

WATER RESOURCES AND UTILITIES

Sanitary Sewer Plan



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Comprehensive Plan

Sanitary Sewer Element

City of Belle Plaine

April 2018

Submitted by:

Bolton & Menk, Inc.
1960 Premier Drive
Mankato, MN 56001
P: 507-625-4171
F: 507-625-4177
BMI No. M15.112777

Certification

Comprehensive Plan

for

Sanitary Sewer Element

City of Belle Plaine, MN



BMI No. M15.112777

April 2018

I hereby certify that this plan, specification or report was prepared by me or under my direct supervision, and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.

By: _____
D. Joseph Duncan II, P.E.
License No. 26100

Date: _____

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I. Introduction

For communities with a locally owned and operated wastewater system, it is important to work to ensure that these systems are adequately managed and maintained around the region. This helps to ensure that local capacity is available, but also helps to prevent costly regional infrastructure investments in inadequately maintained systems. The intent of the Wastewater element of the Comprehensive Plan is to ensure the information community needs to plan for and provide the appropriate local system capacity and address inflow and infiltration.

II. Household and Employment Forecasts

The forecasts for population, households, and employment for areas of the City of Belle Plaine that will be served by the City of Belle Plaine municipal sanitary sewer system are:

Table 2.1 - Population, Households and Employment Projections			
Year	Population	Households	Employment
2020	7,800	2,900	2,600
2030	10,100	3,860	2,950
2040	12,600	4,900	3,300

Figure No. SS-1 represents the existing sanitary sewer infrastructure network. The City of Belle Plaine's sanitary sewer collection system is comprised of several sanitary sewer districts in which major portions of the City drain to one particular sewer collection main. Figure No. SS-2 depicts the approximate boundaries of the following districts, which comprise the sanitary sewer collection system:

- Central District
- South District
- North District (Future)
- West District (Future)

There are no areas in the City of Belle Plaine 2040 Growth Boundary Area that have been designated as being served by private waste water treatment.

The Central Sanitary Sewer District services most of the original platted area of the City of Belle Plaine. The trunk sanitary sewer main for this district is located in Forest Street.

The South Sanitary Sewer District includes the general areas south of TH 169 and southwest of the original platted city. The main trunk sewer servicing this area is the 18-inch sanitary sewer main constructed in the ravine west of the Lutheran Home and south of school district athletic fields, often referred to locally as "South Ravine".

The North Sanitary Sewer District includes the area north and east of Brewery Creek. Future growth in these areas will be serviced through an extension of the North Sanitary Sewer Interceptor. This general area contains a sizeable section of the City's future residential and commercial development.

The West Sanitary Sewer District includes future development areas west of Robert Creek. There is currently no sanitary sewer service to this area. Construction of a new gravity sanitary sewer trunk main from the POTW along the Robert Creek alignment is proposed to facilitate sanitary sewer service to this area.

III. Wastewater Collection Design Considerations

A. General Design Considerations:

The purpose of a municipal wastewater collection system is to collect and transport the wastewater flows of a community to a point of treatment or ultimate disposal. Recommended wastewater collection system improvements discussed later in this element are intended to provide service to the ultimate residential, commercial and industrial development within the growth areas, based on the future general land use assumptions as shown on Figure SS-3.

The analysis of a wastewater collection system involves gathering as much information as possible on the physical components of the piping system to determine the capacity of the existing collection system. The following factors were considered in determining the required capacity and layout of the proposed trunk sanitary sewer improvements:

- Proposed location of collector and arterial streets. To the extent possible, the proposed trunk sewers are planned along the same alignment as proposed collector streets and/or natural drainage paths to minimize excavation requirements.
- Topography of the future development areas, including limitations placed by natural and man-made impediments, such as bluffs, ravines, TH 169 and the railroad.

- Maximum hourly domestic sewage flow.
- Anticipated wastewater flow from residential, commercial, and industrial areas.
- Minimum and maximum depths typical of current construction methods and ultimate usage requirements.
- Depth and capacity of existing sanitary sewers and lift stations to which the proposed trunk sewers would flow.

B. Estimating Wastewater Design Flows:

Residential wastewater design flows are commonly determined on a basis of population density and average per capita wastewater generation. The following typical parameters were used for developing the residential wastewater flows:

1. Single Family Residential:
 - a) Average Density = 3 units/acre
 - b) Average Number of Persons/Dwelling = 2.3
 - c) Average Wastewater Generation = 88 gallons/person/day
 - d) Resulting Average Wastewater Generation = 607 gallons/acre/day
2. Multi-Family
 - a) Average Wastewater Generation = 1500 gallons/acre/day

A peaking factor is applied to the average flow rates based on contributing population. The peaking factor is the estimated ratio of the peak hourly flow to the average design flow. Typical peaking factor values for a city of Belle Plaine's population is 3.0. In general, the smaller the contributing area served by the sanitary sewer system, the higher the peaking factor.

C. Pipe Sizing

The desired force that drives flow in a sanitary sewer pipe is gravity. Therefore, the pipes must be placed on grade (slope). Grades are expressed in terms of a percentage (%) and represent the number of feet of vertical elevation change in 100 feet of pipe. For example, a grade of 1.00% is one foot of elevation difference in 100 feet horizontally.

The slope, diameter and a factor representing the smoothness of the pipe are used to calculate the actual capacity of a given pipe. Typically, this volume of flow is expressed in cubic feet per second (cfs) or gallons per minute (gpm).

D. Design Criteria for Future Sanitary Sewer Improvements:

When investigating and reviewing possible improvements to the sanitary sewer system, the following design criteria were used for the sizing and preliminary alignments of new trunk sanitary sewers:

1. Minimum Permitted Pipe Diameter: 8 inches (residential), 12 inches (commercial/industrial)
2. Depth: 12-foot minimum to allow gravity service to full basements
3. Slope: Sufficient to provide self-cleaning velocities of 2.0 feet/second when flowing full, required slope varies by size of pipe
4. Manholes: Provide at up to 500-foot intervals

E. Lift Station Design Criteria:

In locations that are not serviceable by gravity sewers, lift stations are constructed to pump wastewater from a deeper sewer to a gravity sewer at a higher elevation. Lift stations are usually constructed to service areas that are lower in elevation than the existing gravity sewer. Lift stations discharge flows through a “forcemain” pipe that operates under pressure rather than by gravity. The estimated peak hourly flow from the contributing area is used for sizing the lift station and forcemain.

Lift station improvements at the wastewater treatment plant may need to be considered as development increases and wastewater flows increase. In addition, lift stations may be required to service smaller areas within each of the growth areas due to relative elevation differences as compared to the trunk interceptor sewer mains.

F. Private Waste Water Treatment:

Section 702.03 of the City Ordinance requires connection to the municipal sanitary sewer system, except where public sanitary sewer is not available. Properties where public sanitary sewer is not available are allowed to install a private wastewater disposal system.

The City’s Subdivision Ordinance requires installation of sanitary sewers to serve all properties in the subdivision where a connection to the City sanitary sewer system is available.

Scott County Ordinance governs the installation of private waste water treatment facilities when they are allowed.

G. Inflow and Infiltration:

Comparison of the volume of influent at the waste water treatment facility to the volume of drinking water sold shows that inflow and infiltration is not a significant issue in the City of Belle Plaine. Section 702.5 of the City Code prohibits the connection of roof downspouts, foundation drains, areaway drains, sump pumps or other sources of surface runoff or groundwater to the municipal sanitary sewer. This provisions combined with the sandy soils in Belle Plaine has minimized inflow and infiltration in the sanitary sewer system.

The City has a capital improvement plan in place to replace aging sanitary sewer mains. The City will continue to replace aging mains to minimize opportunities for inflow and infiltration.

The City will continue to enforce the existing ordinance to minimize illegal connections to the system. The City will also continue to share educational material about inflow and infiltration with the public. These combined actions will minimize illegal connections resulting in inflow and infiltration in the system.

IV. Proposed Wastewater Collection System Improvements

The substantial areas to the south and east of the existing development on the south side of TH 169 were identified as areas that will continue to develop. As City growth continues and the sanitary sewer service needs expand, the City will be faced with the challenge of updating sections of the existing sanitary sewer network and constructing new sanitary sewer infrastructure to accommodate this growth. The following are several of the options that can be considered in providing trunk sanitary sewers to the proposed growth areas:

1. North Sanitary Sewer Interceptor Extensions
2. South Ravine Interceptor Sewer Improvements
3. Robert Creek Interceptor Sewer

A. North Sanitary Sewer Interceptor:

In 2007, the City of Belle Plaine constructed approximately 7,500 linear feet of pipe referred to as the North Sanitary Sewer Interceptor. The construction project extended 27" diameter pipe from the intersection of Beaver Street and Market Street eastward and parallel to the Union Pacific Railroad. At a point where Brewery Creek Ravine intersects the Union Pacific, the pipe was redirected southeasterly and an 18" diameter pipe was trenchlessly installed along the southern edge of the ravine and terminated near the corporate limits, just west of 1st Avenue NE. The conduit diameter could be downsized since the natural topography of the ravine allowed for a steeper slope on the pipe, thereby maintaining flow capacity. As part of the TH169/TH25 interchange project that lowered and replaced nearly 3,000 linear feet of TH169 mainline, the opportunity was seized to install a 36" diameter steel casing during roadway excavation for the future extension of the North Sanitary Sewer Interceptor.

A Preliminary Engineers report was approved by the City Council in October 2016 for the extension of the North Sanitary Sewer Interceptor to the east across TH169.

The proposed alignment of the extension is shown below in Illustration 4-1. Commencing at the current terminus just west of 1st Avenue NE, trenchless installation of 22" HDPE would continue eastward to just east of Old TH169 Boulevard. From there to the existing 36" steel casing under TH169, either traditional open cut or trenchless methods could be used to reach the existing steel casing invert based on the grade available.

Once on the east side of TH169, placement of 18" PVC sewer using open-cut methods will be necessary to maintain a grade that will allow for maximum benefit. As shown, the alignment runs just south of the existing drainage way allowing for the lowest invert elevations relative to the surrounding area.



Illustration 4-1 Proposed Alignment of North Sanitary Sewer Interceptor Extension

The total length of sewer extension as represented is approximately 6,700 linear feet. The proposed termination point was selected to permit access to the last property west of the bluff. Phased construction is likely with intermediate terminations based on property being ripe for development. Absent a proposed development further to the east, any phase of the extension would logically bring the sewer through the existing steel casing under TH169.

The proposed alignment of the interceptor sewer is predominately on private property. Therefore, perpetual and construction easements will be necessary for this extension to proceed.

B. South Ravine Sanitary Sewer Interceptor:

The existing 18-inch sanitary sewer located through South Ravine services the existing development south of TH 169. This trunk sanitary sewer also services the existing and proposed development west of the South Ravine, east of Robert Creek, and north of TH 169. As larger areas to the south of the bluff develop, additional capacity in the South Ravine Interceptor will be needed to accommodate the future wastewater generated. The sanitary sewer flowrates from additional development begin to exceed the original planned service areas. Eventually bottlenecks will develop in the system and upgrades of the sanitary sewer system will need be required. The single 18-inch crossing of Highway 169 and flatter segments of sanitary sewer mains both in the ravine and along upstream branches of the sanitary sewer mains located on South Street, Maple Street, Laredo Street, Lindsay Lane, and Ash Street will experience higher flowrates and sewer backups could result during peak flow periods.

As the areas to the south of the City develop, new designated routes to provide sanitary sewer to these areas become more limited and complex as new subdivisions and commercial development continue. The existing subdivisions were built around the existing county roads such as Laredo Street (CSAH 5) and South Street (CSAH 7). These roadways were virtually left intact and remain essentially rural highways. As development continues, traffic will tend to increase resulting in improvements such as turn lanes, additional driving lanes, center medians, and pavement reconstruction. Since these roadways have not been recently improved, they provide a potential route to construct new trunk sanitary sewer mains to service the future growth areas to the south and east of Laredo Street and Hickory Boulevard.

Constructing new interceptor sanitary sewer branches along South Street (CSAH 7) and Laredo Street (CSAH 5) provide an option for gravity routes to service the growth areas east of Meridian Street (CSAH 3) and to the south of CR 64. The trunk sanitary sewer improvements could take place prior to street construction by constructing the new sanitary sewer within the highway right-of-way. An alternative would be constructing the new sanitary sewer mains when the highways are reconstructed.

In order to provide additional service of the future growth areas, upgrading the existing 18-inch VCP sanitary sewer interceptor located within the ravine would need to be completed as wastewater flowrates exceed the existing pipe capacity. Upsizing the sanitary sewer by trenchless methods, such as pipe bursting, reduces excavation, environmental impact and restoration and should be considered as a construction method.

C. Robert Creek Interceptor Sewer

Sanitary sewer service to the undeveloped area to the west of Robert Creek largely depends on how development progresses in the City. The topography and ravine pose challenges in constructing a gravity sanitary sewer to service this area. The Robert Creek ravine is similar to that of the Brewery Creek ravine with rugged terrain and limited construction access. Construction of a new sanitary sewer interceptor is proposed to originate from the POTW, head west and turn south along the Robert Creek alignment. Installing the sanitary sewer

pipe by directional drilling methods becomes an attractive installation method as it minimizes manholes and the curvatures of the ravine are more readily navigated.

Constructing the sanitary sewer within the ravine would provide expanded sanitary sewer service limits, especially south and west of Highway 169. At this time there has not been any residential or commercial development that has obligated the City to consider construction of a sanitary sewer interceptor to service this area. It is recommended that once the location and need for sanitary sewer arises in the area west of Robert Creek, the City should evaluate and consider the construction of an interceptor sanitary sewer to service the area in order to maximize the useful service limits of trunk sanitary sewer.

V. Existing Wastewater Treatment Facility

The original wastewater facility was constructed in 1961 and consisted of a two-cell stabilization pond system. The pond system had a hydraulic capacity of 0.315 million gallons per day (mgd).

The ponds were expanded in 1987 and included one new primary and secondary cell. The acreage of the primary and secondary ponds at the 4-foot level is 13.3 and 20.5 acres respectively. The 1987 expansion increased the capacity to 0.610 mgd.

The City of Belle Plaine maintains a wastewater collection system with three lift stations throughout the system, including the main lift station at the pond facility.

Due to continued growth, the City required expansion of their wastewater facilities and the upgrade of the treatment facility consisted of converting a portion of the stabilization ponds to a mechanical treatment facility and keeping a portion of the existing ponds for additional treatment. The mechanical facility consists of pretreatment, extended aeration activated sludge (oxidation ditch) with biological phosphorous removal, final clarification, ultraviolet disinfection, aerobic digestion and reed beds for biosolids treatment and storage. Chemical addition for phosphorous removal is used for both the stabilization pond and mechanical facility.

The revised stabilization pond facility is designed to treat an average wet weather flow of 0.210 million gallons per day (mgd) with a 5-day biochemical oxygen demand (BOD) of 280 pounds per day. The stabilization ponds discharge on a seasonal basis to the Minnesota River with the following limits: 25 mg/l – Biochemical Oxygen Demand (BOD); 45 mg/l – Total Suspended Solids (TSS); and 1 mg/l – Total Phosphorous.

The mechanical treatment facility is designed to treat an average wet weather flow of 0.840 mgd with a 5-day BOD of 1,540 pounds per day. The mechanical facility discharges on a continuous basis to the Minnesota River with the following limits: 25 mg/l – Biochemical Oxygen Demand (BOD); 30 mg/l – Total Suspended Solids (TSS); and 1 mg/l – Total Phosphorous.

VI. Population, Flow and Loading Projections

The Metropolitan Council adopted Thrive MSP 2040 as the new regional development guide on May 28, 2014. The population projections in the table below are from the 2015 System Statement for the City of Belle Plaine issued September 17, 2015.

In order to project the adequacy of the various wastewater treatment processes the average amount of wastewater produced is required. Review of water use in the City of Belle Plaine during the period 2013-2017 indicates an average total per person demand of 87.71 gallons per day for drinking water. The City of Belle Plaine does not have a high groundwater table so it is reasonable to assume a similar volume of wastewater. This report uses 88 gallons per person per day of wastewater. Peak flows were determined by multiplying the average flows by a factor of 3.0. Using the design criteria from the wastewater treatment facility plans and determining the ratio between average and peak hourly flows determined this value.

The Biochemical Oxygen Demand (BOD) and Total Suspended Solids (TSS) loadings were determined by using average measured values at the influent to the waste water treatment facility during the period January 1, 2016 to April 4, 2018. The estimated July 1, 2016 population of 7,009 persons from the United States Census Bureau Quick Facts webpage was used to convert to a per capita value.

Parameter	Average Influent Concentration	Loading Per Capita
BOD	140 mg/L	0.113 lb/capita/day
TSS	168 mg/L	0.135 lb/capita/day

Measured values for phosphorous were not available so the design criteria from the wastewater treatment facility plan of 0.008 lb/capita/day was used.

Table 7.2 - Population, Flow and Loading Projections						
Year	Population	Average Flow (mgd)	Peak Flow (mgd)	BOD (lbs/day)	TSS (lbs/day)	TP (lbs/day)
2020	7,800	0.686	2.058	881	1,053	62.4
2030	10,100	0.889	2.667	1,141	1,364	80.8
2040	12,600	1.109	3.327	1,424	1,701	100.8

VII. Evaluation of Treatment Facilities

A. General

The wastewater treatment facility processes were evaluated using the criteria from the “Recommended Standards for Wastewater Facilities” or more commonly called “Ten State Standards”. Using these standards and the population, flow and loading estimates from above, each process was evaluated on when its capacity would be exceeded.

Since the Belle Plaine wastewater treatment facility uses a stabilization pond system and a mechanical treatment system, each process was evaluated separately. Total capacity is determined by adding together the limiting factors for the stabilization pond and mechanical treatment system to determine the actual treatment capacity.

B. Stabilization Ponds

Stabilization ponds are evaluated upon hydraulic and organic capacity. Table 8.1 lists the pond design criteria and Table 8.2 shows the capacity of the stabilization pond system.

Table 8.1 - Stabilization Pond Design Criteria	
Parameter	Value
Acres	
- Primary	13.3
- Secondary	21.2
Total	34.5
Volume	
- Primary	17.35
- Secondary	41.7
Total	59.05

Table 8.2 - Stabilization Pond		
Parameter	Design Requirement	Capacity (Population)
Hydraulic Capacity	180 days	3,728
Organic Loading	21 lb/acre/day	2,472

The organic loading is the limiting factor for the pond system and can handle a population of 2,472 persons.

C. Mechanical Treatment System

Mechanical wastewater treatment facilities include two separate processes when combined form an integrated treatment system. The processes are commonly referred to the “liquid stream” and the “solids stream”. The liquid stream combines various treatment components

to convert the wastewater into natural byproducts of biological stabilization and the capabilities of the liquid stream determine the quality of the effluent produced by the facility. The solids stream combines treatment components to stabilize, thicken and store the solids byproducts produced by the liquid stream for eventual incorporation into the soil. Some processes are evaluated on average wastewater flows whereas others are evaluated on peak flows. The plans include references for future treatment units. The analyses of processes include capacity if these additional processes are added. Results are tabulated in the following tables along with a brief description.

1. Pretreatment

Pretreatment facilities are provided to remove sticks, rags, grit and other materials to insure that they do not interfere with subsequent wastewater processes. The pretreatment process consists of a mechanical fine screen with manual screen backup and a grit removal system.

Table 8.3 - Existing Pretreatment Facilities		
Equipment	Capacity, Peak (mgd)	Capacity (Year)
Fine Screen	4.8	2040+
Grit Removal	4.0	2040+

The pretreatment facilities have capacity for a population of approximately 15,151 persons which exceeds the 2040 population forecast. The plans show room for an additional pretreatment facility similar to the current building. Assuming similar equipment is installed during an expansion of the pretreatment facilities, capacity would be doubled to handle 8.0 mgd, and providing capacity for a population of approximately 30,303 persons.

2. Biological Treatment (Oxidation Ditch)

The City of Belle Plaine operates an extended aeration activated sludge process for biological treatment. The major benefit of operating this type of process is the long retention times that allows for effective and efficient operation even when flows and strengths vary widely. Additionally, the activated sludge system is designed for biological phosphorous removal and occurs in an anaerobic basin preceding the oxidation ditch. The City has four oxidation ditches. Each oxidation ditch is 313-feet long with a depth of 10-feet. The anaerobic selector basin preceding the oxidation ditch is approximately 38-feet long, 17-feet wide and 11-feet deep. The oxidation ditch design criteria are presented in Table 8.4 and as shown below in Table 8.5, organic loading is the limiting factor for the activated sludge process with capacity for 23,800 persons.

Table 8.4 - Oxidation Ditch Design Criteria	
Parameter	Value
Number	4
Basin Volume (ft ³)	349,080
Basin Volume (gallons)	2,611,200

Table 8.5 - Activated Sludge Process – Oxidation Ditch (Existing)		
Description	Design Requirement	Capacity
Hydraulic Retention Time	18 Hours	34,792
Organic Loading Rate	15 lb BOD/day	23,800

3. Secondary Clarifier

Activated sludge secondary clarifiers are designed to meet thickening as well as solids separation requirements. Scum collection and removal facilities are provided as well. The City of Belle Plaine has one, 52-foot diameter clarifier that operates at a 14-foot water level and the design criteria is presented in Table 8.6. As presented in Table 8.7, the surface overflow rate governs the capacity of the clarifier and the clarifier can handle wastewater from 21,713 persons which exceeds the forecast 2040 population.

Table 8.6 - Secondary Design Criteria	
Parameter	Value
Number	1
Surface Area (ft ²)	2,123
Depth (ft)	14

Table 8.7 - Final Clarifier (Existing)		
Description	Design Requirement	Capacity (Population)
Surface Overflow Rate	900 gpd/sq. ft.	21,713
Solids Loading Rate	35 lb/day/sq. ft.	26,283
Weir Loading Rate	30,000 gpd/lin. Ft.	25,703

4. Disinfection

A disinfection system is required to disinfect the treated wastewater prior to entering the receiving stream. As per the City’s NPDES permit, they must disinfect the treated wastewater for the months of April through October. The City of Belle Plaine uses an ultraviolet light disinfection system. This type of system uses ultraviolet light to kill bacteria in the water. According to Ten State Standards, disinfection systems must be designed to handle the peak flows, therefore, peak flows are used to evaluate capacity. As shown in Table 8.8, the ultraviolet disinfection system has capacity for approximately 18,181 persons which exceeds the 2040 population forecast.

