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December 9, 2005

Honorable Mayor and City Council
City of Dayton
12260 S. Diamond Lake Road
Dayton, MN 55327

Re: Comprehensive Sanitary Sewer Plan
Bonestroo File No. 174-05-122

Dear Mayor and Council:

Transmitted herewith is the Comprehensive Sanitary Sewer Plan for the City of Dayton. The plan was prepared in accordance with Metropolitan Council guidelines as outlined in the May 1998 Local Planning Handbook.

The trunk sanitary sewer system is presented on Figure 11. Data regarding population, land use, and sewer design have been incorporated into the text and appendices of this report. A capital improvement program for the phased construction of the trunk sewer system has been developed.

We would be pleased to discuss the contents of this report and the findings of our study with the City Council and Staff or other interested parties at any mutually convenient time.

Respectfully submitted,

BONESTROO, ROSENE, ANDERLIK & ASSOCIATES, INC.

Mark Hanson, P.E.

Brent Pember, P.E.

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

Mark Hanson

Mark Hanson, P.E.

Date: December 9, 2005 Reg. No. 14260

Table of Contents

Figures

Tables

Appendices

1. Introduction

The City of Dayton is located in northern Hennepin County about 20 miles north and slightly west of Minneapolis/St. Paul (See Figure 1, page 6). The City is bordered by the Mississippi River to the north, the City of Champlin to the east, the City of Maple Grove to the south, and Hassan Township to the west. Approximately 25 percent (the southeast portion) of Dayton is located in the Elm Creek Park Reserve.

Dayton's population has increased from approximately 2,600 in 1970 to about 5,000 today. The City is expecting continued growth, which will be dependent upon accepted land uses and public utility extensions.

The topography within the City is gently rolling, which allows many of its open areas to be used for agricultural purposes. The Mississippi River, Crow River, Diamond Creek, Rush Creek, and Elm Creek accept much of the overland drainage from Dayton. For the most part, Dayton's surface water naturally flows to the Mississippi River and the Cities of Champlin and Maple Grove. However, portions of Hassan Township west of Dayton flow naturally into Dayton, while portions of Dayton flow through Hassan Township to the Crow River. Dayton's soils vary from a clay soil west of Pineview Lane to sandy soil east of Pineview Lane in the northeast.

Hennepin County Roads No. 12, 13, 81, 121, and 144, serve the City of Dayton in both east-west and north-south directions. Although Interstate 94 crosses the southwest corner of the City, there is no direct access to I-94.

The City of Dayton is not connected to the Metropolitan Council Environment Services (MCES) trunk sanitary sewer system. However, portions of Dayton currently have sewer service.

- In 1996 a sanitary sewer extension was made from the City of Rogers to serve 50 existing residential homes located on the north side of Diamond Lake.
- In 1999 a sanitary sewer extension was made from the City of Otsego to serve the Historic Village in northwestern Dayton.
- In 2004 a sanitary sewer extension was made from the City of Champlin to serve the Nature's Crossing development in southeast Dayton.
- The Dayton Mobile Home Park (approximately 225 units), located in the southwest corner of the City is served by its own treatment facility (MPCA Permit #MN00414321).

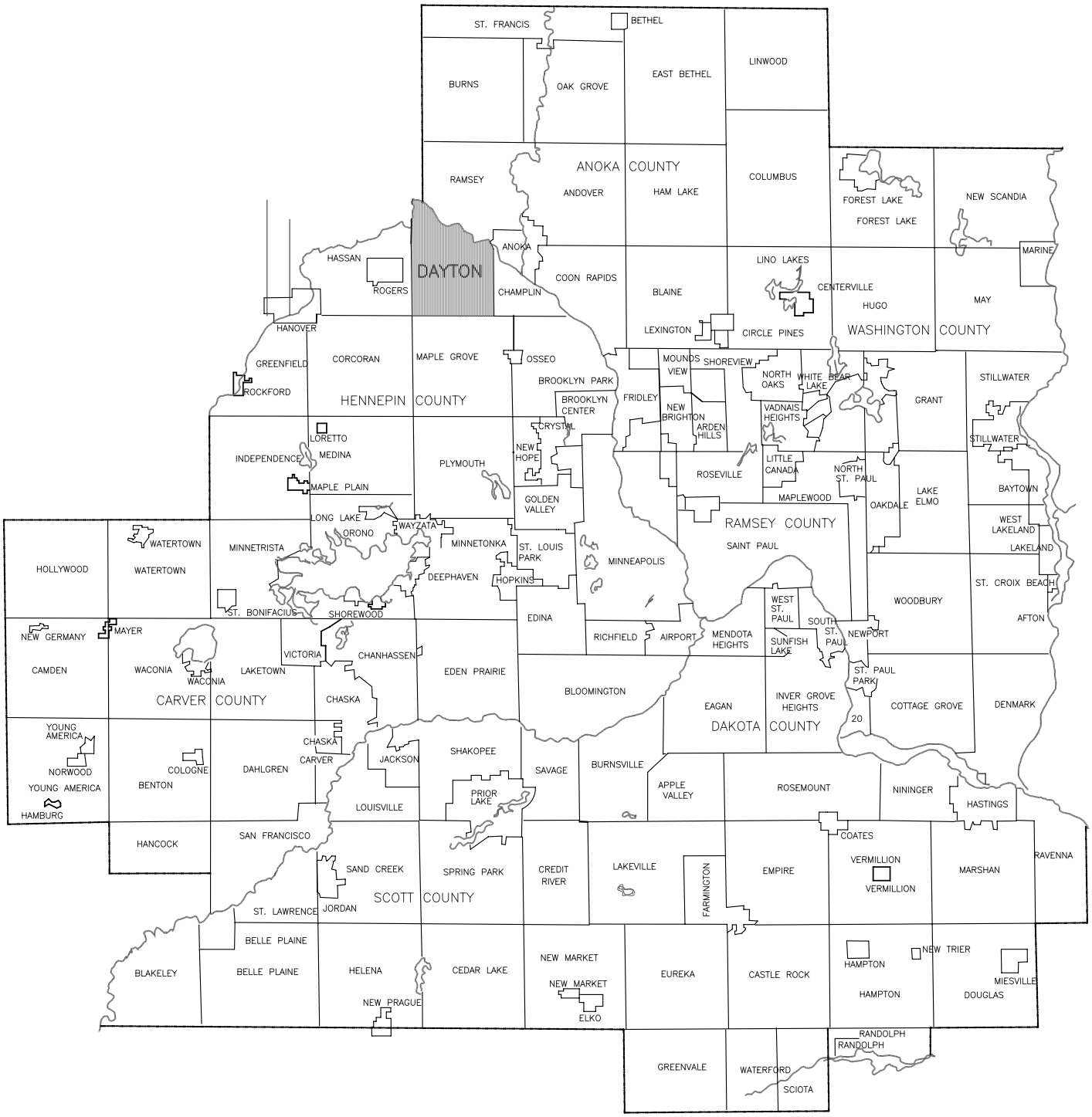
All other existing residential, agricultural, and commercial/industrial property in Dayton is served by on-site wastewater disposal systems.

