



Chapter Four: Comprehensive Wastewater Plan

COMPREHENSIVE WASTEWATER PLAN

The Metropolitan Urban Service Area (MUSA) boundary in general bisects Andover into a northern and southern portion. The southern portion of the City is served by municipal sanitary sewer. The northern portion of the City has individual sewage treatment systems (ISTS). Sewer flow from the City of Andover is treated by the Metropolitan Council through the Metropolitan Disposal System (MDS), specifically by the Metropolitan Waste Water Treatment Plant (WWTP) in St. Paul.

A. CURRENT AND PROJECTED POPULATION / SEWERED RESIDENCES

As of 2018 the population of Andover is 32,758. Approximately 23,100 persons (70.5%) are currently served by municipal sewer. The remaining 9,658 persons (29.5%) reside in the rural areas of the City or reside within the MUSA and are still served by septic systems. It is anticipated that residences within the MUSA served by private septic systems will ultimately connect to the municipal sewer system as utilities are extended in the future.

The projected population of Andover in 2040 is 39,800. It is expected that 29,800 persons (74.9%) will be served by municipal sewer at that time. The remaining 10,000 persons (25.1%) will reside outside of the MUSA boundary, or may still be living within the MUSA and will not yet be connected to municipal sewer.

Table 4.1 below presents the population, household, and employment forecasts for the City for 2018 (most current estimate), 2020, 2030 and 2040.

**Table 4.1
Population, Household and Employment Forecasts**

	2018	2020	2030	2040
Total Population	32,758	33,500	36,500	39,800
Sewered	23,100	23,900	26,700	29,800
Unsewered	9,658	9,600	9,800	10,000
Total Households	10,550	10,800	12,150	13,500
Sewered	7,450	7,700	8,900	10,100
Unsewered	3,100	3,100	3,250	3,400
Total Employment	6,259	6,300	6,700	7,100
Sewered	4,800	4,800	5,100	5,400
Unsewered	1,459	1,500	1,600	1,700

B. CAPACITY AND DESIGN OF THE EXISTING SYSTEM

The vast majority of properties serviced by municipal sewer in Andover flow into the Metropolitan Council Interceptor MSB 7035 (Coon Rapids Interceptor), a 36” trunk line that is part of the regional system maintained by the Metropolitan Council. Approximately 110 residential connections in the southeast corner of the City as well as the Anoka County Public Safety Campus flow south into lateral systems in Coon Rapids, ultimately flowing into the Coon Rapids Interceptor at Crooked Lake Boulevard. These 110 inter-community connections are depicted in Figure 4.1 in the Appendix. The

Joint Powers Agreement between the Cities of Andover and Coon Rapids regarding these intercommunity connections is included in the Appendix as Figure 4.10.

The existing sewer system in Andover is operating within the design capacity of the lines and lift stations (no surcharging) based upon currently constructed homes. The existing system includes approximately 96.5 miles of gravity sanitary sewer pipe ranging in size from 8" to 36" diameter and approximately 1.7 miles of force main. There are ten sanitary sewer lift stations located throughout the City. Andover's sanitary sewer system is relatively new, with the oldest sewer lines being constructed in 1976 with a larger expansion of the system beginning in the mid to late 1980's through current new developments.

In addition to routine annual inspection of the sewer system, as reconstruction of existing streets occurs, the City completes any repairs necessary to sewer lines and manholes. To date, necessary repairs have been virtually non-existent due to the relative age and condition of the sewer mains. Spot repairs are completed annually on sewer manholes on an as needed basis, which may include spray lining, re-grouting doghouses and adjustment rings, and other miscellaneous repairs.

A detailed analysis maintained in a spreadsheet of the sewer system was completed in 2007 and is updated annually as new connections to the system are added or improvements to the sewer system are completed. The City has divided the existing sanitary sewer system into eight major trunk systems. Each trunk system was analyzed based upon current and ultimate anticipated connections, and existing slope and size. For design purposes, the pipes and lift stations are assumed to be at maximum capacity when they reach 95% of their theoretical peak flow and it is assumed that development will proceed at the high end of density ranges based upon land use mapping. A map of the existing sewer system with tributary areas is included in the Appendix as Figure 4.2. Table 4.2 provides a summary of flows and percent of peak capacity of downstream trunk lines, limiting pipes, and lift stations in each tributary area.

**Table 4.2
Existing Trunk Line Sewer Flows and Capacities (August 2020)**

Trunk Line	Size	Slope	Peak Capacity (MGD) (1)	Exist. Peak Flow (MGD)	Existing % of Peak Capacity
Bluebird Trunk-North from LS 4	10" PVC	0.28%	0.93	0.84	90.7%
Bluebird Trunk-North to LS 10	12" PVC	0.22%	1.33	0.96	72.2%
Bluebird Trunk -South	12" RCP	0.22%	1.11	0.16	14.8%
Bluebird Trunk-South	18" RCP	0.12%	2.40	0.63	26.1%
Pinewood Trunk	18" PVC	0.12%	2.91	1.85	63.8%
Coon Creek Trunk	24" PVC	0.06%	4.43	3.42	77.4%
Crosstown Blvd Trunk	24" RCP	0.07%	3.98	3.62	90.8%
Crosstown Blvd Trunk	24" RCP	0.08%	4.26	3.99	93.6%
Bunker Lake Trunk-West	24" RCP	0.08%	4.26	1.33	31.3%
Bunker Lake Trunk-East	30" RCP	0.20%	12.21	4.37	35.8%
Crooked Lake Blvd Trunk	36" RCP	0.05%	9.93	5.35	53.9%
Lift Station #1	387 GPM	4" DIP	0.32	0.14	42.8%
Lift Station #2	180 GPM	6" DIP	0.25	0.23	95.0%

Lift Station #3	470 GPM	6" DIP	0.64	0.36	56.6%
Lift Station #4	486 GPM	6" PVC	0.84	0.73	86.3%
Lift Station #5	181 GPM	6" DIP	0.25	0.04	16.0%
Lift Station #6	106 GPM	4" PVC	0.145	0.153	105.5%
Lift Station #7	90 GPM	4" DIP	0.13	0.02	11.8%
Lift Station #8	105 GPM	4" DIP	0.14	0.08	57.0%
Lift Station #9	100 GPM	4" DIP	0.31	0.16	51.7%
Lift Station #10	1074 GPM	10" PVC	1.47	1.06	72.4%

(1) Based upon 95% of theoretical maximum capacity.

C. CAPACITY AND PLANS FOR FUTURE SYSTEM

The MCES has allocated 4.0 MGD of sewer flow in the Coon Rapids Interceptor for the City of Andover. Based upon Met Council population projections for the City of Andover, the average projected sewer flow for the City in 2040 is 2.46 million gallons per day (MGD), with a peak of 6.65 MGD. Based upon the City of Andover’s sewer system model, the ultimate average projected sewer flow for the City is 3.16 MGD, with a peak of 8.22 MGD. This ultimate flow would include 100% build out within the MUSA boundary, including connection of all parcels within the current MUSA with septic systems, potential redevelopment within the MUSA, and the potential for some fringe areas adjacent to the MUSA being served at a future date (areas just north and east of the Rural Reserve as shown in Figure 4.3). These areas would require further future study and discussion for potential service when the Rural Reserve develops. This model also assumes that remaining developable land within the MUSA will develop at the high end of the density ranges in the land use maps.

Table 4.3 on the following page provides a summary of the anticipated average and peak sewer flow rates generated by the City of Andover in 5-year increments up to the year 2040. These flow rates are based upon revised Metropolitan Council population, household, and employment projections. These revised projections were updated in the fall of 2019 and differ from the System Statement and 2040 Water Resources Policy Plan. Projected flow rates were calculated by multiplying the projected households by 225 gallons per unit per day. Based upon actual sewer flow rates from the Metropolitan Council at meter M218 for June 2006 – June 2007, and the actual number of sewer connections during that timeframe, the average flow per connection for Andover was 207 gallons per unit per day. Staff discussions with MCES personnel at that time indicated that the average flow per unit for the metro area is approximately 218 gallons per unit per day. City staff chose to use a value of 225 gallons per unit per day for these calculations to be somewhat conservative and to allow for variation in flow and this is the basis of our sewer system model. For commercial / industrial / institutional flows, the number of employees in the sewered portion of the City was multiplied by an assumed flow rate of 35 gallons per employee per day. This rate would include flow from restaurants, schools, businesses, car washes, etc. This flow rate would include flow from employees as well as students, patrons, and customers of these establishments.

**Table 4.3
Projected Sewer Flow in 5-Year Increments**

	2018			2020			2025			2030			2035			2040		
	Pop.	Avg. Flow	Peak Flow															
		MGD	MGD															
Total Pop.	32,758			33,500			35,000			36,500			38,150			39,800		
Sewered	23,100			23,900			25,300			26,700			28,250			29,800		
Unsewered	9,658			9,600			9,700			9,800			9,900			10,000		
Total Households	10,550			10,800			11,475			12,150			12,825			13,500		
Sewered	7,450	1.68		7,700	1.73		8,300	1.87		8,900	2.00		9,500	2.14		10,100	2.27	
Unsewered	3,100			3,100			3,175			3,250			3,325			3,400		
Total Employment	6,259			6,300			6,500			6,700			6,900			7,100		
Sewered	4,800	0.17		4,800	0.17		4,950	0.17		5,100	0.18		5,250	0.18		5,400	0.19	
Unsewered	1,459			1,500			1,550			1,600			1,650			1,700		
Total Sewer Flow (MGD)		1.84	5.35		1.90	5.51		2.04	5.71		2.18	6.11		2.32	6.27		2.46	6.65

To accommodate the projected sewer flows in the City, there are improvements that will need to be made to the existing system. One improvement completed in 2019 was the Yellow Pine Lift Station, which provided a bypass for the Bluebird North Trunk Line to the Pinewood Trunk Line to alleviate downstream capacity issues in the Bluebird South Trunk Line. Two additional major improvements have been identified that will be necessary to handle the anticipated growth in the City. Each improvement is discussed in further detail in the following sections. No additional connections directly to the Metropolitan Disposal System are planned in the City.

Coon Creek Trunk Sewer Line Diversion

This improvement project would include diverting a portion of the flow in the Coon Creek Trunk Line into the Bunker Lake East Trunk Line. A flow diverter would be constructed along the Coon Creek Trunk Line just east of Hanson Boulevard, diverting a portion of the flow south along Hanson Boulevard to Jay Street and ultimately into the Bunker Lake East Trunk Line. This improvement would alleviate capacity issues in the Crosstown Boulevard Trunk Line as development progresses. The force main for this project was constructed in 2019 as Hanson Boulevard was reconstructed along this alignment. The flow diversion structure will be constructed at a future date once upstream development increases flows to near capacity in the Crosstown Trunk Line. Funding for this improvement would come from the City's Trunk Sewer Fund. The trunk lines in Crosstown Boulevard are currently at 93.6% of capacity. It is anticipated that this improvement will be completed sometime within the next five years, pending development timeframes upstream.

Rural Reserve Trunk Sewer Line

Development of the area referred to as the Rural Reserve will require extension of a new sewer trunk line. This trunk line would connect to the existing Crooked Lake Boulevard Trunk system at Bunker Lake Boulevard and Crooked Lake Boulevard. The trunk line will generally extend north from Bunker Lake Boulevard, following Coon Creek up to South Coon Creek Drive, then extend north through the center of the Rural Reserve up to 161st Avenue. There is sufficient grade for this system to be a gravity system, however, several lift stations would likely be constructed to minimize impacts of construction through existing neighborhoods between South Coon Creek Drive and Bunker Lake Boulevard and to minimize the required depth of a gravity system. The trunk line will be designed and constructed once development of the Rural Reserve is imminent. Funding for this trunk line improvement would be paid for through area and connection fees for parcels within the Rural Reserve.

Refer to Figure 4.3 for a map of the proposed sewer system with the aforementioned trunk improvements and tributary areas.

D. PRIVATELY OWNED TREATMENT FACILITIES

The northerly portion of the City of Andover is located outside of the MUSA boundary. In 2018, there were approximately 3,100 residences in the City that had Individual

Sewage Treatment Systems (ISTS). By 2040 it is expected that approximately 3,400 homes will be served by ISTS's. While growth outside of the MUSA is expected to add residences with new ISTS's, it is also anticipated that existing areas within the MUSA currently without municipal sewer service may be served by the sewer system. There are currently no existing public or privately owned Community Wastewater Treatment Facilities in the City. The City does not currently allow use of communal or shared treatment systems, or experimental or alternate systems. The City may consider and allow them on a case-by-case basis in the future.

A map depicting areas of the City with ISTS's is included in the Appendix as Figure 4.5.

Title 10, Chapter 4 of the Andover City Code regulates Individual Sewage Treatment Systems and adopts Minnesota Rules Chapters 7080 and 7081. A copy of this City Code is included in the Appendix as Figure 4.6.

The City Code requires the following items be completed by owners of ISTS's:

- Inspect system and submit a maintenance report to the City every two years.
- Pump systems as often as needed, but at a minimum, every three years.
- Owners must upgrade, replace, or discontinue use of system within six months if the system is found to be non-compliant.
- Systems deemed to be a public nuisance (effluent leaking, noxious odors, etc.) must be abated within 30 days.
- Those persons within the City designing, evaluating, installing, maintaining, or pumping individual sewage treatment systems must be certified by the Minnesota Pollution Control Agency (MPCA) as an Individual Sewage Treatment (ISTS) Professional.

The City's Building Official is responsible for ensuring that all systems are in compliance with City Code. The City of Andover Building Department maintains construction, installation, inspection, and pumping records for all individual sewage treatment systems in the City. Per City Code, if owner's fail to make necessary repairs or complete pumping and inspections as required, the City has the right to contract out such work and assess the costs to the property. The City is not currently aware of any ISTS's that are non-compliant.

A copy of the City's National Pollutant Discharge Elimination System (NPDES) permit and State Disposal System (SDS) permit is included in the Appendix as Figure 4.7.

E. INFLOW AND INFILTRATION

The City of Andover recognizes that inflow and infiltration (I/I) is a problem on a metro-wide scale that could limit the sewer capacity available for growth. Excessive amounts of I/I also increase fees billed to the cities by the MCES for treatment of wastewater. It is in the best interest of the City to minimize I/I entering the sanitary sewer system to

reduce costs and maintain capacity in the system for future growth.

In general, the City of Andover does not have a significant I/I problem. In conversations with MCES personnel and in correlating the average flow and peak flow metering data from M218 with large rainfall events, it is evident that the I/I in Andover is minor. This can be attributed to a relatively new sanitary sewer system, the fact that there are no cross connections with storm sewer systems, the presence of sand deposits throughout the City allowing for subsurface drainage, and the implementation of standard construction and inspection practices for the system. The City sewer system does not operate in a surcharge condition, another indication of limited inflow and infiltration. The City recognizes that as the sewer system ages, the potential for I/I will increase and additional measures to limit I/I in the future will likely be necessary.

Flow metering data from M218 was obtained from the MCES. This data was reviewed to determine an estimate on the percentage of I/I in Andover’s sanitary sewer system. Calculations are in accordance with EPA guidance for estimating I/I. Sewer flow metering data was reviewed from 2010 – 2017. The lowest daily flow in a given year is used as the “Base Sewer Flow” in million gallons per day (MGD). The highest daily flow amount is the “Peak Sewer Flow.” The Average Daily Flow is determined by averaging daily flow data. The following table depicts the Base Sewer Flow, Average Daily Flow, Peak Daily Flow, and Yearly and Peak percentages of I/I in the years 2010-2017.

<u>Year</u>	Base Sewer Flow (MGD)	Average Daily Flow (MGD)	Yearly I/I %	Peak Sewer Flow (MGD)	Peak I/I %
2010	1.210	1.298	6.8%	1.370	11.7%
2011	1.281	1.338	4.3%	1.380	7.2%
2012	1.213	1.295	6.3%	1.350	10.1%
2013	1.260	1.299	3.0%	1.360	7.4%
2014	1.286	1.339	4.0%	1.460	11.9%
2015	1.184	1.286	7.9%	1.350	12.3%
2016	1.187	1.244	4.6%	1.320	10.1%
2017	1.232	1.300	5.2%	1.400	12.0%
Averages	1.232	1.300	5.3%	1.374	10.3%

Based upon the above table, in an average year 5.3% of the metered sewer flow in Andover could be attributed to I/I. An estimated amount of I/I between 2010 and 2017 in a given year would be equal to 1.30 MGD x 365 days/year x 5.3% = 25.15 Million Gallons per year (out of approximately 475 Million Gallons / year of total metered flow).

There are no pre-1970’s era sewer mains or service lines within the City. The first sanitary sewer mains in Andover were constructed in 1976. The majority of sanitary sewer pipes within Andover have been constructed since the mid to late 1980’s.

There are currently approximately 7,700 residences connected to the City's sanitary sewer system. Based upon Anoka County parcel data, there are 453 homes (5.9%) built in 1970 or prior connected to the City's sanitary sewer system. City wide (including areas within and outside of the MUSA boundary), 836 out of 10,800 (7.7%) homes were built in 1970 or prior.

It is unknown if the sewer service lines from the cleanouts (typically at right of way line) to the home in the pre-1970 homes were replaced at the time of connection or if service lines constructed with the sewer mains were connected to existing drain lines from existing septic systems. It's likely that the majority of these sewer service lines connected to the house were installed when the sewer mains were installed (all post 1976) as the majority of septic systems in town are in the rear yards. The City has not completed inspections on the sewer service lines from the main to homes as those are considered privately owned. However, when sewer main lines are televised, the connection points are inspected for any signs of damage or sources of I/I. As the sanitary sewer system ages, further inspection of older services lines may be warranted. This will be determined in the future if I/I becomes a larger percentage of the overall sewer flow in the City.

The following Objectives, Policies and Strategies shall be followed by the City of Andover to ensure that the City maintains the integrity of the sewer system and limit potential sources of I/I.

Objective: Maintain the integrity of the Andover sanitary sewer system by preventing and minimizing potential sources of I/I.

Policies: The City of Andover has implemented the following policies to minimize I/I in new and existing sewer systems:

- City inspection of all publicly installed sewer systems to verify compliance with City Standards.
- Adoption of Construction Engineer Association of America (CEAM) Standard Utility Specifications for pressure testing of lines between manholes.
- Video inspection of all newly constructed sewer lines before project acceptance.
- Jet clean and vacuum 20% of existing sewer lines annually.
- Video inspection of existing sewer lines on an annual basis to the extents practicable.
- Require solid manhole covers with concealed pick holes.
- Periodic visual inspection of manholes. Focus on areas including annual street improvement / reconstruction projects.
- Complete repairs as identified to existing sewer mains and manholes.
- Do not allow discharge of residential drainage systems (sump pumps, drain tiles, roof drains, etc.) into the sanitary sewer system.
- Require disconnection of any existing residential drainage systems that are connected to the sanitary sewer system when discovered.
- Install seals around manholes rings to limit sources of I/I.

Strategies: The following strategies are used by the City of Andover to achieve the aforementioned objective and policies:

- Ensure inspectors for utility projects have adequate knowledge and training to enforce City Standards for construction.
- Require developers of newly constructed sewer lines to submit video inspection tapes for review by City staff prior to project acceptance.
- Provide funding to Public Works to annually televise and inspect existing sanitary sewer lines and make necessary repairs.
- Enforce the Minnesota Plumbing Code, which prohibits discharge of drainage systems directly into the sanitary sewer system. A copy of the Minnesota Plumbing Code, Chapter 11, is included in the Appendix as Figure 4.8.
- Enforce Chapter 10-2-4F of the City Code stating “No person shall make connection of roof downspouts, foundation drains, areaway drains, or other sources of surface runoff or ground water to a building sewer or building drain which in turn is connected directly or indirectly to a public sanitary sewer unless such connection is approved by the City Engineer for purposes of disposal of polluted surface drainage.” A copy of this section of the City Code is included in the Appendix as Figure 4.9.
- Educate residents via City website and newsletter that it is illegal to connect sump pumps or subsurface drains to the sanitary sewer system and educate on items that should not be flushed into the system.

Implementation Plan: As previously discussed, the City of Andover does not have a significant problem with I/I. To help ensure that problems do not occur in the future the following measures will be taken:

- The City will maintain the current plan, policies, and objectives to maintain the integrity of the sewer system.
- Periodic and routine maintenance of the system will identify areas needing repair to limit potential I/I. Financing will come from the Trunk Sewer Fund.
- In the future as the sewer system ages, it is anticipated that additional maintenance and repairs will be necessary and will be completed.
- In the future as the system ages, the City will monitor pumping meter data from Met Council Meter 218
- The City will enforce the City Code requiring disconnection of illegal sewer connections when discovered, including through televising of the sewer mains.
- The City Building Inspectors will inspect newly constructed sewer service connections to verify that they comply with the Minnesota Plumbing Code.