Table 8.8 - Disinfection System		
Description	Design Capacity	Capacity (Population)
UV System	1.6 mgd	18,181

The current system has two modules with a total of 20-bulbs per module. The plans indicate that an additional 20-bulbs can be added per module, which is assumed will increase the capacity of the UV system. It is assumed that by adding an additional 20-bulbs per module, the capacity will be doubled to 3.2 mgd and can handle a population of 36,362 persons.

5. Biosolids Processing

Wastewater biosolids consists of solids from raw wastewater and biological solids generated in the treatment process. The City of Belle Plaine treats biosolids using an aerobic digester and after digestion, the biosolids are placed into reed beds where the biosolids are stored and dewatered. Table 8.9 lists the design criteria for the biosolids treatment system. Table 8.10 presents the capacity of each process. Capacity of each process was determined by using 0.115 lb solids/capita/day. This value was determined by assuming 65 percent of influent BOD (0.113 lb BOD/capita/day) is biosolids. It is also assumed that 35 percent of influent phosphorous is reduced through the biological process. Fifteen lbs. solids are produced per lb. of phosphorous reduced. The lb/capita/day values were determined from the average measured values for BOD

and the design criteria for the wastewater treatment improvements was used for phosphorus.

Table 8.9 - Biosolids Treatment Design Criteria	
Parameter	Value
Aerobic Digester	
Number	2
Volume/digester (gals.)	92,000
Reed Beds	
Number	8
Area/cell (ft ²)	5,500

Table 8.10 - Biosolids Processing		
Description	Design Requirement	Capacity (Population)
Aerobic Digester	27 days @ 59° F	7,900
Reed Beds		
-Organic Loading	6 lb/ft ² /yr.	6,290

The limiting factor for the biosolids system is the organic loading rate of the reed beds and is limited to a population of 6,290 persons.

The plans for the mechanical treatment facility indicate there is space for the two additional aerobic digesters of the same size. Addition of these would increase the capacity of the digesters to handle 23,700 persons.

The plans do not show expansion of the reed beds, however, since the east stabilization ponds have been removed from service, it is expected that additional reed beds could be placed north of the existing reed beds. Adding eight additional reed beds would increase the capacity to 12,580 persons based on the original design assumptions, but likely much higher since the existing reed bed system is exceeding design expectations.

VIII. Summary of Existing Treatment Facilities

As discussed above, the capacity is determined by adding together the limiting factors for the stabilization pond and mechanical treatment facility. Table 9.1 presents the capacity for the liquid and solids streams for the combined facility and planned future capacity. The future capacity is assumed as doubling the treatment facility such as adding one additional oxidation ditch, one additional clarifier and fully expanding the disinfection system. Future capacity of the reed beds is determined by assuming an additional eight reed beds are added.

Table 9.1 - Wastewater System Flow Capacity		
Description	Existing Capacity (Population)	Planned Future Capacity (Population)
Liquid Stream		
Stabilization Pond	2,472	2,472
Disinfection (UV system)	18,181	36,362
Total	20,653	38,834
Solids Stream		
Stabilization Pond	2,472	2,472
Reed Beds – Organic Loading	6,290	12,580
Total	8,762	15,052

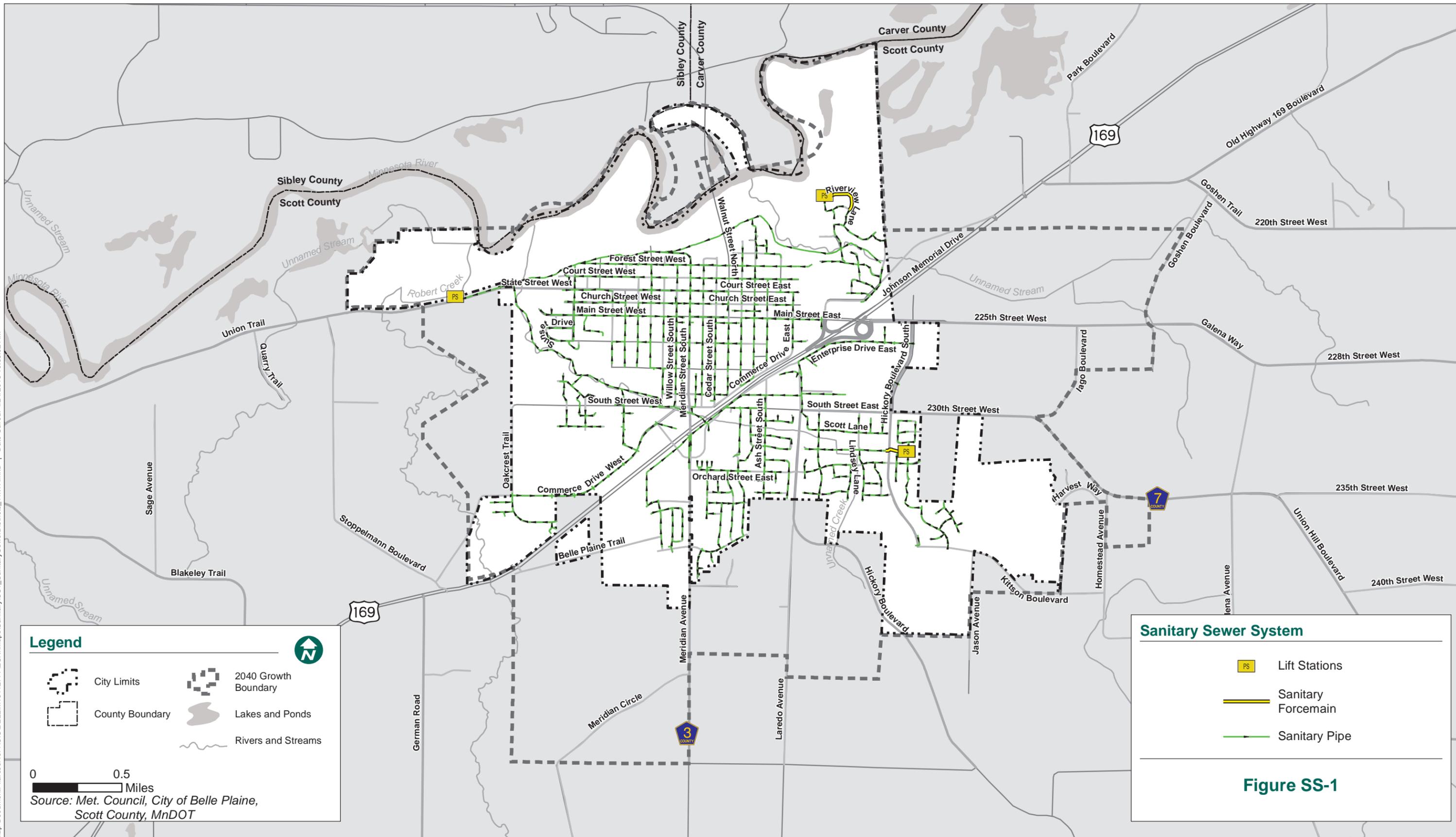
As presented in Table 9.01, the solids stream is the limiting factor with capacity for approximately 8,762 persons. Assuming expansion of the various processes as previously noted above, the solids stream (reed beds) would limit the treatment facility, with a total capacity of 15,052 persons which exceeds the 2040 population forecast.

IX. Cost Implications

The range of costs for upgrading the mechanical treatment system liquid and solids stream (additional oxidation ditch, secondary clarifier, upgrading UV system, new digesters and reed beds) is estimated to be \$9 million dollars in 2018 dollars. The cost for upgrading will be dependent upon the type of processes required and any potential changes in the City's effluent limits.

The operation and maintenance costs will increase due to additional power usage, chemical usage and additional maintenance requirements.

Appendix A: Figures



Legend

	City Limits		2040 Growth Boundary
	County Boundary		Lakes and Ponds
			Rivers and Streams

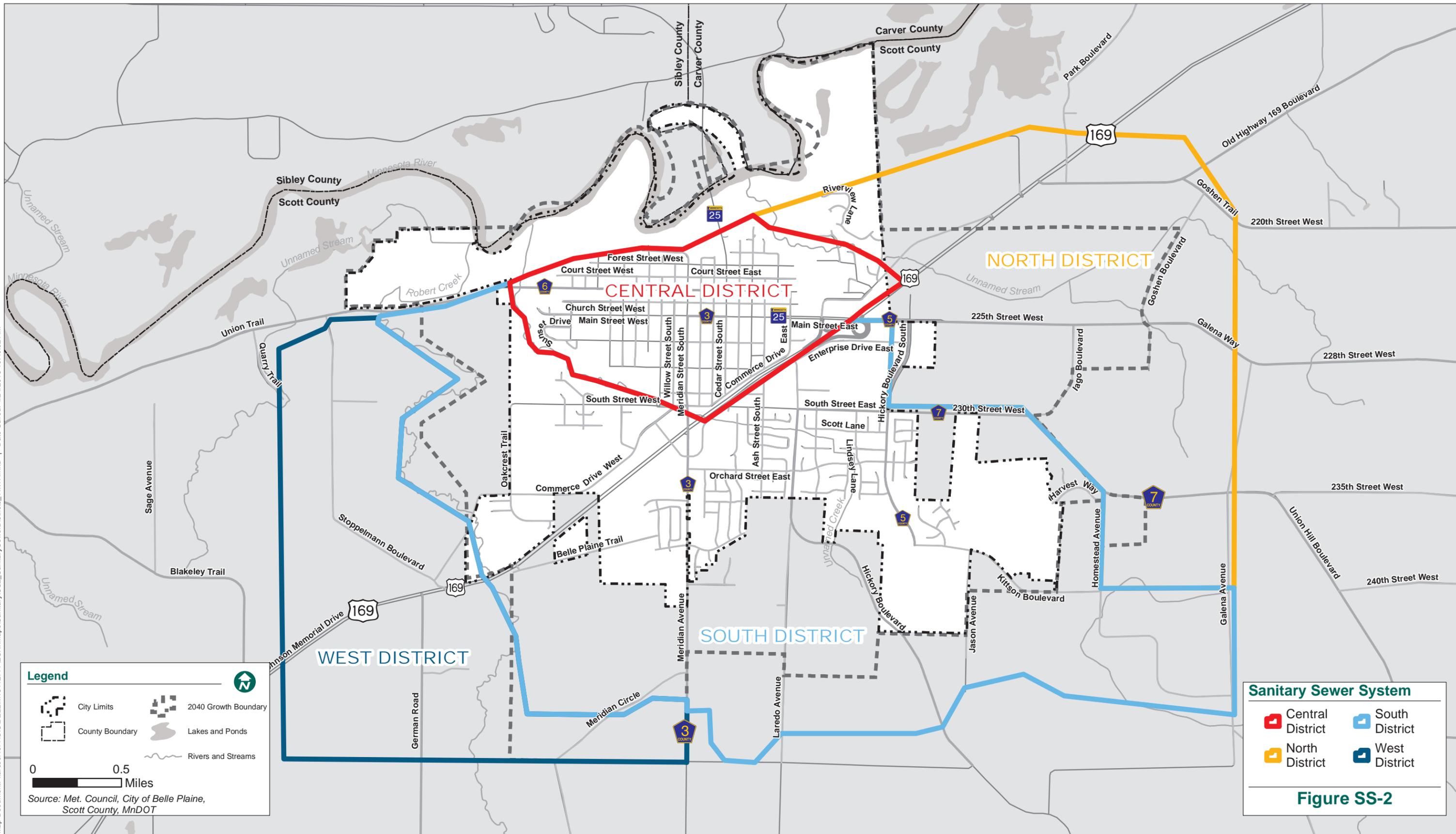
0 0.5 Miles
 Source: Met. Council, City of Belle Plaine, Scott County, MnDOT

Sanitary Sewer System

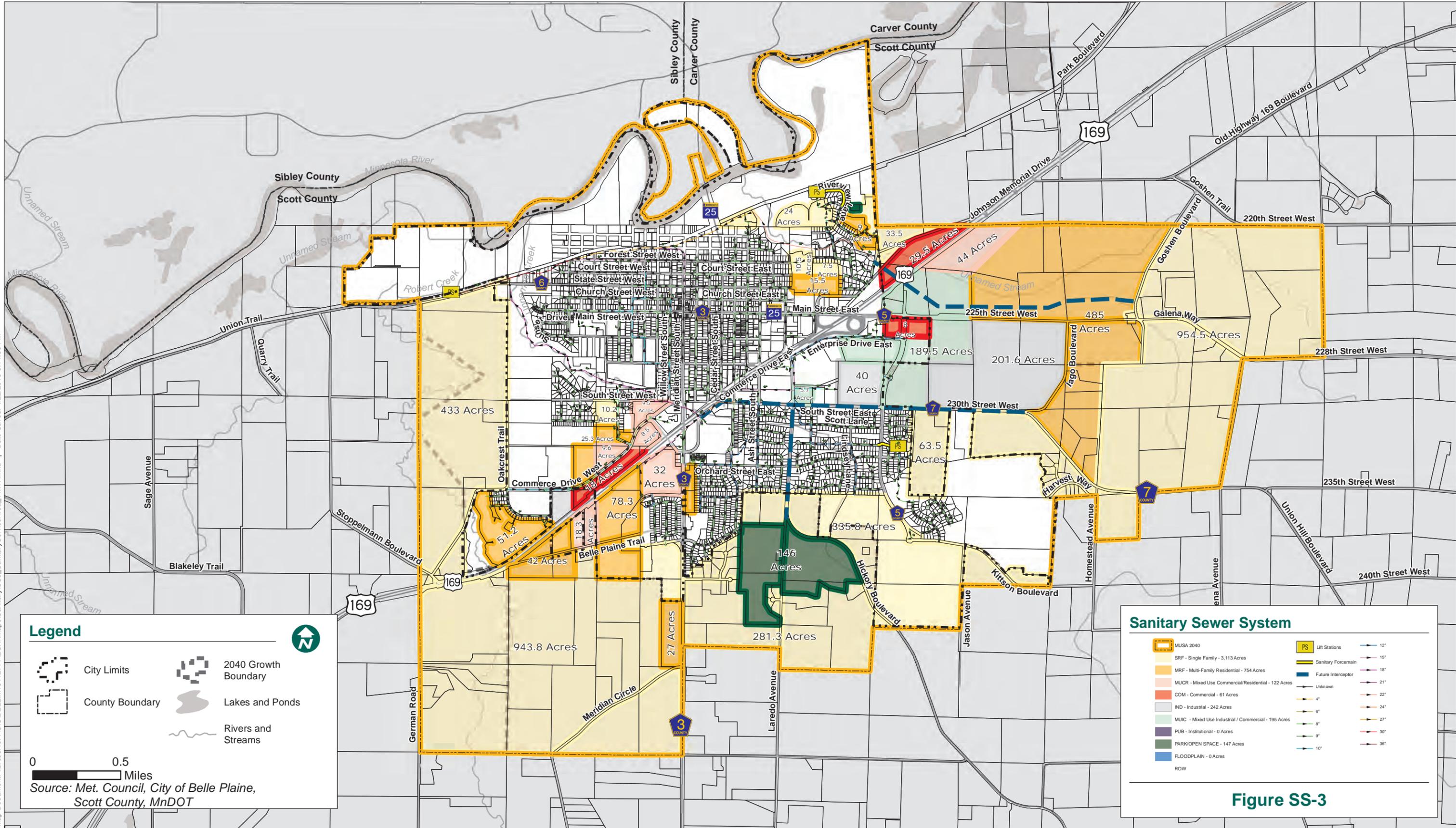
	Lift Stations
	Sanitary Forcemain
	Sanitary Pipe

Figure SS-1

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Legend

	City Limits		2040 Growth Boundary
	County Boundary		Lakes and Ponds
	Rivers and Streams		

0 0.5 Miles

Source: Met. Council, City of Belle Plaine, Scott County, MnDOT

Sanitary Sewer System

	MUSA 2040		Lift Stations		12"
	SRF - Single Family - 3,113 Acres		Sanitary Forcemain		15"
	MRF - Multi-Family Residential - 754 Acres		Future Interceptor		18"
	MUCR - Mixed Use Commercial/Residential - 122 Acres		Unknown		21"
	COM - Commercial - 61 Acres		4"		22"
	IND - Industrial - 242 Acres		6"		24"
	MUIC - Mixed Use Industrial/Commercial - 195 Acres		8"		27"
	PUB - Institutional - 0 Acres		9"		30"
	PARK/OPEN SPACE - 147 Acres		10"		36"
	FLOODPLAIN - 0 Acres				
	ROW				

Figure SS-3

Appendix B: City Ordinance Section 700.00 Water and Sewer

SECTION 700.00 WATER AND SEWER.

- 700.01 Water and Sewer Department.
- 700.02 Use of Water or Sewer Systems Restricted.
- 700.03 Application for Service - Procedure.
- 700.04 Charges for Service Connections.
- 700.05 Account Billing and Collecting.
- 700.06 Right of Entry.

700.01 WATER AND SEWER DEPARTMENT.

There shall be continued within the Department of Public Works a division to be known as the Water and Sewer Department which shall be under the supervision of the Superintendent of Public Works. The Superintendent shall be responsible for the management, maintenance, care and the operation of the water works, and the storm and sanitary sewerage system of the City.

700.02 USE OF WATER OR SEWER SYSTEMS RESTRICTED.

No person shall make, use, or repair any water or sewer service connected to the City water or sewer system except pursuant to application and permit as provided in this Chapter. No person shall make, use, or repair any installation contrary to the regulatory provisions of this Chapter.

700.03 APPLICATION FOR SERVICE - PROCEDURE.

Application for water or sewer service installation shall be made to the City Administrator on forms prescribed and furnished by the City. By his or her signature, the applicant shall agree to conform to this Chapter and to rules and regulations that may be established by the City as conditions for the use of water and sewers. Application for service installation or for continuation of service in another name shall be made by the owner of the property to be served or by his or her agent, provided, however, that whenever a transfer of ownership for property to be served is made, the transferor shall remain liable for all utility costs and charges until proper application is made and accepted by the City.

700.04 CHARGES FOR SERVICE CONNECTIONS.

Subd. 1. Permit Fee. No connection shall be made to the City water or sanitary sewer without a permit received from the City Administrator or his/her designee. The fee for the permit for both water main connections and the permit for sewer connections shall be as set by the Council from time to time by resolution. These fees shall be in addition to any fees required under Subdivisions 2 and 3.

Subd. 2. Connection Fees. When a connection requires installation of a service line from the main to the property line, the applicant shall pay to the City an amount set by Council resolution not less than the cost of making the necessary connections, taps, and installation of pipe and appurtenances to provide service to the property and the necessary street repairs before a permit shall be issued.

Subd. 3. Certification. No permit shall be issued to connect with any water or sanitary sewer main unless the City Administrator certifies to the truth of one of the following or the payment required under Subdivision 4 is made:

- A. That the lot or tract to be served has been assessed for the cost of construction of the main with which the connection is made or that proceedings for levying the assessment have been made or shall be commenced in due course; or
- B. That the cost of construction of the main has been paid by the developer or builder platting the lot or tract; or
- C. That, if neither of the foregoing is true, a sum equal to the portion of the cost of constructing the main which would be assessable against the lot or parcel has been paid to the City.

Subd. 4. Additional Connection Fee. If no such certificate can be issued, the applicant shall pay an additional connection fee equal to the portion of the cost of construction of the main upon the same basis as any assessment previously levied against other property for the main. The determination shall be made by the City Administrator. If no such assessment has been levied, the assessable cost shall be determined upon the basis of the uniform charge which may have been or will be charged for similar connection with the main. The amount shall be determined on the basis of the total assessable cost of the main as regulated in Section 602. Where the assessable cost cannot be determined, the charge shall be fixed by resolution of the Council.

Subd. 5. Excavation of Public Streets. If excavation of public streets or alleys is required in order to connect to existing water and sewer lines, an applicant shall pay to the City Administrator a sum sufficient to insure proper repair of the excavation and replacement of surface materials to restore the condition of a street or alley to its original condition.

700.05 ACCOUNT BILLING AND COLLECTING.

Subd. 1 Water and Sewer Rates. The City Council shall have authority to prescribe by resolution the rates to be charged for water and sewer service to the property owner from time to time and may prescribe the date of billing, a discount for payment within a prescribed period and/or

penalty for failure to pay within the period and such further rules and regulations relative to the use and operation of such the system as it may deem necessary from time to time.

A. Where there is more than one dwelling, business, or industry served through one water meter, the minimum charge shall apply to each such dwelling, business, or industry unit served through that meter.

B. Mobile homes shall be charged in accordance with the meter rate stated above. However, mobile homes shall be charged not less than a sum derived by applying the minimum charge stated herein to each unit while open for rental and operating. (Ord. 05-02, Section 700.05, Subd. 1, B, Adopted on March 21, 2005.)

Subd. 2. Accounts Responsibility of Property Owner. All accounts shall be the responsibility of the property owner unless the owner informs the City in writing that the account shall be carried in the name of another person. In any case, the owner shall remain liable for water supplied to the owner's property, whether the owner is occupying the property or not, and any charges unpaid shall be assessed to the property tax statement and be a lien on the property.

Subd. 3. Bills for Service. Water service charges shall be billed with sewer service charges. Bills shall specify the water consumed in accordance with the rates established by City Council resolution.

Subd. 4. Delinquent Accounts. All charges for water and sewer shall be due on the date specified by the City in its bill for the respective account and shall be delinquent ten days thereafter. The City shall endeavor to collect delinquent accounts promptly. In any case, where satisfactory arrangements for payment have not been made, the Public Works Department may, after the procedural requirements of Subdivision 5 of this Section have been complied with, discontinue service to the delinquent customer by shutting off the water at the stop box. When water service to any premises has been discontinued, service shall not be restored except upon the payment of all delinquent bills and a fee for turning off and turning on the water as set by Council resolution. Delinquent accounts shall be certified to the City Administrator who shall prepare an assessment roll each year providing for assessment of the delinquent amounts against the respective properties served. The assessment roll shall be delivered to the Council for adoption. Such action is optional and may be subsequent to taking legal action to collect delinquent accounts. A penalty for delinquent payments is authorized and shall be established by Council resolution.

