes the potential for developed properties having to be acquired or otherwise impacted in the future to allow needed transportation projects.

The roadway jurisdictional map for Champlin is provided in **Exhibit 6-1**. MnDOT has right of way guidelines for its roadways, as does Hennepin County for County roadways. The City's minimum right of way requirements for roadways under its jurisdiction are as follows:

- "B" Minor and Collector roadways – 80 feet
- Local roadways – 60 feet

Additional right of way may be required at intersections with added turn lanes or to address factors such as sight lines or drainage.

6.4 TRANSIT PLAN

6.4.1 Background

The Metropolitan Council has established a series of Transit Market Areas throughout the metropolitan area as a guide for the provision of appropriate transit service. There are five market areas, I through V, based on the propensity to use transit or the likelihood of high transit ridership. The ranking is based primarily on four factors:

- Population density
- Employment concentration and job density
- Trip volumes and patterns
- Transit dependent segments of the population

With high population and job density, high-trip volumes, and relatively high percentages of transit-dependent individuals, more ridership is anticipated, and higher levels of transit service are thus justified. Market Area I has the highest transit potential for transit ridership and associated justification for extensive service, and Market Area V has the lowest potential for transit ridership.

Champlin is within Market Area III. The Metropolitan Council has identified that service options for Market Area III include commuter express bus service with some fixed-route local service providing basic coverage, special needs paratransit (ADA, seniors), and ridesharing. Public dial-a-ride services are available where fixed-route service is not viable.

6.4.2 Bus Service and Park-and-Ride Facilities

As discussed in **Section 6.2.2** of this Transportation Plan, scheduled transit service that is available to Champlin residents is provided by Metro Transit (Route 766), and Maple Grove Transit (782). These routes provide express service to downtown Minneapolis during the morning and afternoon peak travel times (6-10 a.m., 3-6:30 p.m.). Additional and more frequent service in Champlin would benefit residents and could increase ridership. Further study and coordination with Metro Transit is needed to evaluate possible route expansions or additional service.

Based on Metro Transit's 2017 Annual Regional Park-and-Ride System Report, the two park-and-ride facilities in Champlin are operating at approximately 30 percent capacity. Usage of the two facilities has dropped

significantly in recent years due to more attractive service from the expanded Highway 610 and Noble Parkway park-and-ride in Brooklyn Park and other nearby service in Maple Grove, potential use of the Northstar Commuter Rail, as well as a general decrease in transit use. As the use of these facilities decreases, continued use or possible repurposing of the park-and-ride properties should be explored. Discussions with Metro Transit regarding the future of these park-and-ride facilities should be pursued.

6.4.3 Regional Transitway Service

The TPP's Transit Investment Plan does not show any transitway investments planned for Champlin. However, the existing Northstar Commuter Rail Line and the proposed Blue Line LRT Extension Transitway are identified in adjacent communities and may attract ridership from Champlin.

Northstar Commuter Rail provides passenger service between Big Lake and downtown Minneapolis. Currently, it has five trains into Minneapolis in the morning, and five trains out in the afternoon, with average headways (time between trains) of approximately 30 minutes during the morning and afternoon peak-travel times. Due to the dedicated right of way and limited stops, this service makes commute to and from downtown Minneapolis much more convenient, shorter, and reliable.

The METRO Blue Line Extension LRT project, previously known as the Bottineau Line, is proposed to operate from downtown Minneapolis through north Minneapolis, Golden Valley, Robbinsdale, Crystal and Brooklyn Park. The proposed alignment will have 11 new stations in addition to Target Field Station where it will continue as the METRO Blue Line, providing one-seat rides to Minneapolis-St. Paul International Airport and the Mall of America. It will connect Minneapolis and the region's northwest communities with existing LRT on the METRO Green Line, future LRT on the METRO Green Line Extension (Southwest LRT), bus rapid transit on the METRO Orange Line and METRO Red Line, the Northstar commuter rail line and local and express bus routes. The project will end approximately one mile south of Champlin and is expected to attract some Champlin residents via the park-and-ride stations in Brooklyn Park.

6.4.4 Future Service Demands

The region's changing population may require expanded transportation choices in the future. As people age, they become less mobile and more reliant on public transportation, family, and friends to get around. Younger generations are also looking for more transportation options. Local fixed routes may provide an opportunity to enhance transit service within the city and improve connectivity to the regional network. Certain parts of the city, including the Mississippi Crossings area, may be more appropriate for enhanced transit service due to its higher densities and mix of land uses. Adding infrastructure such as benches and shelters to a transit service can enhance ridership and increase awareness of routes. It is recommended that the City of Champlin discuss future transit needs with Metro Transit to align future service with local demand and a changing population.

6.5 NON-MOTORIZED TRANSPORTATION

This section addresses network needs for walking and bicycling within Champlin. 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 the Champlin transportation system is a key goal in terms of improving transportation sustainability in the city and 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.

This section includes information on the existing non-motorized transportation network within Champlin, connections to land use planning, the planned local non-motorized transportation network, the regional transportation bikeway network, and design best practices.

6.5.1 Existing Non-Motorized Transportation Network

The non-motorized transportation network in Champlin is comprised of sidewalks, multi-use paved trails, and on-street bikeways as shown in **Exhibit 6-11**. Providing attractive networks for residents to use for recreational biking and walking is a very important goal for the City. More and more, residents are expecting neighborhoods and commercial centers to be connected via sidewalks and trails. Overall, Champlin has a well-developed network of walking and bicycle facilities. Through a combination of sidewalks, off-road trails, and on-street bikeways, non-motorized users

can get to most local key destinations such as schools, parks, local businesses, grocery stores, etc.

There are several nodes that support connections through sidewalks and trails. However, major highway and county roads such as TH 169, West River Road (CSAH 12), Hayden Lake Road (CSAH 121), and Winnetka Avenue (CR 103) can create barriers for pedestrians and bicyclists. These crossing barriers affect non-motorizes users because pedestrians and bicyclists are either required to take longer routes to reach key destinations or they are discouraged from walking and bicycling. To improve access across TH 169, a pedestrian bridge was constructed in 2007 north of Elm Creek Parkway/114th Avenue, and a pedestrian underpass was constructed in 2018 as part of the TH 169 Elm Creek bridges construction project.

Sidewalks are typically five feet wide and intended to accommodate walking. An on-street bikeway can consist of a variety of treatments (bike lane, paved shoulder, etc.) with a width of five feet or greater. An off-street bikeway is typically considered to be a multi-use trail with a width of 8 feet or greater. The 2040 Hennepin County Bicycle Transportation Plan identifies the following roadways as part of the "Planned Bikeway System":

- West River Road and Dayton Road (CSAH 12) - mix of primarily existing on-street and off-street bikeways
- Douglas Drive (CSAH 14) - existing off-street bikeway
- Winnetka Avenue (CR 103) - existing on-street bikeway
- Hayden Lake Road (CR 121) - mix of existing and planned on-street and off-street bikeways
- 109th Avenue - mix of existing and planned on-street and off-street bikeways

A portion of the Mississippi River Trail U.S. Bicycle Route 45 (MRT) passes through Champlin. The MRT is a bicycle route that is extends approximately 620 miles from Mississippi Headwaters to the Minnesota-Iowa border. Outside of Minnesota, a route will eventually follow the entire Mississippi River. Within the Twin Cities metropolitan area, there are signed routes along both sides of the river. In Champlin, the route generally follows Dayton Road and West River Road (see **Exhibit 6-12**).

Major highway and county road crossings are barriers that can discourage walking and bicycling in Champlin. While there are some intersection control improvements planned in the future, the City will continue to evaluate major roadway intersections to determine how it can improve safety and encourage walking and bicycling.

6.5.2 Connections to Land Use Planning

Champlin has development patterns consistent with its designation as a Suburban community. In many areas of the city, existing residential development is lower in density compared with many suburban areas, reflecting a community that has developed relatively recently. Most commercial land uses are separated from largely single-family residential land uses. This means that people walking and bicycling must cover greater distances to reach commercial areas from their homes. In these areas of the city, development patterns are likely better suited to bicycling than walking for transportation trips.

As Champlin continues to develop or redevelop, the inclusion of sidewalks and trails is an important consideration 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 opportunities arise, such as through development and roadway reconstruction projects. The City's land use planning and coordination with developers can help improve opportunities for walking and bicycling for transportation. The City can encourage mixed-use development that situates residents within a short walk of commercial destinations. The City can also work with developers to construct sidewalks and trails within developments. Additionally, the City can require pedestrian and bicycle connections in areas where the roadway network does not connect, such as cul-de-sac connector trails that provide shortcuts for people walking and bicycling.

6.5.3 Regional Bicycle Transportation Network

The Metropolitan Council 2040 TPP encourages the use of bicycles as a transportation mode and established the Regional Bicycle Transportation Network (RBTN). The RBTN provides connections across the region as an integrated network of on-street and off-road trails that complement each other. The RBTN identifies existing alignments and corridors into either Tier 1 or Tier 2.

Currently, RBTN Tier 2 alignments are identified along West River Road (CSAH 12) and Winnetka Avenue. A RBTN Tier 2 Corridor is shown generally along the TH 169 River Crossing. North of the river, there is a RBTN Tier 1 Corridor that follows the Mississippi River. The RBTN is important because it provides better access to regional key destinations. With points of access between RBTN Tier 1 and 2 corridors in Champlin, it will be beneficial to continue to incorporate the RBTN when developing future local pedestrian

and bicycle plans. **Exhibit 6-12** shows the existing RBTN corridors and alignments in Champlin.

6.5.4 Planned Local Non-Motorized Transportation Network

Champlin's planned non-motorized transportation network of sidewalks, trails, and bikeways is shown in **Exhibit 6-11**. When the network is complete, it will improve connectivity between residential areas and commercial, institutional, and recreational areas. This includes filling existing network gaps and adding new facilities in developing areas. The network will improve options for people to walk and bicycle for transportation within the city and facilitate regional connections.

6.5.5 Non-Motorized Transportation Design Considerations

At locations deemed appropriate, the City's standard practice is to provide five-foot sidewalks in residential areas and six-foot sidewalks in commercial areas.

Design considerations for bicycle facilities are somewhat more complicated due to the hierarchy of facility types. In order of their ability to provide a comfortable and safe bicycling environment from largest improvement to smallest, 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 will consult additional planning and design resources, including:

- Minnesota's Best Practices for Pedestrian/Bicycle Safety, MnDOT
- Bikeway Facility Design Manual, MnDOT
- Minnesota Manual on Uniform Traffic Control Devices, MnDOT
- NACTO Urban Bikeway Design Guide, Second Edition, National Association of City Transportation Officials
- 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
- Complete Streets Implementation Resource Guide for Minnesota Local Agencies, MnDOT
- Public Rights of Way Accessibility Guidelines (PROWAG), US Access Board

A Complete Streets approach to planning and implementing non-motorized facilities, as described in the MnDOT Complete Streets Implementation Resource Guide, can provide a helpful framework for creating a community-supported, safe, comfortable, and convenient transportation network that serves all modes. A Complete Streets policy or process is intended to provide design guidance and implementation clarity, allowing the community and project designers to advance individual projects in a collaborative and cost-efficient manner.

Accessibility is a very important consideration for non-motorized design. All new pedestrian and bicycle facilities must meet the ADA 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.

6.6 AVIATION AND FREIGHT MOVEMENT

6.6.1 Aviation

Champlin is located approximately 25-miles northwest of the Minneapolis-St. Paul International Airport (MSP). It is also located approximately 13-miles west of Anoka County Airport in Blaine, and approximately eight-miles north of Crystal Airport in Crystal/Brooklyn Center. These are two reliever airports in the Metropolitan Airports Commission's regional airport system.

Champlin is located outside of the defined airport influence area for each of these airports. There are no structures within Champlin that exceed 500 feet in height. Any applicant who proposes to construct structure over 200 feet above the ground 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.

MnDOT has designated no lakes in Champlin for seaplane use under aeronautics rules and regulations. There are currently no heliports in Champlin nor any known plans to construct one.

6.6.2 Freight Movement

Freight transportation in Champlin is primarily served by heavy commercial truck traffic along TH 169. There are no railroad or waterway operations that occur within Champlin. **Exhibit 6-13** shows the city's freight system network.

There are no large freight traffic generators within the city as identified by the Metropolitan Council. Most truck traffic serves local land uses or passes through Champlin on trips to, from, and through the rest of the Twin Cities. The major commercial and industrial development in Champlin lies adjacent to TH 169 with access through the collector roadway system. Locating industrial and commercial-lane uses with good access to the principal arterial network reduces the potential for truck traffic to impact residential areas.

The Metropolitan Council's Regional Truck Highway Corridor Study (completed in 2017) identified TH 169 as Tier 2 regional key truck corridor. TH 169 connects to major regional truck corridors I-94/694 and TH 10. As defined in the Regional Truck Highway Corridor Study, the interstate system serves as the freight backbone, and other tiered roadways provide redundancy to the interstate system, as well as provide door-to-door access to manufacturing facilities, distribution centers, intermodal freight hubs, and ultimately, retailers and customers.

Exhibit 6-13 shows the Heavy Commercial Average Daily Traffic (HCADT) on arterial roadways within Champlin. TH 169 carries 1350-1550 heavy commercial vehicles per day based on MnDOT traffic volume data.

The Metropolitan Council 2040 TPP acknowledges several freight challenges that impact the city and the region. Freight traffic and congestion are expected to increase and place pressure on the region's highway and rail systems. Additionally, there are concerns about compatibility between freight traffic and adjacent land use. While land uses adjacent to the city's primary freight routes are generally compatible, it will be important to ensure that future development is also compatible with freight operations.

6.7 IMPLEMENTATION

Previous sections of this Plan have examined existing conditions, as well as future issues and needs. This section summarizes implementation actions and recommendations to meet 2040 transportation goals.

By adopting the overall Comprehensive Plan Update including the Transportation Chapter, the City Council will establish the guidelines by which decisions regarding transportation facilities and programs will be made in Champlin. The City will periodically review the conditions and assumptions under which the Transportation Chapter has been developed and updated in the Plan as needed.

The following issues and recommended strategies have been identified by the Champlin City Council. Several of these strategies are also shown graphically in **Exhibit 6-14**.

6.7.1 Transit

A. Two (2) Metro Transit park-and-ride facilities in Champlin operate at half capacity - Dayton Road and West River Road.

It is recommended that the City work with Metro Transit to consider the merits of repurposing these parking areas.

B. The City of Champlin is nearby the Northstar Commuter Rail stations and the planned Bottineau Light Rail Line.

It is recommended that the City promote the use of these rail services.

C. The City of Champlin has limited mass transit services.

It is recommended that the City continue to request improved mass transit services.

6.7.2 Congestion

A. Limited river crossings and new growth are expected to increase traffic congestion along the Trunk Highway 169 corridor.

It is recommended that the City work with MnDOT, Hennepin County and neighboring cities to study the need and costs of another river crossing.

B. Several roadways will approach road capacity by 2040 including:

1. **Dayton Road east of French Lake Road;**
2. **West River Road from Hayden Lake Road to Douglas Drive; and**
3. **Winnetka Avenue from 109th Avenue to 117th Avenue.**

It is recommended that the City study and adopt strategies to address congestion on these roadways.

C. Conditions at several intersections are expected to warrant traffic control improvements including:

1. **West River Road and 109th Avenue;**
2. **West River Road and Winnetka Avenue;**
3. **109th Avenue and Winnetka Avenue;**
4. **109th Avenue and Jefferson Highway;**
5. **Champlin Drive and Hayden Lake Road;**
6. **114th Avenue and Winnetka Avenue;**
7. **Elm Creek Crossing and French Lake Road;**
8. **Dean Avenue and Cartway Road;**
9. **120th Avenue and Champlin Drive; and**
10. **South Diamond Lake Road and Dayton Road.**

It is recommended that the City monitor these intersections and work with partnering agencies to make improvements as conditions warrant.

6.7.3 Roadway Jurisdictional Changes

A. Hennepin County has expressed a desire to transfer Winnetka Avenue (CR 103) to the City.

It is recommended that the City research and consider the merits of such a transfer.

6.7.4 Programmed Projects – Collectors and Arterials

A. 109th Avenue Reconstruction – Jefferson Highway to Winnetka Avenue (2023)

B. East Hayden Lake Road Reconstruction – Trunk Highway 169 to West River Road (2025)

C. French Lake Road Reconstruction from West Hayden Lake Road to Dayton Road (2035)

It is recommended that the City prepare for and set aside resources for these projects.

6.7.5 Non-Programmed Projects

A. Winnetka Avenue from 101st Avenue to 109th Avenue (City of Brooklyn Park)

B. Winnetka Avenue from 109th Avenue to West River Road (Hennepin County)

C. Trunk Highway 169 maintenance/rehabilitation (2040) (MnDOT)

D. Dayton Road from west city limits to Trunk Highway 169 (Hennepin County)

E. West River Road from 109th Avenue to Douglas Drive (Hennepin County)

F. Elm Creek Parkway Reconstruction – Jefferson Highway to Goose Lake Parkway

It is recommended that the City work with Hennepin County and other jurisdictions on these non-programmed projects.

6.7.6 Road Classification

A. Several roadways merit an elevation in their functional classification including:

1. **French Lake Road/Hayden Lake Road – western city limits to Trunk Highway 169;**
2. **Jefferson Highway – Elm Creek Parkway to 109th Avenue;**
3. **South Diamond Lake Road – Dayton Road to western city limits; and**
4. **109th Avenue – West River Road – Zachary Lane.**

It is recommended that the City work with Hennepin County, neighboring cities, and/or the Metropolitan Council regarding these road classification reviews.

6.7.7 Studies and Research

A. The national and regional trend is to build and reconstruct streetscapes that reflect a unified, complete design that balances among a wide variety of functions, including storm water management, safe pedestrian travel, use as public space, bicycle, transit, and vehicle movement, parking and loading requirements, ease of maintenance, and emergency access. This trend is known as "complete streets."

It is recommended that the City consider adopting "complete streets" design guidelines.

B. Consider strategies to improve pedestrian and bicycle safety in roundabout intersections.

It is recommended that the City research and employ strategies to address roundabout public safety.

EXHIBITS

6-1 Roadway Jurisdiction
6-2 Roadway Functional Classification
6-3 Existing Number of Roadway Lanes
6-4 Existing Traffic Volumes
6-5 Crash Locations and Frequencies
6-6 Existing and Proposed Transit Services and Infrastructure
6-7 Transportation Analysis Zones
6-8 Existing and Forecasted Traffic Volumes
6-9 Projected 2040 Congestion Conditions
6-10 Future Number of Roadway Lanes
6-11 Existing and Planned Bicycle/Pedestrian Facilities
6-12 Regional Bicycle Transportation Network
6-13 Freight Network and Heavy Commercial Traffic Volumes
6-14 Transportation Strategies

TRANSPORTATION APPENDIX

MnDOT and Hennepin County Access Management Guidelines

MnDOT Access Management Manual

Table 1: 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	
1	**High Priority Interregional Corridors & Interstate System (IRCs)**				
1F	Interstate Freeway	Principal Arterials	Interchange Access Only		⊘
1AF	Non-Interstate Freeway		Interchange Access Only (see Section 3.2.7 for interim spacing)		See Section 3.2.5 for Signalization on Interregional Corridors
1A	Rural		1 mile	1/2 mile	
1B	Urban/Urbanizing		1/2 mile	1/4 mile	
1C	Urban Core		300-660 feet dependent upon block length		
2	**Medium Priority Interregional Corridors**				
2AF	Non-Interstate Freeway	Principal Arterials	Interchange Access Only (See Section 3.2.7 for interim spacing)		See Section 3.2.5 for Signalization on Interregional Corridors
2A	Rural		1 mile	1/2 mile	
2B	Urban/Urbanizing		1/2 mile	1/4 mile	
2C	Urban Core		300-660 feet, dependent upon block length		¼ mile
3	**Regional Corridors**				
3AF	Non-Interstate Freeway	Principal and Minor Arterials	Interchange Access Only (see Section 3.2.7 for interim spacing)		Interim
3A	Rural		1 mile	1/2 mile	See Section 3.2.5
3B	Urban/Urbanizing		1/2 mile	1/4 mile	1/2 mile
3C	Urban Core		300-660 feet, dependent upon block length		1/4 mile

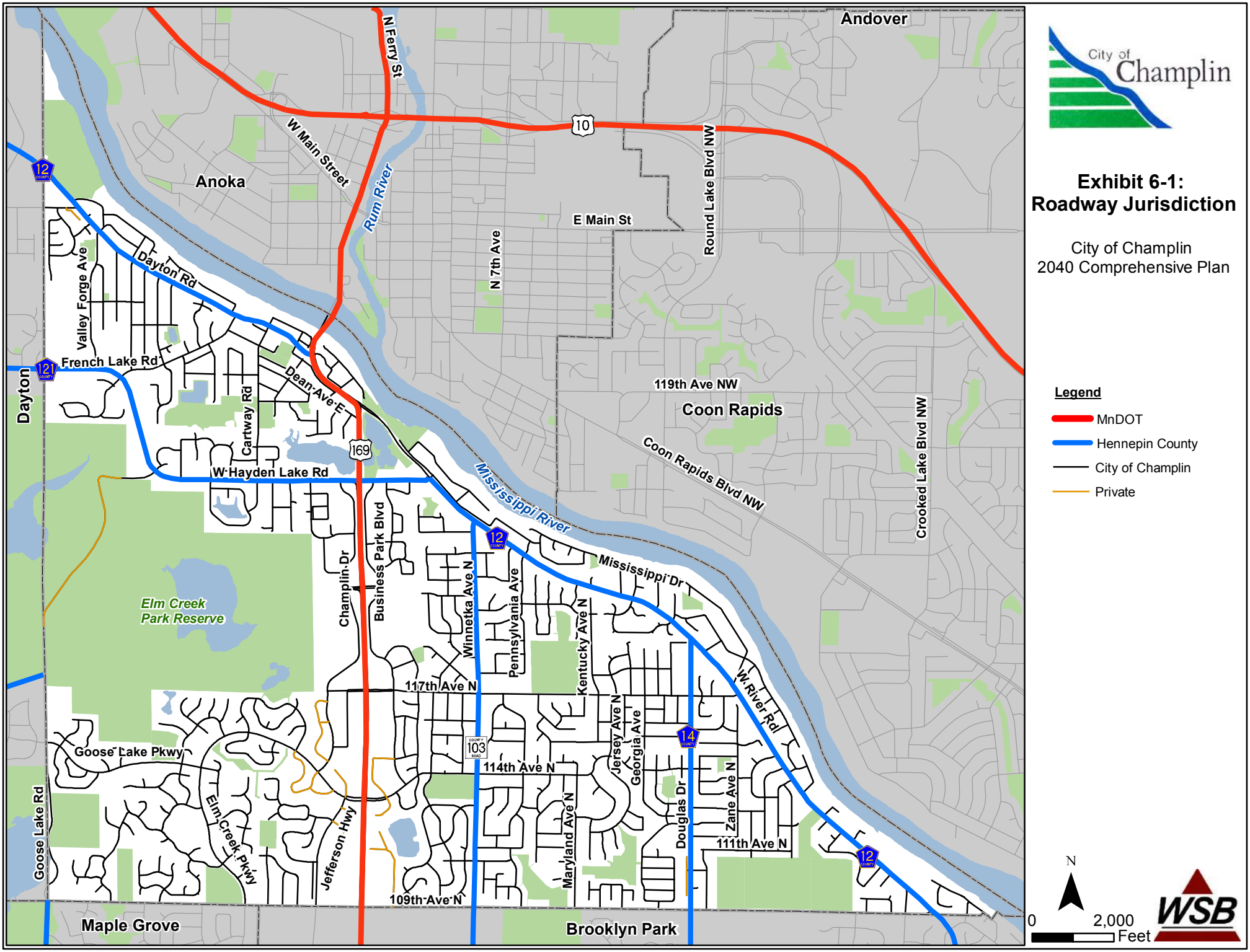
MnDOT Access Management Manual

Table 2: Summary of Recommended Street Spacing for Non-IRCs

Category	Area or Facility Type	Typical Functional Class	Public Street Spacing		Signal Spacing
			Primary Full-Movement Intersection	Secondary Intersection	
4	**Principal Arterials in the Twin Cities Metropolitan Area and Primary Regional Trade Centers (Non-IRCs)**				
4AF	Non-Interstate Freeway	Principal Arterials	Interchange Access Only (see Section 3.2.7 for interim spacing)		Interim
4A	Rural		1 mile	1/2 mile	See Section 3.2.5
4B	Urban/Urbanizing		1/2 mile	1/4 mile	1/2 mile
4C	Urban Core		300-660 feet dependent upon block length		1/4 mile
5	**Minor Arterials**				
5A	Rural	Minor Arterials	1/2 mile	1/4 mile	See Section 3.2.5
5B	Urban/Urbanizing		1/4 mile	1/8 mile	1/4 mile
5C	Urban Core		300-660 feet, dependent upon block length		1/4 mile
6	**Collectors**				
6A	Rural	Collectors	1/2 mile	1/4 mile	See Section 3.2.5
6B	Urban/Urbanizing		1/8 mile	Not Applicable	1/4 mile
6C	Urban Core		300-660 feet, dependent upon block length		1/8 mile
7	**Specific Area Access Management Plans**				
7	All	All	By adopted plan		

Table 5-4: 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



City of Champlin

Exhibit 6-1: Roadway Jurisdiction

City of Champlin
2040 Comprehensive Plan

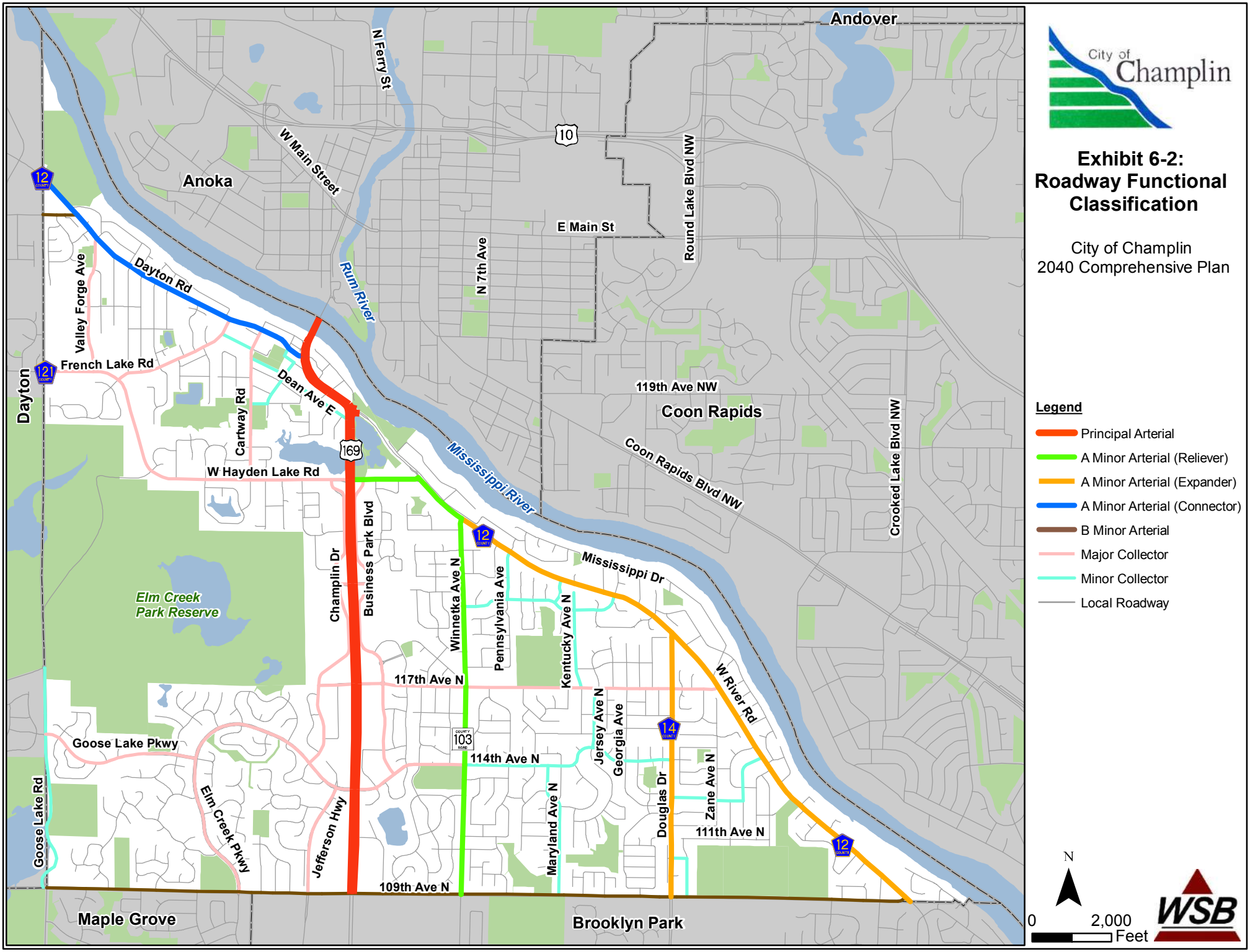
Legend

- MnDOT
- Hennepin County
- City of Champlin
- Private

N

0 2,000 Feet

WSB



City of Champlin

Exhibit 6-2: Roadway Functional Classification

City of Champlin
2040 Comprehensive Plan

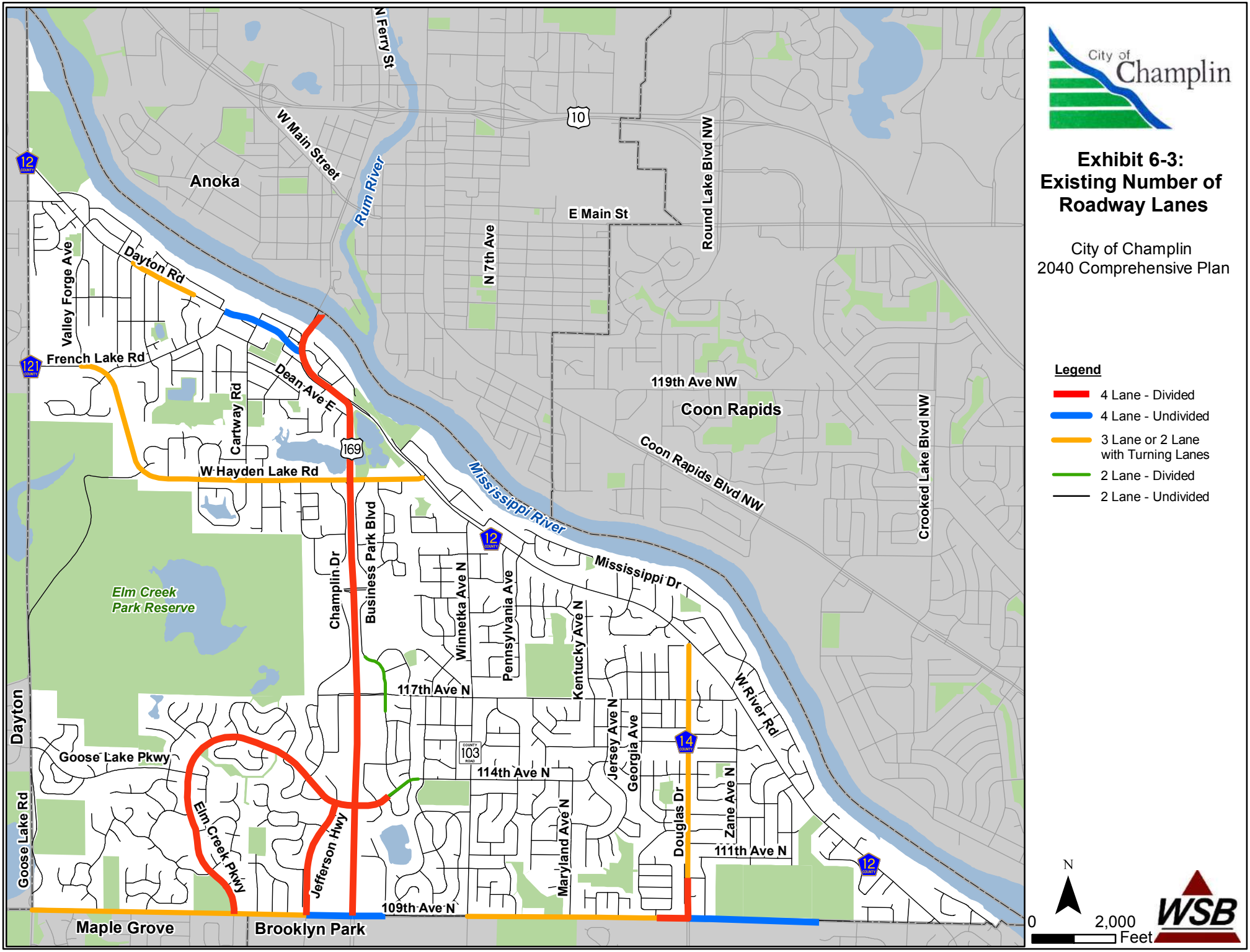
Legend

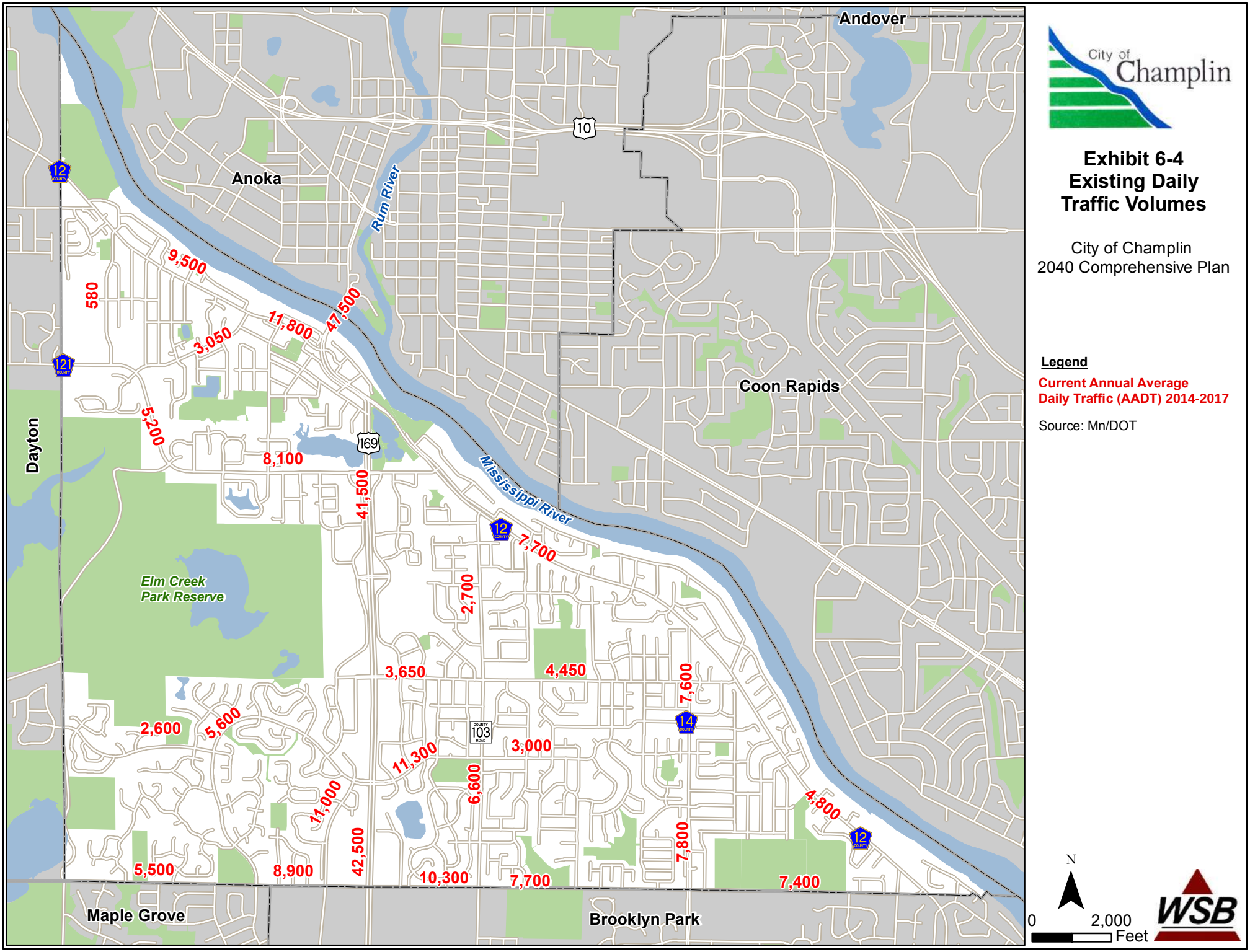
- Principal Arterial
- A Minor Arterial (Reliever)
- A Minor Arterial (Expander)
- A Minor Arterial (Connector)
- B Minor Arterial
- Major Collector
- Minor Collector
- Local Roadway

N

0 2,000 Feet

WSB


City of Champlin
Exhibit 6-3:
Existing Number of Roadway Lanes
City of Champlin
2040 Comprehensive Plan
Legend
4 Lane - Divided
4 Lane - Undivided
3 Lane or 2 Lane with Turning Lanes
2 Lane - Divided
2 Lane - Undivided
N
0
2,000
Feet
WSB
Anoka
Coon Rapids
Maple Grove
Brooklyn Park
Dayton
Rum River
Mississippi River
N Ferry St
W Main Street
E Main St
Round Lake Blvd NW
N 7th Ave
Valley Forge Ave
Dayton Rd
French Lake Rd
Dean Ave E
Cartway Rd
W Hayden Lake Rd
119th Ave NW
Coon Rapids Blvd NW
Crooked Lake Blvd NW
Elm Creek Park Reserve
Champlin Dr
Business Park Blvd
Winnetka Ave N
Pennsylvania Ave
Kentucky Ave N
Mississippi Dr
W River Rd
117th Ave N
Jersey Ave N
Georgia Ave
Douglas Dr
Zane Ave N
111th Ave N
Maryland Ave N
114th Ave N
Goose Lake Pkwy
Goose Lake Rd
Elm Creek Pkwy
Jefferson Hwy
109th Ave N
10
12
121
169
14
103



City of Champlin

Exhibit 6-4
Existing Daily Traffic Volumes

City of Champlin
2040 Comprehensive Plan

Legend

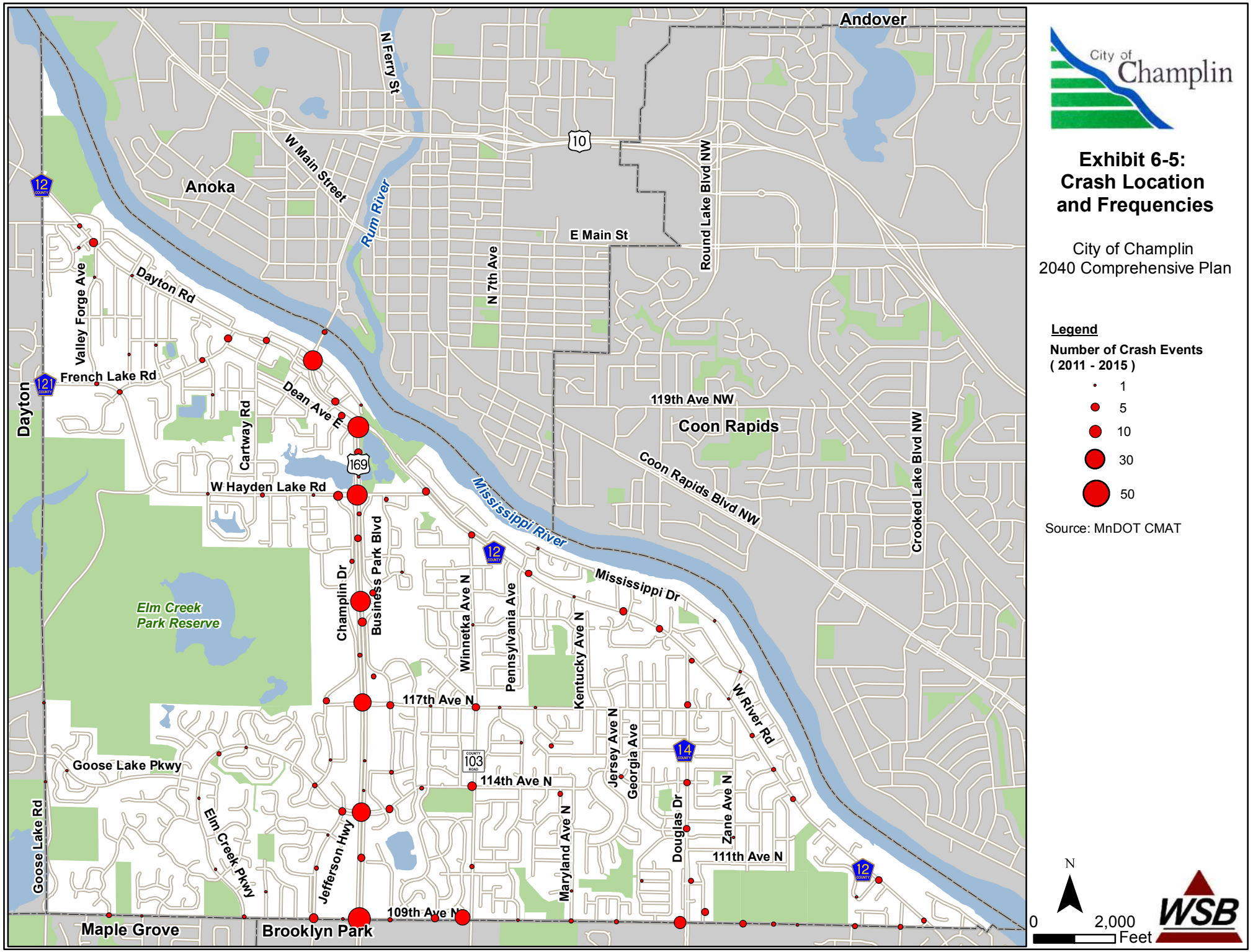
Current Annual Average Daily Traffic (AADT) 2014-2017

Source: Mn/DOT

N

0 2,000 Feet

WSB



City of Champlin

Exhibit 6-5: Crash Location and Frequencies

City of Champlin
2040 Comprehensive Plan

Legend

Number of Crash Events (2011 - 2015)

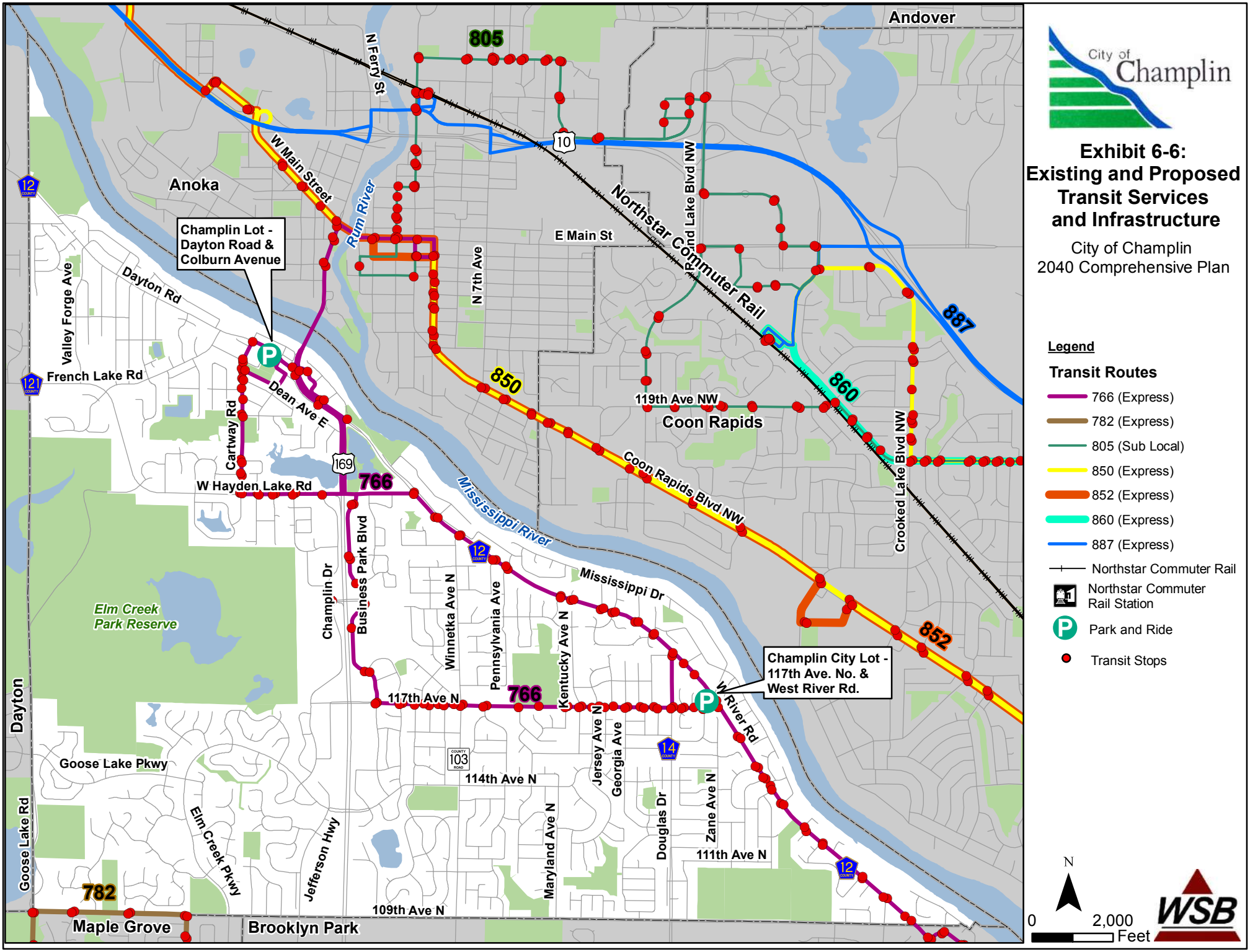
- 1
- 5
- 10
- 30
- 50

Source: MnDOT CMAT

N

0 2,000 Feet

WSB

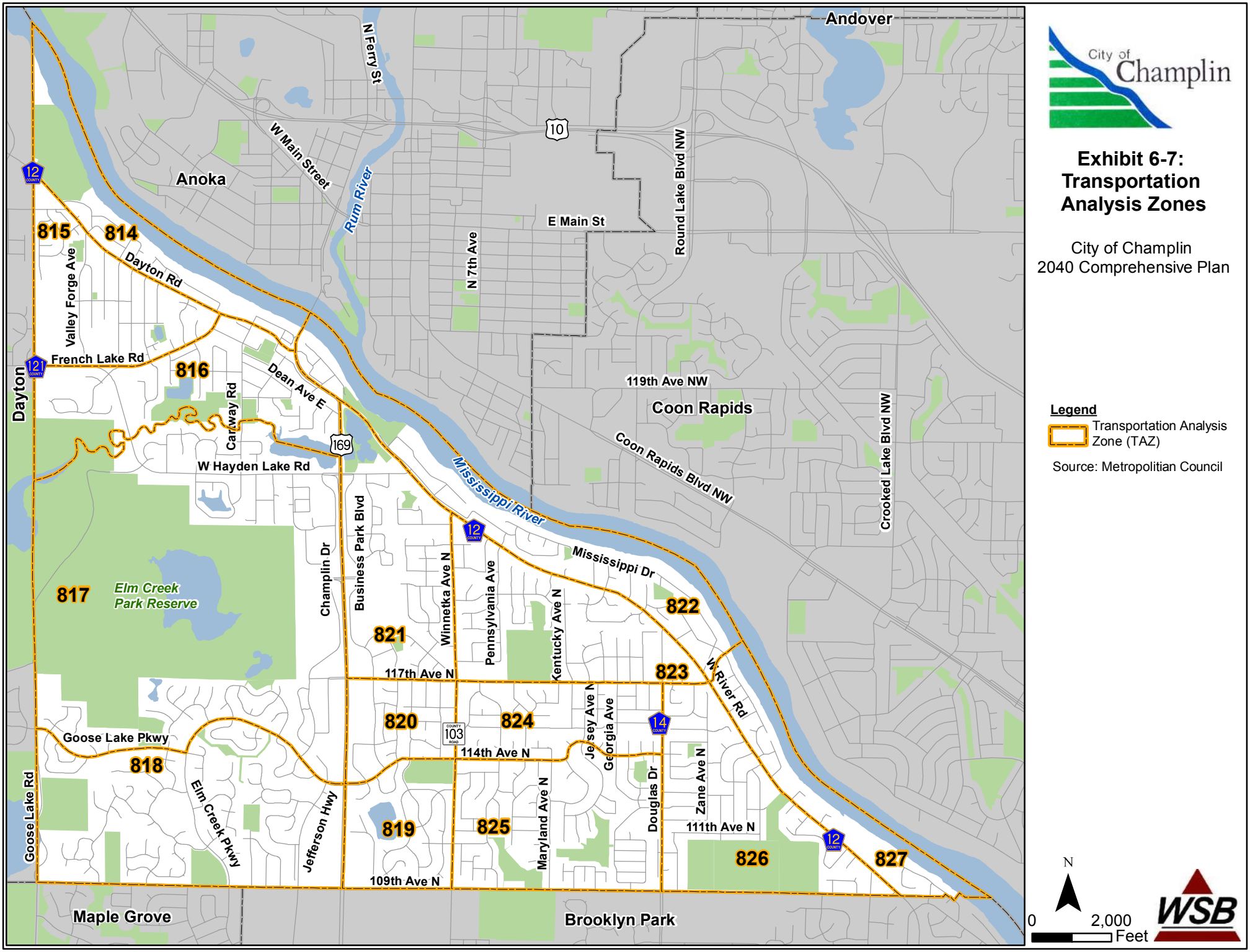


City of Champlin

Exhibit 6-6: Existing and Proposed Transit Services and Infrastructure

City of Champlin
2040 Comprehensive Plan

WSB



City of Champlin

Exhibit 6-7: Transportation Analysis Zones

City of Champlin
2040 Comprehensive Plan

Legend

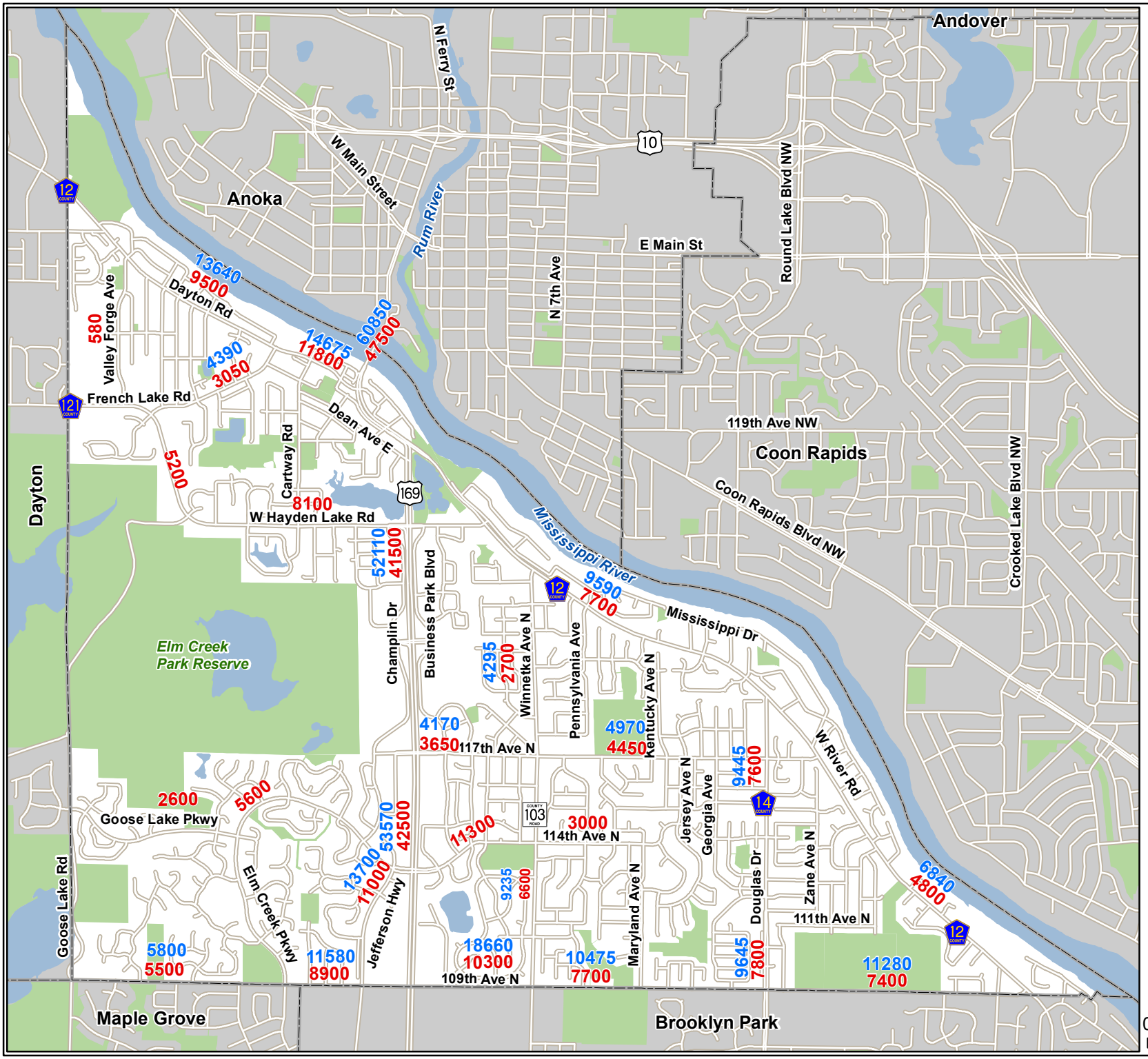
Transportation Analysis Zone (TAZ)

Source: Metropolitian Council

N

0 2,000 Feet

WSB



City of Champlin

Exhibit 6-8: Existing and Forecasted Traffic Volumes

City of Champlin
2040 Comprehensive Plan

Legend

Current Annual Average Daily Traffic (AADT)* 2014-2017

2040 Annual Average Daily Traffic (AADT) Forecast*

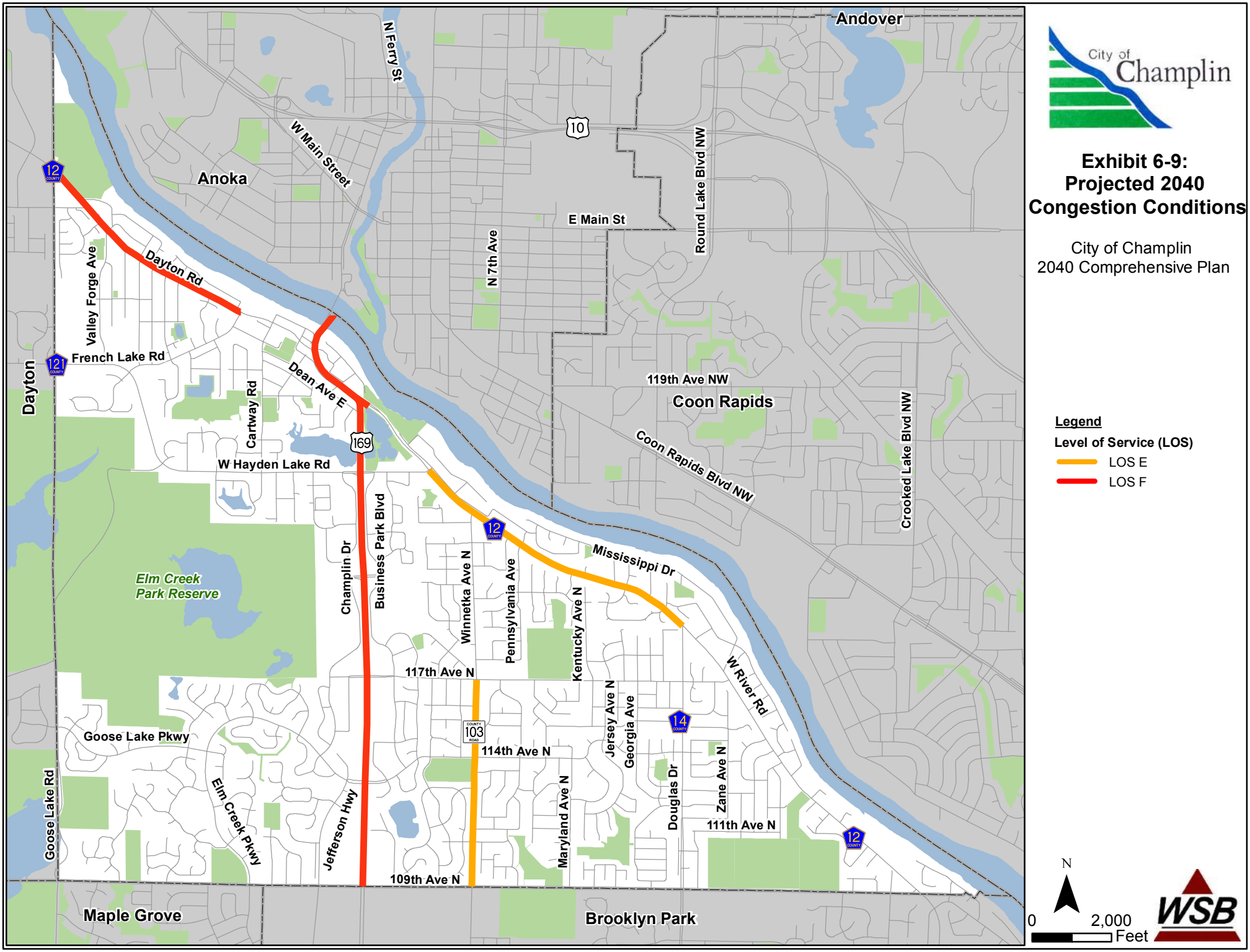
* Source: Mn/DOT

* Source: Metropolitan Council Regional Travel Demand Model; WSB & Associates, Inc.

N

0 2,000 Feet

WSB



City of Champlin

Exhibit 6-9: Projected 2040 Congestion Conditions

City of Champlin
2040 Comprehensive Plan

Legend

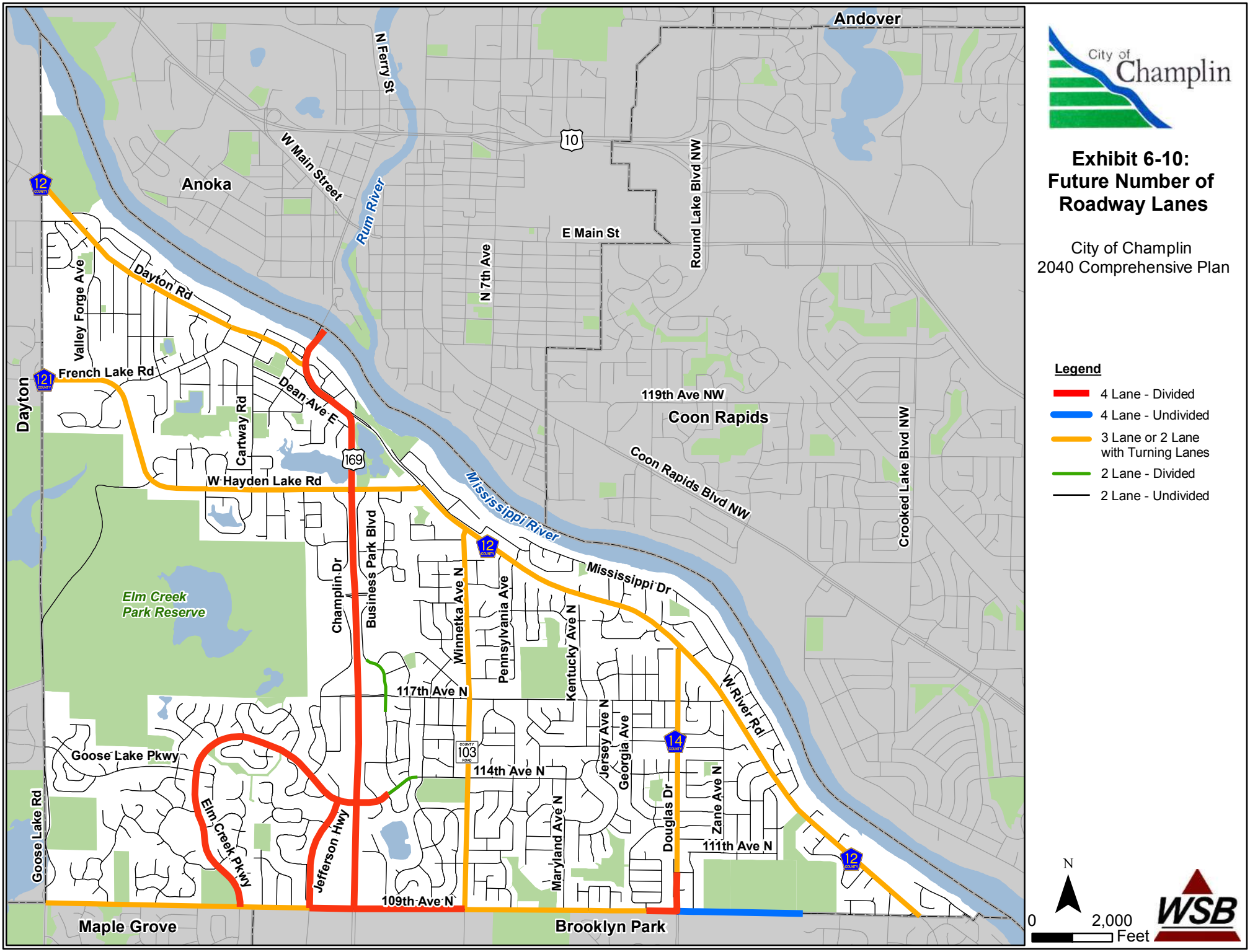
Level of Service (LOS)

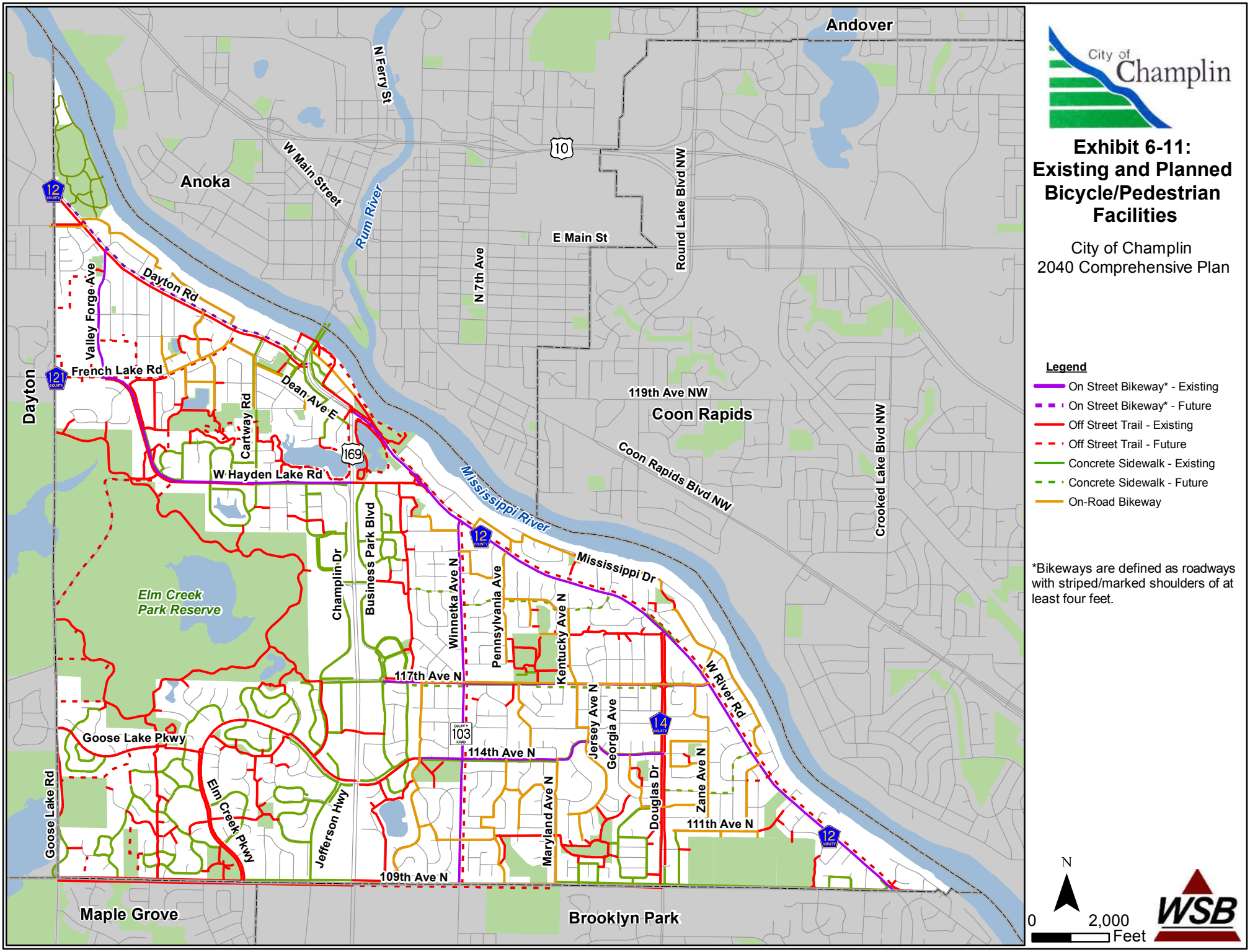
- LOS E
- LOS F

N

0 2,000 Feet

WSB


Andover
N Ferry St
W Main Street
Anoka
Rum River
10
Round Lake Blvd NW
E Main St
N 7th Ave
Dayton Rd
Valley Forge Ave
French Lake Rd
Dayton
Dean Ave E
Cartway Rd
169
W Hayden Lake Rd
119th Ave NW
Coon Rapids
Coon Rapids Blvd NW
Crooked Lake Blvd NW
Mississippi River
Elm Creek
Park Reserve
Champlin Dr
Business Park Blvd
Winnetka Ave N
Pennsylvania Ave
Kentucky Ave N
Mississippi Dr
W River Rd
117th Ave N
Goose Lake Pkwy
Goose Lake Rd
Elm Creek Pkwy
Jefferson Hwy
114th Ave N
Jersey Ave N
Georgia Ave
Douglas Dr
Zane Ave N
Maryland Ave N
111th Ave N
109th Ave N
Maple Grove
Brooklyn Park
City of Champlin
Exhibit 6-10:
Future Number of
Roadway Lanes
City of Champlin
2040 Comprehensive Plan
Legend
4 Lane - Divided
4 Lane - Undivided
3 Lane or 2 Lane
with Turning Lanes
2 Lane - Divided
2 Lane - Undivided
N
0
2,000
Feet
WSB



City of Champlin

Exhibit 6-11: Existing and Planned Bicycle/Pedestrian Facilities

City of Champlin
2040 Comprehensive Plan

Legend

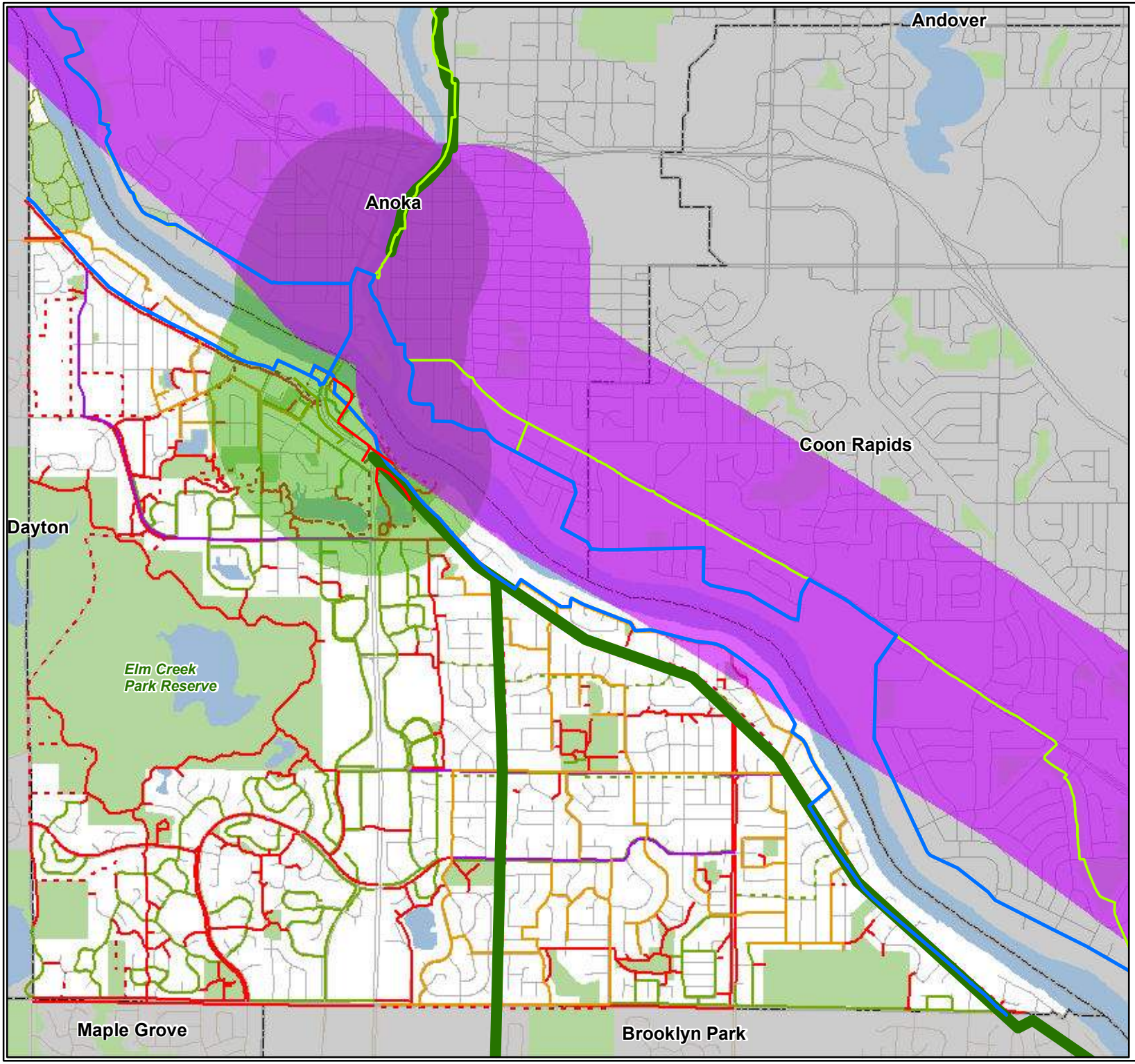
- On Street Bikeway* - Existing
- On Street Bikeway* - Future
- Off Street Trail - Existing
- Off Street Trail - Future
- Concrete Sidewalk - Existing
- Concrete Sidewalk - Future
- On-Road Bikeway

*Bikeways are defined as roadways with striped/marked shoulders of at least four feet.