WASTEWATER AND COMPREHENSIVE SEWER PLAN APPENDIX

Figure 4.1: Inter- Community Connections

Figure 4.2: Existing Sanitary System

Figure 4.3: Proposed Sanitary System

Figure 4.4: Sewer Staging Plan 2020-2040

Figure 4.5: Individual Sewage Treatment Systems Map (ISTS)

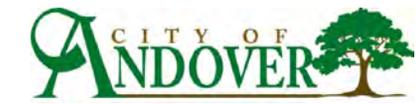
Figure 4.6: Andover City Code Title 10, Chapter 4: Individual Sewage Treatment Systems

Figure 4.7: National Pollutant Discharge Elimination System (NPDES) and State Disposal System (SDS) permit

Figure 4.8: Minnesota Plumbing Code Chapter 11, Storm Drainage

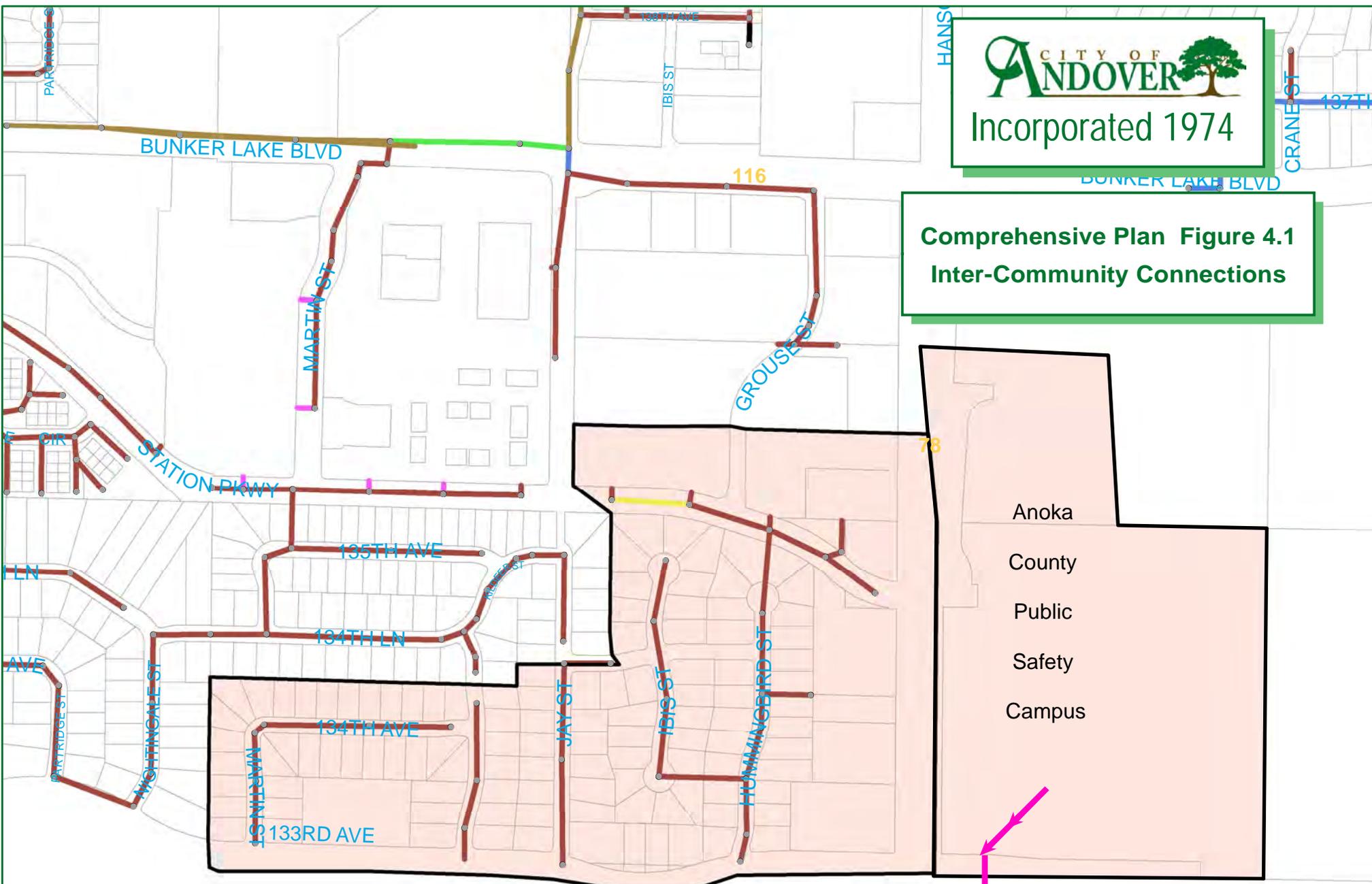
Figure 4.9: Andover City Code Title 10, Chapter 2: Sewer Use and Service

Figure 4.10: Intercommunity Connection Joint Powers Agreement with Coon Rapids



Incorporated 1974

Comprehensive Plan Figure 4.1 Inter-Community Connections



LEGEND

- Sanitary Sewer Zone with Service from Coon Rapids
- 8" Gravity Sewer Main
- 6" Gravity Sewer Main




SOURCES:
Andover GIS
Andover Engineering
Andover Public Works
Andover Engineering

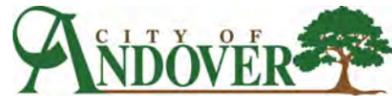
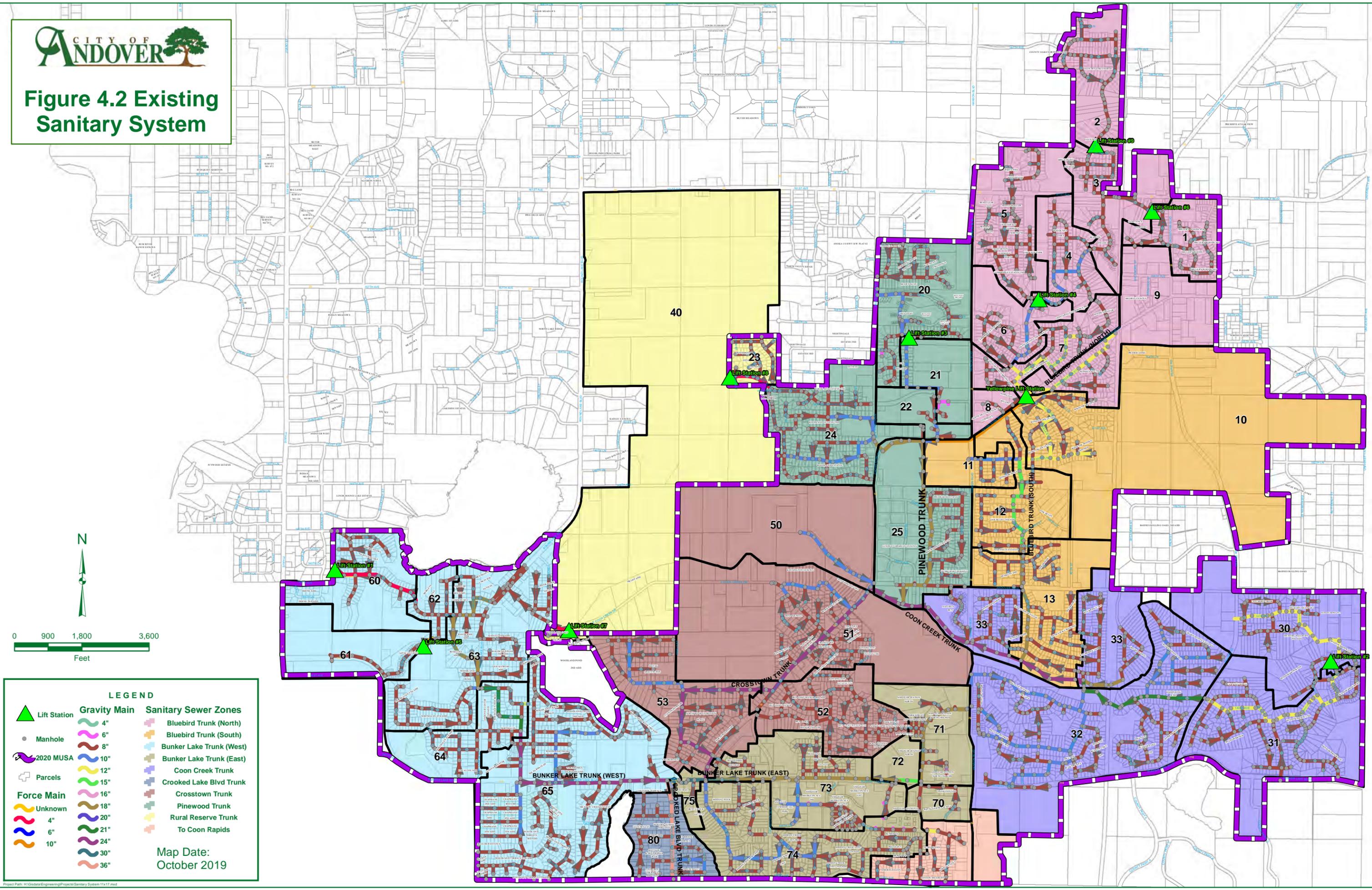


Figure 4.2 Existing Sanitary System



LEGEND

Lift Station	Gravity Main	Sanitary Sewer Zones
Manhole	4"	Bluebird Trunk (North)
2020 MUSA	6"	Bluebird Trunk (South)
Parcels	8"	Bunker Lake Trunk (West)
Force Main	10"	Bunker Lake Trunk (East)
Unknown	12"	Coon Creek Trunk
4"	15"	Crooked Lake Blvd Trunk
6"	16"	Crosstown Trunk
10"	18"	Pinewood Trunk
	20"	Rural Reserve Trunk
	21"	To Coon Rapids
	24"	
	30"	
	36"	

Map Date:
October 2019

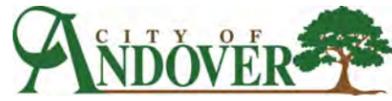
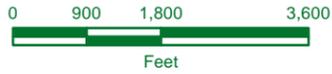
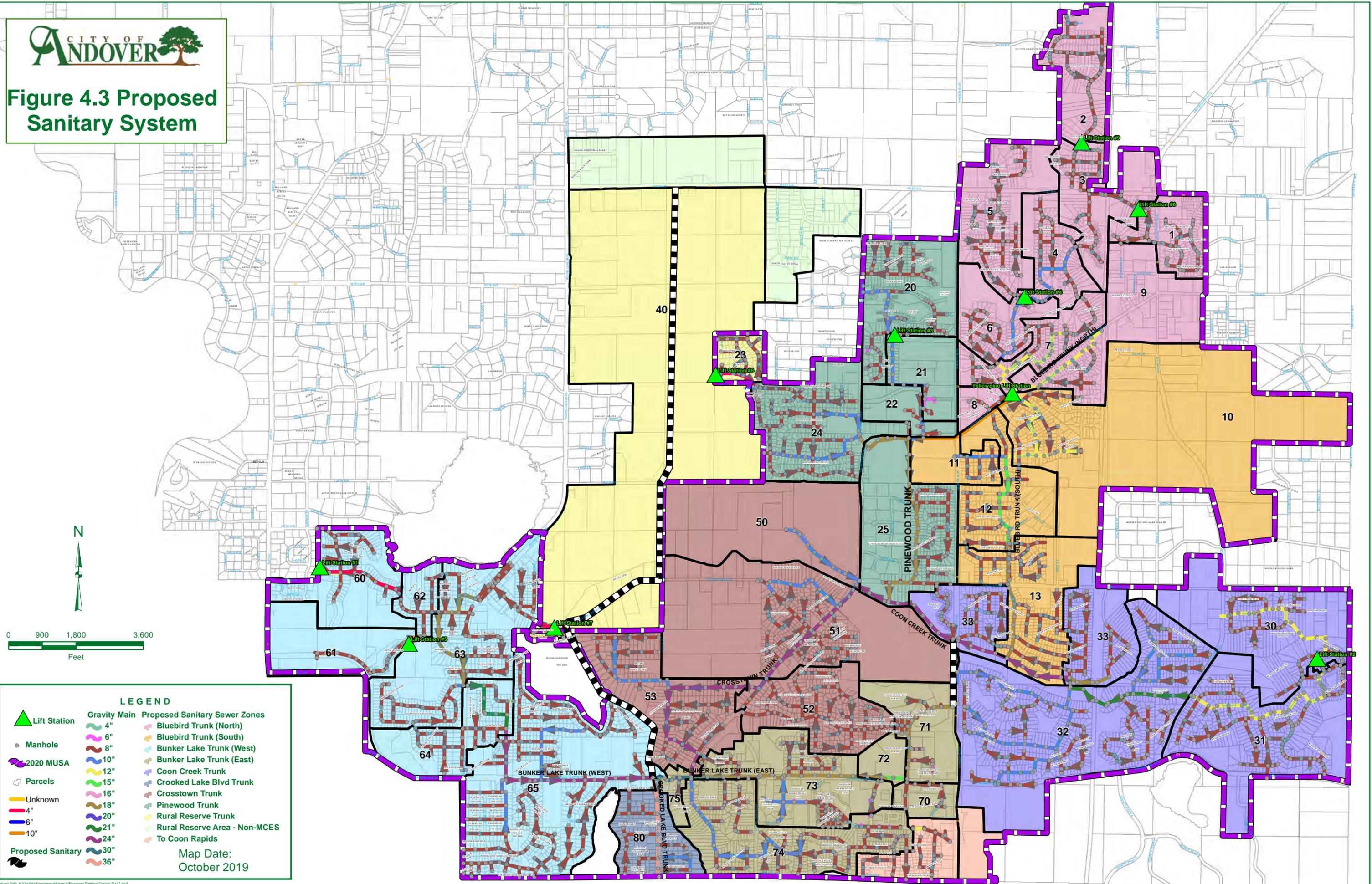


Figure 4.3 Proposed Sanitary System



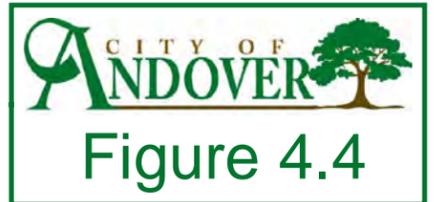
LEGEND

- Lift Station
- Manhole
- 2020 MUSA
- Parcels
- Unknown
- 4"
- 6"
- 10"
- Proposed Sanitary
- Gravity Main
- 4"
- 6"
- 8"
- 10"
- 12"
- 15"
- 16"
- 18"
- 20"
- 21"
- 24"
- 30"
- 36"
- Bluebird Trunk (North)
- Bluebird Trunk (South)
- Bunker Lake Trunk (West)
- Bunker Lake Trunk (East)
- Coon Creek Trunk
- Crooked Lake Blvd Trunk
- Crosstown Trunk
- Pinewood Trunk
- Rural Reserve Trunk
- Rural Reserve Area - Non-MCES
- To Coon Rapids

Map Date:
October 2019

ELEMENTS INDIAN TRIBES FLOWERS BIRDS TREES

FLORIANE ST. NW
ERLUM ST. NW
DYSPROSIUM ST. NW
COBALT ST. NW
BARUM ST. NW
ARGON ST. NW
ZORN ST. NW
FACHAS ST. NW
AKIMOS ST. NW
WICO ST. NW
VENTRE ST. NW
UTEST ST. NW
TONTOST ST. NW
SALASH ST. NW
ROUVRE ST. NW
QUANW ST. NW
POWANTOMI ST. NW
ONEDA ST. NW
MAYAGO ST. NW
MAKAM ST. NW
LIPAN ST. NW
KOWA ST. NW
JUMBO ST. NW
JCSA ST. NW
HOP ST. NW
GUMANN ST. NW
FOX ST. NW
ELORADO ST. NW
DAROTA ST. NW
CREE ST. NW
BLACKFOOT ST. NW
SZEK ST. NW
ZEAST ST. NW
FUCCA ST. NW
XENIA ST. NW
WOODBINE ST. NW
VINAGE ST. NW
UNDERCLIFF ST. NW
TULIP ST. NW
SUPERIOR ST. NW
ROBE ST. NW
QUIN ST. NW
POPPY ST. NW
ORCHID ST. NW
MARGOLIS ST. NW
MARGOLD ST. NW
LIDE ST. NW
KERRY ST. NW
JONGUE ST. NW
PYWOOD ST. NW
HEATHER ST. NW
GLADORA ST. NW
FLORA ST. NW
EDENHES ST. NW
DAMILA ST. NW
GRACIS ST. NW
BUTERWELT ST. NW
AMONLEAD ST. NW
ZON ST. NW
YUON ST. NW
XAVIS ST. NW
WREN ST. NW
VERDIN ST. NW
UPANDOR ST. NW
THRESH ST. NW
SWALLOW ST. NW
RAVEN ST. NW
QUINN ST. NW
OSAGE ST. NW
PARKRIDGE ST. NW
OSAGE ST. NW
NIGHTINGALE ST. NW
LONNET ST. NW
KILDEER ST. NW
JAY ST. NW
HUMINGBIRD ST. NW
GRUISE ST. NW
FLAMINGO ST. NW
ENGLE ST. NW
DARAKE ST. NW
CRANE ST. NW
ALBERD ST. NW
AVOCET ST. NW
ZILAST ST. NW
YELLOW PINE ST. NW
XEON ST. NW
WINTERGREEN ST. NW
VALE ST. NW
UNPFE ST. NW
FAMRACKST. NW
STAMORE ST. NW
REDWOOD ST. NW
QUINCE ST. NW
PALM ST. NW
OLIVE ST. NW
NORWAY ST. NW
MAGNOLIA ST. NW
LARCH ST. NW
KUMQUAT ST. NW
JUNIPER ST. NW
ILEX ST. NW
HOLLY ST. NW
GOLDENROD ST. NW
FLEWYWOOD ST. NW
EVERGREEN ST. NW
DOCKWOOD ST. NW
COTTONWOOD ST. NW
BUTTERNUT ST. NW
ALDER ST. NW
UNIVERSITY AVE. EXT.



SEWER STAGING PLAN

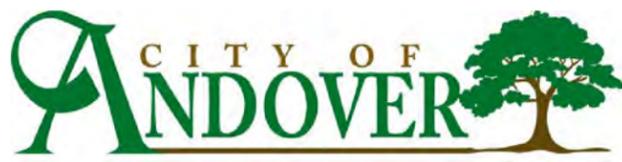
The Sewer Staging Plan divides undeveloped land within the Municipal Urban Service Area into five year growth stages based primarily on the proximity of municipal sewer and water. The growth stages are intended to provide a reasonable estimate of urban growth to the year 2040.

City of Andover - Planning Department
1685 Crosstown Blvd. NW Andover, MN 55304
(763) 755-5100

Map Date: September 2020

LEGEND

- MUSA Boundary
- 2020-2025
- 2026-2030
- 2031-2035
- 2036-2040
- Rural Reserve



ELEMENTS

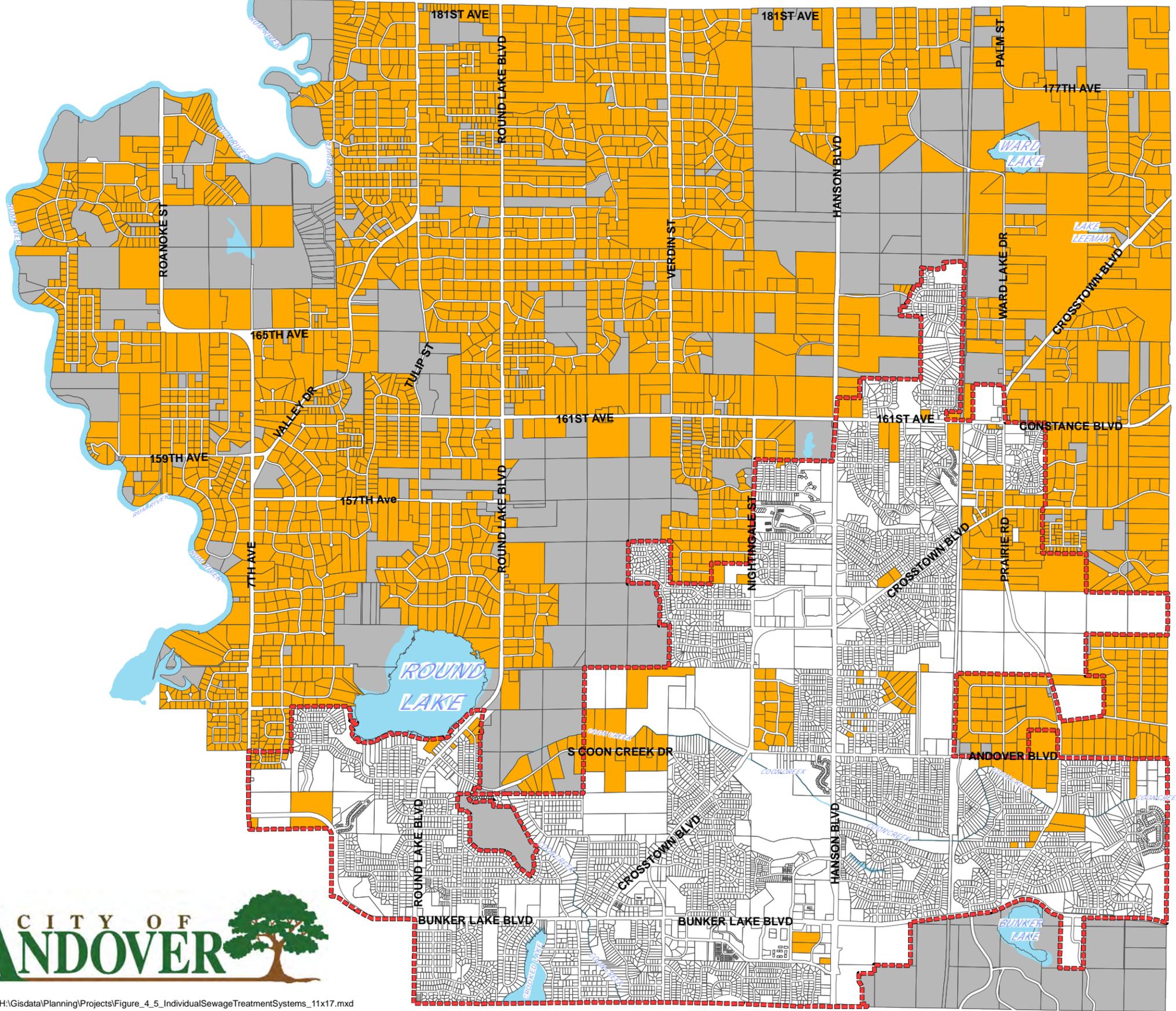
INDIAN TRIBES

FLOWERS

BIRDS

TREES

- ELGURINE ST. NW
- ERLUM ST. NW
- DISPOSITION ST. NW
- COBALT ST. NW
- BARUM ST. NW
- ARGON ST. NW
- ZUNI ST. NW
- TAKOMA ST. NW
- VERHO ST. NW
- WICO ST. NW
- VENTRE ST. NW
- UTES ST. NW
- TONTO ST. NW
- SALASH ST. NW
- ROANOKE ST. NW
- QUAWW ST. NW
- POWANAGAM ST. NW
- ONDEKA ST. NW
- MAKAW ST. NW
- LIPAN ST. NW
- KOWA ST. NW
- JIWAGOST ST. NW
- INCA ST. NW
- HOP ST. NW
- GLARANI ST. NW
- FOX ST. NW
- ELORADO ST. NW
- DAKOTA ST. NW
- CHIEF ST. NW
- BLACKFOOT ST. NW
- AZTEC ST. NW
- ZEN ST. NW
- TUCACA ST. NW
- SEMA ST. NW
- WOODBINE ST. NW
- VINFACE ST. NW
- UNDERLEFT ST. NW
- TULIP ST. NW
- SILVERD ST. NW
- ROSE ST. NW
- QUIN ST. NW
- POPPY ST. NW
- ORCHID ST. NW
- NARCISUS ST. NW
- MARGOLD ST. NW
- LEL ST. NW
- KERRY ST. NW
- JONQUIL ST. NW
- HYWOOD ST. NW
- HEATHER ST. NW
- GLADOLA ST. NW
- FLORA ST. NW
- EDELWEISS ST. NW
- DALLAS ST. NW
- CROCUS ST. NW
- HYPERICUM ST. NW
- ARNOCHAD ST. NW
- ZION ST. NW
- YUNON ST. NW
- XAVIS ST. NW
- WREN ST. NW
- VERDIN ST. NW
- UPLANDER ST. NW
- THORN ST. NW
- SWALLOW ST. NW
- AVEN ST. NW
- QUINN ST. NW
- PATRIDGE ST. NW
- OSAGE ST. NW
- NIGHTINGALE ST. NW
- MARTIN ST. NW
- LANE ST. NW
- KILLDEER ST. NW
- AY ST. NW
- BIR ST. NW
- HAMINGBIRD ST. NW
- GROUSE ST. NW
- FLAMINGO ST. NW
- EGGLE ST. NW
- DRAKE ST. NW
- CRANE ST. NW
- BELLERBD ST. NW
- AVOCET ST. NW
- ZILLA ST. NW
- YELLOW PINE ST. NW
- SEON ST. NW
- WATERBURY ST. NW
- WALE ST. NW
- UNTY ST. NW
- TAMARACK ST. NW
- STAMORE ST. NW
- REDWOOD ST. NW
- QUINCE ST. NW
- PALM ST. NW
- OLIVE ST. NW
- NORWAY ST. NW
- MAGNOLIA ST. NW
- LARCH ST. NW
- KUMQUAT ST. NW
- JUNIPER ST. NW
- BEAK ST. NW
- HOLLY ST. NW
- GOLDENROD ST. NW
- FLYWOOD ST. NW
- EYEBROOK ST. NW
- DOGWOOD ST. NW
- COTTONWOOD ST. NW
- BUTTERNUT ST. NW
- ALDER ST. NW
- UNIVERSITY AVE. EXT.