Subd. 5. Procedure for Shut-Off or Service. Water shall not be shut off under Subdivision 4 or for a violation of rules and regulations affecting utility service until notice and an opportunity for a hearing have first been given the owner of the premises involved. The notice shall be served by first-class mail or personally and shall state that if payment is not made before a day stated in the notice but not less than five (5) days after the date on which the notice is given, the water supply to the premises will be shut off. The Notice shall also state that the owner may, before such date demand a hearing on the matter, in which case the supply will not be cut off until after the hearing is held. If the owner requests a hearing before the date specified, a hearing shall be held on the matter by a hearing officer appointed by the Mayor at least one week after the date on which the request is made. If as a result of the hearing, the hearing officer finds that the amount claimed to be owing is actually due and unpaid and that there is not legal reason why the water

supply of delinquent customer may not be shut off in accordance with this Part, the City may shut off the supply. (Ord. 03-22, Section 700, Adopted November 3, 2003.)

Subd. 6. No service of a residential customer shall be disconnected if the disconnection affects the primary heat source for the residential unit when the disconnection would occur during the period between October 15 and April 15, the customer has declared inability to pay on forms provided by the City, the household income of the customer is less than 185 percent of the federal poverty level as documented by the customer to the City, and the customer's account is current for the billing period immediately prior to October 15 or the customer has entered into a payment schedule and is reasonably current with payments under the schedule. The City shall, between August 15 and October 15, of each year, notify all residential customers of these provisions.

700.06 RIGHT OF ENTRY.

The City has the right to enter in and upon private property, including buildings and dwelling houses, in or upon which is installed a municipal utility or connection, at all times reasonable under the circumstances for the purpose of reading, inspection and repair of meters or utility system, and for the purpose of connecting and disconnecting service.

(Ord. 02-12, Section 700.06, Adopted June 3, 2002.)

SECTION 701.00 WATER USE.

- 701.01 General Water Provisions.
- 701.02 Water Meters.
- 701.03 Plumbing Regulations.
- 701.04 Liability Provisions.

701.01 GENERAL WATER PROVISIONS.

Subd. 1. Use of Public Water Service Required. It shall be unlawful for any person to install a private water system which is intended to provide water for human consumption in the City except in cases where the public water is not accessible to the premises where the private systems are requested. To determine whether or not the public water is available for connection, each person or corporation desiring, to install a private water system shall first make application for connection to a public system. Upon determination by the City that it is not feasible to connect the applicant's premises to the public water system the applicant shall then be granted a permit to install a private water system in accordance with all appropriate State and local regulations. When public water becomes available to the in premises, connection with that public system shall be required.

Subd. 2. Discontinuance of Service. The City may discontinue service to any water consumer without notice for necessary repairs or, upon notice as provided in this Chapter for nonpayment of charges, or for violation of rules and regulations affecting utility service.

Subd. 3. Turning on Water, Tapping Mains. No person except an authorized City employee shall turn on any water supply at the stop box, or tap any distributing main or pipe of the water supply system, or insert a stop cork or other appurtenants therein.

Subd. 4. Repair of Leaks. The property owner shall be responsible for maintaining the service pipe from the main into the building served. If the property owner fails to repair any leak in the service pipe within 24 hours after notice by the City, the City may turn the water off. The water shall not then be turned on again until a fee in an amount that is set from time to time by Council resolution has been paid to the City. When the waste of water is great or damage is likely to result from the leak, the City shall turn the water off immediately upon the giving of notice if repair is not commenced immediately.

Subd. 5. Use of Fire Hydrants. No person other than an authorized City employee or fire fighter shall operate a fire hydrant or interfere in any way with the City water system without first obtaining authority to do so from the City Administrator or Public Works Superintendent.

Subd. 6. Private Water Supply. No water pipe of the City water supply system shall be connected with any pump, well, or tank that is connected with any other source of water supply. When any such connection is found, the City Administrator or Public Works Superintendent shall notify the owner to sever the connection and if this is not done immediately, the City shall turn off the water supply forthwith. Before any new connection to the City system shall be permitted, City employees shall ascertain that no cross-connection shall exist when a new connection is made.

Subd. 7. Water Restriction and Ban.

A. Water Restriction. To encourage water conservation, there will be no outdoor watering permitted between the hours of 9:00 a.m. and 5:00 p.m. (Ord. 03-17, Section 701, Adopted October 20, 2003).

1. This section shall not pertain to the Public Works Department nor to individuals performing duties of City-related projects. (Ord. 05-10, Section 701, Subd. 7, Adopted November 21, 2005).

B. Water Ban.

1. When the Public Works Superintendent determines that a shortage of water supply threatens the City, the Public Works Superintendent may, with the approval of the Mayor and City Administrator, place a city-wide 24-hour per day water ban.
 - a. A public notice shall be published in the official newspaper of the City immediately. Public notices shall be placed at City Hall, newspaper office, community library and any place so deemed as to inform the public of the water ban.
 - b. There shall be no watering or outside usage of water while a water ban is in effect.
2. The Public Works Superintendent shall publish a notice in the official newspaper when the water ban is no longer in effect.

C. Enforcement and Citations. City staff shall enforce this Ordinance and are authorized to issue City penalty citations to violators. A penalty may be issued to a property owner as set by the City's Annual Fee Schedule. The penalty shall be added to the property owner's city water bill.

D. Private Wells. This ordinance shall pertain to private wells.

(Ord. 02-04, Section 701.01, Subd. 7, Adopted January 30, 2002.)

Subd. 8. Violations. Violators of this Subsection shall be guilty of a petty misdemeanor and upon conviction thereof shall be punished by a penalty as set by State Statute.

Subd. 9. Appeals. An aggrieved person may appeal the administrative decision according to Section 103.05. (Ord. 02-12, Section 701.01, Subd. 9, Adopted June 3, 2002.)

701.02 WATER METERS.

Subd. 1. Meters Required. Except for extinguishing of fires, no person other than an authorized City employee shall use water from the City water supply system or permit water to be drawn therefrom unless the water passes through a meter supplied or approved by the City. No person not authorized by the City Administrator or Public Works Superintendent shall connect, disconnect, take apart, or in any manner chance or interfere with any meter or its use.

Subd. 2. Installation, Ownership and Control. Water meters shall be installed by authorized City personnel. The City shall maintain ownership and control of the water meter. The City may require a nonrefundable deposit for the cost of the meter.

Subd. 3. Remote and Radio Meter Reading Registers.

A. Policy of the City. It is the policy of the City to require remote and/or radio water meter reading registers on all premises. The water meter reading register shall be in conformity with all other registers within the City. As such, all property owners shall be required to install conforming water meter reading registers within a period of time as designated by the City Council. The City shall not be obligated to furnish water to an residence which does not provide a remote and/or radio water meter reading register in conformity with all other water meter reading registers. If the parties to a sale and purchase do not provide for responsibility for such installation, it shall be the responsibility of the new owner to provide for the required installation.

B. Installation and Cost. Installation of remote and/or radio water meter reading registers shall be performed by authorized City personnel. The property owner shall be responsible for the cost of installation by said personnel. The radio read unit shall be added as a fee upon the issuance of a building permit for new construction. The fee shall be as set by Council resolution. In all cases, connection of the remote register and the water meter shall be performed by the City.

C. Location. The location of the remote register on the exterior of a building shall be near an existing electric or gas meter in such a location as to minimize any potential and unsightly aspects of the installation. If the user and the Public Works Department cannot agree on the location of the remote register, the question of the City requirement shall be appealed to the City Administrator and to the City Council, in that order.

D. General Provisions. All provisions of this Code applicable to ownership, maintenance, reading and testing of water meters shall also apply to remote water meter reading registers.

E. Meter Maintenance. The City shall maintain and repair at its expense any meter that has become unserviceable through ordinary wear and tear and shall replace it if necessary. Where repair or replacement is made necessary by act or neglect of the owner or occupant of the premises it serves, any City expense caused thereby shall be charged against and collected from the property owner, and water service may be disconnected until the cause is corrected and the amount charged is paid. The property owner or consumer shall notify the City of any injury to or the nonworking of any meter as soon as it comes to his or her knowledge.

F. Complaints; meter testing. When a property owner complains that the bill for any past service period is excessive, the City shall have the meter reread on request. If still dissatisfied, the consumer may, on written request and the deposit of an amount set from time to time by Council resolution, have the meter tested. If the test shows an error in the City's favor exceeding five percent of the water consumed, the register shall be deemed inaccurate, the meter testing deposit shall be refunded and an accurate meter shall be installed, and the bill shall be adjusted accordingly. The adjustment shall not extend back more than one service period from the date of the written request. If the meter is found to be accurate, the deposit of the property owner shall be forfeited.

G. Meter reading and inspection. Authorized meter readers shall have free access at reasonable hours of the day to all parts of every building and premises connected with the City water supply system in order to read meters and make inspections. Property owner or occupant shall be prohibited from obstructing the water meter so as to prohibit the reading or repairing of the meter.

H. Meter readings. City Council may provide for a system of water meter reading, by any method deemed suitable for that purpose by the Council. The Council may also establish billing, areas or districts and provide for the reading of meters and billing, monthly charges or such period intervals as the Council shall determine suitable and necessary from time to time.

Subd. 4 Water Meter Regulations

A. All applications for installation, maintenance and repair of water meters shall be made to the City and the City shall proceed to comply with the application within a reasonable time thereafter.

B. No person, other than the City or its designee, shall maintain or repair any water meter used within the City limits. Every water meter connected to the water system shall be sealed by or under the direction of the City, and no other person shall break or remove the seal; provided however, that a plumber licensed to do business in the State of Minnesota may break such the seal to remove such the meter for necessary repairs. In all cases where a seal is broken or a meter is removed by a licensed plumber, the plumber shall notify the City of the fact within 24 hours after the seal is broken or the meter is removed. Whenever any seal attached to a water meter by or under the direction of the City is found broken, the broken condition of the seal shall be prima facie evidence that the seal was broken contrary to the terms and provisions of and in violation of this Chapter.

Subd. 5.

A. It shall be unlawful for any person to tamper with, alter, bypass, or in any manner whatsoever interfere with the proper use and functioning of any water meter within the City.

B. Enforcement and Citations. The Public Works Superintendent, with the approval of the City Administrator, shall be authorized to issue a citation for violation of this Section. The penalty will be set as according to the City's Annual Fee Schedule and may be added to the property owner's city utility bill.

(Ord. 02-12, Section 701.02, Subd. 5, Adopted June 3, 2002.)

Subd. 6. Compliance Required.

A. Connections. No connection of water services shall be made to any house or other building unless the plumbing therein has been installed pursuant to the State Plumbing Code and the provisions of this Chapter, and inspected, provided that this shall apply only to construction which has not been completed prior to adoption of this Chapter.

B. Consumers. Every person applying for water service, every owner of property for which any such application is made, every person where such service is accepted subsequent to the effective date hereof of the enactment of this Code shall be deemed, upon making such the application or accepting the service, to consent to all rules, regulations and rates as established by this Chapter and as may hereafter be set forth and adopted by the Council by resolution or ordinance.

Subd. 7. Water Meter Seal Required. Each water meter shall be sealed by the Public Works Superintendent, or his/her designee. No Certificate of Occupancy shall be issued by the City's Building Official until the water meter is sealed.

Subd. 8. Enforcement and Citations. The Public Works Superintendent, with the approval of the City Administrator, shall be authorized to issue a citation for violation of this Section. The penalty will be set as according to the City's Annual Fee Schedule and may be added to the property owner's city utility bill.

(Ord. 02-12, Section 701.01, Subd. 7 & 8, Adopted June 3, 2002.)

701.03 PLUMBING REGULATIONS.

Subd. 1. Service Pipes. Every service pipe shall be laid with sufficient bend to allow not less than one foot of extra length and in such manner as to prevent rupture by settlement. The service pipe shall be placed not less than six feet below the surface and be so arranged as to prevent rupture by freezing. A shut-off or other stop cork with waste valve of the size and strength required shall be placed close to the inside wall of the building and be well protected from freezing. Copper tubing or polyethylene pipe SDR 9, copper tube size (CTS) with a minimum pressure rating of 200 p.s.i., accompanied by a #10 copper wire shall be used for all services of two inches or less. The polyethylene pipe shall conform to ASTM Number D-2737 and NSF Number 3408. Ford Insert Stiffeners made of solid 304-tubular stainless steel, dimpled and flanged to retain placement within polyethylene service pipe. Joints on copper tubing shall be as few as possible and not more than one joint shall be used for service up to seventy (70) feet in

length. Each joint shall be left uncovered until inspected by the City. Every service over two inches shall be cast iron or ductal iron. Other material may be approved by the Superintendent of Public Works. Connections with the mains for domestic supply shall be at least three-fourths of an inch per residential unit, or equivalent. (Ord. 06-10, Section 701.03, Adopted August 21, 2006).

Subd. 2. Water Meter Setting. Every water meter shall be installed in accordance with the following provisions:

A. Service pipe from the water main to the meter shall be brought through the floor in vertical position where the pipe enters the building. The stop and waste valve shall be 12 inches above the floor.

B. The bottom of the meter shall be between six (6) and twelve (12) inches above the finished floor line. The meter shall be set not more than 12 inches horizontally from the inside line of the basement wall unless a different position is approved by the City Administrator or the City Administrator's designee. A suitable bracket shall be provided to support the meter in a proper vertical position and prevent noise from vibration.

C. Each meter installation shall have a stop and waste valve on the street side of the meter. In no case shall more than 12 inches of pipe be exposed between a point of entrance through the basement floor and the stop and waste valve. A stop and waste valve shall also be installed in the house side of the meter.

D. The water pipe connecting with the main shall not exceed two feet under the basement floor from the inside of the basement wall to the water meter connection.

E. Deviation from the installation specifications in this Subdivision shall be by variance pursuant to the City Code.

701.04 LIABILITY PROVISIONS.

Subd. 1. Repairs. After the initial connection has been made to the water main the applicant, owner, occupant or user of the premises shall be liable for all repairs required to any water line necessary for connection of the premises to the street main including any repairs necessary to the main itself and any necessary street repairs. It shall be the responsibility of the applicant, owner, occupant and user to maintain the stop box at such height as shall insure that it remains above the finished grade of the property.

Subd. 2. For Failure to System. The City shall not be held liable at any time for any deficiency or failure in the supply of water to any customer whether the same be occasioned by shutting off the water for repairs or connections or for any cause whatsoever.

SECTION 702.00 - SEWER USE AND SEWER SERVICE CHARGE.

- 702.01 Purpose.
- 702.02 General Sewer Provisions.
- 702.03 Use of Public Sewer Required.
- 702.04 Private Wastewater Disposal.
- 702.05 Building Sewers and Connections.
- 702.06 Use of the Public Sewers.
- 702.07 Protection from Damage.
- 702.08 Powers and Authority of Inspections.
- 702.09 Penalties.
- 702.10 Sewer Service Charges.
- 702.11 Sewer Service Fund.

702.01 PURPOSE.

This ordinance contains the rules and regulations relating to sewerage service and provisions regulating the use of public and private sewers and drains, private wastewater disposal, the installation and connection of building sewers, and the discharge of waters and wastes into the public sewer system. The City provides for facilities for the collection and treatment of wastewater to promote the health, safety, and convenience of its people and for the safeguarding of water resources common to all. Provisions are made in the design, construction, operation, maintenance, and replacement of these facilities to accommodate certain types and quantities of industrial wastes in excess of, and in addition to, normal strength domestic wastewater. It is the obligation of all users of the facilities to pay the costs of services rendered by the City in an equitable manner. The proper protection and operation of the collection and treatment facilities may require either the exclusion, pretreatment, or controlled discharge at the point of origin of certain types or quantities of industrial wastes.

702.02 GENERAL SEWER PROVISIONS.

Subd. 1. Definitions. As used in this Section, unless otherwise stated in specific context, the following, words and terms shall have the meanings stated:

A. Approving Authority. "Approving Authority" shall mean the City Council of the City of Belle Plaine, or its duly authorized board, agent, or representative.

B. BOD. "BOD" (Biochemical oxygen demand) shall mean the quantity of oxygen expressed in parts per million by weight, utilized in the biochemical oxidation of organic matter under standard laboratory conditions in five (5) days at 20° C. The laboratory determinations shall be made in accordance with procedures set forth in "Standard Methods".

C. Building drain. "Building drain" shall mean that part of the lowest horizontal piping of a drainage system which receives waste from inside the building and conveys it to the building sewer, beginning five (5) feet (1.5 meters) outside the inner face of the building wall.

D. Building Sewer. "Building sewer" shall mean the extension from the building, drain to the public sewer or other place of disposal. (Also called house connection.)

E. City. "City" shall mean the area within the corporate boundaries of the City of Belle Plaine, as presently established or as amended by legal actions at a future time. The term "City" may be used to refer to the City of Belle Plaine, Minnesota or any authorized person acting in its behalf.

F. COD. "COD" (Chemical oxygen demand) shall mean the oxygen equivalent of that portion of the organic and inorganic matter in a sample of wastewater, expressed in parts per million by weight, that can be oxidized by a strong chemical oxidizing agent. The laboratory determinations shall be made in accordance with procedures set forth in "Standard Methods."

G. Collection System. "Collection system" shall mean the system of sewers and appurtenances for the collection, transportation and pumping of domestic wastewater and industrial wastes.

H. Combined Sewer. "Combined sewer" shall mean a sewer intended to receive both wastewater and storm or surface water.

I. Compatible Pollutant. "Compatible pollutant" shall mean biochemical oxygen demand, suspended solids, pH, and fecal coliform bacteria, plus additional pollutants identified in the City NPDES permit, if the City treatment works is capable of removing the pollutants, and in fact does remove the pollutants to a substantial degree. Examples of such additional pollutions may include: Chemical Oxygen Demand, total organic carbon, phosphorus, phosphorus compounds, nitrogen, and/or nitrogen compounds.

J. Connection. "Connection" shall mean each connection to the collection system.

K. Construction Cost. "Construction cost" shall mean the total cost incurred in the construction of sewerage works, consisting of but not limited to the sums spent for the following purposes:

1. Actual sums paid for construction of wastewater treatment facilities and for land acquisition.
2. Actual engineering fees paid for preliminary engineering studies, plans and specifications, services during construction, construction staking, operation and maintenance manuals and initial operator training.
3. Actual sums paid for soils investigations, wastewater sampling, and materials testing required for such construction.

4. Actual fees and wages paid. for legal, administrative, and fiscal services required by construction of wastewater treatment facilities.

5. Actual interest paid on the total amount financed by debt obligation for construction of wastewater treatment facilities.

L. Debt Service Charge. "Debt Service Charge" shall mean the total charge levied on users for purposes of paying construction costs (principal and associated interest) of obligations incurred to finance acquisition and/or construction of sewerage works.

M. Domestic Wastewater. "Domestic Wastewater" shall mean water-borne wastes normally discharged into the sanitary conveniences of dwellings (including apartment houses and hotel), office buildings, factories and institutions, free of storm and surface water, and industrial wastes.

N. Easement. "Easement" shall mean an acquired legal right for the specific use of land owned by others.

O. Equivalent Residential Unit. "Equivalent Residential Unit" shall mean a unit of gallons per day per connection of normal strength domestic wastewater (see Subd. I. Z.) as established in the Belle Plaine Sewer Service Charge System. Such assignment by the City is for the purpose of levying a charge to users that do not have a metered source of water.

P. Floatable Oil. "Floatable Oil" shall mean oil, fat, or crease in a physical state such that it will separate by gravity from wastewater by treatment in an approved pretreatment facility. A wastewater shall be considered free of floatable fat if it is properly pretreated and the wastewater does not interfere with the collection system.

Q. Garbage. "Garbage" shall mean the animal and vegetable waste resulting from handling, preparation, cooking and services of foods.

R. Incompatible Pollutant. "Incompatible pollutant" shall mean any pollutant which is not a compatible pollutant.

S. Industrial Wastes. "Industrial Wastes" as distinct from domestic or sanitary wastes, shall mean the gaseous, liquid, and solid wastes resulting from industrial or manufacturing processes, trade or business or from the development, recovery and processing of natural resources.

T. Infiltration. "Infiltration" shall mean the water entering the sanitary sewer system and service connections from the ground, through such means as, but not limited to, defective pipes, pipe joints, connections, or manhole walls. Infiltration does not include, and is distinguished from, inflow.

U. Infiltration Inflow. "Infiltration Inflow" shall mean the total quantity of water from both infiltration and inflow without distinguishing the source.

V. Inflow. "Inflow" shall mean the water discharged into the sanitary sewer system from such sources as, but not limited to, roof leaders, cellar, yard, and area drains, foundation drains, cooling water discharges, drains from springs and swampy areas, manhole covers, cross connections to storm sewers, catch basins, storm waters, surface run-off, street wash waters, or drainage. Inflow does not include, and is distinguished from infiltration.

W. Major Contributing Industry. "Major Contributing Industry" shall mean an industrial user of the City Treatment Works that: (a) has an equivalent wastewater flow of 50,000 gallons or more per average work day; (b) has a wastewater flow greater than five percent of the flow carried by the City System receiving the wastewater; (c) has in its wastewater a toxic pollutant in toxic amounts as defined in standards issued under Section 307 (a) of PL-92-500; or (d) is found by the permit issuance authority, in connection with the issuance of an NPDES Permit to the City Treatment Works receiving the wastewater, to have significant impact, either singly or in combination with other contributing industries, on the City Treatment Works or upon the quality of effluent from the City Treatment Works.

X. May. "May" is permissive (see "shall", Subd. 1. PP.).

Y. Natural Outlet. "Natural outlet" shall mean any storm sewer or surface water which overflows into a watercourse, pond, ditch, lake, or other body of surface or groundwater.

Z. Normal Strength Domestic Wastewater. "Normal Strength Domestic Wastewater" shall mean normal strength wastewater for the City in which the average concentration of suspended materials and five (5) day BOD is established at not greater than 200 parts per million by weight suspended materials and 250 parts per million by weight BOD. The COD of normal domestic wastewater shall not exceed 350 parts per million. Such wastewater does not include infiltration and/or inflow, and it is composed of domestic wastewater.