The purpose of this report is to provide the City of Dayton with a Comprehensive Sanitary Sewer Plan that will guide the City's trunk sanitary sewer systems expansion to serve its population at full development. The report uses the latest land use and population data as estimated by the City. This report is an update of Dayton's Comprehensive Sewer Policy Plan dated March 1999, and Comprehensive Plan dated February 2001. Dayton is submitting this plan to the Metropolitan Council based on the Dayton-Champlin Interceptor Extension planned to serve northerly Dayton, and the Elm Creek Interceptor Extension planned to serve westerly and southerly Dayton. Construction on both of these interceptors is slated to begin in 2006. This report is prepared in accordance with the Dayton-Champlin Interceptor Facility Plan dated November 2004, and the Elm Creek Interceptor Facility Plan Update dated September 2002.

A layout of the ultimate trunk sanitary sewer systems, including all relevant data, is presented in Figure 11 located at the back of this report. A layout of the interim trunk sanitary sewer system for the northwest portion of Dayton is presented in Figure 6 on page 23.

An interim system is necessary to serve the Northwest portion of Dayton in accordance with the Sanitary Sewer Phasing Plan as shown in the 2001 Comprehensive Plan (Figure 2, page 8). Preliminary cost estimates have been prepared to establish a basis for updating the Capital Improvement Program and assessment policy. The report has been prepared in accordance with the Metropolitan Council's guidelines for local Comprehensive Sanitary Sewer Plans.

The Metropolitan Council's Local Planning Handbook (last updated 5/14/98) describes the requirements for Tier I and Tier II levels for comprehensive sanitary sewer plans. Tier I content requirements apply to all communities' comprehensive plans. Tier II content requirements apply only to communities that plan to alter, expand, or improve their sewage disposal system. In order to facilitate the review process, Tier I information is presented in Section 2; Tier II information is contained in the remaining sections.



LOCATION MAP

DAYTON, MINNESOTA FIGURE 1

COMPREHENSIVE SANITARY SEWER PLAN

Bonestroo Rosene Anderlik & Associates

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2. Tier I Information

Table 1 presents the Metropolitan Council's projections of sewered population, households, employment, and flows from Dayton's Wastewater System Statement dated September 12, 2005. Figure 2 (page 8) and Appendix F present service area phasing. The service areas in addition to Metropolitan Council Environmental Services (MCES) interceptors and intercommunity connections are shown on Figure 11 (Ultimate System, at the end of this report) and Figure 6 (Interim System, page 23). Information on the City's policies regarding infiltration and inflow (I/I) and on-site wastewater disposal systems are found in sections 6 and 9, respectively.

Table 1. Metropolitan Council Projections

Year	Estimated Sewered Population	Estimated No. of Households	Estimated No. of Employees	Estimated Average Sewage Flow (MGD)
2010	2,615	1,000	3,900	0.29
2020	17,188	7,000	5,750	1.43
2030	27,400	10,500	6,850	2.23

Table 2 presents projections of the estimated total population based on the phasing of the future sanitary sewer system as taken from the City's 2001 Comprehensive Plan which assumes full build out.

Table 2. Total Population Projections

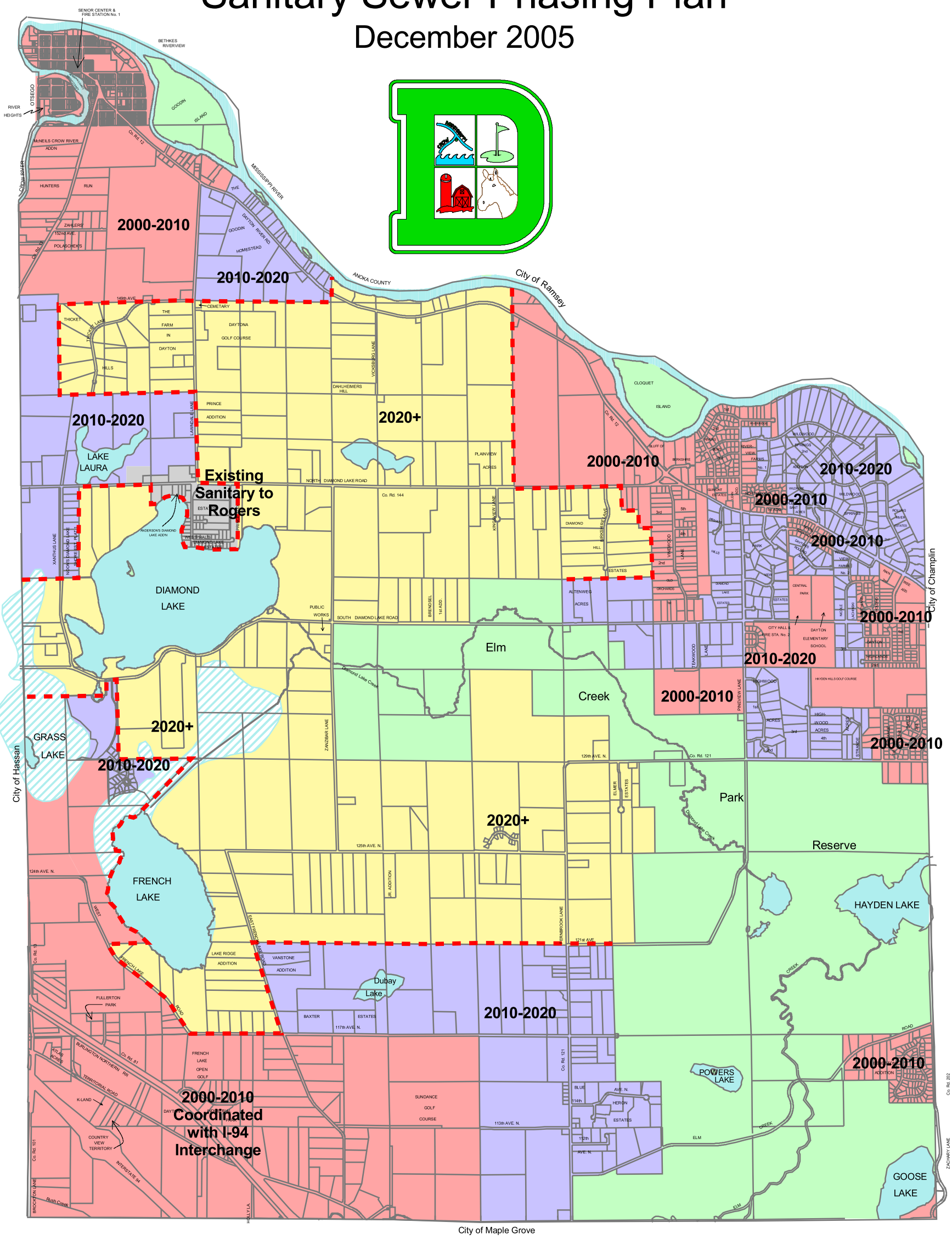
Year	MCES Projection	City of Dayton Projection
2010	5,600	6,300
2020	20,100	15,000
2030	28,700	24,000