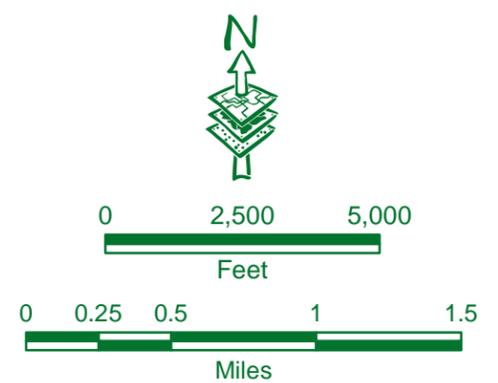
- 181ST AVE. NW
- 180TH AVE. NW
- 179TH AVE. NW
- 178TH AVE. NW
- 177TH AVE. NW
- 176TH AVE. NW
- 175TH AVE. NW
- 174TH AVE. NW
- 173RD AVE. NW
- 172ND AVE. NW
- 171ST AVE. NW
- 170TH AVE. NW
- 169TH AVE. NW
- 168TH AVE. NW
- 167TH AVE. NW
- 166TH AVE. NW
- 165TH AVE. NW
- 164TH AVE. NW
- 163RD AVE. NW
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- 153RD AVE. NW
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- 150TH AVE. NW
- 149TH AVE. NW
- 148TH AVE. NW
- 147TH AVE. NW
- 146TH AVE. NW
- 145TH AVE. NW
- 144TH AVE. NW
- 143RD AVE. NW
- 142ND AVE. NW
- 141ST AVE. NW
- 140TH AVE. NW
- 139TH AVE. NW
- 138TH AVE. NW
- BUNKER LAKE BLVD.
- 136TH AVE. NW
- 135TH AVE. NW
- 134TH AVE. NW
- 133RD AVE. NW



Individual Sewage Treatment Systems
Figure 4.5
 City of Andover - Planning Department
 1685 Crosstown Blvd. NW Andover, MN 55304
 (763) 755-5100
 Map Date: May 2020

LEGEND

- Non-Compliant ISTS
- MUSA Boundary
- Private Septic Sewer Properties
- Area Outside of MUSA



CHAPTER 4

INDIVIDUAL SEWAGE TREATMENT SYSTEMS¹

SECTION:

- 10-4-1: Purpose, Applicability, and Authority
- 10-4-2: General Provisions
- 10-4-3: Standards Adopted
- 10-4-4: Permits
- 10-4-5: Violations and Penalties

10-4-1: **PURPOSE, APPLICABILITY, AND AUTHORITY:**

- A. Purpose. It is the purpose and intent of this ordinance to establish standards for the design, location, construction, operation, and maintenance of Subsurface Sewage Treatment Systems (SSTS).
- B. Applicability. This ordinance shall apply to those sites or facilities which are licensed, permitted, or otherwise regulated by City ordinance. The sewer provisions of this ordinance shall also apply to any premises in the City that are not served by a sewage treatment system permitted by the Minnesota Pollution Control Agency or are located in a city or township which has not adopted a subsurface sewage treatment system ordinance.
- C. Authority. This ordinance is adopted pursuant to the authorization and requirements contained in Minnesota Statutes §145A.05, 115.55 and Minnesota Administrative Rules Chapter 7082. (*Ord. 221, 5-6-1997; amd. 2003 Code; amd. 1-2-07, Ord. 338; Ord. 432*)

10-4-2: **GENERAL PROVISIONS:**

- A. Treatment Required. All sewage generated, in unsewered areas shall be treated and dispersed by an approved SSTS or a system permitted by the Minnesota Pollution Control Agency.

¹ See also sections 3-3-5, 10-2-3, and 13-4-6H2 of this code.

- B. Administrative Policy and Procedures. The provisions of the Andover City Ordinance, Title 1, apply to the administration and enforcement of this Ordinance, unless otherwise expressly provided for in this Ordinance.
- C. Administration. This Ordinance shall be administered by the Andover City Building Inspections Department. The term "Department," where used in this ordinance and the Administrative Procedures Ordinance, shall mean the Andover City Building Inspections Department.
- D. Compliance. No person shall cause or permit the location, construction, alteration, extension, conversion, operation, or maintenance of a subsurface sewage treatment system, except in full compliance with the provisions of this ordinance.
- E. Conditions. Violation of any condition imposed by the City on a license, permit, or variance, shall be deemed a violation of this ordinance and subject to the penalty provisions set forth in this ordinance.
- F. Site Evaluation, System Design, Construction, Inspection, and Servicing. Site evaluation, and system design, construction, inspection and system servicing shall be performed by Minnesota Pollution Control Agency licensed SSTS businesses or qualified employees of local governments or persons exempt from licensing in Minn. R. 7083.0700. For lots platted after April 1, 1996, a design shall evaluate and locate space for a second soil treatment area.
- G. Inspection. No part of an individual sewage treatment system shall be covered until it has been inspected and approved by the Department. If any part of the system is covered before being inspected and approved as herein provided, it shall be uncovered upon the direction of the Department. The Department shall cause such inspections as are necessary to determine compliance with this ordinance. It shall be the responsibility of the permittee to notify the Department that the system is ready for inspection. If the integrity of the system is threatened by adverse weather if left open and the Department is unable to conduct an inspection, the permittee may, after receiving permission from the Department document compliance with the ordinance by photographic means that show said compliance and submit that evidence to the Department prior to final approval being sought.
- H. Compliance Inspection Required. A SSTS compliance inspection is required:
1. For a new or replacement SSTS.
 2. When altering an existing structure to add a bedroom.
 3. When a parcel having an existing system undergoes development, subdivision, or split.
- I. Imminent Public Health and Safety Threat; Failing System; and Surface Discharge.

1. A subsurface sewage treatment system which poses an imminent threat to public health and safety shall immediately abate the threat according to instructions by the Department and be brought into compliance with this ordinance in accordance with a schedule established by the Department, which schedule will not exceed ten (10) months.
 2. A failing system, an SSTS that is not protective of groundwater, shall be brought into compliance within twenty-four months after receiving notice from the Department.
 3. An SSTS discharging raw or partially treated wastewater to ground surface or surface water is prohibited unless permitted under the National Pollution Discharge Elimination System.
- J. Conflict Resolution. For SSTS systems regulated under this Ordinance, conflicts and other technical disputes over new construction, replacement and existing systems will be managed in accordance with the Andover City Administrative Procedures Ordinance, Title 1.
- K. Septic Tank Maintenance. The owner of a sewage tank, or tanks, shall regularly, but not less frequently than every three years (unless otherwise approved by the Department due to limited use), inspect the tank(s) and measure the accumulations of sludge, and scum. If the system is pumped, measurement is not needed. The owner shall remove and sanitarily dispose of septage whenever the top of the sludge layer is less than 12 inches below the bottom of the outlet baffle or the bottom of the scum layer is less than 3 inches above the bottom of the outlet baffle. Removal of septage shall include complete removal of scum and sludge.
- L. Non-Complying Systems. Existing systems which are non-complying, but not an imminent health or safety threat, failing, or discharging to surface, may continue in use so long as the use is not changed or expanded. If the use changes or is expanded, the non-complying elements of the existing system must be brought into compliance.
- M. Non-Complying Work. New individual sewage treatment system construction that is non-compliant, or other work on a system that is non-complying, must be brought into compliance with this ordinance in accordance with a schedule established by the Department, which schedule will not exceed seven days unless the Department finds extenuating circumstances.
- N. Change In Use. A Certificate of Compliance may be voided if, subsequent to the issuance of the certificate, the use of the premises or condition of the system has changed or been altered.
- O. Setback Reduction. Where conditions prevent the construction, alteration, and/or repair of an individual sewage treatment system on an existing developed parcel

of real property, the Department may reduce property line and building setbacks and system sizing requirements provided said reduction does not endanger or unreasonably infringe on adjacent properties and with the concurrence of the affected properties.

- P. Floodplain. An SSTS shall not be located in a floodway or floodplain. Location within the flood fringe is permitted provided that the design complies with this ordinance and all of the rules and statutes incorporated by reference.
- Q. Class V Injection Wells. All owners of new or replacement SSTS that are considered to be Class V injection wells, as defined in the Code of Federal Regulations, title 40, part 144, are required by the Federal Government to submit SSTS inventory information to the Environmental Protection Agency. (*Amd. 1/2/07, Ord. 338; Amd. 1/2/07, Ord. 338; Amd. 1/2/07, Ord. 338; Ord. 221, 5-6-1997; amd. 2003 Code; Amd. 1/2/07, Ord. 338*)

10-4-3 STANDARDS ADOPTED

- A. Minnesota Rules Adopted. Minnesota Rules, Chapters 7080 and 7081, that are in effect on the date of passage of this ordinance, relating to subsurface sewage treatment systems, are hereby adopted by reference and made a part of this ordinance as if fully set forth herein.
- B. Rules Amended. The rules, adopted in Section 3.01 are amended as follows:
 - 1. Compliance Inspection - 15 Percent Vertical Separation Reduction. MR 7080.1500 Subp. 4D is amended to allow 15 percent reduction of vertical separation (separation distance no less than 30.6 inches) may be determined to be compliant for existing systems to account for settling and variable interpretation of soil characteristics.
- C. Holding Tanks. Holding tanks may be allowed for the following applications; as replacement to a failing existing system, an SSTS that poses an imminent threat to public health and safety, or for an existing lot in which a SSTS cannot feasibly be installed and the Department finds extenuating circumstances.
- D. System Abandonment. An SSTS, or component thereof, that is no longer intended to be used must be abandoned in accordance with the adopted standards of this Ordinance. (*Ord. 432, 11/19/13*)

10-4-4 PERMITS

- A. Permit Required. No person shall cause or allow the location, construction, alteration, extension, conversion, or modification of any subsurface sewage treatment system without first obtaining a permit for such work from the

Department. No person shall construct, alter, extend, convert, or modify any structure which is or will utilize subsurface sewage treatment system without first obtaining a permit.

1. All work performed on an SSTS shall be done by an appropriately licensed business, qualified employees or persons exempt from licensing.¹ Permit applications shall be submitted by the person doing the individual subsurface sewage treatment system construction on forms provided by the Department and accompanied by required site and design data, and permit fees.
2. Permits shall only be issued to the person doing the individual sewage treatment system construction.
3. Permit applications for new and replacement SSTS shall include a management plan for the owner that includes a schedule for septic tank maintenance.
4. A permit is not required for minor repairs or replacement of damaged or deteriorated components that do not alter the original function, change the treatment capacity, change the location of system components or otherwise change the original system's design, layout, or function.

B. Operating Permit. An operating permit shall be required of all owners of new holding tanks, Type IV and V systems; MSTs and other SSTS that the Department has determined requires operational oversight.

1. Application. Application for an operating permit shall be made on a form provided by the Department.
2. Holding Tanks. The owner of holding tanks installed after the effective date of this Ordinance shall provide the Department with a copy of a contract with a licensed sewage maintenance business for monitoring and removal of holding tank contents. (*Ord. 432, 11/19/13*)

¹ See also sections 10-1-7 and 10-2-5 of this Title

10-4-5 VIOLATIONS AND PENALTIES

- A. Misdemeanor. Any person who fails to comply with the provisions of this ordinance may be charged with a misdemeanor and upon conviction thereof, shall be punished therefore, as provided by law. A separate offense shall be deemed committed upon each day during or on which a violation occurs or continues.
- B. Injunctive Relief. In the event of a violation or a threat of violation of this ordinance, the Department may institute appropriate actions or proceedings to include injunctive relief to prevent, restrain, correct or abate such violations or threatened violations; and the City Attorney may institute a civil action.
- C. Civil Action. In the event of a violation of this ordinance, the City may institute appropriate actions or proceedings to include injunctive relief to prevent, restrain, correct, or abate such violations, or threatened violations, and the City Attorney may institute such action. (*Ord. 432, 11/19/13*)



Minnesota Pollution Control Agency

**GENERAL PERMIT
AUTHORIZATION TO DISCHARGE STORMWATER
ASSOCIATED WITH SMALL MUNICIPAL SEPARATE STORM SEWER SYSTEMS
UNDER THE NATIONAL POLLUTANT DISCHARGE ELIMINATION
SYSTEM/STATE DISPOSAL SYSTEM (NPDES/SDS) PERMIT PROGRAM**

EFFECTIVE DATE: August 1, 2013

EXPIRATION DATE: July 31, 2018

In compliance with the provisions of the federal Clean Water Act (CWA), as amended, (33 U.S.C. 1251 et seq); 40 CFR Parts 122, 123, and 124, as amended; Minnesota Statutes Chapters 115 and 116, as amended; and Minnesota Rules Chapter 7001 and 7090.

This permit establishes conditions for discharging **stormwater** and specific other related discharges to **waters of the state**. This permit is required for discharges that are from **small Municipal Separate Storm Sewer Systems (small MS4)**, as defined in this permit.

Applicants who submit a complete application in accordance with the requirements of Part II of this permit, and that receive written notification of permit coverage from the **Commissioner**, are authorized to discharge **stormwater** from **small MS4s** under the terms and conditions of this permit.

This permit shall become effective on the date identified above, and supersedes the previous **general permit** MNR040000, with an expiration date of May 31, 2011.

Signature: *John Linc Stine* Date *May 22, 2013*
John Linc Stine
Commissioner
Minnesota Pollution Control Agency

If you have questions on this permit, including the specific permit requirements, permit reporting or permit compliance status, please contact the appropriate Minnesota Pollution Control **Agency** offices.

**Municipal Stormwater Program
Municipal Division
Minnesota Pollution Control Agency
520 Lafayette Road North
St. Paul, MN 55155-4194
Telephone: 651-296-6300 or toll free in Minnesota: 800-657-3864**

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PART I. AUTHORIZATION UNDER THIS PERMIT

A. Eligibility

To be eligible for authorization to discharge **stormwater** under this permit, the applicant must be an **owner** and/or **operator (owner/operator)** of a **small MS4** and meet one or more of the criteria requiring permit issuance as specified in Minn. R. 7090.1010.

1. Authorized **Stormwater** Discharges

This permit authorizes **stormwater** discharges from **small MS4s** as defined in 40 CFR § 122.26(b)(16).

2. Authorized **Non-Stormwater Discharges**

The following categories of **non-stormwater discharges** or flows are authorized under this permit to enter the **permittee's small MS4** only if the **permittee** does not identify them as significant contributors of pollutants (i.e., **illicit discharges**), in which case the discharges or flows shall be addressed in the **permittee's SWPPP**: water line flushing, landscape irrigation, diverted stream flows, rising groundwaters, uncontaminated groundwater infiltration (as defined at 40 CFR § 35.2005(b)(20)), uncontaminated pumped groundwater, discharges from potable water sources, foundation drains, air conditioning condensation, irrigation water, springs, water from crawl space pumps, footing drains, lawn watering, individual residential car washing, flows from riparian habitats and **wetlands**, dechlorinated swimming pool discharges, street wash water, and discharges or flows from firefighting activities.

B. Limitations on Authorization

The following discharges or activities are not authorized by this permit:

1. **Non-stormwater discharges**, except those authorized in Part I.A.2.
2. Discharges of **stormwater** to the **small MS4** from activities requiring a separate NPDES/SDS permit. This permit does not replace or satisfy any other permitting requirements.
3. Discharges of **stormwater** to the **small MS4** from any other entity located in the drainage area or outside the drainage area. Only the **permittee's small MS4** and the portions of the storm sewer system that are under the **permittee's** operational control are authorized by this permit.
4. This permit does not replace or satisfy any environmental review requirements, including those under the Minnesota Environmental Policy Act (Minn. Stat. § 116D), or the National Environmental Policy Act (42 U.S.C. §§ 4321 - 4370 f).
5. This permit does not replace or satisfy any review requirements for endangered or threatened species, from new or expanded discharges that adversely impact or contribute to adverse impacts on a listed endangered or threatened species, or adversely modify a designated critical habitat.

6. This permit does not replace or satisfy any review requirements for historic places or archeological sites, from new or expanded discharges which adversely affect properties listed or eligible for listing in the National Register of Historic Places or affecting known or discovered archeological sites.
7. Prohibited discharges pursuant to Minn. R. 7050.0180, subp. 3, 4, and 5.

C. Permit Authorization

In order for an applicant to be authorized to discharge **stormwater** from a **small MS4** under this permit:

1. The applicant shall submit a complete application to discharge **stormwater** under this permit in accordance with Part II.
2. The **Commissioner** shall review the permit application for completeness and compliance with this permit.
 - a. If an application is determined to be incomplete, the **Commissioner** will notify the applicant in writing, indicate why the application is incomplete, and request that the applicant resubmit the application.
 - b. If an application is determined to be complete, the **Commissioner** shall make a preliminary determination as to whether the permit should be issued or denied in accordance with Minn. R. 7001.
3. The **Commissioner** shall provide public notice with the opportunity for a hearing on the preliminary determination.
4. Upon receipt of written notification of final approval of the application from the **Commissioner**, the applicant is authorized to discharge **stormwater** from the **small MS4** under the terms and conditions of this permit.

D. Transfer of Ownership or Control

Where the ownership or significant operational control of the **small MS4** changes after the submittal of an application under Part II, the new **owner/operator** must submit a new application in accordance with Part II.

E. Issuance of Individual Permits

1. The permit applicant may request an individual permit in accordance with Minn. R. 7001.0210, subp.6, for authorization to discharge **stormwater** associated with a **small MS4**.
2. The **Commissioner** may require an individual permit for the permit applicant or **permittee** covered by a **general permit**, in accordance with Minn. R. 7001.0210, subp. 6.

F. Rights and Responsibilities

1. The **Commissioner** may modify this permit or issue other permits, in accordance with Minn. R. 7001, to include more stringent effluent limitations or permit requirements that modify

or are in addition to the MCMs in Part III.D of this permit, or both. These modifications may be based on the **Commissioner's** determination that such modifications are needed to protect water quality.

2. The **Commissioner** may designate additional **small MS4s** for coverage under this permit in accordance with Minn. R. 7090. The **owner/operator** of a **small MS4** that is designated for coverage must comply with the permit requirements by the dates specified in the **Commissioner's** determination.

PART II. APPLICATION REQUIREMENTS

A. Application for Reauthorization

If a permit has been issued by the **Agency** and the **permittee** holding the permit desires to continue the permitted activity beyond the expiration date of the permit, the **permittee** shall submit a written application for permit reissuance at least 180 days before the expiration date of the existing permit. (Minn. R. 7001.0040, subp.3).

B. New Permittee Applicants

To become a **new permittee** authorized to discharge **stormwater** under this permit, the **owner/operator** of a **small MS4** shall submit an application, on a form provided by the **Commissioner**, in accordance with the schedule in Appendix A, Table 3, and the following requirements:

1. Submit Part 1 of the permit application (includes the permit application fee).
2. Submit Part 2 of the permit application, with the **Stormwater Pollution Prevention Program (SWPPP)** document completed in accordance with Part II.D.

C. Existing Permittee Applicants

All **existing permittees** seeking to continue discharging **stormwater** associated with a **small MS4** after the **effective date** of this permit shall submit Part 2 of the permit application, on a form provided by the **Commissioner**, in accordance with the schedule in Appendix A, Table 1, with the **SWPPP** document completed in accordance with Part II.D. **NOTE: Existing permittees** were required to submit Part 1 of the permit application prior to the expiration date (May 31, 2011) of the **Agency's small MS4 general permit No.MNR040000**, effective June 1, 2006, (see Part II.A above).