AA. NPDES Permit. "NPDES Permit" shall mean the National Pollutant Discharge Elimination System Permit held by the City. This permit, which establishes limits on quality and quantity of discharges from the City treatment works, was issued by the State and Federal governments in accordance with the provisions of the Federal Water Pollution Control Act, as amended, (33 U. S. C. 1251, et. seq.; the " Act", Sections 402 and 405).

BB. Operation and Maintenance Cost. "Operation and Maintenance Cost" shall mean annual expenditures made by the City in the operation and maintenance of its sewerage works, consisting of but not limited to the sums spent for each of the following purposes:

1. Wages and salaries of all operating, maintenance, administrative, and supervisory personnel, together with all premiums paid on the wages and salaries (State of Minnesota worker's compensation coverage, for example),
2. Actual sums paid for electricity for light and power used for wastewater collection and treatment facilities,
3. Actual sums paid for chemicals, fuel and other operating supplies,

4. Actual sums paid for repairs to and maintenance of wastewater collection and treatment facilities and the equipment associated therewith,
5. Actual sums paid as premiums for hazard insurance carried on sewerage works,
6. Actual sums paid as premiums for insurance providing coverage against liability imposed by law for the injury to persons and, for property (including, death) of any person or persons resulting from the use and maintenance of the sewerage works,
7. Actual sums paid for replacement of equipment within the useful life of the wastewater treatment facilities, for example the cost to replace an electric motor or pump that fails, or a broken part in a pump.

CC. Parts Per Million. "Parts Per Million" shall mean a weight-to-weight ratio; the parts per million value multiplied by the factor 8.345 shall be equivalent to pounds per million gallons of water. Parts per million and milligrams per liter (mg/l) shall be synonymous terms.

DD Person. "Person" shall mean any individual, firm, company, association, society, corporation, municipal corporation, Governmental unit, or group.

EE. pH. "pH" shall mean the logarithm of the reciprocal of the hydrogen ion concentration. The concentration is the weight of hydrogen ions, in grams per liter of solution. Neutral water, for example, has a pH value of 7 and a hydrogen ion concentration of 0.000,000,1 grams/liter, or 10^{-7} grams per liter.

FF. Pretreatment. "Pretreatment" shall mean the reduction of the amount of pollutants, the elimination of pollutants, or the alteration of the nature of pollutant properties in wastewater to a less harmful state prior to or in lieu of discharging or otherwise introducing the pollutants into a sanitary sewer.

GG. Properly Shredded Garbage. "Properly shredded garbage" shall mean the wastes from the preparation, cooling,, and dispensing of food that have been shredded to such a degree that all particles will be carried freely under the flow conditions normally prevailing, in public sewers, with no particle greater than 1/2 inch (1.27 centimeters) in any dimension.

HH. Public Sewer. "Public Sewer" shall mean a common sewer controlled by a governmental agency or public utility.

II. Rate Schedule. "Rate Schedule" shall mean a published schedule of sewer service charges.

JJ. Replacement. "Replacement" shall mean expenditures for obtaining and installing equipment, accessories, or appurtenances which are necessary during the design or useful life of, whichever is longer of the sewerage works to maintain the capacity and

performance for which the facilities were designed and constructed. As noted in Subd. 1. BB-7, the term "operation and maintenance cost" includes shall include replacement costs.

KK. Sanitary Sewer. "Sanitary sewer" shall mean a sewer that carries liquid and water carried wastes from residences, commercial buildings, industrial plants, and institutions together with minor quantities of ground, storm, and surface waters (infiltration/inflow) that are not admitted intentionally.

LL. Sewage. "Sewage" shall mean the spent water of a community. The preferred term is "wastewater", Subd. 1. CCC. (Sometimes referred to as "Sanitary Waste".)

MM. Sewer. "Sewer" shall mean a pipe or conduit that carries wastewater or drainage water.

NN. Sewer Service Charge. "Sewer Service Charge" shall mean the total charge levied on users for sewer service. The sewer service charge shall be the sum of "user charge" and "debt service charge".

OO. Sewerage Works. "Sewerage Works" shall mean all facilities for collecting, pumping, treating, and disposing, of wastewater and industrial wastes.

PP. Shall. "Shall" shall mean mandatory (see "May", Subd. 1. X.).

QQ. Slug. "Slug," shall mean any discharge of water or wastewater which in concentration of any given constituent or in quantity of flow exceeds for any period of duration longer than fifteen (15) minutes more than five (5) times the average twenty-four (24) hour concentration or flows during normal operation and shall adversely affect the collection system and/or performance of the wastewater treatment works.

RR. Standard Methods. "Standard Methods" shall mean the examination and analytical procedures set forth in the latest Edition at the time of the analysis of "Standard Methods for the Examination of Water and Wastewater" as prepared, approved and published jointly by the American Public Health Association, the Water Pollution Control Federation, and the American Water Works Association. Such "standard methods" shall also conform to Federal Register Reprint 40 CFR 136, "Guidelines Establishing Test Procedures for Analysis of Pollutants" (Oct. 16, 1973).

SS. Storm Drain. "Storm Drain" (sometimes termed "storm sewer") shall mean a drain or sewer for conveying water, groundwater, subsurface water, or unpolluted water from any source.

TT. Storm Water Runoff. "Storm Water Runoff" shall mean that portion of the rainfall that is drained into the storm sewers or storm drains.

UU. Sump Pump. "Sump Pump" shall mean a pump for disposing, of storm drainage.

VV. Superintendent. "Superintendent" shall mean the superintendent of wastewater facilities of the City, or the Superintendent's authorized deputy, agent, or representative.

WW. Suspended Solids. "Suspended Solids" or "Total Suspended Solids" or "TSS" shall mean total suspended matter that either floats on the surface of, or is in suspension in, water, wastewater, or other liquids, and that is removable by laboratory filtering, as prescribed in "Standard Methods for the Examination of Water and Wastewater" and referred to as nonfilterable residue.

XX. Unit. "Unit" a unit of water is 1,000 gallons.

YY. User. "User" shall mean any person who discharges, causes, or permits the discharge of wastewater into the City's sanitary sewer system.

ZZ. User Charge. "User Charge" shall mean a charge levied on users to recover the cost of operation, maintenance, and replacement of sewerage works, pursuant to Section 204(b) of the Federal Water Pollution Control Act, as amended (33 U.S. C. 1251 et seq).

AAA. User Class. "User-Class" shall be the division of the users by wastewater characteristic or discharge similarities (example; residential, commercial, industrial, institutional, and government)

1. Commercial User. "Commercial User" shall mean any establishment listed in the Office of Management and Budget "Standard Industrial Classification Manual" (1972 edition) involved in a commercial enterprise, business or service which, based on a determination by the City, discharges primarily segregated domestic wastewater or wastewater from sanitary conveniences.

2. Governmental User. "Governmental User" shall mean any Federal, State, or local government user of the wastewater treatment facilities.

3. Industrial User. "Industrial User" shall mean any nongovernmental user of the publicly owned treatment facilities identified in the 1972 Standard Industrial Classification Manual (SICM), Office of Management and Budget as amended and supplemented under the following divisions:

Division A - Agriculture, Forestry, and Fishing;

Division B - Mining;

Division D - Manufacturing;

Division E -Transportation, Communication, Electric, Gas, and Sanitary Services;

Division 1 - Services

An industrial user shall also be defined as a user who discharges to the City sanitary sewer system any liquid wastes resulting from the processes employed in industry or manufacturing, or in the development of any natural resource.

4. Institutional User. "Institutional User" shall mean any establishment listed in the "SICM" involved in a social, charitable, religious, or education function which, based on a determination by the City, discharges primarily segregated domestic wastewater or wastewater from sanitary conveniences.

5. Residential User. "Residential User" shall mean a user of the treatment facilities whose premises or building, is used primarily as a residence for one or more persons, including dwelling, units such as detached, semi-detached, and row houses, mobile homes, garden and standard apartments or permanent multi-family dwellings. (Transit lodging, considered commercial in nature, is not included.)

BBB. Unpolluted Water. "Unpolluted water" shall mean water of quality equal to or better than the effluent criteria in effect or water that would not cause violation of receiving water quality standards and would not be benefited by discharge to the sanitary sewers and wastewater treatment facilities provided.

CCC. Wastewater. "Wastewater" shall mean the spent water of a community. From the standpoint of source, it may be a combination of the liquid and water carried wastes from residences, commercial buildings, industrial plants, and institutions, together with any groundwater, surface water, and stormwater that may be present.

DDD. Wastewater Facilities. "Wastewater facilities" shall mean the structures, equipment, and processes required to collect, carry away, and treat domestic and industrial wastes and dispose of the effluent.

EEE. Wastewater Treatment Facilities. "Wastewater Treatment Facilities" shall mean an arrangement of devices and structures for treating, wastewater, industrial wastes, and sludge. Sometimes used as synonymous with "waste treatment plant" or "wastewater treatment plant" or "water pollution control plant".

FFF. Watercourse. "Watercourse" shall mean a natural or artificial channel for the passage of water either continuously or intermittently.

702.03 USE OF PUBLIC SEWERS REQUIRED.

A. It shall be unlawful for any person to place, deposit, or permit to be deposited in any unsanitary manner on public or private property within the City, or in any area under jurisdiction, any human or animal excrement, garbage or objectionable waste.

B. It shall be unlawful to discharge to any natural outlet within the City, or in any area under City jurisdiction, any wastewater or other polluted waters, except where suitable treatment has been provided in accordance with subsequent provisions of this Chapter.

C. Except as hereinafter 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 wastewater.

D. The owner(s) of all houses, building, or properties used for human occupancy, employment, recreation, or other purposes, situated within the City and abutting, on any street, alley, or right-

of-way in which there is now located or may in the future be located a public sanitary sewer of the City, is hereby shall be required at the owner(s) expense to install a suitable service connection to the public sewer in accordance with the provisions of this Chapter, within ninety (90) days after date of official notice to do so.

E. In the event an owner shall fail to connect to a public sewer in compliance with a notice given under Subd. 2. D of this Section, the City may undertake to have the connection made and shall assess the cost thereof against the benefited property. The assessment shall be a lien against the property. The assessment, when levied, shall bear interest at the rate determined by the City Council and shall be certified to the County Auditor, of the County of Scott, Minnesota, and shall be collected and remitted to the City in the same manner as assessments for local improvements. The rights of the City shall be in addition to any remedial or enforcement provisions of this Chapter.

702.04 PRIVATE WASTEWATER DISPOSAL.

A. Where a public sanitary sewer is not available under the provisions of Subd. 2. D, the building sewer shall be connected to a private wastewater disposal system complying with the provisions of the City's on-site sewer ordinance.

B. The owner(s) shall operate and maintain the private wastewater disposal facilities in a sanitary manner at all times, at no expense to the City.

C. No statement contained in this Section shall be construed to interfere with any additional requirements that may be imposed by the City or the State of Minnesota.

702.05 BUILDING SEWERS AND CONNECTIONS.

A. No unauthorized person(s) shall uncover, make any connections with or opening into, use, alter, or disturb any public sewer or appurtenance thereof without first obtaining a written permit from the Approving Authority.

B. All costs and expenses incidental to the installation and connection of the building sewer shall be borne by the owner(s). The owner(s) shall defend, indemnify and hold harmless the City from any loss or damage that may directly or indirectly be occasioned by the installation of the building sewer.

C. A separate and independent building sewer shall be provided for every building; unless written permission for an alternative is obtained from the City. The City shall not assume any obligation or responsibility for damage caused by or resulting from any single connection under this Subdivision.

D. Old building sewers may be used in connection with new buildings when they are found, on examination and test by the Approving Authority, to meet all requirements of this Chapter.

E. The size, slope, alignment, materials of construction of a building sewer, and the methods to be used in excavating, placing of the pipe, jointing, testing, and backfilling the trench, shall all conform to the requirements of the building and plumbing code or other applicable rules and regulations of the City.

F. Whenever possible, the building sewer shall be brought to the building at an elevation below the basement floor. In all buildings in which any building drain is too low to permit gravity flow to the public sewer, sanitary wastewater carried by the building drain shall be lifted by an approved means and discharged to the building sewer.

G No person(s) shall make connection of roof downspouts, foundation drains, areaway drains, sump pumps, or other sources of surface runoff or groundwater to a building sewer or building drain which in turn is connected directly or indirectly to a public sanitary sewer.

H. The connection of the building sewer into the public sewer shall conform to the requirements of the building and plumbing code or other applicable rules and regulations of the City. All such connections shall be made gastight and watertight and verified by proper testing. Any deviation from the prescribed procedures and materials must be approved by the Approving Authority before installation.

I. The applicant for the building sewer permit shall notify the Approving Authority when the building sewer is ready for inspection and connection to the public sewer. The connection and testing shall be made under the supervision of the Approving Authority.

J. All excavations for building sewer installation shall be adequately guarded with barricades and lights so as to protect the public from hazard. Streets, sidewalks, parkways, and other public property disturbed in the course of the work shall be restored in a manner satisfactory to the Approving Authority.

702.06 USE OF THE PUBLIC SEWERS.

A. No person(s) shall discharge or cause to be discharged any unpolluted waters such as stormwater, groundwater, roof runoff, subsurface drainage, or cooling water to any sewer except storm sewers as provided in this Subdivision. Stormwater runoff from limited areas, which may be polluted at times, may be discharged to the sanitary sewer by permission of the Approving Authority.

1. Clean Water Discharge. Storm water, ground water or surface water, roof drains, sump pumps, foundation tiles, or unpolluted water from an industrial process or other natural precipitation cannot be discharged into Municipal Sanitary Sewer Mains and Laterals. Discharge of clean water into sanitary sewer mains and laterals increases the waste water treatments costs and quantities.
2. Clean water discharge permanent installation. A permanent installation of a system to dispose of clean water must be installed if the clean water is generated through items identified in No. 1 above. This permanent system shall be one that provides for year-round discharge capability to the outside of the dwelling, building or structure or, is connected directly to the City's storm water management system or discharges directly to the curb and gutter in the street. The permanent system shall consist of a rigid discharge line without valving or quick connections for altering the path of discharge. If connected directly to a City storm water management system, connection shall be inspected and approved by the Public Works Superintendent or his/her designee.

3. Any person, firm or corporation having a clean water collection/discharge system that connects directly to the City's sanitary sewer system shall disconnect the discharge system. Any disconnects that create an opening in the sanitary sewer system shall be repaired/replaced and inspected by the City's Public Works Superintendent or his/her designee.
4. Inspection. Every person owning improved real estate that discharges waste water into the City's sanitary sewer system shall allow an employee of the city of Belle Plaine or their designated representative to inspect dwellings, buildings and structures to confirm the presence and use of a sump pump or other prohibited discharge into the sanitary sewer system. The City will provide notification to property owners for this inspection.

Prior to the issuance of a Certificate of Occupancy for new construction, the City shall provide an inspection to determine the appropriateness of any storm water discharge system.

Prior to the transfer of ownership of any dwelling, building or structure within the City of Belle Plaine, the seller shall certify to the buyer, in writing, that the dwelling, building or structure is in compliance with this Subdivision. Seller shall provide a copy of this certificate to the City within five days following the transfer of ownership.

5. Penalty. In addition to any other charges or penalties provided for in City Code, any property owner found in violation of this section of City Code shall be subject to a sanitary sewer surcharge of \$100.00 per month for each month or part thereof that they remain in a non-compliant status.

Any property owner that continues in a non-compliant status for a period of six months following notification of non-compliance shall be subject to suspension of municipal water and municipal sanitary sewer services until such time as they are determined to be in compliance through inspection or certification as provided in No. 4 above.

6. Other remedies. Nothing in this ordinance shall limit the right of the City to seek alternate solutions whereby the property owner is compelled to disconnect unlawful storm water discharge into the sanitary sewer system.

(Ord. 03-06, Section 702.06, Adopted June 16, 2003.)

(Ord. 03-17, Section 701 and 702, Adopted October 20, 2003.)

B. Storm water other than that exempted under Subd. 5 A, and all other unpolluted drainage shall be discharged to such sewers as are specifically designated storm sewers or to a natural outlet approved by the Approving Authority and other regulatory agencies. Unpolluted industrial cooling water or process waters may be discharged, on approval of the Approving Authority and in accordance with the provisions of State and Federal regulations, to a storm sewer, or natural outlet.

C. No person(s) shall discharge or cause to be discharged any of the following described waters or wastes to any public sewers:

1. Any gasoline, benzene, naphtha, fuel oil, or other flammable or explosive liquid, solid, or gas.
2. Any waters containing toxic or poisonous solids, liquids, or gases in sufficient quantity, either singly or by interaction with other wastes, to injure or interfere with any waste treatment process, constitute a hazard to humans or animals, create a public nuisance, result in a violation of State or Federal water quality standards, or create any hazard in the wastewater treatment plant or the receiving waters. Toxins shall be as defined in Section 307(a) of the Clean Water Act.
3. Any waters or wastes having a pH lower than 5.5, or higher than 9.5, or having any other corrosive property capable of causing damage or hazard to structures, equipment, and personnel of the wastewater facilities. Exceptions may be granted (by the Approving Authority) for short duration flows where it has been, or can be shown that high or low pH would not cause any significant wastewater facilities problems.
4. Solid or viscous substances in quantities or of such size capable of causing obstruction to the flow in sewers, or other interference with the proper operation of the wastewater facilities such as, but not limited to, ashes, bones, cinders, sand, mud, straw, shavings, metal, glass, rags, feathers, tar, plastics, wood, unground garbage, whole blood, paunch manure, hair and fleshings, entrails, paper dishes, cups, milk containers, etc., either whole or after passage through garbage grinders.
5. Any wastewaters or matter that would directly or indirectly result in a violation of the City's NPDES permit.

D. The following described substances, materials, waters, or waste shall be limited in discharges to municipal systems to concentrations or quantities which will not violate design criteria or harm either the sewers, wastewater treatment process or equipment, will not have an adverse effect on the receiving stream, or will not otherwise endanger lives, limb, public property, or constitute a nuisance. The Approving Authority may set limitations lower than the limitations established in the regulations below if in its opinion such more severe limitations are necessary to meet the above objectives. In forming the opinion as to the acceptability, the Approving Authority will give consideration to such factors as the quantity of subject waste in relation to flows and velocities in the sewers, materials of construction of the sewers, the wastewater treatment process employed, capacity of the wastewater treatment plant, degree of treatability of the waste in the wastewater treatment plant, and other pertinent factors. The limitations or restrictions on materials or characteristics of waste or wastewater discharged to the sanitary sewer which shall not be violated without approval of the Approving Authority are as follows:

1. Wastewater having a temperature higher than 150° Fahrenheit (65° Celsius),
2. Wastewater containing more than 25 milligrams per liter of petroleum oil, nonbiodegradable cutting oils, or product of mineral oil origin,

3. Wastewater from industrial plants containing floatable oil, fat, or grease, in excess of concentrations permitted by the Approving Authority,

4. Any garbage that has not been properly shredded (see Subd. 1 GG.). Garbage grinders may be connected to sanitary sewers from homes, hotels, institutions, restaurants, hospitals, catering establishments, or similar places where garbage originates from the preparation of food in kitchens for the purpose of consumption on the premises, or consumption elsewhere when served by caterers,

5. Any waters or wastes containing iron, chromium, copper, zinc, and similar objectionable or toxic substances to such degree that any such material received in the composite wastewater at the wastewater treatment works exceeds the limits established by the Approving Authority for such materials.

6. Any waters or wastes containing odor-producing substances exceeding limits which may be established by the Approving Authority,

7. Any radioactive materials of such half-life or concentration as may exceed limits established by the Approving Authority, or applicable State and Federal regulations,

8. Quantities of flow, concentrations, or both which constitute a "slug" as defined herein (See Subd. 1. QQ.),

9. Any water or wastes which, by interaction with other water or wastes in the public sewer system, release obnoxious gases, form suspended solids which interfere with the collection system, or create a condition deleterious to structures and treatment processes.

E. If any waters or wastes are discharged or are proposed to be discharged to the public sewers, which waters contain the substances or possess the characteristics enumerated in D of this Subdivision, and which in the judgment of the Approving Authority may have a harmful effect upon the wastewater facilities, processes, equipment, or receiving waters, or which otherwise create a hazard to life or constitute a public nuisance, the Approving Authority may:

1. Reject the wastes,

2. Require pretreatment to an acceptable condition for discharge to the public sewer, pursuant to Section 307(b) of the Clean Water Act as amended 33 U.S.C. 1251, et seq.

3. Require control over the quantities and rates of discharge, and/or

4. Require payment to cover added cost of handling and treating the wastes not covered by existing taxes or service charges

If the Approving Authority permits the pretreatment or equalization of waste flows, the design and installation of the plants and equipment shall be subject to the review and approval of the Approving Authority and costs shall be borne at the user's expense.

F. Grease, oil, and sand interceptors shall be provided when, in the opinion of the Approving Authority, they are necessary for the proper handling of liquid wastes containing floatable grease in excessive amounts, as specified in Subd. 5. D-3, or any flammable wastes sand, or other harmful ingredients; except that such interceptors shall not be required for private living quarters or dwelling units. All interceptors shall be of a type and capacity approved by the Approving Authority, and shall be located as to be readily and easily accessible for cleaning and inspection. In the maintaining of these interceptors the owner(s) shall be responsible for the proper removal and disposal by appropriate means of the captured material and shall maintain records of the dates, and means of disposal which are subject to review by the Approving Authority. Any removal and hauling of the collected materials not performed by owner(s) personnel must be performed by currently licensed waste disposal firms.

G. Where pretreatment or flow-equalizing facilities are provided or required for any waters or wastes, they shall be maintained continuously in satisfactory and effective operation by the owner(s) at his or her expense.

H. When required by the Approving Authority, the owner of any property serviced by a building, sewer carrying industrial or domestic wastewater shall install a suitable structure together with the necessary meters and other appurtenances in the building sewer to facilitate observation, sampling, and measurement of the wastes. The structure, when required, shall be accessibly and safely located and shall be constructed in accordance with plans approved by the Approving Authority. The structure shall be installed by the owner at his or her expense and shall be maintained by the owner so as to be safe and accessible at all times.