**300 Building Permits/year * 3 people/permit * 10 years = 9,000

The Sanitary Sewer Phasing Plan for Dayton is shown on Figure 2 on the next page. It assumes Dayton will be served beginning with sanitary sewer in its corners. The intent of the phasing plan is to allow growth to occur in Dayton over the next 40 years at a manageable rate as opposed to an accelerated rate over a 10-20 year period.

City of

Dayton, Minnesota
Sanitary Sewer Phasing Plan
December 2005



LEGEND

Year

- 2000-2010
- 2010-2020
- 2020+

- Existing
- Park
- Lakes
- Flood Zones

- - - 2020 MUSA

Figure 2

N W E S

December 2005

3000 0 3000 Feet

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3. Scope of Study

The 1976 Metropolitan Land Planning Act requires local governments to prepare comprehensive plans and submit them to the Metropolitan Council to determine their consistency with metropolitan system plans. The local comprehensive plan is to include a sewer element covering the collection and disposal of wastewater generated by the community. Similarly, under the Metropolitan Sewer Act, local governments are required to submit a Comprehensive Sanitary Sewer Plan (CSSP) for approval by the Metropolitan Council Environmental Services (MCES). The CSSP is broader in scope than the sewer element of the local comprehensive plan and provides detailed sewer system information.

Treatment and disposal of wastewater generated by the City of Dayton would ultimately be accomplished by the MCES at their Metropolitan Treatment plant and by the City of Otsego at their treatment facility. As previously stated, a small area on the north side of Diamond Lake is presently served by the City of Rogers. This area would ultimately be served by MCES when sewer becomes available. Dayton's CSSP delineates the conveyance facilities required to collect the wastewater and transport it to the treatment plants.

The local elements of conveyance are the sewer services, laterals, trunks, manholes, lift stations, forcemains and all correlated appurtenances associated with the collection and transportation of wastewater. The sewer laterals and service lines are governed to a large extent by platting as the land is developed. Therefore, those facilities cannot be accurately determined and must be excluded from this CSSP. However, trunk sanitary sewer alignments are largely dependent on topography, soil conditions, physical features, and manmade barriers, and these can be reasonably determined.

This CSSP is concerned with the trunk system (which includes all lines 10 inches in diameter and larger), other main lines, and other facilities (such as lift stations) which are a vital part of the sewer trunk system. Since the sewer trunk design determines the ultimate service area for the system, it is essential that an overall trunk plan be available as a guide for future development. Such a plan should be flexible enough to absorb some changes in planning and development patterns. Periodic review with updating would be required. Any review should show the relationship of facilities construction to future planning and should reevaluate costs.

4. Sanitary Sewer Districts

There are five ultimate major sanitary sewer districts and one interim sanitary sewer district in the City, each defining the limits of service for a separate trunk system. These districts have been divided into subdistricts used to develop design flows and to determine the cumulative design flows in the various sewer segments. Figure 3 (page 11) shows the major sanitary sewer districts. Table 3 lists the major and interim sanitary sewer districts and their corresponding prefix abbreviations.

Table 3. Sanitary Sewer Districts

Sewer District	Abbreviation	Treatment By
North	N	MCES
West	W	MCES
Northwest	NW	Otsego
Southwest	SW	MCES
Southeast	SE	MCES
Interim*	I	Otsego/Rogers

*Interim district serves the Northwest portion of Dayton within the 2020 MUSA line.

The boundaries of the ultimate districts and sub-districts are shown on Figure 11 (at the end of this report. The boundaries of the interim districts and sub-districts are shown in Figure 6 (page 23). A summary of the areas for various land uses in each district and subdistrict are presented in Appendix A.

All portions of the City will continue to be served by individual and community wastewater systems as regulated by City ordinances and MPCA requirements until such time as they are connected to the MCES or Otsego treatment facilities.