D. Stormwater Pollution Prevention Program (SWPPP) Document

All applicants shall submit a **SWPPP** document with Part 2 of the application form when seeking coverage under this permit. The **SWPPP** document shall become an enforceable part of this permit upon approval by the **Commissioner**. Modifications to the **SWPPP** document that are required or allowed by this permit (see Part III.G) shall also become enforceable provisions. The **SWPPP** document shall be submitted on a form provided by the **Commissioner** and shall include the following:

1. A description of partnerships with another regulated **small MS4(s)**, into which the applicant has entered, in order to satisfy one or more requirements of this permit.
2. A description of all Regulatory Mechanism(s) (e.g., contract language, an ordinance, permits, standards, etc.) the applicant has developed, implemented, and enforced that satisfies the requirements of each program specified under Part III.D.3, 4, and 5. The description shall include the type(s) of Regulatory Mechanism(s) the applicant has in place at the time of application that will be used to satisfy the requirements. If the Regulatory Mechanism(s) have not been developed at the time of application (e.g., **new permittee** applicants), or revised to meet new requirements of this permit (e.g., **existing permittee** applicants); the

- applicant shall describe tasks and corresponding schedules necessary to satisfy the permit requirements in accordance with the schedule in Appendix A, Table 2 (**existing permittee** applicants), or Table 3 (**new permittee** applicants).
3. A description of existing Enforcement Response Procedures (ERPs) the applicant has developed and implemented that satisfy the requirements of Part III.B.1. If the applicant has not yet developed ERPs (e.g., **new permittee** applicants), or existing ERPs must be updated to satisfy new requirements, the description must include tasks and corresponding schedules necessary to satisfy the permit requirements in accordance with the schedule in Appendix A, Table 2 (**existing permittee** applicants), or Table 3 (**new permittee** applicants).
 4. A description of the status of the applicant's storm sewer system map and inventory as required by Part III.C. The description must indicate whether each requirement of Part III.C.1, is satisfied, and for Part III.C.2, is complete, at the time of application. For each requirement of Part III.C that is not satisfied at the time of application, the applicant shall include tasks and corresponding schedules necessary to satisfy the mapping and inventory requirements in accordance with the schedule in Appendix A, Table 2 (**existing permittee** applicants), or Table 3 (**new permittee** applicants).
 5. For each Minimum Control Measure (MCM) outlined in Part III.D:
 - a. The **Best Management Practices (BMPs)** the applicant will implement, or has implemented, for each MCM.
 - b. The measurable goals for each of the **BMPs** identified in Part II.D.5.a, including as appropriate, the months and years in which the applicant will undertake required actions, including interim milestones and the frequency of the action, in narrative or numeric form, as appropriate.
 - c. Name(s) of individual(s) or position titles responsible for implementing and/or coordinating each component of the MCM.
 6. For each **applicable Waste Load Allocation (WLA)** approved prior to the **effective date** of this permit, the applicant shall submit the following information as part of the **SWPPP** document:
 - a. **TMDL** project name(s)
 - b. Numeric **WLA(s)**, including units
 - c. Type of **WLA** (i.e., categorical or individual)
 - d. **Pollutant(s) of concern**
 - e. Applicable flow data specific to each **applicable WLA**
 - f. For each **applicable WLA** not met at the time of application, a compliance schedule is required. Compliance schedules can be developed to include multiple **WLAs** associated with a **TMDL** project and shall include:
 - (1) Interim milestones, expressed as **BMPs** or progress toward implementation of **BMPs** to be achieved during the term of this permit
 - (2) Dates for implementation of interim milestones
 - (3) Strategies for continued **BMP** implementation beyond the term of this permit
 - (4) Target dates the **applicable WLA(s)** will be achieved

- g. For each **applicable WLA** the **permittee** is reasonably confident is being met at the time of application, the **permittee** must provide the following documentation:
 - (1) Implemented **BMPs** used to meet each **applicable WLA**
 - (2) A narrative describing the **permittee's** strategy for long-term continuation of meeting each **applicable WLA**.

- 7. For the requirements of Part III.F, **Alum or Ferric Chloride Phosphorus Treatment Systems**, if applicable, the applicant shall submit the following:
 - a. **Geographic coordinates** of the system
 - b. Name(s) of individual(s) or position titles responsible for the operation of the system
 - c. Information listed in Part III.F.3.a(1)-(6), if the system is constructed at the time the application is submitted to the **Agency**
 - d. Indicate if the system complies with the requirements of Part III.F
 - e. If applicable, for each Part III.F requirement that the applicant's system does not comply with at the time of application, describe tasks and corresponding schedules necessary to bring the system into compliance in accordance with the schedule in Appendix A, Table 2 (**existing permittee** applicants), or Table 3 (**new permittee** applicants).

PART III. STORMWATER POLLUTION PREVENTION PROGRAM (SWPPP)

The **permittee** shall develop, implement, and enforce a **SWPPP** designed to **reduce** the discharge of pollutants from the **small MS4** to the **Maximum Extent Practicable (MEP)**, to protect water quality, and to satisfy the appropriate water quality requirements of the Clean Water Act.

If the **permittee** enters into a partnership for purposes of meeting **SWPPP** requirements, the **permittee** maintains legal responsibility for compliance with this permit.

Existing permittees shall revise their **SWPPP** developed under the **Agency's small MS4 general permit No.MNR040000** that was effective June, 1, 2006, to meet the requirements of this permit in accordance with the schedule in Appendix A, Table 2. **New permittees** shall develop, implement, and enforce their **SWPPP** in accordance with the schedule in Appendix A, Table 3. The **permittee's SWPPP** shall consist of the following:

A. Regulatory Mechanism(s)

To the extent allowable under state, tribal or local law, the **permittee** shall develop, implement, and enforce a Regulatory Mechanism(s) to meet the terms and conditions of Part III.D.3, 4, and 5. A Regulatory Mechanism(s) for the purposes of this permit may consist of contract language, an ordinance, permits, standards, or any other mechanism, that will be enforced by the **permittee**.

B. Enforcement Response Procedures (ERPs)

1. The **permittee** shall develop and implement written ERPs to enforce and compel compliance with the Regulatory Mechanism(s) developed and implemented by the **permittee** in accordance with Part III.A.
2. Enforcement conducted by the **permittee** pursuant to the ERPs shall be documented. Documentation shall include, at a minimum, the following:
 - a. Name of the **person** responsible for violating the terms and conditions of the **permittee's** Regulatory Mechanism(s)
 - b. Date(s) and location(s) of the observed violation(s)
 - c. Description of the violation(s), including reference(s) to relevant Regulatory Mechanism(s)
 - d. Corrective action(s) (including completion schedule) issued by the **permittee**
 - e. Date(s) and type(s) of enforcement used to compel compliance (e.g., written notice, citation, stop work order, withholding of local authorizations, etc.)
 - f. Referrals to other regulatory organizations (if any)
 - g. Date(s) violation(s) resolved

C. Mapping and Inventory

1. Mapping

New permittees shall develop, and **existing permittees** shall update, a storm sewer system map that depicts the following:

- a. The **permittee's** entire **small MS4** as a goal, but at a minimum, all **pipes** 12 inches or greater in diameter, including **stormwater flow direction** in those **pipes**
 - b. **Outfalls**, including a unique identification (ID) number assigned by the **permittee**, and an associated **geographic coordinate**
 - c. **Structural stormwater BMPs** that are part of the **permittee's small MS4**
 - d. All **receiving waters**
2. Inventory (2009 Minnesota Session Law, Ch. 172. Sec. 28).
- a. The **permittee** shall complete an inventory of:
 - (1) All ponds within the **permittee's** jurisdiction that are constructed and operated for purposes of water quality treatment, **stormwater** detention, and flood control, and that are used for the collection of **stormwater** via constructed conveyances. **Stormwater** ponds do not include areas of temporary ponding, such as ponds that exist only during a construction project or short-term accumulations of water in road ditches.
 - (2) All **wetlands** and lakes, within the **permittee's** jurisdiction, that collect **stormwater** via constructed conveyances.
 - b. **The permittee** shall complete and submit the inventory to the **Agency** on a form provided by the **Commissioner**. Each feature inventoried shall include the following information:
 - (1) A unique identification (ID) number assigned by the **permittee**
 - (2) A **geographic coordinate**
 - (3) Type of feature (e.g., pond, **wetland**, or lake). This may be determined by using best professional judgment.

D. Minimum Control Measures (MCMs)

The **permittee** shall incorporate the following six MCMs into the **SWPPP**. The **permittee** shall document as part of the **SWPPP**, a description of **BMPs** used for each MCM, the responsible **person(s)** and department(s) in charge, an implementation schedule, and measureable goals that will be used to determine the success of each **BMP**.

1. Public Education and Outreach

New permittees shall develop and implement, and **existing permittees** shall revise their current program, as necessary, and continue to implement, a public education program to distribute educational materials or equivalent outreach that informs the public of the impact **stormwater** discharges have on water bodies and that includes actions citizens, businesses, and other local organizations can take to **reduce** the discharge of pollutants to **stormwater**. The program shall also include:

- a. Distribution of educational materials or equivalent outreach focused on:
 - (1) Specifically selected **stormwater**-related issue(s) of high priority to the **permittee** to be emphasized during this permit term (e.g., specific **TMDL** reduction targets, changing local business practices, promoting adoption of residential **BMPs**, lake

improvements through lake associations, responsible management of pet waste, household chemicals, yard waste, deicing materials, etc.)

(2) **Illicit discharge** recognition and reporting **illicit discharges** to the **permittee**

b. An implementation plan that consists of the following:

- (1) Target audience(s), including measurable goals for each audience
- (2) Responsible **Person(s)** in charge of overall plan implementation
- (3) Specific activities and schedules to reach measurable goals for each target audience
- (4) A description of any coordination with and/or use of other **stormwater** education and outreach programs being conducted by other entities, if applicable
- (5) Annual evaluation to measure the extent to which measurable goals for each target audience are attained

c. Documentation of the following information:

- (1) A description of any specific **stormwater**-related issues identified by the **permittee** under Part III.D.1.a(1)
- (2) All information required under Part III.D.1.b
- (3) Any modifications made to the program as a result of the annual evaluation under Part III.D.1.b(5)
- (4) Activities held, including dates, to reach measurable goals
- (5) Quantities and descriptions of educational materials distributed, including dates distributed

2. Public Participation/Involvement

a. **New permittees** shall develop and implement, and **existing permittees** shall revise their current program, as necessary, and continue to implement, a Public Participation/Involvement program to solicit public input on the **SWPPP**. The **permittee** shall:

- (1) Provide a minimum of one (1) opportunity annually for the public to provide input on the adequacy of the **SWPPP**. Public meetings can be conducted to satisfy this requirement provided appropriate local public notice requirements are followed and opportunity to review and comment on the **SWPPP** is provided.
- (2) Provide access to the **SWPPP** document, Annual Reports, and other documentation that supports or describes the **SWPPP** (e.g., Regulatory Mechanism(s), etc.) for public review, upon request. All public data requests are subject to the Minnesota Government Data Practices Act, Minn. Stat. § 13.
- (3) Consider public input, oral and written, submitted by the public to the **permittee**, regarding the **SWPPP**.

b. Document the following information:

- (1) All relevant written input submitted by **persons** regarding the **SWPPP**
- (2) All responses from the **permittee** to written input received regarding the **SWPPP**, including any modifications made to the **SWPPP** as a result of the written input received

- (3) Date(s) and location(s) of events held for purposes of compliance with this requirement
- (4) Notices provided to the public of any events scheduled to meet this requirement, including any electronic correspondence (e.g., website, e-mail distribution lists, notices, etc.)

3. **Illicit Discharge** Detection and Elimination (IDDE)

New permittees shall develop, implement, and enforce, and **existing permittees** shall revise their current program as necessary, and continue to implement and enforce, a program to detect and eliminate **illicit discharges** into the **small MS4**. The IDDE program shall consist of the following:

- a. Map of the **small MS4** as required by Part III.C.1.
- b. Regulatory Mechanism(s) that effectively prohibits **non-stormwater discharges** into the **small MS4**, except those **non-stormwater discharges** authorized under Part I.B.1.
- c. Incorporation of **illicit discharge** detection into all inspection and maintenance activities conducted under Part III.D.6.e and f. Where feasible, **illicit discharge** inspections shall be conducted during dry-weather conditions (e.g., periods of 72 or more hours of no precipitation).
- d. Detecting and tracking the source of **illicit discharges** using visual inspections. The **permittee** may also include the use of mobile cameras, collecting and analyzing water samples, and/or other detailed inspection procedures that may be effective investigative tools.
- e. Training of all field staff, in accordance with the requirements of Part III.D.6.g(2), in **illicit discharge** recognition (including conditions which could cause **illicit discharges**), and reporting **illicit discharges** for further investigation.
- f. Identification of priority areas likely to have **illicit discharges**, including at a minimum, evaluating land uses associated with business/industrial activities, areas where **illicit discharges** have been identified in the past, and areas with storage of large quantities of **significant materials** that could result in an **illicit discharge**. Based on this evaluation, the **permittee** shall conduct additional **illicit discharge** inspections in those areas identified as having a higher likelihood for **illicit discharges**.
- g. For timely response to known, suspected, and reported **illicit discharges**:
 - (1) Procedures for investigating, locating, and eliminating the source of **illicit discharges**.
 - (2) Procedures for responding to spills, including emergency response procedures to prevent spills from entering the **small MS4**. The procedures shall also include the immediate notification of the Minnesota Department of Public Safety Duty Officer at 1-800-422-0798 (toll free) or 651-649-5451 (Metro area), if the source of the **illicit discharge** is a spill or leak as defined in Minn. Stat. § 115.061.
 - (3) When the source of the **illicit discharge** is found, ERPs required by Part III.B (if necessary) to eliminate the **illicit discharge** and require any needed corrective action(s).

h. Documentation of the following information:

- (1) Date(s) and location(s) of IDDE inspections conducted in accordance with Part III.D.3.c and f
- (2) Reports of alleged **illicit discharges** received, including date(s) of the report(s), and any follow-up action(s) taken by the **permittee**
- (3) Date(s) of discovery of all **illicit discharges**
- (4) Identification of **outfalls**, or other areas, where **illicit discharges** have been discovered
- (5) Sources (including a description and the responsible party) of **illicit discharges** (if known)
- (6) Action(s) taken by the **permittee**, including date(s), to address discovered **illicit discharges**

4. Construction Site **Stormwater** Runoff Control

New permittees shall develop, implement, and enforce, and **existing permittees** shall revise their current program, as necessary, and continue to implement and enforce, a Construction Site **Stormwater** Runoff Control program that **reduces** pollutants in **stormwater** runoff to the **small MS4** from **construction activity** with a land disturbance of greater than or equal to one acre, including projects less than one acre that are part of a larger **common plan of development or sale**, that occurs within the **permittee's** jurisdiction. The program shall incorporate the following components:

a. Regulatory Mechanism(s)

A Regulatory Mechanism(s) that establishes requirements for erosion and sediment controls and waste controls that is at least as stringent as the **Agency's general permit to Discharge Stormwater Associated with Construction Activity No. MN R100001** (as of the **effective date** of this permit). The **permittee's** Regulatory Mechanism(s) shall require that owners and operators of **construction activity** develop site plans that must be submitted to the **permittee** for review and approval, prior to the start of **construction activity**. Site plans must be kept up-to-date by the owners and operators of **construction activity** with regard to **stormwater** runoff controls. The Regulatory Mechanism(s) must require that site plans incorporate the following erosion and sediment controls and waste controls as described in the above referenced permit:

- (1) **BMPs** to minimize erosion
- (2) **BMPs** to minimize the discharge of sediment and other pollutants
- (3) **BMPs** for dewatering activities
- (4) Site inspections and records of rainfall events
- (5) **BMP** maintenance
- (6) Management of solid and hazardous wastes on each project site
- (7) Final stabilization upon the completion of **construction activity**, including the use of perennial vegetative cover on all exposed soils or other equivalent means
- (8) Criteria for the use of temporary sediment basins

b. Site plan review

The program shall include written procedures for site plan reviews conducted by the **permittee** prior to the start of **construction activity**, to ensure compliance with requirements of the Regulatory Mechanism(s). The site plan review procedure shall include notification to owners and operators proposing **construction activity** of the need to apply for and obtain coverage under the **Agency's general permit to Discharge Stormwater Associated with Construction Activity No.MN R100001**.

c. Public input

The program shall include written procedures for receipt and consideration of reports of noncompliance or other **stormwater** related information on **construction activity** submitted by the public to the **permittee**.

d. Site inspections

The program shall include written procedures for conducting site inspections, to determine compliance with the **permittee's** Regulatory Mechanism(s). The written procedures shall:

- (1) Include procedures for identifying priority sites for inspection. Prioritization can be based on such parameters as topography, soil characteristics, type of **receiving water(s)**, stage of construction, compliance history, weather conditions, or other local characteristics and issues.
- (2) Identify frequency at which site inspections will be conducted
- (3) Identify name(s) of individual(s) or position titles responsible for conducting site inspections
- (4) Include a checklist or other written means to document site inspections when determining compliance.

e. ERPs required by Part III.B of this permit

f. Documentation of the following information:

- (1) For each site plan review – The project name, location, total acreage to be disturbed, owner and operator of the proposed **construction activity**, and any **stormwater** related comments and supporting documentation used by the **permittee** to determine project approval or denial.
- (2) For each site inspection - Inspection checklists or other written means used to document site inspections

5. Post-Construction **Stormwater** Management

New permittees shall develop, implement, and enforce, and **existing permittees** shall revise their current program, as necessary, and continue to implement and enforce, a Post-Construction **Stormwater** Management program that prevents or **reduces water pollution** after **construction activity** is completed, related to **new development** and **redevelopment** projects with land disturbance of greater than or equal to one acre, including projects less than one acre that are part of a larger **common plan of development or sale**, within the **permittee's** jurisdiction and that discharge to the **permittee's small MS4**. The program shall consist, at a minimum, of the following:

a. A Regulatory Mechanism(s) that incorporates:

(1) A requirement that owners and/or operators of **construction activity** submit site plans with post-construction **stormwater** management **BMPs** to the **permittee** for review and approval, prior to start of **construction activity**

(2) Conditions for Post-Construction **Stormwater** Management:

The **permittee** shall develop and implement a Post-Construction **Stormwater** Management program that requires the use of any combination of **BMPs**, with highest preference given to **Green Infrastructure** techniques and practices (e.g., infiltration, evapotranspiration, reuse/harvesting, conservation design, urban forestry, green roofs, etc.), necessary to meet the following conditions on the site of a **construction activity** to the **MEP**:

(a) For **new development** projects – no net increase from pre-project conditions (on an annual average basis) of:

- 1) **Stormwater** discharge Volume, unless precluded by the **stormwater** management limitations in Part III.D.5.a(3)(a)
- 2) **Stormwater** discharges of Total Suspended Solids (TSS)
- 3) **Stormwater** discharges of Total Phosphorus (TP)

(b) For **redevelopment** projects – a net reduction from pre-project conditions (on an annual average basis) of:

- 1) **Stormwater** discharge Volume, unless precluded by the **stormwater** management limitations in Part III.D.5.a(3)(a)
- 2) **Stormwater** discharges of TSS
- 3) **Stormwater** discharges of TP

(3) **Stormwater** management limitations and exceptions

(a) Limitations

- 1) The **permittee's** Regulatory Mechanism(s) shall prohibit the use of infiltration techniques to achieve the conditions for post-construction **stormwater** management in Part III.D.5.a(2) when the infiltration **structural stormwater BMP** will receive discharges from, or be constructed in areas:

- a) Where industrial facilities are not authorized to infiltrate industrial **stormwater** under an **NPDES/SDS** Industrial **Stormwater** Permit issued by the **Agency**
 - b) Where vehicle fueling and maintenance occur
 - c) With less than three (3) feet of separation distance from the bottom of the infiltration system to the elevation of the seasonally **saturated soils** or the top of bedrock
 - d) Where high levels of contaminants in soil or groundwater will be mobilized by the infiltrating **stormwater**
- 2) The **permittee's** Regulatory Mechanism(s) shall restrict the use of infiltration techniques to achieve the conditions for post-construction **stormwater** management, without higher engineering review, sufficient to provide a functioning treatment system and prevent adverse impacts to groundwater, when the infiltration device will be constructed in areas:
- a) With predominately Hydrologic Soil Group D (clay) soils
 - b) Within 1,000 feet up-gradient, or 100 feet down-gradient of **active karst** features
 - c) Within a Drinking Water Supply Management Area (DWSMA) as defined in Minn. R. 4720.5100, subp. 13
 - d) Where soil infiltration rates are more than 8.3 inches per hour
- 3) For linear projects where the lack of right-of-way precludes the installation of volume control practices that meet the conditions for post-construction **stormwater** management in Part.III.D.5.a(2), the **permittee's** Regulatory Mechanism(s) may allow exceptions as described in Part III.D.5.a(3)(b). The **permittee's** Regulatory Mechanism(s) shall ensure that a reasonable attempt be made to obtain right-of-way during the project planning process.

(b) Exceptions for **stormwater** discharge volume

The **permittee's** Regulatory Mechanism(s) may allow for lesser volume control on the site of the original **construction activity** than that in Part III.D.5.a(2) only under the following circumstances:

- 1) The owner and/or operator of a **construction activity** is precluded from infiltrating **stormwater** through a designed system due to any of the infiltration related limitations described above, and
- 2) The owner and/or operator of the **construction activity** implements, to the **MEP**, volume reduction techniques, other than infiltration, (e.g., evapotranspiration, reuse/harvesting, conservation design, green roofs, etc.) on the site of the original **construction activity** that **reduces stormwater** discharge volume, but may not meet the conditions for post-construction **stormwater** management in Part III.D.5.a(2).

(4) Mitigation provisions

There may be circumstances where the **permittee** or other owners and operators of a **construction activity** cannot cost effectively meet the conditions for post-construction **stormwater** management for TSS and/or TP in Part III.D.5.a(2) on the site of the original **construction activity**. For this purpose, the **permittee** shall identify, or may require owners or operators of a **construction activity** to identify, locations where mitigation projects can be completed. The **permittee's** Regulatory Mechanism(s) shall ensure that any **stormwater** discharges of TSS and/or TP not addressed on the site of the original **construction activity** are addressed through mitigation and, at a minimum, shall ensure the following requirements are met:

- (a) Mitigation project areas are selected in the following order of preference:
 - 1) Locations that yield benefits to the same **receiving water** that receives runoff from the original **construction activity**
 - 2) Locations within the same Department of Natural Resource (**DNR**) **catchment area** as the original **construction activity**
 - 3) Locations in the next adjacent **DNR catchment area** up-stream
 - 4) Locations anywhere within the **permittee's** jurisdiction
- (b) Mitigation projects must involve the creation of new **structural stormwater BMPs** or the retrofit of existing **structural stormwater BMPs**, or the use of a properly designed regional **structural stormwater BMP**.
- (c) Routine maintenance of **structural stormwater BMPs** already required by this permit cannot be used to meet mitigation requirements of this Part.
- (d) Mitigation projects shall be completed within 24 months after the start of the original **construction activity**.
- (e) The **permittee** shall determine, and document, who is responsible for long-term maintenance on all mitigation projects of this Part.
- (f) If the **permittee** receives payment from the owner and/or operator of a **construction activity** for mitigation purposes in lieu of the owner or operator of that **construction activity** meeting the conditions for post-construction **stormwater** management in Part III.D.5.a(2), the **permittee** shall apply any such payment received to a public **stormwater** project, and all projects must be in compliance with Part III.D.5.a(4)(a)-(e).