N

0 2,000 Feet

WSB



City of Champlin

Exhibit 6-12: Regional Bicycle Transportation Network

City of Champlin
2040 Comprehensive Plan

Legend

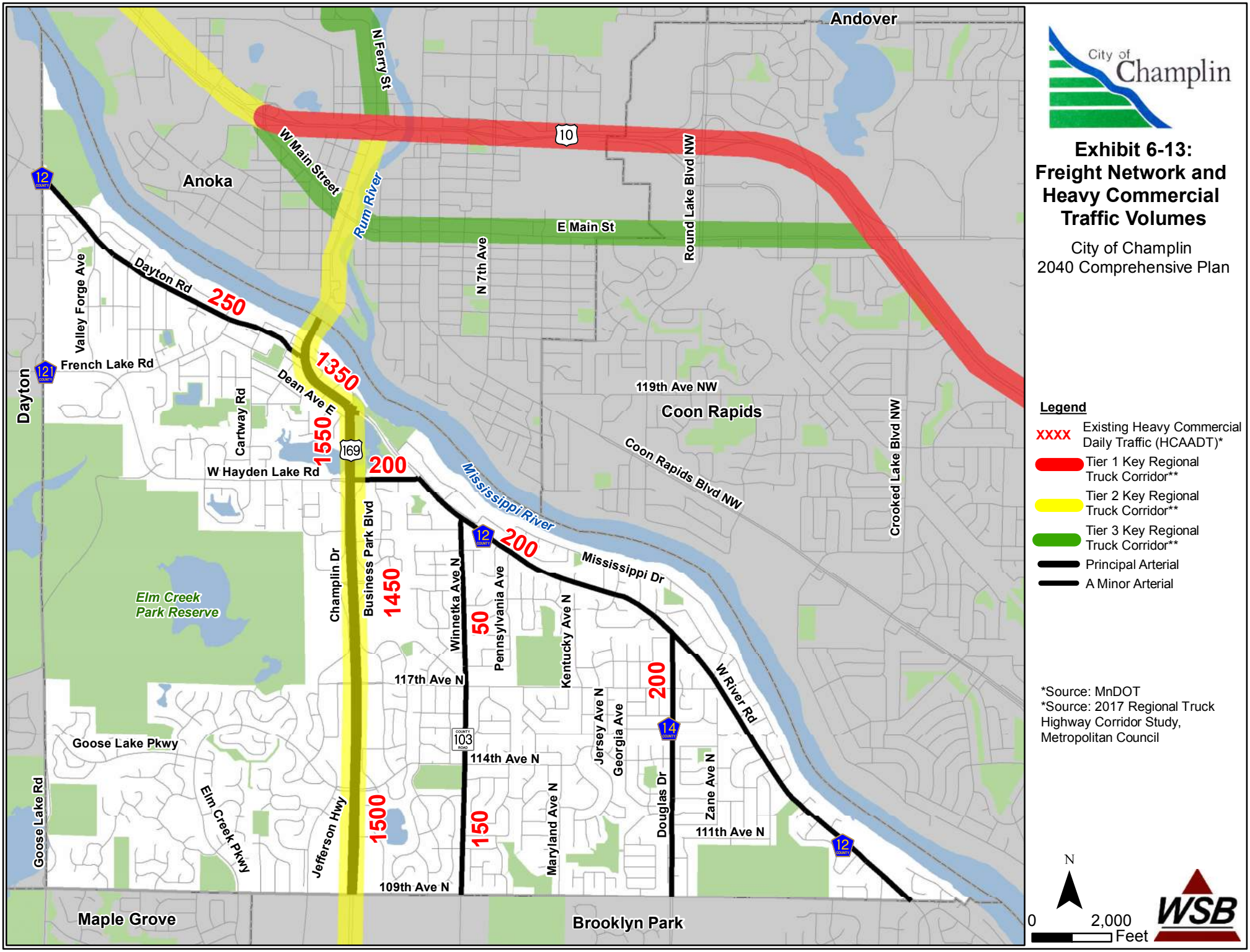
- Tier 2 RBTN Alignment
- Tier 1 RBTN Corridor
- Tier 2 RBTN Corridor
- Mississippi River Regional Trail
- Mississippi River Trail Bikeway Routes
- On Street Bikeway* - Existing
- On Street Bikeway* - Future
- Off Street Trail - Existing
- Off Street Trail - Future
- Concrete Sidewalk - Existing
- Concrete Sidewalk - Future
- On-Road Bikeway

*Bikeways are defined as roadways with striped/marked shoulders of at least four feet.

N

0 2,000 Feet

WSB



City of Champlin

Exhibit 6-13: Freight Network and Heavy Commercial Traffic Volumes

City of Champlin
2040 Comprehensive Plan

Legend

- XXXX Existing Heavy Commercial Daily Traffic (HCAADT)*
- Tier 1 Key Regional Truck Corridor**
- Tier 2 Key Regional Truck Corridor**
- Tier 3 Key Regional Truck Corridor**
- Principal Arterial
- A Minor Arterial

*Source: MnDOT
*Source: 2017 Regional Truck Highway Corridor Study, Metropolitan Council

N

0 2,000 Feet

WSB

City of Champlin

Exhibit 6-14: Transportation Strategies

City of Champlin
2040 Comprehensive Plan

Legend

- Programmed Reconstruction Project
- Recommended Conversion to 3-Lane Roadway (Unprogrammed)
- Potential Future Traffic Signal or Roundabout

Potential Jurisdictional Transfer

- County to City

Future River Crossing Need in Dayton Area (not shown on map)

Note: Programmed reconstruction year per the City of Champlin 2018-2027 Capital Improvement Plan

N

0 2,000 Feet

WSB

WATER SUPPLY PLANS (WSP)

Who needs to complete a Water Supply Plan

Public water suppliers serving more than 1,000 people, large private water suppliers in designated Groundwater Management Areas, and all water suppliers in the Twin Cities metropolitan area are required to prepare and submit a water supply plan.

The goal of the WSP is to help water suppliers: 1) implement long term water sustainability and conservation measures; and 2) develop critical emergency preparedness measures. Champlin needs to know what measures will be implemented in case of a water crisis. A lot of emergencies can be avoided or mitigated if long term sustainability measures are implemented.

Groundwater Management Areas (GWMA)

The DNR has designated three areas of the state as Groundwater Management Areas (GWMAs) to focus groundwater management efforts in specific geographies where there is an added risk of overuse or water quality degradation. A plan directing the DNRs actions within each GWMA has been prepared.

Although there are no specific additional requirements with respect to the water supply planning for communities within designated GWMAs, communities should be aware of the issues and actions planned if they are within the boundary of one of the GWMAs. The three GWMAs are the North and East Metro GWMA (Twin Cities Metro), the Bonanza Valley GWMA and the Straight River GWMA (near Park Rapids). Additional information and maps are included in the DNR Groundwater Management Areas webpage.

Benefits of completing a WSP

Completing a WSP, fulfills a water supplier's statutory obligations under M.S. M.S.103G.291 to complete a water supply plan. For water suppliers in the metropolitan area, the WSP will help local governmental units to fulfill their requirements under M.S. 473.859 to complete a local comprehensive plan. Additional benefits of completing WSP template:

- The standardized format allows for quicker and easier review and approval
- Help water suppliers prepare for droughts and water emergencies.
- Create eligibility for funding requests to the Minnesota Department of Health (MDH) for the Drinking Water Revolving Fund.
- Allow water suppliers to submit requests for new wells or expanded capacity of existing wells.
- Simplify the development of county comprehensive water plans and watershed plans.
- Fulfill the contingency plan provisions required in the MDH wellhead protection and surface water protection plans.
- Fulfill the demand reduction requirements of Minnesota Statutes, section 103G.291 subd 3and 4.

- Upon implementation, contribute to maintaining aquifer levels, reducing potential well
- interference and water use conflicts, and reducing the need to drill new wells or expand
- system capacity.
- Enable DNR to compile and analyze water use

The City of Champlin's Water Supply Plan is below.

Local Water Supply Plan Template
Third Generation for 2016-2018

Revised April 10, 2017

Formerly called Water Emergency & Water Conservation Plan

DEPARTMENT OF NATURAL RESOURCES

Cover photo by Molly Shodeen

For more information on this Water Supply Plan Template, please contact the DNR Division of Ecological and Water Resources at (651) 259-5034 or (651) 259-5100.

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This information is available in an alternative format upon request.

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INTRODUCTION TO WATER SUPPLY PLANS (WSP)

Who needs to complete a Water Supply Plan

Public water suppliers serving more than 1,000 people, large private water suppliers in designated Groundwater Management Areas, and all water suppliers in the Twin Cities metropolitan area are required to prepare and submit a water supply plan.

The goal of the WSP is to help water suppliers: 1) implement long term water sustainability and conservation measures; and 2) develop critical emergency preparedness measures. Your community needs to know what measures will be implemented in case of a water crisis. A lot of emergencies can be avoided or mitigated if long term sustainability measures are implemented.

Groundwater Management Areas (GWMA)

The DNR has designated three areas of the state as Groundwater Management Areas (GWMAs) to focus groundwater management efforts in specific geographies where there is an added risk of overuse or water quality degradation. A plan directing the DNRs actions within each GWMA has been prepared. Although there are no specific additional requirements with respect to the water supply planning for communities within designated GWMAs, communities should be aware of the issues and actions planned if they are within the boundary of one of the GWMAs. The three GWMAs are the North and East Metro GWMA (Twin Cities Metro), the Bonanza Valley GWMA and the Straight River GWMA (near Park Rapids). Additional information and maps are included in the DNR Groundwater Management Areas webpage.

Benefits of completing a WSP

Completing a WSP using this template, fulfills a water supplier's statutory obligations under M.S. M.S.103G.291 to complete a water supply plan. For water suppliers in the metropolitan area, the WSP will help local governmental units to fulfill their requirements under M.S. 473.859 to complete a local comprehensive plan. Additional benefits of completing WSP template:

- The standardized format allows for quicker and easier review and approval
- Help water suppliers prepare for droughts and water emergencies.
- Create eligibility for funding requests to the Minnesota Department of Health (MDH) for the Drinking Water Revolving Fund.
- Allow water suppliers to submit requests for new wells or expanded capacity of existing wells.
- Simplify the development of county comprehensive water plans and watershed plans.
- Fulfill the contingency plan provisions required in the MDH wellhead protection and surface water protection plans.
- Fulfill the demand reduction requirements of Minnesota Statutes, section 103G.291 subd 3 and 4.

- Upon implementation, contribute to maintaining aquifer levels, reducing potential well interference and water use conflicts, and reducing the need to drill new wells or expand system capacity.
- Enable DNR to compile and analyze water use and conservation data to help guide decisions.
- Conserve Minnesota's water resources

If your community needs assistance completing the Water Supply Plan, assistance is available from your area hydrologist or groundwater specialist, the MN Rural Waters Association circuit rider program, or in the metropolitan area from Metropolitan Council staff. Many private consultants are also available.

WSP Approval Process

10 Basic Steps for completing a 10-Year Water Supply Plan

1. Download the DNR/Metropolitan Council Water Supply Plan Template from the DNR Water Supply Plan webpage.
2. Save the document with a file name with this naming convention: WSP_cityname_permitnumber_date.doc.
3. The template is a form that should be completed electronically.
4. Compile the required water use data (Part 1) and emergency procedures information (Part 2)
5. The Water Conservation section (Part 3) may need discussion with the water department, council, or planning commission, if your community does not already have an active water conservation program.
6. Communities in the seven-county Twin Cities metropolitan area should complete all the information discussed in Part 4. The Metropolitan Council has additional guidance information on their Water Supply webpage. All out-state water suppliers ***do not*** need to complete the content addressed in Part 4.
7. Use the Plan instructions and Checklist document from the DNR Water Supply Plan webpage to insure all data is complete and attachments are included. This will allow for a quicker approval process.
8. Plans should be submitted electronically using the MPARS website – no paper documents are required.
9. DNR hydrologist will review plans (in cooperation with Metropolitan Council in Metro area) and approve the plan or make recommendations.
10. Once approved, communities should complete a Certification of Adoption form, and send a copy to the DNR.

Complete Table 1 with information about the public water supply system covered by this WSP.

Table 1. General information regarding this WSP

Requested Information	Description
DNR Water Appropriation Permit Number(s)	**1979-6303**
Ownership	☒ Public or ☐ Private
Metropolitan Council Area	☒ Yes or ☐ No (and county name)
Street Address	11955 Champlin Drive
City, State, Zip	Champlin, Minnesota 55331
Contact Person Name	Tim Hanson
Title	City of Champlin City Engineer
Phone Number	(763) 923-7105
MDH Supplier Classification	Municipal

PART 1. WATER SUPPLY SYSTEM DESCRIPTION AND EVALUATION

The first step in any water supply analysis is to assess the current status of demand and availability. Information summarized in Part 1 can be used to develop Emergency Preparedness Procedures (Part 2) and the Water Conservation Plan (Part 3). This data is also needed to track progress for water efficiency measures.

A. Analysis of Water Demand

Complete Table 2 showing the past 10 years of water demand data.

- Some of this information may be in your Wellhead Protection Plan.
- If you do not have this information, do your best, call your engineer for assistance or if necessary leave blank.

If your customer categories are different than the ones listed in Table 2, please describe the differences below:

The City has not had any wholesale or institutional deliveries so these columns were removed from the table. Water used for Water Supplier Services (WSS) includes irrigation for city property.

Table 2. Historic water demand (see definitions in the glossary after Part 4 of this template)

Year	Pop. Served	Total Connections	Residential Water Delivered (MG)	C/I/I Water Delivered (MG)	Total Water Delivered (MG)	Total Water Pumped (MG)	Water Supplier Services (MG)	Percent Unmetered/ Unaccounted	Average Daily Demand (MGD)	Max. Daily Demand (MGD)	Date of Max. Demand	Residential Per Capita Demand (GPCD)	Total per capita Demand (GPCD)
2005	24,071	7,110	810	75	900	947	15	4.9	2.59	7.29	8/7/2005	92	108
2006	23,860	7,172	916	84	1025	1108	25	7.5	3.04	N/A	N/A	105	127
2007	23,990	7,214	920	82	1025	1071	23	4.3	2.93	7.51	7/30/2007	105	122
2008	23,983	7,339	838	79	940	1013	23	7.2	2.77	6.91	7/6/2008	96	116
2009	23,934	7,355	846	74	947	1047	26	9.5	2.87	6.49	7/12/2009	97	120
2010	23,089	7,420	767	71	861	907	23	5.0	2.48	5.95	5/28/2010	91	108
2011	23,223	7,442	754	63	838	887	20	5.5	2.43	5.24	6/30/2011	89	105
2012	23,536	7,464	849	74	956	996	32	4.1	2.73	6.57	9/3/2012	99	116
2013	23,499	7,484	762	69	857	862	27	0.6	2.36	6.64	8/25/2013	89	100
2014	22,880	7,518	667	60	757	775	30	2.3	2.12	5.50	7/23/2014	80	93
2015	22,741	7,537	682	64	782	809	37	3.2	2.22	5.23	7/16/2015	82	97
Avg. 2010-2015	23,161	7,478	747	67	842	873	28	3.5	2.39	5.86	N/A	88	103

MG – Million Gallons **MGD –** Million Gallons per Day **GPCD** – Gallons per Capita per Day

See Glossary for definitions. A list of Acronyms and Initialisms can be found after the Glossary.

Complete Table 3 by listing the top 10 water users by volume, from largest to smallest. For each user, include information about the category of use (residential, commercial, industrial, institutional, or wholesale), the amount of water used in gallons per year, the percent of total water delivered, and the status of water conservation measures.

Table 3. Large volume users

Customer	Use Category (residential, Industrial, Commercial, Institutional, Wholesale)	Amount Used (Gallons per Year)*	Percent of Total Annual Water Delivered	Implementing Water Conservation Measures? (Yes/No/Unknown)
1) Ecova	Residential (Apts)	7,069,000	0.90%	Unknown
2) City of Brooklyn Park	Public	5,850,000	0.75%	Unknown
3) Champlin Dr Apts	Residential (Apts)	5,190,000	0.66%	Unknown
4) Elm Creek Apts	Residential (Apts)	5,175,000	0.66%	Unknown
5) Coler Farms HOA	Residential (Townhouse)	5,056,000	0.65%	Unknown
6) Lifetime Fitness	Commercial	4,271,000	0.54%	Unknown
7) Bungalows of Champlin	Residential	3,520,000	0.45%	Unknown
8) Anoka Hennepin School	Public	2,891,000	0.37%	Unknown
9) Holiday	Commercial	2,864,000	0.37%	Unknown
10) Kastner Companies	Commercial	2,153,000	0.27%	Unknown

*2016-2017 water usage data

B. Treatment and Storage Capacity

Complete Table 4 with a description of where water is treated, the year treatment facilities were constructed, water treatment capacity, the treatment methods (i.e. chemical addition, reverse osmosis, coagulation, sedimentation, etc.) and treatment types used (i.e. fluoridation, softening, chlorination, Fe/MN removal, coagulation, etc.). Also describe the annual amount and method of disposal of treatment residuals. Add rows to the table as needed.

Table 4. Water treatment capacity and treatment processes

Treatment Site ID (Plant Name or Well ID)	Year Constructed	Treatment Capacity	Treatment Method	Treatment Type	Annual Volume of Residuals	Disposal Process for Residuals	Do You Reclaim Filter Backwash Water?
Water Treatment Plant No. 1 (Wells 4, 5, 6, 7, 9)	1998	8.6 MGD	Gravity filtration	Fe/Mn removal, radium removal, chlorination, fluoridation	N/A	N/A	Yes

Treatment Site ID (Plant Name or Well ID)	Year Constructed	Treatment Capacity	Treatment Method	Treatment Type	Annual Volume of Residuals	Disposal Process for Residuals	Do You Reclaim Filter Backwash Water?
Water Treatment Plant No. 2 (Well 1)	2011	1.44 MGD	Pressure filtration	Fe/Mn removal, radium removal, chlorination, fluoridation	N/A	N/A	Yes
Total	NA	10.04	NA	NA		NA	

Complete Table 5 with information about storage structures. Describe the type (i.e. elevated, ground, etc.), the storage capacity of each type of structure, the year each structure was constructed, and the primary material for each structure. Add rows to the table as needed.

Table 5. Storage capacity, as of the end of the last calendar year

Structure Name	Type of Storage Structure	Year Constructed	Primary Material	Storage Capacity (Gallons)
Tower 1	Elevated storage	1983	Steel	1,000,000
Tower 2	Elevated Storage	1988	Steel	1,000,000
Clearwell	Ground storage	1998	Concrete	1,300,000
Total	NA	NA	NA	3,300,000

Treatment and storage capacity versus demand

It is recommended that total storage equal or exceed the average daily demand.

Discuss the difference between current storage and treatment capacity versus the water supplier's projected average water demand over the next 10 years (see Table 7 for projected water demand):

The City of Champlin currently has 3.3 million gallons (MG) of storage between two elevated storage tanks and one ground storage reservoir. Ten State Standards recommends that a city's storage capacity be equal to or greater than the average day demand. It is anticipated that over the next ten years, the City's average day water demand will plateau at approximately 2.5 million gallons per day (MGD) by 2040; the City's current storage capacity exceeds the projected average day demand by 0.8 MG. Thus, the City's existing storage capacity is sufficient, and will not require additional storage over the course of this plan

It is generally recommended that a city's treatment or production capacity be equal to the maximum day demand with the largest production well out of service (firm capacity). In 2011, the City constructed a second water treatment plant which expanded the City's total treatment capacity to 10.04 MGD. The City's maximum day demands is projected to be 6.86 by 2040. Therefore, the City has sufficient treatment capacity and will not require additional treatment capacity over the course of this plan.

C. Water Sources

Complete Table 6 by listing all types of water sources that supply water to the system, including groundwater, surface water, interconnections with other water suppliers, or others. Provide the name

of each source (aquifer name, river or lake name, name of interconnecting water supplier) and the Minnesota unique well number or intake ID, as appropriate. Report the year the source was installed or established and the current capacity. Provide information about the depth of all wells. Describe the status of the source (active, inactive, emergency only, retail/wholesale interconnection) and if the source facilities have a dedicated emergency power source. Add rows to the table as needed for each installation.

Include copies of well records and maintenance summary for each well that has occurred since your last approved plan in **Appendix 1.**

Table 6. Water sources and status

Resource Type (Groundwater, Surface water, Interconnection)	City Well No.	Resource Name	MN Unique Well # or Intake ID	Year Installed	Capacity (Gallons per Minute)	Well Depth (Feet)	Status of Normal and Emergency Operations (active, inactive, emergency only, retail/wholesale interconnection))	Does this Source have a Dedicated Emergency Power Source? (Yes or No)
Groundwater	3	Franconia-Mt. Simon	160019	1978	n/a	602	inactive	n/a
Groundwater	1	Franconia-Mt. Simon	202754	1974	1200	700	active	Yes
Groundwater	2	Franconia-Mt. Simon	228438	1974	1000	526	active	Yes
Groundwater	4	Tunnel City-Wonewoc	409523	1983	800	291	active	Yes
Groundwater	5	Mt. Simon	409524	1984	1000	550	active	Yes
Groundwater	6	Tunnel City-Wonewoc	416092	1987	1300	310	active	Yes
Groundwater	7	Mt. Simon	416093	1987	750	513	active	Yes
Groundwater	8	Mt. Simon	559414	1996	1750	480	active	Yes
Interconnection	n/a	Brooklyn Park (2- 8-inch interconnects and 1- 12-inch interconnect through the High School)	MSAS 193-106-40 and MSAS 193-106-08	1992 and 1994	1,000 gpm each (8-inch), 2,500 gpm (12-inch)	n/a	The supplier must approve the use of the supply system at the time of need.	n/a
Interconnection	n/a	Dayton (8-inch interconnect)		2004	1,000 gpm	n/a	The supplier must approve the use of the supply system at the time of need.	n/a
Interconnection	n/a	Maple Grove (2- 8-inch interconnects)		2005	1,000 gpm each (8-inch)	n/a	The supplier must approve the use of the supply system at the time of need.	n/a

Limits on Emergency Interconnections

Discuss any limitations on the use of the water sources (e.g. not to be operated simultaneously, limitations due to blending, aquifer recovery issues etc.) and the use of interconnections, including capacity limits or timing constraints (i.e. only 200 gallons per minute are available from the City of Prior Lake, and it is estimated to take 6 hours to establish the emergency connection). If there are no limitations, list none.

The City has three emergency interconnections with Brooklyn Park, Dayton, and Maple Grove. These suppliers must approve the use of the supply system at the time of the need for an emergency connection.

D. Future Demand Projections – *Key Metropolitan Council Benchmark*

Water Use Trends

Use the data in Table 2 to describe trends in 1) population served; 2) total per capita water demand; 3) average daily demand; 4) maximum daily demand. Then explain the causes for upward or downward trends. For example, over the ten years has the average daily demand trended up or down? Why is this occurring?

From 2005 to 2015, the population of Champlin decreased by less than 6%. Although the population of Champlin has remained generally steady over the course of 10 years, the total per capita demand has decreased by 9%, the average daily demand has decreased by 10%, and the maximum daily demand as decreased by 28%. These significant decreases in daily water use are likely due to maintained fixtures, more water efficient appliances, and overall greater public awareness of water use.

Use the water use trend information discussed above to complete Table 7 with projected annual demand for the next ten years. Communities in the seven-county Twin Cities metropolitan area must also include projections for 2030 and 2040 as part of their local comprehensive planning.

Projected demand should be consistent with trends evident in the historical data in Table 2, as discussed above. Projected demand should also reflect state demographer population projections and/or other planning projections.

Table 7. Projected annual water demand

Year	Projected Total Population	Projected Population Served	Projected Total Per Capita Water Demand (GPCD)	Projected Average Daily Demand (MGD)	Projected Maximum Daily Demand (MGD)
2020	24,400	24,400	100	2.44	6.59
2021	24,520	24,520	100	2.45	6.62
2022	24,640	24,640	100	2.46	6.65
2023	24,760	24,760	100	2.48	6.69
2024	24,880	24,880	100	2.49	6.72
2025	25,000	25,000	100	2.50	6.75

2030	25,600	25,600	100	2.56	6.91
2040	25,400	25,400	100	2.54	6.86

GPCD – Gallons per Capita per Day **MGD** – Million Gallons per Day

Projection Method

Describe the method used to project water demand, including assumptions for population and business growth and how water conservation and efficiency programs affect projected water demand:

Population estimates were linearly extrapolated using Metropolitan Council (MCES) estimates for 2020, 2030, and 2040. The City's per capita demands (daily average and maximum day demands) were determined from the MCES population projections and the City's annual water use data.

E. Resource Sustainability

Monitoring – *Key DNR Benchmark*

Complete Table 8 by inserting information about source water quality and quantity monitoring efforts. The list should include all production wells, observation wells, and source water intakes or reservoirs. Groundwater level data for DNR's statewide network of observation wells are available online through the DNR's Cooperative Groundwater Monitoring (CGM) webpage.

Table 8. Information about source water quality and quantity monitoring

MN Unique Well # or Surface Water ID	Type of monitoring point	Monitoring program	Frequency of monitoring	Monitoring Method
202754 (Well 1)	☒ production well ☐ observation well ☐ source water intake ☐ source water reservoir	☒ routine MDH sampling ☒ routine water utility sampling ☐ other	☐ continuous ☐ hourly ☒ daily ☐ monthly ☐ quarterly ☐ annually	☒ SCADA ☐ grab sampling ☐ steel tape ☐ stream gauge ☒ spectrophotometer
228438 (Well 2)	☒ production well ☐ observation well ☐ source water intake ☐ source water reservoir	☒ routine MDH sampling ☒ routine water utility sampling ☐ other	☐ continuous ☐ hourly ☒ daily ☐ monthly ☐ quarterly ☐ annually	☒ SCADA ☐ grab sampling ☐ steel tape ☐ stream gauge ☒ spectrophotometer
409523 (Well 4)	☒ production well ☐ observation well ☐ source water intake ☐ source water reservoir	☒ routine MDH sampling ☒ routine water utility sampling ☐ other	☐ continuous ☐ hourly ☒ daily ☐ monthly ☐ quarterly ☐ annually	☒ SCADA ☐ grab sampling ☐ steel tape ☐ stream gauge ☒ spectrophotometer

MN Unique Well # or Surface Water ID	Type of monitoring point	Monitoring program	Frequency of monitoring	Monitoring Method
409524 (Well 5)	☒ production well ☐ observation well ☐ source water intake ☐ source water reservoir	☒ routine MDH sampling ☒ routine water utility sampling ☐ other	☐ continuous ☐ hourly ☒ daily ☐ monthly ☐ quarterly ☐ annually	☒ SCADA ☐ grab sampling ☐ steel tape ☐ stream gauge ☒ spectrophotometer
416092 (Well 6)	☒ production well ☐ observation well ☐ source water intake ☐ source water reservoir	☒ routine MDH sampling ☒ routine water utility sampling ☐ other	☐ continuous ☐ hourly ☒ daily ☐ monthly ☐ quarterly ☐ annually	☒ SCADA ☐ grab sampling ☐ steel tape ☐ stream gauge ☒ spectrophotometer
416093 (Well 7)	☒ production well ☐ observation well ☐ source water intake ☐ source water reservoir	☒ routine MDH sampling ☒ routine water utility sampling ☐ other	☐ continuous ☐ hourly ☒ daily ☐ monthly ☐ quarterly ☐ annually	☒ SCADA ☐ grab sampling ☐ steel tape ☐ stream gauge ☒ spectrophotometer
559414 (Well 8)	☐ production well ☐ observation well ☐ source water intake ☐ source water reservoir	☒ routine MDH sampling ☒ routine water utility sampling ☐ other	☐ continuous ☐ hourly ☒ daily ☐ monthly ☐ quarterly ☐ annually	☒ SCADA ☐ grab sampling ☐ steel tape ☐ stream gauge ☒ spectrophotometer

Water Level Data

A water level monitoring plan that includes monitoring locations and a schedule for water level readings must be submitted as **Appendix 2**. If one does not already exist, it needs to be prepared and submitted with the WSP. Ideally, all production and observation wells are monitored at least monthly.

Complete Table 9 to summarize water level data for each well being monitored. Provide the name of the aquifer and a brief description of how much water levels vary over the season (the difference between the highest and lowest water levels measured during the year) and the long-term trends for each well. If water levels are not measured and recorded on a routine basis, then provide the static water level when each well was constructed and the most recent water level measured during the same season the well was constructed. Also include all water level data taken during any well and pump maintenance. Add rows to the table as needed.

Groundwater hydrographs illustrate the historical record of aquifer water levels measured within a well and can indicate water level trends over time. For each well in your system, provide a hydrograph for the life of the well, or for as many years as water levels have been measured. Include the hydrographs in **Appendix 3**. An example of a hydrograph can be found on the DNR's Groundwater Hydrograph webpage. Hydrographs for DNR Observation wells can be found in the CGM discussed above.

Table 9. Water level data

Unique Well Number or Well ID	Aquifer Name	Seasonal Variation (Feet)	Long-term Trend in water level data	Water level measured during well/pumping maintenance
202754 (Well 1)	Franconia-Mt. Simon	Approximately 30	☐ Falling ☒ Stable ☐ Rising	See Appendix 3
228438 (Well 2)	Franconia-Mt. Simon	Approximately 20	☐ Falling ☒ Stable ☐ Rising	See Appendix 3
409523 (Well 4)	Tunnel City-Wonewoc	Approximately 5	☐ Falling ☒ Stable ☐ Rising	See Appendix 3
409524 (Well 5)	Mt. Simon	Approximately 100	☐ Falling ☒ Stable ☐ Rising	See Appendix 3
416092 (Well 6)	Tunnel City-Wonewoc	Approximately 5	☐ Falling ☒ Stable ☐ Rising	See Appendix 3
416093 (Well 7)	Mt. Simon	Approximately 100	☐ Falling ☒ Stable ☐ Rising	See Appendix 3
559414 (Well 8)	Mt. Simon	Approximately 80	☐ Falling ☒ Stable ☐ Rising	See Appendix 3
214489 (MNDHR observation well)	Quaternary Buried Artesian Aquifer	Approximately 3	☐ Falling ☒ Stable ☐ Rising	See Appendix 3

Potential Water Supply Issues & Natural Resource Impacts – *Key DNR & Metropolitan Council Benchmark*

Complete Table 10 by listing the types of natural resources that are or could potentially be impacted by permitted water withdrawals in the future. You do not need to identify every single water resource in your entire community. The goal is to help you triage the most important water resources and/or the water resources that may be impacted by your water supply system – perhaps during a drought or when the population has grown significantly in ten years. This is emerging science, so do the best you can with available data. For identified resources, provide the name of specific resources that may be impacted. Identify what the greatest risks to the resource are and how the risks are being assessed. Identify any resource protection thresholds – formal or informal – that have been established to identify when actions should be taken to mitigate impacts. Provide information about the potential mitigation actions that may be taken, if a resource protection threshold is crossed. Add additional rows to the table as needed. See the glossary at the end of the template for definitions.

Some of this baseline data should have been in your earlier water supply plans or county comprehensive water plans. When filling out this table, think of what are the water supply risks, identify the resources, determine the threshold and then determine what your community will do to mitigate the impacts.

Your DNR area hydrologist is available to assist with this table.

For communities in the seven-county Twin Cities metropolitan area, the Master Water Supply Plan *Appendix 1 (Water Supply Profiles)*, provides information about potential water supply issues and natural resource impacts for your community.

Steps for completing Table 10

1. ***Identify the potential for natural resource impacts/issues within the community***
   First, review available information to identify resources that may be impacted by the operation of your water supply system (such as pumping).
   Potential Sources of Information:
   - County Geologic Atlas
   - Local studies
   - Metropolitan Council System Statement (for metro communities)
   - Metropolitan Council Master Water Supply Plan (for metro communities)

   ACTION: Check the resource type(s) that may be impacted in the column "Resource Type"

2. ***Identify where your water supply system is most likely to impact those resources (and vice versa).***
   Potential Sources of Information:
   - Drinking Water Supply Management Areas
   - Geologic Atlas - Sensitivity
   - If no WHPA or other information exists, consider rivers, lakes, wetlands and significant within 1.5 miles of wells; and calcareous fens and trout streams within 5 miles of wells

   ACTION: Focus the rest of your work in these areas.

3. ***Within focus areas, identify specific features of value to the community***
   You know your community best. What resources are important to pay attention to? It may be useful to check in with your community's planning and zoning staff and others.

   Potential Sources of Information:
   - Park plans
   - Local studies
   - Natural resource inventories
   - Tourist attractions/recreational areas/valued community resource

   ACTION: Identify specific features that the community prioritizes in the "Resource Name" column (for example: North Lake, Long River, Brook Trout Stream, or Green Fen). If, based on a review of available information, no features are likely to be at risk, note "None".

4. ***Identify what impact(s) the resource is at risk for***
   Potential Sources of Information:
   - Wellhead Protection Plan

- Water Appropriation Permit
- County Geologic Atlas
- MDH or PCA reports of the area
- Metropolitan Council System Statement (for metro communities)
- Metropolitan Council Master Water Supply Plan (for metro communities)

ACTION: Check the risk type in the column "Risk". If, based on a review of available information, no risk is identified, note "None anticipated".

5. ***Describe how the risk was assessed***

Potential Sources of Information:

- Local studies
- Monitoring data (community, WMO, DNR, etc.)
- Aquifer testing
- County Geologic Atlas or other hydrogeologic studies
- Regional or state studies, such as DNR's report 'Definitions and Thresholds for Negative Impacts to Surface Waters'
- Well boring logs

ACTION: Identify the method(s) used to identify the risk to the resource in the "Risk Assessed Through" column

6. ***Describe protection threshold/goals***

What is the goal, if any, for protecting these resources? For example, is there a lower limit on acceptable flow in a river or stream? Water quality outside of an accepted range? A lower limit on acceptable aquifer level decline at one or more monitoring wells? Withdrawals that exceed some percent of the total amount available from a source? Or a lower limit on acceptable changes to a protected habitat?

Potential Sources of Information:

- County Comprehensive Water Plans
- Watershed Plans or One Watershed/One Plan
- Groundwater or Aquifer Plans
- Metropolitan Master Plans
- DNR Thresholds study
- Community parks, open space, and natural resource plans

ACTION: Describe resource protection goals in the "Describe Resource Protection Threshold" column or reference an existing plan/document/webpage

7. ***If a goal/threshold should trigger action, describe the plan that will be implemented.***

Identify specific action, mitigation measures or management plan that the water supplier will implement, or refer to a partner's plan that includes actions to be taken.

Potential Sources of Information:

- County Comprehensive Water Plans
- Watershed Plans or One Watershed/One Plan

- Groundwater or Aquifer Plans
- Metropolitan Master Plans
- Studies such as DNR Thresholds study

ACTION: Describe the mitigation measure or management plan in the "Mitigation Measure or Management Plan" column.

8. Describe work to evaluate these risks going forward.

For example, what is the plan to regularly check in to stay current on plans or new data?

Identify specific action that the water supplier will take to identify the creation of or change to goals/thresholds, or refer to a partner's plan that includes actions to be taken.

Potential Sources of Information:

- County Comprehensive Water Plans
- Watershed Plans or One Watershed/One Plan
- Groundwater or Aquifer Plans
- Metropolitan Master Plans
- Studies such as DNR Thresholds study

ACTION: Describe what will be done to evaluate risks going forward, including any changes to goals or protection thresholds in the "Describe how Changes to Goals are monitored" column.

Table 10. Natural resource impacts (*List specific resources in Appendix 12)

Resource Type	Resource Name	Risk	Risk Assessed Through *	Describe Resource Protection Threshold or Goal *	Mitigation Measures or Management Plan	Describe How Thresholds or Goals are Monitored
☒ River or stream	Mississippi River & Elm Creek	☒ None anticipated ☐ Flow/water level decline ☐ Degrading water quality trends ☐ Impacts on endangered, threatened, or special concern species habitat ☐ Other: _____	☐ Geologic atlas or other mapping ☐ Modeling ☐ Modeling ☒ Monitoring water levels ☐ Aquifer testing ☐WRAPS or other watershed report ☐Proximity (<1.5 miles) ☐ Other: _____	☒ Not applicable ☐ Additional data is needed to establish ☐ See report: _____ ☐ No data available ☐ Other: _____	☒Not applicable ☐ Change groundwater pumping ☐ Increase conservation ☐ Other: _____	☒Not applicable ☐ Newly collected data will be analyzed ☐ Regular check-in with these partners: _____ ☐ Other: _____
☐ Calcareous fen	n/a	☒ None anticipated ☐ Flow/water level decline ☐ Degrading water quality trends ☐ Impacts on endangered, threatened, or special concern species habitat ☐ Other: _____	☐ Geologic atlas or other mapping ☐ Modeling ☐ Modeling ☐ Monitoring ☐ Aquifer testing ☐WRAPS or other watershed Report ☐Proximity (<5 miles) ☒ Other: ___n/a___	☒ Not applicable ☐ Additional data is needed to establish ☐ See report: _____ ☐ Other: _____	☒Not applicable ☐ Change groundwater pumping ☐ Increase conservation ☐ Other: _____	☒Not applicable ☐ Newly collected data will be analyzed ☐ Regular check-in with these partners: _____ ☐ Other: _____

Resource Type	Resource Name	Risk	Risk Assessed Through *	Describe Resource Protection Threshold or Goal *	Mitigation Measures or Management Plan	Describe How Thresholds or Goals are Monitored
☒ Lake	Lemans Lake	☒ None anticipated ☐ Flow/water level decline ☐ Degrading water quality trends ☐ Impacts on endangered, threatened, or special concern species habitat ☐ Other: _____	☐ Geologic atlas or other mapping ☐ Modeling ☐ Modeling ☒ Monitoring water levels ☐ Aquifer testing ☐WRAPS or other watershed report ☐Proximity (<1.5 miles) ☐ Other: _____	☒ Not applicable ☐ Additional data is needed to establish ☐ See report: _____ ☐ Other: _____	☒Not applicable ☐ Change groundwater pumping ☐ Increase conservation ☐ Other: _____	☒Not applicable ☐ Newly collected data will be analyzed ☐ Regular check-in with these partners: _____ ☐ Other: _____
☐ Wetland	n/a	☒ None anticipated ☐ Flow/water level decline ☐ Degrading water quality trends ☐ Impacts on endangered, threatened, or special concern species habitat ☐ Other: _____	☐ Geologic atlas or other mapping ☐ Modeling ☐ Modeling ☐ Monitoring ☐ Aquifer testing ☐WRAPS or other watershed report ☐Proximity (<1.5 miles) ☐ Other: _____	☒ Not applicable ☐ Additional data is needed to establish ☐ See report: _____ ☐ Other: _____	☒Not applicable ☐ Change groundwater pumping ☐ Increase conservation ☐ Other: _____	☒Not applicable ☐ Newly collected data will be analyzed ☐ Regular check-in with these partners: _____ ☐ Other: _____

Resource Type	Resource Name	Risk	Risk Assessed Through *	Describe Resource Protection Threshold or Goal *	Mitigation Measures or Management Plan	Describe How Thresholds or Goals are Monitored
☐ Trout stream	n/a	☒ None anticipated ☐ Flow/water level decline ☐ Degrading water quality trends ☐ Impacts on endangered, threatened, or special concern species habitat ☐ Other: _____	☐ Geologic atlas or other mapping ☐ Modeling ☐ Monitoring ☐ Aquifer testing ☐WRAPS or other watershed report ☐Proximity (< 5 miles) ☐ Other: _____	☒ Not applicable ☐ Additional data is needed to establish ☐ See report: _____ ☐ Other: _____	☒Not applicable ☐ Change groundwater pumping ☐ Increase conservation ☐ Other: _____	☒Not applicable ☐ Newly collected data will be analyzed ☐ Regular check-in with these partners: _____ ☐ Other: _____
☒ Aquifer	Tunnel City-Wonewoc, Franconia, Mt. Simon	☒ None anticipated ☐ Flow/water level decline ☐ Degrading water quality trends ☐ Impacts on endangered, threatened, or special concern species habitat ☐ Other: _____	☐ Geologic atlas or other mapping ☐ Modeling ☒ Monitoring ☐ Aquifer testing ☒Proximity (obwell < 5 miles) ☐ Other: _____	☒ Not applicable ☐ Additional data is needed to establish ☐ See report: _____ ☐ Other: _____	☒Not applicable ☐ Change groundwater pumping ☐ Increase conservation ☐ Other: _____	☒Not applicable ☐ Newly collected data will be analyzed ☐ Regular check-in with these partners: _____ ☐ Other: _____

Wellhead Protection (WHP) and Source Water Protection (SWP) Plans

Complete Table 11 to provide status information about WHP and SWP plans.

The emergency procedures in this plan are intended to comply with the contingency plan provisions required in the Minnesota Department of Health's (MDH) Wellhead Protection (WHP) Plan and Surface Water Protection (SWP) Plan.

Table 11. Status of Wellhead Protection and Source Water Protection Plans

Plan Type	Status	Date Adopted	Date for Update
WHP	☐ In Process ☒ Completed ☐ Not Applicable	November 2015	November 2025
SWP	☐ In Process ☐ Completed ☒ Not Applicable	n/a	n/a

WHP – Wellhead Protection Plan **SWP** – Source Water Protection Plan

F. Capital Improvement Plan (CIP)

Please note that any wells that received approval under a ten-year permit, but that were not built, are now expired and must submit a water appropriations permit.

Adequacy of Water Supply System

Complete Table 12 with information about the adequacy of wells and/or intakes, storage facilities, treatment facilities, and distribution systems to sustain current and projected demands. List planned capital improvements for any system components, in chronological order. Communities in the seven-county Twin Cities metropolitan area should also include information about plans through 2040.

The assessment can be the general status by category; it is not necessary to identify every single well, storage facility, treatment facility, lift station, and mile of pipe.

Please attach your latest Capital Improvement Plan as **Appendix 4**.

Table 12. Adequacy of Water Supply System

System Component	Planned action	Anticipated Construction Year	Notes
Wells/Intakes	☐ No action planned - adequate ☒ Repair/replacement ☐ Expansion/addition	2017 (well #5) 2018 (well #1) 2020 (well #8) 2021 (well #4 & well #7) 2023	Well rehabilitation: pumps are pulled, inspected, & repaired Re-roof wellhouse #2
Water Storage Facilities	☐ No action planned - adequate ☒ Repair/replacement ☐ Expansion/addition	2018 2021 2023	Tower #1 painting Tower #2 inspection/repair Clearwell inspection and cleaning

System Component	Planned action	Anticipated Construction Year	Notes
Water Treatment Facilities	☐ No action planned - adequate ☒ Repair/replacement ☐ Expansion/addition	2017 2024	Water Treatment Plant #1 – Replace roof and recycle pumps Water Treatment Plant #2 – Replace roof
Distribution Systems (Pipes, valves, etc.)	☐ No action planned - adequate ☒ Repair/replacement ☐ Expansion/addition	2017 2019	Distribution leak detection Meter reading equipment/meters
Pressure Zones	☐ No action planned - adequate ☒ Repair/replacement ☐ Expansion/addition	2018-2021 and 2023-2024	Pull, inspect, & repair high service pump
SCADA	☐ No action planned - adequate ☒ Repair/replacement ☒ Expansion/addition	Each year of duration of CIP, 2017 to 2026	SCADA modifications

Proposed Future Water Sources

Complete Table 13 to identify new water source installation planned over the next ten years. Add rows to the table as needed.

Table 13. Proposed future installations/sources

Source	Installation Location (approximate)	Resource Name	Proposed Pumping Capacity (gpm)	Planned Installation Year	Planned Partnerships
Groundwater	N/A				
Surface Water	N/A				
Interconnection to another supplier	N/A				

Water Source Alternatives - *Key Metropolitan Council Benchmark*

Do you anticipate the need for alternative water sources in the next 10 years? Yes ☐ No ☒

For metro communities, will you need alternative water sources by the year 2040? Yes ☐ No ☒

If you answered yes for either question, then complete table 14. If no, insert NA.

Complete Table 14 by checking the box next to alternative approaches that your community is considering, including approximate locations (if known), the estimated amount of future demand that could be met through the approach, the estimated timeframe to implement the approach, potential partnerships, and the major benefits and challenges of the approach. Add rows to the table as needed.

For communities in the seven-county Twin Cities metropolitan area, these alternatives should include approaches the community is considering to meet projected 2040 water demand.

Table 14. Alternative water sources

Alternative Source Considered	Source and/or Installation Location (approximate)	Estimated Amount of Future Demand (%)	Timeframe to Implement (YYYY)	Potential Partners	Benefits	Challenges
☐ Groundwater	N/A					
☐ Surface Water	N/A					
☐ Reclaimed stormwater	N/A					
☐ Reclaimed wastewater	N/A					
☐ Interconnection to another supplier	N/A					

PART 2. EMERGENCY PREPAREDNESS PROCEDURES

The emergency preparedness procedures outlined in this plan are intended to comply with the contingency plan provisions required by MDH in the WHP and SWP. Water emergencies can occur as a result of vandalism, sabotage, accidental contamination, mechanical problems, power failings, drought, flooding, and other natural disasters. The purpose of emergency planning is to develop emergency response procedures and to identify actions needed to improve emergency preparedness. In the case of a municipality, these procedures should be in support of, and part of, an all-hazard emergency operations plan. Municipalities that already have written procedures dealing with water emergencies should review the following information and update existing procedures to address these water supply protection measures.

A. Emergency Response Plan

Section 1433(b) of the Safe Drinking Water Act, (Public Law 107-188, Title IV- Drinking Water Security and Safety) requires community water suppliers serving over 3,300 people to prepare an Emergency Response Plan. MDH recommends that Emergency Response Plans are updated annually.

Do you have an Emergency Response Plan? Yes ☒ No ☐

Have you updated the Emergency Response Plan in the last year? Yes ☐ No ☒

When did you last update your Emergency Response Plan? March 2016

Complete Table 15 by inserting the noted information regarding your completed Emergency Response Plan.

Table 15. Emergency Response Plan contact information

Emergency Response Plan Role	Contact Person	Contact Phone Number	Contact Email
Emergency Response Lead	Mike Bramwell	763.923.7190 612.968.2167	mbramwell@ci.champlin.mn.us
Alternate Emergency Response Lead	Bret Heitkamp	763.923.7110	bheitkamp@ci.champlin.mn.us

B. Operational Contingency Plan

All utilities should have a written operational contingency plan that describes measures to be taken for water supply mainline breaks and other common system failures as well as routine maintenance.

Do you have a written operational contingency plan? Yes ☒ No ☐

At a minimum, a water supplier should prepare and maintain an emergency contact list of contractors and suppliers.

C. Emergency Response Procedures

Water suppliers must meet the requirements of MN Rules 4720.5280. Accordingly, the Minnesota Department of Natural Resources (DNR) requires public water suppliers serving more than 1,000 people

to submit Emergency and Conservation Plans. Water emergency and conservation plans that have been approved by the DNR, under provisions of Minnesota Statute 186 and Minnesota Rules, part 6115.0770, will be considered equivalent to an approved WHP contingency plan.

Emergency Telephone List

Prepare and attach a list of emergency contacts, including the MN Duty Officer (1-800-422-0798), as **Appendix 5**. An Emergency Contact List template is available at the MnDNR Water Supply Plans webpage.

The list should include key utility and community personnel, contacts in adjacent water suppliers, and appropriate local, state and federal emergency contacts. Please be sure to verify and update the contacts on the emergency telephone list and date it. Thereafter, update on a regular basis (once a year is recommended). In the case of a municipality, this information should be contained in a notification and warning standard operating procedure maintained by the Emergency Manager for that community. Responsibilities and services for each contact should be defined.

Current Water Sources and Service Area

Quick access to concise and detailed information on water sources, water treatment, and the distribution system may be needed in an emergency. System operation and maintenance records should be maintained in secured central and back-up locations so that the records are accessible for emergency purposes. A detailed map of the system showing the treatment plants, water sources, storage facilities, supply lines, interconnections, and other information that would be useful in an emergency should also be readily available. It is critical that public water supplier representatives and emergency response personnel communicate about the response procedures and be able to easily obtain this kind of information both in electronic and hard copy formats (in case of a power outage).

Do records and maps exist? Yes ☒ No ☐

Can staff access records and maps from a central secured location in the event of an emergency?

Yes ☒ No ☐

Does the appropriate staff know where the materials are located?

Yes ☒ No ☐

Procedure for Augmenting Water Supplies

Complete Tables 16 – 17 by listing all available sources of water that can be used to augment or replace existing sources in an emergency. Add rows to the tables as needed.

In the case of a municipality, this information should be contained in a notification and warning standard operating procedure maintained by the warning point for that community. Municipalities are encouraged to execute cooperative agreements for potential emergency water services and copies should be included in **Appendix 6**. Outstate Communities may consider using nearby high capacity wells (industry, golf course) as emergency water sources.

WSP should include information on any physical or chemical problems that may limit interconnections to other sources of water. Approvals from the MDH are required for interconnections or the reuse of water.

Table 16. Interconnections with other water supply systems to supply water in an emergency

Other Water Supply System Owner	Capacity (GPM & MGD)	Note Any Limitations On Use	List of services, equipment, supplies available to respond
Brooklyn Park (Two 8-inch interconnects and one 12-inch interconnect through the High School)	1,000 gpm each (8-inch) 2,500 gpm (12-inch)	The supplier must approve the use of the supply system at the time of need.	Interconnection
Dayton (8-inch interconnect)	1,000 gpm	The supplier must approve the use of the supply system at the time of need.	Interconnection
Maple Grove (Two 8-inch interconnects)	1,000 gpm each (8-inch)	The supplier must approve the use of the supply system at the time of need.	Interconnection

GPM – Gallons per minute MGD – million gallons per day

Table 17. Utilizing surface water as an alternative source

Surface Water Source Name	Capacity (GPM)	Capacity (MGD)	Treatment Needs	Note Any Limitations On Use
N/A				

If not covered above, describe additional emergency measures for providing water (obtaining bottled water, or steps to obtain National Guard services, etc.)

Champlin would obtain bottled water in the case of a short-term emergency. In the case of a long-term emergency, water would be distributed in bulk from a public facility.

Allocation and Demand Reduction Procedures

Complete Table 18 by adding information about how decisions will be made to allocate water and reduce demand during an emergency. Provide information for each customer category, including its priority ranking, average day demand, and demand reduction potential for each customer category. Modify the customer categories as needed, and add additional lines if necessary.

Water use categories should be prioritized in a way that is consistent with Minnesota Statutes 103G.261 (#1 is highest priority) as follows:

1. Water use for human needs such as cooking, cleaning, drinking, washing and waste disposal; use for on-farm livestock watering; and use for power production that meets contingency requirements.
2. Water use involving consumption of less than 10,000 gallons per day (usually from private wells or surface water intakes)

3. Water use for agricultural irrigation and processing of agricultural products involving consumption of more than 10,000 gallons per day (usually from private high-capacity wells or surface water intakes)
4. Water use for power production above the use provided for in the contingency plan.
5. All other water use involving consumption of more than 10,000 gallons per day.
6. Nonessential uses – car washes, golf courses, etc.

Water used for human needs at hospitals, nursing homes and similar types of facilities should be designated as a high priority to be maintained in an emergency. Lower priority uses will need to address water used for human needs at other types of facilities such as hotels, office buildings, and manufacturing plants. The volume of water and other types of water uses at these facilities must be carefully considered. After reviewing the data, common sense should dictate local allocation priorities to protect domestic requirements over certain types of economic needs. Water use for lawn sprinkling, vehicle washing, golf courses, and recreation are legislatively considered non-essential.

Table 18. Water use priorities

Customer Category	Allocation Priority	Average Daily Demand (GPD)	Short-Term Emergency Demand Reduction Potential (GPD)
Residential	1	1,867,397	*
Commercial	2	173,425	*
Industrial	3	1,090	*
Water Supplier Services	4	101,773	101,773
TOTAL	NA	2,143,685	1,351,400

GPD – Gallons per Day

*The short-term emergency demand reductions for residential, commercial, and industrial users include non-essential water uses and are combined in the total GPD reduction

Tip: Calculating Emergency Demand Reduction Potential

The emergency demand reduction potential for all uses will typically equal the difference between maximum use (summer demand) and base use (winter demand). In extreme emergency situations, lower priority water uses must be restricted or eliminated to protect priority domestic water requirements. Emergency demand reduction potential should be based on average day demands for customer categories within each priority class. Use the tables in Part 3 on water conservation to help you determine strategies.

Complete Table 19 by selecting the triggers and actions during water supply disruption conditions.

Table 19. Emergency demand reduction conditions, triggers and actions (Select all that may apply and describe)

Emergency Triggers	Short-term Actions	Long-term Actions
☒ Contamination ☒ Loss of production ☒ Infrastructure failure ☒ Executive order by Governor ☐ Other: _____	☒ Supply augmentation through interconnection ☒ Adopt (if not already) and enforce a critical water deficiency ordinance to penalize lawn watering, vehicle washing, golf course and park irrigation & other nonessential uses. ☒ Water allocation through emergency action by the city council, city administration, or utility superintendent ☐ Meet with large water users to discuss their contingency plan. ☒ Voluntary reduction measures encouraged by public service announcements, i.e. bill stuffers, fliers, and notices in local newspaper	☒ Supply augmentation through interconnection ☒ Adopt (if not already) and enforce a critical water deficiency ordinance to penalize lawn watering, vehicle washing, golf course and park irrigation & other nonessential uses. ☒ Water allocation through emergency action by the city council, city administration, or utility superintendent ☒ Meet with large water users to discuss their contingency plan.

Notification Procedures

Complete Table 20 by selecting trigger for informing customers regarding conservation requests, water use restrictions, and suspensions; notification frequencies; and partners that may assist in the notification process. Add rows to the table as needed.

Table 20. Plan to inform customers regarding conservation requests, water use restrictions, and suspensions

Notification Trigger(s)	Methods (select all that apply)	Update Frequency	Partners
☒ Short-term demand reduction declared (< 1 year)	☒ Website ☐ Email list serve ☒ Social media (e.g. Twitter, Facebook) ☒ Direct customer mailing, ☒ Press release (TV, radio, newspaper), ☐ Meeting with large water users (> 10% of total city use) ☐ Other: _____	☐ Daily ☐ Weekly ☒ Monthly ☐ Annually	• City Staff • Neighboring communities • Local news outlets
☒ Long-term Ongoing demand reduction declared	☒ Website ☐ Email list serve ☒ Social media (e.g. Twitter, Facebook) ☒ Direct customer mailing, ☒ Press release (TV, radio, newspaper),	☐ Daily ☐ Weekly ☐ Monthly ☒ Annually	• City Staff • Neighboring communities • Local news outlets

Notification Trigger(s)	Methods (select all that apply)	Update Frequency	Partners
	☐ Meeting with large water users (> 10% of total city use) ☐ Other: _____		
☒ Governor's critical water deficiency declared	☒ Website ☐ Email list serve ☒ Social media (e.g. Twitter, Facebook) ☒ Direct customer mailing, ☒ Press release (TV, radio, newspaper), ☐ Meeting with large water users (> 10% of total city use) ☐ Other: _____	☐ Daily ☐ Weekly ☐ Monthly ☐ Annually ☒ As needed	• City Staff • Neighboring communities • Local news outlets

Enforcement

Prior to a water emergency, municipal water suppliers must adopt regulations that restrict water use and outline the enforcement response plan. The enforcement response plan must outline how conditions will be monitored to know when enforcement actions are triggered, what enforcement tools will be used, who will be responsible for enforcement, and what timelines for corrective actions will be expected.

Affected operations, communications, and enforcement staff must then be trained to rapidly implement those provisions during emergency conditions.

Important Note:

Disregard of critical water deficiency orders, even though total appropriation remains less than permitted, is adequate grounds for immediate modification of a public water supply authority's water use permit (2013 MN Statutes 103G.291)

Does the city have a critical water deficiency restriction/official control in place that includes provisions to restrict water use and enforce the restrictions? (This restriction may be an ordinance, rule, regulation, policy under a council directive, or other official control) Yes ☒ No ☐

If yes, attach the official control document to this WSP as **Appendix 7**.

If no, the municipality must adopt such an official control within 6 months of submitting this WSP and submit it to the DNR as an amendment to this WSP.

Irrespective of whether a critical water deficiency control is in place, does the public water supply utility, city manager, mayor, or emergency manager have standing authority to implement water restrictions? Yes ☒ No ☐

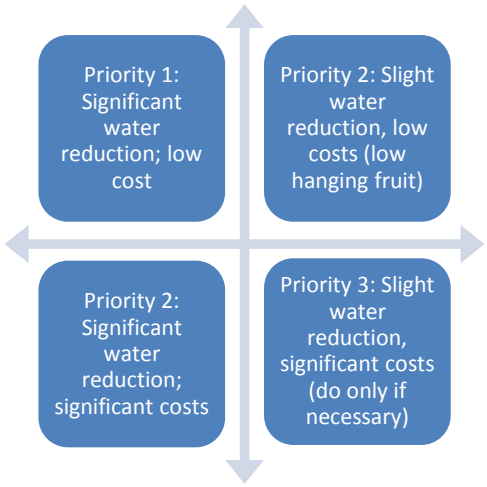
If yes, cite the regulatory authority reference: Sec. 58-168. - Emergency restrictions, Code 1977, § 15-1102

If no, who has authority to implement water use restrictions in an emergency?

N/A

PART 3. WATER CONSERVATION PLAN

Minnesotans have historically benefited from the state's abundant water supplies, reducing the need for conservation. There are however, limits to the available supplies of water and increasing threats to the quality of our drinking water. Causes of water supply limitation may include: population increases, economic trends, uneven statewide availability of groundwater, climatic changes, and degraded water quality. Examples of threats to drinking water quality include: the presence of contaminant plumes from past land use activities, exceedances of water quality standards from natural and human sources, contaminants of emerging concern, and increasing pollutant trends from nonpoint sources.