I. An industrial user may, at the discretion of the City, be required to provide laboratory measurements, tests, or analyses of waters or wastes to illustrate compliance with this Chapter and any special condition for discharge established by the City or regulatory agencies having jurisdiction over the discharge. The number, type, and frequency of sampling, and laboratory analyses to be performed by the owner shall be as stipulated by the City. The industry shall supply a complete analysis of the constituents of the wastewater discharge to assure that compliance with Federal, State, and local standards are being met. The owner shall report the results of measurements and laboratory analyses to the City at the times and in the manner as prescribed by the City. The Owner shall bear the expense of all measurements, analyses, and reporting required by the City. At such times as deemed necessary, the City reserves the right to take measurements and samples for analysis by an independent laboratory.

J. All measurements, tests and analyses of the characteristics of waters and wastes to which reference is made in this Chapter shall be determined in accordance with the latest edition of "Standard Methods for the Examination of Water and Wastewater," published by the American Public Health Association. Sampling methods, location, times, durations and frequencies are to be determined on an individual basis subject to approval by the Approving Authority.

K. New connections to the sanitary sewer system shall be prohibited unless sufficient capacity shall be available in all downstream facilities, including, but not limited to, capacity for flow, BOD, and suspended solids.

L. No person, unless authorized shall uncover, make any connection with or opening into, use, alter, or disturb any sanitary or storm sewer within the City or any part of the City wastewater facilities.

M. No sanitary or storm sewers shall be constructed in the City (except house or building service sewers) except by the City or by others in accordance with plans and specifications approved by a professional engineer. No sewers shall be constructed or considered to be part of the public sewer system unless accepted by the City.

N. The size, slope, alignment, material of construction, methods to be used in excavation, placing of pipe, jointing, testing, backfilling, and other work connected with the construction of sewers shall conform to the requirements of the City.

O. No statement contained in this Section shall be construed as preventing, any special agreement or arrangement between the City and any industrial concern whereby an industrial waste of unusual strength or character may be accepted by the City for treatment, when the City treatment can be provided in compliance with the requirements of the NPDES permit and subject to payment therefore by the industrial concern and providing that national categorical pretreatment standards shall not be violated.

702.07 PROTECTION FROM DAMAGE.

No person(s) shall maliciously, willfully, or negligently enter, break, damage, destroy, uncover, deface, or tamper with any structure, appurtenance or equipment which is a part of the wastewater facilities. Any person(s) violating this provision shall be subject to immediate arrest under charge of disorderly conduct.

702.08 POWERS AND AUTHORITY OF INSPECTORS.

A. Duly authorized employees of the City bearing proper credentials and identification shall be permitted to enter all properties for the purposes of inspection, observation, measurement, sampling, and testing pertinent to discharge to any public sewer or natural outlet in accordance with the provisions of this Chapter.

Sampling pertaining to industry shall reflect the number of days an industry is not operating as well as the days in operation and discharging waste to a public sewer.

B. The Approving Authority or other duly authorized employees shall be authorized to obtain information concerning industrial processes which have a direct bearing on the kind and source of discharge to the wastewater collection system. The industry may withhold information considered confidential. The industry shall establish that the revelation to the public of the information in question might result in an advantage to competitors.

C. While performing the necessary work on private properties referred to in Subd. 7 A, above, duly authorized employees of the City shall observe safety rules applicable to the premises

established by the company, and the company shall be held harmless for injury or death to the City employees, and the City shall indemnify the company against loss or damage to its property by City employees and against liability claims and demands for personal injury, or property damage asserted against the company and growing out of the gauging and sampling operation, except as such may be caused by negligence or failure of the company to maintain safe conditions as required in Subd. 5 H.

D. Duly authorized employees of the City bearing proper credentials and identification shall be permitted to enter all private properties through which the City holds a duly negotiated easement for the purposes of, but not limited to, inspection, observation, measurement, sampling, repair, and maintenance of any portion of the wastewater facilities lying within the easement. All entry and subsequent work, if any, on the easement, shall be done in full accordance with the terms of the duly negotiated easement pertaining to the private property involved.

702.09 PENALTIES.

A. Except as otherwise specifically provided, any person found to be violating any provision of this Chapter shall be served by the City with written notice stating the nature of the violation and providing a reasonable time limit for the satisfactory correction thereof. The offender shall, within the period of time stated in the notice, permanently cease all violations.

B. Any person who continues any violation beyond the time limit provided for in Subd. 8 A, shall be guilty of a misdemeanor. Each day in which any such violation continues shall be deemed a separate offense.

C. Any person violating any of the provisions of this Chapter shall become liable to the City for any expense, loss, or damage occasioned the City by reason of the violation.

702.10 SEWER SERVICE CHARGES.

A. Persons discharging wastewater to the City sanitary sewer system in accordance with the provisions of this Chapter shall be charged monthly on the basis of the volume of wastewater discharged. The quarterly service charge shall include a user charge component (to meet all costs associated with operation, maintenance, and replacement of the wastewater collection and treatment facilities) and a debt retirement component (to meet facility construction costs).

B. As a proportionate share of the expenses incurred by the City in the construction, administration, operation, maintenance, and replacement of the sewerage works, each user shall pay to the City a monthly amount based upon one of the following formula:

For Users with a Metered Source of Water:

$$A1 = (F) (T1 = C1 + D1)$$

Where:

A1 = Service charge to user, with units of \$/month.

F = Volume of wastewater from user with units of 1,000 gallons per month (often assumed equal to metered water usage).

T1 = Operation, maintenance and replacement costs associated with the treatment facilities owned and operated by the City in units of \$/1,000 gallons.

C1 = Operation, maintenance and replacement costs associated with the collection system owned and maintained by the City in units of \$/1,000 gallons.

D1 = Debt costs associated with the construction of the wastewater treatment facilities in units of \$/1,000 gallons.

For Users Without a Metered Source of Water:

$$A2 = (G) (T2 + C2 + D2)$$

Where

Where: A2 = Service charge to user, with units of \$/month

G = Number of equivalent residential units as established by the City.

T2 = Operation, maintenance and replacement costs associated with the treatment facilities owned and operated by the City in units of \$/month per equivalent residential unit.

C2 = Operation, maintenance and replacement costs associated with the collection system owned and maintained by the City in units of \$/month per equivalent residential unit.

D2 = Debt costs associated with the construction of the wastewater treatment facilities in units of \$/month per equivalent residential unit.

For industrial users that discharge above normal strength domestic wastewater:

$$A3 = \frac{A1}{250/\text{mg/l}} \text{ BOD Concentration of Wastewater}$$

Where:

A3 = Service charge to user, with units of \$/month.

A1 = As defined above.

BOD concentration determined in milligrams per liter 250 mg/l is
concentration of domestic wastewater.

C. Average City unit costs (\$/1,000 gallons and \$/month per equivalent residential unit) shall be computed annually and shall include operation, maintenance and replacement costs and annual construction debt retirement costs.

Each user of the City sewer system that does not have a metered source of water may install an accurate water or wastewater flow metering device (at user's expense) that shall serve as a basis for estimating the volume of wastewater discharged, and determining the sewer service charge.

All users may install a separate water system and meter (one only in the same building as the main meter) to isolate and meter water that is not discharged to the City sanitary sewer system and for which no sewer charge is required. If at any time after this independent system is installed, water from this system enters the Sanitary Sewer System, the user shall be subject to the penalties of Subd. 8 and shall be ordered to eliminate the independent system if this violation continues.

D. To insure the required financial surveillance, the City Administrator shall annually review the cash flows associated with providing wastewater treatment service for the City, and shall report the findings to the City Council. Any inequities and/or shortages of revenue caused by unforeseen changes in the cost revenue pattern of the wastewater treatment facilities shall be remedied immediately by a City Council resolution adjusting the unit cost figures. Adjusted unit figures shall be computed in accordance with the principals of this Subdivision. The City Administrator shall maintain records necessary for documentation of compliance with the conditions of this Subdivision.

E. Each user shall pay Operation, Maintenance, and Replacement costs in proportion to the user's proportionate contribution of wastewater flows and loadings to the treatment plant, with the minimum rate for loadings of BOD and TSS being the rate established for concentrations up to 250 mg/l BOD and 200 mg/l TSS.

F. Wastewater sewer service charges provided for in this Chapter shall be included as a separate item on the regular bill for water. Charges shall be paid at the same time that the water charges of the person become due. The City shall annually notify all users what portion of the sewer service charge is necessary to meet the operation, maintenance, and replacement costs (user charge) and what portion is necessary to meet long term debt (debt service charge).

G. Accounts that are not paid in full within thirty (30) days shall be charged a late payment penalty as established by the City Council and shall be subject to interest charges at a rate established by the City Council. In the event a user does not pay his or her account in full within

ninety (90) days after billing, the City may undertake to have the water service to the property disconnected and may file a lien against the property.

702.11 SEWER SERVICE FUND.

A. The City of Belle Plaine establishes a "Sewer Service Fund" as an income fund to receive all revenues generated by the Sewer Service Charge System, and all other income dedicated to the operation, maintenance, replacement and construction of the wastewater treatment works, including taxes, special charges, fees, and assessments intended to retire construction debt.

B. The City shall also establish the following accounts as income and expenditure accounts within the Sewer Service Fund:

- 1) Operation and Maintenance Account
- 2) Equipment Replacement Account
- 3) Debt Retirement Account

C. All revenue generated by the Sewer Service Charge System, and all other income pertinent to the treatment system, including taxes and special assessments dedicated to retire construction debt, shall be held by the City separate and apart from all other funds of the City. Funds received by the Sewer Service Fund shall be transferred to the "Operation and Maintenance Account," the "Equipment Replacement Account," and the "Debt Retirement Account" in accordance with State and Federal regulations and the provisions of this Chapter.

D. Revenue generated from the Sewer Service Charge System sufficient to insure adequate replacement throughout the design or useful life, whichever is longer, of the wastewater facility shall be held separate and apart in the "Equipment Replacement Account" and dedicated to affecting replacement costs. Interest income generated by the Equipment Replacement Account shall remain in the "Equipment Replacement Account".

E. Revenue generated by the Sewer Service Charge System sufficient for operation and maintenance shall be held separate and apart in the "Operation and Maintenance Account."

SECTION 703.00 VIOLATIONS AND ENFORCEMENT

703.01 Enforcement by Penalty.

703.02 Misdemeanor.

703.01 ENFORCEMENT BY PENALTY.

The City Engineer, and/or the City Building Inspector, and/or the City Plumbing Inspector, as appointed by the Council, shall enforce the provisions of this Chapter. All work hereafter installed shall be inspected as provided in this Chapter and violations of this Chapter shall be corrected. Written notice, stating the corrections to be made shall be served upon the installer, or owner of the property, and if the corrections not be duly made, the City may cause to have removed the work and charge the cost thereof to the person installing the same, or to the owner of the affected property.

703.02 MISDEMEANOR.

Any person who covers a plumbing installation before it is inspected, or otherwise refuses to comply with the correction order, or in any other way is found in violation of this Chapter, shall be upon conviction thereof, found guilty of a misdemeanor.

Appendix C: Current NPDES Permit

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Facility Description

The Belle Plaine Wastewater Treatment facility (Facility) is located in the Southeast 1/4 of Northwest 1/4 of Section 2, Township 113 North, Range 24 West, Blakeley Township, Scott County, Minnesota. This is a Class B facility.

Major components of the Facility include:

- 1 Collection System with gravity and/or Pressure Sewer
- 1 Fine Screen
- 1 Bar Screen - manual
- 1 Grit Removal
- 1 Activated Sludge - extended aeration, oxidation ditch
- 1 Secondary Clarifier
- 1 Phosphorus Removal - chemical
- 1 Phosphorus Removal - biological
- 1 Ultraviolet Light
- 1 Primary Stabilization Pond (13.3 acres)
- 1 Secondary Stabilization Pond (20.5 acres)
- 2 Aerobic Storage Tanks
- 8 Reed Beds

The Facility utilizes both a mechanical system and a two-cell pond system at the site. The mechanical facility consists of a continuous discharge activated sludge system with a manual bar screen, mechanical fine screen, grit removal, one oxidation ditch with an anaerobic selector tank for biological phosphorus removal, alum addition for phosphorus removal, one final clarifier, ultraviolet (UV) light disinfection, an effluent pump station, two aerated biosolids holding tanks, and eight reed beds for sludge dewatering and storage. The stabilization pond facility consists of one primary cell with surface area of 13.3 acres and one secondary cell with surface area of 20.5 acres. Flows in excess of the mechanical system capacity will be diverted to the stabilization ponds. The ponds can either be discharged directly under controlled conditions, or effluent can be returned to the mechanical treatment facility during low flow periods. Each system has its own discharge point to the unnamed creek that flows to the Minnesota River.

The mechanical treatment facility has a capacity to treat an average wet weather flow of 0.630 million gallons per day (mgd), an average dry weather flow of 0.400 mgd, and a five-day biochemical oxygen demand strength (CBOD5) of 306 mg/L. The mechanical facility has a continuous discharge (SD003) to an unnamed creek (Class 2B, 3C, 4A, 4B, 5, 6 Water) that then discharges to the Minnesota River (Class 2B, 3C, 4A, 4B, 5, 6 Water).

The two existing stabilization ponds are located on the west side of the site and have an average wet weather flow of 0.210 mgd at 180-day detention time. Two additional stabilization ponds were previously located on the east side of the facility but were decommissioned in 2005. The existing ponds have a discharge (SD002) that is operated on a controlled basis during the applicable seasonal windows only to an unnamed creek (Class 2B, 3C, 4A, 4B, 5, 6 Water) that then discharges to the Minnesota River (Class 2B, 3C, 4A, 4B, 5, 6 Water).

The total average wet weather design flow for the combined pond and mechanical facilities is 0.840 mgd.

In accordance with MPCA rules regarding nondegradation for all waters that are not Outstanding Resource Value Waters, nondegradation review is required for any new or expanded significant discharge (Minn. R. 7050.0185). A significant discharge is: 1) a new discharge (not in existence before January 1, 1988) that is greater than 200,000 gallons per day to any water other than a Class 7 water; or 2) an expanded discharge that expands by greater than 200,000 gallons per day that discharges to any water other than a Class 7 water; or 3) a new or expanded discharge containing any toxic pollutant at a mass loading rate likely to increase the concentration of the toxicant in the receiving water by greater than one percent over the baseline quality. The flow rate used to determine significance is the design average wet weather flow. The January 1, 1988, calculated design average wet weather flow for this facility is 0.428 mgd.

This Permit also complies with Minn. R. 7053.0275 regarding anti-backsliding.

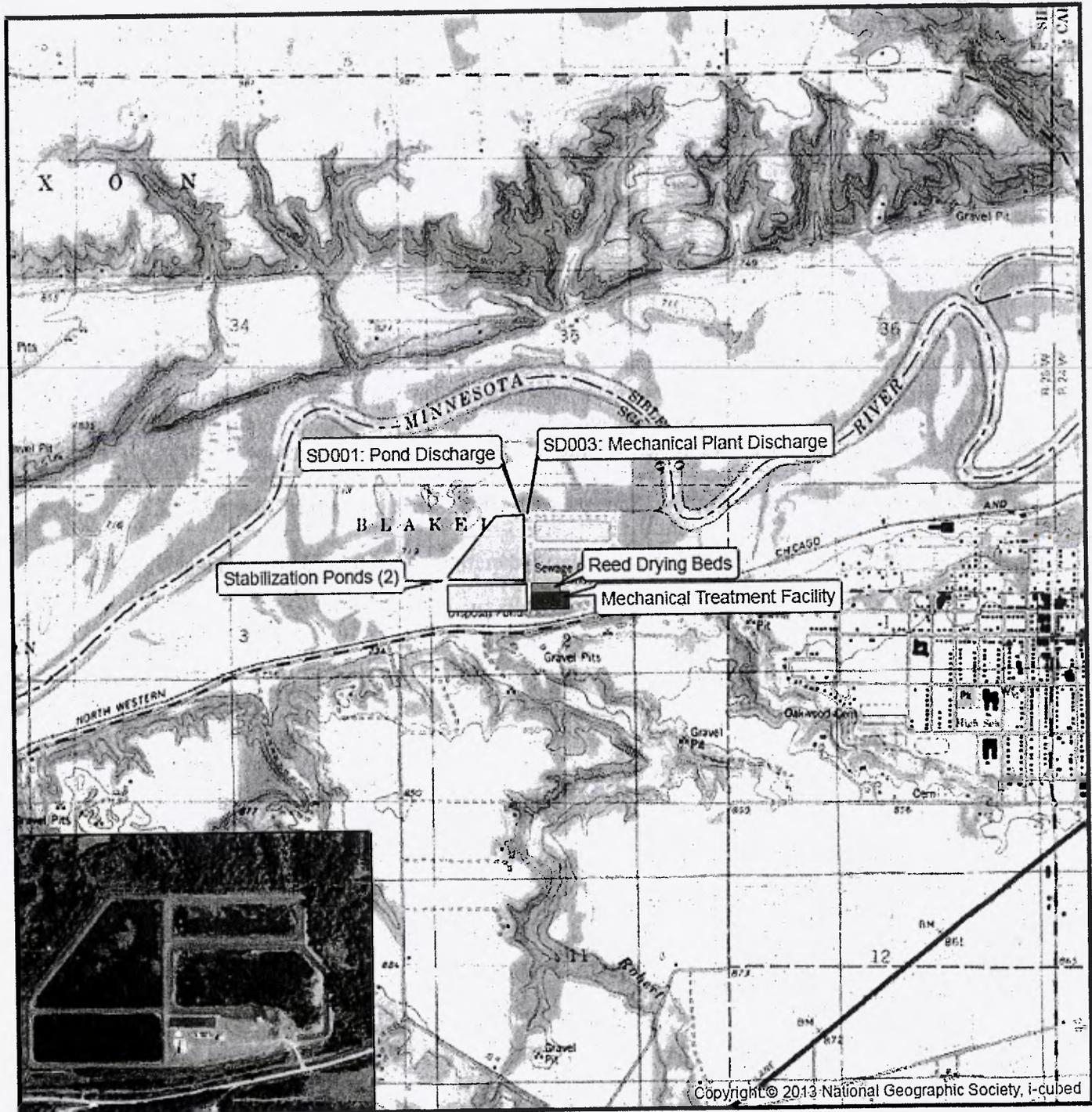
Any point source discharger of sewage, industrial, or other wastes for which a NPDES permit has been issued by the MPCA that contains effluent limits more stringent than those that would be established by Minn. R. 7053.0215 to 7053.0265, shall continue to meet the effluent limits established by the permit, unless the permittee establishes that less stringent effluent limits are allowable pursuant to federal law, under section 402(o) of the Clean Water Act, and the United States Code, title 33, section 1342.

The location of the facility is shown on the "Topographic Map of Permitted Facility" (page 6).

The location of designated monitoring stations is specified on the "Summary of Stations" (page 7).

Topographic Map of Permitted Facility

MN0022772: Belle Plaine Wastewater Treatment Facility
T113N, R25W, Section 2
Blakeley Township, Scott County, Minnesota



Map produced by: MPCA Staff, 6/26/2013
Source: USGS Belle Plaine North & South Quad
Scale: 1:27,652

**Belle Plaine WWTP
Summary of Stations****Surface Discharge Stations**

<u>Station</u>	<u>Type of Station</u>	<u>Local Name</u>	<u>PLS Location</u>
SD002	Effluent To Surface Water	Stabilization Pond Discharge	Section 2, Township 113 North, Range 25 West
SD003	Effluent To Surface Water	Mechanical Plant Discharge	Section 2, Township 113 North, Range 25 West
SD004	Limits Calculation	Compliance Tracking for Combined SD002 and SD003	Section 2, Township 113 North, Range 25 West

Waste Stream Stations

<u>Station</u>	<u>Type of Station</u>	<u>Local Name</u>	<u>PLS Location</u>
WS001	Influent Waste	Influent Waste Stream	Section 2, Township 113 North, Range 25 West

The Permittee shall comply with the limits and monitoring requirements as specified below

SD 002: Stabilization Pond Discharge

Parameter	Limit	Units	Limit Type	Effective Period	Sample Type	Frequency	Notes
BOD, Carbonaceous 05 Day (20 Deg C)	315.6	kg/day	Calendar Month Average	Jan-Dec	Grab	2 x Week	2
BOD, Carbonaceous 05 Day (20 Deg C)	25	mg/L	Calendar Month Average	Jan-Dec	Grab	2 x Week	
BOD, Carbonaceous 05 Day (20 Deg C)	504.9	kg/day	Maximum Calendar Week Average	Jan-Dec	Grab	2 x Week	2
BOD, Carbonaceous 05 Day (20 Deg C)	40	mg/L	Maximum Calendar Week Average	Jan-Dec	Grab	2 x Week	
Fecal Coliform, MPN or Membrane Filter 44.5C	200	#100ml	Calendar Month Geometric Mean	Apr-Oct	Grab	2 x Week	
Flow	0	MG	Calendar Month Total Intervention	Jan-Feb, Jul, Aug	Measurement	1 x Day	6
Flow	Monitor Only	mgd	Calendar Month Average	Mar-Jun, Sep-Dec	Measurement	1 x Day	
Flow	Monitor Only	MG	Calendar Month Total	Mar-Jun, Sep-Dec	Measurement	1 x Day	5
Mercury, Dissolved (as Hg)	Monitor Only	ng/L	Calendar Year Maximum	Jan-Dec	Grab	1 x Year	4
Mercury, Total (as Hg)	Monitor Only	ng/L	Calendar Year Maximum	Jan-Dec	Grab	1 x Year	4
Nitrite Plus Nitrate, Total (as N)	Monitor Only	mg/L	Calendar Month Maximum	Jan-Jun, Jul-Dec	Grab	1 x Half Year	3
Nitrogen, Ammonia, Total (as N)	Monitor Only	mg/L	Calendar Month Maximum	Jan-Jun, Jul-Dec	Grab	1 x Half Year	3
Nitrogen, Kjeldahl, Total	Monitor Only	mg/L	Calendar Month Maximum	Jan-Jun, Jul-Dec	Grab	1 x Half Year	3
Oxygen, Dissolved	Monitor Only	mg/L	Calendar Month Minimum	Jan-Dec	Grab	2 x Week	1
pH	9.0	SU	Calendar Month Maximum	Jan-Dec	Grab	2 x Week	1
pH	6.0	SU	Calendar Month Minimum	Jan-Dec	Grab	2 x Week	1
Phosphorus, Total (as P)	1.0	mg/L	Calendar Month Average	Jan-Dec	24-Hour Flow Composite	2 x Week	
Phosphorus, Total (as P)	Monitor Only	kg/mo	Calendar Month Total	Jan-Dec	24-Hour Flow Composite	2 x Week	
Solids, Total Dissolved (TDS)	Monitor Only	mg/L	Calendar Month Maximum	Jan-Jun, Jul-Dec	Grab	1 x Half Year	3
Solids, Total Suspended (TSS)	568.0	kg/day	Calendar Month Average	Jan-Dec	Grab	2 x Week	2
Solids, Total Suspended (TSS)	45	mg/L	Calendar Month Average	Jan-Dec	Grab	2 x Week	
Solids, Total Suspended (TSS)	820.5	kg/day	Maximum Calendar Week Average	Jan-Dec	Grab	2 x Week	2
Solids, Total Suspended (TSS)	65	mg/L	Maximum Calendar Week Average	Jan-Dec	Grab	2 x Week	
Solids, Total Suspended (TSS), grab (Mercury)	Monitor Only	mg/L	Calendar Year Maximum	Jan-Dec	Grab	1 x Year	4