(5) Long-term maintenance of **structural stormwater BMPs**

The **permittee's** Regulatory Mechanism(s) shall provide for the establishment of legal mechanism(s) between the **permittee** and owners or operators responsible for the long-term maintenance of **structural stormwater BMPs** not owned or operated by the **permittee**, that have been implemented to meet the conditions for post-construction **stormwater** management in Part III.D.5.a(2). This only includes **structural stormwater BMPs** constructed after the **effective date** of this permit, that are directly connected to the **permittee's MS4**, and that are in the **permittee's** jurisdiction. The legal mechanism shall include provisions that, at a minimum:

- (a) Allow the **permittee** to conduct inspections of **structural stormwater BMPs** not owned or operated by the **permittee**, perform necessary maintenance, and assess costs for those **structural stormwater BMPs** when the **permittee**

determines that the owner and/or operator of that **structural stormwater BMP** has not conducted maintenance.

- (b) Include conditions that are designed to preserve the **permittee's** right to ensure maintenance responsibility, for **structural stormwater BMPs** not owned or operated by the **permittee**, when those responsibilities are legally transferred to another party.
- (c) Include conditions that are designed to protect/preserve **structural stormwater BMPs** and site features that are implemented to comply with Part III.D.5.a(2). If site configurations or **structural stormwater BMPs** change, causing decreased **structural stormwater BMP** effectiveness, new or improved **structural stormwater BMPs** must be implemented to ensure the conditions for post-construction **stormwater** management in Part III.D.5.a(2) continue to be met.

b. Site plan review

The program shall include written procedures for site plan reviews conducted by the **permittee** prior to the start of **construction activity**, to ensure compliance with requirements of the Regulatory Mechanism(s).

c. Documentation of the following information:

- (1) Any supporting documentation used by the **permittee** to determine compliance with Part III.D.5.a, including the project name, location, owner and operator of the **construction activity**, any checklists used for conducting site plan reviews, and any calculations used to determine compliance
- (2) All supporting documentation associated with mitigation projects authorized by the **permittee**
- (3) Payments received and used in accordance with Part III.D.5.a(4)(f)
- (4) All legal mechanisms drafted in accordance with Part III.D.5.a(5), including date(s) of the agreement(s) and name(s) of all responsible parties involved

6. Pollution Prevention/Good Housekeeping For Municipal Operations

New permittees shall develop and implement, and **existing permittees** shall revise their current program, as necessary, and continue to implement, an operations and maintenance program that prevents or **reduces** the discharge of pollutants from **permittee** owned/operated facilities and operations to the **small MS4**. The operations and maintenance program shall include, at a minimum, the following:

a. Facilities Inventory

The **permittee** shall develop and maintain an inventory of **permittee** owned/operated facilities that contribute pollutants to **stormwater** discharges. Facilities to be inventoried may include, but is not limited to: composting, equipment storage and maintenance, hazardous waste disposal, hazardous waste handling and transfer; landfills, solid waste handling and transfer, parks, pesticide storage, public parking lots, public golf courses; public swimming pools, public works yards, recycling, salt storage, vehicle storage and maintenance (e.g., fueling and washing) yards, and materials storage yards.

b. Development and Implementation of **BMPs** for inventoried facilities and municipal operations

Considering the source of pollutants and sensitivity of **receiving waters** (e.g., Outstanding Resource Value Waters (ORVWs), **impaired waters**, trout streams, etc.), the **permittee** shall develop and implement **BMPs** that prevent or **reduce** pollutants in **stormwater** discharges from the **small MS4** and from:

- (1) All inventoried facilities that discharge to the **MS4**, and
- (2) The following municipal operations that may contribute pollutants to **stormwater** discharges, where applicable:
 - (a) Waste disposal and storage, including dumpsters
 - (b) Management of temporary and permanent stockpiles of materials such as street sweepings, snow, deicing materials (e.g., salt), sand and sediment removal piles
 - (c) Vehicle fueling, washing and maintenance
 - (d) Routine street and parking lot sweeping
 - (e) Emergency response, including spill prevention plans
 - (f) Cleaning of maintenance equipment, building exteriors, dumpsters, and the disposal of associated waste and wastewater
 - (g) Use, storage, and disposal of **significant materials**
 - (h) Landscaping, park, and lawn maintenance
 - (i) Road maintenance, including pothole repair, road shoulder maintenance, pavement marking, sealing, and repaving
 - (j) Right-of-way maintenance, including mowing
 - (k) Application of herbicides, pesticides, and fertilizers
 - (l) Cold-weather operations, including plowing or other snow removal practices, sand use, and application of deicing compounds

c. Development and implementation of **BMPs** for **MS4** discharges that may affect Source Water Protection Areas (Minn. R. 4720.5100-4720.5590)

The **permittee** shall incorporate **BMPs** into the **SWPPP** to protect any of the following drinking water sources that the **MS4** discharge may affect, and the **permittee** shall include the map of these sources with the **SWPPP** if they have been mapped:

- (1) Wells and source waters for DWSMAs identified as vulnerable under Minn. R. 4720.5205, 4720.5210, and 4720.5330
- (2) Source water protection areas for surface intakes identified in the source water assessments conducted by or for the Minnesota Department of Health (MDH) under the federal Safe Drinking Water Act, U.S.C. §§ 300j – 13

d. Pond Assessment Procedures and Schedule

The **permittee** shall develop procedures and a schedule for the purpose of determining the TSS and TP treatment effectiveness of all **permittee** owned/operated ponds constructed and used for the collection and treatment of **stormwater**. The schedule (which may exceed this permit term) shall be based on measureable goals and priorities established by the **permittee**.

e. Inspections

- (1) Unless inspection frequency is adjusted as described below, the **permittee** shall conduct annual inspections of **structural stormwater BMPs** (excluding **stormwater ponds** which are under a separate schedule below) to determine structural integrity, proper function and maintenance needs.

Inspections of **structural stormwater BMPs** shall be conducted annually unless the **permittee** determines if either of the following conditions apply: 1) Complaints received or patterns of maintenance indicate a greater frequency is necessary, or 2) Maintenance or sediment removal is not required after completion of the first two annual inspections; in which case the **permittee** may reduce the frequency of inspections to once every two (2) years. However, **existing permittees** are authorized under this permit to continue using inspection frequency adjustments, previously determined under the *general stormwater permit for small MS4s No.MNR040000*, effective June 1, 2006, provided that documentation requirements in Part III.D.6.h(2) are satisfied.

- (2) Prior to the expiration date of this permit, the **permittee** shall conduct at least one inspection of all ponds and **outfalls** (excluding underground **outfalls**) in order to determine structural integrity, proper function, and maintenance needs.
- (3) The **permittee** shall conduct quarterly inspections of stockpiles, and storage and material handling areas as inventoried in Part III.D.6.a, to determine maintenance needs and proper function of **BMPs**.

f. Maintenance

Based on inspection findings, the **permittee** shall determine if repair, replacement, or maintenance measures are necessary in order to ensure the structural integrity, proper function, and treatment effectiveness of **structural stormwater BMPs**. Necessary maintenance shall be completed as soon as possible to prevent or **reduce** the discharge of pollutants to **stormwater**.

g. Employee Training

The **permittee** shall develop and implement a **stormwater** management training program commensurate with employee's job-duties as they relate to the **permittee's SWPPP**, including reporting and assessment activities. The **permittee** may use training materials from the United States Environmental Protection Agency (USEPA), state and regional agencies, or other organizations as appropriate to meet this requirement. The employee training program shall:

- (1) Address the importance of protecting water quality
- (2) Cover the requirements of the permit relevant to the job duties of the employee
- (3) Include a schedule that establishes initial training for new and/or seasonal employees, and recurring training intervals for existing employees to address changes in procedures, practices, techniques, or requirements

h. Documentation of the following information:

- (1) Date(s) and description of findings of all inspections conducted in accordance with Part III.D.6.e
- (2) Any adjustments to inspection frequency as authorized under Part III.D.6.e(1)
- (3) A description of maintenance conducted, including dates, as a result of inspection findings
- (4) Pond sediment excavation and removal activities, including:
 - (a) The unique ID number (consistent with that required in Part III.C.2.a) of each **stormwater** pond from which sediment is removed
 - (b) The volume (e.g., cubic yards) of sediment removed from each **stormwater** pond
 - (c) Results from any testing of sediment from each removal activity
 - (d) Location(s) of final disposal of sediment from each **stormwater** pond
- (5) Employee **stormwater** management training events, including a list of topics covered, names of employees in attendance, and date of each event

E. Discharges to **Impaired Waters** with a USEPA-Approved **TMDL** that Includes an **Applicable WLA**

For each **applicable WLA** approved prior to the **effective date** of this permit, the **BMPs** included in the compliance schedule at application constitute a discharge requirement for the **permittee**. The **permittee** shall demonstrate continuing progress toward meeting each discharge requirement, on a form provided by the **Commissioner**, by submitting the following:

1. An assessment of progress toward meeting each discharge requirement, including a list of all **BMPs** being applied to achieve each **applicable WLA**. For each **structural stormwater BMP**, the **permittee** shall provide a unique identification (ID) number and **geographic coordinate**. If the listed **structural stormwater BMP** is also inventoried as required by Part III.C.2, the same ID number shall be used.
2. A list of all **BMPs** the **permittee** submitted at the time of application in the **SWPPP** document compliance schedule(s) and the stage of implementation for each **BMP**, including any **BMPs** specifically identified for the **small MS4** in the **TMDL** report that the **permittee** plans to implement
3. An up-dated estimate of the cumulative reductions in loading achieved for each **pollutant of concern** associated with each **applicable WLA**
4. An up-dated narrative describing any adaptive management strategies used (including projected dates) for making progress toward achieving each **applicable WLA**

F. Alum or Ferric Chloride Phosphorus Treatment Systems

If the **permittee** uses an **alum or ferric chloride phosphorus treatment system**, the **permittee** shall comply with the following:

1. Minimum Requirements of an **Alum or Ferric Chloride Phosphorus Treatment System**

a. Limitations

- (1) The **permittee** shall use the treatment system for the treatment of phosphorus in **stormwater**. **Non-stormwater discharges** shall not be treated by this system.
- (2) The treatment system must be contained within the conveyances and **structural stormwater BMPs** of a **small MS4**. The utilized conveyances and **structural stormwater BMPs** shall not include any **receiving waters**.
- (3) Phosphorus treatment systems utilizing chemicals other than alum or ferric chloride must receive written approval from the **Agency**.
- (4) In-lake phosphorus treatment activities are not authorized under this permit.

b. Treatment System Design

- (1) The treatment system shall be constructed in a manner that diverts the **stormwater** flow to be treated from the main conveyance system.
- (2) A **High Flow Bypass** shall be part of the inlet design.
- (3) A flocculent storage/settling area shall be incorporated into the design, and adequate maintenance access must be provided (minimum of 8 feet wide) for the removal of accumulated sediment.

2. Monitoring During Operation

- a. A designated **person** shall perform visual monitoring of the treatment system for proper performance at least once every seven (7) days, and within 24 hours after a rainfall event greater than 2.5 inches in 24 hours. Following visual monitoring which occurs within 24 hours after a rainfall event, the next visual monitoring must be conducted within seven (7) days after that rainfall event.
- b. Three benchmark monitoring stations shall be established. Table B-1 shall be used for the parameters, units of measure, and frequency of measurement for each station.
- c. Samples shall be collected as grab samples or flow-weighted 24-hour composite samples.
- d. Each sample, excluding pH samples, must be analyzed by a laboratory certified by the MDH and/or the MPCA, and:
 - (1) Sample preservation and test procedures for the analysis of pollutants shall conform to 40 CFR Part 136 and Minn. R. 7041.3200.
 - (2) Detection limits for dissolved phosphorus, dissolved aluminum, and dissolved iron shall be a minimum of 6 micrograms per liter ($\mu\text{g/L}$), 10 $\mu\text{g/L}$, and 20 $\mu\text{g/L}$, respectively.
 - (3) pH must be measured within 15 minutes of sample collection using calibrated and maintained equipment.

Table B-1:
Monitoring Parameters During Operation

Station	Alum Parameters	Ferric Parameters	Units	Frequency
Upstream-Background	Total Phosphorus	Total Phosphorus	mg/L	1 x week
	Dissolved Phosphorus	Dissolved Phosphorus	mg/L	1 x week
	Total Aluminum	Total Iron	mg/L	1 x month
	Dissolved Aluminum	Dissolved Iron	mg/L	1 x week
	pH	pH	SU	1 x week
	Flow	Flow	Mgd	Daily
Alum or Ferric Chloride Feed	Alum	Ferric	Gallons	Daily Total Dosed In Gallons
Discharge From Treatment	Total Phosphorus	Total Phosphorus	mg/L	1 x week
	Dissolved Phosphorus	Dissolved Phosphorus	mg/L	1 x week
	Total Aluminum	Total Iron	mg/L	1 x month
	Dissolved Aluminum	Dissolved Iron	mg/L	1 x week
	pH	pH	SU	1 x week
	Flow	Flow	Mgd	Daily

e. In the following situations, the **permittee** shall perform corrective action(s) and immediately notify the Minnesota Department of Public Safety Duty Officer at 1-800-422-0798 (toll free) or 651-649-5451 (Metro area):

- (1) The pH of the discharged water is not within the range of 6.0 and 9.0
- (2) Any indications of toxicity or measurements exceeding **water quality standards**
- (3) A spill, as defined in Minn. Stat. § 115.01, subd. 13, of alum or ferric chloride

3. Reporting and Recordkeeping

a. Annual Reporting

The **permittee** shall submit the following information with the Annual Report in Part IV.B. The Annual Report must include a month-by-month summary of:

- (1) Date(s) of operation
- (2) Chemical(s) used for treatment
- (3) Gallons of water treated
- (4) Gallons of alum or ferric chloride treatment used
- (5) Calculated pounds of phosphorus removed
- (6) Any performance issues and the corrective action(s), including the date(s) when corrective action(s) were taken

b. On-Site Recordkeeping

A record of the following design parameters shall be kept on-site:

- (1) Site-specific jar testing conducted using typical and representative water samples in accordance with ASTM D2035-08 (2003)
- (2) Baseline concentrations of the following parameters in the influent and **receiving waters**:

- (a) Aluminum or Iron
- (b) Phosphorus

(3) The following system parameters and how each was determined:

- (a) Flocculent settling velocity
- (b) Minimum required retention time
- (c) Rate of diversion of **stormwater** into the system
- (d) The flow rate from the discharge of the outlet structure
- (e) Range of expected dosing rates

4. Treatment System Management

The following site-specific procedures shall be developed and a copy kept on-site:

- a. Procedures for the installation, operation and maintenance of all pumps, generators, control systems, and other equipment
- b. Specific parameters for determining when the solids must be removed from the system and how the solids will be handled and disposed of
- c. Procedures for cleaning up and/or containing a spill of each chemical stored on-site

G. Stormwater Pollution Prevention Program (SWPPP) Modification

1. The **Commissioner** may require the **permittee** to modify the **SWPPP** as needed, in accordance with the procedures of Minn. R. 7001, and may consider the following factors:
 - a. Discharges from the **small MS4** are impacting the quality of **receiving waters**.
 - b. More stringent requirements are necessary to comply with state or federal regulations.
 - c. Additional conditions are deemed necessary to comply with the goals and applicable requirements of the Clean Water Act and protect water quality.
2. Modifications that the **permittee** chooses to make to the **SWPPP** document developed under Part II.D, other than modifications authorized in Part III.G.3 below, must be approved by the **Commissioner** in accordance with the procedures of Minn. R. 7001. All requests must be in writing, setting forth schedules for compliance. The request must discuss alternative program modifications, assure compliance with requirements of the permit, and meet other applicable laws.
3. The **SWPPP** document may only be modified by the **permittee** without prior approval of the **Commissioner** provided it is in accordance with a. or b. below, and the **Commissioner** is notified of the modification in the Annual Report for the year the modification is made.
 - a. A **BMP** is added, and none subtracted, from the **SWPPP** document.
 - b. A less effective **BMP** identified in the **SWPPP** document is replaced with a more effective **BMP**. The alternate **BMP** shall address the same, or similar, concerns as the ineffective or failed **BMP**.

PART IV. ANNUAL **SWPPP** ASSESSMENT, ANNUAL REPORTING, AND RECORD KEEPING

A. Annual **SWPPP** Assessment

The **permittee** shall conduct an Annual Assessment of their **SWPPP** to determine program compliance, the appropriateness of **BMPs**, and progress towards achieving the measurable goals identified in their **SWPPP** document. The Annual **SWPPP** Assessment shall be performed prior to completion of each Annual Report.

B. Annual Reporting

The **permittee** shall submit an Annual Report to the **Agency** by June 30th of each calendar year. The Annual Report shall cover the portion of the previous calendar year during which the **permittee** was authorized to discharge **stormwater** under this permit. The Annual Report shall be submitted to the **Agency**, on a form provided by the **Commissioner**, that will at a minimum, consist of the following:

1. The status of compliance with permit terms and conditions, including an assessment of the appropriateness of **BMPs** identified by the **permittee** and progress towards achieving the identified measurable goals for each of the MCMs in Part III.D.1-6. The assessment must be based on results of information collected and analyzed, including monitoring (if any), inspection findings, and public input received during the reporting period.
2. The **stormwater** activities the **permittee** plans to undertake during the next reporting cycle
3. A change in any identified **BMPs** or measurable goals for any of the MCMs in Part III.D.1-6
4. Information required in Part III.E, to demonstrate progress in meeting **applicable WLAs**
5. Information required to be recorded or documented in Part III
6. A statement that the **permittee** is relying on a partnership(s) with another regulated **Small MS4(s)** to satisfy one or more permit requirements (if applicable), and what agreements the **permittee** has entered into in support of this effort

C. Record Keeping

1. The **permittee** shall keep records required by the **NPDES** permit for at least three (3) years beyond the term of this permit. The **permittee** shall submit records to the **Commissioner** only if specifically asked to do so.
2. The **permittee** shall make records, including components of the **SWPPP**, available to the public at reasonable times during regular business hours (see 40 CFR § 122.7 for confidentiality provision).
3. The **permittee** shall retain copies of the permit application, all documentation necessary to comply with **SWPPP** requirements, all data and information used by the **permittee** to complete the application process, and any information developed as a requirement of this permit or as requested by the **Commissioner**, for a period of at least three (3) years beyond the date of permit expiration. This period is automatically extended during the course of an

unresolved enforcement action regarding the **small MS4** or as requested by the **Commissioner**.

D. Where to Submit

The **permittee** shall use an electronic submittal process, when provided by the **Agency**, when submitting information required by this permit. When submitting information electronically is not possible, the **permittee** may use the following mailing address:

Minnesota Pollution Control Agency (MPCA)
Attn: WQ Submittals Center
520 Lafayette Road North
St. Paul, MN 55155-4194

PART V. GENERAL CONDITIONS

- A. The **Agency's** issuance of a 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)
- B. The **Agency's** issuance of a permit does not prevent the future adoption by the **Agency** 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)
- C. The permit does not convey a property right or an exclusive privilege. (Minn. R. 7001.0150, subp. 3, item C)
- D. The **Agency's** issuance of a permit does not obligate the **Agency** to enforce local laws, rules, or plans beyond that authorized by Minnesota statutes. (Minn. R. 7001.0150, subp.3, item D)
- E. The **permittee** shall perform the actions or conduct the activity authorized by the permit in accordance with the plans and specifications approved by the **Agency** and in compliance with the conditions of the permit. (Minn. R. 7001.0150, subp. 3, item E)
- F. 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.)
- G. The **permittee** may not knowingly make a false or misleading statement, representation, or certification in a record, report, plan, or other document required to be submitted to the **Agency** or to the **Commissioner** by the permit. The **permittee** shall immediately upon discovery report to the **Commissioner** an error or omission in these records, reports, plans, or other documents. (Minn. Stat. § 609.671; Minn.R. 7001.0150, subp.3, item G.; and Minn. R. 7001.1090, subp. 1, items G and H)
- H. The **permittee** shall, when requested by the **Commissioner**, 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)
- I. When authorized by Minn. Stat. §§ 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)

- J. If the **permittee** discovers, through any means, including notification by the **Agency**, that noncompliance with a condition of the permit has occurred, the **permittee** shall take all reasonable steps to minimize the adverse impacts on human health, public drinking water supplies, or the environment resulting from the noncompliance. (Minn. R. 7001.0150, subp.3, item J)
- K. 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**. Within five days of the discovery of the noncompliance, the **permittee** shall submit to the **Commissioner** a written description of the noncompliance; the cause of the noncompliance, the exact dates of the period of the noncompliance, if the noncompliance has not been corrected; the anticipated time it is expected to continue, and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance. (Minn. R. 7001.0150, subp.3, item K)
- L. The **permittee** shall report noncompliance with the permit not reported under item K as a part of the next report, which the **permittee** is required to submit under this permit. If no reports are required within 30 days of the discovery of the noncompliance, the **permittee** shall submit the information listed in item K within 30 days of the discovery of the noncompliance. (Minn. R. 7001.0150, subp.3, item L)
- M. The **permittee** shall give advance notice to the **Commissioner** as soon as possible of planned physical alterations or additions to the permitted facility (**MS4**) or activity that may result in noncompliance with a Minnesota or federal pollution control statute or rule or a condition of the permit. (Minn. R. 7001.0150, subp. 3, item M)
- N. 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)
- O. The permit authorizes the **permittee** to perform the activities described in the permit under the conditions of the permit. In issuing the permit, the state and **Agency** 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 the permit. To the extent the state and **Agency** may be liable for the activities of its employees, that liability is explicitly limited to that provided in the Tort Claims Act, Minn. Stat. § 3.736. (Minn. R. 7001.0150, subp. 3, item O)
- P. This permit incorporates by reference the applicable portions of 40 CFR §§ 122.41 and 122.42 parts (c) and (d), and Minn. R. 7001.1090, which are enforceable parts of this permit.