There are many incentives for conserving water; conservation:

- reduces the potential for pumping-induced transfer of contaminants into the deeper aquifers, which can add treatment costs
- reduces the need for capital projects to expand system capacity
- reduces the likelihood of water use conflicts, like well interference, aquatic habitat loss, and declining lake levels
- conserves energy, because less energy is needed to extract, treat and distribute water (and less energy production also conserves water since water is used to produce energy)
- maintains water supplies that can then be available during times of drought

It is therefore imperative that water suppliers implement water conservation plans. The first step in water conservation is identifying opportunities for behavioral or engineering changes that could be made to reduce water use by conducting a thorough analysis of:

- Water use by customer
- Extraction, treatment, distribution and irrigation system efficiencies
- Industrial processing system efficiencies
- Regulatory and barriers to conservation
- Cultural barriers to conservation
- Water reuse opportunities

Once accurate data is compiled, water suppliers can set achievable goals for reducing water use. A successful water conservation plan follows a logical sequence of events. The plan should address both conservation on the supply side (leak detection and repairs, metering), as well as on the demand side (reductions in usage). Implementation should be conducted in phases, starting with the most obvious and lowest-cost options. In some cases, one of the early steps will be reviewing regulatory constraints to water conservation, such as lawn irrigation requirements. Outside funding and grants may be available for implementation of projects. Engage water system operators and maintenance staff and customers in brainstorming opportunities to reduce water use. Ask the question: "How can I help save water?"

Progress since 2006

Is this your community's first Water Supply Plan? Yes ☐ No ☒

If yes, describe conservation practices that you are already implementing, such as: pricing, system improvements, education, regulation, appliance retrofitting, enforcement, etc.

If no, complete Table 21 to summarize conservation actions taken since the adoption of the 2006 water supply plan.

Table 21. Implementation of previous ten-year Conservation Plan

2006 Plan Commitments	Action Taken?
Change water rates structure to provide conservation pricing: Tiered pricing by customer category is presented in Appendix 9.	☒ Yes ☐ No
Water supply system improvements (e.g. leak repairs, valve replacements, etc.): To accommodate the growing demand for water, the City installed a new water treatment plant in 2011, and continues to regularly improve water supply system infrastructure.	☒ Yes ☐ No
Educational efforts: Summary of educational efforts can be seen in Table 31.	☒ Yes ☐ No
New water conservation ordinances: New water conservation ordinances implemented by the City are summarized in Appendix 10.	☒ Yes ☐ No
Rebate or retrofitting Program (e.g. for toilet, faucets, appliances, showerheads, dish washers, washing machines, irrigation systems, rain barrels, water softeners, etc.	☐ Yes ☒ No
Enforcement: Water-related policy enforcement is summarized in Appendix 10.	☒ Yes ☐ No

What are the results you have seen from the actions in Table 21 and how were results measured?

Since the previous Water Supply Plan completed by the City of Champlin in 2006, the following ordinances were enacted in the City:

In 2009, the '*Sec. 58-50, Discontinuance of Service*' ordinance was added. This ordinance specifies several situations in which the City would have the jurisdiction to shut off water service at a connection. For example, situation a.2. permits the City to shut off water if the resident "refuses or fails to allow city employees access to the premises for the purposes of reading or inspecting a water meter." One way of measuring the results of this specific ordinance situation is to analyze the percent of unmetered/unaccounted water each year, and see if this ordinance has led to a reduction of this percentage. Using the percent of unmetered/unaccounted water summarized in Table 2, the average percent of unmetered/unaccounted water after 2009 is lower than the average before 2009. This ordinance could have potentially contributed to this percent reduction.

In 2007, the '*Sec. 58-169, Irrigation and sprinkling restrictions*' ordinance and the '*Sec. 58-167, Violation and penalty*' ordinance were added. These ordinances establish specific prohibitions on wasting water and an accompanying method of enforcing these prohibitions. This simultaneous passage of a restrictive law and associated enforcement law served as an effective way to reduce the City's annual water usage.

The success of these ordinances can be observed in the total water pumped (MG) trends in Table 2. For example, from 2005 to 2015, the greatest total water pumped, a total of 1,071,000,000 gallons, was in 2007. Following the passage of these ordinances in 2007, the total water pumped during each consecutive year has remained below the 2007 pumping total.

These above ordinances implemented by the City are summarized formally in Appendix 10.

A. Triggers for Allocation and Demand Reduction Actions

Complete table 22 by checking each trigger below, as appropriate, and the actions to be taken at various levels or stages of severity. Add in additional rows to the table as needed.

Table 22. Short and long-term demand reduction conditions, triggers and actions

Objective	Triggers	Actions
Protect surface water flows	☐ Low stream flow conditions ☒ Reports of declining wetland and lake levels ☐ Other: _____	☒ Increase promotion of conservation measures ☐ Other: consider water reuse/stormwater irrigation projects
Short-term demand reduction (less than 1 year	☒ Extremely high seasonal water demand (more than double winter demand) ☒ Loss of treatment capacity ☒ Lack of water in storage ☒ State drought plan ☒ Well interference ☐ Other: _____	☒ Adopt (if not already) and enforce the critical water deficiency ordinance to restrict or prohibit lawn watering, vehicle washing, golf course and park irrigation & other nonessential uses. ☒ Supply augmentation through interconnection ☒ Water allocation through interconnection ☐ Meet with large water users to discuss user's contingency plan.
Long-term demand reduction (>1 year)	☒ Per capita demand increasing ☐ Total demand increase (higher population or more industry). Water level in well(s) below elevation of _____ ☒ Emergency declared	☐ Develop a critical water deficiency ordinance that is or can be quickly adopted to penalize lawn watering, vehicle washing, golf course and park irrigation & other nonessential uses. ☒ Enact a water waste ordinance that targets overwatering (causing water to flow off the landscape into streets, parking lots, or similar), watering impervious surfaces (streets, driveways or other hardscape areas), and negligence of known leaks, breaks, or malfunctions. ☐ Meet with large water users to discuss user's contingency plan. ☒ Enhanced monitoring and reporting: audits, meters, billing, etc.
Governor's "Critical Water Deficiency Order" declared	☒ Declaration as needed	☒ Follow actions per governor's direction

B. Conservation Objectives and Strategies – *Key benchmark for DNR*

This section establishes water conservation objectives and strategies for eight major areas of water use.

Objective 1: Reduce Unaccounted (Non-Revenue) Water loss to Less than 10%

The Minnesota Rural Water Association, the Metropolitan Council and the Department of Natural Resources recommend that all water uses be metered. Metering can help identify high use locations and times, along with leaks within buildings that have multiple meters.

It is difficult to quantify specific unmetered water use such as that associated with firefighting and system flushing or system leaks. Typically, water suppliers subtract metered water use from total water pumped to calculate unaccounted or non-revenue water loss.

Is your five-year average (2005-2014) unaccounted Water Use in Table 2 higher than 10%?

Yes ☐ No ☒

What is your leak detection monitoring schedule? (e.g. Monitor 1/3rd of the city lines per year)

Leak detection surveys are scheduled on an as-needed and budgeted basis. The upcoming leak detection survey is budgeted to occur in 2019.

Water Audits - are designed to help quantify and track water losses associated with water distribution systems and identify areas for improved efficiency and cost recovery. The American Water Works Association (AWWA) has a recommended water audit methodology which is presented in AWWA's M36 Manual of Water Supply Practices: Water Audits and Loss Control Programs. AWWA also provides a free spreadsheet-based water audit tool that water suppliers can use to conduct their own water audits. This free water audit tool can be found on AWWA's Water Loss Control webpage. Another resource for water audit and water loss control information is Minnesota Rural Water Association.

What is the date of your most recent water audit? 2014

Frequency of water audits: ☐ **yearly** ☒ **as needed**
Leak detection and survey: ☐ **every year** ☐ **every other year** ☒ **periodic as needed**
Year last leak detection survey completed: 2011. Another leak detection survey is budgeted for 2019.

If Table 2 shows annual water losses over 10% or an increasing trend over time, describe what actions will be taken to reach the <10% loss objective and within what timeframe

Metering -AWWA recommends that every water supplier install meters to account for all water taken into its system, along with all water distributed from its system at each customer's point of service. An effective metering program relies upon periodic performance testing, repair, maintenance or replacement of all meters. Drinking Water Revolving Loan Funds are available for purchase of new meters when new plants are built. AWWA also recommends that water suppliers conduct regular water audits to account for unmetered unbilled consumption, metered unbilled consumption and source

water and customer metering inaccuracies. Some cities install separate meters for interior and exterior water use, but some research suggests that this may not result in water conservation.

Complete Table 23 by adding the requested information regarding the number, types, testing and maintenance of customer meters.

Table 23. Information about customer meters

Customer Category	Number of Customers	Number of Metered Connections	Number of Automated Meter Readers	Meter testing intervals (years)	Average age/meter replacement schedule (years)
Residential	7,377	7,377	7,377	As needed	2002/2019
Commercial	191	191	191	As needed	2002/2019
Industrial	3	3	3	As needed	2002/2019
Water Supplier Services	50	50	50	As needed	2002/2019
TOTALS	7,621	7,621	7,621	NA	NA

For unmetered systems, describe any plans to install meters or replace current meters with advanced technology meters. Provide an estimate of the cost to implement the plan and the projected water savings from implementing the plan.

All water meters are connected to the City's automated reading system.

Table 24. Water source meters

	Number of Meters	Meter testing schedule (years)	Number of Automated Meter Readers	Average age/meter replacement schedule (years
Water source (wells/intakes)	7	As needed	7	2012/2019
Treatment plant	2	As needed	2	2012/2019

Objective 2: Achieve Less than 75 Residential Gallons per Capita Demand (GPCD)

The 2002 average residential per capita demand in the Twin Cities Metropolitan area was 75 gallons per capita per day.

Is your average 2010-2015 residential per capita water demand in Table 2 more than 75? Yes ☒ No ☐

What was your 2010 – 2015 five-year average residential per capita water demand?
88 gallons/person/day

Describe the water use trend over that timeframe:

Between 2010 and 2015, the City's average annual residential per capita water demand has consistently been higher than 75 GPCD. The residential per capita demand has seen fluctuations throughout the last five years, but has been generally decreasing, with a residential per capita demand remaining below 90 GPCD each year after

2013. It is anticipated that, with continued and newly implemented water conservation strategies described in this plan, the City's residential per capita water demand will continue to decrease.

Complete Table 25 by checking which strategies you will use to continue reducing residential per capita demand and project a likely timeframe for completing each checked strategy (Select all that apply and add rows for additional strategies):

Table 25. Strategies and timeframe to reduce residential per capita demand

Strategy to reduce residential per capita demand	Timeframe for completing work
☒ Revise city ordinances/codes to encourage or require water efficient landscaping.	Ongoing
☒ Revise city ordinance/codes to permit water reuse options, especially for non-potable purposes like irrigation, groundwater recharge, and industrial use. Check with plumbing authority to see if internal buildings reuse is permitted	Annually
☒ Revise ordinances to limit irrigation. Describe the restricted irrigation plan:	3-6 years following adoption of this plan
☐ Revise outdoor irrigation installations codes to require high efficiency systems (e.g. those with soil moisture sensors or programmable watering areas) in new installations or system replacements.	
☒ Make water system infrastructure improvements	Ongoing
☐ Offer free or reduced cost water use audits for residential customers.	
☐ Implement a notification system to inform customers when water availability conditions change.	
☒ Provide rebates or incentives for installing water efficient appliances and/or fixtures indoors (e.g., low flow toilets, high efficiency dish washers and washing machines, showerhead and faucet aerators, water softeners, etc.)	1-3 years following adoption of this plan
☒ Provide rebates or incentives to reduce outdoor water use (e.g., turf replacement/reduction, rain gardens, rain barrels, smart irrigation, outdoor water use meters, etc.)	1-3 years following adoption of this plan
☐ Identify supplemental Water Resources	
☒ Conduct audience-appropriate water conservation education and outreach.	Ongoing
☐ Describe other plans	

Objective 3: Achieve at least 1.5% annual reduction in non-residential per capita water use

(For each of the next ten years, or a 15% total reduction over ten years.) This includes commercial, institutional, industrial and agricultural water users.

Complete Table 26 by checking which strategies you will used to continue reducing non-residential customer use demand and project a likely timeframe for completing each checked strategy (add rows for additional strategies).

Where possible, substitute recycled water used in one process for reuse in another. (For example, spent rinse water can often be reused in a cooling tower.) Keep in mind the true cost of water is the amount

on the water bill PLUS the expenses to heat, cool, treat, pump, and dispose of/discharge the water. Don't just calculate the initial investment. Many conservation retrofits that appear to be prohibitively expensive are actually very cost-effective when amortized over the life of the equipment. Often reducing water use also saves electrical and other utility costs. Note: as of 2015, water reuse, and is not allowed by the state plumbing code, M.R. 4715 (a variance is needed). However, several state agencies are addressing this issue.

Table 26. Strategies and timeframe to reduce institutional, commercial industrial, and agricultural and non-revenue use demand

Strategy to reduce total business, industry, agricultural demand	Timeframe for completing work
☒ Conduct a facility water use audit for both indoor and outdoor use, including system components	Annually
☒ Install enhanced meters capable of automated readings to detect spikes in consumption	Ongoing
☐ Compare facility water use to related industry benchmarks, if available (e.g., meat processing, dairy, fruit and vegetable, beverage, textiles, paper/pulp, metals, technology, petroleum refining etc.)	
☒ Install water conservation fixtures and appliances or change processes to conserve water	Ongoing
☒ Repair leaking system components (e.g., pipes, valves)	Ongoing
☒ Investigate the reuse of reclaimed water (e.g., stormwater, wastewater effluent, process wastewater, etc.)	Annually
☒ Reduce outdoor water use (e.g., turf replacement/reduction, rain gardens, rain barrels, smart irrigation, outdoor water use meters, etc.)	Ongoing
☒ Train employees how to conserve water	Ongoing
☐ Implement a notification system to inform non-residential customers when water availability conditions change.	
☐ Nonpotable rainwater catchment systems intended to supply uses such as water closets, urinals, trap primers for floor drains and floor sinks, industrial processes, water features, vehicle washing facilities, cooling tower makeup, and similar uses shall be approved by the commissioner. Plumbing code 4714.1702, Published October 31, 2016	
☐ Describe other plans:	

Objective 4: Achieve a Decreasing Trend in Total Per Capita Demand

Include as **Appendix 8** one graph showing total per capita water demand for each customer category (i.e., residential, institutional, commercial, industrial) from 2005-2014 and add the calculated/estimated linear trend for the next 10 years.

Describe the trend for each customer category; explain the reason(s) for the trends, and where trends are increasing.

Since 2005, the per capita demand trend for commercial, industrial and water supplier services has remained generally constant. This is likely due to these customer categories remaining generally the same size since 2005.

Since 2005, the per capita residential demand trend has seen some fluctuations from year to year, but has seen a general decrease. This is likely due to installation of low flow fixtures/appliances that result in reduced water waste, and for growing public awareness of water conservation initiatives. It is anticipated that the per capita residential demand in the future will continue to be less than 90 GPCD.

Objective 5: Reduce Ratio of Maximum day (peak day) to the Average Day Demand to Less Than 2.6

Is the ratio of average 2005-2014 maximum day demand to average 2005-2014 average day demand reported in Table 2 more than 2.6? Yes ☐ No ☒

Calculate a ten-year average (2005 – 2014) of the ratio of maximum day demand to average day demand: 2.5

The position of the DNR has been that a peak day/average day ratio that is above 2.6 for in summer indicates that the water being used for irrigation by the residents in a community is too large and that efforts should be made to reduce the peak day use by the community.

It should be noted that by reducing the peak day use, communities can also reduce the amount of infrastructure that is required to meet the peak day use. This infrastructure includes new wells, new water towers which can be costly items.

Objective 6: Implement Demand Reduction Measures

Water Conservation Program

Municipal water suppliers serving over 1,000 people are required to adopt demand reduction measures that include a conservation rate structure, or a uniform rate structure with a conservation program that achieves demand reduction. These measures must achieve demand reduction in ways that reduce water demand, water losses, peak water demands, and nonessential water uses. These measures must be approved before a community may request well construction approval from the Department of Health or before requesting an increase in water appropriations permit volume (Minnesota Statutes, section 103G.291, subd. 3 and 4). Rates should be adjusted on a regular basis to ensure that revenue of the system is adequate under reduced demand scenarios. If a municipal water supplier intends to use a Uniform Rate Structure, a community-wide Water Conservation Program that will achieve demand reduction must be provided.

Current Water Rates

Include a copy of the actual rate structure in **Appendix 9** or list current water rates including base/service fees and volume charges below.

Volume included in base rate or service charge: _1,000__ gallons or ____ cubic feet ___ other

Frequency of billing: ☒ Monthly ☐ Bimonthly ☐ Quarterly ☐ Other: _____

Water Rate Evaluation Frequency: ☒ every year ☐ every ___ years ☐ no schedule

Date of last rate change: ___1-1-17_____

Table 27. Rate structures for each customer category (Select all that apply and add additional rows as needed)

Customer Category	Conservation Billing Strategies in Use *	Conservation Neutral Billing Strategies in Use **	Non-Conserving Billing Strategies in Use ***
Residential	☒ Monthly billing ☒ Increasing block rates (volume tiered rates) ☐ Seasonal rates ☐ Time of use rates ☒ Water bills reported in gallons ☐ Individualized goal rates ☐ Excess use rates ☐ Drought surcharge ☐ Use water bill to provide comparisons ☐ Service charge not based on water volume ☐ Other (describe)	☐ Uniform ☒ Odd/even day watering	☐ Service charge based on water volume ☐ Declining block ☐ Flat ☐ Other (describe)
Commercial/ Industrial/ Institutional	☒ Monthly billing ☒ Increasing block rates (volume tiered rates) ☐ Seasonal rates ☐ Time of use rates ☒ Water bills reported in gallons ☐ Individualized goal rates ☐ Excess use rates ☐ Drought surcharge ☐ Use water bill to provide comparisons ☐ Service charge not based on water volume ☐ Other (describe)	☐ Uniform	☐ Service charge based on water volume ☐ Declining block ☐ Flat ☐ Other (describe)
☐ Other			

*** Rate Structures components that may promote water conservation:**

- **Monthly billing:** is encouraged to help people see their water usage so they can consider changing behavior.
- **Increasing block rates (also known as a tiered residential rate structure):** Typically, these have at least three tiers: should have at least three tiers.
    - The first tier is for the winter average water use.
    - The second tier is the year-round average use, which is lower than typical summer use. This rate should be set to cover the full cost of service.
    - The third tier should be above the average annual use and should be priced high enough to encourage conservation, as should any higher tiers. For this to be effective, the difference in block rates should be significant.
- **Seasonal rate:** higher rates in summer to reduce peak demands
- **Time of Use rates:** lower rates for off peak water use

- **Bill water use in gallons:** this allows customers to compare their use to average rates
- **Individualized goal rates:** typically used for industry, business or other large water users to promote water conservation if they keep within agreed upon goals. **Excess Use rates**: if water use goes above an agreed upon amount this higher rate is charged
- **Drought surcharge:** an extra fee is charged for guaranteed water use during drought
- **Use water bill to provide comparisons**: simple graphics comparing individual use over time or compare individual use to others.
- **Service charge or base fee that does not include a water volume** – a base charge or fee to cover universal city expenses that are not customer dependent and/or to provide minimal water at a lower rate (e.g., an amount less than the average residential per capita demand for the water supplier for the last 5 years)
- **Emergency rates** -A community may have a separate conservation rate that only goes into effect when the community or governor declares a drought emergency. These higher rates can help to protect the city budgets during times of significantly less water usage.

****Conservation Neutral****

- **Uniform rate**: rate per unit used is the same regardless of the volume used
- **Odd/even day watering** –This approach reduces peak demand on a daily basis for system operation, but it does not reduce overall water use.

*** Non-Conserving ***

- **Service charge or base fee with water volume:** an amount of water larger than the average residential per capita demand for the water supplier for the last 5 years
- **Declining block rate:** the rate per unit used decreases as water use increases.
- **Flat rate:** one fee regardless of how much water is used (usually unmetered).

Provide justification for any conservation neutral or non-conserving rate structures. If intending to adopt a conservation rate structure, include the timeframe to do so:

The City has implemented an odd/even watering restriction to reduce peak day demands during months of high water usage.

Objective 7: Additional strategies to Reduce Water Use and Support Wellhead Protection Planning

Development and redevelopment projects can provide additional water conservation opportunities, such as the actions listed below. If a Uniform Rate Structure is in place, the water supplier must provide a Water Conservation Program that includes at <u>least two</u> of the actions listed below. Check those actions that you intent to implement within the next 10 years.

Table 28. Additional strategies to Reduce Water Use & Support Wellhead Protection

☐	Participate in the GreenStep Cities Program, including implementation of at least one of the 20 "Best Practices" for water
☐	Prepare a master plan for smart growth (compact urban growth that avoids sprawl)
☐	Prepare a comprehensive open space plan (areas for parks, green spaces, natural areas)
☐	Adopt a water use restriction ordinance (lawn irrigation, car washing, pools, etc.)
☐	Adopt an outdoor lawn irrigation ordinance
☒	Adopt a private well ordinance (private wells in a city must comply with water restrictions)
☐	Implement a stormwater management program

☐	Adopt non-zoning wetlands ordinance (can further protect wetlands beyond state/federal laws- for vernal pools, buffer areas, restrictions on filling or alterations)
☐	Adopt a water offset program (primarily for new development or expansion)
☒	Implement a water conservation outreach program
☐	Hire a water conservation coordinator (part-time)
☒	Implement a rebate program for water efficient appliances, fixtures, or outdoor water management
☐	Other

Objective 8: Tracking Success: How will you track or measure success through the next ten years?

The City will continue to collect data on customer category water usage (residential, commercial, industrial, agricultural, & WSS), to track the effectiveness of these conservation initiatives. Also, the City will continue to regularly record water levels in production wells, to monitor groundwater resource stability.

Tip: The process to monitor demand reduction and/or a rate structure includes:

a) The DNR Hydrologist will call or visit the community the first 1-3 years after the water supply plan is completed.
b) They will discuss what activities the community is doing to conserve water and if they feel their actions are successful. The Water Supply Plan, Part 3 tables and responses will guide the discussion. For example, they will discuss efforts to reduce unaccounted for water loss if that is a problem, or go through Tables 33, 34 and 35 to discuss new initiatives.
c) The city representative and the hydrologist will discuss total per capita water use, residential per capita water use, and business/industry use. They will note trends.
d) They will also discuss options for improvement and/or collect case studies of success stories to share with other communities. One option may be to change the rate structure, but there are many other paths to successful water conservation.
e) If appropriate, they will cooperatively develop a simple work plan for the next few years, targeting a couple areas where the city might focus efforts.

C. Regulation

Complete Table 29 by selecting which regulations are used to reduce demand and improve water efficiencies. Add additional rows as needed.

Copies of adopted regulations or proposed restrictions or should be included in **Appendix 10** (a list with hyperlinks is acceptable).

Table 29. Regulations for short-term reductions in demand and long-term improvements in water efficiencies

Regulations Utilized	When is it applied (in effect)?
☐ Rainfall sensors required on landscape irrigation systems	☐ Ongoing ☐ Seasonal ☐ Only during declared Emergencies
☐ Water efficient plumbing fixtures required	☐ New development ☐ Replacement ☐ Rebate Programs

Regulations Utilized	When is it applied (in effect)?
☒ Critical/Emergency Water Deficiency ordinance	☒ Only during declared Emergencies
☒ Watering restriction requirements (time of day, allowable days, etc.)	☒ Odd/even ☐ 2 days/week ☐ Only during declared Emergencies
☒ Water waste prohibited (for example, having a fine for irrigators spraying on the street)	☒ Ongoing ☐ Seasonal ☐ Only during declared Emergencies
☐ Limitations on turf areas (requiring lots to have 10% - 25% of the space in natural areas)	☐ New development ☐ Shoreland/zoning ☐ Other
☐ Soil preparation requirement s (after construction, requiring topsoil to be applied to promote good root growth)	☐ New Development ☐ Construction Projects ☐ Other
☐ Tree ratios (requiring a certain number of trees per square foot of lawn)	☐ New development ☐ Shoreland/zoning ☐ Other
☐ Permit to fill swimming pool and/or requiring pools to be covered (to prevent evaporation)	☐ Ongoing ☐ Seasonal ☐ Only during declared Emergencies
☐ Ordinances that permit stormwater irrigation, reuse of water, or other alternative water use (Note: be sure to check current plumbing codes for updates)	☐ Describe

D. Retrofitting Programs

Education and incentive programs aimed at replacing inefficient plumbing fixtures and appliances can help reduce per capita water use, as well as energy costs. It is recommended that municipal water suppliers develop a long-term plan to retrofit public buildings with water efficient plumbing fixtures and appliances. Some water suppliers have developed partnerships with organizations having similar conservation goals, such as electric or gas suppliers, to develop cooperative rebate and retrofit programs.

A study by the AWWA Research Foundation (Residential End Uses of Water, 1999) found that the average indoor water use for a non-conserving home is 69.3 gallons per capita per day (gpcd). The average indoor water use in a conserving home is 45.2 gpcd and most of the decrease in water use is related to water efficient plumbing fixtures and appliances that can reduce water, sewer and energy costs. In Minnesota, certain electric and gas providers are required (Minnesota Statute 216B.241) to fund programs that will conserve energy resources and some utilities have distributed water efficient showerheads to customers to help reduce energy demands required to supply hot water.

Retrofitting Programs

Complete Table 30 by checking which water uses are targeted, the outreach methods used, the measures used to identify success, and any participating partners.

Table 30. Retrofitting programs (Select all that apply)

Water Use Targets	Outreach Methods	Partners
☐ Low flush toilets, ☐ Toilet leak tablets, ☐ Low flow showerheads, ☐ Faucet aerators;	☐ Education about ☐ Free distribution of ☐ Rebate for ☐ Other	☐ Gas company ☐ Electric company ☐ Watershed organization
☐ Water conserving washing machines, ☐ Dish washers, ☐ Water softeners;	☐ Education about ☐ Free distribution of ☐ Rebate for ☐ Other	☐ Gas company ☐ Electric company ☐ Watershed organization
☒ Rain gardens, ☐ Rain barrels, ☒ Native/drought tolerant landscaping, etc.	☒ Education about ☐ Free distribution of ☐ Rebate for ☒ Grant program through Metro Blooms	☐ Gas company ☐ Electric company ☐ Watershed organization ☒ Champlin Environmental Resources Commission

Briefly discuss measures of success from the above table (e.g. number of items distributed, dollar value of rebates, gallons of water conserved, etc.):

In 2016, the Champlin Environmental Resources Commission distributed $2,100 to five community members to fund in the development and maintenance of rain gardens throughout Champlin.

E. Education and Information Programs

Customer education should take place in three different circumstances. First, customers should be provided information on how to conserve water and improve water use efficiencies. Second, information should be provided at appropriate times to address peak demands. Third, emergency notices and educational materials about how to reduce water use should be available for quick distribution during an emergency.

Proposed Education Programs

Complete Table 31 by selecting which methods are used to provide water conservation and information, including the frequency of program components. Select all that apply and add additional lines as needed.

Table 31. Current and Proposed Education Programs

Education Methods	General summary of topics	#/Year	Frequency
Billing inserts or tips printed on the actual bill			☐ Ongoing ☐ Seasonal ☐ Only during declared emergencies
Consumer Confidence Reports	Champlin Water Quality Report, published on City website	1/year	☒ Ongoing ☐ Seasonal ☐ Only during declared emergencies

Education Methods	General summary of topics	#/Year	Frequency
Press releases to traditional local news outlets (e.g., newspapers, radio and TV)			☐ Ongoing ☐ Seasonal ☐ Only during declared emergencies
Social media distribution (e.g., emails, Facebook, Twitter)			☐ Ongoing ☐ Seasonal ☐ Only during declared emergencies
Paid advertisements (e.g., billboards, print media, TV, radio, web sites, etc.)			☐ Ongoing ☐ Seasonal ☐ Only during declared emergencies
Presentations to community groups			☐ Ongoing ☐ Seasonal ☐ Only during declared emergencies
Staff training	General awareness among staff about the City's goals for conservation	Continuous	☒ Ongoing ☐ Seasonal ☐ Only during declared emergencies
Facility tours	As requested	Continuous	☒ Ongoing ☐ Seasonal ☐ Only during declared emergencies
Displays and exhibits			☐ Ongoing ☐ Seasonal ☐ Only during declared emergencies
Marketing rebate programs (e.g., indoor fixtures & appliances and outdoor practices)			☐ Ongoing ☐ Seasonal ☐ Only during declared emergencies
Community news letters	Champlin Chronicle	5/year	☒ Ongoing ☐ Seasonal ☐ Only during declared emergencies
Direct mailings (water audit/retrofit kits, showerheads, brochures)			☐ Ongoing ☐ Seasonal ☐ Only during declared emergencies
Information kiosk at utility and public buildings			☐ Ongoing ☐ Seasonal ☐ Only during declared emergencies

Education Methods	General summary of topics	#/Year	Frequency
Public service announcements			☐ Ongoing ☐ Seasonal ☐ Only during declared emergencies
Cable TV Programs			☐ Ongoing ☐ Seasonal ☐ Only during declared emergencies
Demonstration projects (landscaping or plumbing)			☐ Ongoing ☐ Seasonal ☐ Only during declared emergencies
K-12 education programs (Project Wet, Drinking Water Institute, presentations)			☐ Ongoing ☐ Seasonal ☐ Only during declared emergencies
Community events (children's water festivals, environmental fairs)	The City's Environmental Resource Commission (ERC) helps promote natural resource conservation by providing volunteering & educational opportunities for the city residents. The ERC has focused heavily on water quality protection education by organizing activities and providing documents on water conservation strategies through the City of Champlin website.	Several (varies) times per year	☒ Ongoing ☐ Seasonal ☐ Only during declared emergencies
Community education classes			☐ Ongoing ☐ Seasonal ☐ Only during declared emergencies
Water week promotions			☐ Ongoing ☐ Seasonal ☐ Only during declared emergencies
City website : http://ci.champlin.mn.us/	Includes ordinances, consumer confidence reports, projects, events, and tips regarding water usage	Continuous	☒ Ongoing ☐ Seasonal ☐ Only during declared emergencies
Targeted efforts (large volume users, users with large increases)			☐ Ongoing ☐ Seasonal ☐ Only during declared emergencies
Notices of ordinances			☐ Ongoing ☐ Seasonal ☐ Only during declared emergencies

Education Methods	General summary of topics	#/Year	Frequency
Emergency conservation notices			☐ Ongoing ☐ Seasonal ☐ Only during declared emergencies
Other:			☐ Ongoing ☐ Seasonal ☐ Only during declared emergencies

Briefly discuss what future education and information activities your community is considering in the future:

The City will continue the education methods listed above, and plans to launch educational programs that incorporate water-efficient fixture & appliance rebates.

PART 4. ITEMS FOR METROPOLITAN AREA COMMUNITIES

Minnesota Statute 473.859 requires WSPs to be completed for all local units of government in the seven-county Metropolitan Area as part of the local comprehensive planning process.

Much of the information in Parts 1-3 addresses water demand for the next 10 years. However, additional information is needed to address water demand through 2040, which will make the WSP consistent with the Metropolitan Land Use Planning Act, upon which the local comprehensive plans are based.

This Part 4 provides guidance to complete the WSP in a way that addresses plans for water supply through 2040.

A. Water Demand Projections through 2040

Complete Table 7 in Part 1D by filling in information about long-term water demand projections through 2040. Total Community Population projections should be consistent with the community's system statement, which can be found on the Metropolitan Council's website and which was sent to the community in September 2015.

Projected Average Day, Maximum Day, and Annual Water Demands may either be calculated using the method outlined in *Appendix 2* of the *2015 Master Water Supply Plan* or by a method developed by the individual water supplier.

B. Potential Water Supply Issues

Complete Table 10 in Part 1E by providing information about the potential water supply issues in your community, including those that might occur due to 2040 projected water use.

The Master Water Supply Plan provides information about potential issues for your community in *Appendix 1 (Water Supply Profiles).* This resource may be useful in completing Table 10.

You may document results of local work done to evaluate impact of planned uses by attaching a feasibility assessment or providing a citation and link to where the plan is available electronically.

C. Proposed Alternative Approaches to Meet Extended Water Demand Projections

Complete Table 12 in Part 1F with information about potential water supply infrastructure impacts (such as replacements, expansions or additions to wells/intakes, water storage and treatment capacity, distribution systems, and emergency interconnections) of extended plans for development and redevelopment, in 10-year increments through 2040. It may be useful to refer to information in the community's local Land Use Plan, if available.

Complete Table 14 in Part 1F by checking each approach your community is considering to meet future demand. For each approach your community is considering, provide information about the amount of

future water demand to be met using that approach, the timeframe to implement the approach, potential partners, and current understanding of the key benefits and challenges of the approach.

As challenges are being discussed, consider the need for: evaluation of geologic conditions (mapping, aquifer tests, modeling), identification of areas where domestic wells could be impacted, measurement and analysis of water levels & pumping rates, triggers & associated actions to protect water levels, etc.

D. Value-Added Water Supply Planning Efforts (Optional)

The following information is not required to be completed as part of the local water supply plan, but completing this can help strengthen source water protection throughout the region and help Metropolitan Council and partners in the region to better support local efforts.

Source Water Protection Strategies

Does a Drinking Water Supply Management Area for a neighboring public water supplier overlap your community? Yes ☒ No ☐

If you answered no, skip this section. If you answered yes, please complete Table 32 with information about new water demand or land use planning-related local controls that are being considered to provide additional protection in this area.

The information provided in Table 32 below is directly from the City of Champlin's 2015 Wellhead Protection Plan.

Table 32. Local controls and schedule to protect Drinking Water Supply Management Areas

Local Control	Schedule to Implement	Potential Partners
☒ Comprehensive planning that guides development in vulnerable drinking water supply management areas The Drinking Water Supply Management Area (DWSMA) delineated in the Wellhead Protection (WHP) Plan Part 1 (Part 1) area delineation study extends into the City of Dayton and into the Mississippi River in Coon Rapids. The City will continue to work with neighboring communities to ensure proper management of the portion of the DWSMA that extends into their respective municipality.	It is anticipated that most local issues may be adequately addressed through these existing processes and adopting of best management practices.	City of Dayton and Coon Rapids.

Technical assistance

From your community's perspective, what are the most important topics for the Metropolitan Council to address, guided by the region's Metropolitan Area Water Supply Advisory Committee and Technical Advisory Committee, as part of its ongoing water supply planning role?

☒ Coordination of state, regional and local water supply planning roles
☐ Regional water use goals
☒ Water use reporting standards
☒ Regional and sub-regional partnership opportunities

☐ Identifying and prioritizing data gaps and input for regional and sub-regional analyses
☐ Others: _____

GLOSSARY

Agricultural/Irrigation Water Use - Water used for crop and non-crop irrigation, livestock watering, chemigation, golf course irrigation, landscape and athletic field irrigation.

Average Daily Demand - The total water pumped during the year divided by 365 days.

Calcareous Fen - Calcareous fens are rare and distinctive wetlands dependent on a constant supply of cold groundwater. Because they are dependent on groundwater and are one of the rarest natural communities in the United States, they are a protected resource in MN. Approximately 200 have been located in Minnesota. They may not be filled, drained or otherwise degraded.

Commercial/Institutional Water Use - Water used by motels, hotels, restaurants, office buildings, commercial facilities and institutions (both civilian and military). Consider maintaining separate institutional water use records for emergency planning and allocation purposes. Water used by multi-family dwellings, apartment buildings, senior housing complexes, and mobile home parks should be reported as Residential Water Use.

Commercial/Institutional/Industrial (C/I/I) Water Sold - The sum of water delivered for commercial/institutional or industrial purposes.

Conservation Rate Structure - A rate structure that encourages conservation and may include increasing block rates, seasonal rates, time of use rates, individualized goal rates, or excess use rates. If a conservation rate is applied to multifamily dwellings, the rate structure must consider each residential unit as an individual user. A community may have a separate conservation rate that only goes into effect when the community or governor declares a drought emergency. These higher rates can help to protect the city budgets during times of significantly less water usage.

Date of Maximum Daily Demand - The date of the maximum (highest) water demand. Typically this is a day in July or August.

Declining Rate Structure - Under a declining block rate structure, a consumer pays less per additional unit of water as usage increases. This rate structure does not promote water conservation.

Distribution System - Water distribution systems consist of an interconnected series of pipes, valves, storage facilities (water tanks, water towers, reservoirs), water purification facilities, pumping stations, flushing hydrants, and components that convey drinking water and meeting fire protection needs for cities, homes, schools, hospitals, businesses, industries and other facilities.

Flat Rate Structure - Flat fee rates do not vary by customer characteristics or water usage. This rate structure does not promote water conservation.

Industrial Water Use - Water used for thermonuclear power (electric utility generation) and other industrial use such as steel, chemical and allied products, paper and allied products, mining, and petroleum refining.

Low Flow Fixtures/Appliances - Plumbing fixtures and appliances that significantly reduce the amount of water released per use are labeled “low flow”. These fixtures and appliances use just enough water to be effective, saving excess, clean drinking water that usually goes down the drain.

Maximum Daily Demand - The maximum (highest) amount of water used in one day.

Metered Residential Connections - The number of residential connections to the water system that have meters. For multifamily dwellings, report each residential unit as an individual user.

Percent Unmetered/Unaccounted For - Unaccounted for water use is the volume of water withdrawn from all sources minus the volume of water delivered. This value represents water “lost” by miscalculated water use due to inaccurate meters, water lost through leaks, or water that is used but unmetered or otherwise undocumented. Water used for public services such as hydrant flushing, ice skating rinks, and public swimming pools should be reported under the category “Water Supplier Services”.

Population Served - The number of people who are served by the community's public water supply system. This includes the number of people in the community who are connected to the public water supply system, as well as people in neighboring communities who use water supplied by the community's public water supply system. It should not include residents in the community who have private wells or get their water from neighboring water supply.

Residential Connections - The total number of residential connections to the water system. For multifamily dwellings, report each residential unit as an individual user.

Residential Per Capita Demand - The total residential water delivered during the year divided by the population served divided by 365 days.

Residential Water Use - Water used for normal household purposes such as drinking, food preparation, bathing, washing clothes and dishes, flushing toilets, and watering lawns and gardens. Should include all water delivered to single family private residences, multi-family dwellings, apartment buildings, senior housing complexes, mobile home parks, etc.

Smart Meter - Smart meters can be used by municipalities or by individual homeowners. Smart metering generally indicates the presence of one or more of the following:

- Smart irrigation water meters are controllers that look at factors such as weather, soil, slope, etc. and adjust watering time up or down based on data. Smart controllers in a typical summer will reduce water use by 30%-50%. Just changing the spray nozzle to new efficient models can reduce water use by 40%.
- Smart Meters on customer premises that measure consumption during specific time periods and communicate it to the utility, often on a daily basis.
- A communication channel that permits the utility, at a minimum, to obtain meter reads on demand, to ascertain whether water has recently been flowing through the meter and onto the premises, and to issue commands to the meter to perform specific tasks such as disconnecting or restricting water flow.

Total Connections - The number of connections to the public water supply system.

Total Per Capita Demand - The total amount of water withdrawn from all water supply sources during the year divided by the population served divided by 365 days.

Total Water Pumped - The cumulative amount of water withdrawn from all water supply sources during the year.

Total Water Delivered - The sum of residential, commercial, industrial, institutional, water supplier services, wholesale and other water delivered.

Ultimate (Full Build-Out) - Time period representing the community's estimated total amount and location of potential development, or when the community is fully built out at the final planned density.

Unaccounted (Non-revenue) Loss - See definitions for "percent unmetered/unaccounted for loss".

Uniform Rate Structure - A uniform rate structure charges the same price-per-unit for water usage beyond the fixed customer charge, which covers some fixed costs. The rate sends a price signal to the customer because the water bill will vary by usage. Uniform rates by class charge the same price-per-unit for all customers within a customer class (e.g. residential or non-residential). This price structure is generally considered less effective in encouraging water conservation.

Water Supplier Services - Water used for public services such as hydrant flushing, ice skating rinks, public swimming pools, city park irrigation, back-flushing at water treatment facilities, and/or other uses.

Water Used for Nonessential Purposes - Water used for lawn irrigation, golf course and park irrigation, car washes, ornamental fountains, and other non-essential uses.

Wholesale Deliveries - The amount of water delivered in bulk to other public water suppliers.

Acronyms and Initialisms

AWWA – American Water Works Association
C/I/I – Commercial/Institutional/Industrial
CIP – Capital Improvement Plan
GIS – Geographic Information System
GPCD – Gallons per capita per day
GWMA – Groundwater Management Area – North and East Metro, Straight River, Bonanza,
MDH – Minnesota Department of Health
MGD – Million gallons per day
MG – Million gallons
MGL – Maximum Contaminant Level
MnTAP – Minnesota Technical Assistance Program (University of Minnesota)
MPARS – MN/DNR Permitting and Reporting System (new electronic permitting system)
MRWA – Minnesota Rural Waters Association
SWP – Source Water Protection
WHP – Wellhead Protection

APPENDICES TO BE SUBMITTED BY THE WATER SUPPLIER

Appendix 1: Well records and maintenance summaries
Go to Part 1C for information on what to include in appendix

Appendix 2: Water level monitoring plan
Go to Part 1E for information on what to include in appendix

Appendix 3: Water level graphs for each water supply well
Go to Part 1E for information on what to include in appendix

Appendix 4: Capital Improvement Plan
Go to Part 1E for information on what to include in appendix

Appendix 5: Emergency Telephone List
Go to Part 2C for information on what to include in appendix

Appendix 6: Cooperative Agreements for Emergency Services
Go to Part 2C for information on what to include in appendix

Appendix 7: Municipal Critical Water Deficiency Ordinance
Go to Part 2C for information on what to include in appendix

Appendix 8: Graph of Ten Years of Annual Per Capita Water Demand for Each Customer Category
Go to Objective 4 in Part 3B for information on what to include in appendix

Appendix 9: Water Rate Structure
Go to Objective 6 in Part 3B for information on what to include in appendix

Appendix 10: Ordinances or Regulations Related to Water Use
Go to Objective 7 in Part 3B for information on what to include in appendix

Appendix 11: Implementation Checklist
Provide a table that summarizes all the actions that the public water supplier is doing, or proposes to do, with estimated implementation dates.

Appendix 12: Sources of Information for Table 10
Provide links or references to the information used to complete Table 10. If the file size is reasonable, provide source information as attachments to the plan.

Appendix 1:
Well records and maintenance summaries

Minnesota Unique Well Number

160019

County Hennepin
Quad Anoka
Quad ID 120B

MINNESOTA DEPARTMENT OF HEALTH

WELL AND BORING REPORT

Minnesota Statutes Chapter 1031

Entry Date 08/24/1991
Update Date 08/18/2014
Received Date

Well Name	Township	Range	Dir	Section	Subsection
CHAMPLIN 3	120	21	W	31	CBCCCB

Elevation 905 ft. **Elev. Method** 7.5 minute topographic map (+/- 5 feet)

Address

Contact 11955 CHAMPLIN DR CHAMPLIN MN 55316
Well CHAMPLIN MN 55316

Stratigraphy Information

Geological Material	From	To (ft.)	Color	Hardness
CLAY	0	14	BROWN	
SAND & GRAVEL	14	125	VARIED	
SHALE & SANDSTONE	125	135		
SHALE & SANDSTONE	135	155		
SHALE & SANDSTONE	155	160		
SHALE & SANDSTONE	160	190		
SHALE & SANDSTONE	190	275		
SHALE & SANDSTONE	275	280	VARIED	
SHALE & SANDSTONE	280	352	VARIED	
SHALE & SANDSTONE	352	405	VARIED	
SHALE & SANDSTONE	405	415	VARIED	
SHALE & SANDSTONE	415	470	BLU/GRN	
SHALE	470	479	RED	
SHALE	479	485	RED	
SHALE & SANDSTONE	485	602	WHT/GRN	

Remarks

CHAMPLIN NO.3 NO MP.
GAMMA LOGGED 2-18-1998. M.G.S. NO. 1360 SAMPLES ARE POOR.

Well Depth 602 ft. **Depth Completed** 602 ft. **Date Well Completed** 07/18/1978

Drill Method Non-specified Rotary **Drill Fluid**

Use community supply(municipal) **Status** Active

Well Hydrofractured? Yes ☐ No ☐ **From** **To**

Casing Type Single casing **Joint** Welded
Drive Shoe? Yes ☒ No ☐ **Above/Below** 1 ft.

Casing Diameter	Weight	Hole Diameter
12 in. To 201. ft.	53.6 lbs./ft.	12 in. To 602 ft.

Open Hole From 201 ft. To 602 ft.

Screen? ☐ **Type** **Make**

Static Water Level
36 ft. land surface Measure 05/08/1987

Pumping Level (below land surface)
64 ft. 10 hrs. Pumping at 350 g.p.m.

Wellhead Completion
Pitless adapter manufacturer Model
☐ Casing Protection ☒ 12 in. above grade
☐ At-grade (Environmental Wells and Borings ONLY)

Grouting Information Well Grouted? ☒ Yes ☐ No ☐ Not Specified

Material	Amount	From	To
bentonite		ft.	ft.

Nearest Known Source of Contamination
feet Direction Type
Well disinfected upon completion? ☒ Yes ☐ No

Pump ☒ Not Installed Date Installed
Manufacturer's name
Model Number HP Volt
Length of drop pipe ft Capacity g.p. Typ

Abandoned
Does property have any not in use and not sealed well(s)? ☐ Yes ☐ No

Variance
Was a variance granted from the MDH for this well? ☐ Yes ☐ No

Miscellaneous
First Bedrock Jordan Sandstone Aquifer multiple
Last Strat Mt.Simon Sandstone Depth to Bedrock 135 ft
Located by Minnesota Department of Health
Locate Method GPS Differentially Corrected
System UTM - NAD83, Zone 15, Meters X 468452 Y 5000347
Unique Number Verification Information from Input Date 08/31/1995

Angled Drill Hole

Well Contractor
Renner E.H. & Sons 02015
Licensee Business Lic. or Reg. No. Name of Driller

Minnesota Unique Well Number

202754

County Hennepin
Quad Anoka
Quad ID 120B

MINNESOTA DEPARTMENT OF HEALTH

WELL AND BORING REPORT

Minnesota Statutes Chapter 1031

Entry Date 08/24/1991
Update Date 08/18/2014
Received Date

Well Name	Township	Range	Dir	Section	Subsection
CHAMPLIN 1	120	22	W	13	CCDAAC

Elevation 858 ft. **Elev. Method** 7.5 minute topographic map (+/- 5 feet)

Address

Contact 11955 CHAMPLING DR CHAMPLIN MN 55316
Well CHAMPLIN MN 55316

Stratigraphy Information

Geological Material	From	To (ft.)	Color	Hardness
SILT	0	105	BLUE	
SILT & FINE SAND	105	115	BLUE	
FINE SAND & GRAVEL	115	125	BROWN	
FINE SAND	125	145	BROWN	
SAND & ROCKS	145	151	BROWN	
SAND & GRAVEL	151	157	BROWN	
CLAY & GRAVEL	157	170	BROWN	
SAND & GRAVEL	170	190	BROWN	
SHALE	190	191	LT. BLU	
SANDSTONE & SHALE	191	211	PINK	
SHALE	211	216	RED	
SHALE	216	223	BLUE	HARD
SHALE	223	225	GREEN	HARD
SHALE	225	255	GREEN	
FRANCONIA	255	288	LIGHT	SOFT
SHALE	288	325	GRAY	
SHALE	325	362	GREEN	
SHALE	362	365	RED	
SHALE	365	383	DK. GRN	
SANDSTONE	383	393	LIGHT	SOFT
SHALE	393	395	RED	SOFT
DRESBACH	395	428	LIGHT	
DRESBACH	428	440	LIGHT	
SHALE & SANDSTONE	440	448	LIGHT	
SHALE	448	468		
SHALE	468	510		
SANDSTONE	510	625		
SANDSTONE & SHALE	625	635		
HINKLEY SANDSTONE	635	700		

Remarks

CHAMPLIN MUNI #1 NO MP
M.G.S. NO.935

Well Depth 700 ft. **Depth Completed** 700 ft. **Date Well Completed** 03/29/1974

Drill Method Cable Tool **Drill Fluid**

Use community supply(municipal) **Status** Active

Well Hydrofractured? Yes ☐ No ☐ **From** **To**

Casing Type Step down **Joint**
Drive Shoe? Yes ☐ No ☐ **Above/Below** 1 ft.

Casing Diameter	Weight	Hole Diameter
24 in. To 177 ft.	lbs./ft.	16 in. To 700 ft.
16 in. To 225 ft.	lbs./ft.	
20 in. To 63 ft.	lbs./ft.	

Open Hole From 225 ft. To 700 ft.

Screen? ☐ **Type** **Make**

Static Water Level
13.5 ft. land surface Measure 03/29/1974

Pumping Level (below land surface)
90.7 ft. 40 hrs. Pumping at 2400 g.p.m.

Wellhead Completion
Pitless adapter manufacturer Model
☐ Casing Protection ☒ 12 in. above grade
☐ At-grade (Environmental Wells and Borings ONLY)

Grouting Information Well Grouted? ☐ Yes ☐ No ☐ Not Specified

Nearest Known Source of Contamination
feet Direction Type
Well disinfected upon completion? ☐ Yes ☐ No

Pump ☒ Not Installed Date Installed
Manufacturer's name
Model Number HP Volt
Length of drop pipe ft Capacity g.p. Typ

Abandoned
Does property have any not in use and not sealed well(s)? ☐ Yes ☐ No

Variance
Was a variance granted from the MDH for this well? ☐ Yes ☐ No

Miscellaneous
First Bedrock St.Lawrence Formation Aquifer Tunnel City-Mt.
Last Strat Mid.Prot. sed. undivided Depth to Bedrock 190 ft
Located by Minnesota Department of Health
Locate Method GPS SA On (averaged)
System UTM - NAD83, Zone 15, Meters X 467202 Y 5004878
Unique Number Verification Information from Input Date 06/16/1999

Angled Drill Hole

Well Contractor
Renner E.H. & Sons 02015 LEDBETTER, B.
Licensee Business Lic. or Reg. No. Name of Driller

Minnesota Well Index Report | **202754** | Printed on 08/11/2017 HE-01205-15

Minnesota Unique Well Number

214489

County Hennepin
Quad Coon
Quad ID 120A

MINNESOTA DEPARTMENT OF HEALTH

WELL AND BORING REPORT

Minnesota Statutes Chapter 1031

Entry Date 08/24/1991
Update Date 09/10/2015
Received Date

Well Name	Township	Range	Dir	Section	Subsection
TESSMAN,	119	21	W	4	BBBAAA

Elevation 876 ft. **Elev. Method** 7.5 minute topographic map (+/- 5 feet)

Address

C/W 109TH AV N BROOKLYN PARK MN

Stratigraphy Information

Geological Material	From	To (ft.)	Color	Hardness
BLACK DIRT	0	3		
SAND	3	15		
WATER SAND	15	27		
SAND & GRAVEL CLAY	27	58		
WATER SAND &	58	80		

Remarks

SAME AS UNIQUE NO.462967. NOW WEST WELL FOR CHAMPLIN PARK H.S.

Well Depth 80 ft. **Depth Completed** 80 ft. **Date Well Completed** 12/17/1965

Drill Method **Drill Fluid**

Use irrigation **Status** Active

Well Hydrofractured? Yes ☐ No ☐ **From** **To**

Casing Type Single casing **Joint**

Drive Shoe? Yes ☐ No ☐ **Above/Below**

Casing Diameter	Weight
12 in. To 62 ft.	lbs./ft.

Open Hole From ft. To ft.

Screen? ☒ **Type** **Make**

Diameter	Slot/Gauze	Length	Set	
12 in.	35	18 ft.	62 ft.	80 ft.

Static Water Level

15 ft. land surface Measure 12/17/1965

Pumping Level (below land surface)

35 ft. 4 hrs. Pumping at 500 g.p.m.

Wellhead Completion

Pitless adapter manufacturer Model

☐ Casing Protection ☒ 12 in. above grade

☐ At-grade (Environmental Wells and Borings ONLY)

Grouting Information Well Grouted? ☐ Yes ☒ No ☐ Not Specified

Nearest Known Source of Contamination

feet Direction Type

Well disinfected upon completion? ☐ Yes ☐ No

Pump ☐ Not Installed Date Installed 00/00/1965

Manufacturer's name

Model Number HP 100 Volt

Length of drop pipe ft Capacity g.p. Typ Turbine

Abandoned

Does property have any not in use and not sealed well(s)? ☐ Yes ☐ No

Variance

Was a variance granted from the MDH for this well? ☐ Yes ☐ No

Miscellaneous

First Bedrock Aquifer Quat. buried

Last Strat sand +larger Depth to Bedrock ft

Located by Minnesota Geological Survey

Locate Method Digitized - scale 1:24,000 or larger (Digitizing Table)

System UTM - NAD83, Zone 15, Meters X 471838 Y 4999855

Unique Number Verification Other, note in Input Date 01/01/1990

Angled Drill Hole

Well Contractor

Mc Alpine Brothers 86270

Licensee Business Lic. or Reg. No. Name of Driller

Minnesota Unique Well Number

228438

County Hennepin
Quad Coon
Quad ID 120A

MINNESOTA DEPARTMENT OF HEALTH
WELL AND BORING REPORT
Minnesota Statutes Chapter 1031

Entry Date 08/24/1991
Update Date 09/01/2015
Received Date

Well Name	Township	Range	Dir	Section	Subsection
CHAMPLIN 2	120	21	W	28	DBDBBD

Elevation 849 ft. **Elev. Method** 7.5 minute topographic map (+/- 5 feet)

Address

Contact 11955 CHAMPLIN DR CHAMPLIN MN 55316
Well CHAMPLIN MN 55316

Stratigraphy Information

Geological Material	From	To (ft.)	Color	Hardness
GLACIAL DRIFT	0	99		
SOFT SANDSTONE	99	145		
GREEN SHALE &	145	198		
SANDSTONE (FINE)	198	265		
SHALE WITH SOME	265	330	RED/GRN	
SANDSTONE	330	385		
SHALE-STICKY & SOME	385	500	GRN/RED	
SANDSTONE	500	620		HARD

Remarks
CHAMPLIN MUNI #2 NO MP.

Well Depth 620 ft. **Depth Completed** 620 ft. **Date Well Completed** 04/15/1974

Drill Method Cable Tool **Drill Fluid**

Use community supply(municipal) **Status** Active

Well Hydrofractured? Yes ☐ No ☐ **From** **To**

Casing Type Step down **Joint**
Drive Shoe? Yes ☐ No ☐ **Above/Below** 0 ft.

Casing Diameter	Weight
16 in. To 195 ft.	lbs./ft.
24 in. To 160 ft.	lbs./ft.

Open Hole From 195 ft. To 620 ft.

Screen? ☐ **Type** **Make**

Static Water Level
11 ft. land surface Measure 03/11/1974

Pumping Level (below land surface)
0 ft. hrs. Pumping at 1000 g.p.m.

Wellhead Completion
Pitless adapter manufacturer Model
☐ Casing Protection ☒ 12 in. above grade
☐ At-grade (Environmental Wells and Borings ONLY)

Grouting Information Well Grouted? ☐ Yes ☐ No ☐ Not Specified

Nearest Known Source of Contamination
feet Direction Type
Well disinfected upon completion? ☐ Yes ☐ No

Pump ☐ Not Installed Date Installed
Manufacturer's name
Model Number HP 0 Volt
Length of drop pipe ft Capacity g.p. Typ

Abandoned
Does property have any not in use and not sealed well(s)? ☐ Yes ☐ No

Variance
Was a variance granted from the MDH for this well? ☐ Yes ☐ No

Miscellaneous
First Bedrock Jordan Sandstone Aquifer Tunnel City-Mt.
Last Strat Mt.Simon Sandstone Depth to Bedrock 99 ft
Located by Minnesota Department of Health
Locate Method GPS SA On (averaged)
System UTM - NAD83, Zone 15, Meters X 472091 Y 5001785
Unique Number Verification Information from Input Date 06/16/1999

Angled Drill Hole

Well Contractor
Tri-state Well Co. 27118 BERTHIAUME, F
Licensee Business Lic. or Reg. No. Name of Driller

Minnesota Unique Well Number

409523

County Hennepin
Quad Anoka
Quad ID 120B

MINNESOTA DEPARTMENT OF HEALTH

WELL AND BORING REPORT

Minnesota Statutes Chapter 1031

Entry Date 08/24/1991
Update Date 08/18/2014
Received Date

Well Name	Township	Range	Dir	Section	Subsection
CHAMPLIN 4	120	21	W	30	CABCCB

Elevation 885 ft. **Elev. Method** 7.5 minute topographic map (+/- 5 feet)

Address

Contact 11955 CHAMPLIN DR CHAMPLIN MN 55316
Well CHAMPLIN MN 55316

Stratigraphy Information

Geological Material	From	To (ft.)	Color	Hardness
CLAY	0	5	BROWN	
SAND	5	35	BROWN	
GRAVEL	35	90	BROWN	
SANDSTONE	90	95	YELLOW	
SANDSTONE	95	110	YELLOW	
SHALE & SANDSTONE	110	120	GREEN	
SHALE & SANDSTONE	120	170	TAN	
SHALE & SANDSTONE	170	220	GREEN	
SHALE	220	225	RED	
SHALE & SANDSTONE	225	235	GREEN	
SANDSTONE & SHALE	235	244	LT. BLU	
SANDSTONE & SHALE	244	270	LT. BLU	
SANDSTONE & SHALE	270	291	GRAY	
SANDSTONE & SHALE	291	315	GRAY	
SHALE	315	335	TAN	
SHALE	335	337	RED	
SANDSTONE & SHALE	337	374	TAN	
SANDSTONE & SHALE	374	415	TAN	
SANDSTONE	415	490	TAN	
SANDSTONE	490	495	RED	
SANDSTONE	495	505	TAN	

Remarks

WELL RECONSTRUCTED BY KEYS WELL CO. IN 1997.
LINED WITH 16 IN. CASING TO 185 FT. AND NOW 291 FT. DEEP.
AQUIFERS ARE FRANCONIA AND IRNTON-GALESVILL FORMATIONS.
GAMMA LOGGED 8-5-1983. M.G.S. NO. 2064.

Well Depth 505 ft. **Depth Completed** 291 ft. **Date Well Completed** 08/28/1983

Drill Method Multiple methods used **Drill Fluid**

Use community supply(municipal) **Status** Active

Well Hydrofractured? Yes ☐ No ☐ **From** **To**

Casing Type Single casing **Joint**
Drive Shoe? Yes ☐ No ☐ **Above/Below** 2 ft.

Casing Diameter			Weight		Hole Diameter		
16	in. To	185 ft.	62.5	lbs./ft.	29 in. To	170 ft.	
30	in. To	153 ft.	118.	lbs./ft.	24 in. To	185 ft.	
					20 in. To	505 ft.	

Open Hole From 185 ft. To 291 ft.

Screen? ☐ **Type** **Make**

Static Water Level
39 ft. land surface Measure 06/23/1987

Pumping Level (below land surface)
77.3 ft. hrs. Pumping at 500 g.p.m.

Wellhead Completion
Pitless adapter manufacturer MONITOR Model 16
☐ Casing Protection ☒ 12 in. above grade
☐ At-grade (Environmental Wells and Borings ONLY)

Grouting Information Well Grouted? ☒ Yes ☐ No ☐ Not Specified

Material	Amount		From	To
neat cement	7.7	Cubic yards	0 ft.	185 ft.

Nearest Known Source of Contamination
feet Direction Type
Well disinfected upon completion? ☒ Yes ☐ No

Pump ☐ Not Installed Date Installed 04/00/1998
Manufacturer's name LAYNE
Model Number 10RKALT HP 40 Volt 460
Length of drop pipe 102 ft Capacity 500 g.p. Typ Submersible

Abandoned
Does property have any not in use and not sealed well(s)? ☐ Yes ☒ No

Variance
Was a variance granted from the MDH for this well? ☐ Yes ☒ No

Miscellaneous
First Bedrock Tunnel City Group Aquifer Tunnel City-
Last Strat Fond du Lac Formation Depth to Bedrock 95 ft
Located by Minnesota Department of Health
Locate Method GPS SA On (averaged)
System UTM - NAD83, Zone 15, Meters X 468858 Y 5002172
Unique Number Verification Information from Input Date 06/16/1999

Angled Drill Hole

Well Contractor
Renner E.H. & Sons 02015 LEDBETER, B.
Licensee Business Lic. or Reg. No. Name of Driller

Minnesota Well Index Report | **409523** | Printed on 08/11/2017
HE-01205-15

Minnesota Unique Well Number

409524

County Hennepin
Quad Anoka
Quad ID 120B

MINNESOTA DEPARTMENT OF HEALTH

WELL AND BORING REPORT

Minnesota Statutes Chapter 1031

Entry Date 08/24/1991
Update Date 08/18/2014
Received Date

Well Name	Township	Range	Dir	Section	Subsection
CHAMPLIN 5	120	21	W	30	CABCBD

Elevation 883 ft. **Elev. Method** 7.5 minute topographic map (+/- 5 feet)

Address

Well 12001 169 HY CHAMPLIN MN 55316
Contact 11955 CHAMPLIN DR CHAMPLIN MN 55316

Stratigraphy Information

Geological Material	From	To (ft.)	Color	Hardness
CLAY	0	23	YELLOW	
FINE SAND	23	28	LIGHT	
SAND & GRAVEL	28	42	BROWN	
SANDY CLAY &	42	92	BROWN	
MUDDY SAND &	92	102	BROWN	
SAND & GRAVEL	102	110	BROWN	
SANDSTONE	110	112	GREEN	
SANDSTONE &	112	117	TAN	
SANDSTONE & SAND	117	122	TAN	
SANDSTONE & SHALE	122	220	GREEN	
SANDSTONE & SHALE	220	244	RED/GRN	
SANDSTONE & SHALE	244	290	RED/GRN	
SANDSTONE & SHALE	290	360	RED/GRN	
SHALE & SOME	360	365	LT. BLU	
SANDSTONE & SOME	365	512	GRAY	
SANDSTONE	512	522	RED	
FOND DU LAC	522	550	RED/BRN	

Remarks

CHAMPLIN MUNI #5 NO MP.
M.G.S. NO.2066. GAMMA & ELECTRIC LOGGED 10-5-1983.

Well Depth 550 ft. **Depth Completed** 550 ft. **Date Well Completed** 01/06/1984

Drill Method Multiple methods used **Drill Fluid**

Use community supply(municipal) **Status** Active

Well Hydrofractured? Yes ☐ No ☐ **From** **To**

Casing Type Step down **Joint**
Drive Shoe? Yes ☐ No ☐ **Above/Below** 1 ft.

Casing Diameter			Weight	
14	in. To	381 ft.	63.6	lbs./ft.
20	in. To	122 ft.	78	lbs./ft.

Open Hole From 381 ft. To 550 ft.

Screen? ☐ **Type** **Make**

Static Water Level
54 ft. land surface Measure 11/20/1987

Pumping Level (below land surface)
80 ft. 21 hrs. Pumping at 1100 g.p.m.

Wellhead Completion
Pitless adapter manufacturer Model
☐ Casing Protection ☒ 12 in. above grade
☐ At-grade (Environmental Wells and Borings ONLY)

Grouting Information Well Grouted? ☒ Yes ☐ No ☐ Not Specified

Material	Amount	From	To
neat cement		0 ft.	381 ft.

Nearest Known Source of Contamination
feet Direction Type
Well disinfected upon completion? ☒ Yes ☐ No

Pump ☒ Not Installed Date Installed
Manufacturer's name
Model Number HP Volt
Length of drop pipe ft Capacity g.p. Typ

Abandoned
Does property have any not in use and not sealed well(s)? ☐ Yes ☐ No

Variance
Was a variance granted from the MDH for this well? ☐ Yes ☐ No

Miscellaneous
First Bedrock Tunnel City Group Aquifer Mt.Simon
Last Strat Fond du Lac Formation Depth to Bedrock 110 ft
Located by Minnesota Department of Health
Locate Method GPS SA On (averaged)
System UTM - NAD83, Zone 15, Meters X 468858 Y 5002159
Unique Number Verification Information from Input Date 06/16/1999

Angled Drill Hole

Well Contractor
Renner E.H. & Sons 02015 LEDBETTER, B.
Licensee Business Lic. or Reg. No. Name of Driller

Minnesota Unique Well Number

416092

County Hennepin
Quad Anoka
Quad ID 120B

MINNESOTA DEPARTMENT OF HEALTH

WELL AND BORING REPORT

Minnesota Statutes Chapter 1031

Entry Date 08/24/1991
Update Date 02/19/2016
Received Date

Well Name	Township	Range	Dir	Section	Subsection
CHAMPLIN 6	120	21	W	30	CADBDD

Elevation 878 ft. **Elev. Method** 7.5 minute topographic map (+/- 5 feet)

Address

Well 12000 CAVEL AV CHAMPLIN MN 55316
Contact 11955 CHAMPLIN DR CHAMPLIN MN 55316

Stratigraphy Information

Geological Material	From	To (ft.)	Color	Hardness
CLAY	0	20	BROWN	
SAND CLAY	20	40	BROWN	
SANDSTONE	40	60	BROWN	
SAND FINE & STONES	60	120	BROWN	
GRAVEL	120	122	GRAY	
SHALE	122	123	GREEN	
SANDSTONE	123	135	BROWN	
SANDSTONE	135	160	GREEN	
SANDSTONE	160	180	LIGHT	
SANDSTONE	180	200	BROWN	
SHALEY SANDSTONE	200	210	LIGHT	
SANDSTONE	210	220	TAN	
SANDSTONE	220	281	GREEN	
SANDSTONE	281	282	GREEN	
SHALEY SANDSTONE	282	297	LIGHT	
SHALE	297	301	GRAY	

Remarks

CHAMPLIN MUNI #6 NO MP
M.G.S. NO. 2616. GAMMA LOGGED 1-12-1987.