Limits and Monitoring Requirements

The Permittee shall comply with the limits and monitoring requirements as specified below

SD 003: Mechanical Plant Discharge

Parameter	Limit	Units	Limit Type	Effective Period	Sample Type	Frequency	Notes
BOD, Carbonaceous 05 Day (20 Deg C)	59.5	kg/day	Calendar Month Average	Jan-Dec	24-Hour Flow Composite	1 x Week	
BOD, Carbonaceous 05 Day (20 Deg C)	25	mg/L	Calendar Month Average	Jan-Dec	24-Hour Flow Composite	1 x Week	
BOD, Carbonaceous 05 Day (20 Deg C)	95.3	kg/day	Maximum Calendar Week Average	Jan-Dec	24-Hour Flow Composite	1 x Week	
BOD, Carbonaceous 05 Day (20 Deg C)	40	mg/L	Maximum Calendar Week Average	Jan-Dec	24-Hour Flow Composite	1 x Week	
BOD, Carbonaceous 05 Day (20 Deg C) Percent Removal	85	%	Minimum Calendar Month Average	Jan-Dec	Calculation	1 x Week	
Fecal Coliform, MPN or Membrane Filter 44.5C	200	#100ml	Calendar Month Geometric Mean	Apr-Oct	Grab	1 x Week	
Flow	Monitor Only	mgd	Calendar Month Average	Jan-Dec	Measurement, Continuous	1 x Day	
Flow	Monitor Only	mgd	Calendar Month Maximum	Jan-Dec	Measurement, Continuous	1 x Day	
Flow	Monitor Only	MG	Calendar Month Total	Jan-Dec	Measurement, Continuous	1 x Day	
Mercury, Dissolved (as Hg)	Monitor Only	ng/L	Calendar Month Maximum	Jul	Grab	1 x Month	4
Mercury, Total (as Hg)	Monitor Only	ng/L	Calendar Month Maximum	Jul	Grab	1 x Month	4
Nitrite Plus Nitrate, Total (as N)	Monitor Only	mg/L	Calendar Month Average	Apr, Sep	24-Hour Flow Composite	1 x Month	
Nitrogen, Ammonia, Total (as N)	Monitor Only	mg/L	Calendar Month Average	Apr, Sep	24-Hour Flow Composite	1 x Month	
Nitrogen, Kjeldahl, Total	Monitor Only	mg/L	Calendar Month Average	Apr, Sep	24-Hour Flow Composite	1 x Month	
Oxygen, Dissolved	Monitor Only	mg/L	Calendar Month Minimum	Jan-Dec	Grab	1 x Day	1
pH	9.0	SU	Calendar Month Maximum	Jan-Dec	Grab	1 x Week	1
pH	6.0	SU	Calendar Month Minimum	Jan-Dec	Grab	1 x Week	1
Phosphorus, Total (as P)	1.0	mg/L	12 Month Moving Average	Jan-Dec	24-Hour Flow Composite	1 x Week	4
Phosphorus, Total (as P)	Monitor Only	mg/L	Calendar Month Average	Jan-Dec	24-Hour Flow Composite	1 x Week	
Phosphorus, Total (as P)	Monitor Only	kg/mo	Calendar Month Total	Jan-Dec	24-Hour Flow Composite	1 x Week	
Solids, Total Dissolved (TDS)	Monitor Only	mg/L	Calendar Month Average	Apr, Sep	24-Hour Flow Composite	1 x Month	
Solids, Total Suspended (TSS)	71.4	kg/day	Calendar Month Average	Jan-Dec	24-Hour Flow Composite	1 x Week	
Solids, Total Suspended (TSS)	30	mg/L	Calendar Month Average	Jan-Dec	24-Hour Flow Composite	1 x Week	
Solids, Total Suspended (TSS)	107.2	kg/day	Maximum Calendar Week Average	Jan-Dec	24-Hour Flow Composite	1 x Week	
Solids, Total Suspended (TSS)	45	mg/L	Maximum Calendar Week Average	Jan-Dec	24-Hour Flow Composite	1 x Week	
Solids, Total Suspended (TSS) Percent Removal	85	%	Minimum Calendar Month Average	Jan-Dec	Calculation	1 x Week	
Solids, Total Suspended (TSS), grab (Mercury)	Monitor Only	mg/L	Calendar Month Maximum	Jul	Grab	1 x Month	4

Limits and Monitoring Requirements

The Permittee shall comply with the limits and monitoring requirements as specified below

SD 004: Compliance Tracking for Combined SD002 and SD003

Parameter	Limit	Units	Limit Type	Effective Period	Sample Type	Frequency	Notes
Phosphorus, Total (as P)	1160	kg/yr	12 Month Moving Total	Jan-Dec	Calculation	1 x Month	4
Solids, Total Suspended (TSS)	33242	kg/yr	Calendar Year Total	Jan-Dec	Calculation	1 x Month	

WS 001: Influent Waste Stream

Parameter	Limit	Units	Limit Type	Effective Period	Sample Type	Frequency	Notes
BOD, Carbonaceous 05 Day (20 Deg C)	Monitor Only	mg/L	Calendar Month Average	Jan-Dec	24-Hour Flow Composite	1 x Week	
BOD, Carbonaceous 05 Day (20 Deg C)	Monitor Only	mg/L	Calendar Month Maximum	Jan-Dec	24-Hour Flow Composite	1 x Week	
Flow	Monitor Only	mgd	Calendar Month Average	Jan-Dec	Measurement, Continuous	1 x Day	
Flow	Monitor Only	mgd	Calendar Month Maximum	Jan-Dec	Measurement, Continuous	1 x Day	
Flow	Monitor Only	MG	Calendar Month Total	Jan-Dec	Measurement, Continuous	1 x Day	
pH	Monitor Only	SU	Calendar Month Maximum	Jan-Dec	Grab	1 x Week	1
pH	Monitor Only	SU	Calendar Month Minimum	Jan-Dec	Grab	1 x Week	1
Phosphorus, Total (as P)	Monitor Only	mg/L	Calendar Month Average	Jan-Dec	24-Hour Flow Composite	1 x Week	
Precipitation	Monitor Only	in	Calendar Month Total	Jan-Dec	Measurement	1 x Day	
Solids, Total Suspended (TSS)	Monitor Only	mg/L	Calendar Month Average	Jan-Dec	24-Hour Flow Composite	1 x Week	
Solids, Total Suspended (TSS)	Monitor Only	mg/L	Calendar Month Maximum	Jan-Dec	24-Hour Flow Composite	1 x Week	

Notes:

- 1 -- Analyze immediately.
- 2 -- Based on a maximum 6-inch per day drawdown rate from the 20.5 acre secondary cell.
- 3 -- Only two effluent samples per year are required - one collected during a spring discharge and one collected during a fall discharge. Report results on DMR for month when sample was collected. For discharges in other months when sample result has already been reported on a previous DMR, leave DMR box blank.
- 4 -- See Surface Discharge Stations Chapter for additional information.
- 5 -- The acceptable discharge periods are March 1 through June 15 and September 15 through December 31.
- 6 -- The problem discharge periods are January through February, July, and August.

Chapter 1. Special Requirements

1. Special Requirements

Reverse Osmosis Treatment at the City of Belle Plaine Water Treatment Plant

- 1.1 If the City of Belle Plaine decides to discharge Reverse Osmosis (RO) reject water from the City's Water Treatment Plant to the Wastewater Treatment Plant, a permit modification and fee must be submitted to the MPCA at least 180 days prior to the initiation of RO reject discharge.
- 1.2 The permit modification will include the addition of sampling parameters to the permit. These parameters may include, but are not limited to: Chloride, CaCO₃, Specific Conductance, Total Dissolved Salts, Sulfates as SO₄, Bicarbonates as HCO₃, Sodium, Calcium, Magnesium and Potassium at a monitoring frequency of at least twice a week during discharge for Station SD002 and at least once a month for station SD003.

Chapter 2. Surface Discharge Stations

1. Requirements for Specific Stations

- 1.1 SD 002, SD 003, SD 004: Submit a monthly DMR by 21 days after the end of each calendar month following permit issuance.

2. Special Requirements

- 2.1 Limits for Station SD004 (Compliance Tracking for Combined SD002 and SD003) are the combined limits from both the mechanical and pond systems and are representative of the total facility discharge. To calculate the limits on the SD004 DMR, the Permittee shall add the cumulative monthly results for BOTH the Pond Discharge (SD002) and Mechanical Discharge (SD003) for the specific parameter.

3. Sampling Location

- 3.1 Samples for Station SD003 (Mechanical Plant Discharge) shall be taken at a point representative of the total effluent discharge from the mechanical facility.
- 3.2 Samples for the Station SD002 (Stabilization Pond Discharge) shall be collected from the final cell outlet control structure.

4. Surface Discharges

- 4.1 Floating solids or visible foam shall not be discharged in other than trace amounts.
- 4.2 Oil or other substances shall not be discharged in amounts that create a visible color film.
- 4.3 The Permittee shall install and maintain outlet protection measures at the discharge stations to prevent erosion.

5. Winter Sampling Conditions

- 5.1 The Permittee shall sample flows at the designated monitoring stations including when this requires removing ice to sample the water. If the station is completely frozen throughout a designated sampling month, the Permittee shall check the "No Discharge" box on the Discharge Monitoring Report (DMR) and note the ice conditions in Comments on the DMR.

6. Phosphorus Limits and Monitoring Requirements

- 6.1 Phosphorus limits are to be calculated as follows.
- 6.2 "12-Month Moving Average" is a rolling average. To calculate, add all of the monthly average values during the last 12 months and divide by 12.

Chapter 2. Surface Discharge Stations

6. Phosphorus Limits and Monitoring Requirements

6.3 "12-Month Moving Total" is a rolling total. For the first 11 months after this limit is effective, report the mass phosphorus discharged by calculating each month's kg/month, then adding each month's kg/month from the first month the new limit is effective through the 11th month after this limit became effective. This value should be reported on the eDMR in the 12-Month Moving Total field. If using the eDMR calculator tool, replace the calculated value with this value. Starting the 12th month after this limit became effective and thereafter, calculate each kg/month then add all of the monthly values (kg/mo) during the last twelve months, starting with the monthly total for the month of the current reporting period. Calculate kg/month for each month by multiplying the total volume of effluent flow (MG) by the monthly average concentration and by a 3.785 conversion factor to get kg/month. Starting the 12th month after this limit became effective and thereafter, the eDMR calculator tool will provide the correct value for this limit.

7. Mercury Limits and Monitoring Requirements

- 7.1 Permittees are required to sample for TSS (grab sample) at the same time that Total/Dissolved Mercury samples are taken. All results must be recorded on DMRs.
- 7.2 Total and Dissolved Mercury samples must be analyzed using EPA Method 1631 with clean techniques method 1669 and any revisions to those methods. Should another mercury analytical method that has a reportable quantitation level that allows for low-level sample characterization be approved by the EPA and certified by the Minnesota Department of Health, the Permittee is authorized to use that method.
- 7.3 Mercury monitoring and a concurrent TSS grab sample are required once per year throughout the permit cycle. Samples for pond discharge station SD002 shall be taken any time of the year during discharge but shall be reported on the December DMR.

8. Discharge Monitoring Reports

- 8.1 The Permittee shall submit monitoring results for discharges in accordance with the limits and monitoring requirements for this station. If no discharge occurred during the reporting period, the Permittee shall check the "No Discharge" box on the Discharge Monitoring Report (DMR).

Chapter 3. Waste Stream Stations

1. Requirements for Specific Stations

- 1.1 WS 001: Submit a monthly DMR by 21 days after the end of each calendar month following permit issuance.

2. Sampling Location

- 2.1 Samples for Station WS001 (Influent Waste Stream) shall be collected at a point representative of total influent flow to the system.

Chapter 4. Mercury Minimization Plan

1. Mercury Pollutant Minimization Plan

- 1.1 The Permittee is required to complete and submit a Mercury Pollutant Minimization Plan (MMP) to the MPCA as detailed in this section. If the Permittee has previously submitted a MMP, it must update its MMP and submit the updated MMP to the MPCA. The purpose of the MMP is to evaluate collection and treatment systems to determine possible sources of mercury as well as potential mercury reduction options. Guidelines for developing a MMP are detailed in this section.

Chapter 4. Mercury Minimization Plan

Mercury Pollutant Minimization Plan

- 1.2 The specific mercury monitoring requirements are detailed in the limits and monitoring section of this permit. Information gained through the MMP process can be used to reduce mercury concentrations. As part of its mercury control strategy, the Permittee should consider selecting activities based on the potential of those activities to reduce mercury loadings to the wastewater treatment facility.
- 1.3 The Permittee shall submit a Mercury Minimization Plan by 180 days before permit expiration. At a minimum, the MMP must include the following:
 - a) A summary of mercury influent and effluent concentrations and biosolids monitoring data using the most recent five years of monitoring data, if available.
 - b) Identification of existing and potential sources of mercury concentrations and/or loading to the facility. As appropriate for your facility, you should consider residential, institutional, municipal, and commercial sources (such as dental clinics, hospitals, medical clinics, nursing homes, schools, laundries, and industries with potential for mercury contributions). You should also consider other influent mercury sources, such as stormwater inputs, ground water (inflow & infiltration) inputs, and waste streams or sewer tributaries to the wastewater treatment facility.
 - c) An evaluation of past and present WWTF operations to determine those operating procedures that maximize mercury removal.
 - d) A summary of any mercury reduction activities implemented during the last five years.
 - e) A plan to implement mercury management and reduction measures during the next five years.

Chapter 5. Biosolids-Land Application

1. Authorization

- 1.1 This permit authorizes the Permittee to store and land apply domestic wastewater treatment biosolids in accordance with the provisions in this chapter and Minnesota Rules, ch. 7041.
- 1.2 Permittees who prepare bulk biosolids must obtain approval of the sites on which bulk biosolids are applied before they are applied unless they are Exceptional Quality Biosolids. Site application procedures are set forth in Minn. R. ch. 7041.0800.

2. Compliance Responsibility

- 2.1 The Permittee is responsible for ensuring that the applicable requirements in this chapter and Minn. R. ch. 7041 are met when biosolids are prepared, distributed, or applied to the land.

3. Notification Requirements

- 3.1 The Permittee shall provide information needed to comply with the biosolids requirements of Minn. R. ch. 7041 to others who prepare or use the biosolids.

Chapter 4. Mercury Minimization Plan

1. Mercury Pollutant Minimization Plan

- 1.2 The specific mercury monitoring requirements are detailed in the limits and monitoring section of this permit. Information gained through the MMP process can be used to reduce mercury concentrations. As part of its mercury control strategy, the Permittee should consider selecting activities based on the potential of those activities to reduce mercury loadings to the wastewater treatment facility.
- 1.3 The Permittee shall submit a Mercury Minimization Plan by 180 days before permit expiration. At a minimum, the MMP must include the following:
 - a) A summary of mercury influent and effluent concentrations and biosolids monitoring data using the most recent five years of monitoring data, if available.
 - b) Identification of existing and potential sources of mercury concentrations and/or loading to the facility. As appropriate for your facility, you should consider residential, institutional, municipal, and commercial sources (such as dental clinics, hospitals, medical clinics, nursing homes, schools, laundries, and industries with potential for mercury contributions). You should also consider other influent mercury sources, such as stormwater inputs, ground water (inflow & infiltration) inputs, and waste streams or sewer tributaries to the wastewater treatment facility.
 - c) An evaluation of past and present WWTF operations to determine those operating procedures that maximize mercury removal.
 - d) A summary of any mercury reduction activities implemented during the last five years.
 - e) A plan to implement mercury management and reduction measures during the next five years.

Chapter 5. Biosolids-Land Application

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2. Compliance Responsibility

- 2.1 The Permittee is responsible for ensuring that the applicable requirements in this chapter and Minn. R. ch. 7041 are met when biosolids are prepared, distributed, or applied to the land.

3. Notification Requirements

- 3.1 The Permittee shall provide information needed to comply with the biosolids requirements of Minn. R. ch. 7041 to others who prepare or use the biosolids.

Chapter 5. Biosolids-Land Application

1. Pollutant Limits

- 4.1 Biosolids which are applied to the land must not exceed the ceiling concentrations in Table 1 and must not be applied so that the cumulative amounts of pollutant in Table 2 are exceeded.

Table 1 Ceiling Concentrations (dry weight basis)

Parameter in units mg/kg

Arsenic 75

Cadmium 85

Copper 4300

Lead 840

Mercury 57

Molybdenum 75

Nickel 420

Selenium 100

Zinc 7500

Table 2 Cumulative Loading Limits

Parameter in units lbs/acre

Arsenic 37

Cadmium 35

Copper 1339

Lead 268

Mercury 15

Molybdenum not established*

Nickel 375

Selenium 89

Zinc 2500

*The cumulative limit for molybdenum has not been established at the time of permit issuance

2. Pathogen and Vector Attraction Reduction

- 5.1 Biosolids shall be processed, treated, or be incorporated or injected into the soil to meet one of the vector attraction reduction requirements in Minnesota Rules, pt. 7041.1400.
- 5.2 Biosolids shall be processed or treated by one of the alternatives in Minnesota Rules, pt. 7041.1300 to meet the Class A or Class B standards for the reduction of pathogens. When Class B biosolids are applied to the land, the site restrictions in Minnesota Rules, pt. 7041.1300 must also be met.

Chapter 5. Biosolids-Land Application

4. Pollutant Limits

4.1 Biosolids which are applied to the land must not exceed the ceiling concentrations in Table 1 and must not be applied so that the cumulative amounts of pollutant in Table 2 are exceeded.

Table 1 Ceiling Concentrations (dry weight basis)

Parameter in units mg/kg

Arsenic 75
Cadmium 85
Copper 4300
Lead 840
Mercury 57
Molybdenum 75
Nickel 420
Selenium 100
Zinc 7500

Table 2 Cumulative Loading Limits

Parameter in units lbs/acre

Arsenic 37
Cadmium 35
Copper 1339
Lead 268
Mercury 15
Molybdenum not established*
Nickel 375
Selenium 89
Zinc 2500

*The cumulative limit for molybdenum has not been established at the time of permit issuance

5. Pathogen and Vector Attraction Reduction

5.1 Biosolids shall be processed, treated, or be incorporated or injected into the soil to meet one of the vector attraction reduction requirements in Minnesota Rules, pt. 7041.1400.

5.2 Biosolids shall be processed or treated by one of the alternatives in Minnesota Rules, pt. 7041.1300 to meet the Class A or Class B standards for the reduction of pathogens. When Class B biosolids are applied to the land, the site restrictions in Minnesota Rules, pt. 7041.1300 must also be met.

Chapter 5. Biosolids-Land Application

5. Pathogen and Vector Attraction Reduction

5.3 The minimum duration between application and harvest, grazing or public access to areas where Class B biosolids have been applied to the land is as follows:

- a. 14 months for food crops whose harvested parts may touch the soil/biosolids mixture (such as melons, squash, tomatoes, etc.), when biosolids are surface applied, incorporated or injected.
- b. 20 months or 38 months depending on the application method for food crops whose harvested parts grow in the soil (such as potatoes, carrots, onions, etc.). The 20 month time period is required when biosolids are surface applied or surface applied and incorporated after they have been on the soil surface for at least four (4) months. The 38 month time period is required when the biosolids are injected or surface applied and incorporated within four (4) months of application.
- c. 30 days for feed crops, other food crops (such as field corn, sweet corn, etc.), hay or fiber crops when biosolids are surface applied, incorporated or injected.
- d. 30 days for grazing of animals when biosolids are surface applied, incorporated or injected.
- e. One year where there is a high potential for public contact with the site, (such as a reclamation site located in populated areas, a construction site located in a city, turf farms, plant nurseries, etc.) and 30 days where there is low potential for public contact (such as agricultural land, forest, a reclamation site located in an unpopulated area, etc.) when biosolids are surface applied, incorporated, or injected.

6. Management Practices

6.1 The management practices for the land application of biosolids are described in detail in Minn. R. ch. 7041.1200 and must be followed unless specified otherwise in a site approval letter or a permit issued by the MPCA.

6.2 Overall management requirements:

- a. Biosolids must not be applied to the land if it is likely to adversely affect a threatened or endangered species listed under Section 4 of the Endangered Species Act or its designated critical habitat.
- b. Biosolids must not be applied to flooded, frozen or snow covered ground so that the biosolids enter wetlands or other waters of the state.
- c. Biosolids must be applied at an agronomic rate unless specified otherwise by the MPCA in a permit.
- d. Biosolids shall not be applied within 33 feet of a wetland or waters of the state unless specified otherwise by the MPCA in a permit.

7. Monitoring Requirements

7.1 Representative samples of biosolids applied to the land must be analyzed by methods specified in Minnesota Rule pt. 7041.3200 for the following parameters: arsenic, cadmium, copper, lead, mercury, molybdenum, nickel, selenium, zinc, Kjeldahl nitrogen, ammonia nitrogen, total solids, volatile solids, phosphorus, potassium and pH.