Sanitary Sewer Districts

December 2005

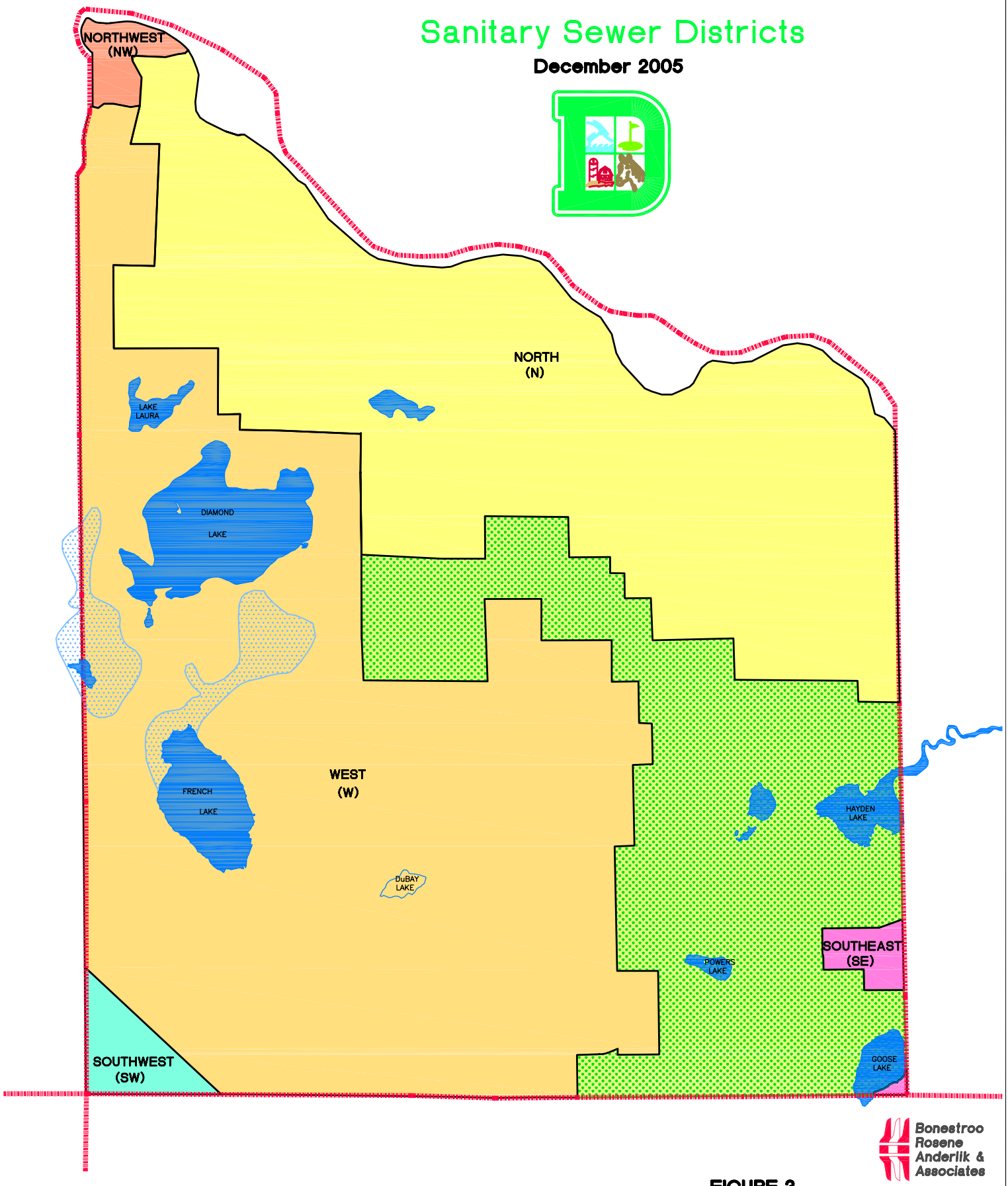

FIGURE 3

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5. Land Use and Population

General

The sizing of sanitary sewer facilities is dependent on the hydraulic capacity required for each part of the system. Municipal wastewater generally is a mixture of domestic sewage, commercial and industrial wastes, groundwater infiltration, and surface water inflow. With proper design and construction, groundwater (infiltration) is reduced to a minor percentage of the total flow and surface water (inflow) is eliminated. Hydraulic discharges depend to a great extent on the types of development and the population densities that are ultimately achieved (i.e., land use).

Land Use

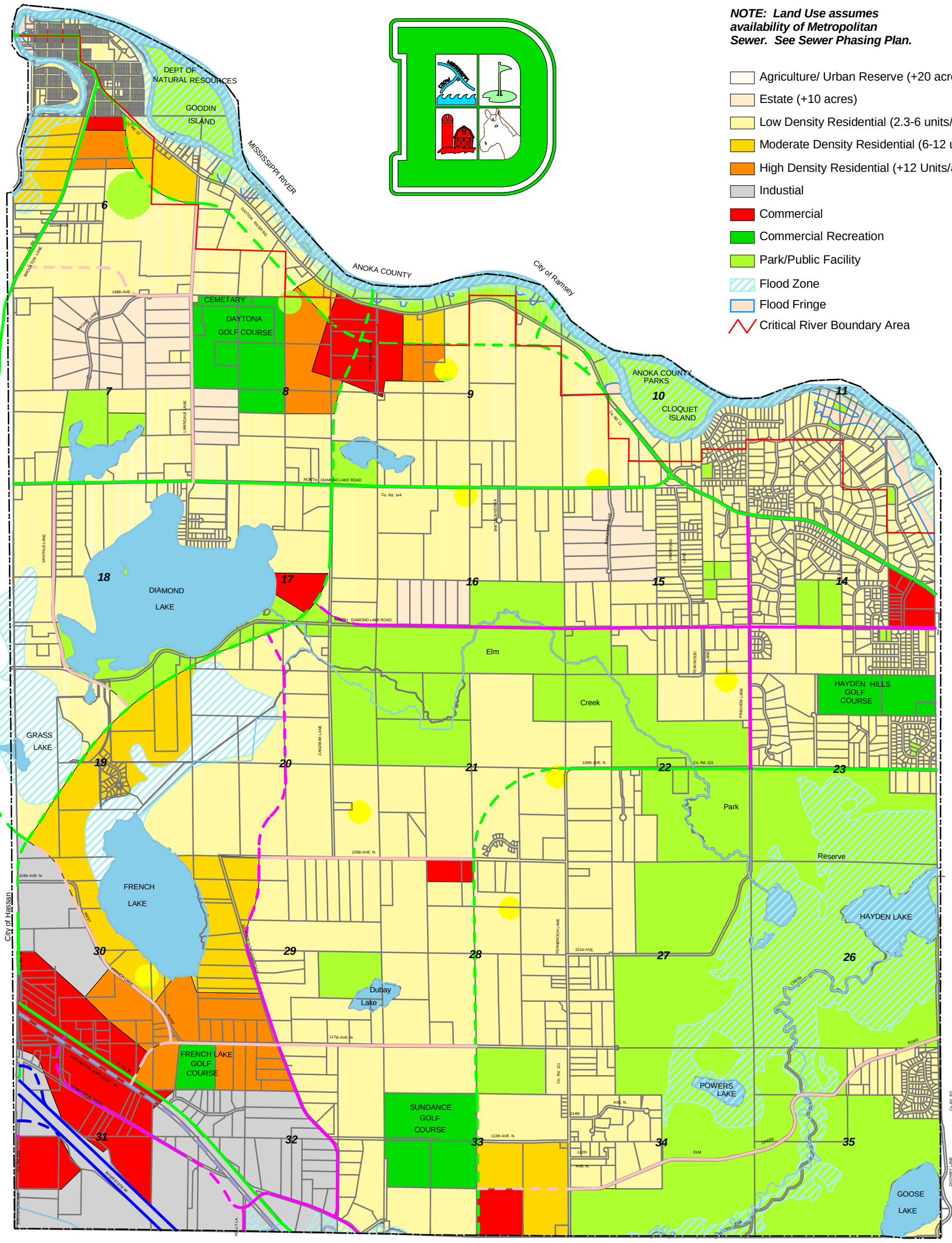
Figure 4 (page 13) shows the future land use for the city. Table 4 (page 14) gives a description of each of the land uses. The estimated acreage for each land use type is listed in Appendix A for each subdistrict and is summarized for the entire City in Table 5 (page 15). The acreage in Appendix A and Table 5 is measured in gross developable acres. The gross developable acres include small parks and street rights-of-way.