Well Depth 301 ft. **Depth Completed** 301 ft. **Date Well Completed** 03/09/1987

Drill Method Cable Tool **Drill Fluid**

Use community supply(municipal) **Status** Active

Well Hydrofractured? Yes ☐ No ☐ **From** **To**

Casing Type Step down **Joint** Welded
Drive Shoe? Yes ☒ No ☐ **Above/Below** 1 ft.

Casing Diameter **Weight**
14 in. To 189. ft. 54.5 lbs./ft.
20 in. To 131. ft. 78.6 lbs./ft.

Open Hole From 189 ft. To 301 ft.

Screen? ☐ **Type** **Make**

Static Water Level
25 ft. land surface Measure 03/09/1987

Pumping Level (below land surface)
74 ft. 3.5 hrs. Pumping at 500 g.p.m.

Wellhead Completion
Pitless adapter manufacturer Model
☐ Casing Protection ☒ 12 in. above grade
☐ At-grade (Environmental Wells and Borings ONLY)

Grouting Information Well Grouted? ☒ Yes ☐ No ☐ Not Specified

Material	Amount	From	To
neat cement	235. Sacks	0 ft.	189.3 ft.

Nearest Known Source of Contamination
feet Direction Type
Well disinfected upon completion? ☒ Yes ☐ No

Pump ☐ Not Installed Date Installed
Manufacturer's name
Model Number HP Volt
Length of drop pipe ft Capacity g.p. Typ Submersible

Abandoned
Does property have any not in use and not sealed well(s)? ☐ Yes ☐ No

Variance
Was a variance granted from the MDH for this well? ☐ Yes ☐ No

Miscellaneous
First Bedrock Tunnel City Group Aquifer Tunnel City-
Last Strat Wonewoc Sandstone Depth to Bedrock 122 ft
Located by Minnesota Department of Health
Locate Method GPS SA On (averaged)
System UTM - NAD83, Zone 15, Meters X 469139 Y 5002021
Unique Number Verification Information from Input Date 06/16/1999

Angled Drill Hole

Well Contractor
Renner E.H. Well 71015 SIGAFOOS, G.
Licensee Business Lic. or Reg. No. Name of Driller

Minnesota Unique Well Number

416093

County Hennepin
Quad Anoka
Quad ID 120B

MINNESOTA DEPARTMENT OF HEALTH

WELL AND BORING REPORT

Minnesota Statutes Chapter 1031

Entry Date 08/24/1991
Update Date 08/18/2014
Received Date

Well Name	Township	Range	Dir	Section	Subsection
CHAMPLIN 7	120	21	W	30	CADBDD

Elevation 876 ft. **Elev. Method** 7.5 minute topographic map (+/- 5 feet)

Address

Well 12001 CAVELL AV N CHAMPLIN MN 55316

Contact 11955 CHAMPLIN DR CHAMPLIN MN 55316

Stratigraphy Information

Geological Material	From	To (ft.)	Color	Hardness
CLAY	0	20	YELLOW	
SAND	20	60	BROWN	
MUDDY SAND &	60	80	BROWN	
SAND & GRAVEL	80	114	BROWN	
SANDSTONE	114	250	GREEN	
SHALE WITH TAN	250	269	GREEN	
SHALE WITH TAN	269	280	GREEN	
GRAY SHALE &	280	295	GRAY	
SANDSTONE	295	300	WHITE	
SHALE & SANDSTONE	300	308	GRAY	
SHALE & SANDSTONE	308	391	GRAY	
SHALE & SANDSTONE	391	450	GRAY	
SANDSTONE	450	513	GRAY	

Remarks

CHAMPLIN MUNI #7 NO MP

M.G.S. NO. 2591. GAMMA & ELECTRIC LOGGED 12-1-1986.

Well Depth 513 ft. **Depth Completed** 513 ft. **Date Well Completed** 04/09/1987

Drill Method Cable Tool **Drill Fluid**

Use community supply(municipal) **Status** Active

Well Hydrofractured? Yes ☐ No ☐ **From** **To**

Casing Type Step down **Joint**

Drive Shoe? Yes ☐ No ☐ **Above/Below** 1 ft.

Casing Diameter		Weight	
14 in. To	428. ft.	54.5	lbs./ft.
20 in. To	120. ft.	78.6	lbs./ft.

Open Hole From 429 ft. To 513 ft.

Screen? ☐ **Type** **Make**

Static Water Level

27 ft. land surface Measure 10/09/1987

Pumping Level (below land surface)

88 ft. 3 hrs. Pumping at 830 g.p.m.

Wellhead Completion

Pitless adapter manufacturer Model

☐ Casing Protection ☒ 12 in. above grade

☐ At-grade (Environmental Wells and Borings ONLY)

Grouting Information Well Grouted? ☒ Yes ☐ No ☐ Not Specified

Material	Amount	From	To
neat cement	529 Sacks	0 ft.	428 ft.

Nearest Known Source of Contamination

feet Direction Type

Well disinfected upon completion? ☒ Yes ☐ No

Pump ☐ Not Installed Date Installed

Manufacturer's name

Model Number HP Volt

Length of drop pipe ft Capacity g.p. Typ Submersible

Abandoned

Does property have any not in use and not sealed well(s)? ☐ Yes ☐ No

Variance

Was a variance granted from the MDH for this well? ☐ Yes ☐ No

Miscellaneous

First Bedrock Tunnel City Group Aquifer Mt.Simon

Last Strat Mt.Simon Sandstone Depth to Bedrock 114 ft

Located by Minnesota Department of Health

Locate Method GPS SA On (averaged)

System UTM - NAD83, Zone 15, Meters X 469120 Y 5002021

Unique Number Verification Information from Input Date 06/16/1999

Angled Drill Hole

Well Contractor

Renner E.H. Well 71015 SIGAFOOS, G.

Licensee Business Lic. or Reg. No. Name of Driller

Minnesota Unique Well Number

559414

County Hennepin
Quad Anoka
Quad ID 120B

MINNESOTA DEPARTMENT OF HEALTH

WELL AND BORING REPORT

Minnesota Statutes Chapter 1031

Entry Date 05/08/1997
Update Date 08/18/2014
Received Date

Well Name	Township	Range	Dir	Section	Subsection
CHAMPLIN 8	120	21	W	30	BDACCB

Elevation 869 ft. **Elev. Method** 7.5 minute topographic map (+/- 5 feet)

Address

Contact 11955 CHAMPLIN DR CHAMPLIN MN 55316
Well 12255 CHAMPLIN DR CHAMPLIN MN 55316

Stratigraphy Information

Geological Material	From	To (ft.)	Color	Hardness
SAND	0	10	BROWN	SOFT
SAND & GRAVEL	10	65	GRAY	MEDIUM
SAND/GRAVEL/ROCK	65	144	BROWN	MEDIUM
FRANCONIA	144	148	GREEN	HARD
FRANCONIA	148	150	GREEN	HARD
FRANCONIA-BROKERN	150	153	VARIED	HARD
FRANCONIA	153	224	GRN/BRN	MEDIUM
IRONTON/GALESVILLE	224	273	WHITE	MEDIUM
EAU CLAIRE SHALE	273	352	GRN/BRN	MEDIUM
MT. SIMON	352	480	TAN/WHT	SOFT

Remarks

M.G.S. NO. 3751. GAMMA LOGGED 7-29-1996.

Well Depth	Depth Completed	Date Well Completed
480 ft.	480 ft.	11/01/1996

Drill Method Cable Tool **Drill Fluid** Bentonite

Use community supply(municipal) **Status** Active

Well Hydrofractured? Yes ☐ No ☐ **From** **To**

Casing Type Step down **Joint** Welded
Drive Shoe? Yes ☒ No ☐ **Above/Below**

Casing Diameter	Weight	Hole Diameter
18 in. To 370. ft.	70.5 lbs./ft.	24 in. To 412 ft.
24 in. To 168. ft.	94.6 lbs./ft.	18 in. To 480 ft.

Open Hole From 370 ft. To 480 ft.

Screen? ☐ **Type** **Make**

Static Water Level

41 ft. land surface Measure 10/28/1996

Pumping Level (below land surface)

125. ft. 8 hrs. Pumping at 2340 g.p.m.

Wellhead Completion

Pitless adapter manufacturer Model

☐ Casing Protection ☒ 12 in. above grade
☐ At-grade (Environmental Wells and Borings ONLY)

Grouting Information Well Grouted? ☒ Yes ☐ No ☐ Not Specified

Material	Amount	From	To
neat cement	20 Cubic yards	0 ft.	370 ft.

Nearest Known Source of Contamination

feet Direction Type

Well disinfected upon completion? ☒ Yes ☐ No

Pump ☒ Not Installed Date Installed

Manufacturer's name
Model Number HP Volt
Length of drop pipe ft Capacity g.p. Typ

Abandoned

Does property have any not in use and not sealed well(s)? ☐ Yes ☒ No

Variance

Was a variance granted from the MDH for this well? ☐ Yes ☐ No

Miscellaneous

First Bedrock Tunnel City Group Aquifer Mt.Simon
Last Strat Mt.Simon Sandstone Depth to Bedrock 148 ft
Located by Minnesota Department of Health
Locate Method GPS SA On (averaged)
System UTM - NAD83, Zone 15, Meters X 469042 Y 5002538
Unique Number Verification Information from Input Date 06/16/1999

Angled Drill Hole

Well Contractor

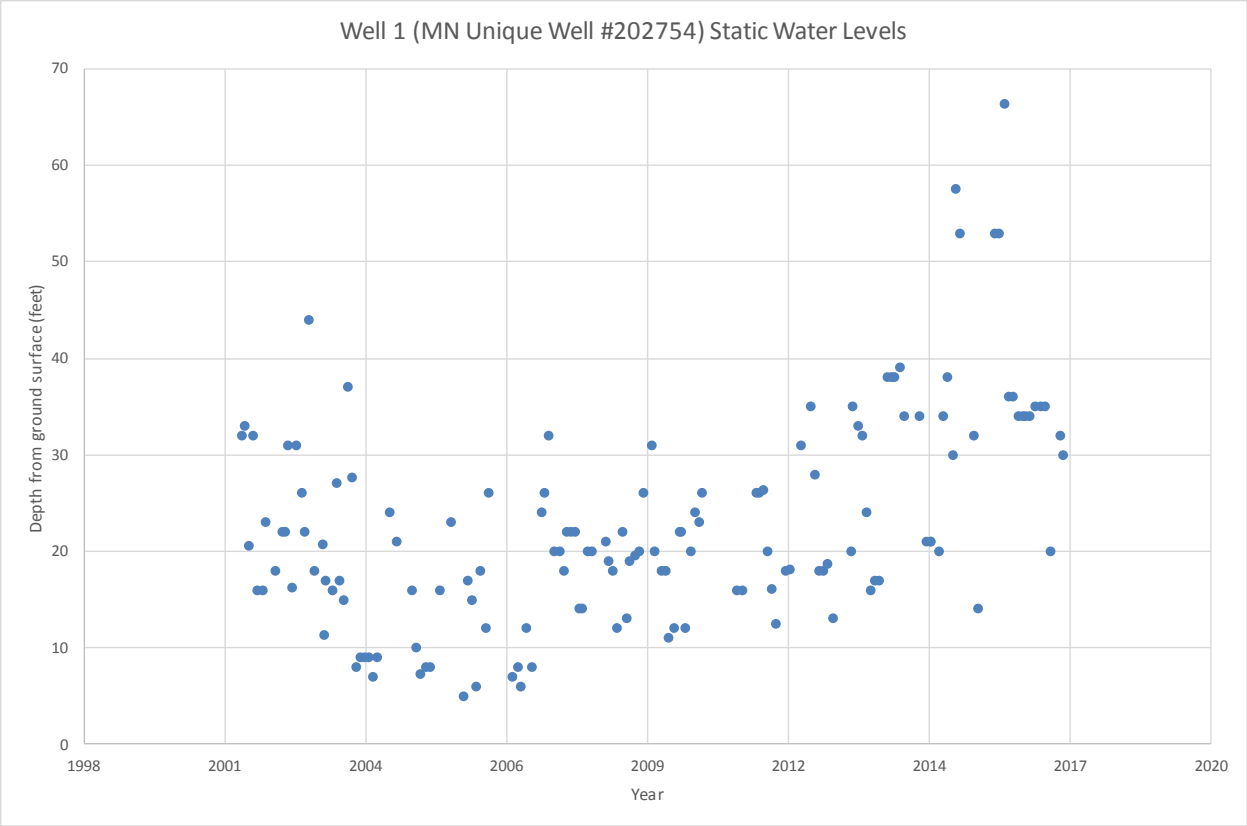
Renner E.H. Well 71015 SIGAFOOS, R.
Licensee Business Lic. or Reg. No. Name of Driller

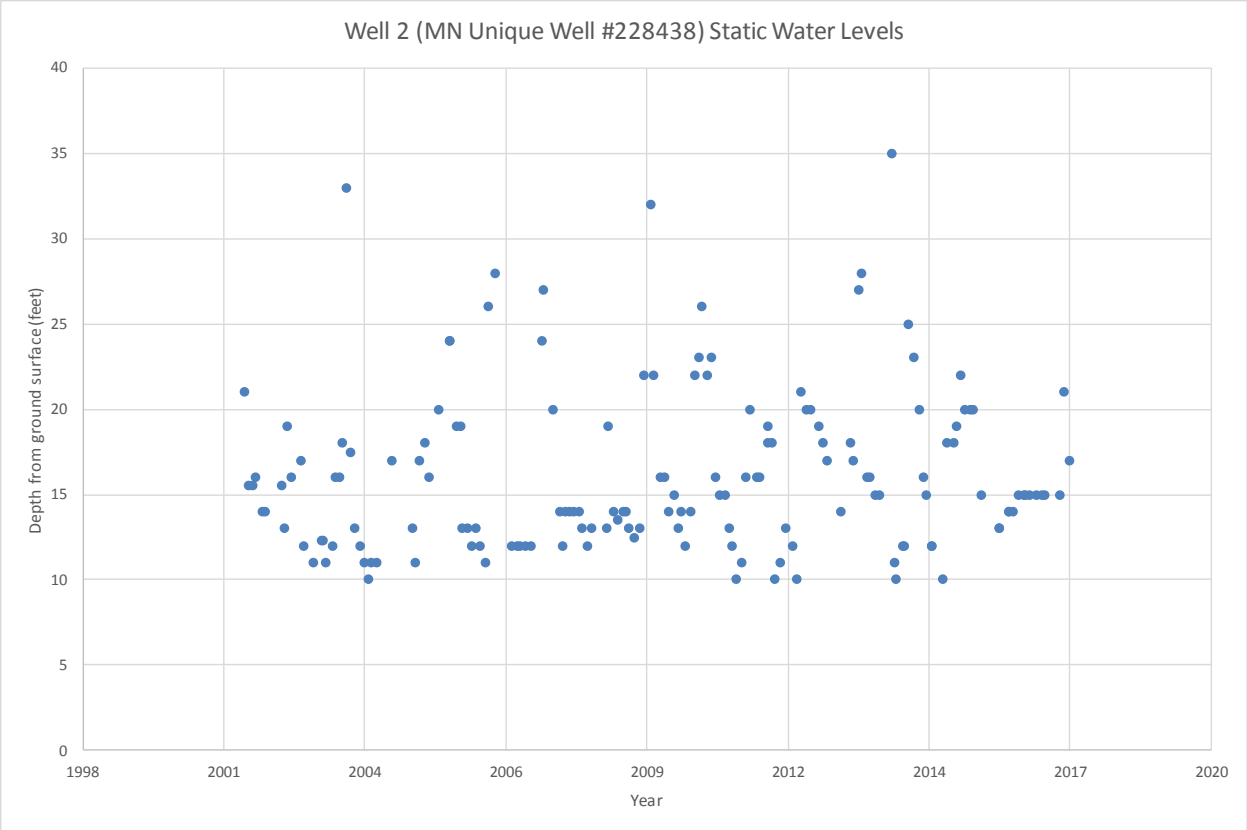
Appendix 2:
Water level monitoring plan

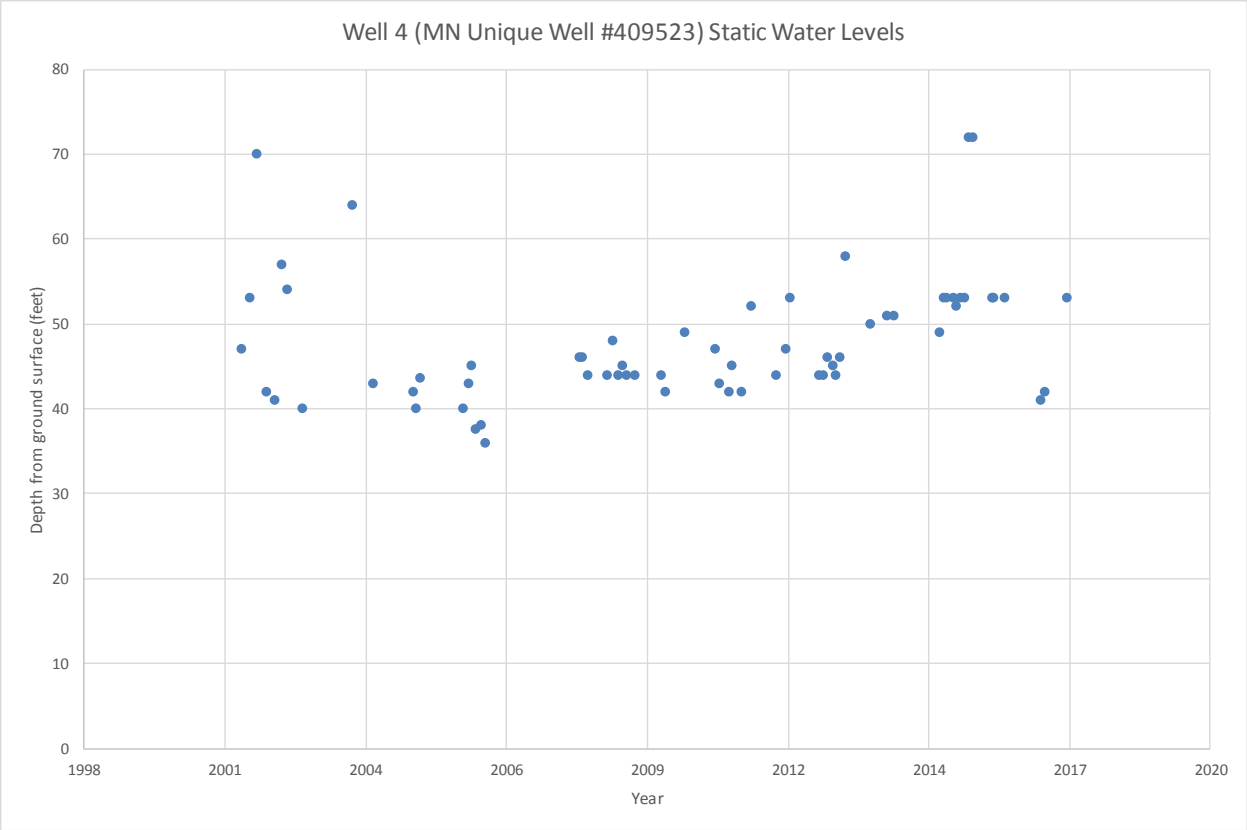
City of Champlin Water Level Monitoring Plan

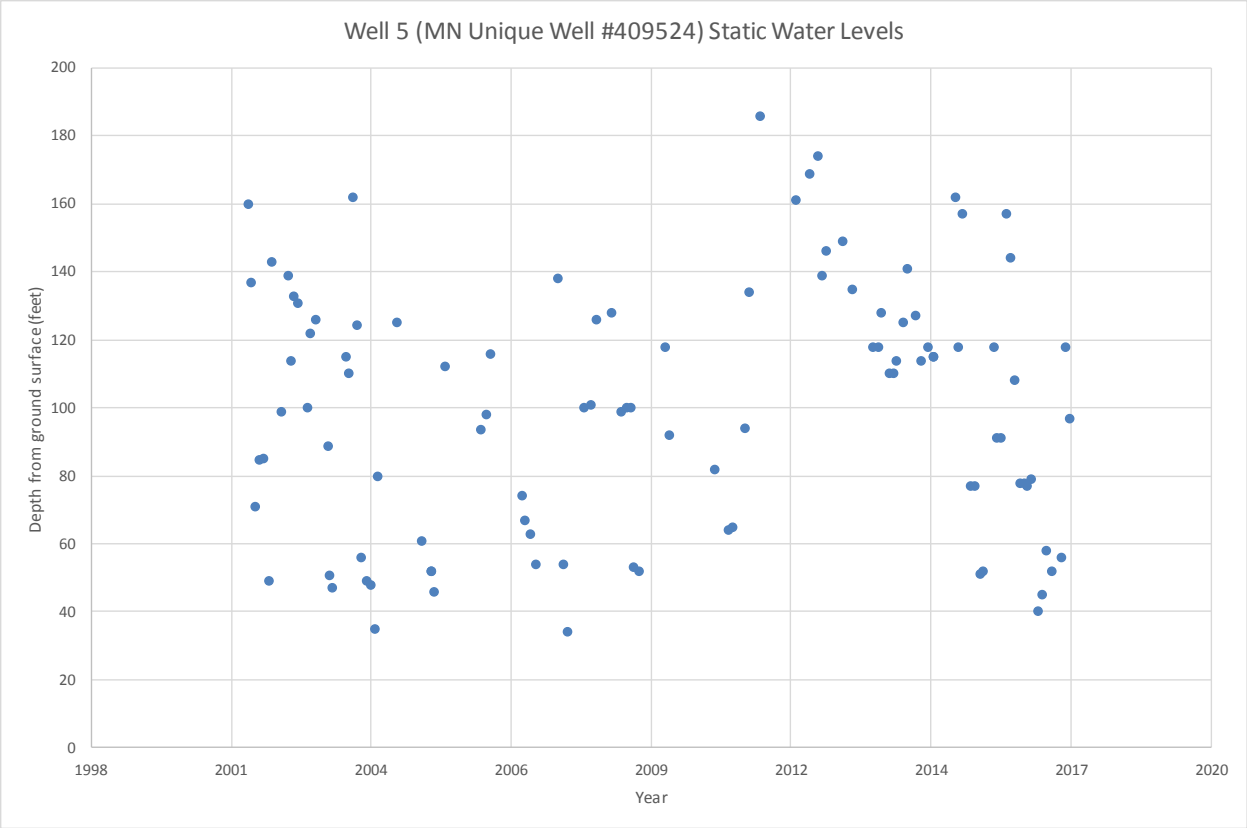
Source	Monitor Type	Frequency
Well 1	SCADA & Spectrophotometer	Monthly
Well 2	SCADA & Spectrophotometer	Monthly
Well 4	SCADA & Spectrophotometer	Monthly
Well 5	SCADA & Spectrophotometer	Monthly
Well 6	SCADA & Spectrophotometer	Monthly
Well 7	SCADA & Spectrophotometer	Monthly
Well 8	SCADA & Spectrophotometer	Monthly

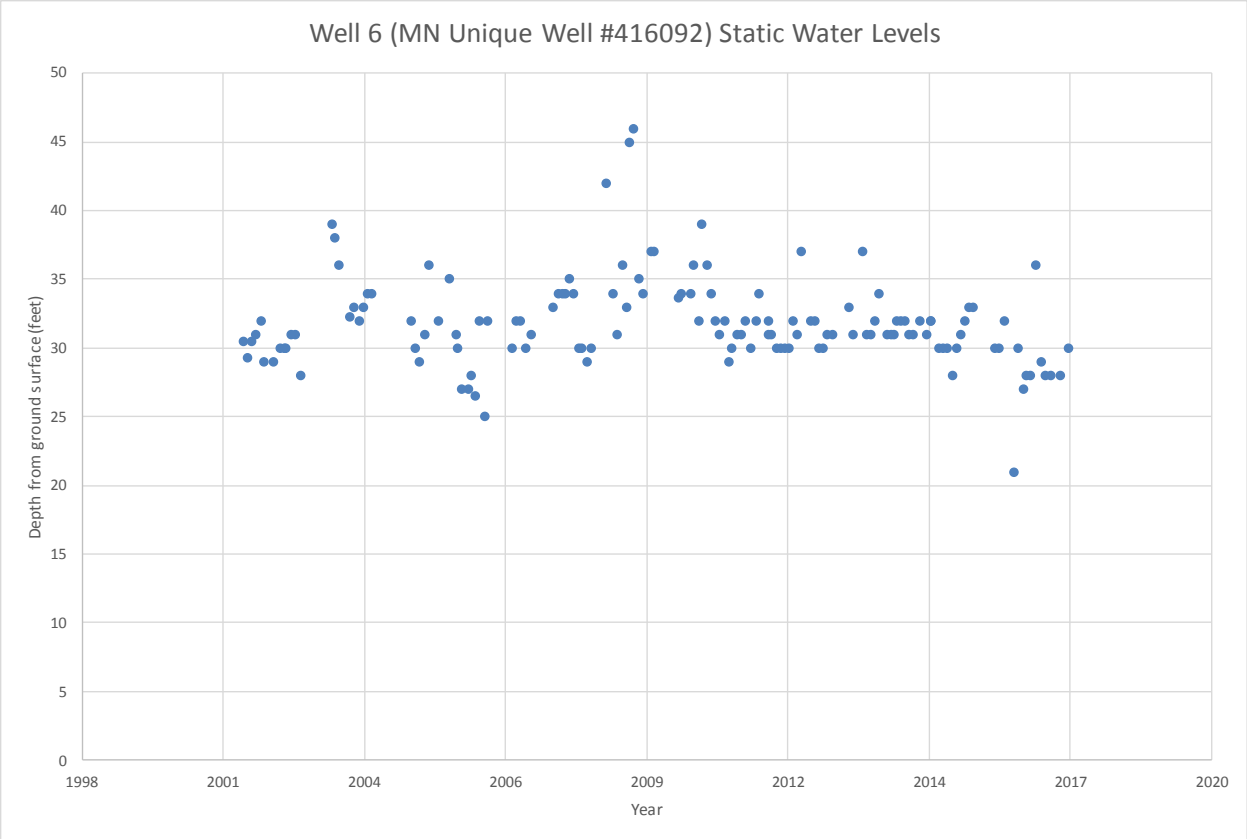
Appendix 3:
Water level graphs for each water supply well

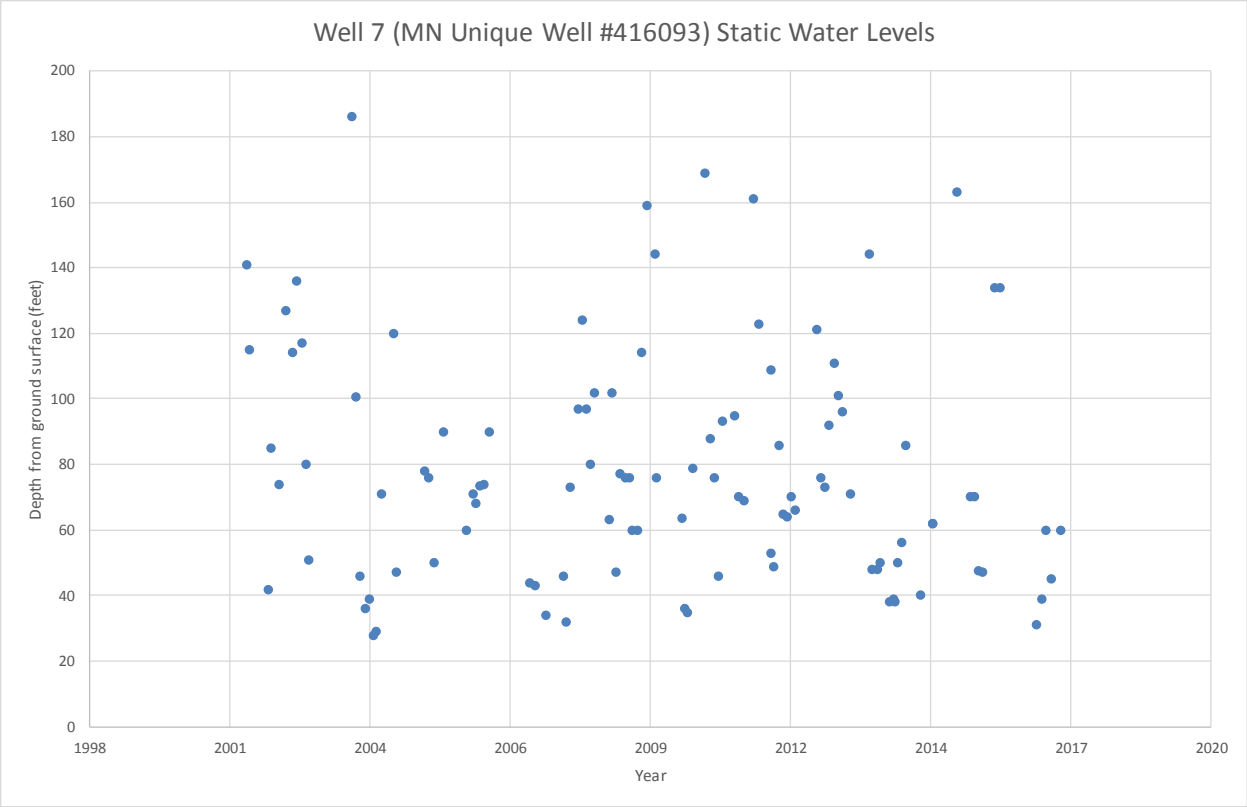

Well 1 (MN Unique Well #202754) Static Water Levels
Depth from ground surface (feet)
70
60
50
40
30
20
10
0
1998
2001
2004
2006
2009
2012
2014
2017
2020
Year

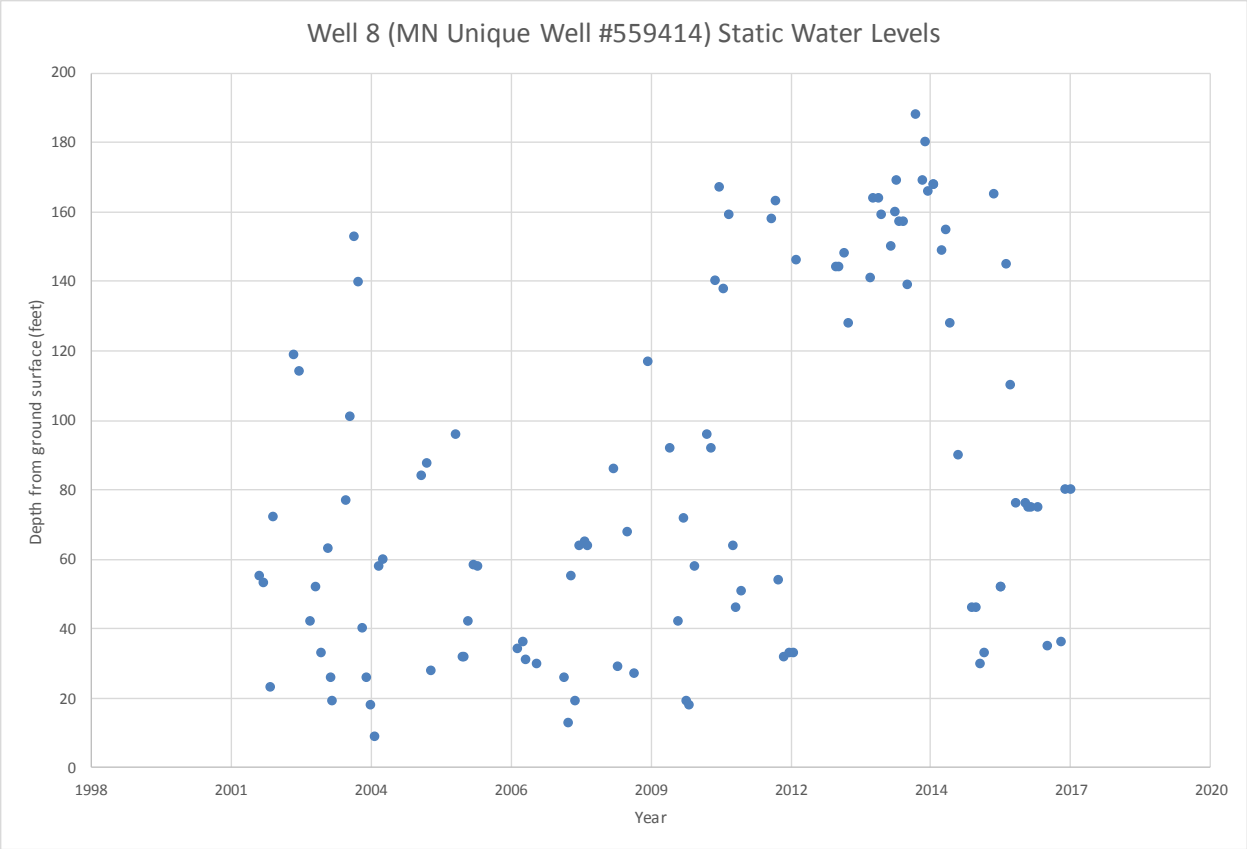

Well 2 (MN Unique Well #228438) Static Water Levels
Depth from ground surface (feet)
0
5
10
15
20
25
30
35
40
1998
2001
2004
2006
2009
2012
2014
2017
2020
Year

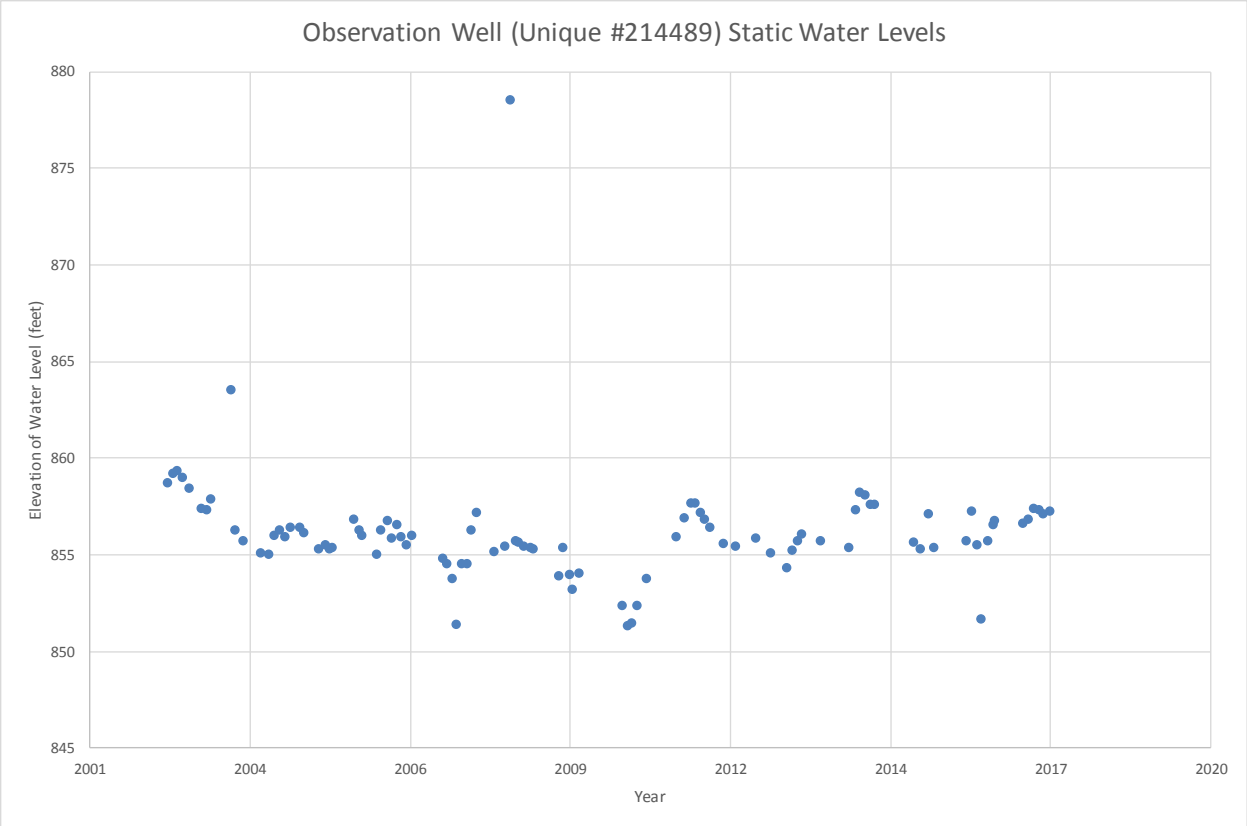

Well 4 (MN Unique Well #409523) Static Water Levels
Depth from ground surface (feet)
0
10
20
30
40
50
60
70
80
1998
2001
2004
2006
2009
2012
2014
2017
2020
Year


Well 5 (MN Unique Well #409524) Static Water Levels
Depth from ground surface (feet)
200
180
160
140
120
100
80
60
40
20
0
1998
2001
2004
2006
2009
2012
2014
2017
2020
Year


Well 6 (MN Unique Well #416092) Static Water Levels
Depth from ground surface (feet)
50
45
40
35
30
25
20
15
10
5
0
1998
2001
2004
2006
2009
2012
2014
2017
2020
Year


Well 7 (MN Unique Well #416093) Static Water Levels
Depth from ground surface (feet)
Year
0
20
40
60
80
100
120
140
160
180
200
1998
2001
2004
2006
2009
2012
2014
2017
2020


Well 8 (MN Unique Well #559414) Static Water Levels
Depth from ground surface (feet)
0
20
40
60
80
100
120
140
160
180
200
1998
2001
2004
2006
2009
2012
2014
2017
2020
Year


Observation Well (Unique #214489) Static Water Levels
Elevation of Water Level (feet)
880
875
870
865
860
855
850
845
2001
2004
2006
2009
2012
2014
2017
2020
Year

Appendix 4:
Capital Improvement Plan

Department	#	Priority	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	To
VACTOR/JETTER	SEW-007	n/a			350,000								350,000
EMERGENCY PUMP AND PANEL REPAIRS	SEW-010	3	15,000	15,000	15,000	15,000	15,000	15,000	15,000	15,000	15,000	15,000	150,000
SANITARY SEWER REHABILITATION	SEW-023	n/a	420,000		440,000		460,000		480,000		500,000		2,300,000
PUMP SERVICE PROGRAM	SEW-024	n/a	10,000		10,000		10,000	10,000		10,000			50,000
LIFT STATION CONTROL & MONITORING UPGRADE	SEW-042	n/a	45,000	45,000									90,000
SANITARY MANHOLE REPLACEMENT	SEW-043	n/a	25,000	25,000	25,000	25,000							100,000
LIFT STATION VFD R & R	SEW-044	n/a					8,000	8,000					16,000
SEWER Total			**795,000**	**115,000**	**870,000**	**70,000**	**523,000**	**63,000**	**525,000**	**55,000**	**545,000**	**45,000**	**3,606,000**
STREET LIGHTS													
REPLACE STREET LIGHT POLES	STR LTS-001	3	50,000	50,000					50,000				150,000
TRAFFIC SIGNAL POLE PAINTING	STR LTS-004	n/a		32,000			32,000	33,000			34,000		131,000
CAMPUS PARKING LOT LIGHTS	STR LTS-007	n/a		37,000									37,000
STREET LIGHTS Total			**50,000**	**119,000**			**32,000**	**33,000**	**50,000**		**34,000**		**318,000**
WATER													
TOWER 2 INSPECTION/REPAIR	WAT-001	3					1,200,000						1,200,000
RE-ROOF WATER TREATMENT PLANT #2	WAT-002	n/a								65,000			65,000
RE-ROOF WELL #8	WAT-003	3							40,000				40,000
PICK-UP TRUCK (304)	WAT-005	n/a		40,000									40,000
METER READING EQUIPMENT/METERS	WAT-007	3			1,500,000								1,500,000
WELL 4 & 5	WAT-009	n/a	7,500										7,500
WELL 2 RE-ROOF	WAT-011	n/a							40,000				40,000
WTP#1 POLYMER PUMP	WAT-012	n/a	15,000										15,000
SCADA MODIFICATIONS	WAT-013	3	15,000	20,000	20,000	20,000	20,000	25,000	25,000	25,000	25,000	25,000	220,000
WELL #2 PULL AND INSPECT	WAT-016	n/a			35,000								35,000
EMERGENCYREPAIRS	WAT-017	3	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	500,000
WELL # 2	WAT-020	3		7,500									7,500
TRUCK #306 (2012 FORD F-350)	WAT-021	n/a						50,000					50,000
SCADA COMPUTER HARDWARE/SOFTWARE	WAT-022	n/a			30,000					30,000			60,000
WELL 1 PULL & INSPECT	WAT-024	3		35,000									35,000
WELL 4 PULL & INSPECT & REPAIR	WAT-025	n/a					35,000						35,000
WELL 5 PULL & INSPECT & REPAIR	WAT-026	n/a	35,000										35,000
WELL 8	WAT-027	n/a				35,000							35,000

Department	#	Priority	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	Total
CLEARWELL INSPECTION AND CLEANING	WAT-032	n/a							10,000				10,000
TRUCK #310 (98-1 TON DHEV.)	WAT-033	n/a	32,000										32,000
REPLACE RECYCLE PUMPS WTP#1	WAT-034	n/a	35,000										35,000
AIR CONDITIONING UNIT-WTP1 REAR OFFICE	WAT-037	n/a	7,500										7,500
ACCESS SECURITY	WAT-041	3	10,000										10,000
WATER TREATMENT #1 PLANT ROOF	WAT-047	n/a	100,000										100,000
HIGH SERVICE PUMP (PULL, INSPECT, REPAIR)	WAT-054	n/a		12,000	12,000	12,000	12,000		12,000	12,000			72,000
ADD MEDIA TO FILTER	WAT-059	n/a			30,000								30,000
REPLACE/REPAIR SIDEWALK E OF WTP 1	WAT-060	n/a	40,000										40,000
WELL 7 PULL AND INSPECT	WAT-068	n/a					35,000						35,000
HVAC UNIT REPLACEMENT	WAT-074	n/a	150,000										150,000
LARGE METER TESTING & REPAIR (DIST)	WAT-075	n/a	5,000	5,000									10,000
GPS	WAT-077	n/a					7,500						7,500
DISTRIBUTION LEAK DETECTION	WAT-080	n/a	8,500										8,500
SECURITY	WAT-088	n/a	40,000										40,000
BACKFLOW MONITORING PROGRAM	WAT-089	n/a	15,000										15,000
UTILITY VEHICLE 311	WAT-092	n/a						30,000					30,000
REPLACE ACCESS HATCHES	WAT-094	n/a	40,000										40,000
ANDREWS PARK IRRIGATION	WAT-095	n/a		20,000									20,000
TOWER 1 - PAINTING	WAT-098	n/a		1,200,000									1,200,000
WASH DOWN & FILL STATION	WAT-104	n/a	75,000										75,000
WATER Total			**680,500**	**1,389,500**	**1,677,000**	**117,000**	**1,359,500**	**155,000**	**177,000**	**182,000**	**75,000**	**75,000**	***5,887,500***
GRAND TOTAL			**17,484,492**	**29,283,086**	**15,243,250**	**10,991,630**	**6,554,130**	**5,739,000**	**7,942,400**	**7,560,185**	**7,525,530**	**3,108,800**	***111,432,503***

Appendix 5:
Emergency Telephone List

Emergency Telephone List

Emergency Response Team	Name	Work Telephone	Alternate Telephone
Emergency Response Lead	Mike Bramwell	763.923.7190	612.968.2167
Alternate Emergency Response Lead	Bret Heitkamp	763.923.7110	
Water Operator			
Alternate Water Operator			
Public Communications			

State and Local Emergency Response Contacts	Name	Work Telephone	Alternate Telephone
State Incident Duty Officer	Minnesota Duty Officer	800/422-0798 Out State	651-649-5451 Metro
County Emergency Director			
National Guard	Minnesota Duty Officer	800/422-0798 Out State	651-649-5451 Metro
Mayor/Board Chair			
Fire Chief	Charlie Thompson	763.576.2861	763.286.7354
Sheriff			
Police Chief	Ty Schmidt	763.923.7179	
Ambulance			
Hospital			
Doctor or Medical Facility			

State and Local Agencies	Name	Work Telephone	Alternate Telephone
MDH District Engineer	Robert Dehler	651-201-3710	
MDH	Drinking Water Protection	651-201-4700	
State Testing Laboratory	Minnesota Duty Officer	800/422-0798 Out State	651-649-5451 Metro
MPCA	MPCA St. Paul Office	651-296-6300	800-657-3864
DNR Area Hydrologist	Jason Speigel	651-259-5822	jason.spiegel@state.mn.us
County Water Planner	Joel Settles	612-348-6157	joel.settles@co.hennepin.mn.us

Utilities	Name	Work Telephone	Alternate Telephone
Electric Company	Xcel	800.895.1999	
Gas Company	Centerpoint	612.372.5050	
Telephone Company			
Gopher State One Call	Utility Locations	800-252-1166	651-454-0002
Highway Department			

Mutual Aid Agreements	Name	Work Telephone	Alternate Telephone
Neighboring Water System	Brooklyn Park / Maple Grove	7634938008/7634946370	
Emergency Water Connection	Brooklyn Park / Maple Grove	7634938008/7634946370	
Materials			

Technical/Contracted Services/Supplies	Name	Work Telephone	Alternate Telephone
MRWA Technical Services	MN Rural Water Association	800-367-6792	
Well Driller/Repair	Bergerson Caswell	763.479.3121	
Pump Repair	Bergerson Caswell	763.479.3121	
Electrician			
Plumber			
Backhoe			
Chemical Feed			
Meter Repair			

Generator			
Valves			
Pipe & Fittings			
Water Storage			
Laboratory			
Engineering firm			

Communications	Name	Work Telephone	Alternate Telephone
News Paper			
Radio Station			
School Superintendent			
Property & Casualty Insurance			

Critical Water Users	Name	Work Telephone	Alternate Telephone
Hospital Critical Use:			
Nursing Home Critical Use:			
Public Shelter Critical Use:			

Appendix 6:
Cooperative Agreements for Emergency Services

C PH 8

COOPERATIVE JOINT POWERS AGREEMENT
109TH AVENUE IMPROVEMENTS
BROOKLYN PARK AND CHAMPLIN

AGREEMENT, made and entered into this 9th day of September, 199[illegible], by and between the City of Brooklyn Park, hereinafter referred to as "Brooklyn Park;" and the City of Champlin, hereinafter referred to as "Champlin."

WITNESSETH:

WHEREAS, Brooklyn Park and Champlin are desirous of bringing about the improvement of that portion of 109th Avenue approved as a Municipal State Aid Street (MSAS) and designated as Brooklyn Park MSAS 110-113-040 and Champlin MSAS 193-106-40 from Douglas Drive, east approximately 3300 feet, to be shown on the construction plans, which improvement contemplates concrete curb and gutter; concrete sidewalk/trails; aggregate base; utilities; bituminous base and wearing courses; street lighting; traffic signals; landscaping; storm sewer system and other related improvements herein referred to as the Project; and

WHEREAS, the City of Champlin has in place municipal sanitary sewer facilities and a municipal water system near the Brooklyn Park north boundary and the City of Brooklyn Park does not anticipate extending its municipal sewer and water systems to this area of the City until it is consistent with its growth control plan, and

WHEREAS, it is in the best interest of the general taxpayer supporting municipal and school governing units to extend to the new high school in the area municipal services, this will save the

school district from constructing private sewer and water systems and will benefit the health, safety and general welfare of students at the new school, and

WHEREAS, it is the intent of this agreement to allow but limit Champlin municipal services to the Brooklyn Park boundary where such services shall be constructed with the idea that this water service will act as a municipal water interconnection to benefit both communities in the future and that Champlin and Brooklyn Park agree that there will not be any additional lands in Brooklyn Park served by Champlin public utilities unless and until consistent with future planning in both cities this agreement shall be specifically limited to the new high school being built by Independent School District No. 11, and

WHEREAS, Minnesota Statutes Section 471.59 allows the cities of Brooklyn Park and Champlin to enter into a Joint Powers Agreement to plan and construct the proposed road and public utilities on the common boundary between the two cities; and

WHEREAS, the above mentioned construction along 109th Avenue shall be hereinafter identified as BP Projects S-1018, S-1019, SS-1020, ST-1034 and M-1051, Improvement 91-08/CH 91-2; and, the entire length of the Project lies on the mutual corporate limits of Brooklyn Park and Champlin; and

WHEREAS, Brooklyn Park and Champlin have the authority to special assess to benefitted properties the costs of public improvement projects to governmental units pursuant to State Statutes Chapter 429 and Chapter 435.19; and,

WHEREAS, pursuant to Minnesota Statutes Chapter 429 and 435 the Independent School District #11 petitioned the cities of Brooklyn Park and Champlin to construct certain improvements, and

WHEREAS, the Brooklyn Park City staff prepared the required feasibility reports, and the City Councils ordered the improvements; and

WHEREAS, plans and specifications must be prepared for the improvements, bids must be solicited and approved, and contracts awarding the work must be executed and construction management exercised throughout the improvement process; all in accordance with approved Municipal State Aid Standards (MSA); and

WHEREAS, Brooklyn Park and Champlin mutually agree that Brooklyn Park will be the lead agency to perform the Project management and design work in accordance with MSA Rules and Regulations and obtain MnDOT approvals as required; and

WHEREAS, Brooklyn Park, as the lead agency, will maintain records of all expenditures and charges associated with the Project and provide a breakdown of those costs for the benefit of each City; and

WHEREAS, the parties hereto have reviewed the plans and specifications and have approved said plans and specifications and agree to participate in the cost of Project items both eligible and ineligible for MSA funding; and

WHEREAS, it is contemplated that this public improvement Project be carried out by the parties hereto under the provisions, terms and conditions set forth.

NOW THEREFORE, IT IS HEREBY AGREED:

I

The cities of Brooklyn Park and Champlin, by executing this agreement, mutually approve the City of Brooklyn Park as the Lead Agency and agree to review and approve the plans and specifications for said Project. Champlin shall provide Brooklyn Park with all the available data and materials pertinent to the work program as required to complete the Projects. The City's data and material may consist of, but will not be limited to; contour maps, utility and street plans, aerial photos and previous environmental study material. Progress meetings will be scheduled for the City staffs and other concerned public agencies to discuss issues during the study/report, design and construction phases.

II

Brooklyn Park shall prepare on behalf of the cities' as parties hereto, the necessary feasibility report(s) for usage by each individual city for subsequent public improvement and assessment hearings. Each City shall prepare an addendum to the feasibility report indicating their assessment program, a list of the affected properties and pertinent information unique to each City's special assessment program. Champlin shall be responsible for calling all necessary hearing and compliance with Minnesota Law to levy special assessments in their City and Brooklyn Park shall be responsible for said procedures for Brooklyn Park properties.

III

Brooklyn Park shall prepare the plans and specifications,

which shall be reviewed and approved by Champlin, Brooklyn Park shall then advertise for and receive bids; enter into a contract for said Project with the successful bidder at the unit prices specified in the bid of the lowest responsible bidder, in accordance with Minnesota Statues.

The contract documents will include the plans and specifications prepared by Brooklyn Park or its agents and approved by Champlin and MnDOT as an MSA Project. The plans and specifications shall be in compliance with all State Aid standards and shall be approved for State Aid funding.

IV

Brooklyn Park shall administer the contract and inspect the construction of the contract work contemplated herewith. All work on the Project shall be completed in compliance with the plans and specifications. Champlin's City Engineer or staff shall have the right, as the work progresses, to enter upon the premises to make any inspections deemed necessary, but will have no responsibility for the supervision of the work.

V

Brooklyn Park shall be responsible for receiving final approval of the Project by the State Aid Engineer and obtaining the necessary agency approvals. Champlin and Brooklyn Park, at their own expense, shall acquire all rights-of-way and/or easements required in accordance with State law and MnDOT rules and regulations and the approved right-of-way plans, for the construction of said project within their respective corporate

limits. Brooklyn Park or its agent will provide a description and individual drawing of each parcel involved in the right-of-way program according to the approved right-of-way plan. The individual drawing will show the permanent and temporary right-of-way taking with appropriate dimensions. The right-of-way costs incurred shall include all acquisition costs including, but not limited to, any and all damages occurring to any person or persons, including private utilities, relocation assistance, removing or adjusting main conduits or other structures located in or upon the land taken and within the present right-of-way; or damage in procuring such right-of-way in the performance of this contract with respect to the Project in accordance with the plans and specifications. The right-of-way costs expended by each City shall be included as part of the eligible MSA funding program.

VI

The proposed schedule to complete the improvement project described herein is as follows:

1. Complete the Cooperative Agreement.....August 26, 1991
2. Complete Feasibility/Engineering Report.....July 22, 1991
3. Award Contract.....September 9, 1991
4. Complete Construction.....June 12, 1992
5. Hold Special Assessment Hearings.....September, 1992

VII

Brooklyn Park and Champlin shall share in the incurred Project costs, including construction, engineering and administrative costs. All costs incurred by Brooklyn Park as the lead agency; to

manage, provide reports and studies, preliminary work, design, construction and project administration, shall be part of the Project costs in accordance with MSA rules and regulations. All project costs shall be apportioned to each City in accordance with the percentage of the total construction items completed in each City. The Brooklyn Park project engineering and administrative/management costs shall not exceed eighteen (18%) percent (unless approved by the parties hereto) of the construction cost exclusive of the cost associated with each City's special assessment and public hearing requirements, and, exclusive of the cost to provide right-of-way parcel descriptions and individual parcel drawings and to acquire said rights-of-way. The aforestated sharing shall be exclusive of trails and sidewalks not funded by MSA funds, which trails and sidewalks shall be paid for, in their entirety, by the City in which they are constructed.

VIII

All direct payments for project design and administration and to the Contractor for work performed on said Project will be made by Brooklyn Park. Brooklyn Park shall be responsible for and pay all the construction costs of the contract work for said Project as identified herein and delineated in the contract documents. Ninety percent (90%) of the estimated project cost will be due to Brooklyn Park by the City of Champlin 90 days after the City of Champlin approves the contract and the final ten percent (10%) is due to Brooklyn Park 30 days after notification by Brooklyn Park that the assessment roll has been approved. All change orders, which

effects Champlin's assessment, are to be approved by the City of Champlin.

IX

Brooklyn Park and Champlin shall each be responsible for reporting of State Aid contracts to MnDOT for their respective segments of the Project and the collecting of State Aid funds.

Brooklyn Park shall provide to Champlin all pertinent information for the reporting of the State Aid contract.

X

All records kept by Brooklyn Park and Champlin with respect to this Project, shall be subject to examination by the representatives of each party hereto.

XI

As part of the Project, a signage plan for 109th Avenue North shall be prepared by Brooklyn Park and approved by the City of Champlin. Future modification of that plan by either Brooklyn Park or Champlin shall be mutually approved by the parties hereto.

It is understood and agreed that upon completion of the improvement proposed herein, all Project elements shall be part of the as built plans prepared by Brooklyn Park and shall become the property of the City in which those improvements are located and all maintenance, restoration, repair or replacement required thereafter shall be performed by each City at its own expense. A subsequent agreement between Champlin and Brooklyn Park will establish the maintenance program for the roadway as it relates to the street surface and snow removal.

XII

It is further agreed that each party to this agreement shall not be responsible or liable to the other or to any other person whomsoever for any claims, damages, actions, or causes of actions of any kind or character arising out of or by reason of the performance of any work or part hereof by the other as provided herein; and each party further agrees to defend at its sole cost and expense any action or proceeding commenced for the purpose of asserting any claim of whatsoever character arising in connection with or by virtue of performance of its own work as provided herein.

Brooklyn Park also agrees that any contract let by the City or its agents for the performance of the work on 109th Avenue as provided for herein shall include clauses that will: 1) Require the Contractor to defend, indemnify, and save harmless Brooklyn Park and Champlin, their officers, agents and employees from claims, suits, demands, damages, judgements, costs, interest, expenses (including, without limitation, reasonable attorney's fees, witness fees, and disbursements incurred in the defense thereof) arising out of or by reason of the negligence of the said Contractor, its officers, employees, agents or subcontractors; and 2) Require the Contractor to provide and maintain sufficient insurance so as to ensure the performance of its hold harmless obligations.

XIII

* The City of Brooklyn Park agrees to pay the City of Champlin for water metered at the cross connection at a rate equal to that set by the City of Champlin for other similar usages. The City of Brooklyn Park will bill Champlin Park High School for their specific water usage. At a future time when the City of Brooklyn Park connects to this system, the City of Champlin and the City of Brooklyn Park agree to pay to the other city any monies due for water consumed by properties in the other city at the rates charged by Brooklyn Park or Champlin for similar utilization. This interconnection of the two municipal systems shall be maintained in the future to protect the health, safety and general welfare of persons residing in both cities. The City of Champlin shall construct an extension of their municipal water system to the Brooklyn Park City boundary at no cost to the City of Brooklyn Park.

XIV

The projects shall include construction of a connection to the CAB sewer line in Champlin upstream of its meter with the Metropolitan sewer system. The City of Brooklyn Park agrees to pay the City of Champlin for sanitary sewage based on the water billings at the Champlin Park High School during said time that the sewage flows through a meter located in the Metropolitan Waste Control Commission system that meters Champlin sewage only.

XV

The City of Brooklyn Park agrees to pay for all the electric power/maintenance associated with the street lighting of this project and will bill the City of Champlin on a 50/50 basis. The City of Champlin agrees to pay for electric power/maintenance

associated with the street lighting necessary to light their portion of 109th Avenue.

IN TESTIMONY WHEREOF, the parties hereto have caused this agreement to be executed by their respective duly authorized officers as of the day and year first above written.

CITY OF BROOKLYN PARK

BY: _____
Mayor

DATE: 9-26-91

AND: _____
Manager (Acting)

DATE: 9-26-91

(Seal)

CITY OF CHAMPLIN

BY: _____
Mayor

DATE: 9/23/91

AND: _____
Manager

DATE: 9/24/91

(Seal)

COOPERATIVE JOINT POWERS AGREEMENT
109TH AVENUE IMPROVEMENTS
(NOBLE TO CHAMPLIN PARK HIGH SCHOOL)
CHAMPLIN AND BROOKLYN PARK

AGREEMENT, made and entered into this 27th day of June, 1994, by and between the City of Champlin, hereinafter referred to as "Champlin;" and the City of Brooklyn Park, hereinafter referred to as "Brooklyn Park."

WITNESSETH:

WHEREAS, Champlin and Brooklyn Park are desirous of bringing about the improvement of that portion of 109th Avenue approved as a Municipal State Aid Street (MSAS) and designated as Champlin MSAS 193-106-08 and Brooklyn Park MSAS 110-113-10 from the easterly side of Noble Avenue westerly to 2554 feet, to be shown on the construction plans, which improvement contemplates concrete curb and gutter; concrete sidewalk/trails; aggregate base; utilities; bituminous base and wearing courses; street lighting; landscaping; storm sewer; and culvert; and other related improvements herein referred to as the Project; and

WHEREAS, the City of Champlin has made this Project part of their southeast area streets and utilities improvement, and

WHEREAS, it is in the best interest of the general taxpayer supporting Champlin and Brooklyn Park to jointly construct 109th Avenue using Municipal State Aid funds, and

WHEREAS, Champlin and Brooklyn Park have, in the past, cooperated in street improvement projects on 109th Avenue between Jefferson Highway and Douglas Drive, Douglas Drive to the eastern limits of the Champlin Park School, and between Noble and County Road 12, as well as recent

improvements to Brooklyn Park's Marvella Subdivision whereby Champlin provided utility connections for water and sewer, and

WHEREAS, Minnesota Statutes Section 471.59 allows the cities of Champlin and Brooklyn Park to enter into a Joint Powers Agreement to plan and construct the proposed road and public utilities on the common boundary between the two cities; and

WHEREAS, the above mentioned construction along 109th Avenue shall be hereinafter identified as Champlin's Southeast Area Improvements Project 92-2 and BP Improvement 94-04, Project ST-1095, SS-1096, S-1097 and W-1098, and

WHEREAS, the Champlin City staff prepared the feasibility reports and the City Councils ordered the improvements, and

WHEREAS, plans and specifications have been prepared for the improvements, and bids have been solicited and approved, and contracts awarding the work have been executed, and construction management will be exercised through the improvement process; all in accordance with approved Municipal State Aid Standards (MSA); and

WHEREAS, Champlin and Brooklyn Park mutually agree that Champlin will be the lead agency to perform the Project management and design work in accordance with MSA Rules and Regulations and obtain MnDOT approvals as required; and

WHEREAS, Champlin, as lead agency, will maintain records of all expenditures and charges associated with the Project and provide a breakdown of those costs for the benefit of each City; and

WHEREAS, the parties hereto have reviewed the plans and specifications and have approved said plans and specifications and agree

to participate in the cost of Project items both eligible and ineligible for MSA funding; and

WHEREAS, it is contemplated that this public improvement Project be carried out by the parties hereto under the provisions, terms and conditions set forth.

NOW, THEREFORE, IT IS HEREBY AGREED:

I

The cities of Champlin and Brooklyn Park, by executing this agreement, mutually approve the City of Champlin as the Lead Agency and agree to review and approve the plans and specifications for said Project. Brooklyn Park shall provide Champlin with all the available data and materials pertinent to the work program as required to complete the Projects. The City's data and material may consist of, but will not be limited to; contour maps, utility and street plans, aerial photos and previous environmental study material. Progress meetings will be scheduled for the City staffs and other concerned public agencies to discuss issues during the study/report, design and construction phases.

II

Champlin shall prepare on behalf of the cities' as parties hereto, the necessary feasibility report(s) for usage by each individual city for subsequent public improvement and assessment hearings. Each City shall prepare an addendum to the feasibility report indicating their assessment program, a list of the affected properties and pertinent information unique to each City's special assessment program. Brooklyn Park shall be responsible for calling all necessary hearings in

compliance with Minnesota Law to levy special assessments in their City and Champlin shall be responsible for said procedures for Champlin properties.

III

Champlin shall prepare the plans and specifications, which shall be reviewed and approved by Brooklyn Park, Champlin shall then advertise for and receive bids; enter into a contract for said Project with the successful bidder at the unit prices specified in the bid of the lowest responsible bidder, in accordance with Minnesota Statutes.

The contract documents will include the plans and specifications prepared by Champlin or its agents and approved by Brooklyn Park and MnDOT as a MSA Project. The plans and specifications shall be in compliance with all State Aid Standards and shall be approved for State Aid funding.

IV

Champlin shall administer the contract and inspect the construction of the contract work contemplated herewith. All work on the Project shall be completed in compliance with the plans and specifications. Brooklyn Park 's City Engineer or staff shall have the right, as the work progresses, to enter upon the premises to make any inspections deemed necessary, but will have no responsibility for the supervision of the work.

V

Champlin shall be responsible for receiving final approval of the Project by the State Aid Engineer and obtaining the necessary agency

approvals. Brooklyn Park and Champlin, at their own expense, shall acquire all rights-of-way and/or easements required in accordance with State law and MnDOT rules and regulations and the approved right-of-way plans, for the construction of said project within their respective corporate limits. Champlin or its agent will provide a description and individual drawing of each parcel involved in the right-of-way program according to the approved right-of-way plan. The individual drawing will show the permanent and temporary right-of-way taking with appropriate dimensions. The right-of-way costs incurred shall include all acquisition costs including, but not limited to, any and all damages occurring to any person or persons, including private utilities, relocation assistance, removing or adjusting main conduits or other structures located in or upon the land taken and within the present right-of-way; or damage in procuring such right-of-way in the performance of this contract with respect to the Project in accordance with the plans and specifications. The right-of-way costs expended by each City shall be included as part of the eligible MSA funding program.