Chapter 5. Biosolids-Land Application

7. Monitoring Requirements

- 7.2 At a minimum, biosolids must be monitored at the frequencies specified in Table 3 for the parameters listed above, and any pathogen or vector attraction reduction requirements in Minnesota Rules, pts. 7041.1300 and 7041.1400 if used to determine compliance with those parts.

Table 3 Minimum Sampling Frequencies

Biosolids Applied* (metric tons/365-day period)	Biosolids Applied* (tons/365-day period)	Frequency (times/365-day period)
>0 but <290	>0 but <320	1
>=290 but <1,500	>=320 but <1,650	4
>=1,500 but <15,000	>=1,650 but <16,500	6
>=15,000	>=16,500	12

* Either the amount of bulk biosolids applied to the land or the amount of biosolids received by a person who prepares biosolids that are sold or given away in a bag or other container for application to the land (dry weight basis).

- 7.3 Representative samples of biosolids that are transferred to storage units and are stored for more than two years shall be analyzed by methods specified in Minnesota Rule pt. 7041.3200 for each cropping year they are stored for the following parameters: arsenic, cadmium, copper, lead, molybdenum, nickel, selenium, and zinc. Mercury is specifically NOT included in the stored biosolids analysis because of the short holding time [28 days] required between sampling and analysis.
- 7.4 Increased sampling frequencies are specified for the parameters listed in Table 4. Sampling at a frequency at twice the minimum frequencies in Table 3 is required if concentrations listed in Table 4 are exceeded (based on the average of all analyses made during the previous cropping year).

Table 4 Increased Frequency of Sampling

Parameter (mg/kg dry weight basis)
Arsenic 38
Cadmium 43
Copper 2150
Lead 420
Mercury 28
Molybdenum 38
Nickel 210
Selenium 50
Zinc 3750

8. Records

- 8.1 The Permittee shall keep records of the information necessary to show compliance with pollutant concentrations and loadings, pathogen reduction requirements, vector attraction reduction requirements and management practices as specified in Minnesota Rules, pt. 7041.1600, as applicable to the quality of biosolids produced.

9. Reporting Requirements

- 9.1 By December 31 following the end of each cropping year, the Permittee shall submit a Biosolids Annual Report for the land application of biosolids on a form provided by or approved by the MPCA. The report shall include the requirements in Minnesota Rules, part 7041.1700.

Chapter 5. Biosolids-Land Application

9. Reporting Requirements

- 9.2 If, during any cropping year, biosolids were transferred, or not land applied, the Permittee shall submit a Biosolids Annual Report by December 31 following the end of the cropping year. The report shall state that biosolids were not land applied, how much was generated, and where they were transferred to.
- 9.3 For biosolids that are stored for more than two years, the Biosolids Annual Report must also include the analytical data from the representative sample of the biosolids generated during the cropping year.
- 9.4 The Permittee shall submit the Biosolids Annual Report to:
- Biosolids Coordinator
Minnesota Pollution Control Agency
520 Lafayette Road North
St. Paul, Minnesota 55155-4194
- 9.5 The Permittee must notify the MPCA in writing when 90 percent or more of any of the cumulative pollutant loading rates listed for any Land Application Sites has been reached for a site.

Chapter 6. Domestic Wastewater -- Mechanical System

1. Bypass Structures

- 1.1 All structures capable of bypassing the treatment system shall be manually controlled and kept locked at all times.

2. Sanitary Sewer Extension Permit

- 2.1 The Permittee may be required to obtain a Sanitary Sewer Extension Permit from the MPCA for any addition, extension or replacement to the sanitary sewer. If a sewer extension permit is required, construction may not begin until plans and specifications have been submitted and a written permit is granted except as allowed in Minn. Stat. 115.07, Subd. 3(b).

3. Operator Certification

- 3.1 The Permittee shall provide a Class B state certified operator who is in direct responsible charge of the operation, maintenance and testing functions required to ensure compliance with the terms and conditions of this permit.
- 3.2 The Permittee shall provide the appropriate number of operators with a Type IV certification to be responsible for the land application of biosolids or semisolids from commercial or industrial operations.
- 3.3 If the Permittee chooses to meet operator certification requirements through a contractual agreement, the Permittee shall provide a copy of the contract to the MPCA, WQ Submittals Center. The contract shall include the certified operator's name, certificate number, company name if appropriate, the period covered by the contract and provisions for renewal; the duties and responsibilities of the certified operator; the duties and responsibilities of the permittee; and provisions for notifying the MPCA 30 days in advance of termination if the contract is terminated prior to the expiration date.
- 3.4 The Permittee shall notify the MPCA within 30 days of a change in operator certification or contract status.

Chapter 7. Domestic Wastewater -- Pond System

1. Bypass Structures

- 1.1 All structures capable of bypassing the treatment system shall be manually controlled and kept locked at all times.

2. Ponds - Acceptable Discharge Periods

- 2.1 Acceptable Discharge Periods are March 1 through June 15 and September 15 through December 31 for facilities located in the Marshall, Rochester, Willmar, Mankato and Metropolitan regions.
- 2.2 Effluent limitations for this permit have been assigned based upon the assumption that the receiving waters exhibit favorable flow and reaeration characteristics during the acceptable discharge periods.

3. Ponds - Discharges Outside Acceptable Discharge Periods

- 3.1 For discharges occurring outside the acceptable discharge periods, refer to the "Stabilization Pond Guidance Discharge Guidance" located at www.pca.state.mn.us/water/wastewater.html#operation. If any of the discharge occurs outside of the acceptable discharge periods, the Permittee shall notify the MPCA of the potential noncompliance prior to discharge. The Permittee shall call the appropriate regional office and indicate that the call is for notification of a pond discharge.
- 3.2 For any discharge outside of acceptable discharge periods or to an ice covered receiving water, an adequate dilution ratio is required. If an adequate dilution ratio is not available, receiving water monitoring is required.
- 3.3 For any discharge outside of acceptable discharge periods or to an ice covered receiving water, the Permittee shall submit a "Discharge Evaluation Report" on a form provided in the "Stabilization Pond Discharge Guidance" located at www.pca.state.mn.us/water/wastewater.html#operation.

4. Ponds - Discharge Rate

- 4.1 The discharge rate shall be limited so as not to create a shock load on the receiving waters, disturb the pond bottom sediment in the area of the intake of the outfall structure or flood downstream properties. If the drawdown rate should exceed six (6) inches per day, call the MPCA at the appropriate regional office and indicate that the call is for notification of a pond discharge.

5. Ponds - Pre-discharge Sampling

- 5.1 If predischarge sample results indicate that one or more of the effluent limitations may be exceeded, the Permittee shall notify the MPCA of potential noncompliance prior to discharge. The Permittee shall call the MPCA at the appropriate regional office and indicate that the call is for notification of a pond discharge.
- 5.2 Samples shall be taken from four sides of the pond and composited prior to discharge and analyzed for permitted parameters. This sampling must be taken no more than two weeks prior to the beginning of the discharge; dissolved oxygen and pH (both are field tests) must be taken no more than 24 hours prior to the beginning of the discharge. If more than two weeks pass prior to the beginning of discharge, additional predischarge samples shall be obtained and analyzed prior to discharge.

6. Ponds - Observations

- 6.1 The Permittee shall inspect the pond system weekly, and shall take measurements of pond water depth, estimate the coverage of aquatic plants, floating mats and ice cover on the surface of the ponds, and note odors, the condition of the dikes and the presence of muskrats. The Permittee shall maintain records of these weekly inspections for the last three (3) years; and submit the results on the Discharge Monitoring Report (DMR) supplemental form.
- 6.2 The Permittee shall maintain daily precipitation records.

Chapter 8. Domestic Wastewater -- Pretreatment

1. Pretreatment - Definitions

- 1.1 An "Individual Control Mechanism" is a document, such as an agreement or permit, that imposes limitations or requirements on an individual industrial user of the POTW.
- 1.2 "Significant Industrial User" (SIU) means any industrial user that:
 - a. discharges 25,000 gallons per day or more of process wastewater;
 - b. contributes a load of five (5) % or more of the capacity of the POTW; or
 - c. is designated as significant by the Permittee or the MPCA on the basis that the SIU has a reasonable potential to adversely impact the POTW, or the quality of its effluent or residuals. (Minn. R. 7049.0120, Subp. 24)

2. Pretreatment - Permittee Responsibility to Control Users

- 2.1 It is the Permittee's responsibility to regulate the discharge from users of its wastewater treatment facility. The Permittee shall prevent any pass through of pollutants or any inhibition or disruption of the Permittee's facility, its treatment processes, or its sludge processes or disposal that contribute to the violation of the conditions of this permit or any federal or state law or regulation limiting the release of pollutants from the POTW. (Minn. R. 7049.0600)
- 2.2 The Permittee shall prohibit the discharge of the following to its wastewater treatment facility:
 - a. pollutants which create a fire or explosion hazard, including any discharge with a flash point less than 60 degrees C (140 degrees F);
 - b. pollutants which would cause corrosive structural damage to the POTW, including any waste stream with a pH of less than 5.0;
 - c. solid or viscous pollutants which would obstruct flow;
 - d. heat that would inhibit biological activity, including any discharge that would cause the temperature of the waste stream at the POTW treatment plant headworks to exceed 40 degrees C (104 degrees F);
 - e. pollutants which produce toxic gases, vapors, or fumes that may endanger the health or safety of workers; or
 - f. any pollutant, including oxygen demanding pollutants such as biochemical oxygen demand, released at a flow rate or pollutant concentration that will cause interference or pass through. (Minn. R. 7049.0140)
- 2.3 The Permittee shall prohibit new discharges of non-contact cooling waters unless there is no cost effective alternative. Existing discharges of non-contact cooling water to the Permittee's wastewater treatment facility shall be eliminated, where elimination is cost-effective, or where an infiltration/inflow analysis and sewer system evaluation survey indicates the need for such removal.
- 2.4 If the Permittee accepts trucked-in wastes, the Permittee shall evaluate the trucked in wastes prior to acceptance in the same manner as it monitors sewered wastes. The Permittee shall accept trucked-in wastes only at specifically designated points. (Minn. R. 7049.0140, Subp. 4)
- 2.5 Pollutant of concern means a pollutant that is or may be discharged by an industrial user that is, or reasonably should be of concern on the basis that it may cause the permittee to violate any permit limits on the release of pollutants. The following pollutants shall be evaluated to determine if they should be pollutants of concern: pollutants limited in this permit, pollutants for which monitoring is required in this permit, pollutants that are likely to cause inhibition of the Permittee's POTW, pollutants which may interfere with sludge disposal, pollutants for which the Permittee's treatment facility has limited capacity, and pollutants of concern to the Permittee - mercury, phosphorus and salty discharge parameters. (Minn. R. 7049.0120, Subp. 13)

Chapter 8. Domestic Wastewater -- Pretreatment

3. Control of Significant Industrial Users

- 3.1 The Permittee shall impose pretreatment requirements on SIUs which will ensure compliance with all applicable effluent limitations and other requirements set forth in this permit or any federal or state law or regulation limiting the release of pollutants from the POTW. These requirements shall be applied to SIUs by means of an individual control mechanism. (Minn. R. 7049.0600)
- 3.2 The Permittee shall not knowingly enter into an individual control mechanism with any user that would allow the user to contribute an amount or strength of wastewater that would cause violation of any limitation or requirement in the permit, or any applicable federal, state or local law or regulation. (Minn. R. 7049.0600 Subp. 3)

4. Monitoring of Significant Industrial Users

- 4.1 The Permittee shall obtain from SIUs specific information on the quality and quantity of the SIU's discharges to the Permittee's POTW. Except where specifically requested by the Permittee and approved by the MPCA, this information shall be obtained by means of representative monitoring conducted by the Permittee or by the SIU under requirements imposed by the Permittee in the SIU's individual control mechanism. Monitoring performed to comply with this requirement shall include all pollutants for which the SIU is significant and shall be done at a frequency commensurate with the significance of the SIU. (Minn. R. 7049.0710)

5. Reporting and Notification

- 5.1 If a SIU discharges to the POTW during a given calendar year, the Permittee shall submit a Pretreatment Annual Report for that calendar year, due by January 31 of the following year. The Pretreatment Annual Report shall be submitted on forms provided by the agency or shall provide equivalent information.

The Permittee shall submit the pre-treatment report to the following address:

MPCA
Attn: WQ Submittals Center
520 Lafayette Road North
St. Paul, Minnesota 55155-4194 (Minn. R. 7049.0720)

- 5.2 The Permittee shall notify the MPCA in writing of any:

- a. SIU of the Permittee's POTW which has not been previously disclosed to the MPCA;
- b. anticipated or actual changes in the volume or quality of discharge by an industrial user that could result in the industrial user becoming an SIU as defined in this chapter; or
- c. anticipated or actual changes in the volume or quality of discharges by a SIU that would require changes to the SIU's required local limits.

This notification shall be submitted within 30 days of identifying the IU as a SIU. Where changes are proposed, they must be submitted prior to changes being made. (Minn. R. 7049.0700, Subp. 1)

Chapter 8. Domestic Wastewater -- Pretreatment

5. Reporting and Notification

5.3 Upon notifying the MPCA of a SIU or change in a SIU discharge as required above, the Permittee shall submit the following information on forms provided by the agency or in a comparable format:

- a. the identity of the SIU and a description of the SIU's operation and process;
- b. a characterization of the SIU's discharge;
- c. the required local limits that will be imposed on the SIU;
- d. a technical justification of the required local limits; and
- e. a plan for monitoring the SIU which is consistent with monitoring requirements in this chapter. (Minn. R. 7049.0700)

5.4 In addition, the Permittee shall, upon request, submit the following to the MPCA for approval:

- a. additional information on the SIU, its processes and discharge;
- b. a copy of the individual control mechanism used to control the SIU;
- c. the Permittee's legal authority to be used for regulating the SIU; and
- d. the Permittee's procedures for enforcing the requirements imposed on the SIU. (Minn. R. 7049.0700, Subp. 3)

5.5 The permittee shall notify MPCA of any of its industrial users that may be subject to national categorical pretreatment standards.

5.6 This permit may be modified in accordance with Minnesota Rules, ch. 7001 to require development of a pretreatment program approvable under the Federal General Pretreatment Regulation (40 CFR 403).

Chapter 9. Total Facility Requirements

1. General Requirements

General Requirements

1.1 Incorporation by Reference. The following applicable federal and state laws are incorporated by reference in this permit, are applicable to the Permittee, and are enforceable parts of this permit: 40 CFR pts. 122.41, 122.42, 136, 403 and 503; Minn. R. pts. 7001, 7041, 7045, 7050, 7052, 7053, 7060, and 7080; and Minn. Stat. Sec. 115 and 116.

1.2 Permittee Responsibility. The Permittee shall perform the actions or conduct the activity authorized by the permit in compliance with the conditions of the permit and, if required, in accordance with the plans and specifications approved by the Agency. (Minn. R. 7001.0150, subp. 3, item E)

1.3 Toxic Discharges Prohibited. Whether or not this permit includes effluent limitations for toxic pollutants, the Permittee shall not discharge a toxic pollutant except according to Code of Federal Regulations, Title 40, sections 400 to 460 and Minnesota Rules 7050, 7052, 7053 and any other applicable MPCA rules. (Minn. R. 7001.1090, subp.1, item A)

1.4 Nuisance Conditions Prohibited. The Permittee's discharge shall not cause any nuisance conditions including, but not limited to: floating solids, scum and visible oil film, acutely toxic conditions to aquatic life, or other adverse impact on the receiving water. (Minn. R. 7050.0210 subp. 2)

Chapter 9. Total Facility Requirements

1. General Requirements

- 1.5 Property Rights. This permit does not convey a property right or an exclusive privilege. (Minn. R. 7001.0150, subp. 3, item C)
- 1.6 Liability Exemption. In issuing this permit, the state and the MPCA assume no responsibility for damage to persons, property, or the environment caused by the activities of the Permittee in the conduct of its actions, including those activities authorized, directed, or undertaken under this permit. To the extent the state and the MPCA may be liable for the activities of its employees, that liability is explicitly limited to that provided in the Tort Claims Act. (Minn. R. 7001.0150, subp. 3, item O)
- 1.7 The MPCA's issuance of this permit does not obligate the MPCA to enforce local laws, rules, or plans beyond what is authorized by Minnesota Statutes. (Minn. R. 7001.0150, subp.3, item D)
- 1.8 Liabilities. The MPCA's issuance of this permit does not release the Permittee from any liability, penalty or duty imposed by Minnesota or federal statutes or rules or local ordinances, except the obligation to obtain the permit. (Minn. R. 7001.0150, subp.3, item A)
- 1.9 The issuance of this permit does not prevent the future adoption by the MPCA of pollution control rules, standards, or orders more stringent than those now in existence and does not prevent the enforcement of these rules, standards, or orders against the Permittee. (Minn. R. 7001.0150, subp.3, item B)
- 1.10 Severability. The provisions of this permit are severable and, if any provisions of this permit or the application of any provision of this permit to any circumstance are held invalid, the application of such provision to other circumstances and the remainder of this permit shall not be affected thereby.
- 1.11 Compliance with Other Rules and Statutes. The Permittee shall comply with all applicable air quality, solid waste, and hazardous waste statutes and rules in the operation and maintenance of the facility.
- 1.12 Inspection and Entry. When authorized by Minn. Stat. Sec. 115.04; 115B.17, subd. 4; and 116.091, and upon presentation of proper credentials, the agency, or an authorized employee or agent of the agency, shall be allowed by the Permittee to enter at reasonable times upon the property of the Permittee to examine and copy books, papers, records, or memoranda pertaining to the construction, modification, or operation of the facility covered by the permit or pertaining to the activity covered by the permit; and to conduct surveys and investigations, including sampling or monitoring, pertaining to the construction, modification, or operation of the facility covered by the permit or pertaining to the activity covered by the permit. (Minn. R. 7001.0150, subp.3, item I)
- 1.13 Control Users. The Permittee shall regulate the users of its wastewater treatment facility so as to prevent the introduction of pollutants or materials that may result in the inhibition or disruption of the conveyance system, treatment facility or processes, or disposal system that would contribute to the violation of the conditions of this permit or any federal, state or local law or regulation.

Sampling

- 1.14 Representative Sampling. Samples and measurements required by this permit shall be conducted as specified in this permit and shall be representative of the discharge or monitored activity. (40 CFR 122.41 (j)(1))
- 1.15 Additional Sampling. If the Permittee monitors more frequently than required, the results and the frequency of monitoring shall be reported on the Discharge Monitoring Report (DMR) or another MPCA-approved form for that reporting period. (Minn. R. 7001.1090, subp. 1, item E)
- 1.16 Certified Laboratory. A laboratory certified by the Minnesota Department of Health and/or registered by the MPCA shall conduct analyses required by this permit. Analyses of dissolved oxygen, pH, temperature, specific conductance, and total residual oxidants (chlorine, bromine) do not need to be completed by a certified laboratory but shall comply with manufacturers specifications for equipment calibration and use. (Minn. Stat. Sec. 144.97 through 144.98 and Minn. R. 4740.2010 and 4740.2050 through 4740.2120) (Minn. R. 4740.2010 and 4740:2050 through 2120)

Chapter 9. Total Facility Requirements

1. General Requirements

- 1.17 Sample Preservation and Procedure. Sample preservation and test procedures for the analysis of pollutants shall conform to 40 CFR Part 136 and Minn. R. 7041.3200.
- 1.18 Equipment Calibration: Flow meters, pumps, flumes, lift stations or other flow monitoring equipment used for purposes of determining compliance with permit shall be checked and/or calibrated for accuracy at least twice annually. (Minn. R. 7001.0150, subp. 2, items B and C)
- 1.19 Maintain Records. The Permittee shall keep the records required by this permit for at least three years, including any calculations, original recordings from automatic monitoring instruments, and laboratory sheets. The Permittee shall extend these record retention periods upon request of the MPCA. The Permittee shall maintain records for each sample and measurement. The records shall include the following information (Minn. R. 7001.0150, subp. 2, item C):
- a. The exact place, date, and time of the sample or measurement;
 - b. The date of analysis;
 - c. The name of the person who performed the sample collection, measurement, analysis, or calculation; and
 - d. The analytical techniques, procedures and methods used; and
 - e. The results of the analysis.
- 1.20 Completing Reports. The Permittee shall submit the results of the required sampling and monitoring activities on the forms provided, specified, or approved by the MPCA. The information shall be recorded in the specified areas on those forms and in the units specified. (Minn. R. 7001.1090, subp. 1, item D; Minn. R. 7001.0150, subp. 2, item B)

Required forms may include:

DMR Supplemental Form

Individual values for each sample and measurement must be recorded on the DMR Supplemental Form which, if required, will be provided by the MPCA. DMR Supplemental Forms shall be submitted with the appropriate DMRs. You may design and use your own supplemental form; however it must be approved by the MPCA.

Note: Required summary information **MUST** also be recorded on the DMR. Summary information that is submitted **ONLY** on the DMR Supplemental Form does not comply with the reporting requirements.

Chapter 9. Total Facility Requirements

1. General Requirements

- 1.21 Submitting Reports. Discharge Monitoring Reports (DMRs), DMR supplemental forms, and related attachments shall be submitted electronically via the MPCA Online Services Portal after authorization is approved. Authorization must be applied for and approved prior to submittal via the Online Services Portal.

DMRs and DMR Supplemental Forms shall be electronically submitted by the 21st day of the month following the monitoring period end or as otherwise specified in this permit. Electronic DMR submittal must be complete on or before 11:59 PM of the 21st day of the month following the end of the monitoring period or as otherwise specified in this permit. A DMR shall be submitted for each required station even if no discharge occurred during the monitoring period. (Minn. R. 7001.0150, subs. 2.B and 3.H)

If electronic submittal is not possible, the Permittee must apply for an exception to electronic submittal. Exceptions requests for extreme conditions (no computer on-site is not an extreme condition) must at a minimum contain the extreme reason for the exception, actions to be taken, and date the facility will submit eDMR. All exception requests, and paper DMRs, DMR supplemental forms, and related attachments must be submitted by the 21st day of the month following the monitoring period end to:

MPCA

Attn: Discharge Monitoring Reports
520 Lafayette Road North
St. Paul, Minnesota 55155-4194.