City of

DAYTON, MINNESOTA

CONCEPT GUIDE PLAN

COMPREHENSIVE PLAN UPDATE, NOVEMBER 2005



NOTE: Land Use assumes availability of Metropolitan Sewer. See Sewer Phasing Plan.

- Agriculture/ Urban Reserve (+20 acres)
- Estate (+10 acres)
- Low Density Residential (2.3-6 units/acre)
- Moderate Density Residential (6-12 units/acre)
- High Density Residential (+12 Units/acre)
- Industial
- Commercial
- Commercial Recreation
- Park/Public Facility
- Flood Zone
- Flood Fringe
- Critical River Boundary Area

- Existing Community Collector
- Proposed Community Collector
- Existing Principal Arterial (State)
- Proposed Principal Arterial (State)
- Existing Minor Arterial (County)
- Alternate Proposed Minor Arterial
- Existing Neighborhood Collector
- Proposed Neighborhood Collector
- Proposed Commuter Rail

N
W E
S

Meters
1000 0 1000
3000 0 3000
Feet

Figure 4

Land Use Map Updates

November, 1999
February, 2000
June, 2005
November, 2005

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Table 4. Land Use Type Descriptions

1) Estate – Single family residential at 1.0 unit per 10 acres.

2) Low Density – Single family residential at 2.3 units per acre.

3) Moderate Density – Single family cluster, townhouses, and smaller multiple family structures at 6.0 units per acre.

4) High Density – Variety of high-density buildings at 12.0 units per acre.

5) Commercial/Industrial – Includes general manufacturing, industrial, warehouse facilities, shopping center, general and roadside business.

6) Recreational/Public – Includes golf courses, parks, schools, and public service facilities (fire stations, city offices, utility structures, etc.).

7) Undevelopable – Includes rivers, lakes, wetlands, floodplains, major highway rights-of-way, and ponds that lie in each of the sewer sub-districts.

Table 5. Land Use Summary

Use	Area (acres)	Percentage
Estate	393	3.2
Low Density Residential	5,887	48.1
Moderate Density Residential	543	4.4
High Density Residential	365	3.0
Total Residential	**7,189**	**58.8**
Commercial/Industrial	1,142	9.3
Recreational/Public	1,082	8.8
Undevelopable	2,817	23.0
Total	**12,229**	**100.0**

Population

The population of Dayton totaled nearly 5,000 in 2000 and is projected to increase to approximately 15,000 by 2020, including both sewered and unsewered areas; these data are based on the 2000 census and the February 2001 City of Dayton Comprehensive Plan. The expected Ultimate population and density of Dayton at full build-out (including redevelopment of existing residential areas to their guided densities) is shown in Table 6 (page 16). The expected sewered population projections are shown in Table 7 (page 16). The sewered population data are based on Metropolitan Council projections and City of Dayton projections. The Metropolitan Council projections are from Dayton's Wastewater System Statement, dated September 12, 2005. The difference in population projections between Metropolitan Council and Dayton is in part based on sewer extensions to Dayton not occurring as soon as previously estimated. If Dayton's Ultimate population is 57,660 as noted in Table 6 (page 16), significant redevelopment needs to occur in areas where parcel sizes are presently one (1) to ten (10) acres in size.

Table 6. Ultimate Population/Units per Acre Calculation*

Land Use	Net Developable Acres	Units/ Acre	Units	Population
Estate	393	0.1	39	118
Low Density Residential	5,887	2.3	13,541	40,622
Moderate Density Residential	543	6.0	3,260	8,150
High Density Residential	365	12.0	4,385	8,770
Total	**7,189**	**2.95**	**21,225**	**57,660**

*Includes redevelopment of existing residential areas to their guided densities

Table 7. Sewered Population Projections

Year	Met Council Projections	City Projections
2010	2,615	2,500*
		+9,000**
2020	17,188	11,500
		+9,000**
2030	27,400	20,500

* 2010 Connections = Historic Village = 200; Rogers = 50; Nature's Crossing = 90; NE Dayton = 500. Total = 840 Connections * 3 people/connection = 2520

**300 Building Permits/year * 3 people/permit * 10 years = 9,000

The City of Dayton recently adopted a resolution and an ordinance regarding the adoption of a Growth Management Policy (see Appendix I) which limits the number of building permits the City of Dayton will issue each year to 2010. Although the Growth Management Policy does not extend beyond 2010, for purposes of this Comprehensive Sanitary Sewer Plan, we assumed an average of 300 building permits per year would be issued between 2010 and 2030 to estimate Dayton's sewered population.

6. Design Criteria

Wastewater Flows

Anticipated wastewater flows from the subdistricts were determined by applying unit area flow rates to each of the land use types (Table 8). The estimated unit area flow rates are in accordance with standard engineering practice and are generally considered conservative. Appendix B shows each subdistrict's projected average wastewater flow rates under ultimate development conditions, using the unit area flow rates in Table 8.

Table 8. Unit and Area Wastewater Flow Rates

Land Use Type	Persons/ Unit	Gals./Capita/Day (GCD)	Gals./Unit/Day (GUD)	Units/Acre	Gals./Acre/Day (GAD)
Estate	3.0	90	270	0.1	27
Low Density Residential	3.0	90	270	2.3	621
Moderate Density Residential	2.5	80	200	6.0	1200
High Density Residential	2.0	70	140	12.0	1,680
Commercial / Industrial					800
Recreational / Public					250

At this time, there are no major industries in Dayton whose average daily sewage flow exceeds 50,000 gallons, or exceeds five percent of the total flow in the City, nor whose wastewater would be considered toxic.