VI

Champlin and Brooklyn Park shall share in the incurred Project costs, including construction, engineering and administrative costs. All costs incurred by Champlin as the lead agency; to manage, provide reports and studies, preliminary work, design, construction and project administration, shall be part of the Project costs in accordance with MSA rules and regulations. All Project costs shall be apportioned to each City in accordance with the percentage of the total construction items completed in each City as defined below.

- Right turn lane and bypass lane at Indiana Avenue and West River Road. The City of Champlin will pay for the right turn lane and bypass lane on West River Road at Indiana Avenue. Brooklyn Park will not participate in this cost.
- Utility and streets on 109th Avenue to the west of Noble Avenue.

The City of Brooklyn Park will pay for one-half of the construction cost of the watermain lateral (up to 8 inch diameter based on contractors bid) and all of the costs of the services from the east side of Noble Avenue to the east side of Champlin Park High School at station 30+00. Brooklyn Park will pay for the watermain lead extension and hydrant south of the centerline of 109th Avenue at Noble Avenue.

The City of Brooklyn Park will pay for one-half of the construction cost for the sanitary sewer line plus all of the costs of the services to Brooklyn Park from Noble Avenue to Oxbow Park. Brooklyn Park will be responsible for the entire construction cost of the sanitary sewer to the west of Oxbow Park from manhole #3 at station 38+60.

The City of Brooklyn Park and Champlin will each pay one-half of the construction cost for the MSA street and storm sewer on 109th Avenue from Noble Avenue to the west with the exception of the storm sewer culvert at station 29+75. The cost to install this storm sewer culvert will be the responsibility of Brooklyn Park.

- Utility and streets on 109th Avenue 660 feet east of Noble

The City of Brooklyn Park will pay for one-half of the construction cost of watermain lateral (up to 8 inches in diameter

based on contractors bid) and all costs for the four services easterly of Noble to Lee Avenue. These costs will include all cost associated with placing the water service under 109th Avenue.

The City of Brooklyn Park will pay for one-half of the construction cost of the sanitary sewer line plus the cost to jack 3 sanitary sewer services under 109th Avenue to the properties lying within Brooklyn Park.

Brooklyn Park will reimburse the City of Champlin for actual engineering cost to its consultant for the above mentioned construction costs. Documentation is to be provided by the consultant. The engineering overhead cost is estimated to be 19 percent.

Brooklyn Park will be responsible for any easements needed on the south side of 109th Avenue. Champlin will be responsible for any easements on the north side of 109th Avenue.

The City of Brooklyn Park will pay watermain trunk, source and storage fee for each home, based on the same rate as charged to the Marvella Addition. This is $1,050.00 per home.

The aforestated sharing shall be exclusive of trails and sidewalks not funded by MSA funds, which trails and sidewalks shall be paid for, in their entirety, by the City in which they are constructed.

VII

All direct payments for Project design and administration and to the Contractor for work performed on said Project will be made by

Champlin. Champlin shall be responsible for and pay all the construction costs of the contract work for said Project as identified herein and delineated in the contract documents. Ninety percent (90%) of the estimated project cost will be due to Champlin by the City of Brooklyn Park 90 days after the City of Brooklyn Park approves the contract and the final ten percent (10%) is due to Champlin 30 days after final acceptance of the project by Champlin and Brooklyn Park. All change orders, which affect Brooklyn Park's cost, are to be approved by the City of Brooklyn Park.

VIII

Champlin and Brooklyn Park shall each be responsible for reporting of State Aid contracts to MnDOT for their respective segments of the Project and the collecting of State Aid funds.

Champlin shall provide Brooklyn Park all pertinent information for the reporting of the State Aid contract.

IX

All records kept by Champlin and Brooklyn Park with respect to this Project, shall be subject to examination by the representatives of each party hereto.

X

It is understood and agreed that upon completion of the improvement proposed herein, all Project elements shall be part of the as built plans prepared by Champlin and shall become the property of the City in which those improvements are located and all maintenance, restoration, repair or replacement required thereafter shall be

performed by each City at its own expense. A subsequent agreement between Brooklyn Park and Champlin will establish the maintenance program for the roadway as it relates to the street surface and snow removal, water, sanitary sewer and storm sewer.

XI

It is further agreed that each party to this agreement shall not be responsible or liable to the other or to any other person whomsoever for any claims, damages, actions, or causes of actions of any kind or character arising out of or by reason of the performance of any work or part hereof by the other as provided herein; and each party further agrees to defend at its sole cost and expense any action or proceeding commenced for the purpose of asserting any claim of whatsoever character arising in connection with or by virtue of performance of its own work as provided herein.

Champlin also agrees that any contract let by the City or its agents for the performance of the work on 109th Avenue as provided for herein shall include clauses that will: 1) Require the Contractor to defend, indemnify, and save harmless Champlin and Brooklyn Park, their officers, agents and employees from claims, suits, demands, damages, judgements, costs, interest, expenses (including, without limitation, reasonable attorney's fees, witness fees, and disbursements incurred in the defense thereof) arising out of or by reason of the negligence of the said Contractor, its officers, employees, agents or subcontractors; and 2) Require the Contractor to provide and maintain sufficient insurance so as to ensure the performance of its hold harmless obligations.

XII

✳ The City of Brooklyn Park will be responsible for the installation and reading of water meters to each home in Brooklyn Park. The readings will be taken at the time other meters are read in the area. Brooklyn Park agrees to pay quarterly to the City of Champlin for the total gallons used by Brooklyn Park citizens, based on Champlin's current industrial/commercial rate for water and sewer. The quarterly readings will be submitted with the payment.

Brooklyn Park will be responsible for the maintenance, including turning on and turning off, and the collection of unpaid bills for Brooklyn Park residents. Champlin will have the right to review Brooklyn Park meter readings and billings. Brooklyn Park agrees to pay the same fees for water and sewer as charged any other industrial user within the City of Champlin, including the possibility of increased cost for water treatment.

The City of Champlin agrees to give 60 day notice of any rate change.

IN TESTIMONY WHEREOF, the parties hereto have caused this agreement to be executed by their respective duly authorized officers as of the day and year first above written.

CITY OF CHAMPLIN

BY: _____
Mayor

DATE: 7/11/94

AND: _____
Administrator

DATE: 6/27/94

(Seal)

CITY OF BROOKLYN PARK

BY: _____
Mayor

DATE: 6/27/94

AND: _____
Manager

DATE: 6/27/94

(Seal)

6/14/3-4

AGREEMENT

CITY OF DAYTON AND CITY OF CHAMPLIN

THIS AGREEMENT is made and entered into between the City of Dayton, a Minnesota municipal corporation (hereinafter referred to as "Dayton"), and the City of Champlin, a Minnesota municipal corporation (hereinafter referred to as "Champlin").

RECITALS:

WHEREAS, Champlin currently owns and operates a municipal wastewater system (hereinafter referred to as "sewer") and a municipal water system (hereinafter referred to as "water") (hereinafter sewer and water are collectively referred to as "Champlin's Utilities"); and

WHEREAS, both the Champlin and Dayton comprehensive plans anticipate that there will be single family residential units in the southeast area of Dayton, including the Nature's Crossing Subdivision area.

WHEREAS, the Southeast Area requires access to Champlin's Utilities to develop urban densities; and

WHEREAS, the City of Dayton would like to extend Champlin's Utilities to the Southeast Area of Dayton, shown on attached **Exhibit A** (hereinafter referred to as "Southeast Area").

WHEREAS, Champlin and Dayton desire to enter into this Agreement allowing Champlin's Utilities to serve the Southeast Area pursuant to Minn. Stat. §471.59.

NOW, THEREFORE, it is hereby agreed by and between the parties as follows:

1. Use Allowed. For the term of this Agreement, and any renewals thereof, Champlin grants to Dayton a right and license to connect to and dispose of sanitary sewage from the Southeast Area via its municipal wastewater system. Further, Champlin grants to Dayton a right and license to connect to and draw water to serve the Southeast Area from Champlin's municipal water system. Level of services to be provided by Champlin to the Southeast Area properties pursuant to this Agreement shall be the same as provided by Champlin to similar developments in Champlin. Dayton shall adopt the provisions of Champlin's ordinances governing use of water and sewer, as attached in **Exhibit C**; Dayton may adopt additional ordinances regarding municipal utilities for the area to be served by Champlin, provided any such ordinance or ordinances shall be approved by Champlin, such approval shall not be

unreasonably withheld and the provisions shall not be substantially different from Champlin ordinances.

2. Construction, Ownership and Maintenance. Champlin represents that stub connections for sewer and water are located at the intersection of Goose Lake Road and Goose Lake Parkway that may be used, at Dayton's option, for connection of the Southeast Area to Champlin's Utilities.

Dayton shall pay for all lateral fees for use of sanitary sewer and/or water lateral on Goose Lake Road that benefit Dayton.

Dayton shall pay for and construct all sewer and water lines and associated structures within its boundaries. Champlin shall have the right to review and approve plans for any private/public improvement projects in Dayton's Southeast Area that will utilize Champlin's sewer and water system. Dayton shall pay Champlin for its staff's review time. Champlin shall submit a bill to Dayton upon completion of its review. Dayton shall collect from the private/public project said fee, which is to be based on an hourly charge for Champlin's staff review time. The fee is to be based on an hourly charge with a 2% markup rate to cover staff time and overhead. Dayton shall pay for, own and maintain all sewer and water lines and associated structures constructed within its boundaries. Dayton shall regularly maintain said lines and associated structures so as to keep them in good operating order per specifications detailed in **Exhibit B.** Dayton shall regularly inspect the lines and associated structures and immediately correct any problem which could adversely affect Champlin's Utilities, or which could result in inaccurate readings of flow through said lines. Maintenance shall occur as detailed in **Exhibit B.** All residential properties within the jurisdiction of Dayton served with water and sewer pursuant to this Agreement shall use water meters supplied and maintained by Champlin.

Champlin shall pay for, own and maintain the sewer and water lines and associated structures constructed within its boundaries. Champlin shall regularly maintain said lines and associated structures so as to keep them in good operating order. Maintenance shall occur as detailed in **Exhibit B.** Champlin shall regularly inspect the lines and associated structures and immediately correct any problem which would adversely affect or interfere with delivery of service to Dayton. Champlin shall provide the same level of continuous and uninterrupted service as provided to similar developments in Champlin and as provided in this Agreement, to the Southeast Area.

3. Champlin/Dayton shall share equally [50-50] the ownership and maintenance of public utilities in Goose Lake Road. In accordance with other agreements when Goose Lake Road is turned back to Champlin/Dayton by Hennepin County, Champlin/Dayton shall share equally [50-50] the ownership and maintenance of Goose Lake Road. Maintenance of and capital improvements

for Goose Lake Road shall be subject to consent by both parties. Maintenance shall be done in accordance with **Exhibit D.**

4. Ongoing Services. Champlin agrees that it currently has and will maintain, through the term of this Agreement, the capacity required for both sewer from and water to the Southeast Area pursuant to the land use element of the Comprehensive Plans of both parties in effect on the approval date of this agreement. Further, Champlin agrees it will provide for continuous and uninterrupted sanitary sewer service and city water service to the Southeast Area to the same extent that it provides such services to similar developments in Champlin, except for periods of necessary or emergency maintenance, or catastrophic events, including, but not limited to, flood, storm, war, or any other natural or man made catastrophes or events outside of its control. Except in cases of emergencies, in the event service needs to be interrupted for necessary maintenance, Champlin shall give Dayton fourteen (14) days notice. Said notice shall include a plan for said maintenance and alternative service to be provided, if any, and time period service will be interrupted, which plan and time period of interruption of service shall be reasonable. In the event service needs to be interrupted for emergency maintenance, Champlin shall give Dayton immediate notice. Said notice shall include, or shall as soon as practicable, be followed by a plan for said maintenance and time period service will be interrupted, which plan and time period of interruption of service shall be reasonable. The Cities of Dayton and Champlin shall cooperate in the construction of necessary utility services to serve the Faulds property, located at 11240 109th Ave. Any costs associated with extending sewer and water to the Fauld's property shall be paid by the property owner. As a part of the looping of the watermain on Goose Lake Road by Champlin, Dayton agrees to allow the extension of water trunk pipe into Dayton's municipal boundaries from 109th Avenue to a point approximately one-eighth mile north of 109th Avenue.

5. Fee Formula.

Connection/Billing, Rates, Fees and Changes.

a. Dayton Responsibilities.

Dayton shall be responsible for collection of all fees for connection to water and sewer, including trunk area fees and SAC Fees once a building permit is granted by Dayton. Dayton shall charge each residential unit within the Southeast Area the current rate charged by Champlin, pursuant to Champlin Ordinance and Resolution 2004-09 as shown in **Exhibit E**.

Dayton shall collect from each single family residential (SFR) connection in the Southeast Area and remit to Champlin the following fees:

Water Trunk, Source and Storage Fee	$2,200 per SFR connection
Sewer building fee	25 per SFR connection
Water building fee	25 per SFR connection
Water Meter fee	213 per SFR connection

Dayton shall pay directly to the Metropolitan Council Environmental Service (MCES) a Service Availability Connection (SAC) fee for each connection, which for 2004 amounts to $1,350 per single family connection.

Champlin's current Trunk Sewer Fee shall be paid by the Developer to the City of Dayton, at the time of final plat approval, prior to release of the Final Plat. Dayton shall submit said fees to the City of Champlin within thirty (30) days of Dayton's release of a Final Plat within the Southeast Area.

b. Champlin's Responsibilities. Champlin shall collect the service fees for sewer and water. Dayton shall develop a fair cost to be passed on to Dayton residents which would be a part of Champlin's rate, with that amount being reimbursed to the City of Dayton upon collection by Champlin. The rate of these costs are to be set by Dayton, by resolution, and may be updated by Dayton from time to time. When such an update occurs, Dayton shall notify Champlin ninety (90) days prior to effective date of such rate change, and Champlin shall adjust the amount collected from Dayton residents and subsequently the amount reimbursed to Dayton.

Champlin shall charge Dayton residents for only those services which benefit Dayton residents.

In the event Champlin amends its ordinance or resolution regarding fees, Champlin shall give Dayton written notice. Written notice shall be given 90 days prior to the effective date of such rate change.

Dayton residents have the same right to challenge bills received from Champlin that any other Champlin resident has.

Water meters will be dispersed to Dayton for pick-up and purchase by Dayton residents at the time of the sewer connection permit issuance. The SAC Fee and Water Trunk, Source and Storage Fee shall be collected and sewer and water permits shall be obtained at the time of the water meter purchase. The water meter fees, the Water Trunk, Source and Storage fees and the sewer and water permit fee collected by Dayton, will be submitted to Champlin on a quarterly basis.

c. Service to the Southeast Area. Flow determination for water to and sewer from the Southeast Area shall be determined by water meter readings of each individual residential unit. Champlin will have the sole responsibility of reading water meters and billing residential units within the Southeast Area for use.

d. Champlin shall bill Dayton residents monthly for sewer and water user fees and all applicable penalties. Payments by Dayton residents to Champlin shall be in accordance with Champlin City Ordinance.

Champlin shall notify Dayton of delinquent payments. Dayton shall be responsible for collecting delinquent payments in accordance with the laws of the State of Minnesota. Champlin shall cooperate to the extent necessary to assist Dayton in the collection of delinquent payments and penalties in accordance with Dayton City Ordinances and in accordance with procedures established in either MN Stat. Chapter 429 or MN Stat. 444.075. Within sixty (60) days of the 31st of August of each year of this agreement, Dayton shall pay to Champlin a sum equal to the total amount of delinquent fees as of August 31st. Dayton shall retain the right to assess the applicable properties, or to take any action available to it under law to recover the amount of the delinquent funds it so paid to Champlin.

6. Default and Remedies.

a. Champlin Remedies. In the event Dayton breaches any of its obligations under this agreement, Champlin shall have the right to bring an action of law or, if required by this agreement, arbitration, for its available remedies only after giving thirty (30) days written notice of the breach to Dayton and opportunity to cure the breach. If Dayton does not cure the breach, or reach a mutually agreed upon plan for the cure of the breach within that thirty (30) days notice period, Champlin may commence action or arbitration proceedings after giving ten (10) days written notice to Dayton that it intends to bring such action or arbitration proceeding. Nothing herein shall limit the causes of action or equitable rights that Champlin may assert pursuant to this agreement.

b. Dayton Remedies. In the event Champlin breaches any of its obligations under this agreement, Dayton shall have the right to bring an action at law or, if required by this agreement, arbitration, for its available remedies only after giving thirty (30) days written notice of the breach and opportunity to cure the breach. If Champlin does not cure the breach or reach a mutually agreeable plan for the cure of the breach within that thirty (30) days notice period Dayton may commence action or arbitration proceedings after giving ten (10) days written notice to Champlin that it intends to bring such action or arbitration proceeding. Provided, however, that if a default by Champlin results in sewer and water service to the Southeast Area below the level required by this Agreement, Champlin must take immediate action to correct the problem upon receipt of written notice from Dayton. Nothing herein shall limit the causes of action or equitable rights that Dayton may assert pursuant to this agreement.

7. Notice and Termination. Dayton shall reserve the right to service this area by another means in the future if some other means is provided and in such case, Dayton shall have the right to terminate this Agreement, by giving one hundred eighty (180) days written notice of its intention to terminate this Agreement. In the event of termination, all obligations of Dayton to make payment to Champlin shall cease upon the effective date of the termination.

8 Term. This agreement shall be perpetual and may only be terminated by Dayton pursuant to Section 7 of this Agreement.

9. Indemnity. Dayton shall defend, indemnify and hold Champlin harmless for any claims arising from Dayton's use or maintenance of sewer and water lines, and any associated structures, within the boundaries of Dayton. Champlin shall defend, indemnify and hold Dayton harmless for any claims arising from its operation of water and sewer lines, and any associated structures, located within the boundaries of Champlin.

10. Modification. This Agreement may be modified only by written agreement of both parties.

11 Notice. All notices required by this Agreement shall be in written form and shall be deemed delivered upon its receipt by the City Clerk of either party. Notice may be made by personal delivery, mail or facsimile.

12. Governing Law. This Agreement shall be construed by the laws of the State of Minnesota.

13. Severability. In case any one or more of the provisions contained in this Agreement shall be invalid, illegal or unenforceable in any respect, the validity, legality and enforceability of the remaining provisions contained herein and any other application thereof shall not in any way be affected or impaired thereby.

14. Time is of the Essence. Time is of the essence in the performance of all obligations, undertakings and covenants under this Agreement.

15. Entire Agreement. This Agreement, any attached exhibits and any addenda or amendments signed by the parties shall constitute the entire agreement between Dayton and Champlin, and supersedes any other written or oral agreements between Dayton and Champlin on matters covered hereby.

16. Counterparts. This Agreement may be simultaneously executed in any number of counterparts, all of which shall constitute one and the same instrument.

17. Effective Date. The effective date of this Agreement shall be the last date on which it is executed by any party to this Agreement. This Agreement shall not become effective until it has been executed by all parties to the Agreement.

IN WITNESS, WHEREOF, the parties have agreed to the foregoing terms.

The City of Dayton

By: _____ Dated: 6/21/04
Its: Mayor

By: _____ Dated: 6/21/04
Its: City Clerk

The City of Champlin

By: _____ Dated: 6/14/04
Its: Mayor

By: _____ Dated: 6/14/04
Its: City Clerk

Exhibit A
Champlin-Dayton Joint Powers Agreement

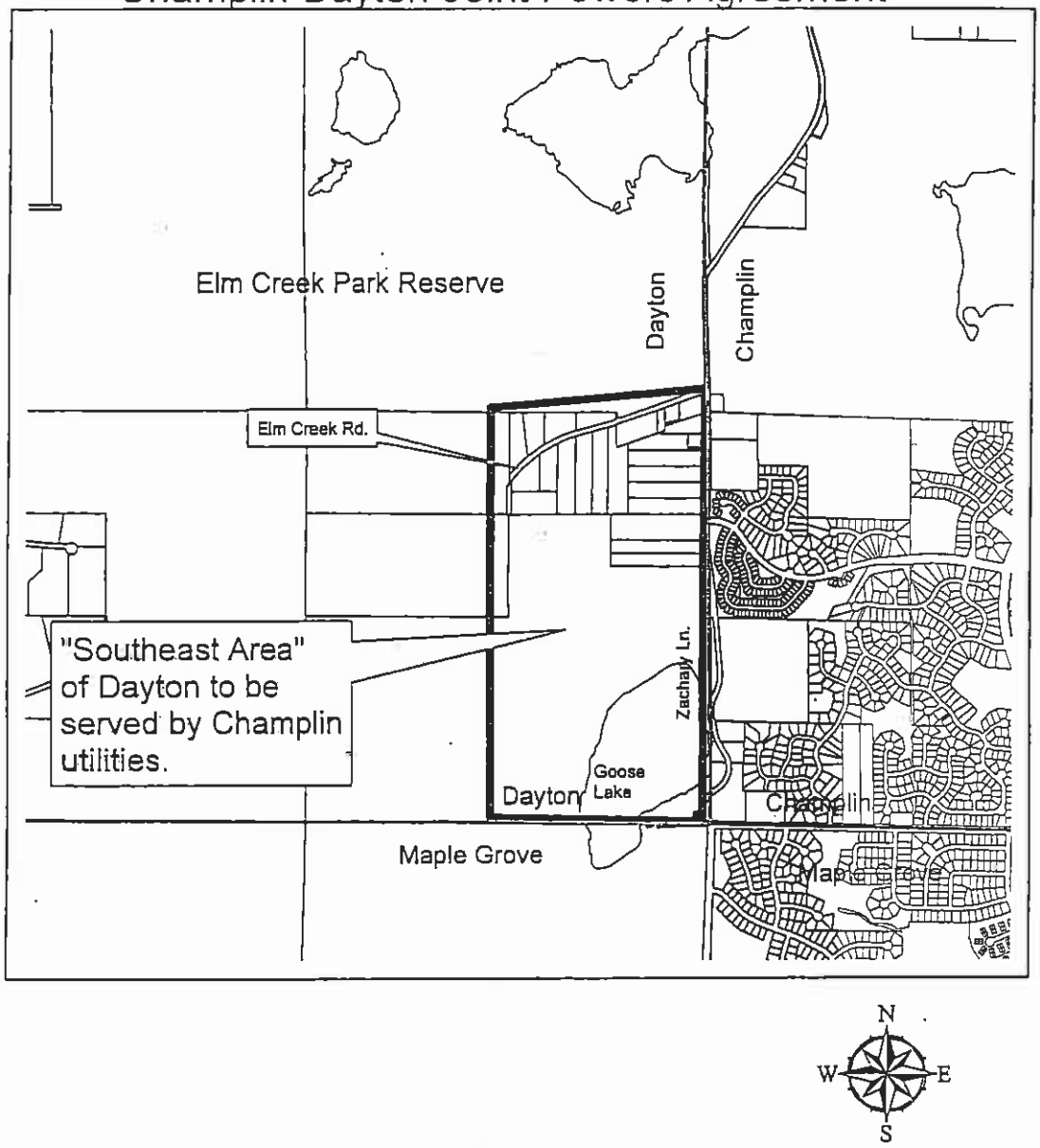


Exhibit B

Scheduled and Emergency Sewer Maintenance, and Scheduled Emergency Water Maintenance.

Scheduled and Emergency Sewer Maintenance

o Sewer Jetting	5 years
o Sewer Televising	As needed
o Sewer Mainline Repairs	As needed based on televising
o Sump Pump Connection Inspection	7 years
o Manhole Casting Maintenance	As needed
o Cone and Ring Inspections	As needed
o Sewer Plugs	As needed
o Locating	As needed
o Lift Station Maintenance	As needed
o Replacement of Infrastructure	As needed
o Excavation Restoration	As needed

Scheduled and Emergency Water Maintenance

o Flush Water Mains	Semi annually
o Exercise Hydrants	Semi annually
o Hydrant Repairs	As needed
o Paint Hydrants	As needed
o Replace Hydrant Flags	As needed
o Gate Valve Maintenance	As needed
o replacement of Infrastructure	As needed
o Locating	As needed
o Meter Reading (by Champlin)	Monthly
o Meter Finals (by Champlin)	As needed
o Meter Repairs (by Champlin)	As needed

Exhibit C

Champlin Ordinances

- An ordinance regulating the operation of the public water system, requiring certain connections to be made to the public water system, providing for the issuance of permits for, and supervision of, all connections to the public water system prescribing certain materials and methods to be used for said connections, prescribing rates and charges for water service, and prescribing for the violation of same. (Champlin 15-201 - 15-236)

- An ordinance regulating the operation of the public sanitary sewer system, requiring connections to be made to the public sanitary sewer system, providing for the issuance of permits for and supervision of all connections to the public sanitary sewer system, prescribing certain materials and methods to be used of said connections, establishing regulations as to types and kinds of wastes that may be disposed of by use of the public sanitary sewer system, prohibiting the discharge of any type or kind of surface waters into the public sanitary sewer system, prescribing rates and charges for disposal services, regulating street excavations, and prescribing penalties for the violation of same. (Champlin 15-401 - 15-414)

- Ordinance establishing an industrial user strength charge in addition to the charge based upon the volume of discharge by an industrial user and establishing an industrial user strength charge formula for the computation thereof to recover operation and maintenance costs or waste treatment services attributable to the strength of the discharge of industrial waste into the sewer system and establishing tax lien against property served in connection with such strength charge. (Champlin 15-801 - 15-807)

- An ordinance regulating the operation of the public water works system during periods when there may be a shortage of water. (Champlin 15-1100 - 15-1103)

- An ordinance providing for the installation or repair of sanitary sewer and water service lines and the collection of costs of such worth or service when done by the municipality as a special assessment against property benefited; and providing penalties for violations. (Champlin 15-1200 - 15-1205)

- An ordinance providing for public right-of-way management. (Champlin 15-1500 - 15-1535)

Exhibit D

Goose Lake Road Maintenance Responsibility

Champlin and Dayton will agree to maintain Goose Lake Road. The City of Champlin and the City of Dayton agree to maintain the roadway on an every other year basis. Road maintenance will be shared as noted below after the County turns back the road to Champlin and Dayton. Champlin will be responsible for maintenance in the even numbered years and Dayton will be responsible for maintenance in odd numbered years. The change over will begin on July 1st of each year. Therefore, for example, Champlin will be responsible for maintenance from July 1, 2006 – June 30, 2007 and Dayton will be responsible for maintenance from July 1, 2007 – June 30, 2008 and so on. The City responsible for maintenance will address all maintenance, curb to curb, of Goose Lake Road between 109th Ave. and Elm Creek Road. This will include:

- Maintenance of street signs
- Maintenance of traffic control signage
- Maintenance of concrete curb and gutter
- Maintenance of gravel shoulder
- Maintenance of catch basins and storm sewer pipe
- Maintenance of bituminous surface to include:
    - ☐ Pot holes
    - ☐ Crack sealing — See below
    - ☐ Seal coating — See below
    - ☐ Traffic markings — See below
- Street sweeping
- Snow and ice control
- Raising and lowering of any iron (manholes, catch basins, gate valves, etc)

- Maintenance does not include any side walk or trail located in Dayton or Champlin.

- Cracksealing and sealcoating will be done every six years. The cost will be divided by each City 50/50. The City of Champlin is responsible for the coordination of maintenance activities.

- Traffic markings will be done each year. The cost will be divided by each City 50/50. The City of Dayton is responsible for the coordination of this maintenance activity.

- If the road requires any "new" items (i.e. street sign, catch basin, etc.) Champlin and Dayton will share in the cost 50/50 assuming both cities agree.

Councilmember Whalen introduced the following resolution and moved its adoption:

CITY OF CHAMPLIN
HENNEPIN COUNTY, MINNESOTA
RESOLUTION 2005 - 99

RESOLUTION APPROVING THE BID AND AWARDING THE CONTRACT FOR 109th AVENUE STREET RECONSTRUCTION PROJECT NO. 20405 APPROVING THE CO-OPERATIVE JOINT POWERS AGREEMENT WITH THE CITY OF MAPLE GROVE

WHEREAS, pursuant to an advertisement for bids for the improvement of 109th Avenue Street Reconstruction Project No. 20405, bids were received, opened and tabulated according to law, and the following bids were received complying with the advertisement:

BIDDER	BID AMOUNT
Park Construction	$2,416,688.13
Hardrives, Inc.	$2,443,635.25
Richard Knutson, Inc.	$2,494,372.87
C.S. McCrossan Construction	$2,566,974.15
Palda & Sons	$2,630,134.06

WHEREAS, it appears that Park Construction of Hampton, Minnesota, is the lowest responsible bidder, and

WHEREAS, the improvement would be a benefit to the City, and

WHEREAS, a Co-operative Construction Agreement has been drafted between the Cities of Maple Grove and Champlin.

NOW, THEREFORE, BE IT RESOLVED by the Champlin City Council that the Mayor and Clerk are hereby authorized and directed to enter into the attached Co-operative Joint Powers Agreement with the City of Maple Grove for the improvement of 109th Avenue Reconstruction Project 20405 according to the plans and specifications hereby approved by the City Council and on file in the Office of the City Clerk.

FURTHER BE IT RESOLVED that the City Clerk is hereby authorized and directed to return forthwith to all bidders the deposits made with their bids except that the deposit of the successful bidder and the next lowest bidder shall be retained until the contract has been signed.

The motion for the adoption of the foregoing resolution was duly seconded by Councilmember Uglem, and upon vote being taken thereon, the following voted in favor thereof: Mayor Boynton, Councilmembers Whalen, Uglem, Payer and Swenson, and the following voted against the same: none, whereupon said resolution was passed this 26th day of September 2005.

Steven E. Boynton, Mayor

ATTEST:

Roberta Colotti, City Clerk

COOPERATIVE JOINT POWERS AGREEMENT
109TH AVENUE NORTH CONSTRUCTION
CITIES OF BROOKLYN PARK, MAPLE GROVE, CHAMPLIN

AGREEMENT, made and entered into this _____ day of _____, 20___, by and between the City of Brooklyn Park, hereinafter referred to as "Brooklyn Park," and City of Maple Grove, hereinafter referred to as "Maple Grove;" and the City of Champlin, hereinafter referred to as "Champlin."

WITNESSETH:

WHEREAS, Maple Grove Brooklyn Park and Champlin are desirous of bringing about the improvement of that portion of 109th Avenue North (Maple Grove MSAS _____, Brooklyn Park MSAS _____, Champlin _____ MSAS) between Zachary Lane (County Road 202) and Jefferson Highway (Engineer's Stations _____ to _____) as shown on construction plans prepared by Maple Grove dated _____, for which improvement contemplates concrete curb and gutter; bituminous trail/concrete sidewalk/trails; aggregate base, utilities; bituminous base and wearing courses; landscaping; and other related improvements; and

WHEREAS, the above-mentioned construction of 109th Avenue North shall be hereinafter identified as MG 04-05/BP ST-1418/CH 20405; and

WHEREAS, the above described project between Zachary Lane (County Road 202) and 310 feet east of Lancaster (Engineer's Stations _____ to _____) lying South of centerline is within Maple Grove and lying North of centerline between Zachary Lane and Jefferson Highway is within Champlin, construction items of which are identified in the construction contract documents; and

WHEREAS, the above described project between 310 feet East of Lancaster Lane and Jefferson Highway (Engineer's Stations _____ to _____) lying South of centerline is within Brooklyn Park, construction items of which are identified in the construction contract documents; and

WHEREAS, Brooklyn Park, Maple Grove and Champlin have the authority to special assess to benefited properties the costs of public improvement projects under Statutes Chapter 429.0; and

WHEREAS, Statutes Chapter 429.0 require that certain rules and regulations regarding feasibility reports, City Council actions, improvement and assessment hearings must all be completed; and

WHEREAS, plans and specifications must be prepared for the improvement, bids accepted, a contract awarded and construction management exercised throughout the improvement process; and

WHEREAS, it is contemplated that the public improvement project be carried out by the parties hereto under the provisions, terms and conditions set forth.

NOW THEREFORE, IT IS HERBY AGREED:

I

The cities of Brooklyn Park Maple Grove and Champlin, by executing this agreement, mutually approve the City of Maple Grove as the Lead Agency and agree to approve the plans and specifications for said project. The cities shall provide the Consultants with all the available data and materials pertinent to the work program and as requested by the Consultant. The City's data and material may consist of, but will not be limited to; contour maps, utility and street plans, aerial photos and previous environmental study material.

II

Maple Grove shall prepare on behalf of the cities as parties hereto, the necessary feasibility report(s) for usage by each individual city for subsequent public improvement and assessment hearings. Each City shall prepare an addendum to the feasibility report indicating their assessment program, a list of the affected properties and pertinent information unique to each City's special assessment program.

III

Maple Grove shall prepare the plans and specifications, advertise for and receive bids; enter into a contract for said project with the successful bidder at the unit prices specified in the bid of the

lowest responsible bidder, according to law in such case provided for public improvements under Chapter 429.0.

The contract documents will include the plans and specifications prepared by Maple Grove or its agents and approved by Brooklyn Park and Champlin. The plans and specifications shall be in compliance with all State Aid standards and shall be approved for State Aid funding and Trunk Highway Turnback funding The extent of construction on intersecting streets beyond the 109th Avenue North extended right-of-way limits will be based on acceptable design standards. Additional work beyond these limits may be a funding responsibility for that city(ies).

IV

Maple Grove shall administer the contract and inspect the construction of the contract work contemplated herewith. All work on 109th Avenue North shall be completed in compliance with the plans and specifications. Brooklyn Park and Champlin's City Engineers or their staff shall have the right, as the work progresses, to enter upon the premises to make any inspections deemed necessary, but will have no responsibility for the supervision of the work.

V

Maple Grove shall be responsible for receiving final approval of the project by the State Aid Engineer and obtaining the necessary agency approvals. Maple Grove, Champlin and Brooklyn Park, at (its) their own expense shall acquire all rights-of-way and/or easements required in accordance with State law and requirements and the approved right-of-way plans, for the construction of said project within their respective corporate limits. Maple Grove or its agent will provide a description and individual drawing of each parcel involved in the right-of-way program according to the approved right-of-way plan. The individual drawing will show the permanent and temporary right-of-way taking with appropriate dimensions. The right-of-way costs incurred shall include all acquisition costs including, but not limited to, any and all damages occurring to any person or persons, including private utilities, relocation assistance, removing or adjusting main conduits or other structures located in or upon the land taken and within the present right-of-way; or damage in procuring such right-of-way in the performance of this contract with respect to the improvement of 109th Avenue North in accordance with the plans and specifications. The right-of-

way costs expended by each City shall be included as part of the eligible turnback funding program.

VI

The proposed schedule to complete the improvement project described herein as follows:

1.	Complete the Cooperative Agreement	April 14, 2005
2.	Complete the necessary Consulting Engineer Agreements	April 28, 2005
3.	Preliminary construction and right-of-way plans approval from cities and agencies	May 15, 2005
4.	File condemnation documents	N.A.
5.	Hold Public Hearing	April/May, 2005
6.	Award construction	June 20, 2005
8.	Complete construction	October 1, 2005

VII

Brooklyn Park, Maple Grove and Champlin shall share in the project costs, including construction, engineering and administrative costs, for that portion of the improvement as identified in Appendix A. Engineering and administrative costs associated with the project shall not exceed eighteen percent (18%) (unless approved by the parties hereto) of the construction cost exclusive of the cost to provide the right-of-way parcel descriptions and individual parcel drawings. The cost of providing the right-of-way parcel description and individual parcel drawing can be in excess of the 18% maximum. The aforestated sharing shall be exclusive of trails and sidewalks, which trails and sidewalks shall be paid for, in their entirety, by the City in which they are constructed.

VIII

All direct payments for project design and administration and to the Contractor for work performed on said project will be made by Maple Grove. Maple Grove shall be responsible for and pay all the construction costs of the contract work for said project as identified herein and delineated in the contract documents. The final proportionate project costs attributed to Brooklyn Park and Champlin, including justifiable interest thereon, shall be paid to Maple Grove within 30 days of the plan approval and 30 days of final project construction approval.

IX

Maple Grove, Brooklyn Park and Champlin shall each be responsible for reporting of State Aid contracts to Mn/DOT for their respective segments of the project and the collecting of State Aid funds.

Maple Grove shall provide to Brooklyn Park and Champlin all pertinent information for the reporting of the State Aid contract.

X

All records kept by Maple Grove, Brooklyn Park and Champlin with respect to this project, shall be subject to examination by the representatives of each party hereto.

XI

It is agreed that modifications to existing traffic control signage, as well as additional signage, shall be included in the herein described project. As part of the project, a signage plan shall be prepared by Maple Grove. Future modification of that plan by either Brooklyn Park, Maple Grove or Champlin shall be mutually approved by the parties hereto.

XII

It is understood and agreed that upon completion of the improvement proposed herein, all project elements shall be part of the as-built plans prepared by Maple Grove and shall become the property of the City in which those improvements are located and all maintenance, restoration, repair or replacement required thereafter shall be performed by each City at its own expense. Subsequent agreements between Maple Grove/Brooklyn Park/Champlin will establish the maintenance program for the roadway for each portion of 109th Avenue North located in the aforementioned City.

XIII

It is further agreed that each party to this agreement shall not be responsible or liable to the other or to any other person whomsoever for any claims, damages, actions, or causes of actions of any kind or character arising out of or by reason of the performance of any work or part hereof by the other as provided herein; and each party further agrees to defend at its sole cost and expense any

action or proceeding commenced for the purpose of asserting any claim of whatsoever character arising in connection with or by virtue of performance of its own work as provided herein.

Maple Grove also agrees that any contract let by the City or its agents for the performance of the work on 109th Avenue North as provided for herein shall include clauses that will: 1) Require the Contractor to defend, indemnify, and save harmless Brooklyn Park, Maple Grove, and Champlin, their officers, agents and employees from claims, suits, demands, damages, judgments, costs, interest, expenses (including, without limitation, reasonable attorney's fees, witness fees, and disbursements incurred in the defense thereof) arising out of or by reason of the negligence of the said Contractor, its officers, employees, agents or subcontractors; and 2) Require the Contractor to provide and maintain sufficient insurance so as to ensure the performance of its hold harmless obligations.

IN TESTIMONY WHEREOF, the parties hereto have caused this agreement to be executed by their respective duly authorized officers as of the day and year first above written.

CITY OF BROOKLYN PARK	CITY OF MAPLE GROVE
BY:_____ Mayor	BY:_____ Mayor
DATE:_____	DATE:_____
AND:_____ Manager	AND:_____ Administrator
DATE:_____	DATE:_____
(Seal)	(Seal)

CITY OF CHAMPLIN

BY _____
Mayor

DATE: 10-13-05

AND: _____
Administrator

DATE: 10-14-05

(Seal)

109TH AVENUE NORTH RECONSTRUCTION

ITEM NUMBER	NOTES	ITEM DESCRIPTION	UNIT	TOTAL ESTIMATED QUANTITY	EST. UNIT PRICE	TOTAL COST	CITY OF CHAMPLIN		CITY OF MAPLE GROVE		CITY OF BROOKLYN PARK	
							ESTIMATED QUANTITY	ESTIMATED COST	ESTIMATED QUANTITY	ESTIMATED COST	ESTIMATED QUANTITY	ESTIMATED COST
GRADING:												
2021.501	(5)	MOBILIZATION	LUMP SUM	1	$100,000.00	$100,000.00	50%	$ 50,000.00	40%	$ 40,000.00	10%	$ 10,000.00
2104.501		REMOVE CULVERT	LIN FT	210.0	$10.00	$2,100.00	210.0	$ 2,100.00	0.0	$ -	0.0	$ -
2104.501		REMOVE CURB AND GUTTER	LIN FT	430.0	$1.50	$645.00	250.0	$ 375.00	90.0	$ 135.00	90.0	$ 135.00
2104.503		REMOVE BITUMINOUS WALK	SQ FT	33270.0	$0.50	$16,635.00	0.0	$ -	22180.0	$ 11,090.00	11090.0	$ 5,545.00
2104.503		REMOVE BITUMINOUS PAVEMENT	SQ YD	25770.0	$2.00	$51,540.00	13410.0	$ 26,820.00	9320.0	$ 18,640.00	3040.0	$ 6,080.00
2105.501		COMMON EXCAVATION (EV)	CU YD	54810.0	$8.00	$439,280.00	27940.0	$ 223,520.00	21830.0	$ 174,640.00	5140.0	$ 41,120.00
2105.507	(3)	SUBGRADE EXCAVATION (EV)	CU YD	510.0	$10.00	$5,100.00	280.0	$ 2,800.00	280.0	$ 2,800.00	50.0	$ 500.00
2105.522	(1)	SELECT GRANULAR BORROW (CV) (IZ)	CU YD	14660.0	$15.00	$219,900.00	7460.0	$ 111,900.00	5830.0	$ 87,450.00	1370.0	$ 20,550.00
		SUBTOTAL: GRADING				$ 835,200.00		$ 417,315.00		$ 333,955.00		$ 83,930.00
PAVING:												
2211.503	(1)	AGGREGATE BASE (CV) CLASS 5	CU YD	8760.0	$ 25.00	$244,500.00	4970.0	$ 124,250.00	3890.0	$ 97,250.00	920.0	$ 23,000.00
2301.503		CONCRETE PAVEMENT IRREGULAR WIDTH	SQ YD	590.0	$ 25.00	$14,750.00	60.0	$ 1,500.00	530.0	$ 13,250.00	0.0	$ -
2301.511		STRUCTURAL CONCRETE	CU YD	130.0	$ 100.00	$13,000.00	20.0	$ 2,000.00	110.0	$ 11,000.00	0.0	$ -
2350.603	(1)	BITUMINOUS WEARING COURSE 2" THICK	SQ YD	37980.0	$ 4.00	$151,920.00	19430.0	$ 77,720.00	15010.0	$ 60,040.00	3540.0	$ 14,160.00
2350.603	(1)	BITUMINOUS BINDER COURSE 2" THICK	SQ YD	37980.0	$ 4.00	$151,920.00	19430.0	$ 77,720.00	15010.0	$ 60,040.00	3540.0	$ 14,160.00
2350.603	(1)	BITUMINOUS BASE COURSE 3" THICK	SQ YD	37980.0	$ 5.50	$208,890.00	19430.0	$ 106,865.00	15010.0	$ 82,555.00	3540.0	$ 19,470.00
2357.502		BITUMINOUS MATERIAL FOR TACK COAT	GALLON	3620.0	$ 2.00	$7,240.00	1950.0	$ 3,900.00	1510.0	$ 3,020.00	360.0	$ 720.00
2521.501		5" CONCRETE WALK	SQ FT	9500.0	$ 2.50	$23,750.00	9500.0	$ 23,750.00	0.0	$ -	0.0	$ -
2531.503		3" CONCRETE MEDIAN	SQ YD	190.0	$ 15.00	$2,850.00	50.0	$ 750.00	140.0	$ 2,100.00	0.0	$ -
2521.511		2.5" BITUMINOUS WALK	SQ FT	84910.0	$ 1.80	$116,838.00	47160.0	$ 84,888.00	4040.0	$ 7,272.00	13710.0	$ 24,678.00
2531.501		CONCRETE CURB & GUTTER DESIGN B412	LIN FT	680.0	$ 5.00	$5,280.00	140.0	$ 1,120.00	520.0	$ 4,160.00	0.0	$ -
2531.501		CONCRETE CURB & GUTTER DESIGN B424	LIN FT	14500.0	$ 10.00	$145,000.00	7120.0	$ 71,200.00	5880.0	$ 58,800.00	1400.0	$ 14,000.00
2531.501		CONCRETE CURB & GUTTER DESIGN B624	LIN FT	200.0	$ 9.00	$1,800.00	130.0	$ 1,170.00	0.0	$ -	70.0	$ 630.00
2531.501		CONCRETE CURB & GUTTER DESIGN B618	LIN FT	280.0	$ 9.00	$2,520.00	280.0	$ 2,520.00	0.0	$ -	0.0	$ -
2531.502		PEDESTRIAN CURB RAMPS	EACH	31.0	$ 500.00	$15,500.00	15.0	$ 7,500.00	15.0	$ 7,500.00	1.0	$ 500.00
		SUBTOTAL: PAVING				$ 1,106,158.00		$ 586,853.00		$ 407,987.00		$ 111,318.00
STORM SEWER:												
2105.600	(5)	CONSTRUCT WATER QUALITY TREATMENT	EACH	2.0	$ 20,000.00	640,000.00	50%	$ 20,000.00	40%	$ 16,000.00	10%	$ 4,000.00
2502.541	(5)	4" PERF TP PIPE DRAIN W/ SOCK	LIN FT	600.0	$ 12.00	$7,200.00	50%	$ 3,600.00	40%	$ 2,880.00	10%	$ 720.00
2503.603	(5)	15" PIPE SEWER (STORM)	LIN FT	4920.0	$ 22.00	$108,240.00	50%	$ 54,120.00	40%	$ 43,296.00	10%	$ 10,824.00
2503.603	(5)	18" PIPE SEWER (STORM)	LIN FT	1805.0	$ 26.00	$46,730.00	50%	$ 20,865.00	40%	$ 16,692.00	10%	$ 4,173.00
2503.603	(5)	21" PIPE SEWER (STORM)	LIN FT	1595.0	$ 28.00	$44,660.00	50%	$ 22,330.00	40%	$ 17,864.00	10%	$ 4,466.00
2503.603	(5)	24" PIPE SEWER (STORM)	LIN FT	30.0	$ 32.00	$960.00	50%	$ 480.00	40%	$ 384.00	10%	$ 96.00
2503.603	(5)	27" PIPE SEWER (STORM)	LIN FT	60.0	$ 46.00	$2,760.00	50%	$ 1,380.00	40%	$ 1,104.00	10%	$ 276.00
2506.602	(5)	DRAINAGE STRUCTURES	EACH	44.0	$ 2,000.00	$88,000.00	50%	$ 44,000.00	40%	$ 35,200.00	10%	$ 8,800.00
2506.602	(5)	CATCH BASINS	EACH	28.0	$ 1,100.00	$28,600.00	50%	$ 14,300.00	40%	$ 11,440.00	10%	$ 2,860.00
2506.522	(5)	ADJUST FRAME & RING CASTING	EACH	10.0	$ 200.00	$2,000.00	50%	$ 1,000.00	40%	$ 800.00	10%	$ 200.00
2506.602	(5)	RECONSTRUCT DRAINAGE STRUCTURE	EACH	1.0	$ 750.00	$750.00	50%	$ 375.00	40%	$ 300.00	10%	$ 75.00
		SUBTOTAL: STORM SEWER				$ 324,900.00		$ 162,450.00		$ 129,980.00		$ 32,490.00

APPENDIX A

109TH AVENUE NORTH RECONSTRUCTION

ITEM NUMBER	NOTES	ITEM DESCRIPTION	UNIT	TOTAL ESTIMATED QUANTITY	EST. UNIT PRICE	TOTAL COST	CITY OF CHAMPLIN		CITY OF MAPLE GROVE		CITY OF BROOKLYN PARK	
							ESTIMATED QUANTITY	ESTIMATED COST	ESTIMATED QUANTITY	ESTIMATED COST	ESTIMATED QUANTITY	ESTIMATED COST
SANITARY SEWER:												
2506.602		RECONSTRUCT LIFT STATION STRUCTURE	EACH	1.0	$ 1,000.00	$ 1,000.00	1.0	$ 1,000.00	0.0	$ -	0.0	$ -
2506.522		ADJUST FRAME & RING CASTING	EACH	8.0	$ 200.00	$ 1,600.00	8.0	$ 1,600.00	0.0	$ -	0.0	$ -
		SUBTOTAL: SANITARY SEWER				$ 2,600.00		$ 2,600.00		$ -		$ -
WATERMAIN:												
2504.602		HYDRANT	EACH	1.0	$ 2,000.00	$ 2,000.00	1.0	$ 2,000.00	0.0	$ -	0.0	$ -
2504.602		8" PIPE BEND 45 DEGREE	EACH	2.0	$ 115.00	$ 230.00	2.0	$ 230.00	0.0	$ -	0.0	$ -
2504.602		8" X 6" TEE FITTING	EACH	1.0	$ 345.00	$ 345.00	1.0	$ 345.00	0.0	$ -	0.0	$ -
2504.602		6" GATE VALVE AND BOX	EACH	1.0	$ 600.00	$ 600.00	1.0	$ 600.00	0.0	$ -	0.0	$ -
2504.602		8" GATE VALVE AND BOX	EACH	1.0	$ 700.00	$ 700.00	1.0	$ 700.00	0.0	$ -	0.0	$ -
2504.603		6" WATERMAIN	LIN FT	10.0	$ 17.00	$ 170.00	10.0	$ 170.00	0.0	$ -	0.0	$ -
2504.603		8" WATERMAIN	LIN FT	1260.0	$ 25.00	$ 31,500.00	1260.0	$ 31,500.00	0.0	$ -	0.0	$ -
		SUBTOTAL: WATER MAIN				$ 35,545.00		$ 35,545.00		$ -		$ -
TRAFFIC:												
2563.601	(5)	TRAFFIC CONTROL	LUMP SUM	1	$ 40,000.00	$ 40,000.00	50%	$ 20,000.00	40%	$ 16,000.00	10%	$ 4,000.00
2564.000	(5)	SIGN AND STRIPING	MILE	1.3	$ 25,000.00	$ 31,250.00	50%	$ 15,625.00	40%	$ 12,500.00	10%	$ 3,125.00
		SUBTOTAL: TRAFFIC				$ 71,250.00		$ 35,625.00		$ 28,500.00		$ 7,125.00
TURF ESTABLISHMENT:												
2573.502		SILT FENCE, TYPE PREASSEMBLED	LIN FT	13870.0	$ 2.00	$ 27,740.00	8930.0	$ 13,880.00	9550.0	$ 11,100.00	1390.0	$ 2,780.00
2573.602	(5)	INLET PROTECTION-SEDIMENT CONTROL	EACH	70.0	$ 200.00	$ 14,000.00	50%	$ 7,000.00	40%	$ 5,600.00	10%	$ 1,400.00
2575.600	(4) (5)	SEEDING	ACRE	10.0	$ 1,700.00	$ 17,000.00	50%	$ 8,500.00	40%	$ 6,800.00	10%	$ 1,700.00
2575.505		SODDING TYPE LAWN W/ 4" TOPSOIL	SQ YD	12340.0	$ 3.00	$ 37,020.00	8170.0	$ 18,510.00	4930.0	$ 14,790.00	1240.0	$ 3,720.00
		SUBTOTAL: TURF ESTABLISHMENT				$ 95,760.00		$ 47,870.00		$ 38,290.00		$ 9,600.00
	(3)	SUBTOTAL: CONSTRUCTION COST				$ 2,471,413.00		$ 1,288,258.00		$ 938,692.00		$ 244,463.00
		CONTINGENCIES, ENGINEERING, INSPECTION AND ADMINISTRATION (35%)				$ 864,994.55		$ 450,890.30		$ 328,542.20		$ 85,562.05
		TOTAL ESTIMATED COST				$ 3,336,407.55		$ 1,739,148.30		$ 1,267,234.20		$ 330,025.05

NOTES:
(1) PAVEMENT CONSTRUCTION ASSUMES A SECTION OF 2" WEAR, 2" BINDER, 3" BASE, 6" AGGREGATE BASE & 12" SELECT GRANULAR.
(2) COSTS DO NOT INCLUDE RIGHT OF WAY OR EASEMENT ACQUISITION COSTS.
(3) ASSUMED.
(4) INCLUDES SEED, SEEDING, FERTILIZER, AND MULCH.
(5) PARTICIPATION BY LINEAR FOOTAGE OF ROAD FRONTAGE: CHAMPLIN 50%, MAPLE GROVE 40%, BROOKLYN PARK 10%.

CITY OF CHAMPLIN

REQUEST FOR COUNCIL ACTION

AGENDA SECTION	ORIGINATING DEPT	MEETING DATE
CONSENT	ENGINEERING	APRIL 27, 1998

ITEM NO:	ITEM DESCRIPTION	PREPARED BY
12	COOPERATIVE AGREEMENT WITH BROOKLYN PARK FOR WATERMAIN INTERCONNECTION ON MISSISSIPPI	T. TUOMINEN J. BITTLE

BACKGROUND

The City of Champlin Water Plan has identified a need for emergency interconnections between the our neighboring cities. One of the potential interconnection locations is on Mississippi Drive at the municipal boundary. The Champlin watermain in this area was constructed as part of the 92-2 Southeast Area utility improvements. It is a condition of the Edgetown Estates Development to construct an emergency watermain connection to the proposed Brooklyn Park watermain system.

REVIEW OF ISSUES

The City of Champlin has proposed that an emergency water interconnection be constructed as part of the Edgetown Estates Development construction. This interconnection will serve as an emergency source of water for either Brooklyn Park or Champlin in the event of a water shortage or a water emergency. The City of Champlin would be financially responsible for the construction of the valve and manhole, while Brooklyn Park would be responsible to extend their watermain to the municipal boundary. The estimated cost of the Champlin share is estimated at $2002.00, including 10% engineering cost. This cost would be paid from the Trunk Source and Storage Fund.

ALTERNATIVES/IMPACTS (UPSIDE/DOWNSIDE)

UPSIDE
The interconnection with Brooklyn Park will benefit and provide protection to both Cities. There are no negative impacts.

DOWNSIDE
The interconnection will cost the City of Champlin $2002.

STAFF RECOMMENDATIONS

It is recommended that the City Council approve the attached Joint Powers Agreement between the Cities of Champlin and Brooklyn Park for the Emergency Watermain Interconnection at Mississippi Drive.

It is further recommended that the City's share, amounting to $2002 be paid from the TS&S Fund.

Attachment: Joint Powers Agreement

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APPROVED
CITY ADMINISTRATOR
DATE 4/23/98
AGENDA DATE 4/27/98

COOPERATIVE JOINT POWERS AGREEMENT FOR EMERGENCY/STANDBY WATER INTERCONNECT BETWEEN THE CITIES OF BROOKLYN PARK AND CHAMPLIN

THIS AGREEMENT, made and entered into this ____ day of _____, 1998, by and between the City of Brooklyn Park, herein referred to as "Brooklyn Park" and the City of Champlin, herein referred to as "Champlin."

WITNESSETH:

WHEREAS, Champlin and Brooklyn Park each operate and maintain separate water production and distribution systems for the health, safety, welfare, and benefit of each City's constituents, and;

WHEREAS, Champlin and Brooklyn Park are desirous of establishing a common water connection between the two systems in the event of a water shortage or water emergency, and;

WHEREAS, Champlin has identified the need for an emergency water connection with Brooklyn Park as part of Champlin's water resource management plan, and;

WHEREAS, Champlin and Brooklyn Park have identified Mississippi Drive at the municipal boundary as an appropriate location to provide an emergency water connection, and;

WHEREAS, Brooklyn Park and Champlin have authorized roadway and utility improvements as part of Edgetown Estates Development, and;

WHEREAS, Champlin and Brooklyn Park have agreed that it is appropriate and feasible to install a water connection as part of this improvement project, and;

WHEREAS, Minnesota statutes 471.59 allows Champlin and Brooklyn Park to enter into a Joint Powers Agreement to plan and construct public utilities on common boundaries between two cities.

NOW, THEREFORE, it is hereby agreed by and between the parties to this agreement as follows:

1. That Champlin and Brooklyn Park by executing this agreement, mutually approve the plans and specifications for said water improvements.

2. Champlin and Brooklyn Park shall independently enter into development agreements with the developers of Edgetown Estates and thereby requiring the developer to provide all necessary plans prepared by the developers engineer.

3. Champlin and Brooklyn Park shall require that the developer construct said water improvements in compliance with the approved plans and specifications. Champlin and Brooklyn Park shall each inspect and test their own respective utilities. The proposed watermain valves/manhole shall be determined as the boundary of municipal ownership. Each respective City shall be responsible to require that the developer or his designer correct any deficiencies found in the respective City.

4. The proposed schedule by the developer is to complete the improvement project prior to May 1, 1998.

5. Champlin shall be responsible for costs incurred for the watermain valve to manhole including construction, plus 10% for engineering. Brooklyn Park shall require the developer to provide connection to said valve.

6. It is understood and agreed that upon completion of these improvements, all project elements shall be part of the record plans prepared by Brooklyn Park and reviewed by Brooklyn Park and shall become the property of the city in which those improvements are located. All maintenance and repair or replacement required thereafter shall be performed by Champlin for the watermain valve/manhole and utilities located north and east of the municipal boundary. Brooklyn Park shall be responsible for maintenance and repair south of the boundary.

7. It is the intent and understanding of both cities that said interconnect shall be utilized for temporary or emergency uses only. It is understood and agreed that upon project completion, opening of the emergency interconnect by either City shall be performed only upon authorization by the City Manager or designee of the other City. Terms of emergency use, such as the length of time of actual water transfer and appropriate compensation shall be negotiated between and by each City's City Manager or designee at the time of emergency. Both Brooklyn Park and Champlin shall have the authority to close the temporary exchange of water at any time, but must provide reasonable notice to the other City prior to doing so.

8. It is further agreed that each party to this agreement shall not be responsible or liable to the other or to other persons whosoever for claims, damages, actions, or causes of actions of any kind or character rising out of or by reason of performance of any work or part hereof by the other as provided herein; and each party agrees to defend at its sole cost and expense, any action or proceeding commenced for the purpose of asserting any claim or whatsoever character arising in connection with or by virtue of performance of its own work as provided herein.

9. Nothing herein shall be deemed a waiver of the limitations or liability provided for in Minnesota Statutes, Chapter 466, and neither party shall have any obligation to indemnify the other in any amount in excess of the limitations on liability set forth therein.

IN TESTIMONY WHEREOF, the parties hereto have caused this agreement to be executed by their respective duly authorized officers as of the day and year first above written.

CITY OF CHAMPLIN

BY_____
Mayor

DATE:_____

AND:_____
City Administrator

DATE:_____

(SEAL)

CITY OF BROOKLYN PARK

BY_____
Mayor

DATE:_____

AND:_____
City Manager

DATE:_____

(SEAL)

Appendix 7:
Municipal Critical Water Deficiency Ordinance

Appendix 7
City of Champlin, Official Critical Water Deficiency Control Ordinance

DIVISION 5. - WATER SHORTAGES

Sec. 58-166. - City to impose water restrictions by resolution.

Whenever the city council shall determine that a shortage of water supply threatens the city, it may limit the times and hours during which water may be used from the municipal water supply system for lawn and garden sprinkling, irrigation, car washing, air conditioning or other uses specified therein. Notice of the limitations shall be given in such a matter as the council may determine including, but not limited to, newspaper articles, radio and television broadcasts, or notice on the city's website.

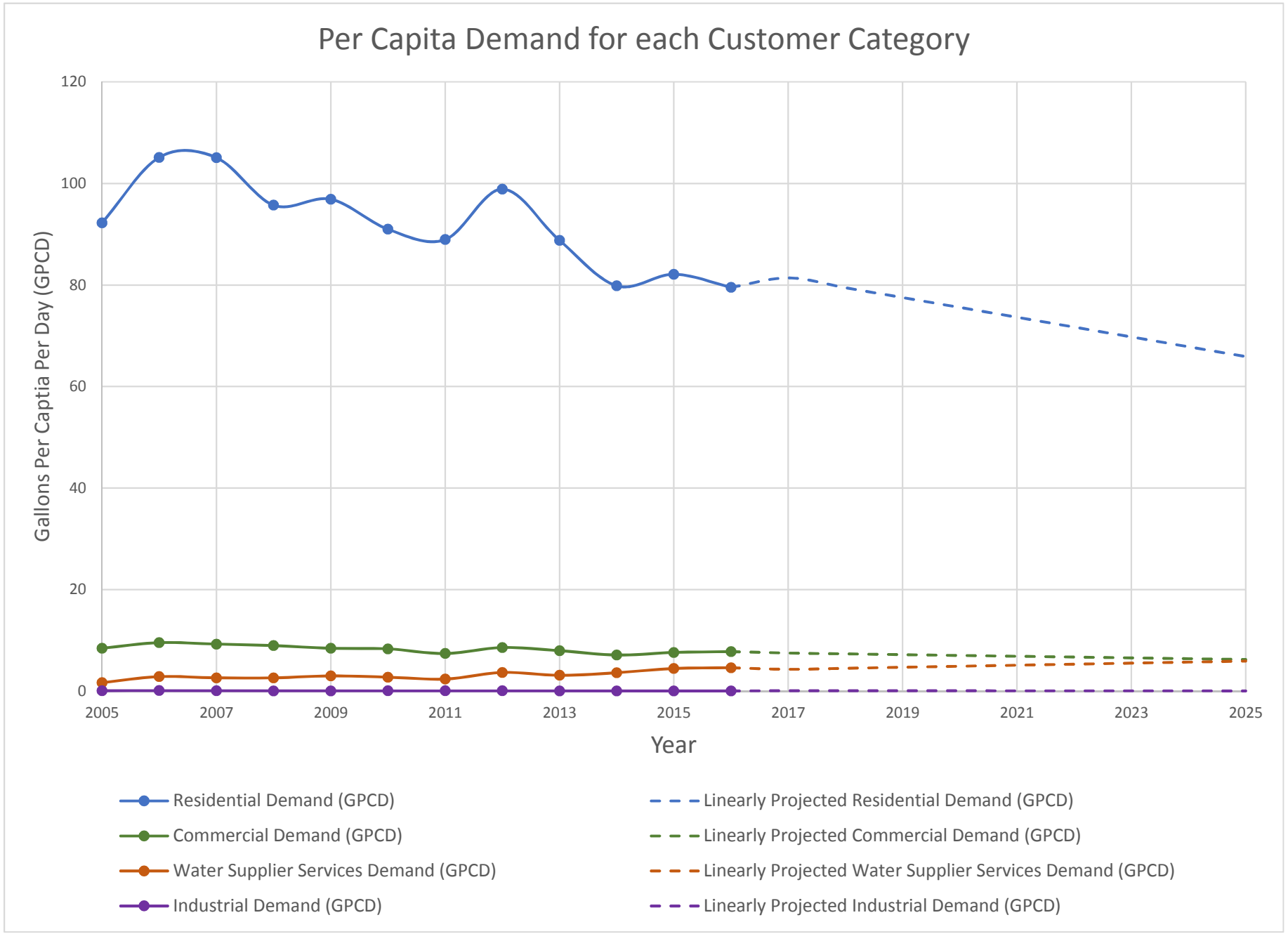
(Code 1977, § 15-1100; Ord. No. 633, § 15-1100, 1-8-2007)

Sec. 58-168. - Emergency restrictions.

In addition, the city council, city administrator, or utility superintendent shall have the right to impose reasonable restrictions on the use of the city water system in emergency situations and any water customer who shall cause or permit water to be used in violation of these restrictions shall be subject to the penalties as set forth in section 58-167.

(Code 1977, § 15-1102)

Appendix 8:
Graph of Ten Years of Annual Per Capita Water Demand for Each Customer Category


Per Capita Demand for each Customer Category
Gallons Per Captia Per Day (GPCD)
120
100
80
60
40
20
0
2005
2007
2009
2011
2013
2015
2017
2019
2021
2023
2025
Year
Residential Demand (GPCD)
Commercial Demand (GPCD)
Water Supplier Services Demand (GPCD)
Industrial Demand (GPCD)
Linearly Projected Residential Demand (GPCD)
Linearly Projected Commercial Demand (GPCD)
Linearly Projected Water Supplier Services Demand (GPCD)
Linearly Projected Industrial Demand (GPCD)

Appendix 9:
Water Rate Structure

Water Rates:		Eff. 1-1-17
58-108(a)	Residential Properties Administrative Charge, per month	$1.47
	Residential Properties Tier 1, 0-16,000 gallons, per 1,000 gallons	$2.37
	Residential Properties Tier 2, over 16,000 gallons, per 1,000 gallons	$2.99
	Irrigation Meters Administrative Charge, per month and Commercial	$2.35
	Irrigation Meters Tier 1, 0-30,000 gallons, per 1,000 gallons	$2.37
	Irrigation Meters Tier 2, over 30,000 gallons, per 1,000 gallons	$3.00
	Large Irrigation Meters Administrative Charge, per month	$2.46
	Large Irrigation Meters Tier 1, 0-125,000 gallons, per 1,000 gallons	$2.37
	Large Irrigation Meters Tier 2, over 125,000 gallons, per 1,000 gallons	$3.00
	Commercial, per 1,000 gallons	$2.37
58-108(g), 58-167, 58-168	Excess usage fee	$86.00
58-110	Water rates, late payment charge	10% of current

Appendix 10:
Ordinances or Regulations Related to Water Use

Appendix 10

City of Champlin, regulations & restrictions to reduce demand and improve water efficiencies

Sec. 58-50. - Discontinuance of service.