Other reports required by this permit shall be submitted on or before the due date specified in the permit to:

MPCA

Attn: WQ Submittals Center
520 Lafayette Road North
St. Paul, Minnesota 55155-4194.

- 1.22 Incomplete or Incorrect Reports. The Permittee shall immediately submit an electronically amended report or DMR to the MPCA upon discovery by the Permittee or notification by the MPCA that it has submitted an incomplete or incorrect report or DMR. The amended report or DMR shall contain the missing or corrected data along with a cover letter explaining the circumstances of the incomplete or incorrect report. If it is impossible to electronically amend the report or DMR, the Permittee shall immediately notify the MPCA and the MPCA will provide direction for the amendment submittals. (Minn. R. 7001.0150 subp. 3, item G)
- 1.23 Required Signatures. All DMRs, forms, reports, and other documents submitted to the MPCA shall be signed by the Permittee or the duly authorized representative of the Permittee. Minn. R. 7001.0150, subp. 2, item D. The person or persons that sign the DMRs, forms, reports or other documents must certify that he or she understands and complies with the certification requirements of Minn. R. 7001.0070 and 7001.0540, including the penalties for submitting false information. Technical documents, such as design drawings and specifications and engineering studies required to be submitted as part of a permit application or by permit conditions, must be certified by a registered professional engineer. (Minn. R. 7001.0540)

Chapter 9. Total Facility Requirements

1. General Requirements

- 1.24 **Detection Level.** The Permittee shall report monitoring results below the reporting limit (RL) of a particular instrument as "<" the value of the RL. For example, if an instrument has a RL of 0.1 mg/L and a parameter is not detected at a value of 0.1 mg/L or greater, the concentration shall be reported as "<0.1 mg/L." "Non-detected," "undetected," "below detection limit," and "zero" are unacceptable reporting results, and are permit reporting violations. (Minn. R. 7001.0150, subp. 2, item B)

Where sample values are less than the level of detection and the permit requires reporting of an average, the Permittee shall calculate the average as follows:

- a. If one or more values are greater than the level of detection, substitute zero for all nondetectable values to use in the average calculation.
 - b. If all values are below the level of detection, report the averages as "<" the corresponding level of detection.
 - c. Where one or more sample values are less than the level of detection, and the permit requires reporting of a mass, usually expressed as kg/day, the Permittee shall substitute zero for all nondetectable values. (Minn. R. 7001.0150, subp. 2, item B)
- 1.25 **Records.** The Permittee shall, when requested by the Agency, submit within a reasonable time the information and reports that are relevant to the control of pollution regarding the construction, modification, or operation of the facility covered by the permit or regarding the conduct of the activity covered by the permit. (Minn. R. 7001.0150, subp. 3, item H)
- 1.26 **Confidential Information.** Except for data determined to be confidential according to Minn. Stat. Sec. 116.075, subd. 2, all reports required by this permit shall be available for public inspection. Effluent data shall not be considered confidential. To request the Agency maintain data as confidential, the Permittee must follow Minn. R. 7000.1300.

Noncompliance and Enforcement

- 1.27 **Subject to Enforcement Action and Penalties.** Noncompliance with a term or condition of this permit subjects the Permittee to penalties provided by federal and state law set forth in section 309 of the Clean Water Act; United States Code, title 33, section 1319, as amended; and in Minn. Stat. Sec. 115.071 and 116.072, including monetary penalties, imprisonment, or both. (Minn. R. 7001.1090, subp. 1, item B)
- 1.28 **Criminal Activity.** The Permittee may not knowingly make a false statement, representation, or certification in a record or other document submitted to the Agency. A person who falsifies a report or document submitted to the Agency, or tampers with, or knowingly renders inaccurate a monitoring device or method required to be maintained under this permit is subject to criminal and civil penalties provided by federal and state law. (Minn. R. 7001.0150, subp.3, item G., 7001.1090, subps. 1, items G and H and Minn. Stat. Sec. 609.671)
- 1.29 **Noncompliance Defense.** It shall not be a defense for the Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit. (40 CFR 122.41(c))

Chapter 9. Total Facility Requirements

1. General Requirements

1.30 Effluent Violations. If sampling by the Permittee indicates a violation of any discharge limitation specified in this permit, the Permittee shall immediately make every effort to verify the violation by collecting additional samples, if appropriate, investigate the cause of the violation, and take action to prevent future violations. If the permittee discovers that noncompliance with a condition of the permit has occurred which could endanger human health, public drinking water supplies, or the environment, the Permittee shall within 24 hours of the discovery of the noncompliance, orally notify the commissioner and submit a written description of the noncompliance within 5 days of the discovery. The written description shall include items a. through e., as listed below. If the Permittee discovers other non-compliance that does not explicitly endanger human health, public drinking water supplies, or the environment, the non-compliance shall be reported during the next reporting period to the MPCA with its Discharge Monitoring Report (DMR). If no DMR is required within 30 days, the Permittee shall submit a written report within 30 days of the discovery of the noncompliance. This description shall include the following information:

- a. a description of the event including volume, duration, monitoring results and receiving waters;
- b. the cause of the event;
- c. the steps taken to reduce, eliminate and prevent reoccurrence of the event;
- d. the exact dates and times of the event; and
- e. steps taken to reduce any adverse impact resulting from the event. (Minn. R. 7001.0150, subp. 3k)

1.31 Upset Defense. In the event of temporary noncompliance by the Permittee with an applicable effluent limitation resulting from an upset at the Permittee's facility due to factors beyond the control of the Permittee, the Permittee has an affirmative defense to an enforcement action brought by the Agency as a result of the noncompliance if the Permittee demonstrates by a preponderance of competent evidence:

- a. The specific cause of the upset;
- b. That the upset was unintentional;
- c. That the upset resulted from factors beyond the reasonable control of the Permittee and did not result from operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventative maintenance, or increases in production which are beyond the design capability of the treatment facilities;
- d. That at the time of the upset the facility was being properly operated;
- e. That the Permittee properly notified the Commissioner of the upset in accordance with Minn. R. 7001.1090, subp. 1, item I; and
- f. That the Permittee implemented the remedial measures required by Minn. R. 7001.0150, subp. 3, item J.

Release

1.32 Unauthorized Releases of Wastewater Prohibited. Except for discharges from outfalls specifically authorized by this permit, overflows, discharges, spills, or other releases of wastewater or materials to the environment, whether intentional or not, are prohibited. However, the MPCA will consider the Permittee's compliance with permit requirements, frequency of release, quantity, type, location, and other relevant factors when determining appropriate action. (40 CFR 122.41 and Minn. Stat. Sec 115.061)

Chapter 9. Total Facility Requirements

1. General Requirements

1.33 Discovery of a release. Upon discovery of a release, the Permittee shall:

a. Take all reasonable steps to immediately end the release.

b. Notify the Minnesota Department of Public Safety Duty Officer at 1(800)422-0798 or (651)649-5451 (metro area) immediately upon discovery of the release. You may contact the MPCA during business hours at 1(800)657-3864 or (651)296-6300 (metro area).

c. Recover as rapidly and as thoroughly as possible all substances and materials released or immediately take other action as may be reasonably possible to minimize or abate pollution to waters of the state or potential impacts to human health caused thereby. If the released materials or substances cannot be immediately or completely recovered, the Permittee shall contact the MPCA. If directed by the MPCA, the Permittee shall consult with other local, state or federal agencies (such as the Minnesota Department of Natural Resources and/or the Wetland Conservation Act authority) for implementation of additional clean-up or remediation activities in wetland or other sensitive areas.

1.34 Sampling of a release. Upon discovery of a release, the Permittee shall:

a. Collect representative samples of the release. The Permittee shall sample the release for parameters of concern immediately following discovery of the release. The Permittee may contact the MPCA during business hours to discuss the sampling parameters and protocol. In addition, Fecal Coliform Bacteria samples shall be collected where it is determined by the Permittee that the release contains or may contain sewage. If the release cannot be immediately stopped, the Permittee shall consult with MPCA regarding additional sampling requirements. Samples shall be collected at least, but not limited to, two times per week for as long as the release continues.

b. Submit the sampling results on the Release Sampling Form (<http://www.pca.state.mn.us/index.php/view-document.html?gid=18867>). The Release Sampling Form shall be submitted to the MPCA with the next DMR or within 30 days whichever is sooner.

Bypass

1.35 Anticipated bypass. The permittee may allow any bypass to occur which does not cause effluent limitations to be exceeded, but only if the bypass is for essential maintenance to assure efficient operation of the facility. The permittee shall submit prior notice, if possible at least ten days before the date of the bypass to the MPCA (40 CFR 122.41(m)(2) and 122.41(m)(3) and Minn. R. Ch. 7001.1090, subp. 1, J).

The notice of the need for an anticipated bypass shall include the following information:

a. The proposed date and estimated duration of the bypass;

b. The alternatives to bypassing; and

c. A proposal for effluent sampling during the bypass. Any bypass wastewater must enter waters of the state from outfalls specifically authorized by this permit. Therefore, samples shall be collected at the frequency and location identified in this permit or two times per week for as long as the bypass continues, whichever is more frequent.

Chapter 9. Total Facility Requirements

1. General Requirements

- 1.36 All other bypasses are prohibited. The MPCA may take enforcement action against the Permittee for a bypass, unless the specific conditions described in Minn. R. Ch. 7001.1090 subp. 1, K and 122.41(m)(4)(i) are met.

In the event of an unanticipated bypass, the permittee shall:

- a. Take all reasonable steps to immediately end the bypass.
- b. Notify the Minnesota Department of Public Safety Duty Officer at 1(800)422-0798 or (651)649-5451 (metro area) immediately upon commencement of the bypass. You may contact the MPCA during business hours at 1(800)657-3864 or (651)296-6300 (metro area). (Minn. Stat. Sec 115.061)
- c. Immediately take action as may be reasonably possible to minimize or abate pollution to waters of the state or potential impacts to human health caused thereby. If directed by the MPCA, the Permittee shall consult with other local, state or federal agencies for implementation of abatement, clean-up, or remediation activities.
- d. Only allow bypass wastewater as specified in this section to enter waters of the state from outfalls specifically authorized by this permit. Samples shall be collected at the frequency and location identified in this permit or two times per week for as long as the bypass continues, whichever is more frequent. The permittee shall also follow the reporting requirements for effluent violations as specified in this permit.

Operation and Maintenance

- 1.37 The Permittee shall at all times properly operate and maintain the facilities and systems of treatment and control, and the appurtenances related to them which are installed or used by the Permittee to achieve compliance with the conditions of the permit. Proper operation and maintenance includes effective performance, adequate funding, adequate operator staffing and training, and adequate laboratory and process controls, including appropriate quality assurance procedures. The Permittee shall install and maintain appropriate backup or auxiliary facilities if they are necessary to achieve compliance with the conditions of the permit and, for all permits other than hazardous waste facility permits, if these backup or auxiliary facilities are technically and economically feasible Minn. R. 7001.0150. subp. 3, item F.
- 1.38 In the event of a reduction or loss of effective treatment of wastewater at the facility, the Permittee shall control production or curtail its discharges to the extent necessary to maintain compliance with the terms and conditions of this permit. The Permittee shall continue this control or curtailment until the wastewater treatment facility has been restored or until an alternative method of treatment is provided. (Minn. R. 7001.1090, subp. 1, item C)
- 1.39 Solids Management. The Permittee shall properly store, transport, and dispose of biosolids, septage, sediments, residual solids, filter backwash, screenings, oil, grease, and other substances so that pollutants do not enter surface waters or ground waters of the state. Solids should be disposed of in accordance with local, state and federal requirements. (40 CFR 503 and Minn. R. 7041 and applicable federal and state solid waste rules)
- 1.40 Scheduled Maintenance. The Permittee shall schedule maintenance of the treatment works during non-critical water quality periods to prevent degradation of water quality, except where emergency maintenance is required to prevent a condition that would be detrimental to water quality or human health. (Minn. R. 7001.0150. subp. 3, item F and Minn. R. 7001.0150. subp. 2, item B)
- 1.41 Control Tests. In-plant control tests shall be conducted at a frequency adequate to ensure compliance with the conditions of this permit. (Minn. R. 7001.0150. subp. 3, item F and Minn. R. 7001.0150. subp. 2, item B)

Changes to the Facility or Permit

Chapter 9. Total Facility Requirements

1. General Requirements

- 1.42 Permit Modifications. Except as provided under Minnesota Statutes, section 115.07, subdivisions 1 and 3, no person required by statute or rule to obtain a permit may construct, install, modify, or operate the facility to be permitted, nor shall a person commence an activity for which a permit is required by statute or rule until the agency has issued a written permit for the facility or activity. (Minn. R. 7001.0030)

Permittees that propose to make a change to the facility or discharge that requires a permit modification must follow Minn. R. 7001.0190. If the Permittee cannot determine whether a permit modification is needed, the Permittee must contact the MPCA prior to any action. It is recommended that the application for permit modification be submitted to the MPCA at least 180 days prior to the planned change.

- 1.43 No person required by statute or rule to obtain a permit may construct, install, modify, or operate the facility to be permitted except as provided under Minnesota Statutes, section 115.07, subdivisions 1 and 3, nor shall a person commence an activity for which a permit is required by statute or rule until the agency has issued a written permit for the facility or activity.
- 1.44 Plans, specifications and MPCA approval are not necessary when maintenance dictates the need for installation of new equipment, provided the equipment is the same design size and has the same design intent. For instance, a broken pipe, lift station pump, aerator, or blower can be replaced with the same design-sized equipment without MPCA approval.

If the proposed construction is not expressly authorized by this permit, it may require a permit modification. If the construction project requires an Environmental Assessment Worksheet under Minn. R. 4410, no construction shall begin until a negative declaration is issued and all approvals are received or implemented.

- 1.45 Report Changes. The Permittee shall give advance notice as soon as possible to the MPCA of any substantial changes in operational procedures, activities that may alter the nature or frequency of the discharge, and/or material factors that may affect compliance with the conditions of this permit. (Minn. R. 7001.0150, subp. 3, item M)
- 1.46 Chemical Additives. The Permittee shall receive prior written approval from the MPCA before increasing the use of a chemical additive authorized by this permit, or using a chemical additive not authorized by this permit, in quantities or concentrations that have the potential to change the characteristics, nature and/or quality of the discharge.

The Permittee shall request approval for an increased or new use of a chemical additive at least 60 days, or as soon as possible, before the proposed increased or new use.

This written request shall include at least the following information for the proposed additive:

- a. The process for which the additive will be used;
- b. Material Safety Data Sheet (MSDS) which shall include aquatic toxicity, human health, and environmental fate information for the proposed additive. The aquatic toxicity information shall include at minimum the results of: a) a 48-hour LC50 or EC50 acute study for a North American freshwater planktonic crustacean (either Ceriodaphnia or Daphnia sp.) and b) a 96-hour LC50 acute study for rainbow trout, bluegill or fathead minnow or another North American freshwater aquatic species other than a planktonic crustacean;
- c. A complete product use and instruction label;
- d. The commercial and chemical names and Chemical Abstract Survey (CAS) number for all ingredients in the additive (If the MSDS does not include information on chemical composition, including percentages for each ingredient totaling to 100%, the Permittee shall contact the supplier to have this information provided); and
- e. The proposed method of application, application frequency, concentration, and daily average and maximum rates of use. (Minn. R. 7001.0170)

Chapter 9. Total Facility Requirements

1. General Requirements

1.47 Upon review of the information submitted regarding the proposed chemical additive, the MPCA may require additional information be submitted for consideration. This permit may be modified to restrict the use or discharge of a chemical additive and include additional influent and effluent monitoring requirements.

Approval for the use of an additive shall not justify the exceedance of any effluent limitation nor shall it be used as a defense against pollutant levels in the discharge causing or contributing to the violation of a water quality standard.

1.48 MPCA Initiated Permit Modification, Suspension, or Revocation. The MPCA may modify or revoke and reissue this permit pursuant to Minn. R. 7001.0170. The MPCA may revoke without reissuance this permit pursuant to Minn. R. 7001.0180.

1.49 TMDL Impacts. Facilities that discharge to an impaired surface water, watershed or drainage basin may be required to comply with additional permits or permit requirements, including additional restriction or relaxation of limits and monitoring as authorized by the CWA 303(d)(4)(A) and 40 CFR 122.44.1.2.i., necessary to ensure consistency with the assumptions and requirements of any applicable US EPA approved wasteload allocations resulting from Total Maximum Daily Load (TMDL) studies.

1.50 Permit Transfer. The permit is not transferable to any person without the express written approval of the Agency after compliance with the requirements of Minn. R. 7001.0190. A person to whom the permit has been transferred shall comply with the conditions of the permit. (Minn. R., 7001.0150, subp. 3, item N)

1.51 Facility Closure. The Permittee is responsible for closure and post-closure care of the facility. The Permittee shall notify the MPCA of a significant reduction or cessation of the activities described in this permit at least 180 days before the reduction or cessation. The MPCA may require the Permittee to provide to the MPCA a facility Closure Plan for approval.

Facility closure that could result in a potential long-term water quality concern, such as the ongoing discharge of wastewater to surface or ground water, may require a permit modification or reissuance.

The MPCA may require the Permittee to establish and maintain financial assurance to ensure performance of certain obligations under this permit, including closure, post-closure care and remedial action at the facility. If financial assurance is required, the amount and type of financial assurance, and proposed modifications to previously MPCA-approved financial assurance, shall be approved by the MPCA. (Minn. Stat. Sec. 116.07, subd. 4)

Chapter 9. Total Facility Requirements

1. General Requirements

1.52 Permit Reissuance. If the Permittee desires to continue permit coverage beyond the date of permit expiration, the Permittee shall submit an application for reissuance at least 180 days before permit expiration. If the Permittee does not intend to continue the activities authorized by this permit after the expiration date of this permit, the Permittee shall notify the MPCA in writing at least 180 days before permit expiration.

If the Permittee has submitted a timely application for permit reissuance, the Permittee may continue to conduct the activities authorized by this permit, in compliance with the requirements of this permit, until the MPCA takes final action on the application, unless the MPCA determines any of the following (Minn. R. 7001.0040 and 7001.0160):

- a. The Permittee is not in substantial compliance with the requirements of this permit, or with a stipulation agreement or compliance schedule designed to bring the Permittee into compliance with this permit;
- b. The MPCA, as a result of an action or failure to act by the Permittee, has been unable to take final action on the application on or before the expiration date of the permit;
- c. The Permittee has submitted an application with major deficiencies or has failed to properly supplement the application in a timely manner after being informed of deficiencies.

Submittals and Actions Checklist Belle Plaine WWTP

This checklist is intended to assist you in tracking the reporting requirements of your permit. However, it is only an aid. PLEASE CONSULT YOUR PERMIT FOR THE EXACT REQUIREMENTS.

Please note: This checklist only details submittal requirements for the next five years. DMRs, Annual Reports, and many other submittals are required even after the expiration date of this permit, and continue to be due until the permit is either reissued or terminated.

Submit eDMRs:

Submit eDMRs via the MPCA Online Services
Portal at: <https://netweb.pca.state.mn.us/private/>

Submit other WQ reports to:

Attention: Submittals Center
Minnesota Pollution Control Agency
520 Lafayette Rd N
St. Paul, MN 55155

MPCA Staff Contacts:

For eDMR-related questions:
Jennifer Satnik at (651)757-2692
For other questions:
Chandi McCracken at (651)757-2232

2013

- Submit DMR (due before Nov 22)
- Submit DMR (due before Dec 22)

2014

- Submit DMR (due before Jan 22)
- Submit DMR (due before Feb 22)
- Submit DMR (due before Mar 22)
- Submit DMR (due before Apr 22)
- Submit DMR (due before May 22)
- Submit DMR (due before Jun 22)
- Submit DMR (due before Jul 22)
- Submit DMR (due before Aug 22)
- Submit DMR (due before Sep 22)
- Submit DMR (due before Oct 22)
- Submit DMR (due before Nov 22)
- Submit DMR (due before Dec 22)

2015

- Submit DMR (due before Jan 22)
- Submit DMR (due before Feb 22)
- Submit DMR (due before Mar 22)
- Submit DMR (due before Apr 22)
- Submit DMR (due before May 22)
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- Submit DMR (due before Aug 22)
- Submit DMR (due before Sep 22)
- Submit DMR (due before Oct 22)
- Submit DMR (due before Nov 22)
- Submit DMR (due before Dec 22)

2016

- Submit DMR (due before Jan 22)
- Submit DMR (due before Feb 22)
- Submit DMR (due before Mar 22)
- Submit DMR (due before Apr 22)
- Submit DMR (due before May 22)
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St. Paul, MN 55155

MPCA Staff Contacts:

For eDMR-related questions:
Jennifer Satnik at (651)757-2692
For other questions:
Chandi McCracken at (651)757-2232

2017

- Submit DMR (due before Jan 22)
- Submit DMR (due before Feb 22)
- Submit DMR (due before Mar 22)
- Submit DMR (due before Apr 22)
- Submit DMR (due before May 22)
- Submit DMR (due before Jun 22)
- Submit DMR (due before Jul 22)
- Submit DMR (due before Aug 22)
- Submit DMR (due before Sep 22)
- Submit DMR (due before Oct 22)
- Submit DMR (due before Nov 22)
- Submit DMR (due before Dec 22)

2018

- Submit DMR (due before Jan 22)
- Submit DMR (due before Feb 22)
- Submit a Mercury Pollutant Minimization Plan (due before Mar 4) {Permit Req't. 4.1.3}
- Submit an application for permit reissuance (due before Mar 4) {Permit Req't. 9.1.52}
- Submit DMR (due before Mar 22)
- Submit DMR (due before Apr 22)
- Submit DMR (due before May 22)
- Submit DMR (due before Jun 22)
- Submit DMR (due before Jul 22)
- Submit DMR (due before Aug 22)

Other Submittals

- If, during any cropping year, biosolids were transferred, or not land applied, the Permittee shall submit a Biosolids Annual Report by December 31 following the end of the cropping year. The report shall state that biosolids were not land applied, how much was generated, and where they were transferred to. {Permit Req't. 5.9.2}

Services Provided:

Civil & Municipal Engineering

Water & Wastewater Engineering

Transportation Planning & Engineering

Structural Engineering

Aviation Services

Water Resources Engineering

Landscape Architecture

Land Surveying

Geographic Information System

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