APPENDIX A

SCHEDULES

Table 1
 Application Submittal Schedule for Existing permittees

Group 1 Within 90 days after permit effective date		
Alexandria, City	Glencoe, City	Oak Grove, City
Andover, City	Grand Rapids, City	Orono, City
Anoka Technical College	Greenwood, City	Ramsey, City
Arden Hills, City	Hibbing, City	Sartell, City
Birchwood Village, City	Hilltop, City	South St Paul, City
Cambridge, City	Inver Hills Community College	St Bonifacius, City
Centerville, City	Little Falls, City	St Cloud Technical College
Chaska, City	Long Lake, City	St Louis County
Dakota County Technical College	Maple Plain, City	St Paul Park, City
Detroit Lakes, City	Minnetonka Beach, City	Waite Park, City
Excelsior, City	Monticello, City	Woodland, City
	Northland Comm & Technical College	
Group 2 Within 120 days after permit effective date		
Anoka, City	Hutchinson, City	Nowthen, City
Anoka-Ramsey Community College	La Crescent, City	Proctor, City
Baxter, City	Lake Superior College - Duluth	Red Wing, City
Brainerd, City	Landfall, City	Shakopee, City
Buffalo, City	Lauderdale, City	South Washington WD
Champlin, City	Litchfield, City	Spring Park, City
Clay County	Mendota, City	St Joseph, City
Coon Creek WD	Midway Township	St Michael, City
Dayton, City	MN State Comm and Tech College-Moorhead	Stearns County
Dilworth, City	Moorhead, City	Tonka Bay, City
East Grand Forks, City	Mounds View, City	West St Paul, City
Elk River, City	North Oaks, City	Willernie, City
Elko New Market, City		Winona, City
Fridley, City		
Group 3 Within 150 days after permit effective date		
Albert Lea, City	Hennepin Technical College Eden Prairie	Owatonna, City
Anoka County	Hermantown, City	Pine Springs, City
Apple Valley, City	Hopkins, City	Plymouth, City
Austin, City	Houston County	Prior Lake, City
Bemidji, City	Hugo, City	Prior Lake-Spring Lake WSD
Benton County	Independence, City	Ramsey County Public Works
Big Lake, City	Inver Grove Heights, City	Ramsey-Washington Metro WD
Big Lake Township	Jackson Township	Redwood Falls, City
Blaine, City	La Crescent Township	Rice Creek WD
Bloomington, City	Laketown Township	Rice Lake Township
Brockway Township	Lakeville, City	Richfield, City

Brooklyn Center, City	Lake Elmo, City	Robbinsdale, City
Brooklyn Park, City	Le Sauk Township	Rochester, City
Burnsville, City	Lexington, City	Rochester Community & Tech College
Capitol Region WD	Lilydale, City	Rochester Township
Carver, City	Lino Lakes, City	Rosemount, City
Carver County	Little Canada, City	Roseville, City
Cascade Township	Loretto, City	Sauk Rapids, City
Century College	Louisville Township	Sauk Rapids Township
Chanhassen, City	Mahtomedi, City	Savage, City
Circle Pines, City	Mankato, City	Osseo, City
Cloquet, City	Maplewood, City	Otsego, City
Columbia Heights, City	Maple Grove, City	Scott County
Coon Rapids, City	Marion Township	Sherburne County
Corcoran, City	Marshall, City	Shoreview, City
Cottage Grove, City	Medicine Lake, City	Shorewood, City
Credit River Township	Medina, City	Spring Lake Park, City
Crystal, City	Mendota Heights, City	Spring Lake, Township
Dakota County	Metropolitan State University	Saint Paul College
Deephaven, City	Minden Township	St Anthony Village, City
Dellwood, City	Minnehaha Creek WD	St Cloud, City
Duluth, City	Minnesota Correctional-Lino Lakes	St Cloud State University
Duluth Township	Minnesota Correctional-St Cloud	St Joseph Township
Eagan, City	Minnetonka, City	St Louis Park, City
East Bethel, City	Minnetrissa, City	St Peter, City
Eden Prairie, City	MNDOT Metro District	Stillwater, City
Edina, City	MNDOT Outstate District	Sunfish Lake, City
Empire Township	MN State University-Moorhead	U of M-Duluth
Fairmont, City	Montevideo, City	U of M-Twin Cities Campus
Falcon Heights, City	Mound, City	Vadnais Heights, City
Faribault, City	Mpls Community/Technical College	Valley Branch WD
Farmington, City	New Brighton, City	Victoria, City
Federal Medical Center	New Hope, City	Waconia, City
Fergus Falls, City	New Ulm, City	Waseca, City
Forest Lake, City	Newport City	Washington County
Gem Lake, City	Normandale Community College	Watab Township
Golden Valley, City	North Branch, City	Wayzata, City
Grant, City	North Hennepin Community College	West Lakeland Township
Ham Lake, City	North Mankato, City	White Bear Lake, City
Hastings, City	North St Paul, City	White Bear Township
Haven Township	Northfield, City	Willmar, City
Haverhill Township	Oakdale, City	Woodbury, City
Hennepin County	Olmsted County	Worthington, City
Hennepin Technical College Brooklyn Pk		

Table 2
Existing Permittees – Schedule of Permit Requirements

<i>Permit Requirement</i>	<i>Schedule</i>
PART II. APPLICATION REQUIREMENTS <ul style="list-style-type: none"> • <i>Submit Part 2 of the permit application with the SWPPP document completed in accordance with Part II.D.</i> 	<ul style="list-style-type: none"> • See Table 1 above.
PART III. STORMWATER POLLUTION PREVENTION PROGRAM (SWPPP) <ul style="list-style-type: none"> • <i>Complete revisions to incorporate requirements of Part III.A-F into current SWPPP.</i> <p><u>Part III.C Mapping and Inventory</u> Part III.C.2 Inventory</p> <ul style="list-style-type: none"> • <i>Complete and submit inventory in accordance with Part III.C.2.</i> <p><u>Part III.D.6 Pollution Prevention/Good Housekeeping For Municipal Operations</u> Part III.D.6.e Inspections</p> <ul style="list-style-type: none"> • <i>Conduct inspections.</i> <p><u>Part III.E Impaired Waters and TMDLs (if applicable)</u></p> <ul style="list-style-type: none"> • <i>Submit all information required by Part III.E.</i> <p><u>Part III.F. Alum or Ferric Chloride Phosphorus Treatment Systems (if applicable)</u></p> <ul style="list-style-type: none"> • <i>Meet requirements for treatment systems under Part III.F.</i> 	<ul style="list-style-type: none"> • Within 12 months of the date permit coverage is extended, unless other timelines have been specifically established in this permit and identified below. • Within 12 months of the date permit coverage is extended. • Annually (Part III.D.6.e(1) and (2)), Quarterly (Part III.D.6.e(3)). • With each Annual Report required in Part IV.B. • Within 12 months of the date permit coverage is extended.
PART IV. ANNUAL SWPPP ASSESSMENT, ANNUAL REPORTING AND RECORD KEEPING <u>Part IV.A Annual SWPPP Assessment</u> <ul style="list-style-type: none"> • <i>Conduct assessment of the SWPPP.</i> <p><u>Part IV.B Annual Reporting</u> <ul style="list-style-type: none"> • <i>Submit an Annual Report</i> </p>	<ul style="list-style-type: none"> • Annually and prior to completion of each Annual Report. • By June 30th of each calendar year.

Table 3
New Permittees – Schedule of Permit Requirements

<i>Permit Requirement</i>	<i>Schedule</i>
PART II. APPLICATION REQUIREMENTS <ul style="list-style-type: none"> • <i>Submit Part 1, and Part 2 of the permit application with the proposed SWPPP document as required by Part II.D.</i> 	<ul style="list-style-type: none"> • Within 18 months of written notification from the Commissioner that the MS4 meets the criteria in Minn. R. 7090.1010, Subpart 1.A. or B. and permit coverage is required.
PART III. STORMWATER POLLUTION PREVENTION PROGRAM (SWPPP) <ul style="list-style-type: none"> • <i>Complete all requirements of Part III.A-F.</i> <p><u>Part III.A Regulatory Mechanism(s)</u> Illicit Discharge Detection and Elimination (see Part III.D.3)</p>	<ul style="list-style-type: none"> • Within 36 months of the date permit coverage is extended, unless other timelines have been specifically established in this permit and identified below; or • Within timelines established by the Commissioner under Part I.F.2.

<ul style="list-style-type: none"> • <i>Develop, implement, and enforce Regulatory Mechanism.</i> <p>Construction Site Stormwater Runoff Control (see Part III.D.4)</p> <ul style="list-style-type: none"> • <i>Develop, implement, and enforce Regulatory Mechanism.</i> <p>Post-Construction Stormwater Management (see Part III.D.5)</p> <ul style="list-style-type: none"> • <i>Develop, implement, and enforce Regulatory Mechanism.</i> <p><u>Part III.B Enforcement Response Procedures (ERPs)</u></p> <ul style="list-style-type: none"> • <i>Develop and implement written ERPs for the Regulatory Mechanism(s) required under Part III.A.</i> <p><u>Part III.C Mapping and Inventory</u></p> <p>Part III.C.1 Mapping</p> <ul style="list-style-type: none"> • <i>Develop a storm sewer system map.</i> <p><u>Part III.C.2 Inventory</u></p> <ul style="list-style-type: none"> • <i>Complete and submit inventory in accordance with Part III.C.2.</i> <p><u>Part III.D Minimum Control Measures</u></p> <p><u>Part III.D.4 Construction Site Stormwater Runoff Control</u></p> <ul style="list-style-type: none"> • <i>Develop, implement, and enforce a Construction Site Stormwater Runoff Control program.</i> <p><u>Part III.D.5 Post-Construction Stormwater Management</u></p> <ul style="list-style-type: none"> • <i>Develop, implement, and enforce a Post-Construction Stormwater Management program.</i> <p><u>Part III.D.6 Pollution Prevention/Good Housekeeping for Municipal Operations</u></p> <p>Part III.D.6.e Inspections</p> <ul style="list-style-type: none"> • <i>Conduct inspections.</i> <p><u>Part III.E Impaired Waters and TMDLs (if applicable)</u></p> <ul style="list-style-type: none"> • <i>Submit all information required by Part III.E.</i> <p><u>Part III.F. Alum or Ferric Chloride Phosphorus Treatment Systems (if applicable)</u></p> <ul style="list-style-type: none"> • <i>Meet requirements for treatment systems under Part III.F.</i> 	<ul style="list-style-type: none"> • Within 12 months of the date permit coverage is extended. • Within six (6) months of the date permit coverage is extended. • Within 24 months of the date permit coverage is extended. • Within 24 months of the date permit coverage is extended. • Within 24 months of the date permit coverage is extended. • Within 24 months of the date permit coverage is extended. • Within 24 months of the date permit coverage is extended. • Within six (6) months of the date permit coverage is extended. See Part III.A Regulatory Mechanism(s). • Within 24 months of the date permit coverage is extended. See Part III.A Regulatory Mechanism(s). • Annually (Part III.D.6.e(1) and (2)), Quarterly (Part III.D.6.e(3)). • With each Annual Report required in Part IV.B. • Within 12 months of the date permit coverage is extended.
<p>PART IV. ANNUAL SWPPP ASSESSMENT, ANNUAL REPORTING AND RECORD KEEPING</p> <p><u>Part IV.A Annual SWPPP Assessment</u></p> <ul style="list-style-type: none"> • <i>Conduct assessment of the SWPPP.</i> <p><u>Part IV.B Annual Reporting</u></p> <ul style="list-style-type: none"> • <i>Submit an Annual Report.</i> 	<ul style="list-style-type: none"> • Annually and prior to completion of each Annual Report. • By June 30th of each calendar year.

APPENDIX B

DEFINITIONS AND ABBREVIATIONS

The definitions in this Part are for purposes of this permit only.

1. **“Active Karst”** means geographic areas underlain by carbonate bedrock (or other forms of bedrock that can erode or dissolve) with less than 50 feet of sediment cover.
2. **“Agency”** means the Minnesota Pollution Control **Agency** or MPCA. (Minn. Stat. § 116.36, subd. 2.)
3. **“Alum or Ferric Chloride Phosphorus Treatment System”** means the diversion of flowing **stormwater** from a **MS4**, removal of phosphorus through the use a continuous feed of alum or ferric chloride additive, flocculation, and the return of the treated **stormwater** back into a **MS4** or **receiving water**.
4. **“Applicable WLA”** – means a **Waste Load Allocation** assigned to the **permittee** and approved by the USEPA.
5. **“Best Management Practices”** or **“BMPs”** means practices to prevent or **reduce** the pollution of the **waters of the state**, including schedules of activities, prohibitions of practices, and other management practices, and also includes treatment requirements, operating procedures and practices to control plant site runoff, spillage or leaks, sludge, or waste disposal or drainage from raw material storage. (Minn. R. 7001.1020, subp.5.)
6. **“Commissioner”** means the **Commissioner** of the Minnesota Pollution Control **Agency** or the **Commissioner’s** designee. (Minn. Stat. § 116.36, subd. 3.)
7. **“Common Plan of Development or Sale”** means a contiguous area where multiple separate and distinct land disturbing activities may be taking place at different times, on different schedules, but under one proposed plan. One plan is broadly defined to include design, permit application, advertisement or physical demarcation indicating that land-disturbing activities may occur.
8. **“Construction Activity”** includes **construction activity** as defined in 40 CFR § 122.26(b)(14)(x) and **small construction activity** as defined in 40 CFR § 122.26(b)(15). This includes a disturbance to the land that results in a change in the topography, existing soil cover (both vegetative and non-vegetative), or the existing soil topography that may result in accelerated **stormwater** runoff, leading to soil erosion and movement of sediment into **surface waters** or drainage systems. Examples of **construction activity** may include clearing, grading, filling, and excavating. **Construction activity** includes the disturbance of less than one acre of total land area that is a part of a larger **common plan of development or sale** if the larger common plan will ultimately disturb one (1) acre or more.
9. **“DNR Catchment Area”** means the Hydrologic Unit 08 areas delineated and digitized by the Minnesota DNR. The catchment areas are available for download at the Minnesota DNR Data Deli website. **DNR catchment areas** may be locally corrected, in which case the local corrections may be used.
10. **“Effective Date”** means the date, located on the front cover of this permit, on which this permit shall become effective.

11. **“Existing Permittee”** means an **Owner/Operator** of a **small MS4** that has been authorized to discharge **stormwater** under a previously issued **general permit** for **small MS4s** in the state of Minnesota.
12. **“General permit”** means a permit issued under Minn. R. 7001.0210 to a category of **permittees** whose operations, emissions, activities, discharges, or facilities are the same or substantially similar. (Minn. R. 7001.0010, subp.4.)
13. **“Geographic Coordinate”** means the point location of a **stormwater** feature expressed by X, Y coordinates of a standard Cartesian coordinate system (i.e. latitude/longitude) that can be readily converted to Universal Transverse Mercator (UTM), Zone 15N in the NAD83 datum. For polygon features, the **geographic coordinate** will typically define the approximate center of a **stormwater** feature.
14. **“Green Infrastructure”** means a wide array of practices at multiple scales that manage wet weather and that maintains or restores natural hydrology by infiltrating, evapotranspiring, or harvesting and using stormwater. On a regional scale, green infrastructure is the preservation or restoration of natural landscape features, such as forests, floodplains and wetlands, coupled with policies such as infill and redevelopment that reduce overall imperviousness in a watershed. On the local scale, green infrastructure consists of site and neighborhood-specific practices, such as bioretention, trees, green roofs, permeable pavements and cisterns.
15. **“High Flow Bypass”** means a function of an inlet device that allows a certain flow of water through, but diverts any higher flows away. **High flow bypasses** are generally used for **BMPs** that can only treat a designed amount of flow and that would be negatively affected by higher flows.
16. **“Illicit Discharge”** means any discharge to a **municipal separate storm sewer** that is not composed entirely of stormwater except discharges pursuant to a NPDES permit (other than the **NPDES** permit for discharges from the **municipal separate storm sewer**) and discharges resulting from firefighting activities. (40 CFR § 122.26(b)(2))
17. **“Impaired Water”** means waters identified as impaired by the **Agency**, and approved by the USEPA, pursuant to section 303(d) of the Clean Water Act (33 U.S.C. § 303(d)).
18. **“Maximum Extent Practicable”** or **“MEP”** means the statutory standard (33 U.S.C. § 1342(p)(3)(B)(iii)) that establishes the level of pollutant reductions that an **Owner** or **Operator** of **Regulated MS4s** must achieve. The USEPA has intentionally not provided a precise definition of **MEP** to allow maximum flexibility in **MS4** permitting. The pollutant reductions that represent **MEP** may be different for each **small MS4**, given the unique local hydrologic and geologic concerns that may exist and the differing possible pollutant control strategies. Therefore, each **permittee** will determine appropriate **BMPs** to satisfy each of the six Minimum Control Measures (MCMs) through an evaluative process. The USEPA envisions application of the **MEP** standard as an iterative process.
19. **“Municipal separate storm sewer system”** or **“MS4”** means a conveyance or system of conveyances including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains:
 - a. owned or operated by a state, city, town, county, district, association, or other public body, created by or pursuant to state law, having jurisdiction over disposal of sewage, industrial

wastes, stormwater, or other wastes, including special districts under state law such as a sewer district, flood control district, or drainage district or similar entity, or an Indian tribe or an authorized Indian tribe organization, or a designated and approved management **Agency** under section 208 of the federal Clean Water Act, United States Code, title 33, section 1288, that discharges into **waters of the state**

- b. designed or used for collecting or conveying stormwater
- c. that is not a combined sewer; and
- d. that is not part of a publicly owned treatment works as defined in 40 CFR § 122.2

Municipal separate storm sewer systems do not include separate storm sewers in very discrete areas, such as individual buildings. (Minn. R. 7090.0080, subp. 8).

- 20. **“New development”** means all **construction activity** that is not defined as **redevelopment**.
- 21. **“New Permittee”** means an **Owner/Operator** of a **small MS4** that has not been authorized to discharge **stormwater** under a previously issued General **Stormwater** Permit for **small MS4s** in the state of Minnesota and that applies for, and obtains coverage under this permit.
- 22. **“Non-Stormwater Discharge”** means any discharge not composed entirely of **stormwater**.
- 23. **“Operator”** means the **person** with primary operational control and legal responsibility for the **municipal separate storm sewer system**. (Minn. R. 7090.0080, subp.10.)
- 24. **“Outfall”** means the point source where a **municipal separate storm sewer system** discharges to a **receiving water**, or the **stormwater** discharge permanently leaves the **permittee’s MS4**. It does not include diffuse runoff or conveyances that connect segments of the same stream or water systems (e.g., when a conveyance temporarily leaves an **MS4** at a road crossing).
- 25. **“Owner”** means the **person** that owns the **municipal separate storm sewer system**. (Minn. R. 7090.0080, subp.11.)
- 26. **“Permittee”** means a **person** or **persons**, that signs the permit application submitted to the **Agency** and is responsible for compliance with the terms and conditions of this permit.
- 27. **“Person”** means the state or any Agency or institution thereof, any municipality, governmental subdivision, public or private corporation, individual, partnership, or other entity, including, but not limited to, association, commission or any interstate body, and includes any officer or governing or managing body of any municipality, governmental subdivision, or public or private corporation, or other entity.(Minn. Stat. § 115.01, subd. 10.)
- 28. **“Pipe”** means a closed manmade conveyance device used to transport **stormwater** from location to location. The definition of **pipe** does not include foundation drain **pipes**, irrigation **pipes**, land drain tile **pipes**, culverts, and road sub-grade drain **pipes**.
- 29. **“Pollutant of Concern”** means a pollutant specifically identified in a USEPA-approved **TMDL** report as causing a water quality impairment.

30. **“Receiving Water”** means any lake, river, stream or **wetland** that receives **stormwater** discharges from an **MS4**.
31. **“Redevelopment”** means any **construction activity** where, prior to the start of construction, the areas to be disturbed have 15 percent or more of impervious surface(s).
32. **“Reduce”** means **reduce** to the **Maximum Extent Practicable (MEP)** unless otherwise defined in the context in which it is used.
33. **“Saturated Soil”** means the highest seasonal elevation in the soil that is in a reduced chemical state because of soil voids being filled with water. **Saturated soil** is evidenced by the presence of redoximorphic features or other information.
34. **“Significant Materials”** includes, but is not limited to: raw materials, fuels, materials such as solvents, detergents, and plastic pellets; finished materials such as metallic products; raw materials used in food processing or production; hazardous substances designated under Section 101(14) of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA); any chemical the facility is required to report pursuant to Section 313 of the Emergency Planning and Community Right-to-Know Act (EPCRA); fertilizers, pesticides, and waste products such as ashes, slag, and sludge that have the potential to be released with **stormwater** discharges. When determining whether a material is significant, the physical and chemical characteristics of the material should be considered (e.g. the material’s solubility, transportability, and toxicity characteristics) to determine the material’s pollution potential. (40 CFR § 122.26(b)(12)).
35. **“Small Municipal Separate Storm Sewer System”** or **“small MS4”**, means all separate storm sewers that are:
 1. Owned or operated by the United States, a state, city, town, borough, county, parish, district, association, or other public body (created by or pursuant to state law) having jurisdiction over disposal of sewage, industrial wastes, **stormwater**, or other wastes, including special districts under state law such as a sewer district, flood control district or drainage district, or similar entity, or an Indian tribe or an authorized Indian tribal organization, or a designated and approved management Agency under section 208 of the CWA that discharges to waters of the United States.
 2. Not defined as “large” or “medium” **Municipal Separate Storm Sewer Systems** pursuant to 40 CFR § 122.26 paragraphs (b)(4) and (b)(7) or designated under paragraph (a)(1)(v).
 3. This term includes systems similar to separate storm sewer systems in municipalities, such as systems at military bases, large hospital or prison complexes, and highways and other thoroughfares. The term does not include separate storm sewers in very discrete areas, such as individual buildings.
36. **“Stormwater”** means **stormwater** runoff, snow melt runoff, and surface runoff and drainage. (Minn. R. 7090.0080, subp.12.)
37. **“Stormwater flow direction”** means the direction of predominant flow within a **pipe**. Flow direction can be discerned if **pipe** elevations can be displayed on the storm sewer system map.