(a) Water service may be shut off at any connection whenever:

(1) The owner or occupant of the premises served, or any person working on any pipes or equipment thereon connected with the water system has violated or threatens to violate, any of the provisions of this article;

(2) The owner or occupant of the premises served refuses or fails to allow city employees access to the premises for the purposes of reading or inspecting a water meter, as provided by subsection 58-136(c)(5); or

(3) Fraud or misrepresentation by the owner or occupant of the premises served in connection with an application for service.

(4) The Building official, to protect the public health and safety and in order to the protect the public water supply and/or private property, may order the city water service immediately disconnected to any property upon determining that any of the following conditions exist:

a. The property is vacant;

b. The property is unsecured;

c. The property is determined to be uninhabitable or unsuitable for occupancy;

d. Other utilities to the property providing heat and/or light have been shut off;

e. That running water to the property creates an unsanitary or unsafe condition to anyone who may enter the property.

(b) The city shall notify by mail and addressed to the owner as the owner's name appears in the property records and to the premises postal address, before discontinuation of service.

(c) The water service shall not be reconnected to the property until it has passed an inspection by the building official and, the necessary permits have been issued and fees have been paid. The inspection and reconnection fee are set forth in chapter 22 fees.

(Code 1977, § 15-204; Ord. No. 683, 2-23-2009)

Sec. 58-51. - Deficiency of water, shutting off water and restrictions on use.

In case of a fire, or alarm of fire, or in making repairs or construction of new works, water may be shut off at any time and kept off as long as necessary. In addition, the city council, city administrator, or utilities superintendent shall have the right to impose reasonable restrictions on the use of the city water system in emergency situations.

(Code 1977, § 15-205)

Sec. 58-54. - Repair of leaks.

It shall be the responsibility of the consumer or owner to maintain the service pipe from the curbstop box into the house or building. In case of failure upon the part of any consumer or owner to repair any leak occurring in his service pipe within 24 hours after verbal or written notice thereof, the water may be turned off by the city and shall not be turned on until the leak has been repaired and the appropriate fee as set forth in chapter 22 has been paid to the city.

(Code 1977, § 15-208)

Sec. 58-62. - Use of water for air conditioning.

All air conditioning systems that are connected directly or indirectly with the public water system must be equipped with water conserving and water regulating devices as approved by the city.

(Code 1977, § 15-217)

Sec. 58-63. - Permits required for air conditioning.

Permits shall be required for the installation of all new air conditioning systems to the public water system.

(Code 1977, § 15-218)

Sec. 58-166. - City to impose water restrictions by resolution.

Whenever the city council shall determine that a shortage of water supply threatens the city, it may limit the times and hours during which water may be used from the municipal water supply system for lawn and garden sprinkling, irrigation, car washing, air conditioning or other uses specified therein. Notice of the limitations shall be given in such a matter as the council may determine including, but not limited to, newspaper articles, radio and television broadcasts, or notice on the city's website.

(Code 1977, § 15-1100; Ord. No. 633, § 15-1100, 1-8-2007)

Sec. 58-167. - Violation and penalty.

Any water customer who shall cause or permit water to be used in violation of the limitation shall be charged an excess usage fee as set forth in chapter 22 for each day the customer violates the limitations as set forth in section 58-108(g). Continued violations of the limitations shall be cause for discontinuance of water service.

(Code 1977, § 15-1101; Ord. No. 633, § 15-1101, 1-8-2007)

Sec. 58-168. - Emergency restrictions.

In addition, the city council, city administrator, or utility superintendent shall have the right to impose reasonable restrictions on the use of the city water system in emergency situations and any water customer who shall cause or permit water to be used in violation of these restrictions shall be subject to the penalties as set forth in section 58-167.

(Code 1977, § 15-1102)

Sec. 58-169. - Irrigation and sprinkling restrictions.

(a) *Waste of water prohibited.*

(1) Customers shall maintain taps, faucets, valves and other water facilities so that water waste is eliminated from seeps, dripping faucets, etc.

(2) No person shall waste water deliberately by allowing irrigation or sprinkling water to run off onto the street or into a drain.

(b) *Permission to use hydrant.* No person shall open, close or tamper with any fire hydrant except under the authorization of the utilities department.

(c) *Odd-even sprinkling.* Sprinkling will be curtailed from May 1st—Labor Day. Properties with even numbered post office addresses may use water on even numbered calendar days. Properties with odd numbered post office addresses may use water on odd numbered calendar days. Property owners with private wells are not affected by the watering ban. Owners of properties served by private wells shall register their wells with the city. Unless specifically included in the notice of water use restrictions, new sod and seed are exempt from the ban for a period of four weeks from the effective date of the ban. Trees and shrubs may be watered with a hand-held hose unless specifically stated otherwise in the notice of water use restrictions.

(d) *Prohibited hours.* There will be no watering of lawns, trees or shrubs by use of city supplied water between the hours of 10:00 a.m. and 7:00 p.m.

(e) *Emergency restrictions.* Additional restrictions of water usage in high demand periods shall be by order of the city administrator or his designee. When such additional restrictions have been ordered no person shall discharge water for the purposes of watering lawns, shrubs, trees and washing cars or structures. All unnecessary uses of water are prohibited for the duration of the imposed restriction.

(f) *Excess usage fee.*

(1) First violation of this section will result in a written warning.

(2) The second and each subsequent violation of this section will result in an excess usage fee as set forth in chapter 22.

(3) Owners of private wells must register with the city on an annual basis. Failure to register shall be a misdemeanor. The city may inspect private wells to determine compliance with this section and with other regulations applicable to private wells.

(Ord. No. 633, 1-8-2007)

Appendix 11:
Implementation Checklist

City of Champlin

Implementation Checklist

Action	Description	Timeframe				
		ongoing	annually	1-3 yrs	1-5 yrs	3-6 yrs
Review city ordinances/codes	To encourage or require water efficient landscaping.	✓				
Review city ordinance/codes	To permit water reuse options, especially for non-potable purposes like irrigation, groundwater recharge, and industrial use.		✓			
Revise ordinances to limit irrigation	Review outdoor irrigation installations codes to require high efficiency systems (e.g. those with soil moisture sensors or programmable watering areas) in new installations or system replacements					✓
Make water system infrastructure improvements	Follow infrastructure improvements detailed in the City's Capital Improvement Plan	✓				
Provide rebates or incentives for installing water efficient appliances and/or fixtures	e.g. low flow toilets, high efficiency dish washers and washing machines, showerhead and faucet aerators, water softeners,			✓		
Provide reabtes or incentives to reduce outdoor water use	e.g. turf replacement/reduction, rain gardens, rain barrels, smart irrigation, outdoor water use meters, etc.	✓				
Conduct audience-appropriate water conservation education and outreach	City of Champlin Environmental Resource Comission (ERC) programs	✓				
Conduct a facility water use audit	For both indoor and outdoor use, including system components			✓		
Install enhanced meters	Capable of automated readings to detect spikes in consumption	✓				
Install water conservation fixtures and appliances or change processes to conserve water	Toilets, faucets, etc.	✓				
Repair leaking system components	(e.g., pipes, valves)	✓				
Investigate the reuse of reclaimed water	(e.g., stormwater, wastewater effluent, process wastewater, etc.)		✓			
Reduce outdoor water use	(e.g., turf replacement/reduction, rain gardens, rain barrels, smart irrigation, outdoor water use meters, etc.)	✓				
Train employees how to conserve water	Include for new employee training	✓				
Increasing block rates billing strategy	Rate structure for Residential, Commercial, Industrial, and Institutional customers	✓				
Consider participating in the GreenStep Cities Program	Voluntary program to aid cities in achieving their sustainability and quality-of-life goals			✓		
Rainfall sensors required on landscape irrigation systems	Conserve water and reduce utility bill when there is a sufficient moisture for landscape area.	✓				
Watering restriction requirements	Odd/Even day watering	✓				
Billing inserts or tips printed on the actual bill	Educational information supplied as billing insert			✓		
Consumer Confidence Reports	Report of City's water quality		✓			
Direct mailings (water audit/retrofit kits, showerheads, brochures)	City is looking into using direct mailings to further educate residents on the benefits of water conservation.	✓				
K-12 Education programs (Project Wet, Drinking Water Institute, presentations)	Making programs to educate school age children on water resources.		✓			

SECTION 8: SANITARY SEWER

8.1 EXECUTIVE SUMMARY

This Executive Summary provides a brief synopsis of the major findings and projections developed in the preparation of Champlin's Comprehensive Sanitary Sewer Plan.

- Champlin's existing sanitary sewer collection system consists of:
  - 95.9 miles of 6-inch through 21-inch diameter piping
  - 2,552 manholes
  - 8 lift stations
  - 7.48 miles of forcemain
- All sanitary sewer flows generated by the City of Champlin are conveyed to the Metropolitan Wastewater Treatment Plant in St. Paul via the CAB (Champlin Anoka-Brooklyn Park) Interceptor constructed in 1985 with the exception of the 86 units from the Charest-Woodlawn Addition area at 109th Avenue and Jefferson Highway which discharges to the Maple Grove sanitary sewer system.
- Champlin has six (6) inter-community connections providing for the collection of sanitary sewer flows from adjacent cities and one (1) inter-community connection collecting wastewater from Champlin.
  - A parcel adjacent to Indiana Avenue and west of West River Road flows to a Champlin lateral sanitary sewer (one unit).
  - South of 109th Avenue and each side of Noble Avenue in Brooklyn Park connects to a Champlin lateral sanitary sewer, (16 units).
  - The Northwood's Park building in Brooklyn Park flows to a Champlin lateral sanitary sewer, (one unit, summer months only).
  - The Charest-Woodlawn Addition in Champlin flows to the Maple Grove sanitary sewer system, (85 units and two City park buildings).
  - Nature's Crossing in Dayton flows to a Champlin trunk sanitary sewer, (112 units current and 125 units ultimate).
  - The Faulds Property in Dayton flows to a Champlin lateral sanitary sewer, (one unit current and three units ultimate).
- As of 2018, Champlin had:
  - An estimated population of 23,343
  - Approximately 8,700 housing units connected to the municipal sanitary sewer system;
  - Nearly 9,940 Residential Equivalent Connections (REC's of SAC units) to the sewer system; and
  - An average daily sanitary flow of 1.6 million gallons.
- Two areas of Champlin remain to be developed and served with sanitary sewer service:

- The T.H. #169 corridor between 109th Avenue and Hayden Lake Road has about 40 acres of commercial, industrial, and office zoned property to be developed.
- Nearly 86 acres of single family, residentially zoned property along both sides of French Lake Road to the west of Revere Lane.

❖ Champlin is projected to be fully developed by 2040 with:

- An estimated population of 25,400;
- About 10,700 REC's; and
- Projected average daily sanitary flows from Champlin of about 1.7 million gallons.

❖ Champlin has implemented policies and strategies to reduce and prevent inflow and infiltration (I/I).

- Champlin will continue to pursue the elimination of storm sewer connections into the sanitary sewer system.
- Champlin has established a sanitary sewer rehabilitation program that lines approximately one mile of vitrified clay sewer pipe each year.
- Champlin has established an annual maintenance schedule for televising portions of the sewer system to detect leaks, obstructions and illicit discharge.
- Where street reconstruction projects are scheduled, clay sanitary sewer pipe is evaluated for reconstruction with modern materials

8.2 INTRODUCTION

The City of Champlin is located at the northern edge of Hennepin County and is generally located in the northwest portion of the Twin Cities Seven County Metropolitan area as shown on the accompanying Location Map in Appendix 8-1. Champlin is triangular in shape, covering approximately 8.66 square miles of area, and is bounded by the Mississippi River to the northeast, the City of Dayton to the west and by the cities of Brooklyn Park and Maple Grove to the south.

Purpose and Scope

The purpose of this report is to provide the City of Champlin with Comprehensive Sewer Policy Plan that will serve as an inventory of existing facilities as well as a guide for the completion of Champlin's lateral sanitary sewer system to serve the community as it becomes fully developed in addition to serving several adjacent residential developments in neighboring communities. The report has been based on the City's latest land use and population data and is consistent with that used in; the "City of Champlin Comprehensive Water Supply Plan."

Champlin's Sanitary Sewer System

Champlin was first settled in 1952 as a farming area near the mouth of Elm Creek as it joins the Mississippi River. The Village of Champlin was platted in 1856 and the principal urban growth of the community concentrated near the ferry crossing located just upstream of the Elm Creek – Rum River – Mississippi River juncture. The original Village developed into an area which provided a community identity without a strong commercial or industrial base.

Outside the original platted area of the Village, the land use was almost exclusively agricultural. Urban development did not begin in the township until the 1950's and this early residential development occurred in a checkerboard fashion as subdivisions leapfrogged into open areas. This type and amount of development pressure led to the consolidation of the Township and Village in 1971.

Champlin had experienced rather steady, but moderate, growth until about 1980, at that time its' population was counted at 8879. With the forthcoming availability of sanitary sewer capacity through the construction of the CAB (Champlin-Anoka-Brooklyn Park) interceptor in the mid-1980's, growth and development in Champlin greatly accelerated during the 1980's and the first half of the 1990's at a rate of over 800 persons per year. This resulted in a 1990 population of 16,848 a population of 20,307 in 1998 and a population of 24,400 in 2008. The rate of population increase in Champlin is expected to moderate to approximately 120 persons per year during the next ten (10) years to 2030 when Champlin is expected to reach a population of 25,600 and an ultimate population of 25,400 in year 2040.

Municipal sanitary sewer service was initially constructed in the Village of Champlin in 1964 and was conveyed to the Anoka Wastewater Treatment Plan via a lift station and forcemain for processing. The expansion of the sanitary sewer collections system within

Champlin during the 1960's, the 1970's, and the early 1980's was largely confined to the original Champlin Village area and the adjacent township areas along the Mississippi River.

From 1964 until 1985, sewage was treated at the Anoka Sewage Treatment Plant. Due to the limited capacity and inefficiency of the plant, the Metropolitan Waste Control Commission made the long-range decision to close down the Anoka Treatment Plant and handle the sewage from the Cities of Anoka, Andover, Ramsey, and Champlin through the Pigs Eye Plant in St. Paul. The first step in the process, the CAB (Champlin-Anoka-Brooklyn Park) interceptor, was constructed through Champlin in 1985 providing capacity within the confines of the respective comprehensive plans for growth in the CAB cities. In 1992, the Anoka Sewage Treatment Plant was removed from service and a trunk sewer pipe was installed from Anoka into Champlin (roughly paralleling T.H. #169), where it tied into the CAB Interceptor Line just south of Hayden Lake Road and east of T.H. #169.

With the Construction of the CAB Interceptor line through Champlin in 1985, sanitary sewer service became available to the entire area of the City within the MUSA (Metropolitan Urban Service Area) boundary. It made sanitary sewer service readily available to approximately 2,500 existing homes in the City of Champlin which, together with new growth and development, dramatically increased the flows from the community. And as can be seen on the City's sanitary sewer map, sanitary sewer lines have been extended to serve all the developed areas of the community. The MUSA boundary has since been extended further west, so it encompasses the entire City of Champlin and an adjacent, existing single-family residential development in the City of Dayton. The Dayton development, referred to as the Nature's Crossing, is surrounded by the Elm Creek Park Reserve to the north, west and south. The most logical and economical way to provide sanitary sewer service was through Champlin as discussed and agreed upon by both cities.

8.3 SEWER ELEMENT OF COMPREHENSIVE PLAN

Under the Metropolitan Land Planning Act, local governments are to prepare comprehensive plans and submit these to the Metropolitan Council to determine their consistency with metropolitan system plans. Local comprehensive plans are to include land use and public facilities plans with sufficient information to establish the effects on or departures from metropolitan system plans. The public facilities plan includes a sewer element which:

1. Describes, designates and schedules the area to be served by the public sewer system; and:

2. Outlines the existing and planned capacities of the public sewer system.

The following information and data regarding the Champlin Sanitary Sewer System is provided to fulfill the content requirements for the sewer element of the Champlin Comprehensive Plan for sewered areas within the Metropolitan Urban Service Area (MUSA).

Projections of Socioeconomic and Sanitary Flow Data

The estimated population, number of households, number of employees and sanitary sewer flows, as projected by the City and the Metropolitan Council, to be served by the CAB Interceptor of the Metropolitan Council Environmental Service sewer system within Champlin is as follows:

Table 8-1: Forecasts

YEAR	ESTIMATED SEWERED POPULATION	ESTIMATED SEWERED HOMES	ESTIMATED SEWERED EMPLOYEES	ESTIMATED AVERAGE SEWAGE FLOW RANGE (MGD)
2020	24,347	8,681	4,400	1.59
2030	25,573	9,390	4,600	1.71
2040	25,397	9,399	4,800	1.72

The estimated growth forecasts by MCES interceptor facility are shown in the table below. Note that the forecasts for a particular interceptor include the forecasts for any sewersheds upstream of that interceptor. For example, MCES Interceptor 8252-482 conveys all flows generated in the City. Therefore, the household and employment forecasts for MCES Interceptor 8252-482 match the City-wide sewered forecasts.

Table 8-2: Forecasts by MCES Interceptor Facility

	2-CN-630	8010	8252-482A	8252-482

Year	Hhds.	Empl.	Hhds.	Empl.	Hhds.	Empl.	Hhds.	Empl.
2020	1,985	383	339	201	152	719	8,681	4,400
2030	2,314	401	800	210	177	752	9,390	4,600
2040	2,316	418	810	219	177	785	9,399	4,800

Existing and Proposed Sanitary Sewer Services Area

The City of Champlin Trunk Sanitary Sewer System is shown on Appendix 8-2. The existing trunk sanitary sewer lines, including the CAB Interceptor, are identified and the proposed development areas are identified by the land use and anticipated development time frame. The existing inter-community sanitary sewer connection locations are also shown on Appendix 8-2 and include:

Inter-community connections flowing to Champlin:

1. One single family residential unit in Brooklyn Park adjacent to Indiana Avenue (10802 Indiana Avenue) connects to a Champlin lateral sanitary sewer flowing to lift station No 9, discharges to the Champlin portion of the CAB interceptor.

2. Sixteen single-family residential units in Brooklyn Park along the south side of 109th Avenue on both sides of Noble Avenue (the southeastern corner of the City) connect to a lateral sanitary sewer discharging to the Champlin portion of the CAB Interceptor.

3. One existing connection to a recreational park building in Brooklyn Park located on the south side of 109th Avenue to the east of Winnetka Avenue (County Road #103), flows to the Champlin portion of CAB Interceptor via an 8-inch lateral line along Quebec Avenue.

4. One hundred twenty-five (125) single-family residential homes, 112 existing and 13 future located in the Nature's Crossing of Dayton, located west of Goose Lake Road at the west end of Goose Lake Parkway. The sanitary sewer connects into the Champlin sanitary sewer system.

5. One single family residential unit in Dayton at the southwest corner of Champlin connects to a Champlin lateral sanitary sewer in Goose Lake Road which ultimately discharges to the Champlin portion of the CAB interceptor.

Inter-community connections flowing out of Champlin

1. Eighty-five (85) single-family residential homes and two City park buildings located in or adjacent to the Charest-Woodlawn Addition of Champlin, generally located on the north side of 109th Avenue to the west of Jefferson Highway North,

flow into the Maple Grove sanitary sewer system via Champlin Lift Station No. 4 and forcemain.

The agreements for said connections are attached as Appendix 8-3.

Inflow and Infiltration

Inflow and infiltration (I/I) are types of clearwater, such as stormwater runoff or groundwater, that enter the sanitary sewer system. Inflow typically enters the system during storm events through rain leaders, foundation drains, sump pumps, storm sewer cross connections, or loose manhole covers. Infiltration is groundwater that gradually seeps into the system through cracks, leaky joints, or deteriorated structures.

Sanitary sewers installed pre-1970 are more susceptible to I/I due to their materials of construction and their age. Eleven percent (11%) of the residential housing stock in Champlin was built prior to 1970. Of the pre-1970 era private services, about two thirds have been evaluated for I/I. Sewer televising completed in conjunction with street and utility improvement projects has not shown significant I/I entering the system from private services.

The clearwater flow entering the City of Champlin sanitary sewer system was estimated using MCES meter data from 2015 to 2019. The average annual I/I rate and peak month I/I rate were calculated as the difference between the average flow and the base flow. The base flow was approximated as the lowest monthly flow within each year.

Table 8-3: Estimated I/I Rate

YEAR	AVERAGE FLOW (MGD)	AVERAGE I/I RATE	PEAK MONTH FLOW (MGD)	PEAK MONTH I/I RATE
2015	1.477	4.0%	1.594	11.0%
2016	1.585	10.3%	1.734	18.0%
2017	1.631	3.0%	1.703	7.1%
2018	1.553	3.3%	1.587	5.4%
2019	1.639	7.7%	1.737	12.9%
AVERAGE	1.577	5.6%	1.671	10.9%

City Strategies for Reducing and Preventing Excessive I/I

The City of Champlin has implemented several strategies for preventing and reducing excessive I/I into its local sewer system. These strategies include:

1. The annual cleaning/inspections of portions of the sanitary sewer system. All clay piping is cleaned on a 3-year cycle. All plastic piping is cleaned on a 5-year cycle.

2. The annual televising of 25% (a 4-year cycle) of the City's vitrified clay pipe (VCP) and 10% (a 10-year cycle) of its polyvinyl chloride (PVC) sanitary sewer lines with a follow-up program to make the necessary corrections, repairs or pipe replacement to reduce infiltration, remove obstructions, and improve flows.

3. The City has established an annual pipe rehabilitation program in its Capital Improvement Program to line all vitrified clay pipe. The annual budget provides for approximately one mile of pipe rehabilitation each year.

4. A city ordinance and inspection program to eliminate cross-connections of sump pump discharge into the sanitary sewers system which was implemented in 1994. Champlin's Ordinance Regulating the Operation of the Sanitary Sewer System is shown on Appendix 8-4.

5. The City will be starting a water meter replacement project in the next few years, which will include sump pump inspections.

I/I Reduction Projects

As described above, the City of Champlin has several cleaning, inspection, televising, and rehabilitation programs aimed at mitigating I/I. The table below summarizes the rehabilitation projects completed in the last ten years for which data is available, as well as the work budgeted for the next five years.

Table 8-4: I/I Reduction Projects

YEAR	DESCRIPTION	LENGTH	COST
2008	Sanitary Sewer Rehabilitation	10,137 LF	N/A
2015	Sanitary Sewer Rehabilitation	22,910 LF	$613,412
2020	Champlin Heights Sanitary Sewer	1,130 LF	$88,085
2020	Edgewater Gardens Sanitary Sewer	8,770 LF	$738,120
2021	Sanitary Sewer Rehabilitation	TBD	$460,000
2023	Sanitary Sewer Rehabilitation	TBD	$480,000
2025	Sanitary Sewer Rehabilitation	TBD	$500,000

Management of Individual Sewage Treatment Systems.

The City of Champlin has reduced the number of individual sewage treatment systems (ISTS) within the City to 19 sites resulting from the expansion of the City's public sanitary sewer system.

By City Ordinance, parcels with public sanitary sewer availability have two years to connect to the public system. Appendix 8-5 identifies the list of properties that currently utilize ISTS.

Construction of ISTS within the City is not allowed if public sanitary sewer is available to serve the property. ISTS systems that are installed are administered by Hennepin County. The City Ordinance Authorizing Hennepin County to Administer Individual Sewage Treatment Systems Regulators is shown on Appendix 8-6. The Hennepin County Ordinance for Individual Sewage Treatment System Standards is located in Appendix 8-7.

8.4 LOCAL COMPREHENSIVE SEWER POLICY PLAN

The Local Comprehensive Sewer Policy Plan (LCSPP) discusses the collection and disposal of wastewater generated by the community. The LCSPP is broader in scope than the sewer element of the City's comprehensive plan and provides detailed sewer system engineering information.

Treatment and disposal of wastewater generated by the City of Champlin is accomplished by the MCES at the Metropolitan Wastewater Treatment Plant in St. Paul. The Comprehensive Sewer Policy Plan for the City of Champlin deals primarily with conveyance facilities required to collect the wastewater and transport it to the Champlin-Anoka-Brooklyn Park (CAB) Interceptor, an MCES facility which extends through Champlin.

The local elements of conveyance are the sewer services, laterals, trunks, manholes, lift stations, force mains, and all related appurtenances associated with the collection and transportation of the wastewater flows. The sewer laterals and service lines are laid out or designed during platting of the land as it is developed. Trunk sewers are largely dependent on the service area size, type and density of development, and total anticipated sanitary flows to be generated. The trunk system includes all lines twelve inches (12") in diameter and larger, MCES facilities, and other facilities, such as lift stations are also part of the City's trunk sewer system. Champlin's trunk sewer system has been constructed and provides for the ultimate service area. Periodic review and updating of the trunk sewer system is required to ensure that the existing facilities meet the needs of the areas served.

Description of Sanitary Sewer System

The first municipal sanitary sewer facilities were constructed in 1964 within the original Village area (near the T.H. #169 bridge crossing of the Mississippi River). The initial trunk and lateral sanitary sewer pipe system extending into the surrounding neighborhood areas conveyed the effluent to Lift Station #1, located just south of the Mississippi River and west of T.H. #169, where it was pumped through an 8" forcemain to the Anoka Wastewater Treatment Plant, located on the north bank of the Mississippi River and just east of T.H. #169 at the confluence of the Rum River with the Mississippi River. The Metropolitan Waste Control Commission acquired Lift Station #1 and associated forcemain from the City of Champlin in 1971.

During the 1960's and 1970's, the expansion of Champlin's sanitary sewer collection system was largely confined to the original Champlin Village area and the adjacent township areas along the Mississippi River. To serve many of these early service areas, it was necessary to install lift stations and forcemains to elevate the effluent into the gravity system flowing to Lift Station #1. Lift Stations #2, 3, 5 & 6 and their associated forcemain outlets were constructed to serve specific drainage districts during that period of time.

In the late 1970's sanitary sewer service was also provided to 66 existing single-family residences in the Charest-Woodlawn Subdivision, located at the northwest quadrant of Jefferson Highway and 109th Avenue in the south-central portion of the community.

Sewer service was provided by constructing lift station #4 and a forcemain which conveyed the effluent to Maple Grove's collection system. That system continues to operate the same today in serving the fully developed area of 86 homes and 2 City park buildings.

In the early 1980's, a number of existing single family residential developments in central Champlin, which had been built in Champlin Township during the late 1950's and the 1960's, were experiencing well and septic tank problems. These subdivisions, generally located between 111th and 119th Avenues from ¼ mile west of Winnetka Avenue (County Road #103) to West River Road (County Road #12), were adjacent to the proposed and pending Champlin-Anoka-Brooklyn Park (CAB) Interceptor line. Municipal sanitary sewer collection systems were designed and constructed through these neighborhoods which conveyed the effluent via lift stations and forcemains constructed at the edge of the developments and near the future CAB alignment. These interim lift stations and forcemains, with the exception of Lift Station #8, which was relocated farther downstream to serve an enlarging sewer district, were eliminated by the CAB Interceptor in 1985.

The construction of the CAB Interceptor line through Champlin in 1985 placed the entire community within the Metropolitan Urban Service Area (MUSA) boundary. Sanitary Sewer flows from Champlin were no longer restricted by the pumping capacity of Lift Station #1 and its 8" forcemain to the Anoka Wastewater Treatment Plant. Sanitary sewer trunk and lateral lines have been extended in the past twenty (20) years to serve all the platted and developed areas of the City including those served by Lift Stations #7, #8, and #9.

The only significant land areas of the City remaining to be served by sanitary sewer include about 150 acres of single family, residentially zoned property along both sides of French Lake Road (Co. Road No. 121) from one mile west of T.H. No. 169 to the west corporate boundary and north of the Elm Creek. This area will be served by connecting to the recently constructed MCES Dayton-Champlin Interceptor. This area is anticipated to develop between 2020 and 2025.

In summary, the Champlin Trunk Sanitary Sewer System consists of 2.8 miles of 12-inch diameter and larger piping, 8 lift stations and 7.48 miles of forcemain (4", 6", & 8").

Pump No.	Location	Year Constructed	Flow (GPM)
#2	1217 Sherwood Street	1982 (Replacement)	140
#3	13224 Revere Lane	2004 (Replacement)	300
#4	9506 109th Avenue	1977	100
#5	12290 Gettysburg Avenue	1978-2018 (Reconstructed)	359
#6	7500 River Shore Lane	1979-1980	50
#7	11625 Mississippi Avenue	1987	200
#8	11330 Georgia Avenue	1985 (Replacement)	890
#9	11000 Mississippi Avenue	1995	200

City of Champlin "Lift Station Inventory Records" for each lift station are provided in Appendix 8-8.

Metropolitan Facilities

Lift Station #1, located along the south bank of the Mississippi River one (1) block west of the T.H. #169 bridge, and its associated 8" forcemain were constructed by the City of Champlin in 1964 to convey effluent to the Anoka Wastewater Treatment Plant, a Metropolitan Waste Control Commission (MWCC) facility. In 1971, the MWCC purchased the lift station and forcemain from the City of Champlin and took over the operation and maintenance of those facilities.

With the shutdown of the Anoka Wastewater Treatment Plant (WWTP) in 1992, the forcemain from Lift Station #1 as well as the forcemain crossing the Mississippi River from the former Anoka WWTP were reconstructed to discharge the flows into the Champlin-Anoka-Brooklyn Park (CAB) Interceptor, near the intersection of T.H. #169 and Hayden Lake Road, for conveyance to the Metropolitan Wastewater Treatment Plant in St. Paul. The forcemain routing to the CAB Interceptor line roughly parallels T.H. #169, located to the north and east sides of the highway, in a southeasterly and southerly direction. Lift Station #1 remains a facility of the Metropolitan Council Environmental Services – Wastewater Division (MCES) and is a duplex lift station. It utilizes Aurora Model 613 pumps with a pumping capacity of 950 g.p.m. per pump and a combined capacity of 1200 g.p.m.

The Champlin-Anoka-Brooklyn Park (CAB) Interceptor was constructed through Champlin in 1985 by the former MWCC and consists of 48" and 54" reinforced concrete pipe. The routing, as shown on Appendix 8-2, "Champlin Trunk System Phasing Sanitary Sewer System", enters the southeastern corner of Champlin at 109th Avenue and Noble Avenue. It proceeds to the west for about 2 ¼ miles along 109th Avenue or a paralleling alignment about ¼ mile to the north (111th Avenue corridor), then turns northerly ¼ mile east of T.H. #169 to parallel the highway for about 1.5 miles to 123rd Avenue before proceeding to the west and north for another ¼ to 3/8 mile to terminate near the intersection of T.H. #169 and Hayden Lake Road. It is at this location that the forcemain for Lift Station #1 and from the Anoka WWTP ties into the CAB Interceptor line.

In 2008, Metropolitan Council Environmental Services (MCES) extended the CAB Interceptor along the 123rd Street alignment across T.H. 169 to Champlin Drive, then north on Champlin Drive to Hayden Lake Road. The gravity interceptor was extended west within Hayden Lake Road to a MCES pumping station located at the intersection of Hayden Lake Road and Elm Creek Crossing. The pumping station lifts the sewage that is conveyed in a second gravity interceptor that extends along Elm Creek Crossing and French Lake Road to the City of Dayton.

The Champlin gravity sewer system has completed 2 connectors to the MCES Dayton interceptor.

Inter-Community Flows

The Champlin sanitary sewer system has seven (7) locations of inter-community flows as shown on the Trunk Sanitary Sewer map in Appendix 8-2. Following is a brief description of the existing connections with neighboring communities with the existing and ultimate flows for each interconnection location provided in Table 1 below:

a) Indiana Avenue – East side of street at West River Road in Brooklyn Park
One single family residence within Brooklyn Park connects to a Champlin lateral sanitary sewer. The sanitary sewer extends to lift station no 9 which pumps the wastewater to a lateral sanitary sewer along 109th Avenue that discharges to the CAB Interceptor on the Champlin side. The City of Champlin bills the City of Brooklyn Park for this sanitary sewer service.

b) 109th Avenue – Noble Avenue Neighborhood in Brooklyn Park
Sixteen single family residential houses on the south side of 109th Avenue, either side of Noble Avenue, in the City of Brooklyn Park are connected to a Champlin lateral sanitary sewer. The lateral sanitary sewer line conveys the wastewater into the Champlin side of the CAB Interceptor.

c) Northwoods Park in Brooklyn Park
The Northwood's Park building located south of 109th Avenue across from Quebec Avenue in the City of Brooklyn Park ties into the Champlin sanitary sewer lateral system at the intersection of 109th Avenue and Quebec Avenue. The City of Champlin bills the City of Brooklyn Park for this sanitary sewer service.

d) Nature's Crossing in Dayton
The Nature's Crossing, located west of Goose Lake Road in Dayton, includes 125 single-family residential lots, which are proposed to be served with municipal sanitary sewer service from the City of Champlin. Flow from the Nature's Crossing extends to the Champlin sanitary sewer line constructed within Goose Lake Parkway. There are currently 112 connections with 13 future connections. The City of Champlin bills these properties for this sanitary sewer service. The City of Champlin also collects a utility maintenance fee which is remitted to Dayton quarterly for sewer maintenance.

e) Faulds Property in Dayton
The Faulds property is located west of the southeast corner of Dayton. This parcel has one residential connection to the Champlin sanitary sewer system located within Goose Lake Road. Ultimately there may be three connections. The Faulds Property is included in the Nature's Crossing agreement with Dayton.

f) Charest - Woodlawn area in Champlin to Maple Grove
Municipal sewer and water utilities were constructed in the Charest Woodlawn Addition, located in the northwest quadrant of the intersection of Jefferson Highway and 109th Avenue at the southern edge of Champlin, in the late 1970s to replace a number of failing wells and septic systems in the existing homes. Since it was an isolated neighborhood in Champlin and since the CAB (Champlin-Anoka-Brooklyn Park) Interceptor construction had not yet been committed, the only available and feasible alternative for conveying the sanitary sewer flows from the Charest Woodlawn neighborhood was to pump it into an adjoining Maple Grove system to the southwest via Lift station #4 and a 4-inch-diameter forcemain. This lift station initially served a total of 73 single-family homes and one City park, and it currently serves a total of 85 single-family, residential homes and two City park buildings. The City of Champlin collects the sewer fees for this sanitary sewer

service, exempting the Jerry Ruppelius park building, and Maple Grove bills Champlin on a quarterly basis.

Table 8-5: Existing and Projected Inter-Community Flows

NEIGHBORHOOD AREA	EXISTING CONNECTIONS	EXISTING FLOWS (GAL/DAY)[1]	ULTIMATE CONNECTIONS	ULTIMATE FLOWS (GAL/DAY)[(1)]
109th & Noble	16	2,880	16	2,880
Northwoods Park	1	274	1	274
Charest Woodlawn Avenue	87	13,920	87	13,920
Nature's Crossing	110	17,600	125	29,000
Faulds Property	1	160	3	480

* Summer usage only.
(1) Flows based on 160 gallons per day per Residential Equivalent Connection (REC).

Sanitary Sewer Trunk System

The Champlin Trunk Sanitary Sewer System shown on Appendix 8-2, graphically displays the existing sanitary sewer lines, 12-inches or larger in diameter, which constitute the City's trunk system. Due to the relatively small geographical area of the City, its relatively flat topography, and the routing of the CAB Interceptor line through the community, the length and pipe diameter size of Champlin's trunk system is rather small. There are no apparent operational or flow capacity problems in the existing system.

Land Usage and Population

The sizing of sanitary sewer facilities is dependent upon the hydraulic capacity required for each part of the system. Municipal wastewater generally is a mixture of domestic sewage, commercial and industrial wastes, ground water infiltration, and surface water inflow. With proper design and construction, ground water is reduced to a minor percentage of the total flow and surface water is eliminated. Hydraulic discharges, which must be handled, depend, to the greatest extent, upon the type of development and the population densities which are served.

Growth Trends

From 1990 to 2000, Champlin experienced significant increases in population, household and employment growth. The growth rate, however, has slowed in recent years due to the limited supply of developable residential land. While it is expected that Champlin will add around 700 housing units in the 2020 to 2040 planning period, the population will not rise in proportion due to an aging of the population and a subsequent decline in the average household size. Table 8.6 represents population, household and employment information for the City of Champlin. Data from 1980 through 2010 is taken from the Census, 2016 is from City data and 2030 through 2040 are estimates provided from

Metropolitan Council staff as consulted by City staff. The values in Table 8.6 are total city-wide values that include both sewered and unsewered.

Table 8.6 - City of Champlin Community Forecasts

	1990	2000	2010	2016	2020	2030	2040
Population	16,849	22,193	23,089	23,343	24,400	25,600	25,400
Households	5,423	7,425	8,328	8,442	8,700	9,400	9,400
People per Household	3.11	2.99	2.91	2.76	2.77	2.72	2.70
Employment	1,110	2,734	4,012	4,116	4,400	4,600	4,800

Existing Land Use

The current land use patterns in Champlin are described through a series of land use categories. These categories were established during prior planning efforts in the City of Champlin.

Low Density Residential: This is a residential land use intended to provide land for single- and two-family residences. This is the most prevalent pattern of land use in the community and is dominated by single family detached housing. Densities within the low-density category generally range from a low of 1.5 units per gross acre up to 3.3 units per gross acre with the overall development pattern generally averaging about 2.5 units per gross acre. Permitted densities are up to five units per gross acre. The commensurate zoning districts are Single Family Residential (R-1), Two-Family Residential (R-2) and Low-Density Multi-Family Residential (R-3). Single family and two-family dwellings are permitted in this land use category.

Medium Density Residential: This land use is intended to create areas for low-density multi-family residences; to preserve and enhance transitional residential areas between lower and higher densities and to enhance transitional areas between low density and other non-residential land uses. More medium density developments have occurred recently with the increased demand in townhome and condominium styles of living. Densities within these developments typically range between six to eight units per gross acre. Permitted densities are between five and twelve units per gross acre. The commensurate zoning district is Medium Density Residential (R-4). This land use supports duplexes, townhomes, condominiums and small apartment buildings.

High Density Residential: This residential land use is intended to create, preserve and enhance areas for multi-family use of higher densities for both permanent and transient families in close proximity to major transportation and transit corridors, public community centers, shopping centers and employment centers. This pattern is reflected by older apartment developments in the Mississippi Crossings Area but also in newer developments such as the Mill Pond Gables and Champlin Shores senior housing facilities on Elm Creek and the Champlin Drive Apartments on

Champlin Drive. Average densities within the High-Density category are 15 units per gross acre. Permitted densities are twelve to eighteen units per gross acre. Densities greater than 18 units per acre have been accepted by the community under a Planned Unit Development overlay zoning, typically used for senior-oriented housing. The commensurate zoning district is High Density Residential (R-5). This land use supports apartments and large townhome or condominiums.

Commercial: The commercial land use provides for businesses, professional services, and retailers to meet the needs of residents in Champlin. Prior to 2000, most commercial development consisted of single use buildings with a sole retail business or professional service. More recent development is multi-tenant retail that has diversified the quantity and quality of retail and professional services. A majority of the commercial development has occurred along the Trunk Highway 169 corridor, clearly to take advantage of the benefits of a highly trafficked major highway. Other commercial areas are more oriented to neighborhood service delivery and are found near collector road intersections. This land use is supported by various Commercial zoning districts. Floor area ratios (FAR's) for commercial land uses are estimated at 0.4.

Office: This land use is intended to create areas for office development to provide employment opportunities in locations providing unique amenities benefiting office settings. The Commercial Office District (C-1) is most appropriate for this land use. C-1 commercial-office business district is intended for the location and development of office buildings, hotels, hospitals, clinics and public buildings. These uses shall be considered principal uses and must occupy at least 40 percent of the building square footage of the zoning district area. Related uses which are subject to more restrictive controls and for uses providing goods and services which are primarily for the use of persons employed in the district shall be considered accessory uses and shall not be permitted unless 40 percent of district area square footage is occupied by a principal use. FAR's for Office land uses are estimated at 2.5.

Industrial: This land use is intended to create areas for warehousing with office uses to provide employment opportunities and business complexes in locations accessible to high-level infrastructure. Developments along the Trunk Highway 169 Corridor near 109th Avenue highlight this land use type. Industrial land use is represented by the Industrial zoning district (I-1). Most Industrial uses have a distribution component and, as such, FAR's are estimated at 0.2.

Mixed Use: This land use is intended to permit a mix of residential, commercial and office uses in one building. The mix of uses (by acreage) is expected to be 30 percent commercial, 20 percent office and 50 percent residential. Residential densities shall have minimum densities of 40 units per gross acre with maximum densities at 50 units per acre. Higher densities may be permitted under a Planned Unit Development.

The overall design of mixed-use development areas incorporate density and promote activity. Mixed use areas can become the city's gathering space and the design may incorporate public spaces. By providing walkable mixed-use areas,

stress on the transportation system is reduced. Mixed use areas can also provide a "sense of place" by creating active and vibrant developments with opportunities for interaction through successful design and site layout.

Parks/Schools/Public Open Space: This category covers all public uses. It is intended to create areas for public recreation, public education, government services and open space. The Elm Creek Park Reserve makes up a large portion of this land use category in Champlin as over 800 acres is within corporate limits. The Open Space (OS) zoning district closely matches this land use for permanent open space areas.

Open water: Any public waters of the state as defined by Minn. Stat. 103G.005, Subd.15 (the state's county-by-county inventory of lakes, rivers and other public waterways in the public domain).

Major Right-of-Way: Right-of-way provided for Trunk Highway 169.

The following table outlines existing land uses found in Champlin broken down by acres that are developed and vacant acres that are undeveloped or that could be further developed.

Table 8.7 - Existing Land Use

LAND USE CATEGORY	DEVELOPED ACRES	VACANT ACRES	TOTAL / PERCENT OF TOTAL
Low Density Residential	2,985	95	3,080 / 56.6%
Medium Density Residential	208	8	216 / 4.0%
High Density Residential	53	4	57 / 1.0%
Commercial	138	26	164 / 3.0%
Office	5	10	15 / 0.3%
Industrial	92	0	92 / 1.7%
Mixed Use	0	0	0 / 0.0%
RESTRICTED LANDS	ACRES		
Parks, Schools, Open Space	1,308		1,308 / 24.0%
Major Road Right-of-way	90		90 / 1.7%
Open Water	420		420 / 7.7%
TOTAL LAND AREA	**5,442**		**5,442 / 100 %**

Detached single family neighborhoods comprise over half of Champlin's land area. Attached and multi-family residential areas, located at the periphery of single-family neighborhoods along major streets, make up another 4.7 percent.

Commercial, office and industrial uses comprise six percent of the City's land area, with the largest concentrations along the Trunk Highway 169 corridor. Neighborhood scale commercial nodes are well dispersed and are typically found near arterial road intersections.

The remaining acreage (nearly 35 percent), set aside for parks, schools and public open space, major road right-of-way and public water, can be thought of as "restricted" in terms of development potential. However, they are important in providing community services and amenities.

Future Land Use

The future land use plan identifies the location and intensity of future development within the City and establishes a framework in which future development will occur. In creating this plan, the City is looking to the future, trying to guide the change that will inevitably occur rather than allowing the community to be affected by change without a plan. The Land Use Plan Map can be amended through a publicly-advertised process either on its own initiative or in response to landowner application. The Land Use Plan map guides the use of property, while the City's Zoning Map and Zoning Ordinance outline specific use provisions and bulk regulations. Where inconsistency between land use and zoning exist, it is the Land Use that supersedes.

Per the Metropolitan Council's Thrive 2040 Regional Development Framework, Champlin is designated as a "Suburban" community (see Exhibit 2-1). "Suburban" communities experienced continued growth and expansion during the 1980s and early 1990s, and typically have automobile-oriented development patterns at significantly lower densities than in previous eras. Suburban communities 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.

Since receipt of the Metropolitan Council System Statements (September 2015), the City experienced new residential growth of 381 housing units on 34.6 acres or 11.1 units/acre. Much of the new growth provided medium and high density residential housing choices. By 2040, the City is expected to grow to 9,400 households or 700 more housing units.

Overall, the future land use plan does not differ significantly in terms of land use changes. The following narratives describe key changes in the land use plan since 2008 and elements that comprise the future land use plan and development potentials.

Emery Village

Emery Village, a 144-unit condominium development located in the northwest corner of the Trunk Highway 169/117th Avenue intersection, contained a seven-acre parcel guided for high-density residential development. In 2015, the land use was amended in support of medium density residential townhomes consistent with adjacent land use.

Elm Creek Commons

Elm Creek Commons is a 39-acre commercial/retail planned unit development located west of Trunk Highway 169 between Elm Creek Parkway and 117th Avenue North. Land use for a five-acre site in the development was amended from Commercial to High Density Residential supporting a 185-unit affordable senior housing apartment development.

Northwest Area

In the northwest area of the city, 80 acres of vacant un-platted residential land is available for residential development. The area, served with public utilities and other infrastructure, is guided Low Density Residential; though the adopted Northwest Area Plan indicated that the City may support up to 60 medium density housing units or approximately 10 acres of medium density land use.

The Northwest Area Plan has guided quality development in the Northwest Area and, thus, has served its purpose. In keeping consistent with surrounding land use and development patterns of the last ten years, the Northwest Area Plan shall be removed from the Comprehensive Plan and thus eliminating 10 acres for future medium density land use in the northwest area.

Mississippi Crossings Redevelopment Area

In 2013, the City approved an addendum to the 2030 Comprehensive Plan for 70 acres in the area adjacent to the Mississippi River and Anoka-Champlin Bridge, known as Mississippi Crossings. The Mississippi Crossings Framework Plan replaced the 3.5-acre Gateway Plan and is highlighted by a mix of uses including 299 multi-family apartments, 107,750 square feet of retail/office and a restaurant/event center. The project also includes a centralized key open space (Village Green) and ancillary open spaces.

In 2017, five acres adjacent to the Mississippi River and just south of the Anoka-Champlin Bridge were amended from Mixed Use and Medium Density Residential to High Density Residential in support of an 85-unit senior cooperative development (Applewood Pointe in Mississippi Crossings). With the project, the City identified the need to review the remaining acreage in Mississippi Crossings south of Applewood Pointe and north of Mississippi Pointe Park. This 16-acre area is envisioned for a mix of uses including high density residential (50 percent), retail/office (20 percent), restaurant (10 percent) and park (20 percent). The precise location of these future uses is not yet determined. The future land use map shall identify 16 acres in Mississippi Crossings as Mixed Use.

Seven Acre Parcel – Northwest Corner of 117th Avenue/Highway 169 Intersection

This parcel is part of the Emery Village planned development. The site is currently guided entirely for Office Use. The northerly four acres is appropriate for High Density Residential Land Use, subject to an approved site development.

Future Residential Land Use Development Summary

The City projects it will reach full development in 2040 and will have approximately 9,400 housing units. This requires an additional 700 housing units over the next 20 years. It is expected that nearly one-third of the housing units that comprise the projected growth will occur on undeveloped low density residential sites mostly located in the Northwest Planning Area, while the remaining growth will occur via scattered in-fill sites located throughout the community, a three-acre high density site (second phase of Mill Pond Gables) and redevelopment areas, specifically Mississippi Crossings (see Table 2.4). The Future Land Use Map is attached as Exhibit 2-3. It includes three modifications from the existing land use plan: 1) the Northwest Planning Area will no longer be afforded ten acres of medium density land use and thus, the area will maintain a low density residential designation; and 2) 16 acres in the Mississippi Crossings area will be guided Mixed Use in support of the City's redevelopment efforts and 3) four acres of the property located in the Northwest corner of the 117th Avenue/Highway 169 intersection will be guided from Office to High Density Residential.

The city anticipates that the medium density residential, high density residential and mixed-use areas will all development in the 2020 through 2030 time frame. The anticipated timing of scattered infill development of single-family areas is not known, but will occur prior to 2040. The City expects to be fully developed in 2040.

Table 8.8 – Future Land Use

LAND USE CATEGORY	TOTAL ACRES	PERCENT OF TOTAL
Low Density Residential	3,070	56.6%
Medium Density Residential	210	3.7%
High Density Residential	61	1.0%
Commercial	164	3.0%
Office	11	0.3%
Industrial	92	1.7%
Mixed Use	16	0.3%
RESTRICTED LANDS		
Parks, Schools, Open Space	1,308	24.0%
Major Road Right-of-way	90	1.7%
Open Water	420	7.7%
TOTAL LAND AREA	5,442	100%

Table 8.9 – Future Residential Land Use Development Capacity

LAND USE TYPE	MINIMUM DEVELOPMENT INTENSITY	2021 - 2030 ACRES/ UNITS	2031 - 2040 ACRES/ UNITS	TOTAL ACRES/ UNITS
Low Density Residential (1)	2.0 units/acre	95 / 190	0 / 0	95 / 190
Medium Density Residential (2)	5 units/acre	8 / 20	0 / 0	8 / 40
High Density Residential (3)(4)	12 units/acre	8 / 96	0 / 0	8 / 96
Mixed Use (5)	40 units/acre	8 / 320	0 / 0	8 / 320
In-Fill of Existing Larger Lot Low Density Residential Sites		10 / 25	10 / 25	20 / 50
TOTAL				139 / 696
Average Density	**5.0 units/acre**			

(1) Includes 80 acres in the Northwest Planning Area and other scattered undeveloped parcels located in the southwest area (5 acres) and southeast area (10 acres)
(2) Includes four acres along Dayton Road near the Cartway Road intersection and four acres in Emery Village (NW corner of Highway 169 and 117th Avenue)
(3) Second phase of Mill Pond Gables on four acres (Hayden Lake Road/Champlin Drive)
(4) Northwest Corner of 117th Avenue/Highway 169 parcel

(5) Mississippi Crossings Area totaling 16 acres (50 percent residential)

Table 8.10 – Future Land Use Map Changes

SITE	Current Land use	Amended Land Use	Acreage	Residential Density
Northwest Planning Area	Medium Density Residential	Low Density Residential	10	2.0 units/acre
Mississippi Crossings	Low Density Residential, Medium Density Residential	Mixed Use	16	40 units/acre
NW Corner of 117th Avenue & Highway 169	Office	High Density Residential	4	12 units/acre
		Totals	30	

Wastewater Flow History

In order to project anticipated future wastewater flows for the City of Champlin, it is necessary to review and analyze the historical data from past years. Table 8-11 identifies the following data for the years 1971 through 2007 when available:

- Champlin's total population;
- Champlin's recorded number of Residential Equivalent Connections (REC's);
- Champlin's average daily wastewater flow, in gallons per day, as recorded by the Metropolitan Waste Control Commission or Metropolitan Council Environmental Services Wastewater Division;
- Champlin's average daily wastewater flow per Residential Equivalent Connection (REC), recorded in gallons per day.

The average daily wastewater flows generated by the City of Champlin as well as the average daily flow generated per Residential Equivalent Connection (REC) are found on Table 8-11. Of particular significance are several noticeable changes in the average daily flow rate per REC. The most notably is the dramatic upward trend from 1991 through 1995 followed by a downward trend from 1996 through 1998. During the period of 1971 through 1975, the daily flow per REC remained relatively constant in the 175 to 180 gallons per day range. Then in 1985, the daily rate per REC unit increased by about 10% into the 190 to 195 gallons per day range for the 1985 through 1990 time period. From 1991 to 1995 the daily flow per REC unit demonstrated a dramatic increase from 210 to 230 gallons per day with a peak rate of nearly 240 gallons per day per REC recorded in 1993. However, in 1996 and 1997, the rate per REC unit dropped to about 215 gallons per day followed by another 10% reduction in 1998 to about 195 gallons per day per REC.

Two cast in place pipe lining projects were completed, one in 2009 and a second in 2015. There is a noticeable decrease in average daily flows after each of these projects were competed.

Table 8-11: Champlin Sanitary Sewer Flow History

YEAR	TOTAL POPULATION	NUMBER OF REC'S	MCES AVERAGE DAILY FLOW (GAL/DAY)	AVERAGE DAILY FLOW PER REC (GAL/DAY)
1971	-	970	175,858	181.3
1972	-	994	175,290	176.3
1973	-	1,022	178,658	174.8
1974	-	1,041	184,083	176.8
1975	-	1,091	194,981	178.7
1976	-	-	192,902	-
1977	-	-	206,043	-
1978	-	-	202,014	-
1979	8580	-	196,661	-
1980	8879	-	219,334	-

1981	9655	-	275,248	-
1982	10,517	-	302,152	-
1983	11,739	-	349,261	-
1984	12,069	-	454,665	-
1985	12,759	-	538,526	-
1986	13,621	3843	750,938	195.4
1987	14,310	4572	0.87	190.2
1988	15,259	5140	0.94	182.8
1989	16,207	5528	1.06	192.3
1990	16,831	5920	1.15	193.6
1991	17,304	6090	1.28	210.2
1992	17,777	6313	1.35	213.8
1993	18,250	6485	1.57	242.1
1994	18,723	6690	1.52	227.2
1995	19,196	7117	1.63	229.0
1996	19,668	7346	1.58	215.1
1997	20,141	7464	1.59	213.0
1998	20,614	7786	1.52	195.2
1999	21,000	8010	1.55	193.5
2000	21,500	8292	1.59	191.8
2001	22,193	8496	1.76	207.2
2002	22,600	8752	1.83	209.1
2003	23,000	9034	1.64	181.5
2004	23,400	9220	1.67	181.1
2005	23,800	9281	1.78	191.8
2006	23,900	9392	1.76	187.4
2007	24,200	9460	1.80	190.3
2008	24,400	9496	1.77	186.1
2009	24,300	9552	1.80	188.2
2010	24,200	9635	1.67	173.8
2011	24,100	9663	1.65	171.5
2012	24,400	9659	1.78	184.3
2013	23,900	9573	1.73	181.0
2014	23,800	9589	1.66	173.2
2015	23,700	9635	1.63	170.2
2016	23,600	9847	1.51	154.0
2017	23,500	9910	1.47	149.0
2018	23,400	-	1.58	-

Since, Champlin's sanitary sewer system is relatively new due to the City's high construction standards and aggressive annual maintenance program, stormwater inflow and groundwater infiltration are not suspected to be major contributors to the sanitary flow. Although the per capita consumption of water for domestic purposes and the resulting sanitary flows have increased, City utility staff felt the major contributor to the dramatic increase in sanitary flow per REC in the early 1990's was probably due to cross connections of stormwater sump pumps and foundation drains outletting to the sanitary sewer collection system. The City implemented an aggressive program in 1994 to address and rectify this abuse and misuse of the sanitary sewer collection system. The significantly lower flow rates per REC from 1996 through 2007 indicates the success of those programs and strategies. The average daily flow per REC has averaged 186.4 over the past 5 years.

City Wastewater Flow Projections

Utilizing an estimated population base of 24,400 persons in Champlin in 2020, as well as 9,940 Residential Equivalent Connections (REC) being served by its sanitary sewer collection system, Table 8-12 projects the anticipated Average Daily Sanitary Sewer Flow from the City of Champlin for each year from 2020 through Year 2040 when Champlin is expected to be fully developed with a population of 25,400. Based on Champlin's Land Use Plan and its current population projections, the number of Residential Equivalent Connections (REC) for each land use as well as the inter-community connections are estimated for each year.

The following information and assumptions are incorporated into the preparation of Table 8-12:

1) The existing eighty-seven (87) REC's in the Charest-Woodlawn Addition, which currently outlet into the Maple Grove collection system, will continue to flow into that system;

2) The inter-community connections with Brooklyn Park in the 109th Avenue and Noble Avenue area and the Northwood's Park building remain.

3) The fifteen (15) remaining inter-community connections from the Natures Crossing in Dayton are made during years 2018 to 2025.

4) Approximately 20 acres of commercial, industrial, and office zoned land is expected to develop by 2020.

5) Nine (9) Residential Equivalent Connections (REC's) per acre are used for projecting flows from the commercial/industrial/office zoned lands based on a projected water usage of 2,000 gallons per day per acre.

6) The Total Projected Average Daily Flows, measured in gallons, assume a flow rate of 160 gallons per day per REC.

7) All remaining ISTS systems within the City except one will be connected to the public sanitary sewer system by the year 2040.

The estimated total contributing REC's, the City's Total Projected Average Daily Flow, and anticipated population for years 2015 through 2040 are shown on Table 8-12.

TABLE 8-12: CHAMPLIN SANITARY SEWER FLOW PROJECTIONS

	Annual Residential REC Growth					Champlin Commercial/Industrial Annual Growth				
YEAR	Total Population (Sewered and Unsewered)	Champlin Population Increase	Champlin REC Increase	Inter-Communities ISTS REC Increase	Total Residential REC Increase	Acres	REC's	Annual REC Increase	Total Contributing REC's	Total Projected Average Daily Flow MGD
2020	24,400	120	70	2	72	2	10	82	9,940	1.59
2021	24,520	120	70	2	72	2	10	82	10,022	1.60
2022	24,640	120	70	2	72	2	10	82	10,104	1.62
2023	24,760	120	70	2	72	2	10	82	10,186	1.63
2024	24,880	120	70	2	72	2	10	82	10,268	1.64
2025	25,000	120	70	2	72	2	10	82	10,350	1.66
2026	25,120	120	70	2	72	2	10	82	10,432	1.67
2027	25,240	120	70	2	72	2	10	82	10,514	1.68
2028	25,360	120	70	2	72	2	10	82	10,596	1.70
2029	25,480	120	70	1	71	2	10	81	10,677	1.71
2030	25,600	-	-	-	-	2	10	10	10,687	1.71
2031	25,580	-	-	-	-	2	10	10	10,697	1.71
2032	25,560	-	-	-	-	2	10	10	10,707	1.71
2033	25,540	-	-	-	-	2	10	10	10,717	1.71
2034	25,520	-	-	-	-	2	10	10	10,727	1.72
2035	25,500	-	-	-	-	-	-	-	10,727	1.72
2036	25,480	-	-	-	-	-	-	-	10,727	1.72
2037	25,460	-	-	-	-	-	-	-	10,727	1.72
2038	25,440	-	-	-	-	-	-	-	10,727	1.72
2039	25,420	-	-	-	-	-	-	-	10,727	1.72
2040	25,400	-	-	-	-	-	-	-	10,727	1.72

Metropolitan Council Sewer Flow Projections

The forecasts of population, households, employment, and wastewater flows for Champlin have been estimated by the Metropolitan Council staff and identified in their *Water Resources Management Policy Plan.* These forecasts are for sewered development. The sewered housing forecasts were estimated based on SAC data, annual city reports, current trends and other information relating to Champlin. The wastewater flows are based on historical wastewater flow data and the projected sewered housing and employment data.

The flow projections represent the Council's commitment to a level of service, assuming that the Council's underlying demographic forecasts are maintained. Adjustments may be required based on verified growth or lack of growth.

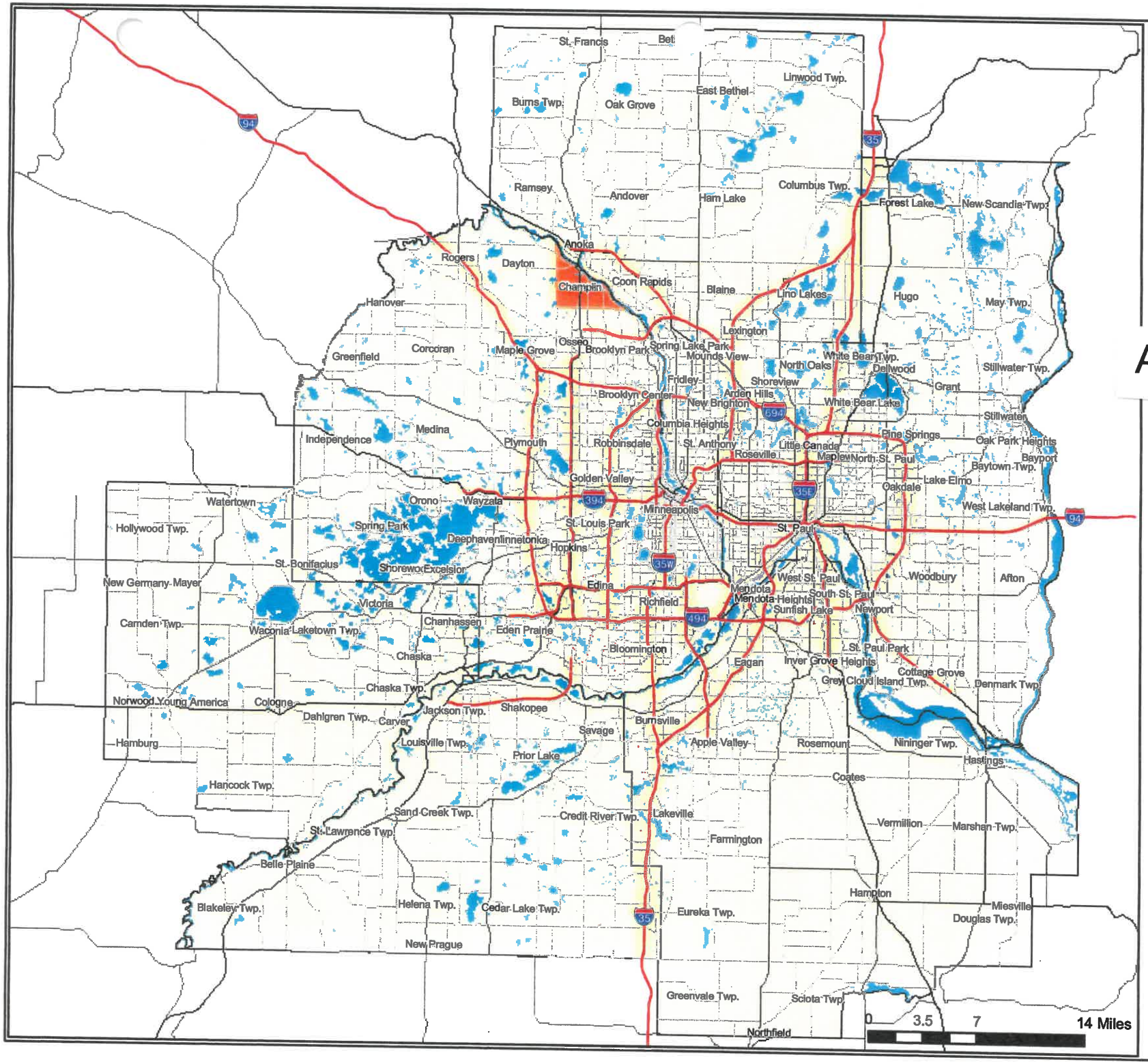
Table 8-13: MCES Projected Sewage Flows for the City Of Champlin

YEAR	FLOW (MILLION GALLONS/YEAR) MG	CITY AVERAGE DAILY FLOW	MCES AVERAGE DAILY FLOW
1990	418.3	1.15	1.15
1995	593.6	1.63	1.63
2000	579.3	1.59	1.59
2005	649.8	1.78	1.73
2010	658.4	1.85	1.69
2020	580.4	1.59	1.66
2030	624.2	1.71	1.68
2040	627.8	1.72	1.62

A comparison of the projected sanitary sewer flows for the City of Champlin by the Metropolitan Council staff and by the City staff, as shown in Table 8-13 above, shows very similar projections for years 2010. Minor divergence occurs in years 2020 and 2030. Although the same population projections are utilized, the additional flow per REC accounts for part of the divergence.

8.5 CAPITAL IMPROVEMENTS PROGRAM

A Capital Improvement Program based on estimated sanitary sewer system improvements is presented in Appendix 8-9 of this chapter. The Capital Improvement Program includes upgrades and maintenance improvements to the City's pumping stations, pipe rehabilitation, and data information improvements for the City's sanitary sewer system.