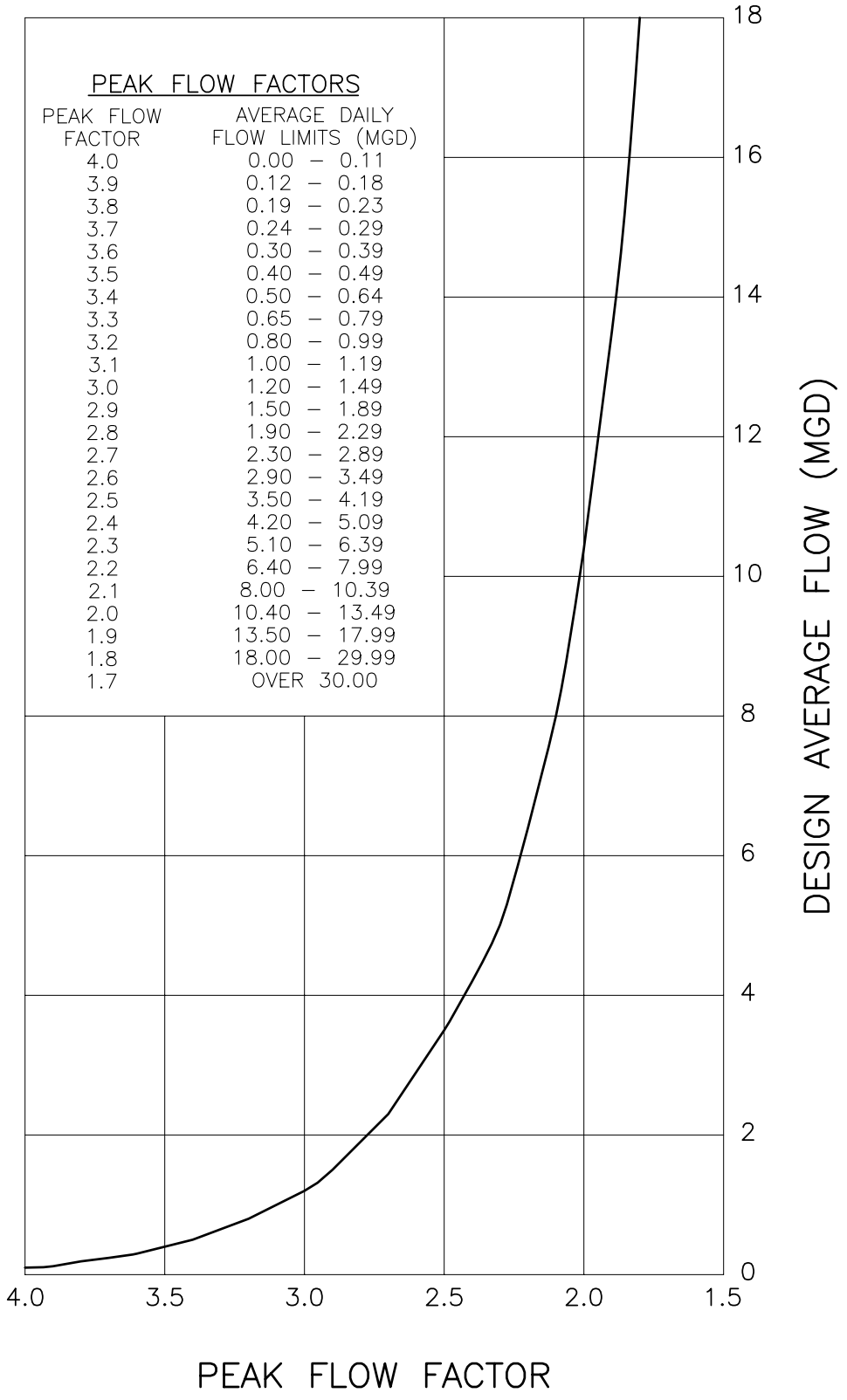
Infiltration/Inflow

The unit and area flow rates (Table 8, page 17) incorporate an allowance for an average of 10 gallons per capita per day of extraneous water entering the sanitary sewer system through inflow and infiltration (I/I). The City has adopted wastewater ordinances that address limiting I/I through current accepted engineering practices and prohibiting the connection of roof and foundation drains to the sanitary sewer system. These ordinances were put in place as part of sewer extensions from the Cities of Otsego, Rogers, and Champlin and can be found in Appendix H.

System Design

The trunk sanitary sewer system must be capable of handling not only the average flows, but also the anticipated peak flows. These peak flow rates can be expressed as a variable ratio applied to the average flow rates. This variable ratio, called the peak flow factor, has been found generally to decrease with increasing average flow rates. Figure 5 (page 19) shows the relationship of the peak flow factor to average flow rate. These values are generally conservative and are widely used for planning in municipalities.

Appendix C shows the design flows for each pipe segment of the ultimate and interim trunk system. The proposed trunk sanitary sewer system layouts (Figures 6 and 10, page 23 and at the end of this report) show the proposed sanitary sewer system alignments with each pipe segment drawn between nodes, including trunks, forcemains, and lift stations. For each pipe segment the information in Appendix C shows the node reference points, the average flow from Appendix B, the summed average flow of the flows tributary to the respective pipe segment, the peak flow factor, and the resulting design flow. Appendix D shows the pipe design for each segment including the ratio of the capacity to the design flow.



PEAK FLOW FACTORS

DAYTON, MINNESOTA FIGURE 5

COMPREHENSIVE SANITARY SEWER PLAN

Bonestroo Rosene Anderlik & Associates

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7. System Description

General

The proposed alignment of the trunk sanitary sewer system is tentative and should be reviewed at the time of final design to ensure conformance with existing and proposed development. The alignments shown closely follow the natural drainage of the land in most cases, so any major changes in alignment are not recommended because the increased depth would increase construction cost.

Treatment Facilities

Metropolitan Facilities

The wastewater flows from Dayton's proposed sanitary sewer system in the north and southeast districts would eventually enter the MCES Champlin-Anoka-Brooklyn Park (CAB) Interceptor (Figure 11, end of this report). The wastewater flows from Dayton's proposed sanitary sewer system in the west and southwest districts would eventually enter the MCES Elm Creek Interceptor (ECI) (Figure 11). The interceptors would convey wastewater to the Metropolitan Wastewater Treatment Plant located on the Mississippi River in Saint Paul. The Metropolitan plant uses advanced secondary treatment followed with chlorination and dechlorination for disinfection. The capacity of the Metropolitan plant is 251 million gallons per day.

Otsego Facilities

The wastewater flows from Dayton's sanitary sewer system in the northwest district (Historic Village) flows to the Otsego Treatment Facility discharging to the Crow River. The City of Otsego operates an activated sludge plant consisting of screenings and grit removal, oxidation ditches, final clarifiers and ultraviolet disinfection. The average daily capacity of the Otsego plant is currently 400,000 gallons per day. Dayton's present allocation to the Otsego Treatment Facility, based on existing agreements, is 40,000 gallons per day.

Otsego's plant is currently undergoing expansion to increase total capacity to 1.0 million gallons per day by October 2006. The plant's ultimate capacity is 3.5 million gallons per day. Future expansion will be scheduled as the City's growth demands it.