38. **“Stormwater Pollution Prevention Program” or “SWPPP”** means a comprehensive program developed by the **permittee** to manage and **reduce** the discharge of pollutants in **stormwater** to and from the **small MS4**.
39. **“Structural Stormwater BMP”** means a stationary and permanent **BMP** that is designed, constructed and operated to prevent or **reduce** the discharge of pollutants in **stormwater**.
40. **“Total Maximum Daily Load” or “TMDL”** means the sum of the individual **Waste Load Allocations** for point sources and load allocations for nonpoint sources and natural background, as more fully defined in 40 CFR § 130.2, paragraph (i). A **TMDL** sets and allocates the maximum amount of a pollutant that may be introduced into a **water of the state** and still assure attainment and maintenance of **water quality standards**. (Minn. R. 7052.0010 subp. 42)
41. **“Waste Load Allocation” or “WLA”** means the portion of a receiving water's loading capacity that is allocated to one of its existing or future point sources of pollution, as more fully defined in Code of Federal Regulations, title 40, section 130.2, paragraph (h). In the absence of a **TMDL** approved by USEPA under 40 CFR § 130.7, or an assessment and remediation plan developed and approved according to Minn. R. [7052.0200](#), subp. 1.C, a **WLA** is the allocation for an individual point source that ensures that the level of water quality to be achieved by the point source is derived from and complies with all applicable **water quality standards** and criteria. (Minn. R. 7052.0010 subp. 45)
42. **“Water pollution”** means (a) the discharge of any pollutant into any waters of the state or the contamination of any waters of the state so as to create a nuisance or render such waters unclean, or noxious, or impure so as to be actually or potentially harmful or detrimental or injurious to public health, safety or welfare, to domestic, agricultural, commercial, industrial, recreational or other legitimate uses, or to livestock, animals, birds, fish or other aquatic life; or (b) the alteration made or induced by human activity of the chemical, physical, biological, or radiological integrity of waters of the state. (Minn. Stat. § 115.01, subd. 13)
43. **“Water Quality Standards”** means those provisions contained in Minn. R. 7050 and 7052.
44. **“Waters of the State”** means all streams, lakes, ponds, marshes, watercourses, waterways, wells, springs, reservoirs, aquifers, irrigation systems, drainage systems and all other bodies or accumulations of water, surface or underground, natural or artificial, public or private, which are contained within, flow through, or border upon the state or any portion thereof. (Minn. Stat. § 115.01, subd. 22.)
45. **“Wetlands”** are those areas that are inundated or saturated by surface water or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. **Wetlands** generally include swamps, marshes, bogs, and similar areas. Constructed **wetlands** designed for wastewater treatment are not **waters of the state**. **Wetlands** must have the following attributes:
1. A predominance of hydric soils
 2. Inundated or saturated by surface water or groundwater at a frequency and duration sufficient to support a prevalence of hydrophytic vegetation typically adapted for life in a saturated soil condition and

3. Under normal circumstances support a prevalence of such vegetation. (Minn. R. 7050.0186, subp. 1a.B.)

ABBREVIATIONS AND ACRONYMS

- BMP - Best Management Practice
- CFR – Code of Federal Regulations
- CWA – Clean Water Act or the Federal Water Pollution Control Act, 33 U.S.C. §1251 *et seq*)
- DNR – Department of Natural Resources
- DWSMA – Drinking Water Supply Management Area
- ERPs– Enforcement Response Procedures
- IDDE - Illicit Discharge Detection and Elimination
- MCM – Minimum Control Measure
- MDH – Minnesota Department of Health
- MEP – Maximum Extent Practicable
- MS4 - Municipal Separate Storm Sewer System
- NPDES - National Pollutant Discharge Elimination System
- ORVW - Outstanding Resource Value Water
- SDS – State Disposal System
- TMDL - Total Maximum Daily Load
- TP – Total Phosphorus
- TSS - Total Suspended Solids
- USEPA - United States Environmental Protection Agency
- WLA – Waste Load Allocation



2015

MINNESOTA PLUMBING CODE



MINNESOTA DEPARTMENT OF
LABOR & INDUSTRY

CHAPTER 11

STORM DRAINAGE

1101.0 General.

1101.1 Where Required. Roofs, paved areas, yards, courts, courtyards, vent shafts, light wells, or similar areas having rainwater, shall be drained into a separate storm sewer system, or into a combined sewer system where a separate storm sewer system is not available, or to some other place of disposal satisfactory to the Authority Having Jurisdiction. In no case shall water from roofs or any building roof drainage flow onto the public sidewalk. In the case of one- and two-family dwellings, storm water shall be permitted to be discharged on flat areas, such as streets or lawns, so long as the storm water shall flow away from the building and away from adjoining property, and shall not create a nuisance.

1101.2 Storm Water Drainage to Sanitary Sewer Prohibited. Storm water shall not be drained into sewers intended for sanitary drainage unless approved by the municipal sewer authority or stated elsewhere in this code.

1101.3 Material Uses. Rainwater piping placed within the interior of a building or run within a vent or shaft shall be of cast-iron, galvanized steel, wrought iron, brass, copper, lead, Schedule 40 ABS DWV, Schedule 40 PVC DWV, stainless steel 304 or 316L [stainless steel 304 pipe and fittings shall not be installed underground and shall be kept not less than 6 inches (152 mm) aboveground], or other approved materials. Changes in direction shall be in accordance with Section 706.0. ABS and PVC DWV piping installations shall be installed in accordance with IS 5 and IS 9.

1101.4 Expansion Joints Required. Expansion joints or sleeves shall be provided where warranted by temperature variations or physical conditions.

1101.5 Subsoil Drains. Subsoil drains shall be provided around the perimeter of buildings having basements, cellars, crawl spaces, or floors below grade. Such subsoil drains shall be permitted to be positioned inside or outside of the footing, shall be of perforated or open-jointed approved drain tile or pipe, not less than 3 inches (80 mm) in diameter, and shall be laid in gravel, slag, crushed rock, approved $\frac{3}{4}$ of an inch (19.1 mm) crushed, recycled glass aggregate, or other approved porous material with not less than 4 inches (102 mm) surrounding the pipe. Filter media shall be provided for exterior subsoil piping.

1101.5.1 Discharge. Subsoil drains shall be piped to a storm drain, to an approved water course, to the front street curb or gutter, to an alley, or the discharge from the subsoil drains shall be conveyed to the alley by a concrete gutter. Where a continuously flowing spring or groundwater is encountered, subsoil drains shall be piped to a storm drain or an approved water course.

1101.5.2 Sump. Where it is not possible to convey

the drainage by gravity, subsoil drains shall discharge to an accessible sump provided with an approved automatic electric pump. The sump shall be not less than 15 inches (381 mm) in diameter, 18 inches (457 mm) in depth, and provided with a fitted cover. The sump pump shall have an adequate capacity to discharge water coming into the sump as it accumulates to the required discharge point, and the capacity of the pump shall be not less than 15 gallons per minute (gpm) (0.95 L/s). The discharge piping from the sump pump shall be not less than $1\frac{1}{2}$ inches (40 mm) in diameter and have a union or other approved quick-disconnect assembly to make the pump accessible for servicing.

1101.5.3 Splash Blocks. For separate dwellings not serving continuously flowing springs or groundwater, the sump discharge pipe shall be permitted to discharge onto a concrete splash block with a minimum length of 24 inches (610 mm). This pipe shall be within 4 inches (102 mm) of the splash block and positioned to direct the flow parallel to the recessed line of the splash block.

1101.5.4 Backflow Protection. Subsoil drains subject to backflow where discharging into a storm drain shall be provided with a backwater valve in the drain line so located as to be accessible for inspection and maintenance.

1101.5.5 Open Area. Nothing in Section 1101.5 shall prevent drains that serve either subsoil drains or areaways of a detached building from discharging to a properly graded open area, provided that:

- (1) They do not serve continuously flowing springs or groundwater.
- (2) The point of discharge is not less than 10 feet (3048 mm) from a property line.
- (3) It is impracticable to discharge such drains to a storm drain, to an approved water course, to the front street curb or gutter, or to an alley.

1101.6 Building Subdrains. Building subdrains located below the public sewer level shall discharge into a sump or receiving tank, the contents of which shall be automatically lifted and discharged into the drainage system as required for building sumps.

1101.7 Areaway Drains. Open subsurface space adjacent to a building, serving as an entrance to the basement or cellar of a building, shall be provided with a drain or drains. Such areaway drains shall be not less than 2 inches (50 mm) in diameter for areaways at a maximum of 100 square feet (9.29 m²) in area, and shall be discharged in the manner provided for subsoil drains not serving continuously flowing springs or groundwater (see Section 1101.5.1). Areaways in excess of 100 square feet (9.29 m²) shall not drain into subsoil drains. Areaway drains for

CHAPTER 2

SEWER USE AND SERVICE

SECTION:

- 10-2-1: Definitions
- 10-2-2: Use Of Public Sewers Required
- 10-2-3: Private Wastewater Disposal Systems
- 10-2-4: Building Sewers And Connections
- 10-2-5: Contractor Licensing Requirements
- 10-2-6: Discharges Into Public System
- 10-2-7: Interceptors
- 10-2-8: Pretreatment Or Flow Equalizing Facilities
- 10-2-9: Industrial Users
- 10-2-10: Information Required
- 10-2-11: Measurements, Tests And Analyses
- 10-2-12: Special Agreements
- 10-2-13: Power And Authority Of Inspectors
- 10-2-14: Violation; Penalties

10-2-1: **DEFINITIONS:** Unless the context specifically indicates otherwise, the meanings of terms used in this chapter shall be as follows:

**BIOCHEMICAL
OXYGEN DEMAND
(BOD):**

The quantity of oxygen utilized in the biochemical oxidation of organic matter under standard laboratory procedure in five (5) days at twenty degrees centigrade (20°C), expressed in milligrams per liter.

BUILDING DRAIN:

That part of the lowest horizontal piping of a drainage system which receives the discharge from soil, waste and other drainage pipes inside the walls of the building and conveys it to the building sewer, beginning five feet (5') outside the inner face of the building wall.

BUILDING OFFICIAL:

Officer or other designated authority charged with the administration and enforcement of this chapter.

BUILDING SEWER:	The extension from the building drain to the public sewer or other place of disposal, also called house connection.
CITY:	City of Andover.
EASEMENT:	An acquired legal right for the specific use of land owned by others.
FLOATABLE OIL:	Oil, fat, or grease, in a physical state such that it may separate by gravity from wastewater by treatment in an approved pretreatment facility. A wastewater shall be considered free of floatable oil if it is properly pretreated and the wastewater does not interfere with the collection system.
GARBAGE:	The animal and vegetable waste resulting from the handling, preparation, cooking and serving of foods.
INDUSTRIAL WASTES:	The wastewater from industrial processes, trade, or business as distinct from domestic sanitary wastes.
NATURAL OUTLET:	Any outlet, including storm sewers, into a watercourse, pond, ditch, lake, or other body of surface or ground water.
pH:	The logarithm of the reciprocal of the hydrogen ion concentration. The concentration is the weight of hydrogen ion, in grams per liter of solution. Neutral water, for example, has a pH value of 7 and a hydrogen ion concentration of 10.
PERSON:	Any individual, firm, company, association, society, corporation, or group.
PROPERLY SHREDDED GARBAGE:	The wastes from the preparation, cooking, and dispensing of foods 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 one-half inch (1/2") in any dimension.
PUBLIC SEWER:	A common sewer controlled by a governmental agency or public authority.

SANITARY SEWER:	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 that are not admitted intentionally.
SEWER:	A pipe or conduit that carries wastewater.
SHALL; MAY:	"Shall" is mandatory; "may" is permissive.
SLUG:	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 of flows during normal operation and shall adversely affect the collection system.
STORM DRAIN (Sometimes Termed STORM SEWER):	A drain or sewer for conveying water, ground water, subsurface water, or unpolluted water from any source.
SUSPENDED SOLIDS:	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 non-filterable residue.
UNPOLLUTED WATER:	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.
WASTEWATER:	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 ground water, surface water, and storm water that may be present.

**WASTEWATER
FACILITIES:**

The structures, equipment, and processes required to collect and carry away domestic and industrial wastes and dispose of the effluent.

WATERCOURSE:

A natural or artificial channel for the passage of water either continuously or intermittently. (Amended Ord. 32, 11-25-1975; amd. 2003 Code)

10-2-2: USE OF PUBLIC SEWERS REQUIRED:

- A. **Discharge Of Human And Animal Wastes:** 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 the jurisdiction of the city, any human or animal excrement, garbage, or objectionable waste.
- B. **Discharges Into Natural Outlets:** It shall be unlawful to discharge to any natural outlet within the city, or in any area under the jurisdiction of the city, any wastewater or other polluted waters. (Amended Ord. 32, 11-25-1975)
- C. **Connection To Sewer System Required:** The owner of all houses, buildings, or properties used for human occupancy, employment, recreation, or other purposes, situated within the city and abutting 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 required at the owner's expense to install suitable toilet facilities therein, and to connect such facilities directly with the proper public sewer in accordance with the provisions of this chapter within one year after date of due notice to do so. (Amended Ord. 32, 11-25-1975; amd. 2003 Code)
- D. **Discharges Into System:** Discharge of wastewater into building sewers and sanitary sewer system shall be in conformance with the Metropolitan Waste Control Commission rules and regulations. (Amended Ord. 32, 11-25-1975)

10-2-3: PRIVATE WASTEWATER DISPOSAL SYSTEMS¹:

- A. **Private Systems Permitted:** Where a public sanitary sewer is not available under the provisions of Subsection 10-2-2C of this chapter, the building sewer shall be connected to a private wastewater disposal system complying with the Minnesota State Plumbing Code and the provisions of the city private waste disposal ordinance².

¹ See also chapter 4 of this title and sections 3-3-5, 12-12-4 and 13-4-6H2 of this code.

² See chapter 4 of this title.

- B. Responsibility For Private System: The owner shall operate and maintain the existing private wastewater disposal facilities in accordance with the recommendations of the State Department of Public Health at no expense to the city.
- C. Availability Of Public Sewer:
1. Nonconforming Private System: At such time as a public sewer becomes available to a property served by a nonconforming private wastewater disposal system, a direct connection shall be made to the public sewer within thirty (30) days.
 2. Conforming Private System: At such time as a public sewer becomes available to a property served by a conforming private wastewater disposal system, a direct connection shall be made to the public sewer within a period of time as determined by Council resolution.
 3. Cleaning And Filling Of Private System: Immediately upon hookup to the public system, any septic tanks, cesspools, or similar private wastewater disposal facilities may be required, at the discretion of the Building Official, to be cleaned of sludge, collapsed and backfilled with a suitable granular material. (Amended Ord. 32, 11-25-1975)
 4. Failure To Connect To Public System: If such connection is not made pursuant to this chapter, the city shall enter into a contract with a licensed contractor to have the connection made, and the cost shall be assessed to the property taxes, unless authorized by the City Council to do otherwise. (Amended Ord. 32, 11-25-1975; amd. 2003 Code)

10-2-4: **BUILDING SEWERS AND CONNECTIONS:**

- A. Permit To Connect¹:
1. Permit Required: No unauthorized person 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 Building Official.
 2. Classes Of Permits: There shall be two (2) classes of building sewer permits: a) for residential and commercial services; and b) for service to establishments producing industrial wastes.
 3. Application For Permit: In either case, the owner or his agent shall make application on a special form furnished by the city. The permit application shall be supplemented by plans, specifications, or other

¹ See also section 3-3-5 of this code.

information considered pertinent in the judgment of the Building Official. (Amended Ord. 32, 11-25-1975)

4. Fees¹: A permit and inspection fee as set forth by ordinance for a residential or commercial building sewer permit, or fee as set forth by ordinance for an industrial building sewer permit shall be paid to the city at the time the application is filed, plus an administrative fee as set forth by ordinance to cover processing costs.

5. Approval Of Permit: Upon approval of the permit, the city will furnish the applicant sanitary sewer service stub elevations and location ties.

B. Separate Building Sewers Required: A separate and independent building sewer shall be provided for every building except where one building stands at the rear of another, on an interior lot and no private sewer is available or can be constructed to the rear building through an adjoining alley, court, yard, or driveway.

C. Construction Specifications:

1. Building sewer pipe and fitting materials and construction shall be in accordance with the current Minnesota Plumbing Code². If polyvinyl chloride (PVC) pipe is used, it shall meet the current requirements of the American Society for Testing and Materials Designation D3034.73A, SDR-35 extra heavy wall thickness (minimum wall thickness: 4"-0.125"; 6"-0.180"; 8"-0.240").

2. The size and slope of the building sewer shall be subject to the approval of the Building Official, and in no event shall the diameter be less than four inches (4") and the slope less than one-eighth inch (1/8") per foot. Any variation shall be subject to the approval of the Building Official. The service stub and the building drain shall be uncovered and the differential elevation determined before construction is begun. Where practicable, the building sewer shall be laid on a uniform grade. It shall be the responsibility of the service line contractor to investigate the location of all existing public utility lines including telephone conduits, gas, water and sewer mains, and power conduits which may be in place at the site of the operations. The contractor shall utilize the Gopher State One-Call System before work has begun at those locations. In case the aforementioned public utilities are broken or damaged in any way by the contractor's operations, the utility shall be notified immediately and the damage repaired without delay at no charge to the city. (Amended Ord. 32, 11-25-1975; amd. 2003 Code)

¹ See subsection 1-7-3J of this code.

² See section 9-1-1 of this code.

3. Whenever possible, the building sewer shall be brought to the building at an elevation below the basement floor. No building sewer shall be laid parallel to and within three feet (3') of any bearing wall which might thereby be weakened. The depth shall be sufficient to afford protection from frost. The building sewer shall be laid in straight alignment insofar as possible, and changes in direction shall be made only with properly curved pipes and fittings. Cleanouts will be required at all ninety-degree (90°) bends and for every seventy-five feet (75') of service line from the service stub to the house connection. Cleanouts will not be required at forty-five degree (45°) bends or less. All ninety degree (90°) bends will be wide sweep ells.
4. Wherever any building drain is too low to permit gravity flow to the municipal sewer, sewage carried by such drain shall be lifted by approved artificial means and discharged into the building sewer.
- D. Connections To System: The connection of the building sewer into the public sewer shall conform to the requirements of the Minnesota Building and Plumbing Code¹, State Water Well Construction Code or other applicable rules and regulations of the city. The sanitary sewer line, if constructed of plastic pressure pipe, must be at least fifty feet (50') away from a private water supply that is greater than fifty feet (50') in depth and at least one hundred feet (100') away from a private water supply that is less than fifty feet (50') in depth. The sanitary sewer line, if constructed of extra heavy cast iron soil pipe, must be at least twenty feet (20') away from a private water supply regardless of the well depth. Any deviation from the prescribed procedures and materials must be approved by the Building Official before installation. If existing sanitary sewer services cannot be found after diligent search or are not located properly for providing the needed service, a saddle type connection shall be made, provided the Building Official or representative approves. Connections of the saddle type shall be made in a smooth, round hole and machine drilled into the main sewer pipe. The fittings used in the connection shall be made in such a manner as to ensure that no protrusion of the fitting into the main sewer pipe shall result. The connector shall fit perfectly to the contour of the inside of the sanitary sewer and shall be specifically designed to fit the particular size main sewer pipe into which the connection is made. The machine-drilled hole shall be of such size to provide one-eighth inch (1/8") clearance between the outside of the fitting and the hole. The space thus provided shall be completely filled with joint material. The space between the shoulder of the fittings and the face of the main sewer pipe shall be one-eighth inch (1/8") thick, and this space shall be completely filled with joint material. The joint material used for this type house service connection shall be completely waterproof and shall be capable of withstanding any condition of stress or strain likely to be

¹ See section 9-1-1 of this code.

encountered in normal sanitary sewer construction or maintenance.

- E. Excavations: All excavations in the city streets and rights-of-way shall be in accordance with the city street opening ordinance¹. 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 satisfactory manner to comply with city ordinances. (Amended Ord. 32, 11-25-1975)
- F. Surface Water Runoff: No person shall make connection of roof downspouts, foundation drains, areaway drains, or other sources of surface runoff or ground water to a building sewer or building drain which in turn is connected directly or indirectly to a public sanitary sewer unless such connection is approved by the City Engineer for purposes of disposal of polluted surface drainage.
- G. Inspections: The applicant for a sewer permit shall notify the Building Official when the building sewer is ready for inspection. The inspection of the installation for the public sewer system to the house shall be made by the Building Official or representative before backfilling. (Amended Ord. 32, 11-25-1975; amd. 2003 Code)
- H. Liability For Costs And Expenses: All costs and expenses incident to the installation and connection of the building sewer shall be borne by the owner. The owner or the person installing the building sewer for said owner shall indemnify the city from any loss or damage that may directly or indirectly be occasioned by said installation.
- I. Responsibility For System:
 - 1. The sewer service from the main in the street to the home shall be the property of the owner and protected and maintained by him/her. The city is, however, responsible for:
 - a. Defects in materials within the portion of the service installed under city contract that may become apparent within a one-year period following acceptance and final payment for the construction by the city.
 - b. The city is responsible for any faulty construction within that section of the service installed under city contract.
 - 2. Based upon the information supplied by the property owner or available to the city, the city will make a determination as to whether a problem

¹ See title 8, chapter 2 of this code.

exists in that portion of the service which is the city's responsibility. If the problem appears to exist in the areas for which the city has no responsibility, the private owners will be completely responsible for correction of the problem. (Amended Ord. 32, 11-25-1975)

10-2-5: **CONTRACTOR LICENSING REQUIREMENTS¹:**

A. Installing, Constructing Sewer Systems:

1. License Required: No person, firm or corporation shall engage in the business of altering, repairing, installing or constructing sanitary sewer connections within the city without first obtaining a license to carry on such occupation from the city.

2. Security:

a. Insurance: The applicant shall file with the City Clerk policies of public liability and property damage insurance which shall remain in force and effect during the entire term of said license and which shall contain a provision that they shall not be canceled without ten (10) days' written notice to the city. Public liability insurance shall not be less than one hundred thousand dollars (\$100,000.00) for injuries including accidental death to any one person and subject to the same limit for each person in an amount of not less than three hundred thousand dollars (\$300,000.00) on account of any one accident, and property damage insurance in the amount of not less than fifty thousand dollars (\$50,000.00) for each accident and not less than one hundred thousand dollars (\$100,000.00) aggregate. No work shall be done under this license until said insurance policies have been filed and approved by the city.

b. Bond: The applicant shall file with the City Clerk for surety a bond guaranteeing the conformance and compliance of work with this chapter. Said bond shall be in an amount of two thousand dollars (\$2,000.00). The city shall hold said bond for one year following the license period. Failure to comply with provisions and requirements of this chapter shall result in forfeiture of the bond.

3. Filing And Review Of Application: Application for license shall be filed with the City Clerk and shall be reviewed and subject to the approval of the city.

4. Revocation Or Refusal To Review License: Any installation, construction, or alteration of a sanitary sewer connection by a licensee in violation of any provision of this chapter, or refusal on the part of a

¹ See also sections 10-1-7 and 10-4-2, amendment 7080.0700 of this title.

licensee to correct such defective work, shall be cause for revocation of or refusal to renew a license. Said license may be revoked or refused for renewal by the city at any time for cause which shall be documented in writing. (Amended Ord. 32, 11-25-1975)

B. Sewage Pumpers:

1. License Required: No person, firm or corporation designated as sewage pumpers shall discharge sludge into the designated discharge location within the city without first obtaining a license from the city to carry on such occupation.

2. Filing And Review Of Application: Application for license shall be filed with the City Clerk and shall be reviewed and subject to the approval by the city.