City of Champlin

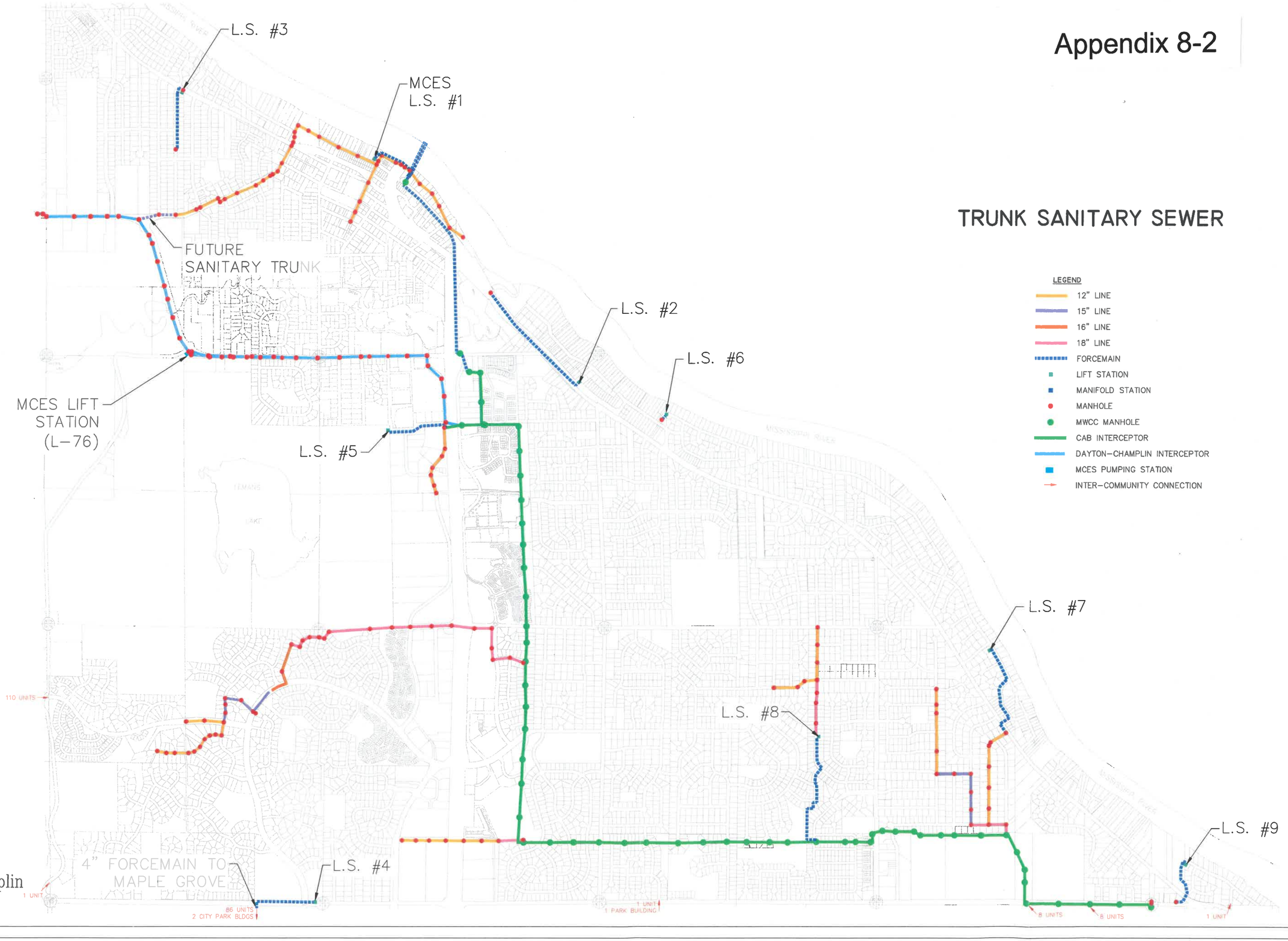
2030 Comprehensive Plan City of Champlin

Appendix 8-1

WSB & Associates, Inc.

Appendix 8-2

TRUNK SANITARY SEWER



LEGEND

- 12" LINE
- 15" LINE
- 16" LINE
- 18" LINE
- FORCEMAIN
- LIFT STATION
- MANIFOLD STATION
- MANHOLE
- MWCC MANHOLE
- CAB INTERCEPTOR
- DAYTON-CHAMPLIN INTERCEPTOR
- MCES PUMPING STATION
- INTER-COMMUNITY CONNECTION

City of Champlin

wsb

City Of Champlin
Sanitary Sewer Pipe Flows and Estimated Flow

Sanitary Sewer District	Location Utility	Point From	Point To	Pipe Size (in) (in)	Pipe Grade %	Pipe Capacity MGD	Existing Average Flow MGD	Ultimate Average Flow MGD	Peak Hourly Flow Factor	Ultimate Peak Hourly Flow MGD	Ultimate Percent Capacity %
MCES-1	LS#3	District	MH1-083	8"	0.4	0.54	0.0765	0.0765	4.0	0.3060	57%
MCES-1	West Trunk	District	LS#1	12"	0.26	1.27	0.1114	0.1141	4.0	0.4564	36%
MCES-1	LS#3 + District	LS#1	CAB31	12"	0.26	1.27		0.1879	3.9	0.7328	58%
MCES-1	Central Trunk	District	LS#1	12"	1.4	3.65	0.0372	0.0372	4.0	0.1488	4%
MCES-1	LS#6	District	MH2-204	8"	0.4	0.54	0.0292	0.0292	4.0	0.1168	22%
MCES-1	LS#2	District	MH1-222	8"	0.4	0.54	0.1324	0.1324	3.9	0.5164	96%
MCES-1	LS#6 + LS#2	LS#2	East Trunk	12"	0.22	1.44		0.1616	3.9	0.6302	44%
MCES-1	East Trunk	District	LS#1	12"	0.22	1.44	0.0832	0.0832	4.0	0.3328	23%
MCES-1	East Trunk + LS#2	East Trunk	LS#1	12"	0.22	1.44		0.2448	3.7	0.9058	63%
MCES-1	LS#1	LS#1	CAB31					0.4699	3.5	1.6447	
DC73	Future lateral	District	DC MH 73	8"	0.4	0.54		0.0513	4.0	0.2052	38%
DC51	Future lateral	District	DC MH 51	8"	0.4	0.54		0.0102	4.0	0.0409	8%
DC51	LS#3 - MCES-1	Future Trunk	DC MH 51	8"	0.4	0.54	0.0103	0.0868	4.0	0.3472	64%
CAB71	Elm Creek Crossing bridge	District	DC MH 71	8"	1.92	1.44	0.0227	0.0227	4.0	0.0908	6%
CAB70	MCES pumping station	District	DC MH 70	12"	0.22	1.44	0.0288	0.0288	4.0	0.1152	8%
CAB16-42	LS#5	District	LS#5	21"	0.15	4.31	0.0968	0.0968	4.0	0.3872	9%
CAB16-42	Lateral sewer	District	CAB16-42	12"	0.23	1.47	0.0652	0.0652	4.0	0.2608	18%
CAB16-42	CAB16-42	CAB16-42	CAB21					0.1620	3.9	0.6318	
CAB20	Village on Oak Creek - Zealand	District	CAB20	8"	0.4	0.54	0.0056	0.0056	4.0	0.0224	4%
CAB17	Commercial - Willey McCoys	District	CAB17	8"	0.4	0.54	0.0022	0.0022	4.0	0.0088	2%
CAB21	Zealand Ave - Oak Creek	District	CAB21	8"	0.4	0.54	0.0173	0.0173	4.0	0.0692	13%
CAB22	Coler Farms	District	CAB22	8"	0.4	0.54	0.0299	0.0299	4.0	0.1196	22%
CAB15A	Target Area	District	CAB15A	8"	0.5	0.74	0.0137	0.0137	4.0	0.0548	7%
CAB15	Texas Ave connection	District	CAB15	8"	0.4	0.54	0.0400	0.0400	4.0	0.1600	30%
CAB15B	Emery Farms	District	CAB15B	8"	0.4	0.54	0.0493	0.0493	4.0	0.1972	37%
CAB14	Trunk Sewer SW Area	District	CAB14	18"	0.08	2.08	0.3358	0.3358	3.6	1.2089	58%
CAB13	Xylon Avenue Area	District	CAB13	8"	0.4	0.54	0.0216	0.0216	4.0	0.0864	16%
CAB12	South Pond Trail	District	CAB12	8"	0.4	0.54	0.0264	0.0264	4.0	0.1056	20%
CAB11	Xyon Pond - West connection	Industrial side	CAB11	21"	0.13	4.92	0.0703	0.0803	4.0	0.3212	7%
CAB11	Xylon Pond - South Connection SFR	Residential	CAB11	8"	0.4	0.54	0.0229	0.0932	4.0	0.3728	69%
CAB10	110th Place - Westwood N	District	CAB10	8"	0.4	0.54	0.0239	0.0239	4.0	0.0956	18%
CAB9	110th Place - Bartusch Add	District	CAB9	8"	0.4	0.54	0.0070	0.0070	4.0	0.0280	5%
CAB8	110th Place & Quebec Ave	District	CAB8	8"	0.4	0.54	0.0337	0.0337	4.0	0.1348	25%
CAB7	Oregon Ave - Helmer Add	District	CAB7	8"	0.4	0.54	0.0126	0.0126	4.0	0.0504	9%
CAB6	110th Circle	District	CAB6	8"	0.4	0.54	0.0018	0.0018	4.0	0.0072	1%
CAB5	Maryland Ave- Helmer Addition	District	CAB5	8"	0.4	0.54	0.0077	0.0077	4.0	0.0308	6%
CAB4	Louisiana Court West	District	CAB4	8"	0.4	0.54	0.0221	0.0221	4.0	0.0886	16%
CAB3	Bartusch Park	District	CAB3	8"	0.4	0.54	0.0202	0.0202	4.0	0.0808	15%
CAB2	LS#8	District	CAB2	18"	0.11	2.44	0.2142	0.2187	3.8	0.8311	34%
CAB2	Brittany Drive	District	CAB2	8"	1.27	1.17	0.0110	0.0110	4.0	0.0440	4%
CAB2	Brittany Drive	CAB2	CAB59				0.2252	0.2297	3.8	0.8729	
CAB1	LS#7	District	C1-031	12"	0.24	1.51	0.0516	0.0591	4.0	0.2364	16%
CAB1	Vera Cruz Avenue	District	CAB1	18"	0.3	4.96	0.1248	0.1248	3.9	0.4867	10%
CAB1	Vera Cruz Avenue	CAB-01	CAB63				0.1764	0.1839	3.9	0.7172	
CAB69	Anoka Hennepin School	District	CAB69	8"	0.4	0.54	0.0401	0.0401	4.0	0.1604	30%
CAB18	Brooklyn Park residential lots	District	CAB18	8"	0.4	0.54	0.0014	0.0014	4.0	0.0056	1%
CAB19	LS#9	District	C19-006	8"	0.4	0.54	0.0110	0.0133	4.0	0.0532	10%
CAB19	109th & Regent Avenue	District	CAB19	8"	0.4	0.54	0.0155	0.0155	4.0	0.0620	11%
CAB19	109th & Regent Avenue	CAB-19	CAB-18				0.0265	0.0288	4.0	0.1152	
To Maple Grove Sanitary Sewer System		LS#4	Maple Grove	8"	0.4	0.54	0.0158	0.0158	4.0	0.0632	12%
	TOTAL ESTIMATED ULTIMATE FLOW							**2.28**	**2.8**	**6.38**	

A G R E E M E N T

AGREEMENT, made this 27th day of September 1977, by and between THE CITY OF MAPLE GROVE, hereinafter referred to as "Maple Grove"; and THE CITY OF CHAMPLIN, hereinafter referred to as "Champlin", both of said parties being municipal corporations lying within the County of Hennepin, State of Minnesota.

WHEREAS, Maple Grove has constructed a public sanitary sewer facility in the Northern sector of the community and is in the process of expanding said system to an area in Maple Grove in the vicinity of 109th Avenue North and Nathan Lane; and

WHEREAS, Maple Grove and Champlin have contiguous boundaries in said area; and

WHEREAS, in the Southern sector of Champlin there are 74 properties, (73 of which have an in-place residential dwelling thereon and 1 of which is a Champlin City Park property) which properties do not have the availability of a sanitary sewer facility, due to their isolation from other developed areas in Champlin; and

WHEREAS, the private sewage facilities for said 74 properties are for the most part presently failing, thus affecting the health and welfare of the inhabitants of the community; and

WHEREAS, until such time as the future CAB interceptor is available in the area, there is no feasible means to supply the necessary public sanitary sewer facilities to the said 74 properties other than through the Maple Grove system; and

WHEREAS, although Maple Grove has limited capacity in the metropolitan sewer system, it has determined that based upon its anticipated growth projection the need for its full capacity in the affected sewer system will not be fully realized prior to the year 1992; and

WHEREAS, Maple Grove and Champlin in an effort to resolve the environmental and health problem of the 73 in-place houses in Champlin which are in need of sanitary sewer has determined that if Maple Grove

agrees to furnish Champlin temporary limited capacity in its sewer system for the said 73 in-place houses as well as the Champlin City Park, that said action will conform to the metropolitan sewer system framework and yet will not jeopardize the Maple Grove system or its future capacity; an

WHEREAS, Maple Grove and Champlin have come to an agreement subject to approval by the Metropolitan Waste Control Commission to facilitate the construction of a temporary public sanitary sewer facility to serve the 74 parcels, which parcels are identified on Exhibit "A" attached hereto and incorporated herein by reference, which temporary facility will allow the said 74 parcels in Champlin to discharge sewage through and into the Maple Grove sewage system,

NOW, THEREFORE, IT IS AGREED AS FOLLOWS:

1. Purpose. It is the purpose of this Agreement to establish the terms under with Champlin may utilize Maple Grove's Sanitary sewer facilities for the benefit of 74 parcels of property, all of which parcels are identified on Exhibit "A" attached hereto and incorporated herein by reference.

2. Time Framework. This Agreement and all of its terms as set forth hereinafter are binding upon the parties until cancelled pursuant to the following procedure:

> Champlin may, upon ninety (90) days' notice served in writing upon the Clerk of Maple Grove, cancel this Agreement at any time. Maple Grove may at any time after the 1st day of January 1990 serve notice upon Champlin by service of said notice upon the Clerk of Champlin of its intention to cancel the terms of this contract; however, such notice shall not have the effect of termination of this Agreement until two (2) years from the date of service of said notice upon Champlin, unless otherwise agreed upon in writing by the parties.

3. Limitation of this Agreement. This Agreement is intended to furnish temporary public sanitary sewer facilities to only the 74 specific parcels set forth on Exhibit "A" attached hereto and incorporated herein by reference and shall under no circumstances, without appropriate executed amendment to this Agreement, furnish sewer discharge capacity to any other properties in Champlin.

4. Construction of Facility. Champlin shall construct and maintain all the sanitary sewer facilities from the connection point near 109th Avenue North and Nathan Lane. The said facility shall include a pumping lift station with an hourly meter therein to measure the flow of sewage through the Champlin system into the Maple Grove system. The construction, plans and specifications shall be approved by Maple Grove prior to commencement of construction. Champlin shall have the obligation to satisfactorily construct and maintain the facility to the standards required by Maple Grove. Maple Grove shall have the right at any reasonable time during the term of this Agreement to make all reasonable examinations and inspections of the subject facility and upon Champlin's receipt of a notice of a defect or deficiency in construction and/or maintenance of the said facility, Champlin shall within a reasonable time, cure the said defect or deficiency. It is intended herein that Maple Grove shall not make any capital outlay or have any maintenance expense for that portion of the facility which lies North of the connection point in Nathan Lane just South of 109th Avenue North.

5. Connection Charge. On or before December 31, 1977, Champlin shall pay to Maple Grove a connection charge in the sum of Thirty-One Thousand Sixty ($31,060.00) Dollars for the 74 units which are being furnished sanitary sewer service through the Maple Grove system.

6. User Charges. In addition to the connection charges referred to above, Maple Grove will bill Champlin on a quarterly basis a use charge for each of the parcels which are deemed to be using said facility. Champlin shall pay to Maple Grove the entire amount of said billing not less than thirty (30) days after the date of said billing. Permits for connection

to the said sanitary sewer facility for any of the referred 74 parcels, are to be issued by Champlin. Champlin shall not permit any of the said parcels to make connection until such time as a permit has been issued. At the time of the issuance of the permit, the property shall be deemed for billing purposes to be connected and using the system. A separate permit shall issue for each separate property being connected. The quarterly use charge made to Champlin by Maple Grove shall be determined by multiplying the number of single-family connections in Champlin which are using the said system times Maple Grove's current sewer useage charge for single-family residences. It is further agreed that only single-famil residences shall occupy any of the 73 subject parcels and that the 74th parcel shall be limited to the size set forth in Exhibit "A" and shall be occupied by no more than one building using sewage facilities, which building shall have no more than 48 fixture units (definition of fixture units to be determined from the Minnesota State Plumbing Code). The meter ing device to be installed by Champlin in the lift station shall monitor the sewage flow from Champlin into the Maple Grove system. Should Champlin sewage flow per capita for the parcels described on Exhibit " attached hereto and incorporated herein by reference exceed Maple Grove's average per capita flow, Champlin shall, upon notice by Maple Grove, install an adequate tank system to skim off excess amounts during periods of peak flow so as to discharge the said excess amount in a period of slack flow. Any increase in per capita flow from Champlin over the Maple Grove average per capita sewage flow shall require Champlin to pay an additional use charge which adjusted use charge shall be increased proportionately to the amount of the excess flow.

7. Notification of Issuance of Permit. Champlin shall notify Maple Grove in writing within ten (10) days after the permit is issued for one of the subject properties to hook up to said facility, that Maple Grove may commence to bill Champlin for the use charges for said property in its next quarterly billing.

8. Service Availability Charges. Service availability charges by the Metropolitan Waste Control Commission shall be collected by Champl at the time a permit is issued and Champlin shall be responsible for the payment of said charges directly to the Metropolitan Waste Commission.

9. Indemnification. Champlin shall hold harmless, indemnify and defend Maple Grove from all claims, costs and expenses of every kind and nature whether occurring in Champlin or Maple Grove or any other place which claims, costs and/or expenses are incurred by Maple Grove and which arise directly or indirectly out of the terms of this Agreement and which shall include but not be limited to matters relating to construction, use and/or maintenance of the Champlin-Maple Grove sewage facility referred to herein.

10. Agreement Contingency. This Agreement is contingent upon the parties obtaining the necessary approval of the Metropolitan Council and/or the Metropolitan Waste Control Commission.

Executed by and between the parties hereto the day and year first above written.

THE CITY OF MAPLE GROVE

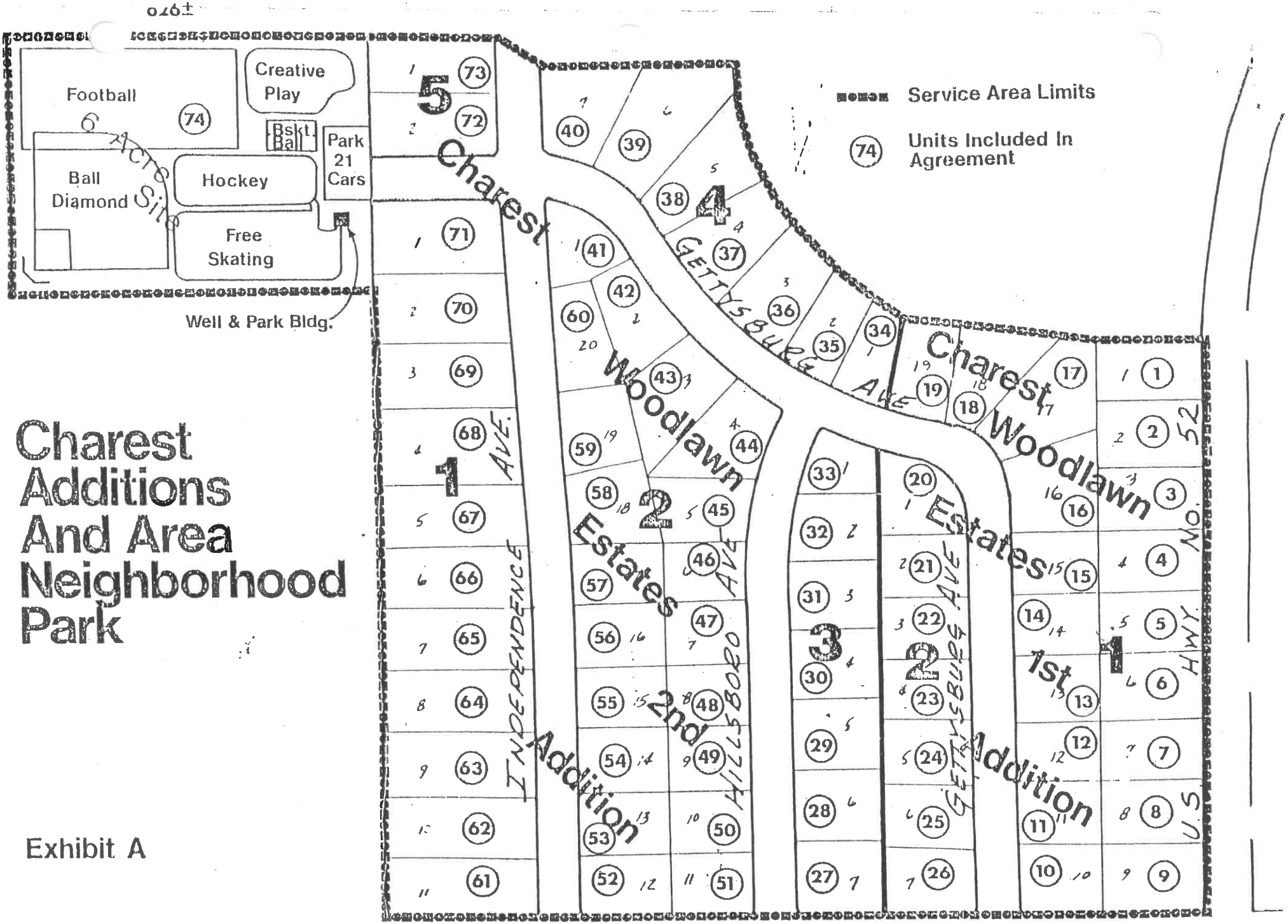
By _____
Richard H. Reimer, Mayor

And _____
Gerri Fleming, City Clerk

THE CITY OF CHAMPLIN

By _____
Its mayor

and _____
Its City Clerk-Treas


Service Area Limits
74 Units Included In Agreement
Football
Creative Play
Bskt Ball
Park 21 Cars
Hockey
Ball Diamond
Free Skating
Well & Park Bldg.
6 Acre Site
417±
±970
Charest Additions And Area Neighborhood Park
Exhibit A
CHV6:02 29A
Charest
Woodlawn
Getty Sburg Ave
Independence Ave
Hillsboro Ave
Addition
Estates
1st
2nd
Woodlawn No. 52
Hwy. 1
U.S.
19th Ave No

City of Maple Grove
9401 Fernbrook Lane, P.O. Box 1180, Maple Grove, MN 55311-6180 612-494-6000

July 9, 1997

RECEIVED
JUL 10 1997
CLERKS OFFICE
CITY OF CHAMPLIN

Mr. Todd Tuominen
City of Champlin
11955 Champlin Drive
Champlin, MN 55316-2399

Dear Todd:

Enclosed herewith is one fully-executed copy of the Joint Powers Agreement between Champlin and Maple Grove regarding sanitary and storm sewer facilities. Also enclosed is a receipt for your check number 59990 in the amount of $57,210.20 relating to the utility connection and legal fees.

Please feel free to contact me if I can be of any further assistance.

Sincerely,

Gerald E. Butcher, P.E.
Director of Public Works

GEB:sr

Encl.

cc: Champlin File

Robert A. Burlingame, Mayor
David Burtness, Councilmember
Irene C. Koski, Councilmember
Mark V. Steffenson, Councilmember
LeAnn Sargent, Councilmember

Printed on Recycled Paper containing at least 15% post-consumer paper fibers

City of Maple Grove

9401 FERNBROOK LANE / MAPLE GROVE, MINNESOTA 55369

PHONE: 494-6000

Joint powers agreement	
Sanitary storm sewer	57210.20
facilities	

TOTAL CHARGES $ 57210.20

NAME City of Champlin

ADDRESS

RECEIPT No. 118447

DATE 7-7-97

K Dose

AGREEMENT

THIS AGREEMENT, made this 7th day of July, 1997, by and between THE CITY OF MAPLE GROVE, hereinafter referred to as "Maple Grove"; and THE CITY OF CHAMPLIN, hereinafter referred to as "Champlin", both of said parties being municipal corporations lying within the County of Hennepin, State of Minnesota.

WHEREAS, the parties previously entered into an Agreement dated September 27, 1977, whereby Maple Grove allowed seventy-four (74) properties in the southern section of Champlin to temporarily utilize Maple Grove's sanitary sewer facilities; and

WHEREAS, the parties wish to amend their Agreement so as to include up to twelve (12) additional properties and so as to make adjustment to other terms of the said Agreement.

NOW, THEREFORE, THE PARTIES AGREE AS FOLLOWS:

1. This Agreement shall supersede and entirely replace the parties' previous Agreement dated September 27, 1977. It is the purpose of this Agreement to establish the terms under which Champlin may permanently utilize Maple Grove's sanitary sewer facilities for the benefit of up to eighty-six (86) parcels of property as identified on Exhibit "A" (sanitary sewer tributary area), and may utilize Maple Grove's storm drainage system for approximately sixty (60) acres of property identified on Exhibit "B" (storm sewer tributary area) attached hereto, both of which exhibits are incorporated herein by reference.

2. Champlin shall construct and maintain at its expense all the sanitary sewer and storm drainage facilities contemplated herein to feed into Maple Grove's facilities. This obligation with regard to sanitary sewer shall extend from the connection point near 109th Avenue North and Nathan Lane. The said facilities shall include a pumping lift station with an hourly meter therein to measure the flow of sewage through the Champlin system into the Maple Grove system. The construction,

plans and specifications of all facilities shall be approved by Maple Grove prior to commencement of construction. Champlin shall have the obligation to satisfactorily construct and maintain all facilities to the standards required by Maple Grove. Maple Grove shall have the right at any reasonable time during the term of this Agreement to make all reasonable examinations and inspections of the subject facilities and upon Champlin's receipt of a notice of a defect or deficiency in construction and/or maintenance of any such facility, Champlin shall, within a reasonable time, cure the said defect or deficiency. It is intended herein that Maple Grove shall not make any capital outlay or have any maintenance expense for Champlin's improvements including, but not limited to, those portions of the sanitary sewer facilities which lie North of the connection point in Nathan Lane just south of 109th Avenue North.

3. Prior to adding the described additional twelve (12) units and drainage to Maple Grove, Champlin shall pay to Maple Grove the amount of $26,000.00 for connection charges, continued permanent usage of presently connected sewer facilities, and for storm water drainage service through the Maple Grove system. If said amount is paid after January 1, 1995, said sum shall be adjusted upward to include interest at the rate of seven percent (7%) per annum. Said payment shall be made at the time this Agreement is executed.

4. Champlin agrees to pay Maple Grove's sanitary sewer utility as charged to Maple Grove residents less a credit for Champlin maintenance and operation. Maple Grove will bill Champlin on a quarterly basis a use charge for each of the parcels which are deemed to be using said facilities. Champlin shall pay to Maple Grove the entire amount of said billing not less than thirty (30) days after the date of said billing. Permits for connection to the said sanitary sewer facilities for any of the referred eighty-six (86) parcels are to be issued by Champlin. Champlin shall not permit any of the said parcels to make connection until such time as a permit has been issued. At

the time of the issuance of the permit, the property shall be deemed for billing purposes to be connected and using the system. A separate permit shall be issued for each separate property being connected. The quarterly sanitary sewer use charge made to Champlin by Maple Grove shall be determined by multiplying the number of single-family connections in Champlin which are using the said system times the difference between Maple Grove's current sewer usage charge for single-family residences less a $4.00 credit per quarter per parcel for Champlin's operating and maintaining facilities north of 109th Avenue. It is further agreed that only single-family residences shall occupy any of the eighty-five (85) subject parcels and that the eighty-sixth (86th) parcel (a park area) shall be limited to the size set forth in Exhibit "A" and shall be occupied by no more than one building using sewage facilities, which building shall have no more than forty-eight (48) fixture units (definition of fixture units to be determined from the Minnesota State Plumbing Code). The metering device to be installed by Champlin in the lift station shall monitor the sewage flow from Champlin into the Maple Grove system. Should Champlin sewage flow per capita for the parcels described on Exhibit "A" exceed Maple Grove's average per capita flow, Champlin shall, upon notice by Maple Grove, install an adequate tank system to skim off excess amounts during periods of peak flow so as to discharge the said excess amount in a period of slack flow. Any increase in per capita flow from Champlin over the Maple Grove average per capita sewage flow shall require Champlin to pay an additional use charge, which adjusted use charge shall be increased proportionately to the amount of the excess flow. The quarterly drainage use charge made to Champlin by Maple Grove shall be determined by multiplying the number of acres or units times Maple Grove's current storm drainage utility fee, if any, less a 50% credit to reflect Champlin's operation and maintenance of facilities north of 109th Avenue.

5. Champlin shall notify Maple Grove in writing within thirty (30) days after the permit is issued for one of the subject properties to hook up to the sanitary sewer facilities, that Maple Grove may commence to bill Champlin for the use charges for said property in its next quarterly billing.

6. Service availability charges made by the Metropolitan Council Environmental Service (MCES) shall be collected by Champlin at the time a permit is issued, and Champlin shall be responsible for the payment of said charges directly to the Metropolitan Council Environmental Service.

7. Champlin shall reimburse Maple Grove in the amount of $23,960.00 for the cost of the existing 109th Avenue Trail between Jefferson Highway and the easterly boundary of Maple Grove. Said amount shall be adjusted upward to include interest at the rate of seven percent (7%) per annum from February 1, 1996, to the date of payment. Said reimbursement shall be made at the time this Agreement is executed.

8. Champlin shall install at its expense prior to additional development, additional storm water retention basins providing a minimum of 7.7 acre feet of additional water storage north of 109th Avenue so as to hold waters of a 100-year storm from the 60 or so acres identified on Exhibit "B" and so as to maintain the existing rate of discharge before water enters Maple Grove pond WM-P1. The ponds in Champlin and Maple Grove shall function as one by means of an equalizer pipe, and Champlin shall be responsible for the cost of said pipe, and its installation and maintenance.

9. Maple Grove agrees to accept on a permanent basis the sanitary sewer flow from Champlin for approximately eighty-six (86) lots as identified on Exhibit "A", and will continue to accept storm drainage from Champlin draining into the 109th/Boundary Creek pond from the existing contributory areas in Champlin as identified on Exhibit "B".

10. Each party shall be responsible for any future costs that may be required by other agencies having jurisdiction over these areas such as, but not limited to, the West Mississippi Water Management Organization and the Elm Creek Watershed Management Organization.

11. Champlin shall pay the costs of preparing this Agreement not to exceed $172.50 within ten (10) days of billing by Maple Grove.

12. Any notice required or permitted to be given by any party upon the other is given in accordance with this Agreement if it is directed to Champlin by delivering it personally to Champlin; or if it is directed to Maple Grove by delivering it personally to Maple Grove; or if mailed in a sealed wrapper by United States certified mail, return receipt requested, postage prepaid; or if transmitted by facsimile, copy followed by mailed notice as above required; or if deposited, cost paid with a national recognized, reputable overnight courier, properly addressed as follows:

IF TO CHAMPLIN:

_____
_____
_____

AND COPY TO:

_____
_____
_____

IF TO MAPLE GROVE:

Director of Public Works
CITY OF MAPLE GROVE
P.O. Box 1180
9401 Fernbrook Lane
Maple Grove, Minnesota 55311

AND COPY TO:

HOFF, BARRY & KUDERER, P.A.
Maple Grove City Attorney
7901 Flying Cloud Drive #260
Eden Prairie, Minnesota 55344-7914

Notices shall be deemed effective on the earlier of the date of receipt or the date of deposit as aforesaid; provided, however, that if notice is given by deposit, that the time for the response to any notice by the other party shall commence to run one (1) business day after any such deposit. Any party may change its address for the service of notice by given written notice of such change to the other party, or in any manner above specified, ten (10) days prior to the effective date of such change.

13. Champlin shall hold harmless, indemnify and defend Maple Grove from all claims, costs and expenses of every kind and nature whether occurring in Champlin or Maple Grove or any other place which claims, costs and/or expenses are incurred by Maple Grove and which arise directly or indirectly out of the terms of this Agreement and which shall include, but not be limited to, matters relating to construction, use and/or maintenance of the Champlin-Maple Grove sewage or drainage facilities referred to herein.

14. This Agreement is contingent upon the parties obtaining the necessary approval of the Metropolitan Council and/or the MCES and any other governmental body having jurisdiction in the matter.

15. If any provision of this Agreement or any application hereof shall be invalid or unenforceable, the remainder of this Agreement and any other application of such provisions shall not be affected thereby and shall not be rendered invalid or unenforceable.

16. This Agreement will be binding upon the agents, successors, and assigns of the parties.

WHEREFORE, the parties have hereunto set their hands as their free, voluntary, and knowing act this _____ day of _____, 1997.

CITY OF MAPLE GROVE

Dated: 7/7/97

By: Robert A. Burlingame
Robert A. Burlingame, Mayor

Dated: 7/7/97

And: Alan A. Madsen
Alan A. Madsen, City Clerk

CITY OF CHAMPLIN

Dated: 6/20/97

By: Steve E. Boynton
Its Mayor

Dated: 6/20/97

And: Joanne M Brown
Its City Clerk

STATE OF MINNESOTA)
COUNTY OF HENNEPIN) SS.
CITY OF MAPLE GROVE)

This instrument was acknowledged before me on July 8, 1997 by Robert A. Burlingame and Alan A. Madsen as the Mayor and City Clerk respectively of the CITY OF MAPLE GROVE, a Minnesota Municipal corporation.

Stephanie M. Koll Anderson
Notary Public

Stephanie M. Koll Anderson
NOTARY PUBLIC – MINNESOTA
MY COMMISSION EXPIRES
JANUARY 31, 2000

STATE OF MINNESOTA)
) SS.
COUNTY OF HENNEPIN)

This instrument was acknowledged before me on 6/20/97 by Steve Boynton and Joanne Brown as the Mayor and City Clerk respectively of the CITY OF CHAMPLIN, a Minnesota Municipal corporation.

ALLEN D. BRUNS
NOTARY PUBLIC-MINNESOTA
HENNEPIN COUNTY
My Commission Expires Jan. 31, 2000

Notary Public

This instrument was drafted by:

City of Maple Grove
9401 Fernbrook Lane
P.O. Box 1180
Maple Grove, MN 55311-6180
(612) 494-6000

COOPERATIVE JOINT POWERS AGREEMENT
109TH AVENUE IMPROVEMENTS
(NOBLE TO CHAMPLIN PARK HIGH SCHOOL)
CHAMPLIN AND BROOKLYN PARK

AGREEMENT, made and entered into this 27th day of June, 1994, by and between the City of Champlin, hereinafter referred to as "Champlin;" and the City of Brooklyn Park, hereinafter referred to as "Brooklyn Park."

WITNESSETH:

WHEREAS, Champlin and Brooklyn Park are desirous of bringing about the improvement of that portion of 109th Avenue approved as a Municipal State Aid Street (MSAS) and designated as Champlin MSAS 193-106-08 and Brooklyn Park MSAS 110-113-10 from the easterly side of Noble Avenue westerly to 2554 feet, to be shown on the construction plans, which improvement contemplates concrete curb and gutter; concrete sidewalk/trails; aggregate base; utilities; bituminous base and wearing courses; street lighting; landscaping; storm sewer; and culvert; and other related improvements herein referred to as the Project; and

WHEREAS, the City of Champlin has made this Project part of their southeast area streets and utilities improvement, and

WHEREAS, it is in the best interest of the general taxpayer supporting Champlin and Brooklyn Park to jointly construct 109th Avenue using Municipal State Aid funds, and

WHEREAS, Champlin and Brooklyn Park have, in the past, cooperated in street improvement projects on 109th Avenue between Jefferson Highway and Douglas Drive, Douglas Drive to the eastern limits of the Champlin Park School, and between Noble and County Road 12, as well as recent

improvements to Brooklyn Park's Marvella Subdivision whereby Champlin provided utility connections for water and sewer, and

WHEREAS, Minnesota Statutes Section 471.59 allows the cities of Champlin and Brooklyn Park to enter into a Joint Powers Agreement to plan and construct the proposed road and public utilities on the common boundary between the two cities; and

WHEREAS, the above mentioned construction along 109th Avenue shall be hereinafter identified as Champlin's Southeast Area Improvements Project 92-2 and BP Improvement 94-04, Project ST-1095, SS-1096, S-1097 and W-1098, and

WHEREAS, the Champlin City staff prepared the feasibility reports and the City Councils ordered the improvements, and

WHEREAS, plans and specifications have been prepared for the improvements, and bids have been solicited and approved, and contracts awarding the work have been executed, and construction management will be exercised through the improvement process; all in accordance with approved Municipal State Aid Standards (MSA); and

WHEREAS, Champlin and Brooklyn Park mutually agree that Champlin will be the lead agency to perform the Project management and design work in accordance with MSA Rules and Regulations and obtain MnDOT approvals as required; and

WHEREAS, Champlin, as lead agency, will maintain records of all expenditures and charges associated with the Project and provide a breakdown of those costs for the benefit of each City; and

WHEREAS, the parties hereto have reviewed the plans and specifications and have approved said plans and specifications and agree

to participate in the cost of Project items both eligible and ineligible for MSA funding; and

WHEREAS, it is contemplated that this public improvement Project be carried out by the parties hereto under the provisions, terms and conditions set forth.

NOW, THEREFORE, IT IS HEREBY AGREED:

I

The cities of Champlin and Brooklyn Park, by executing this agreement, mutually approve the City of Champlin as the Lead Agency and agree to review and approve the plans and specifications for said Project. Brooklyn Park shall provide Champlin with all the available data and materials pertinent to the work program as required to complete the Projects. The City's data and material may consist of, but will not be limited to; contour maps, utility and street plans, aerial photos and previous environmental study material. Progress meetings will be scheduled for the City staffs and other concerned public agencies to discuss issues during the study/report, design and construction phases.

II

Champlin shall prepare on behalf of the cities' as parties hereto, the necessary feasibility report(s) for usage by each individual city for subsequent public improvement and assessment hearings. Each City shall prepare an addendum to the feasibility report indicating their assessment program, a list of the affected properties and pertinent information unique to each City's special assessment program. Brooklyn Park shall be responsible for calling all necessary hearings in

compliance with Minnesota Law to levy special assessments in their City and Champlin shall be responsible for said procedures for Champlin properties.

III

Champlin shall prepare the plans and specifications, which shall be reviewed and approved by Brooklyn Park, Champlin shall then advertise for and receive bids; enter into a contract for said Project with the successful bidder at the unit prices specified in the bid of the lowest responsible bidder, in accordance with Minnesota Statutes.

The contract documents will include the plans and specifications prepared by Champlin or its agents and approved by Brooklyn Park and MnDOT as a MSA Project. The plans and specifications shall be in compliance with all State Aid Standards and shall be approved for State Aid funding.

IV

Champlin shall administer the contract and inspect the construction of the contract work contemplated herewith. All work on the Project shall be completed in compliance with the plans and specifications. Brooklyn Park 's City Engineer or staff shall have the right, as the work progresses, to enter upon the premises to make any inspections deemed necessary, but will have no responsibility for the supervision of the work.

V

Champlin shall be responsible for receiving final approval of the Project by the State Aid Engineer and obtaining the necessary agency

approvals. Brooklyn Park and Champlin, at their own expense, shall acquire all rights-of-way and/or easements required in accordance with State law and MnDOT rules and regulations and the approved right-of-way plans, for the construction of said project within their respective corporate limits. Champlin or its agent will provide a description and individual drawing of each parcel involved in the right-of-way program according to the approved right-of-way plan. The individual drawing will show the permanent and temporary right-of-way taking with appropriate dimensions. The right-of-way costs incurred shall include all acquisition costs including, but not limited to, any and all damages occurring to any person or persons, including private utilities, relocation assistance, removing or adjusting main conduits or other structures located in or upon the land taken and within the present right-of-way; or damage in procuring such right-of-way in the performance of this contract with respect to the Project in accordance with the plans and specifications. The right-of-way costs expended by each City shall be included as part of the eligible MSA funding program.

VI

Champlin and Brooklyn Park shall share in the incurred Project costs, including construction, engineering and administrative costs. All costs incurred by Champlin as the lead agency; to manage, provide reports and studies, preliminary work, design, construction and project administration, shall be part of the Project costs in accordance with MSA rules and regulations. All Project costs shall be apportioned to each City in accordance with the percentage of the total construction items completed in each City as defined below.

- Right turn lane and bypass lane at Indiana Avenue and West River Road. The City of Champlin will pay for the right turn lane and bypass lane on West River Road at Indiana Avenue. Brooklyn Park will not participate in this cost.
- Utility and streets on 109th Avenue to the west of Noble Avenue.

  The City of Brooklyn Park will pay for one-half of the construction cost of the watermain lateral (up to 8 inch diameter based on contractors bid) and all of the costs of the services from the east side of Noble Avenue to the east side of Champlin Park High School at station 30+00. Brooklyn Park will pay for the watermain lead extension and hydrant south of the centerline of 109th Avenue at Noble Avenue.

  The City of Brooklyn Park will pay for one-half of the construction cost for the sanitary sewer line plus all of the costs of the services to Brooklyn Park from Noble Avenue to Oxbow Park. Brooklyn Park will be responsible for the entire construction cost of the sanitary sewer to the west of Oxbow Park from manhole #3 at station 38+60.

  The City of Brooklyn Park and Champlin will each pay one-half of the construction cost for the MSA street and storm sewer on 109th Avenue from Noble Avenue to the west with the exception of the storm sewer culvert at station 29+75. The cost to install this storm sewer culvert will be the responsibility of Brooklyn Park.
- Utility and streets on 109th Avenue 660 feet east of Noble

  The City of Brooklyn Park will pay for one-half of the construction cost of watermain lateral (up to 8 inches in diameter

based on contractors bid) and all costs for the four services easterly of Noble to Lee Avenue. These costs will include all cost associated with placing the water service under 109th Avenue.

The City of Brooklyn Park will pay for one-half of the construction cost of the sanitary sewer line plus the cost to jack 3 sanitary sewer services under 109th Avenue to the properties lying within Brooklyn Park.

Brooklyn Park will reimburse the City of Champlin for actual engineering cost to its consultant for the above mentioned construction costs. Documentation is to be provided by the consultant. The engineering overhead cost is estimated to be 19 percent.

Brooklyn Park will be responsible for any easements needed on the south side of 109th Avenue. Champlin will be responsible for any easements on the north side of 109th Avenue.

The City of Brooklyn Park will pay watermain trunk, source and storage fee for each home, based on the same rate as charged to the Marvella Addition. This is $1,050.00 per home.

The aforestated sharing shall be exclusive of trails and sidewalks not funded by MSA funds, which trails and sidewalks shall be paid for, in their entirety, by the City in which they are constructed.

VII

All direct payments for Project design and administration and to the Contractor for work performed on said Project will be made by

Champlin. Champlin shall be responsible for and pay all the construction costs of the contract work for said Project as identified herein and delineated in the contract documents. Ninety percent (90%) of the estimated project cost will be due to Champlin by the City of Brooklyn Park 90 days after the City of Brooklyn Park approves the contract and the final ten percent (10%) is due to Champlin 30 days after final acceptance of the project by Champlin and Brooklyn Park. All change orders, which affect Brooklyn Park's cost, are to be approved by the City of Brooklyn Park.

VIII

Champlin and Brooklyn Park shall each be responsible for reporting of State Aid contracts to MnDOT for their respective segments of the Project and the collecting of State Aid funds.

Champlin shall provide Brooklyn Park all pertinent information for the reporting of the State Aid contract.

IX

All records kept by Champlin and Brooklyn Park with respect to this Project, shall be subject to examination by the representatives of each party hereto.

X

It is understood and agreed that upon completion of the improvement proposed herein, all Project elements shall be part of the as built plans prepared by Champlin and shall become the property of the City in which those improvements are located and all maintenance, restoration, repair or replacement required thereafter shall be

performed by each City at its own expense. A subsequent agreement between Brooklyn Park and Champlin will establish the maintenance program for the roadway as it relates to the street surface and snow removal, water, sanitary sewer and storm sewer.

XI

It is further agreed that each party to this agreement shall not be responsible or liable to the other or to any other person whomsoever for any claims, damages, actions, or causes of actions of any kind or character arising out of or by reason of the performance of any work or part hereof by the other as provided herein; and each party further agrees to defend at its sole cost and expense any action or proceeding commenced for the purpose of asserting any claim of whatsoever character arising in connection with or by virtue of performance of its own work as provided herein.

Champlin also agrees that any contract let by the City or its agents for the performance of the work on 109th Avenue as provided for herein shall include clauses that will: 1) Require the Contractor to defend, indemnify, and save harmless Champlin and Brooklyn Park, their officers, agents and employees from claims, suits, demands, damages, judgements, costs, interest, expenses (including, without limitation, reasonable attorney's fees, witness fees, and disbursements incurred in the defense thereof) arising out of or by reason of the negligence of the said Contractor, its officers, employees, agents or subcontractors; and 2) Require the Contractor to provide and maintain sufficient insurance so as to ensure the performance of its hold harmless obligations.

XII

The City of Brooklyn Park will be responsible for the installation and reading of water meters to each home in Brooklyn Park. The readings will be taken at the time other meters are read in the area. Brooklyn Park agrees to pay quarterly to the City of Champlin for the total gallons used by Brooklyn Park citizens, based on Champlin's current industrial/commercial rate for water and sewer. The quarterly readings will be submitted with the payment.

Brooklyn Park will be responsible for the maintenance, including turning on and turning off, and the collection of unpaid bills for Brooklyn Park residents. Champlin will have the right to review Brooklyn Park meter readings and billings. Brooklyn Park agrees to pay the same fees for water and sewer as charged any other industrial user within the City of Champlin, including the possibility of increased cost for water treatment.

The City of Champlin agrees to give 60 day notice of any rate change.

IN TESTIMONY WHEREOF, the parties hereto have caused this agreement to be executed by their respective duly authorized officers as of the day and year first above written.

CITY OF CHAMPLIN

BY: _____
Mayor

DATE: 7/11/94

AND: _____
Administrator

DATE: 6/27/94

(Seal)

CITY OF BROOKLYN PARK

BY: _____
Mayor

DATE: 6/27/94

AND: _____
Manager

DATE: 6/27/94

(Seal)

AGREEMENT

CITY OF DAYTON AND CITY OF CHAMPLIN

THIS AGREEMENT is made and entered into between the City of Dayton, a Minnesota municipal corporation (hereinafter referred to as "Dayton"), and the City of Champlin, a Minnesota municipal corporation (hereinafter referred to as "Champlin").

RECITALS:

WHEREAS, Champlin currently owns and operates a municipal wastewater system (hereinafter referred to as "sewer") and a municipal water system (hereinafter referred to as "water") (hereinafter sewer and water are collectively referred to as "Champlin's Utilities"); and

WHEREAS, both the Champlin and Dayton comprehensive plans anticipate that there will be single family residential units in the southeast area of Dayton, including the Nature's Crossing Subdivision area.

WHEREAS, the Southeast Area requires access to Champlin's Utilities to develop urban densities; and

WHEREAS, the City of Dayton would like to extend Champlin's Utilities to the Southeast Area of Dayton, shown on attached **Exhibit A** (hereinafter referred to as "Southeast Area").

WHEREAS, Champlin and Dayton desire to enter into this Agreement allowing Champlin's Utilities to serve the Southeast Area pursuant to Minn. Stat. §471.59.

NOW, THEREFORE, it is hereby agreed by and between the parties as follows:

1. Use Allowed. For the term of this Agreement, and any renewals thereof, Champlin grants to Dayton a right and license to connect to and dispose of sanitary sewage from the Southeast Area via its municipal wastewater system. Further, Champlin grants to Dayton a right and license to connect to and draw water to serve the Southeast Area from Champlin's municipal water system. Level of services to be provided by Champlin to the Southeast Area properties pursuant to this Agreement shall be the same as provided by Champlin to similar developments in Champlin. Dayton shall adopt the provisions of Champlin's ordinances governing use of water and sewer, as attached in **Exhibit C**; Dayton may adopt additional ordinances regarding municipal utilities for the area to be served by Champlin, provided any such ordinance or ordinances shall be approved by Champlin, such approval shall not be

unreasonably withheld and the provisions shall not be substantially different from Champlin ordinances.

2. Construction, Ownership and Maintenance. Champlin represents that stub connections for sewer and water are located at the intersection of Goose Lake Road and Goose Lake Parkway that may be used, at Dayton's option, for connection of the Southeast Area to Champlin's Utilities.

Dayton shall pay for all lateral fees for use of sanitary sewer and/or water lateral on Goose Lake Road that benefit Dayton.

Dayton shall pay for and construct all sewer and water lines and associated structures within its boundaries. Champlin shall have the right to review and approve plans for any private/public improvement projects in Dayton's Southeast Area that will utilize Champlin's sewer and water system. Dayton shall pay Champlin for its staff's review time. Champlin shall submit a bill to Dayton upon completion of its review. Dayton shall collect from the private/public project said fee, which is to be based on an hourly charge for Champlin's staff review time. The fee is to be based on an hourly charge with a 2% markup rate to cover staff time and overhead. Dayton shall pay for, own and maintain all sewer and water lines and associated structures constructed within its boundaries. Dayton shall regularly maintain said lines and associated structures so as to keep them in good operating order per specifications detailed in **Exhibit B.** Dayton shall regularly inspect the lines and associated structures and immediately correct any problem which could adversely affect Champlin's Utilities, or which could result in inaccurate readings of flow through said lines. Maintenance shall occur as detailed in **Exhibit B.** All residential properties within the jurisdiction of Dayton served with water and sewer pursuant to this Agreement shall use water meters supplied and maintained by Champlin.

Champlin shall pay for, own and maintain the sewer and water lines and associated structures constructed within its boundaries. Champlin shall regularly maintain said lines and associated structures so as to keep them in good operating order. Maintenance shall occur as detailed in **Exhibit B.** Champlin shall regularly inspect the lines and associated structures and immediately correct any problem which would adversely affect or interfere with delivery of service to Dayton. Champlin shall provide the same level of continuous and uninterrupted service as provided to similar developments in Champlin and as provided in this Agreement, to the Southeast Area.

3. Champlin/Dayton shall share equally [50-50] the ownership and maintenance of public utilities in Goose Lake Road. In accordance with other agreements when Goose Lake Road is turned back to Champlin/Dayton by Hennepin County, Champlin/Dayton shall share equally [50-50] the ownership and maintenance of Goose Lake Road. Maintenance of and capital improvements

for Goose Lake Road shall be subject to consent by both parties. Maintenance shall be done in accordance with **Exhibit D.**

4. Ongoing Services. Champlin agrees that it currently has and will maintain, through the term of this Agreement, the capacity required for both sewer from and water to the Southeast Area pursuant to the land use element of the Comprehensive Plans of both parties in effect on the approval date of this agreement. Further, Champlin agrees it will provide for continuous and uninterrupted sanitary sewer service and city water service to the Southeast Area to the same extent that it provides such services to similar developments in Champlin, except for periods of necessary or emergency maintenance, or catastrophic events, including, but not limited to, flood, storm, war, or any other natural or man made catastrophes or events outside of its control. Except in cases of emergencies, in the event service needs to be interrupted for necessary maintenance, Champlin shall give Dayton fourteen (14) days notice. Said notice shall include a plan for said maintenance and alternative service to be provided, if any, and time period service will be interrupted, which plan and time period of interruption of service shall be reasonable. In the event service needs to be interrupted for emergency maintenance, Champlin shall give Dayton immediate notice. Said notice shall include, or shall as soon as practicable, be followed by a plan for said maintenance and time period service will be interrupted, which plan and time period of interruption of service shall be reasonable. The Cities of Dayton and Champlin shall cooperate in the construction of necessary utility services to serve the Faulds property, located at 11240 109th Ave. Any costs associated with extending sewer and water to the Fauld's property shall be paid by the property owner. As a part of the looping of the watermain on Goose Lake Road by Champlin, Dayton agrees to allow the extension of water trunk pipe into Dayton's municipal boundaries from 109th Avenue to a point approximately one-eighth mile north of 109th Avenue.

5. Fee Formula.

Connection/Billing, Rates, Fees and Changes.

a. Dayton Responsibilities.

Dayton shall be responsible for collection of all fees for connection to water and sewer, including trunk area fees and SAC Fees once a building permit is granted by Dayton. Dayton shall charge each residential unit within the Southeast Area the current rate charged by Champlin, pursuant to Champlin Ordinance and Resolution 2004-09 as shown in **Exhibit E**.

Dayton shall collect from each single family residential (SFR) connection in the Southeast Area and remit to Champlin the following fees:

Water Trunk, Source and Storage Fee	$2,200 per SFR connection
Sewer building fee	25 per SFR connection
Water building fee	25 per SFR connection
Water Meter fee	213 per SFR connection

Dayton shall pay directly to the Metropolitan Council Environmental Service (MCES) a Service Availability Connection (SAC) fee for each connection, which for 2004 amounts to $1,350 per single family connection.

Champlin's current Trunk Sewer Fee shall be paid by the Developer to the City of Dayton, at the time of final plat approval, prior to release of the Final Plat. Dayton shall submit said fees to the City of Champlin within thirty (30) days of Dayton's release of a Final Plat within the Southeast Area.

b. Champlin's Responsibilities. Champlin shall collect the service fees for sewer and water. Dayton shall develop a fair cost to be passed on to Dayton residents which would be a part of Champlin's rate, with that amount being reimbursed to the City of Dayton upon collection by Champlin. The rate of these costs are to be set by Dayton, by resolution, and may be updated by Dayton from time to time. When such an update occurs, Dayton shall notify Champlin ninety (90) days prior to effective date of such rate change, and Champlin shall adjust the amount collected from Dayton residents and subsequently the amount reimbursed to Dayton.

   Champlin shall charge Dayton residents for only those services which benefit Dayton residents.

   In the event Champlin amends its ordinance or resolution regarding fees, Champlin shall give Dayton written notice. Written notice shall be given 90 days prior to the effective date of such rate change.

   Dayton residents have the same right to challenge bills received from Champlin that any other Champlin resident has.

   Water meters will be dispersed to Dayton for pick-up and purchase by Dayton residents at the time of the sewer connection permit issuance. The SAC Fee and Water Trunk, Source and Storage Fee shall be collected and sewer and water permits shall be obtained at the time of the water meter purchase. The water meter fees, the Water Trunk, Source and Storage fees and the sewer and water permit fee collected by Dayton, will be submitted to Champlin on a quarterly basis.

c. Service to the Southeast Area. Flow determination for water to and sewer from the Southeast Area shall be determined by water meter readings of each individual residential unit. Champlin will have the sole responsibility of reading water meters and billing residential units within the Southeast Area for use.

d. Champlin shall bill Dayton residents monthly for sewer and water user fees and all applicable penalties. Payments by Dayton residents to Champlin shall be in accordance with Champlin City Ordinance.

Champlin shall notify Dayton of delinquent payments. Dayton shall be responsible for collecting delinquent payments in accordance with the laws of the State of Minnesota. Champlin shall cooperate to the extent necessary to assist Dayton in the collection of delinquent payments and penalties in accordance with Dayton City Ordinances and in accordance with procedures established in either MN Stat. Chapter 429 or MN Stat. 444.075. Within sixty (60) days of the 31st of August of each year of this agreement, Dayton shall pay to Champlin a sum equal to the total amount of delinquent fees as of August 31st. Dayton shall retain the right to assess the applicable properties, or to take any action available to it under law to recover the amount of the delinquent funds it so paid to Champlin.

6. Default and Remedies.

a. Champlin Remedies. In the event Dayton breaches any of its obligations under this agreement, Champlin shall have the right to bring an action of law or, if required by this agreement, arbitration, for its available remedies only after giving thirty (30) days written notice of the breach to Dayton and opportunity to cure the breach. If Dayton does not cure the breach, or reach a mutually agreed upon plan for the cure of the breach within that thirty (30) days notice period, Champlin may commence action or arbitration proceedings after giving ten (10) days written notice to Dayton that it intends to bring such action or arbitration proceeding. Nothing herein shall limit the causes of action or equitable rights that Champlin may assert pursuant to this agreement.

b. Dayton Remedies. In the event Champlin breaches any of its obligations under this agreement, Dayton shall have the right to bring an action at law or, if required by this agreement, arbitration, for its available remedies only after giving thirty (30) days written notice of the breach and opportunity to cure the breach. If Champlin does not cure the breach or reach a mutually agreeable plan for the cure of the breach within that thirty (30) days notice period Dayton may commence action or arbitration proceedings after giving ten (10) days written notice to Champlin that it intends to bring such action or arbitration proceeding. Provided, however, that if a default by Champlin results in sewer and water service to the Southeast Area below the level required by this Agreement, Champlin must take immediate action to correct the problem upon receipt of written notice from Dayton. Nothing herein shall limit the causes of action or equitable rights that Dayton may assert pursuant to this agreement.

7. Notice and Termination. Dayton shall reserve the right to service this area by another means in the future if some other means is provided and in such case, Dayton shall have the right to terminate this Agreement, by giving one hundred eighty (180) days written notice of its intention to terminate this Agreement. In the event of termination, all obligations of Dayton to make payment to Champlin shall cease upon the effective date of the termination.

8 Term. This agreement shall be perpetual and may only be terminated by Dayton pursuant to Section 7 of this Agreement.

9. Indemnity. Dayton shall defend, indemnify and hold Champlin harmless for any claims arising from Dayton's use or maintenance of sewer and water lines, and any associated structures, within the boundaries of Dayton. Champlin shall defend, indemnify and hold Dayton harmless for any claims arising from its operation of water and sewer lines, and any associated structures, located within the boundaries of Champlin.

10. Modification. This Agreement may be modified only by written agreement of both parties.

11 Notice. All notices required by this Agreement shall be in written form and shall be deemed delivered upon its receipt by the City Clerk of either party. Notice may be made by personal delivery, mail or facsimile.

12. Governing Law. This Agreement shall be construed by the laws of the State of Minnesota.

13. Severability. In case any one or more of the provisions contained in this Agreement shall be invalid, illegal or unenforceable in any respect, the validity, legality and enforceability of the remaining provisions contained herein and any other application thereof shall not in any way be affected or impaired thereby.

14. Time is of the Essence. Time is of the essence in the performance of all obligations, undertakings and covenants under this Agreement.

15. Entire Agreement. This Agreement, any attached exhibits and any addenda or amendments signed by the parties shall constitute the entire agreement between Dayton and Champlin, and supersedes any other written or oral agreements between Dayton and Champlin on matters covered hereby.

16. Counterparts. This Agreement may be simultaneously executed in any number of counterparts, all of which shall constitute one and the same instrument.

17. Effective Date. The effective date of this Agreement shall be the last date on which it is executed by any party to this Agreement. This Agreement shall not become effective until it has been executed by all parties to the Agreement.

IN WITNESS, WHEREOF, the parties have agreed to the foregoing terms.

The City of Dayton

By: _____ Dated: 6/21/04
Its: Mayor

By: _____ Dated: 6/21/04
Its: City Clerk

The City of Champlin

By: _____ Dated: 6/14/04
Its: Mayor

By: _____ Dated: 6/14/04
Its: City Clerk

Exhibit A
Champlin-Dayton Joint Powers Agreement

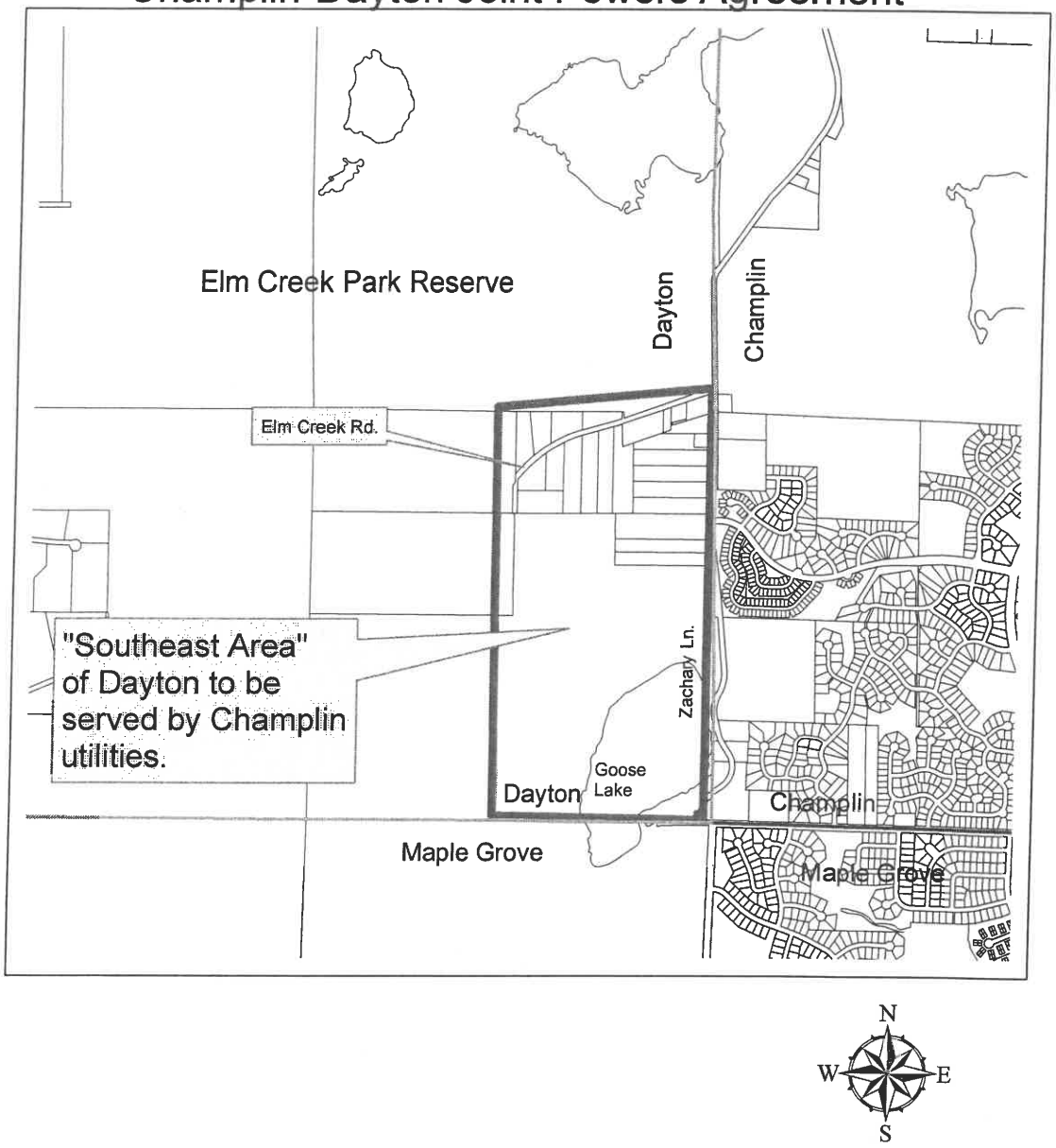


Exhibit B

Scheduled and Emergency Sewer Maintenance, and Scheduled Emergency Water Maintenance.

Scheduled and Emergency Sewer Maintenance

o Sewer Jetting	5 years
o Sewer Televising	As needed
o Sewer Mainline Repairs	As needed based on televising
o Sump Pump Connection Inspection	7 years
o Manhole Casting Maintenance	As needed
o Cone and Ring Inspections	As needed
o Sewer Plugs	As needed
o Locating	As needed
o Lift Station Maintenance	As needed
o Replacement of Infrastructure	As needed
o Excavation Restoration	As needed

Scheduled and Emergency Water Maintenance

o Flush Water Mains	Semi annually
o Exercise Hydrants	Semi annually
o Hydrant Repairs	As needed
o Paint Hydrants	As needed
o Replace Hydrant Flags	As needed
o Gate Valve Maintenance	As needed
o replacement of Infrastructure	As needed
o Locating	As needed
o Meter Reading (by Champlin)	Monthly
o Meter Finals (by Champlin)	As needed
o Meter Repairs (by Champlin)	As needed

Exhibit C

Champlin Ordinances

- An ordinance regulating the operation of the public water system, requiring certain connections to be made to the public water system, providing for the issuance of permits for, and supervision of, all connections to the public water system prescribing certain materials and methods to be used for said connections, prescribing rates and charges for water service, and prescribing for the violation of same. (Champlin 15-201 - 15-236)

- An ordinance regulating the operation of the public sanitary sewer system, requiring connections to be made to the public sanitary sewer system, providing for the issuance of permits for and supervision of all connections to the public sanitary sewer system, prescribing certain materials and methods to be used of said connections, establishing regulations as to types and kinds of wastes that may be disposed of by use of the public sanitary sewer system, prohibiting the discharge of any type or kind of surface waters into the public sanitary sewer system, prescribing rates and charges for disposal services, regulating street excavations, and prescribing penalties for the violation of same. (Champlin 15-401 - 15-414)

- Ordinance establishing an industrial user strength charge in addition to the charge based upon the volume of discharge by an industrial user and establishing an industrial user strength charge formula for the computation thereof to recover operation and maintenance costs or waste treatment services attributable to the strength of the discharge of industrial waste into the sewer system and establishing tax lien against property served in connection with such strength charge. (Champlin 15-801 - 15-807)

- An ordinance regulating the operation of the public water works system during periods when there may be a shortage of water. (Champlin 15-1100 - 15-1103)

- An ordinance providing for the installation or repair of sanitary sewer and water service lines and the collection of costs of such worth or service when done by the municipality as a special assessment against property benefited; and providing penalties for violations. (Champlin 15-1200 - 15-1205)

- An ordinance providing for public right-of-way management. (Champlin 15-1500 - 15-1535)

Exhibit D

Goose Lake Road Maintenance Responsibility

Champlin and Dayton will agree to maintain Goose Lake Road. The City of Champlin and the City of Dayton agree to maintain the roadway on an every other year basis. Road maintenance will be shared as noted below after the County turns back the road to Champlin and Dayton. Champlin will be responsible for maintenance in the even numbered years and Dayton will be responsible for maintenance in odd numbered years. The change over will begin on July 1st of each year. Therefore, for example, Champlin will be responsible for maintenance from July 1, 2006 – June 30, 2007 and Dayton will be responsible for maintenance from July 1, 2007 – June 30, 2008 and so on. The City responsible for maintenance will address all maintenance, curb to curb, of Goose Lake Road between 109th Ave. and Elm Creek Road. This will include:

- Maintenance of street signs
- Maintenance of traffic control signage
- Maintenance of concrete curb and gutter
- Maintenance of gravel shoulder
- Maintenance of catch basins and storm sewer pipe
- Maintenance of bituminous surface to include:
  - ☐ Pot holes
  - ☐ Crack sealing — See below
  - ☐ Seal coating — See below
  - ☐ Traffic markings — See below
- Street sweeping
- Snow and ice control
- Raising and lowering of any iron (manholes, catch basins, gate valves, etc)

- Maintenance does not include any side walk or trail located in Dayton or Champlin.