Intercommunity Flows

Ultimate System Intercommunity Flows

There are three proposed locations for intercommunity flows (Figure 11, end of this report) in the ultimate design. Table 9 lists these locations, their existing average flows and their ultimate average flows.

Table 9. Ultimate System Intercommunity Flows

Sub-district	From	To	Existing Avg. Flow (MGD)	Ultimate Avg. Flow (MGD)
NW-A, NW-P	Dayton	Otsego	0.011	0.060
SE-A	Dayton	Champlin	Homes under construction	0.053
SE-B	Dayton	Champlin	0	0.003
W-Q*	Maple Grove	Dayton	0	0.022
*Further discussions required with Maple Grove. Information is shown for discussion purposes only, not included in the Appendices calculations.				

Sub-districts NW-A and NW-P are served by the Otsego Treatment Facility. Approximately 100 homes in the northwest district are currently connected to the system. The northwest district will remain connected to the Otsego Treatment Facility in the ultimate system.

Sub-districts SE-A and SE-B are landlocked by the Elm Creek Park Reserve and require sewer service to the MCES Champlin-Anoka-Brooklyn Park Interceptor via Champlin's system.

Sub-district W-Q abuts Maple Grove. Due to the terrain (hilly and wooded) and Rush Creek, a portion of Maple Grove may flow to Dayton if development occurs in this area. Further discussions with Maple Grove are required when this area develops. For the purposes of this report the flows from Maple Grove are not included in the calculations; however, the conveyance system as designed in Dayton will accommodate the anticipated flows from Maple Grove.

Interim System Intercommunity Flows

There are three proposed locations for intercommunity flows (Figure 6, page 23) in the interim design. Table 10 below lists these locations, their existing average flows and their interim average flows. All of the interim flows will be directed to the north or west districts being sewered by MCES upon completion of the ultimate system (Figure 11, at the end of this report).

Table 10. Interim System Intercommunity Flows

Sub-Districts	From	To	Existing Avg. Flow (MGD)	Interim Avg. Flow (MGD)
W-J	Dayton	Rogers	45 connections	Limited to 50 connections
I-A	Dayton	Otsego	0.004	0.034
I-B, I-C, I-D, I-E, I-F	Dayton	Otsego	0.0	0.801

The intercommunity connection that currently serves sub-district W-J (point 10 of the I & W Districts) is an interim connection to Rogers. This sub-district would ultimately flow south to the Elm Creek Interceptor via Dayton's system when the sanitary sewer phasing plan is complete in the West District. The interim connection for W-J was constructed in 1996 and was limited to 50 residential connections based on the agreement between the Cities of Dayton and Rogers.

The intercommunity connection that currently serves sub-district I-A (point 3-I of I District) in the Dayton Historic Village is an interim connection. This sub-district (part of N-P in the ultimate design) would ultimately flow to the east (abandoning the existing lift station) to the Dayton-Champlin Extension of the Champlin-Anoka-Brooklyn Park (CAB) Interceptor via Dayton's system when the sanitary sewer phasing plan is complete in the North District. The interim connection was constructed in 1999 as part of the Dayton Historic Village Utility/Street Improvements.

The intercommunity connection that will serve sub-districts I-B, I-C, I-D, I-D, and I-F (point 19-W of the I District, point 19 of the W District) is an interim connection to Otsego. The interim connection is required to comply with Dayton's Sanitary Sewer Phasing Plan (see Figure 2, page 8) prepared in response to a petition from land owners owning approximately 400 acres in sub-districts W-M and N-P. These sub-districts would eventually flow to the south to the Elm Creek Interceptor and to the east to the Dayton-Champlin Extension of the CAB Interceptor via Dayton's system when the sanitary sewer phasing plan is complete in the West District.