C. Additional Requirements:

1. Application For License: Applications for such license shall be made annually on a form provided by the City Clerk.

2. Term Of License: Licenses shall be in effect from January 1 to December 31.

3. Renewal Of Licenses: All licenses required in this section shall be renewed annually. (Amended Ord. 32, 11-25-1975; amd. 2003 Code)

D. Hearing On Revocation Or Refusal To Renew Licenses: Before any license issued under the provisions of this section may be revoked or renewal refused, the licensee shall be given a hearing by the City Council to show cause why such license should not be revoked or refused. Notice of the time, place and purpose of such hearing shall be in writing. (Amended Ord. 32, 11-25-1975)

10-2-6: **DISCHARGES INTO PUBLIC SYSTEM:**

A. Storm And Surface Water Runoff:

1. No person shall discharge or cause to be discharged any unpolluted waters such as storm water, ground water, roof runoff, subsurface drainage, or cooling water to any sewer. Storm water runoff from limited areas, which may be polluted at times, may be discharged to the sanitary sewer by permission of the City Engineer.

2. Storm water other than that exempted under Subsection A1 of this section and all other unpolluted drainage shall be discharged to such

sewers as are specifically designated as storm sewers or to a natural outlet approved by the City Engineer and other regulatory agencies. Unpolluted industrial cooling water or process waters may be discharged to a storm sewer or natural outlet on approval of the City Engineer and other regulatory agencies.

B. Prohibited Discharges: No person 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, or create any hazard in the receiving waters of the wastewater treatment plant.
3. Any waters or wastes having a pH lower than 5.5 or having any other corrosive property capable of causing damage or hazard to structures, equipment, and personnel of the wastewater works.
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, un-ground garbage, whole blood, paunch, manure, hair and fleshings, entrails and paper dishes, cups, milk containers, etc., either whole or ground by garbage grinders.

C. Discharges Subject To Review:

1. The following described substances, materials, waters, or waste shall be limited in discharges to municipal systems to concentrations or quantities which will not harm either the sewers, wastewater treatment process or equipment, will not have any adverse effect on the receiving stream, or will not otherwise endanger lives, limbs, public property, or constitute a nuisance. The City Engineer may set limitations lower than the limitations established in the regulations below if in his opinion such more severe limitations are necessary to meet the above objectives. In forming his opinion as to the acceptability, the City Engineer shall 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 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 wastewaters discharged to the sanitary sewer which shall not be violated without approval of the City Engineer are as follows: (Amended Ord. 32, 11-25-1975; amd. 2003 Code)

- a. Wastewater having a temperature higher than one hundred fifty degrees Fahrenheit (150°F) (65° Celsius).
- b. Wastewater containing more than twenty-five milligrams per liter (25 mg/l) of petroleum oil, non-biodegradable cutting oils, or product of mineral oil origin.
- c. Wastewater from industrial plants containing floatable oils, fat, or grease.
- d. Any garbage that has not been properly shredded. 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 when served by caterers.
- e. 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 Metropolitan Waste Control Commission for such materials.
- f. Any waters or wastes containing odor-producing substances exceeding limits that may be established by the City Engineer.
- g. Any radioactive wastes or isotopes of such half-life or concentration as may exceed limits established by the City Engineer in compliance with applicable state or federal regulations.
- h. Quantities of flow, concentrations, or both which constitute a "slug" as defined in Section 10-2-1 of this chapter.
- i. Waters or wastes containing substances which are not amenable to treatment only to such degree that the wastewater treatment plant effluent cannot meet the requirements of other agencies having jurisdiction over discharge to the receiving waters.
- j. Any waters or wastes that, by interaction with other waters or wastes in the public sewer system, release obnoxious gases from suspended solids that interfere with the collection system or create a condition deleterious to structures and treatment processes.

2. 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 Subsection C1 of this section and which, in the judgment of the City Engineer may have a deleterious effect upon the wastewater facilities, processes, equipment, or receiving waters, or which otherwise create a hazard to life or constitute a public nuisance, the city engineer may:

- a. Reject the wastes;
- b. Require pretreatment to an acceptable condition for discharge to the public sewers;
- c. Require control over the quantities and rates of discharge; and/or
- d. Require payment to cover added cost of handling and treating the wastes not covered by existing taxes or sewer charges under the provisions of Chapter 3 of this Title.

3. When considering the above alternatives, the Building Official shall give consideration to the economic impact of each alternative on the discharger. If the Building Official 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 Building Official.

- D. Sludge From Private Systems: Sludge from private sewage disposal systems can be discharged into the sanitary sewer system at a designated location established by the County. (Amended Ord. 32, 11-25-1975; amd. 2003 Code)

10-2-7: **INTERCEPTORS:** Grease, oil, and sand interceptors shall be provided when, in the opinion of the Building Official, they are necessary for the proper handling of liquid wastes containing floatable grease in excessive amounts, as specified in Subsection 10-2-6C1c of this chapter, 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 Building Official and shall be located as to be readily and easily accessible for cleaning and inspection. In the maintaining of these interceptors, the owner 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 that are subject to review by the Building Official. Any removal and hauling of the collected materials not performed by owner personnel must be performed by waste disposal firms currently licensed by the city. (Amended Ord. 32, 11-25-1975)

10-2-8: **PRETREATMENT OR FLOW EQUALIZING FACILITIES:** 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 at his expense. (Amended Ord. 32, 11-25-1975)

10-2-9: **INDUSTRIAL USERS:** When required by the Building Official, the owner of any property serviced by a building sewer carrying industrial wastes shall install a suitable structure together with such necessary meters and other appurtenances in the building sewer to facilitate observation, sampling, and measurement of the wastes. Such structure, when required, shall be constructed in accordance with plans approved by the Building Official. The structure shall be installed by the owner at his/her expense and shall be maintained by him/her so as to be safe and accessible at all times. (Amended Ord. 32, 11-25-1975)

10-2-10: **INFORMATION REQUIRED:** The Building Official may require a user of sewer services to provide information needed to determine compliance with this chapter. These requirements may include:

- A. Wastewater discharge peak rate and volume over a specified time period.
- B. Chemical analyses of wastewaters.
- C. Information on raw materials, processes, and products affecting wastewater volume and quality.
- D. Quantity and disposition of specific liquid, sludge, oil, solvent, or other materials important to sewer use control.
- E. A plot plan of sewers of the user's property showing sewer and pretreatment facility location.
- F. Details of wastewater pretreatment facilities.
- G. Details of systems to prevent and control the losses of materials through spills to the municipal sewer. (Amended Ord. 32, 11-25-1975)

10-2-11: **MEASUREMENTS, TESTS AND ANALYSES:** 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 Building Official. (Amended Ord. 32, 11-25-1975)

10-2-12: **SPECIAL AGREEMENTS:** No statement contained in this chapter

shall be construed as preventing any special agreement between the city and any industrial concern whereby an industrial waste of unusual strength or character may be accepted by the city for treatment. Special agreements or arrangements and all parts of this chapter shall be in conformance with the Metropolitan Waste Control Commission rules and regulations. (Amended Ord. 32, 11-25-1975)

10-2-13: **POWER AND AUTHORITY OF INSPECTORS:** The Building Official and other duly authorized employees of the city, upon proper identification, shall be permitted to enter upon all properties for the purpose of inspections, observation, measurement, sampling and testing in accordance with the provisions of this chapter. (Amended Ord. 32, 11-25-1975)

10-2-14: **VIOLATION; PENALTIES:**

- A. Notice Of Violation: Any person found to be violating any provision of this chapter shall be served by the Building Official 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 such notice, permanently cease all violations.
- B. Violation; Penalty: Any person who shall continue any violation beyond the time provided for in the written notice shall be guilty of a misdemeanor and, upon conviction thereof, shall be punished according to prevailing state laws. Each day in which any such violation shall continue shall be deemed a separate offense.
- C. Liability For Violation: 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 such violation. (Amended Ord. 32, 11-25-1975)

**FIGURE 4.10: INTERCOMMUNITY CONNECTION
JOINT POWERS AGREEMENT WITH COON RAPIDS**

**A JOINT POWERS AGREEMENT BY AND BETWEEN
THE CITIES OF COON RAPIDS AND ANDOVER
FOR THE OPERATION AND MAINTENANCE OF
CERTAIN PUBLIC UTILITIES WITHIN THE
CITY OF COON RAPIDS AND THE CITY OF ANDOVER**

This Agreement made and entered this 8th day of September, 1993,
by and between the City of Coon Rapids, a municipal corporation herein
after referred to as "Coon Rapids", and the City of Andover, a municipal
corporation herein after referred to as "Andover".

WITNESSETH:

WHEREAS, Coon Rapids and Andover share a common border; and

WHEREAS, development in both cities along said common border is
either occurring or expected to occur within the near future; and

WHEREAS, The City of Andover has constructed various public
improvements including sanitary sewer, watermain, storm drain, and street
which serve areas in Andover connecting to areas in Coon Rapids; and

WHEREAS, a determination has been made by the City Council of
both communities that such improvements should be constructed; and

WHEREAS, the City of Andover has prepared a feasibility report
for Andover Projects 92-29 & 92-10, including forty-nine (49) lots in Echo
Woods and two (2) lots in Pheasant Meadows and additional unimproved lots
as shown on the map included as Attachment A, to which service will be
provided when improved; and

WHEREAS, said report includes utility and/or street construction
within the City of Andover; and

WHEREAS, said utility and street construction benefits areas
within the City of Andover; and

WHEREAS, Minnesota Statutes Section 471.59 authorizes political
subdivisions of the State to enter into joint powers agreements for the
joint exercise of powers to each.

NOW, THEREFORE, it is mutually stipulated and agreed:

1. Purpose: Parties are joined together for the purpose of providing sanitary sewer service and water service within proposed Jay Street between 133rd Avenue and 134th Avenue as described in the feasibility report for Andover Projects 92-29 & 92-10, known as Echo Woods and Pheasant Meadows Additions, on file in the office of the City Engineer, Andover, Minnesota and incorporated herein by reference.
2. Method: The City of Andover will provide all engineering services and shall cause the construction of said Andover Projects 92-29 & 92-10, including Echo Woods and Pheasant Meadows, in conformance with said report.
3. Improvements: Improvements to be constructed shall be as indicated in the feasibility report for Andover Projects 92-29 & 92-10, including Echo Woods and Pheasant Meadows.
4. Cost: The project cost of the work shall constitute the actual "construction cost" and shall be so referred to herein. "Estimated costs" are good faith projections of the cost which will be incurred for this project. Actual cost may vary and shall be the cost for which the City of Andover will be responsible.
5. Upon completion of construction the City of Andover will pay to the City of Coon Rapids, upon written demand by the City of Coon Rapids, a one-time trunk sewer charge for use of Coon Rapids trunk and lateral facilities at a rate of \$1,573 per acre that will be updated as needed with the ENR construction cost index.

6. Sewer and Water Services Charges: Upon connection to the sewer and water system constructed under this Agreement, the property owners within Andover will be billed by the City of Andover for sewer and water service in accordance with rates established by the City of Andover. The City of Andover will notify the City of Coon Rapids at such time as any connection is made to the system. The City of Coon Rapids will quarterly bill the City of Andover collectively for all services provided based upon Coon Rapids' policies and rates. Inasmuch as only one collective billing will be issued to the City of Andover for all Andover users of the Coon Rapids' system, and as the City of Andover guarantees the prompt payment of utility use charges when due, the City of Coon Rapids agrees to charge only one quarterly service charge irrespective of the number of connections served in Andover by the Coon Rapids utility system. The City of Andover further agrees to provide meter readings to the Coon Rapids Utility Department when due.
7. Future Water Service: The City of Andover retains the right to serve and supply that portion of the system owned by Andover with water from the Andover system. Thirty days notice shall be given to the City of Coon Rapids before the actual change is made. The valve connecting to the City of Coon Rapids system will then be turned off. The valve will be retained as an emergency water system interconnect.
8. Strict Accountability: The strict accounting share made of all funds and report of all receipts and disbursements shall

be made upon request by either party.

9. Indemnity Notification: Each party hereto agrees to indemnify, defend and hold harmless the other from any claims, losses, costs, expenses or damages resulting from the acts or omissions of its respective officers, agents, or employees relating to activities conducted under this Agreement.
10. Entire Agreement Requirement of A Writing: It is understood and agreed that the entire agreement of the parties is contained herein and this Agreement supersedes all Agreements and all negotiations between the parties relating to the subject matter thereof as well as any previous Agreement presently in effect between the parties relating to the subject matter thereof. Any alterations, variations, or modifications of the provisions of the Agreement shall be valid only when they have been reduced to writing and duly signed by the parties therein.

IN WITNESS WHEREOF, the parties hereto have executed this agreement by their duly authorized officers and have caused their respective seals to be affixed hereto.

CITY OF COON RAPIDS

BY: William F. Thompson
William F. Thompson, Mayor

(SEAL)

BY: Robert L. Svehla
Robert Svehla, City Manager

CITY OF ANDOVER

BY: J. E. McKelvey
J.E. McKelvey, Mayor

(SEAL)

BY: Victoria Volk
Victoria Volk, City Clerk

Andover Properties Connected to Coon Rapids Utilities

RESIDENTIAL - Coon Rapids Sewer Only

#	<u>Address</u>	<u>Development</u>
1	13318 Hummingbird Street NW	Kirby Estates
2	13319 Hummingbird Street NW	Kirby Estates
3	13330 Hummingbird Street NW	Kirby Estates
4	13331 Hummingbird Street NW	Kirby Estates
5	13342 Hummingbird Street NW	Kirby Estates
6	13343 Hummingbird Street NW	Kirby Estates
7	13361 Hummingbird Street NW	Echo Woods
8	13362 Hummingbird Street NW	Echo Woods
9	13381 Hummingbird Street NW	Echo Woods
10	13382 Hummingbird Street NW	Echo Woods
11	13397 Hummingbird Street NW	Echo Woods
12	13402 Hummingbird Street NW	Echo Woods
13	13415 Hummingbird Street NW	Echo Woods
14	13422 Hummingbird Street NW	Echo Woods
15	13431 Hummingbird Street NW	Echo Woods
16	13442 Hummingbird Street NW	Echo Woods
17	13447 Hummingbird Street NW	Echo Woods
18	13459 Hummingbird Street NW	Echo Woods
19	13462 Hummingbird Street NW	Echo Woods
20	13471 Hummingbird Street NW	Echo Woods
21	13474 Hummingbird Street NW	Echo Woods
22	13483 Hummingbird Street NW	Echo Woods
23	13486 Hummingbird Street NW	Echo Woods
24	13495 Hummingbird Street NW	Echo Woods
25	13498 Hummingbird Street NW	Echo Woods
26	13323 Ibis Street NW	Echo Woods
27	13343 Ibis Street NW	Echo Woods
28	13344 Ibis Street NW	Echo Woods
29	13354 Ibis Street NW	Echo Woods
30	13363 Ibis Street NW	Echo Woods
31	13364 Ibis Street NW	Echo Woods
32	13383 Ibis Street NW	Echo Woods
33	13384 Ibis Street NW	Echo Woods
34	13403 Ibis Street NW	Echo Woods
35	13404 Ibis Street NW	Echo Woods
36	13423 Ibis Street NW	Echo Woods
37	13443 Ibis Street NW	Echo Woods
38	13463 Ibis Street NW	Echo Woods
39	13464 Ibis Street NW	Echo Woods
40	13472 Ibis Street NW	Echo Woods
41	13475 Ibis Street NW	Echo Woods
42	13480 Ibis Street NW	Echo Woods

43	13483 Ibis Street NW	Echo Woods
44	13487 Ibis Street NW	Echo Woods
45	13488 Ibis Street NW	Echo Woods
46	13491 Ibis Street NW	Echo Woods
47	13496 Ibis Street NW	Echo Woods
48	13315 Jay Street NW	Echo Woods
49	13343 Jay Street NW	Echo Woods
50	13361 Jay Street NW	Echo Woods
51	13377 Jay Street NW	Echo Woods
52	13395 Jay Street NW	Echo Woods
53	1760 134th Lane NW	Echo Woods
54	1772 134th Lane NW	Echo Woods
55	1784 134th Lane NW	Echo Woods
56	13318 Martin Street NW	Emerald Glen
57	13334 Martin Street NW	Emerald Glen
58	13350 Martin Street NW	Emerald Glen
59	13366 Martin Street NW	Emerald Glen
60	13382 Martin Street NW	Emerald Glen
61	13398 Martin Street NW	Emerald Glen
62	1983 134th Avenue NW	Emerald Glen
63	1971 134th Avenue NW	Emerald Glen
64	1959 134th Avenue NW	Emerald Glen
65	1947 134th Avenue NW	Emerald Glen
66	1935 134th Avenue NW	Emerald Glen
67	1923 134th Avenue NW	Emerald Glen
68	1911 134th Avenue NW	Emerald Glen
69	1899 134th Avenue NW	Emerald Glen
70	1887 134th Avenue NW	Emerald Glen
71	1875 134th Avenue NW	Emerald Glen
72	1863 134th Avenue NW	Emerald Glen
73	13319 Martin Street NW	Emerald Glen
74	13335 Martin Street NW	Emerald Glen
75	13351 Martin Street NW	Emerald Glen
76	13367 Martin Street NW	Emerald Glen
77	1956 134th Avenue NW	Emerald Glen
78	1944 134th Avenue NW	Emerald Glen
79	1932 134th Avenue NW	Emerald Glen
80	1920 134th Avenue NW	Emerald Glen
81	1908 134th Avenue NW	Emerald Glen
82	1896 134th Avenue NW	Emerald Glen
83	1884 134th Avenue NW	Emerald Glen
84	1872 134th Avenue NW	Emerald Glen
85	13368 Killdeer Street NW	Emerald Glen
86	13352 Killdeer Street NW	Emerald Glen
87	13336 Killdeer Street NW	Emerald Glen
88	13320 Killdeer Street NW	Emerald Glen
89	13321 Killdeer Street NW	Emerald Glen

90	13337 Killdeer Street NW	Emerald Glen
91	13353 Killdeer Street NW	Emerald Glen
92	13369 Killdeer Street NW	Emerald Glen
93	13385 Killdeer Street NW	Emerald Glen
94	13401 Killdeer Street NW	Emerald Glen
95	13417 Killdeer Street NW	Emerald Glen
96	13420 Jay Street NW	Emerald Glen
97	13400 Jay Street NW	Emerald Glen
98	13380 Jay Street NW	Emerald Glen
99	13364 Jay Street NW	Emerald Glen
100	13348 Jay Street NW	Emerald Glen
101	13332 Jay Street NW	Emerald Glen
102	13316 Jay Street NW	Emerald Glen
103	13309 Jay Street NW	No Subdivision
104	13442 Jay Street NW	Pheasant Meadows

COMMERCIAL - Coon Rapids Sewer Only
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<u>#</u>	<u>Address</u>	<u>Business Name</u>
1	13533 Jay Street NW	Grand American Bus
2	13535 Grouse Street NW	Hedberg Landscape
3	13301 Hanson Blvd NW	Anoka County Public Safety Campus
4	13476 Hanson Blvd NW	Andover Wheel & Frame
5	13432 Hanson Blvd NW	MN Water Treatment

RESIDENTIAL - Coon Rapids Sewer & Water
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<u>#</u>	<u>Address</u>	<u>Development</u>
1	1747 133rd Avenue NW	Hanson Meadows
2	1759 133rd Avenue NW	Hanson Meadows

A JOINT POWERS AGREEMENT BY AND BETWEEN THE CITIES OF ANDOVER AND COON RAPIDS FOR THE MUNICIPAL WATER SYSTEM INTERCONNECTS FOR PUBLIC WATER UTILITY WITHIN THE CITY OF ANDOVER AND COON RAPIDS

This agreement made and entered this 10th day of April, 2008, by and between the City of Andover, a municipal corporation hereinafter to be referred to as "Andover", and the City of Coon Rapids, a municipal corporation, hereinafter referred to as "Coon Rapids".

WITNESSETH:

WHEREAS, Andover and Coon Rapids share a common border and wish to share City water utility service in times of an emergency to enhance the public safety and health of both communities, and

WHEREAS, water main connections between the two cities' water systems exist along 133rd Avenue NW at Narcissus Street NW, Crooked Lake Boulevard NW, between Crosstown Boulevard NW and Crooked Lake Boulevard NW, between Thrush Street NW and Swallow Street NW, between Nightingale Street NW and Partridge Street NW, at Jay Street NW and at Hummingbird Street NW, and

WHEREAS, the connections are made with gate valves that are properly marked and should remain closed unless otherwise agreed by both cities in times of an emergency, and

WHEREAS, the gate valves were installed and are owned and maintained by Andover and Coon Rapids.

NOW, THEREFORE, IT IS MUTUALLY AGREED AS FOLLOWS:

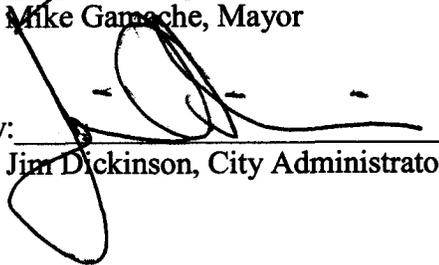
1. That the existing water main service interconnections shall be permitted for the above listed locations.
2. That the City water main interconnections are available for sharing City water when an emergency situation arises in either City and that the proper City officials shall communicate prior to the interconnection systems being activated.
3. That in the event of an emergency where prior communication is not possible or would otherwise cause a delay and jeopardize one of the Cities' ability to respond to the emergency, the interconnection system may be activated without prior communication, but communication will thereafter be made immediately after the emergency has been resolved.
4. That water provided to a City pursuant to a request to activate the gate valve shall be considered that City's own water for legal liability purposes and the City declaring the emergency shall hold harmless, indemnify and defend the providing City for any cause of action, claims or damages related to the provision of water pursuant to this agreement.

5. That in the event a City requests activation of the gate valve due to an emergency, the City Officials involved will implement a system to measure the amount of water consumed by the requesting City and the requesting City will be billed for the water consumed at the providing City's standard price per gallon.

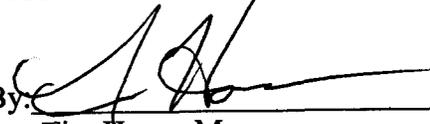
IN WITNESS WHEREOF, the parties hereto have executed this agreement by their duly authorized officers and have caused their respective seals to be hereto affixed.

CITY OF ANDOVER

By: 
Mike Gameche, Mayor

By: 
Jim Dickinson, City Administrator

CITY OF COON RAPIDS

By: 
Tim Howe, Mayor

By: 
Matt Fulton, City Manager