- Cracksealing and sealcoating will be done every six years. The cost will be divided by each City 50/50. The City of Champlin is responsible for the coordination of maintenance activities.

- Traffic markings will be done each year. The cost will be divided by each City 50/50. The City of Dayton is responsible for the coordination of this maintenance activity.

- If the road requires any "new" items (i.e. street sign, catch basin, etc.) Champlin and Dayton will share in the cost 50/50 assuming both cities agree.

Exhibit E
Resolution Updating Seal Coating, Storm Sewer District 10A and 10B and Typical Lot Fees

RESOLUTION NO. 2004-09
RESOLUTION UPDATING SEAL COATING, STORM SEWER DISTRICT 10A AND 10B AND TYPICAL LOT FEES

WHEREAS, the Champlin City Council has approved a special assessment manual outlining certain fees to be updated periodically, and

WHEREAS, the Champlin City Council has previously approved fees for Storm Sewer Districts 10A and 10B, Water Trunk, Source and Storage Fees and Sealcoating, and

WHEREAS, the fees outlined on the table entitled "Sealcoating, Storm Sewer District 10A and 10B and Typical Lot Fees and Water and Sewer Usage Fees" have been determined to be just and equitable, and

WHEREAS, the Consumer Price Index inflation rate is 2%, and

WHEREAS, the Water Trunk, Source and Storage Fee, based upon Resolution 96-32, will be increased $100 each year until the year 2017.

WHEREAS, the water usage fee was last updated March 1, 1997 and May 1, 2000 respectively.

NOW, THEREFORE, BE IT RESOLVED by the Champlin City Council that the fees are set according to the attached table.

FURTHER BE IT RESOLVED that Resolution No. 2003-11 dated January 13, 2003 is hereby rescinded.

The motion for the adoption of the foregoing resolution was duly seconded by Councilmember Uglem, and upon vote being taken thereon the following voted in favor thereof: Mayor Boynton, Councilmembers Molenar, Walen and Uglem and the following voted against the same: none whereupon said resolution was passed this 12th day of January, 2004.

Steven E. Boynton, Mayor

ATTEST:

Jo Anne M. Brown, City Clerk

January 1, 2004

SEALCOATING, STORM SEWER DISRICT 10A AND 10B, TYPICAL LOT FEES, SAC FEE AND WATER AND SEWER USAGE FEES

ESTIMATED TYPICAL LOT	2003 TYPICAL BASED ON 90 FF	2004 TYPICAL BASED ON 90 ff
Water Lateral	$3281	$3347
Water Service	717	731
Water TSS	2100	2200
Sanitary Sewer Lateral	3565	3636
Sanitary Sewer Service	662	675
Sanitary Sewer Trunk	654	667
Storm Sewer	2258	2303
Residential Street		
New street (100% street cost)	3915	3993
New curb & gutter (100% curb & gutter)	752	767
Reconstructed street (50% typical street cost)	1959	1998
Mill & Overlay (50% typical mill & overlay cost)	598	610
MSA Street – Residential & Parks		
New street (100% street cost)	3915	3993
New curb & gutter (100% curb & gutter)	752	767
Reconstructed street (50% typical street cost)	1959	1998
Reconstructed curb & gutter (50% typ.res.st.cost)	377	385
Mill & Overlay (50% typical mill & overlay cost)	598	610
MSA Street – Apts/Condos/Town Homes (per single family equivalent unit)		
New street (100% typical residential street cost)	3915	3993
New curb & gutter (100% curb & gutter)	752	767
Reconstructed street (100% typical resid.street)	3915	3993
Mill & Overlay (100% typical resid. cost)	1196	1220
MSA Street – Industrial/Commercial/Churches/ Schools (per single family equivalent unit)		
*New Street (100% costs to 42')	6897	7035
New curb and gutter (100% costs to 42')	752	767
Reconstructed street (100% cost to 42')	6897	7035
Mill and overlay (100% costs to 42')	1664	1697

**Driveway & Boulevard Restoration	$1531	$1562
Street Lighting	1005	1025
Sidewalk	1150	1173
Trail	583	595

SEALCOATING – New and Reconstructs

Sealcoating (Residential)	$ 163	$ 166
Sealcoating (Commer. Incl. Apts)	163	166
Sealcoating (Open Land)	163	166

STORM SEWER DISTRICT 10A & 10B

Storm Sewer District 10A

Low Density Residential	$1794/Acre	$1830/Acre
Medium & High Density Res., Com., & Indust.	$2761/Acre	$2816/Acre

Storm Sewer District 10B

Low Density Residential	$3074/Acre	$3135/Acre
Medium & High Density Res., Com. & Industrial	$4727/Acre	$4822/Acre

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Water Usage Rates	$4.67/1st 2000 gal. or less $1.82 ea. additional 1000 gallons (since 3/1/97)	
Sanitary Sewer Usage Rates	$9 flat charge/mo. plus $1.07/1000 gal. used on average winter usage or actual usage, whichever is less (since 5/1/00)	
SAC Fee	$1275	$1350/Acre

Sidewalk/trails on MSA Streets are not assessed whether initiated by a petition or City initiated.

* Based on 42' wide street pro-rated from typical residential street. The amount assessed to be pro-rated based on width of street.

**New street and/or new utilities need to include driveway and boulevard restoration costs.

ARTICLE IV. SEWERS AND SEWAGE DISPOSAL

Appendix 8-4

DIVISION 1. GENERALLY

Sec. 58-190. Definitions.

The following words, terms and phrases, when used in this article, shall have the meanings ascribed to them in this section, except where the context clearly indicates a different meaning:

Building drain means that part of the lowest horizontal piping of a drainage system which receives the discharge from soil, waste, and other drainage pipes inside the walls of the building and conveys it to the building sewer beginning at least one foot outside the outer face of the building footings.

Building sewer means the extension from the building drain to the public sewer or other places of disposal.

Connection charge means a charge levied by the city to contribute to the payment of the cost of the city public sewer facilities.

Inspector means the person or persons authorized by the city to inspect and approve the installation of building sewers and their connections to the public sewer system.

Private sewage system means any septic tank, or drainfield used for the disposal of sewage.

Private sewer means a sewer in which all owners of abutting property have equal rights and is controlled by the city.

Sanitary sewer means a sewer that carries sewage and to which stormwaters, surface waters, and groundwaters are not intentionally admitted.

Service availability charge means a fixed fee levied by the metropolitan waste control commission and collected at the time a building permit is issued for a new housing unit or commercial development or any connection to the sewer system where metropolitan sewer service disposal is or becomes available.

(Code 1977, § 15-401)

Sec. 58-191. Use of public sewers required.

(a) It shall be unlawful for any person to place, deposit, or permit to be deposited in an unsanitary manner upon public or private property within the city, any human excrement, sewage, garbage, or other objectionable waste which ordinarily would be regarded as sewage or industrial wastes.

(b) It shall be unlawful to discharge to any natural outlet within the city any sanitary sewage, industrial wastes, or other polluted waters.

(c) Except as hereafter provided, it shall be unlawful to construct or maintain any privy, privy vault, septic tank, cesspool, or other facility intended or used for the disposal of sewage.

(d) The owner of all houses, buildings or property used for human occupancy, employment, recreation, or other purposes which is served or intended to be served (as determined by the city council) by a public sanitary sewer of the city is required, at his expense, to install suitable

toilet facilities and to connect such facilities with the proper public sewer, in accordance with the provisions of this article or, in the case of sewers which are constructed after the effective date of the ordinance from which this section is derived, within two years after such sanitary sewer service becomes available.

(e) The city council shall have the power to adjust and make exceptions to the provisions of this section that require connection to the public sewer to the extent of the following and no further: To vary or modify the strict application of the connection provisions contained in this article in cases in which there are practical difficulties or unnecessary hardships in the way of such strict application; provided that modification or adjustment will not materially affect adversely the health or safety of persons residing or working in the neighborhood and will not be discriminatory.

(f) At such time as the public sewer becomes available to a property served by a private sewage disposal system as provided in subsection (e) of this section, a connection shall be made to the public sewer in compliance with this article, and any septic tanks, cesspools and similar private disposal facilities shall be abandoned and treated as follows:

(1) If the private facility is concrete and the cover is four feet or more below grade, the facility may be abandoned without opening, pumping and filling; or

(2) If the private facility or the cover thereof is wood and/or the cover is less than four feet below grade, the facility shall be opened, pumped and filled with suitable gravel material.

(Code 1977, § 15-402)

Sec. 58-192. Permits and insurance required.

(a) No person shall uncover, make any connection with or opening into, or discharge into, use, alter, repair, or disturb any public sewer or building sewer, or appurtenances thereof without first obtaining a written permit from the city. Before a permit may be issued for excavating for plumbing, for a connection to any public sewer in any public street, way or public easement, or alley, a licensed master plumber (under the laws of the state) shall apply for such permit and shall have executed unto the city and deposited with the city, a bond approved by the city in the sum of $2,000.00 conditioned that he will perform faithfully all work with due care and skill and in accordance with the laws, rules and regulations established under the authority of any ordinance of the city. This bond shall state the principal and surety will indemnify and save harmless the city and the owner of the premises against all damages, costs, expenses, outlays, and claims of every nature and kind arising out of ordinance violation, lack of skill, or negligence on his part in connection with plumbing or excavating for plumbing. Such bond shall remain in force and must be executed for a period of one year except that on such expiration it shall remain in force as to all penalties, claims and demands that may have accrued thereunder prior to such expiration.

(b) Prior to commencement of construction work, the licensed master plumber shall take out and maintain insurance in some company approved by the city against damages of property or injury or death to persons, which policy or policies shall indemnify and save harmless the property owner, whose premises the work will serve, the city and all of its officers and personnel against any claim, demand for damages, action arising out of or by reason of the doing of the work or activities relating or incidental thereto, and from any costs, disbursements, or expense of defending the same. Such insurance shall be a general liability or all perils policy in the minimum amount of at least $1,000,000.00. Proof of insurance shall be filed with the city clerk prior to commencement of the construction work. The policy shall provide that the city shall be notified immediately of any termination of or modification to such insurance. Should the insurance coverage provided for in this section be inadequate in amount, then, the licensed master plumber shall indemnify and save harmless the property owner, the city, and all its

officers and personnel in like manner.

(c) A licensed master plumber shall make application for a building sewer installation permit on a special form furnished by the city. The permit application shall be supplemented by any plans, specifications or other information that the inspector may reasonably require. A permit and inspection fee, as set forth in chapter 22, for a building sewer permit shall be paid to the city at the time the application is filed.

(Code 1977, § 15-403)

Sec. 58-193. Building sewers.

(a) A separate and independent building sewer shall be provided for every building except where one building stands at the rear of another on an interior lot and no building sewer is available or can be constructed to the rear building sewer through an adjoining alley, courtyard, or driveway, then the building sewer from the front building may be extended to the rear building and the whole considered as the building sewer. Other exceptions will be allowed only by special permission granted by the city.

(b) An old building sewer or portions thereof, may be used in connection with new buildings only when they are found on examination and test by the inspector to meet all requirements of this article.

(c) Where a building sewer is laid across or over an existing cesspool or septic tank, one continuous piece of schedule 40 plastic or equivalent shall be used for that portion of the building sewer that is laid across or over the existing cesspool or septic tank.

(Code 1977, § 15-404)

Sec. 58-194. Materials and methods.

(a) Approved materials and methods shall be prescribed by the city.

(b) Whenever possible, the building sewer shall be brought to the building at an elevation below the basement floor. Its depth shall be sufficient to afford protection from frost. All excavations required for the installation of a building sewer shall be open trench work unless otherwise approved by the inspector. No backfill shall be placed until the work has been inspected by the city. Back casting method may be used under supervision of the inspector and extra inspector's fees are to be paid to the city at the rate of current wages per hour.

(c) In all buildings in which any building drain is too low to permit gravity flow to the public sewer, sanitary sewage carried by such drains shall be lifted by approved artificial means and discharged to the building sewer. No water operated sewage ejector shall be used.

(d) Before excavation is commenced, the applicant of the building sewer must obtain the location of all public utilities installed. The applicant is responsible for the location of the sanitary sewer service at the property line.

(e) The applicant for the building sewer shall notify the inspector when the building sewer is ready for inspection and connection to the public sewer. The connection shall be made under the supervision of the inspector or his representative.

(f) The applicant shall obtain acknowledgment from a representative of each public utility serving the particular area that no utilities installed have been disturbed by the building sewer constructor's work.

(g) All excavations within four feet of the public sewer (horizontal or vertical measurement) shall be by hand excavation only.

(h) The city shall make the final decision as to the type of pipe used for sanitary sewer construction when it lies within a city right-of-way. The internal diameter of the pipe shall also be determined by the city.

(Code 1977, § 15-405)

Sec. 58-195. Connections.

(a) Approved types of house service connections shall be one of the following:

(1) *Type 1.* Connections to existing vitrified clay wye branches shall be made with an approved type of joint material of the bituminous type or an approved compression coupling. The connection shall be completely watertight. No connection shall be allowed to a damaged wye branch. If damage occurs during the making of the connection, the wye branch shall be taken out of the main sewer by the plumber and replaced either by another undamaged wye or by a straight vitrified clay pipe. If a straight pipe is used in the replacement, other approved connection methods shall be used. Concrete encasement of the wye branch, connection joint, or any other part of the connection shall not be deemed watertight and shall not be allowed as a method or repairing a damaged joint.

(2) *Type 2.* Connections of the saddle type shall be made in a smooth, round hole, machine drilled into the main sewer pipe. The fittings used in the connection shall be made in such a manner as to ensure that no protrusion of the fitting into the main sewer pipe shall result. The connector shall fit perfectly the contour of the inside of the sanitary sewer and shall be specifically designed to fit the particular size main sewer pipe into which the connection is made. The machine-drilled hole shall be of such size to provide one-eighth-inch clearance between the outside of the fitting and the hole. The space thus provided shall be completely filled with joint material. The space between the shoulder of the fittings and the face of the main sewer pipe shall be one-eighth-inch thick and this space shall be completely filled with joint material. The joint material used for the type 2 house service connection shall be completely waterproof and shall be capable of withstanding any condition of stress or strain likely to be encountered in normal sanitary sewer construction or maintenance. Concrete encasement will not be considered waterproof. The fitting shall be manufactured of either cast aluminum alloy or vitrified clay pipe and shall be capable of receiving all normally used types of pipe for house service connections.

(b) Type 1 wye connections may be used in existing sanitary sewers when wye branches previously installed are readily and conveniently available. If existing wye branches cannot be found after diligent search or are not located properly for providing the needed service, type 2 saddle connections shall be made; provided the inspector approves. When new sanitary sewers are constructed, type 1 connections may be made in cases where the connection to the house is made during the construction and before backfilling of the sanitary main sewer trench. No wye branches shall be installed and covered up for future use. Type 2 connections shall be made in all cases where house services are installed subsequent to construction and backfilling operations.

(c) Wherever the sewer constructed under city sewer project 64-1 traverses the interior of an established lot, block or parcel containing lands suitable for development upon either side of the sewer, if the lands have been assessed only one-half of the cost of the sewer line, then, an additional assessment charge of $3.00 per foot of sewer shall be made when a connection is applied for, to serve a building sewer running to the side of the sewer not previously served. An additional charge of $3.00 per foot of sewer may be assessed for building sewers designed to serve portions of a corner or parcel developed after construction of the sewer.

(d) A connection charge shall be paid to the city before any building sewer shall be permitted to be connected to the public sewer. This connection charge shall be established by resolution of the city council.

(e) A service availability charge as fixed by the metropolitan waste control commission shall be collected by the city for the metropolitan waste control commission at the time a building permit is issued for a building where metro sewer service is available.

(Code 1977, § 15-406)

Sec. 58-196. Use of the public sewers.

(a) No person shall discharge any waste, or cause or allow any waste to be discharged into the public sewers unless in accordance with these rules and regulations.

(b) Use of the public sewers shall be in conformance with the metropolitan waste control commission sewage and waste control rules and regulations for the metropolitan disposal system. In the event of conflict between said rules and regulations and this section, then the provisions of this section shall control.

(c) The sewer drain from the customer's building to the public sewer (located in the street) is the property owner's responsibility. Under this section the property owner is responsible for repairing and cleaning this sewer service.

(d) In the event that a building that is connected to the public sewer is to be demolished, then, prior to the commencement of the demolition, the building sewer leading to the public sewer shall be plugged by a licensed master plumber at the lot line or within three feet thereof, at the owner's expense. An inspection fee, as set forth in chapter 22, shall be paid to the city before the demolition commences. In the event that a building that is connected to the public sewer is destroyed by accident, explosion, fire, windstorm or other casualty, then within 48 hours after the destruction, the building sewer leading to the public sewer shall be plugged by the above method.

(Code 1977, § 15-407)

Sec. 58-197. Sanitary sewer charges.

(a) Charges for sewer use shall be established as set forth in chapter 22.

(b) If the monthly service charge is not paid when due, a penalty in the amount set forth in chapter 22 shall be added thereto.

(c) Bills for sewage service shall be rendered at regular intervals, as determined by the city council. Each charge levied pursuant to this article, plus reasonable clerical expense is hereby made a lien upon the corresponding property land or premises served by a connection to the sewer system of the city. Any amounts due for sewer charges hereunder may be collected in a civil action, or the city may certify to the county auditor the amount due, together with a legal description of the premises served, and the county auditor shall thereupon enter such amount as part of the tax levy on said premises to be collected during the ensuing year. A minimum charge of $5.00 or ten percent of the delinquent charges, whichever is larger, shall be attached for expense.

(Code 1977, § 15-408)

Sec. 58-198. Power and authority of inspectors.

The city shall have the right to enter upon any premises connected with any public sewer or drain at all reasonable hours for the purpose of ascertaining whether the provisions of this article or any other ordinance in regard to house drains or connections have been complied with and whether the sewer or drain connecting such premises with the public sewers is in good condition. If such sewer or drain or its appurtenances do not conform to the provisions of law in regard thereto, or have become clogged, obstructed, broken or out of order, the city shall notify the owner, agent or occupant or person having charge of the building or premises which are drained by such sewer or drain. It shall thereupon be the duty of such owner, agent, occupant or person having charge of the building or premises to cause the sewer or drain or appurtenances to be removed, reconstructed, repaired, altered or cleansed as the condition of such sewer or drain or appurtenances may require, and in case of neglect or refusal of the owner, agent, occupant or other person to remove, reconstruct, repair, alter or cleanse such sewer or drain or appurtenances within three days after receiving such notice from the city, the city shall cause such work to be done in such a manner as deemed expedient and shall charge the expense thereof to the owner, agent, occupant or other person aforesaid.

(Code 1977, § 15-410)

Sec. 58-199. Prohibited discharges into sanitary sewer.

No person shall discharge or cause to be discharged any stormwater, groundwater, roof runoff, yard drainage, yard fountain, pond overflow or any substance other than sanitary sewage into the sanitary collection system.

(Ord. No. 443, § 15-412, 11-14-1994)

Sec. 58-200. Connection to sanitary sewer prohibited.

No roof runoff, sump pump, swimming pool discharge, or surface water drainage shall be connected to the sanitary sewer system and no building shall hereafter be constructed nor shall any existing building be hereafter altered in such a manner that the roof drainage or any other source of discharge or drainage other than sanitary sewer shall connect with the sanitary sewer system inside or outside the building.

(Ord. No. 443, § 15-413, 11-14-1994)

Sec. 58-201. Disconnection.

Any person, firm or corporation having a roof, sump pump, swimming pool discharge, cistern overflow pipe of surface drain now connected and/or discharging into the sanitary sewer system shall disconnect and/or remove the same. Any disconnects or openings in the sanitary sewer shall be closed or repaired in an effective, workmanlike manner as described in section 58-202.

(Ord. No. 443, § 15-414, 11-14-1994)

Sec. 58-202. Discharge equipment.

(a) All sump pumps shall have a discharge pipe installed to the outside wall of the building with a one inch inside minimum diameter. The pipe attachment must be a rigid and permanent fitting such as PVC pipe with glued fittings. The discharge shall extend at least three feet outside of the foundation wall and must be directed toward the front yard or rear yard area of the property.

(b) All new residential construction, having a sump basket, shall have permanent piping

installed in the sump basket with permanent fittings and discharged to the outside of the foundation wall as described in subsection (a) of this section. Such work shall be completed prior to the final building inspection and issuance of a certificate of occupancy.

(Ord. No. 443, § 15-415, 11-14-1994)

Sec. 58-203. Discharge inspections.

Every person owning improved real estate that discharges into the city's sanitary sewer system shall allow the city employee or its designated agent to inspect the buildings to confirm that there is no sump pump or other prohibited discharge into the sanitary sewer system. Any person refusing to allow their property to be inspected shall immediately become subject to the surcharge hereinafter provided for. Any property found to violate this article shall make the necessary changes to comply with this article and such changes shall be verified by an authorized city employee.

(Ord. No. 443, § 15-416, 11-14-1994)

Sec. 58-204. Sewer surcharge.

A surcharge of $75.00 per month is hereby imposed and shall be added to every sewer billing mailed for properties that are not in compliance with this article. The surcharge shall be added every month, until the property is in compliance. In the event a violation of this article is discovered upon inspection of new construction, the surcharge shall be paid to the city prior to the issuance of an occupancy permit. Repeat violations of this article by the same contractor or property owner shall be subject to an escalating schedule of surcharges as set forth in section 58-197. The imposition of such surcharge shall in no way limit the right of the city to seek an injunction in district court ordering the property owner to disconnect the nonconforming connection to the sanitary sewer system or from pursuing any other legal remedies available.

(Ord. No. 443, § 15-417, 11-14-1994)

Sec. 58-205. Compliance inspections.

Upon verified compliance with this section, the city reserves the right to inspect such property at least yearly to verify compliance herewith.

(Ord. No. 443, § 15-418, 11-14-1994)

Sec. 58-206. Penalties.

The escalating penalty for unlawful discharges into the sanitary sewer system shall be as follows:

(1) For the first offense, $75.00 per month until remedied;

(2) For the second offense, $150.00 per month until remedied;

(3) For the third offense, $300.00 per month until remedied; and

(4) For the fourth and subsequent offenses, $500.00 per month until remedied.

(Ord. No. 443, § 15-419, 11-14-1994)

Secs. 58-207--58-235. Reserved.

DIVISION 2. STRENGTH CHARGES

Sec. 58-236. Recitals.

The metropolitan waste control commission, a metropolitan commission organized and existing under the laws of the state (the "commission"), in order to receive and retain grants in compliance with the Federal Water Pollution Control Act Amendments of 1972 and regulations thereunder (the "Act"), has determined to impose an industrial user sewer strength charge upon users of the metropolitan disposal system (as defined in Minn. Stats. § 473.121, subd. 24) to recover operation and maintenance costs of treatment works attributable to the strength of the discharge of industrial waste, such sewer strength charge being in addition to the charge based upon the volume of discharge. In order for the city to pay such costs based upon strength of industrial discharge and allocated to it each year by the commission, it is hereby found, determined and declared to be necessary to establish sewer strength charges and a formula for the computation thereof for all industrial users receiving waste treatment services within or served by the city. Furthermore, Minn. Stats. § 444.075, subd. 3, empowers the city to make such sewer charge a charge against the owner, lessee, occupant or all of them and certify unpaid charges to the county auditor as a tax lien against the property served.

(Code 1977, § 15-801)

Sec. 58-237. Establishment of strength charges.

For the purpose of paying the costs allocated to the city each year by the commission that are based upon the strength of discharge of all industrial users receiving waste treatment services within or served by the city, there is hereby approved, adopted and established, in addition to the sewer charge based upon the volume of discharge, a sewer charge upon each person, company or corporation receiving waste treatment services within or served by the city, based upon the strength of industrial waste discharge into the sewer system of the city (the "strength charge").

(Code 1977, § 15-802)

Sec. 58-238. Establishment of formula.

For the purpose of computation of the strength charge established by section 58-237, there is hereby established, approved and adopted in compliance with the Act the same strength charge formula designated in Resolution No. 76-172, adopted by the governing body of the commission on June 15, 1976, such formula being based upon pollution qualities and difficulty of disposal of the sewage produced through and evaluation of pollution qualities and quantities in excess of an annual average base and the proportionate costs of operation and maintenance of waste treatment services provided by the commission.

(Code 1977, § 15-803)

Sec. 58-239. Payment.

It is hereby approved, adopted and established that the strength charge established by section 58-237 shall be paid by each industrial user receiving waste treatment services and subject thereto before the 20th day next succeeding the date of billing thereof to such user by or on behalf of the city, and such payment thereof shall be deemed to be delinquent if not so paid to the billing entity before

such date. Furthermore, it is hereby established, approved and adopted that if such payment is not paid before such date, an industrial user shall pay interest compounded monthly at the rate of two-thirds of one percent per month on the unpaid balance due.

(Code 1977, § 15-804)

Sec. 58-240. Establishment of tax lien.

As provided by Minn. Stats. § 444.075, subd. 3, it is hereby approved, adopted and established that if payment of the strength charge established by section 58-237 is not paid before the 16th day next succeeding the date of billing thereof to the industrial user by or on behalf of the city, said delinquent sewer strength charge, plus accrued interest established pursuant to section 58-239, shall be deemed to be a charge against the owner, lessee and occupant of the property served, and the city or its agent shall certify such unpaid delinquent balance to the county auditor with taxes against the property served for collection as other taxes are collected; provided, however, that such certification shall not preclude the city or its agent from recovery of such delinquent sewer strength charge and interest thereon under any other available remedy.

(Code 1977, § 15-805)

Appendix 8-5

CITY OF CHAMPLIN
ON-SITE SEWER SYSTEMS
JANUARY 1, 2020

DAYTON ROAD
1324
1312

GOOSE LAKE ROAD
11540

FRENCH LAKE ROAD
10550
10610
10785
10830
10951
10975
10085
10900
11060

WEST HAYDEN LAKE ROAD
722
12102
12310

PARKVIEW LANE
704
701

109TH AVENUE
10901

ELM CREEK CROSSING
12651

Councilmember Whalen introduced the following resolution and moved its adoption:

RESOLUTION 98-113

REQUESTING HENNEPIN COUNTY TO ADMINISTER THE CONSTRUCTION OF ALL NEW AND MAINTENANCE OF ALL EXISTING, INDIVIDUAL SEWAGE TREATMENT SYSTEMS

WHEREAS, State Statute requires local units of government to enforce regulations governing individual sewage treatment systems; and

WHEREAS, the City of Champlin would need to contract with qualified personnel to enforce; and

WHEREAS, Hennepin County has offered to enforce those regulations in Champlin at no cost; and

THEREFORE BE IT RESOLVED, by the City Council of the City of Champlin, that the Hennepin County Health Department is hereby authorized to administer Individual Sewage Treatment Systems Regulations in the City of Champlin beginning January 1, 1999.

The motion for the adoption of the foregoing resolution was duly seconded by Councilmember Sturdevant, and upon vote being taken thereon, the following voted in favor of thereof: Mayor Boynton, Councilmembers Whalen, Molenaar, Sturdevant and Goodman, and the following voted against the same: none, whereupon said resolution was passed this 10th day of November, 1998.

Steven E. Boynton, Mayor

Attest:

JoAnne Brown, City Clerk

www.Hennepin.us | Your Connection to Hennepin County, Minnesota.

Appendix 8-7

Ordinance # 19 Individual Sewage Treatment System Standards

ORDINANCE NUMBER 19
INDIVIDUAL SEWAGE TREATMENT SYSTEMS STANDARDS FOR HENNEPIN COUNTY

Adopted by the

Hennepin County Board of Commissioners

of Hennepin County, Minnesota

September 28, 1999
Amended on June 5, 2001

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The Hennepin County Board of Commissioners does hereby adopt this Ordinance establishing county-wide standards for the regulation of Individual Sewage Treatment Systems (ISTS) pursuant to Minn. Stat. § 115.55 and Minn. Rules Chapter 7080.

SUBDIVISION 1: GENERAL PROVISIONS.

1.1 Purpose. This ordinance is enacted to provide minimum standards for the regulation of individual sewage treatment systems (ISTS) including: their proper location, design and construction; their necessary modification and reconstruction; their operation, maintenance and repair for the purpose of protecting surface water and groundwater from contamination by human sewage and waterborne household and commercial wastes; the protection of the public's health and safety; and the elimination and prevention of the development of public nuisances, pursuant to the authority granted under Minn. Stat. Chapters 115 and 145A and Minnesota Rules Chapter 7080 and as amended that may pertain to sewage and wastewater treatment.

1.2 Objectives. The principal objectives of this Ordinance are as follows:

1.21 The protection of Hennepin County's lakes, rivers and streams, wetlands, and groundwater essential to the promotion of public health, safety, welfare, socioeconomic growth and development of the County in perpetuity.

1.22 The regulation of proper ISTS construction, reconstruction, repair and maintenance to prevent the entry and migration of contaminants, thereby ensuring the non-degradation of surface water and groundwater.

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

1.24 The appropriate utilization of privy vaults and other non-water carried ISTS.

1.25 The prevention and control of water-borne disease, lake degradation, groundwater related hazards, and public nuisance conditions through technical assistance and education, plan reviews, inspections, ISTS surveys and complaint investigation.

SUBDIVISION 2: DEFINITIONS.

2.1 Health Authority. The Hennepin County Community Health Department and its designated agent who shall be a qualified employee or licensee.

2.2 Non-Standard Systems. ISTS that are Alternative, Performance or Other Systems as described in Minnesota Rules, parts 7080.0172, 7080.0178 and 7080.0179.

2.3 Other Establishment. Any private or public structure, other than a dwelling, that generates sewage having characteristics other than residential-type waste or has an average waste flow greater than 2,000 gallons per day and discharges to an individual sewage treatment system.

2.4 Owner. The fee owner(s) and, if applicable, the contract-for-deed purchaser. Ownership interests shall be determined by reference to the records of Hennepin County. The owner of each lot served by an ISTS is responsible for the lawful operation and maintenance of each ISTS.

2.5 Standard System. ISTS designed and installed in accordance with the construction standard specified in Minnesota Rules, Chapter 7080.0060-7080.0170.

SUBDIVISION 3: STANDARDS INCORPORATED BY REFERENCE.

3.1 This Ordinance hereby incorporates by reference Minnesota Rules Chapter 7080, sections 7080.0020; 7080.0060; 7080.0065; 7080.0110; 7080.0115; 7080.0120; 7080.0125; 7080.0130; 7080.0150; 7080.0160; 7080.0170; 7080.0170, subpart 2, item C, subitem (1), unit (b), Table Va; 7080.0172; 7080.0175; 7080.0176; 7080.0178; and 7080.0179 being the sections containing the technical standards and criteria contained in the "Individual Sewage Treatment Systems Program."

SUBDIVISION 4: JURISDICTION.

4.1 Municipalities. Municipalities in Hennepin County that elect to regulate Individual Sewage Treatment Systems shall do so pursuant to Minnesota Rules, Chapter 7080.0305-7080.0315. Municipalities that elect to assume or abandon ISTS jurisdiction shall:

A. Provide verification to the Health Authority of its intention to assume or abandon jurisdiction of Individual Sewage Treatment Systems by submitting a resolution of the City Council or authorized governmental official to the Health Authority at least one year in advance of the first of January of any given calendar year, or with approval of the Health Authority.
B. In the event of abandonment of jurisdiction, agree to cooperate with the Health Authority in the transfer of responsibility including timely transfer of all records maintained by the municipality.

SUBDIVISION 5: ADMINISTRATION BY THE HEALTH AUTHORITY.

5.1 The Health Authority shall have the following duties and responsibilities:

A. To review all applications for ISTS.
B. To issue all required permits.
C. To conduct construction inspections and to perform all necessary tests to determine its conformance with this Ordinance.
D. To investigate complaints regarding ISTS.
E. To perform compliance inspections and to issue Certificates of Compliance or Notices f Noncompliance where appropriate.
F. To issue Stop Work Orders and Notices of Violation pursuant to this Ordinance.
G. To take complaints to the Municipal or County Attorney for violations of this Ordinance.
H. To maintain proper records for ISTS including site evaluation records, design records including calculations and summaries for all system component sizings and as-builts, complaints on noncompliance, compliance inspections, site evaluations, applications and exhibits, variance requests, issued permits, Certificates of Compliance, and enforcement proceedings.
I. To submit annual reports to the MPCA to demonstrate enforcement of this Ordinance per Chapter 7080.0310.

5.2 Neither the issuance of permits, Certificates of Compliance nor Notices of Noncompliance as requested or issued shall be construed to represent a guarantee or warranty of the system's operation or effectiveness. Such certificates signify that the system in question is or has been designed and installed in compliance or non-compliance with the provision of these standards and regulations.

SUBDIVISION 6: PERMITTING.

6.1 Required Permits. A permit from the Health Authority is required before any ISTS in Hennepin County's jurisdiction is installed, replaced, abandoned, altered, repaired or extended. Installation, replacement, alteration, repair, or extension of an ISTS shall not begin prior to the receipt of a permit from the Health Authority for each specific installation, replacement, alteration, repair or extension pursuant to this Ordinance. Such permits are not transferable as to person or place. Such permits shall expire 12 months after date of issuance. Upon request of an inspector, permits shall be provided by the permittee at the time of inspection.

6.2 Permits Not Required. Permits shall not be required for the following activities:

A. Repair or replacement of pumps, floats or other electrical devices of the pump.
B. Repair or replacement of baffles in the septic tank.
C. Installation or repair of inspection pipes and manhole covers.
D. Repair or replacement of the line from the building to the septic tank.
E. Repair or replacement of the line from the septic tank or pump chamber to the distribution box or lines.

6.3 Permit Application. All applications for an ISTS permit shall include the following information:

A. Name and address of property owner.
B. Property identification number.
C. Legal description of the property.
D. ISTS Designer name, address, telephone number and State MPCA license number; (or Health Authority qualified employee name and number).
E. ISTS Installer name, address, telephone number and MPCA license number.
F. Site evaluation report on forms approved by the Health Authority.
G. System design with full information including applicable construction information on forms approved by the Health Authority.
H. The location of at least one designated additional soil treatment area that can support a standard soil treatment system on lots created after January 23, 1996.
I. Any other information requested pertinent to the process.
J. A certified statement from the person who conducted the work.

6.4 Additional Requirements for the Permitting of Non-Standard Systems. Non-standard systems shall only be permitted if all of the requirements of Minn. Rules, Chapter 7080.0172, 7080.0178 and 7080.0179 and the following:

A. The Health Authority agrees that a Standard System cannot be installed;
B. Reasonable assurance of performance of the system, as determined by the Health Authority, is submitted by the Designer;
C. An operating permit has been approved by the Health Authority; and
D. A water meter is installed to monitor flow.
E. If a non-standard system reduces the vertical separation distance between the bottom of the distribution medium to saturated soil or bedrock from three feet, the following must be met:

1. A minimum of one foot of unsaturated soil must be present;
2. Additional nutrient removal may be required by the Health Authority for sensitive environments or high strength wastes;
3. For one to three feet of unsaturated soil, total fecal coliform levels shall not exceed an average of 2,000 colonies per 100 ml of effluent; and
4. The performance system must be installed with an alarm device that warns that the system has failed, so untreated sewage cannot reach the distribution medium.

6.41 Operating Permit. The Health Authority shall issue and enforce an operating permit for all non-standard systems. The operating permit shall be valid for twelve months and renewed by the expiration date. The Health Authority shall review all required monitoring data submitted from the previous year and the renewal application before approving any subsequent operating permits. An operating permit shall include:

1. A detailed description of the operation, maintenance, and monitoring necessary to ensure both continued system performance as designed and protection of public health and the environment for the life of the system;
2. A requirement that the person responsible for monitoring notify the Health Authority when monitoring plan requirements are not met; and
3. The signatures of the system designer and owner.

6.42 Monitoring Plans. All sampling methods and analysis techniques shall be performed in accordance with Standard Methods. The monitoring plan shall be developed and approved prior to issuance of a permit and provide the following:

1. The parameters for sampling, sample type, sampling location and frequency for monitoring;
2. The sample parameter compliance limits or boundaries;
3. The reporting frequency, not less than annually;
4. The flow or water usage measurements;
5. The signature of the person responsible for conducting the monitoring and reporting to the Health Authority; and
6. A mitigation plan detailing actions to be taken if the system fails to meet the expectations established by the monitoring plan requirements. The mitigation plan shall detail possible component failures, corrective actions, person responsible for mitigation, and estimated cost of correction.

6.43 The results of the monitoring of a Non-Standard System shall be submitted in accordance with the approved monitoring plan to the Health Authority annually, no later than the expiration date of the operating permit. If monitoring results do not meet the monitoring plan requirements, then the person responsible for conducting the monitoring shall notify the Health Authority within 10 calendar days. Monitoring plans may be modified as necessary with approval by the Health Authority.

6.5 Individuals Constructing Their Own ISTS. A license is not required for an individual who is constructing a Standard System on land that is owned or leased by the individual and functions solely as a dwelling or seasonal dwelling for that individual. The ISTS shall be designed by a Minnesota Pollution Control Agency licensed Designer I or II.

6.6 Application Review and Determination. If after consideration of the application for a permit, the Health Authority determines that the proposed work complies with provision of this Ordinance, the Health Authority shall issue a written permit granting preliminary approval authorizing initiation of the work as proposed. If the Health Authority determines that the proposed work will not comply with the provisions of this Ordinance, the Health Authority shall deny the permit application. The permit application may be revised or corrected and resubmitted to the Health Authority for reconsideration.

6.7 Variances. Variances to wells and water supply lines require approval from the Minnesota Department of Health. The Health Authority may grant variances to the technical standards and criteria of Minnesota Rules, Chapter 7080 or this Ordinance, if the system meets the requirements of part 7080.0172, 7080.0178, 7080.0179 and this Ordinance. All requests for a variance shall be requested in writing to the Health Authority on forms approved by the Health Authority.

SUBDIVISION 7: CONSTRUCTION INSPECTIONS.

7.1 Requirements. Compliance inspections shall be conducted by the Health Authority anytime an ISTS is installed, replaced, altered, repaired, or extended. The installation and construction of the ISTS shall be in accordance with the permit requirements and application design. If any ISTS component is covered before being inspected by the Health Authority, it shall be uncovered if so ordered by the Health Authority. Proposals to alter the permitted construction shall be reviewed and the proposed change accepted by the Health Authority prior to construction. Inspections shall be conducted at least once during the construction that is prior to covering of the ISTS to assure that the system has been constructed per the submitted and approved design.

7.2 Inspector. Compliance inspections for construction, replacement, alteration or repair work on ISTS shall be conducted by the Health Authority.

7.3 Request for Inspection. It shall be the duty of the permittee to notify the Health Authority of the date and time the inspection is requested at least 24 hours (excluding weekend days and holidays) preceding the requested inspection time. If the permitee provides proper notice as described above and the Health Authority does not appear for an inspection within two hours after the time scheduled, the

permitee may complete the installation and submit an As-built for the system.

7.4 Access to Premises and Records. Upon the request of the Health Authority, the applicant, owner, permittee or any other person shall allow access at any reasonable time to the affected premises as well as any related records, for the purposes of regulating and enforcing this Ordinance. If entry is refused, the Health Authority shall have recourse to the remedies provided by law to secure entry. No person shall hinder or otherwise interfere with the Health Authority in the performance of their duties and responsibilities pursuant to the enforcement of this Ordinance. Refusal to allow reasonable access to the Health Authority shall be deemed a separate and distinct offense, whether or not any other specific violations are cited.

7.5 Stop Work Orders. Whenever any ISTS work is being done contrary to the provisions of this Ordinance, the Health Authority may order the work stopped by verbal or written notice served upon the installer or the owner of the land. All installation and construction shall cease and desist until subsequent authorization to proceed is received from the Health Authority.

7.6 As-builts. As-builts shall only be accepted for Standard Systems. As-builts shall be submitted to the Health Authority within five (5) working days of completion of the work on the ISTS on forms provided or approved by the Health Authority. The As-built shall include photographs of the system prior to covering and a certified statement that the work was installed in accordance with submitted design and permit conditions and that it was free from defects. If an As-built is not submitted, the Health Authority may require the uncovering of the system for inspection.

7.7 Inspection Reports. A Certificate of Compliance or Notice of Noncompliance shall be prepared by the Health Authority following an inspection or review of As-builts submitted in accordance with Section 7.6. A Certificate of Compliance or Notice of Noncompliance shall include a signed statement by the inspector identifying the type of ISTS inspected and whether the system is in compliance with Minnesota Rules Chapter 7080.0060. A copy of the Certificate of Compliance or Notice of Noncompliance shall be provided to the property owner within 30 days of the compliance inspection and a copy kept on file with the Health Authority.

7.71 Certificates of Compliance issued by the Health Authority for new construction and replacement shall be valid for five (5) years from the date of the compliance inspection or As-built certification unless the Health Authority or licensed inspector identifies the system as an Imminent Public Health Threat.

7.72 Notices of Violation may be issued with Notices of Noncompliance when the Health Authority determines that new construction, replacement or repairs are not in compliance with this Ordinance.

SUBDIVISION 8: EXISTING SYSTEMS.

8.1 Requirements. The Health Authority shall require a compliance inspection of an existing system whenever:

A. In designated Shoreland Management or Wellhead Protection Areas, an application for any type of building or land use permit is made.
B. The Health Authority deems a compliance inspection necessary, including, but not limited to, upon receipt of information of a potential ISTS failure or Imminent Health Threat.
C. An additional bedroom on the property is requested. If a request for an additional bedroom is received between November 1 and April 30, the governing municipality may issue a building permit immediately with the contingent requirement that a compliance inspection of the existing ISTS shall be completed by the following June 1.
D. Any addition or remodel of a licensed food, beverage, or lodging establishment or any Other Establishment where the sewage treatment system's designed flow may be effected.

8.2 Inspector. Only the Health Authority or licensed Designer I or Inspector, shall conduct an inspection when a compliance inspection is required for an existing ISTS.

8.3 Existing Systems in Compliance with the Two-foot Rule. An existing system installed before April 1, 1996 shall be considered in compliance with the technical standards of MN Rules 7080 and need not be upgraded if the following conditions exist:

A. The system is not an Imminent Public Health Threat.
B. The system has at least two feet of vertical separation between the bottom of the distribution medium and seasonally saturated soil as indicated by mottling or other indicators.
C. The system is not in a Shoreland Designated Area.
D. The system is not in a Wellhead Protection Area.
E. The system is not serving a food/beverage/lodging facility.

8.4 Inspection Reports. A copy of the Certificate of Compliance or Notice of Noncompliance resulting from a compliance inspection shall be provided to the property owner and the Health Authority within 30 calendar days of inspection.

8.41 Certificates of Compliance issued by a licensed ISTS Inspector for an existing system shall be valid for three (3) years from the date of the compliance inspection unless the Health Authority or licensed inspector identifies the system as an Imminent Public Health Threat.

8.42 A Notice of Noncompliance shall be issued in the following circumstances and the conditions noted in violation of this Ordinance shall be remedied as follows:

A. An ISTS determined to be failing shall be upgraded, replaced, or repaired in accord with Minnesota Rules Chapter 7080.0060, within three (3) years, or its use is discontinued. The Health Authority, at its discretion, may grant an extension of an additional two (2) years.
B. An ISTS posing an imminent threat to public health or safety shall be upgraded, replaced or repaired within 10 months. The Health Authority will give consideration to weather conditions in determining compliance dates. If an ISTS is determined to be a public health nuisance by the Health Authority, the Health Authority may order the owner of the ISTS to cease use immediately and not allow use of the ISTS until it is corrected in accordance with the

recommendations of the Health Authority.

SUBDIVISION 9: VIOLATIONS.

9.1 Cause to Issue a Notic e of Violation. Noncompliance with this Ordinance by an applicant, permittee, installer or other person, as determined by the Health Authority, shall constitute a violation.

9.2 Serving a Notice of Violation. The Health Authority shall serve, in person or by mail, a Notice of Violation upon any person determined to be not in compliance with this Ordinance.

9.3 Contents of a Notice of Violation. A Notice of Violation shall contain the following:

A. A statement documenting the findings of fact determined through inspections, reinspection or investigation.
B. A list of specific violation or violations of this Ordinance.
C. The specific requirements for correction or removal of the specified violation(s).
D. A mandatory time schedule for correction, removal and compliance with this Ordinance.

9.4 Notification of MPCA. The Health Authority shall in accordance with state law notify the MPCA of any inspection, installation, design, construction, alteration or repair of an ISTS by a licensed person or any pumping by a licensed pumper performed in violation of the provisions of this Ordinance.

SUBDIVISION 10: ADDITIONAL STANDARDS FOR HEALTH AND ENVIRONMENTAL PROTECTION.

10.1 Siting of an ISTS. Notwithstanding any state or federal requirements, the separation distance from an ISTS to a Type 3, 4, 5 or 6 wetland shall be no less than fifty (50) feet.

10.2 Warrantied Systems. Warrantied systems, as described in Minn. Stat., Chapter 115.55, subd. 8, are prohibited.

10.3 Maintenance Report. The owner of an ISTS or an owner's agent who measures or removes accumulations in accordance with Minn. Rules 7080.0175B shall submit records to the Health Authority of all pumping activities.

SUBDIVISION 11: ENFORCEMENT.

11.1 Any person, firm, corporation or other entity who violates any of the provisions of this Ordinance or who makes any false statement on a Certificate of Compliance, shall be guilty of a misdemeanor, punishable by imprisonment or a fine or both, as defined by law. Each day in violation may constitute a separate violation.

11.2 In the event of a violation of this Ordinance, in addition to other remedies, the County or Municipal Attorney may institute appropriate actions or proceedings to prevent, restrain, correct or abate such violations.

SUBDIVISION 12: FEES. The Hennepin County Board shall from time to time establish fees for activities undertaken by the Health Authority pursuant to this Ordinance. Fees shall be due and payable at a time and in a manner to be determined by the Health Authority.

SUBDIVISION 13: SEVERABILITY. If a provision or application of this Ordinance is held invalid, that invalidity shall not affect other provisions or applications of this Ordinance.

SUBDIVISION 14: EFFECTIVE DATE. This ordinance shall take effect June 5, 2001.

Passed by the Board of County Commissioners of Hennepin County, Minnesota, this 5th day of June, 2001

This ordinance was current when published on this web site. To be certain that it has not been amended, contact the Hennepin County Human Services and Pulbic Health Department at the email address shown on the right.

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Appendix 8-8

ELECTRIC PUMP

200 West 88th Street, Suite #1
Bloomington, MN 55420

Telephone (952) 884-5394 • Toll Free 1-800-536-5394
Fax (952) 884-3239

Sold to: City of Champlin
11955 Champlin Drive
Champlin, MN 55316

Tag: Lift Station #2

Scope of Materials

Pump & Accessories:

Two	(2)	Flygt CP 3140, 481 impeller, 15 HP, 480 volt, 3 phase explosion proof submersible pumps capable of 380 GPM at 75'TDH with 40'power cords and leakage sensors
Two	(2)	4" base discharge elbows with lower guide pipe holders
Two	(2)	2" upper guide brackets
Two	(2)	2"x6" intermediate guide brackets
Two	(2)	27' lengths of stainless steel chain with shackles
One	(1)	30"x48" access hatch with channel drain, torsion bar, and padlock staple
One	(1)	36"x50" access hatch with channel drain, torsion bar, and padlock staple
One	(1)	Stainless steel cable rack
Two	(2)	Flygt MiniCAS leakage sensing relays to be mounted in controls
One	(1)	Certified Flygt startup

Warranty:

One	(1)	Lot of standard 5 year warranty on pumps and accessories

O & M Manuals:

Three	(3)	Sets of operation & maintenance manuals (including pump parts lists)

#3

ELECTRIC PUMP

200 West 88th Street, Suite #1
Bloomington, MN 55420

Telephone (952) 884-5394 • Toll Free 1-800-536-5394
Fax (952) 884-3239

Sold to: Carl Bolander & Sons
251 Starkey Street
St. Paul, MN 55107

Tag: Pump Station #3 Upgrade
Champlin, MN

Scope of Materials

Flygt Submersible Centrifugal Pumps

Two	(2)	Flygt CP 3085-434, 3HP 230V 3-phase explosion proof submersible pumps capable of 323GPM at 21.8'TDH with 40' power cords and leakage sensors.
One	(1)	Flygt Mix Flush Valve to be mounted on one pump
Two	(2)	Flygt 4" base discharge elbows with lower guide pipe holders
Two	(2)	2" SS upper guide brackets
Two	(2)	2"x6" SS intermediate guide brackets
Two	(2)	25' lengths of stainless steel chain with shackles
One	(1)	Stainless steel cable rack
Two	(2)	Flygt 120V MiniCAS leakage sensing relays
One	(1)	Certified startup

Warranty:

One	(1)	Lot of standard 5 year warranty on pumps and accessories

O & M Manuals:

Four	(4)	Sets of operation & maintenance manuals (including pump parts lists)

LIFT STATION #4

Year: new 2002

Pump 1 KRT F80-200/34XG	**Pump 2 KRT F80-200/34XG**
Serial # 887102	**Serial # 884561**
185 impeller	**185 impeller**
5 HP	**5 H.P**
230 volt 15.4 FLA	**230 volt 15.4 FLA**
3 phase	**3 phase**
312 G.P.M	**312 G.P.M**
30' T.D.H	**30' T.D.H**
1750 RPM	**1750 RPM**
4" base discharger elbow	**4" discharger elbow**

Control Panel	**Control Panel**
Serial #	**Serial # 884561**

#5

Quality Flow Systems, Inc.

800 6th Street NW
New Prague, MN 56071

Phone: (952) 758-9445
Fax: (952) 758-9661

Sold To: **Minger Construction**
620 Corporate Drive
Jordan, MN 55352

Ship To: **(Please Advise)**

TAG: **Champlin, MN**
Lift Station 5 Improvements

SCOPE OF MATERIALS

Two (2) "KSB" Model KRT NF80-220/044 (190imp.) 5 hp, 208/3, submersible pump designed to deliver 345 GPM @ 25' TDH. Each pump to include the following:

- 5 hp, 208/3, 1750rpm, electric motor (16 FLA)
- Over temperature protection (bi-metallics)
- Leakage sensor
- 4" base discharge elbow w/ 4" x6" flg. eccentric reducers
- 50' submersible power cable (2/3 max o.d.)
- 20' length of ¼ SS lifting chain and shackle
- 2" stainless steel guide pipe
- Complete 316 SS guide rail system consisting of:
  - Upper guide pipe bracket (SS construction)
  - Intermediate guide pipe bracket (2" Sch. 40 SS guide pipe x 6" DIP riser pipe)
  - 2" Sch-40 SS guide pipe

One (1) Plastic coated cable rack (for supporting pump and control cords)

One (1) SS J-hook (for support of pump lifting chain)

One (1) "Quality Control and Integration" NEMA 3X, pad mounted, 304SS, duplex control panel for operation on 208/3 4-wire incoming service

One (1) "Halliday" Model HIR 30"x 48" single door aluminum access cover (H20 construction rating)

One (1) "Halliday" Model HIR 30"x 48" single door aluminum access cover (H20 construction rating)

LIFT STATION #6

Year: new 1979
Pump 1 newly installed 2013

Pump 1	**Flygt CP3085.183**	**Pump 2**	**KRT F80-200/24XG**
Serial #	**1320969**	**Serial #**	**880108**
Impeller	**436**	**Impeller**	**175mm**
3 HP		**3.4 HP**	
230 volt	**8.7 FLA**	**230 volt**	**7.1 FLA**
1 phase		**1 phase**	
G.P.M		**G.P.M**	
T.D.H		**T.D.H**	
' power cord		**' power cord**	
Oil Change 1.1 qts		**Oil Change .5 qts**	

Both pumps were received in 2004 when new control panel was installed so that they would work with V.F.D. for higher ramping

Control Panel Electric Pump new 2004
V.F.D are ABB – ACS 140 AC for speed control from ½ h.p. to 3.hp
Depth of wet well
top elevation ft base elevation ft

Miscellaneous: estimated down time before backups occur:

LIFT STATION #7

Year: new 2006

Pump 1 Flygt CP3127	**Pump 2 Flygt CP3127**
Serial # NO TAG ON PUMP	**Serial # 8680657**
Impeller 483	**Impeller 483**
10 H.P	**10 H.P**
230 volt 26 FLA	**230 volt 26 FLA**
3 phase	**3 phase**
200 G.P.M	**200 G.P.M**
70' T.D.H	**705' T.D.H**
60' power cord	**60' power cord**
4" base discharger elbow	**4" discharger elbow**
1750 R.P.M	**1750 R.P.M**

Control Panel - Consolidated Electric Co.	**Control Panel – Consolidated Electric Co.**
Serial #	**Serial #**
Short circuit protection	**Type**
Overload protection	
Depth of wet well ft	
top elevation ft	**base elevation ft**

Lift station 7 is equipped with by pass capabilities, also is set up with an "add-a-phase" power converter

Miscellaneous: estimated down time before backups occur:

#8

ELECTRIC PUMP

9700 Humboldt Ave. So.
Minneapolis, MN 55431

Telephone (952) 884-5394 • Toll Free 1-800-536-5394
Fax (952) 884-3239

Sold to: City of Champlin Public Utilities
Attn: Mike Bramwell
11955 Champlin Drive
Champlin, MN 55316

Tag: Lift Station Improvements – Georgia Street

Scope of Materials

Pump & Accessories:

Two	(2)	Flygt NP 3171, 435 impeller, 25 HP, 1750 RPM, 460 volt, 3 phase Pump designed to meet or exceed design condition of 890 GPM @ 65' TDH.
One	(1)	Lot of electrical modification to include Flygt leakage sensing modules and starter overloads.
Two	(2)	6x8 Flygt discharge elbows
Two	(2)	Flygt Mix-Flush valve
Two	(2)	2" upper guide bracket
Two	(2)	33' lengths of stainless steel chain with clevis
Eight	(8)	Lengths of 2" stainless steel guide pipe

Wet Well Cover

One	(1)	Concrete cover with cast in place Safe-Hatch access cover

Warranty:

One	(1)	Lot of standard 5 year warranty on pumps and accessories

O & M Manuals:

Four	(4)	Sets of operation & maintenance manuals (including pump parts lists)

#9

WALDOR PUMP
& EQUIPMENT CO.
9700 HUMBOLDT AVE. SO.
MINNEAPOLIS, MN 55431
PHONE (612) 884-5394 **FAX (612) 884-3299**

July 28, 1993

Sold to: Kenko Construction
1694 91st Avenue NE
Blaine, MN 55449

Ship to: **PLEASE ADVISE**

Tag: Champlin, MN
109th Avenue N/SE Area Improvements
Section 4120 - Lift Station

SHOP DRAWING REVIEW

REVIEW IS FOR GENERAL COMPLIANCE
WITH CONTRACT DOCUMENTS
NO RESPONSIBILITY IS ASSUMED FOR
CORRECTNESS OF DIMENSIONS OR DETAILS

NO EXCEPTIONS TAKEN	✓
MAKE CORRECTIONS NOTED	
AMEND & RESUBMIT	
REJECTED — SEE REMARKS	

MAIER STEWART and ASSOC.
CONSULTING ENGINEERS
Date 7-11-94 By Paul Beth

Scope of Materials

Pump & Accessories:

Two (2) "Flygt" CP3127X-485, 240/3, 7.5 HP, 20.0 FLA explosion proof submersible sewage pumps each complete with:
- 40' of #10/3-2-1 GC power and control cord (.84" O.D.)
- built-in thermal overload protection (to be interfaced with controls)
- built-in FLS leakage sensors
- #485 impeller (140 gpm @ 51'TDH)
- FM Label for explosion-proof rating (Class 1 Division 1 Groups C & D)

Two (2) 4" base discharge elbows with lower guide pipe holder.
Two (2) 2" upper guide pipe support brackets. **Note:** Guide pipes by others.
Two (2) 2" x 4" stainless steel intermediate guide pipe brackets.
Two (2) 21' length of 1/4" galvanized lifting chain with fitting shackles. (to pump handle.)

Access Cover & Frame:

One (1) (36" x 48") single-leaf aluminum access cover and frame complete with the following:
- 1/4" checkered plate single leaf cover
- 300# load rating throughout
- stainless steel hardware & locking hasp
- hold-open arm

One (1) Plastic-coated cable rack.
One (1) S.S. lifting chain anchoring J-hook

Float Switch:

One (1) "Anchor Scientific" Roto Float float switch with 40' of cord.

City of Champlin, MN

Capital Improvement Program

2020 thru 2029

PROJECTS BY FUNDING SOURCE

Source	#	Priority	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	Total
SEWER REVENUE													
VACTOR/JETTER	SEW-007	n/a	420,000										*420,000*
SANITARY SEWER REHABILITATION	SEW-023	n/a		460,000		480,000		500,000					*1,440,000*
PUMP SERVICE PROGRAM	SEW-024	n/a		10,000	10,000		10,000		30,000	30,000	10,000		*100,000*
LIFT STATION 7	SEW-027	n/a					250,000						*250,000*
LIFT STATION #8 DROP MANHOLE	SEW-029	n/a					100,000						*100,000*
LIFT STATION CONTROL & MONITORING UPGRADE	SEW-042	n/a									45,000		*45,000*
SANITARY MANHOLE REPLACEMENT	SEW-043	n/a	25,000	25,000	25,000								*75,000*
LIFT STATION VFD R & R	SEW-044	n/a		8,000						10,000			*18,000*
FIBER COMMUNICATION FOR SCADA	SEW-045	n/a			100,000					100,000			*200,000*
RECONSTRUCT GARFIELD AVENUE	ST & UTIL-02	n/a	122,700										*122,700*
CHAMPLIN HEIGHTS ADDITION	ST & UTIL-04	n/a	380,000										*380,000*
CONST OF 120TH AVE KENTUCKY AVENUE	ST & UTIL-07	n/a										2,200	*2,200*
MILL/OVERLAY MISSISSIPPI DRIVE	ST MILOVR-23	n/a							149,800				*149,800*
MILL/ OVERLAY WEST RIVER PARKWAY	ST MILOVR-25	n/a				24,000							*24,000*
MILL/OVERLAY VALLEY FORGE LANE	ST MILOVR-28	n/a								10,000			*10,000*
MILL/OVERLAY HILLSBORO AVE/INDEPENDENCE AVE	ST MILOVR-31	n/a							28,600				*28,600*
MILL/OVERLAY 114TH AVENUE	ST MILOVR-33	n/a									26,000		*26,000*
MILL/OVERLAY GEORGIA AVE S OF 117TH AVE	ST MILOVR-34	n/a								58,300			*58,300*
MILL/OVERLAY HEATHERS ESTATES	ST MILOVR-35	n/a										26,700	*26,700*

Source	#	Priority	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	Total
MILL/OVERLAY ZANE AVENUE AREA E OF DOUGLAS DR	ST MILOVR-38	n/a						168,700					168,700
MILL/OVERLAY XENIA AVENUE AREA	ST MILOVR-39	n/a					58,200						58,200
MILL AND OVERLAY ON CARTWAY COURT	ST MILOVR-40	n/a										6,800	6,800
MILL & OVERLAY IN VIRGINIA AVE & 119TH AVE AREA	ST MILOVR-41	n/a					45,000						45,000
MILL & OVERLAY MARYLAND/OREGON AREA S 114TH AVE	ST MILOVR-43	n/a		46,600									46,600
AREA S OF 114TH AVE & E OF WINNETKA AVE	ST MILOVR-44	n/a			58,200								58,200
KIMBALL DR/INDEPENDENCE-CARTWAY	ST MILOVR-53	n/a										6,800	6,800
MILL POND EST, CHAMP DR/ELM CRK/CARTWAY	ST MILOVR-55	n/a										20,000	20,000
SUNBLATTS PK & S, STHLND ACR 6/8 ADD	ST MILOVR-57	n/a	28,400			31,900							60,300
XYLON/UTAH/VIRGIINIA/113TH	ST MILOVR-58	n/a				131,200							131,200
BARTUSCH ADDN, HELMER ADDN	ST MILOVR-59	n/a				69,900							69,900
CHAMPLIN & NICOLES ESTATES	ST MILOVR-60	n/a									48,300		48,300
DEAN AVE: INDEPENDENCE TO TH 169	ST MILOVR-65	n/a							10,000				10,000
BROOKLYN HEIGHTS	ST MILOVR-68	n/a			30,000								30,000
HIDDEN OAKS LANE AREA	ST MILOVR-71	n/a		56,600									56,600
WOODS TRAIL AREA	ST MILOVR-72	n/a			71,600								71,600
HILLSBORO AVE AREA	ST MILOVR-73	n/a		46,700									46,700
PLEASANT & ZEALAND AREAS	ST MILOVR-74	n/a					51,700						51,700
RECONST DOWNS RD	ST RECSTR-12	n/a		6,700									6,700
DEAN AVE - INDEPENDENCE TO CARTWAY	ST RECSTR-17	n/a		41,230									41,230
RECONST STREET LAKESIDE TR/HILLSIDE DRIVE	ST RECSTR-21	n/a		40,000									40,000
TILDEN AVE/SARATOGA, UNION TERRACE TO REVERE LN	ST RECSTR-29	n/a	517,100										517,100
GHOSTLEY STREET SOUTH OF DEAN AVE	ST RECSTR-30	n/a										3,300	3,300
ELM CRK TERR/INDEPENDENCE, S TRUSSEL	ST RECSTR-34	n/a			43,600								43,600
PARKSIDE TRAIL	ST RECSTR-56	n/a			35,000								35,000
E HAYDEN LAKE ROAD	ST RECSTR-62	n/a									13,600		13,600
STRM SWR FRENCH LK RD NEW DEVELOP NW OF POND	STM SEWR-18	n/a			50,000								50,000

Source	#	Priority	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	Total
GPS	WAT-077	n/a		3,750									*3,750*
WASH DOWN & FILL STATION	WAT-104	n/a	25,000										*25,000*
SEWER REVENUE Total			**1,518,200**	**744,580**	**423,400**	**737,000**	**514,900**	**668,700**	**218,400**	**208,300**	**142,900**	**65,800**	***5,242,180***
GRAND TOTAL			**1,518,200**	**744,580**	**423,400**	**737,000**	**514,900**	**668,700**	**218,400**	**208,300**	**142,900**	**65,800**	***5,242,180***

City of Champlin

N

SANITARY DISTRICTS / MCES

Legend

- MCES Connections
- Sanitary Points
- MCES Trunk
- Sanitary Lines
- Sanitary Districts

MCES #1 - LS #3

DC - 73

DC - 51

DC - 71

DC - 70

MCES LS #1

MCES #1

CAB16 - LS #5

CAB - 20

CAB - 21

CAB - 22

MSEC 1 - LS #2

MSEC 1 - LS #6

CAB - 15A

CAB - 16

CAB - 15B

CAB - 15

CAB 1 - LS #7

CAB 2 - LS #8

CAB - 13

CAB - 14

CAB - 12

CAB - 1

CAB - 8

CAB - 7

CAB - 4

CAB - 10

CAB - 11

CAB - 6

CAB - 5

CAB - 2

CAB - 3

LS #4

CAB - 8

CAB - 69

CAB 19 - LS #9

CAB - 19

CAB - 18

To Maple Grove