Interim Sanitary Sewer

Northwest Dayton to Otsego/Rogers

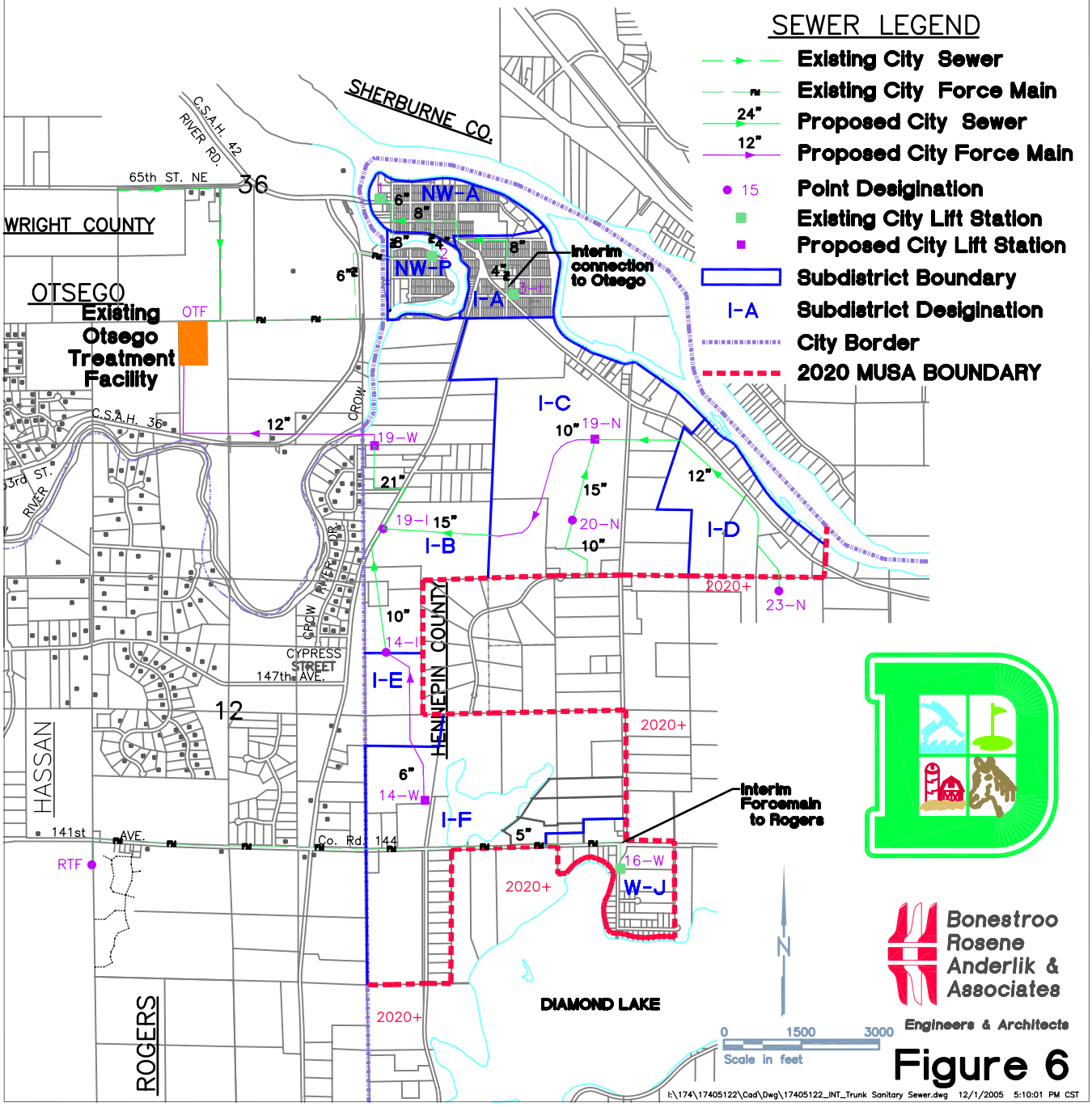

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Figure 6

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North District

The North District has existing sanitary sewer service to Otsego in sub-district N-P (sub-district I-A in Interim phase). The existing lift station serving this area will be abandoned during the Ultimate phase. Portions or all of sub-districts N-P, N-R, and N-S (sub-districts I-A, I-C, I-D, and I-F in Interim phase) would be served by the City of Otsego during the Interim phase. Ultimately, all sanitary sewer flows would enter the CAB Interceptor in the eastern portion of the district at the Dayton connection to the MCES Dayton-Champlin Extension north of Hennepin County Road 121.

There would be three lift stations in the North District:

1. A lift station at point 19 would serve sub-districts N-R, N-O, N-P, and N-S. This lift station would be installed during the Interim phase (point 19-N) to serve sub-district I-D.
2. A lift station at point 4 would serve sub-district N-C.
3. A lift station be point 11 would serve sub-district N-G.

The Northeast District would also require a large MCES lift station near the end of the Tilden Avenue Extension.

West District

The West District has existing interim sanitary sewer service to Rogers in sub-district W-J. Portions or all of sub-districts W-I, W-J, W-L, and W-M would be served by the City of Otsego and the City of Rogers during the Interim phase. Sub-district W-B includes an existing mobile home facility with an operable wastewater treatment facility. Ultimately, all sanitary sewer flows will enter the Elm Creek Interceptor in the southern portion of the district at the Dayton connection to the MCES Elm Creek Interceptor on Holly Lane.

There would be eight lift stations in the West District:

1. A lift station at point 19 would serve sub-district W-M. This lift station would be installed during the Interim phase (point 19-W) to serve sub-districts I-B, I-C, I-D, I-D and I-F.
2. An existing lift station at point 16 serves sub-district W-J, conveying wastewater to the City of Rogers as an interim connection. This lift station would remain but would require larger pumps to serve sub-districts W-J and W-K to point 15 during the Ultimate phase.
3. A lift station at point 14 would serve sub-districts W-I, W-L, and the sub-districts served by the lift stations at points 16, and 19. This lift station would be installed during the interim phase (point 14-W) to serve sub-district I-F.

4. A lift station at point 8 would serve sub-districts W-C, W-D, W-H and the sub-districts served by the lift stations at points 14, 16, and 19.
5. A lift station at point 5 would serve sub-district W-O.
6. A lift station at point 12 would serve sub-districts W-E, W-F, and W-G.
7. A lift station at point 27 would serve sub-districts W-S, W-T, W-U, W-V, W-W, W-X, and W-Y.
8. A lift station at point 25 would serve sub-district W-R.

Northwest District

The Northwest District has existing sanitary sewer service to the City of Otsego. The Historic Village of Dayton is currently served on an interim basis by three existing lift stations. Ultimately, sub-districts NW-A and NW-B would be served by the City of Otsego using the two existing lift stations in these sub-districts (points 1 and 2). The lift station serving the southeast portion of the Historic Village is located in the North District (sub-district N-P) and is an interim lift station that would be abandoned upon completion of the Ultimate conveyance system in the North District.

Southeast District

The Southeast District would ultimately be served by MCES through the City of Champlin's conveyance system to the CAB Interceptor. The Southeast District has existing sanitary sewer service to the City of Champlin in sub-district SE-A.

There would be 2 lift stations in the Southeast District:

1. A lift station at point 1 would serve the remainder of sub-district SE-A.
2. A lift station at point 3 would serve sub-district SE-B.

Southwest District

The Southwest District has no existing sanitary sewer service and is separated from the rest of Dayton by Interstate 94. City plans call for this district to be served by the MCES Elm Creek Interceptor via a connection through Maple Grove.

8. Cost Analysis

Trunk Sanitary Sewer Costs

One of the basic objectives of this report is to determine the cost of completing the City of Dayton's trunk sanitary sewer system. The cost estimates presented here are based on 2005 construction costs and can be related to the value of the ENR Index for Construction Costs of 7415 (June 2005). Future changes in this index are expected to fairly accurately describe cost changes in the proposed facilities. During interim periods between full evaluation of projected costs, capital recovery procedures can be related to this index. A summary of the cost estimates is presented in Table 11 (page 28), with a detailed breakdown in Appendix E. The cost estimates are for construction, legal, engineering, administrative, and easement acquisition. Also noted in Table 11 (page 28) is the trunk area charge per acre to complete the trunk sanitary sewer system based on the developable acres for each district and the area charge based on the complete trunk system cost and the total developable acreage in Dayton.

Table 11. Cost Summary

District	Cost	Developable Acres	Area Charge
North District	$7,689,000	4,166 ac	$1,845/ac
West District	$12,294,000	4,928 ac	$2,170/ac
Southeast District	$566,000	90 ac	$6,289/ac
Southwest District	$153,000	124 ac	$1,234/ac
Northwest District (Historic Village)	$0	105 ac	$0 (existing)
Subtotal for Ultimate Trunk System	**$20,702,000**	**9413 ac**	**$2,199/ac**
Interim North District			
Otsego Forcemain	$150,000	½ of cost to North District	
Sewer to serve N-P & N-S during the Interim	$431,000		
Subtotal for Interim North District	**$581,000**		
Interim West District			
Otsego Forcemain	$150,000	½ of cost to West District	
Sewer to serve W-I & W-L during the Interim	$399,000		
Subtotal for Interim West District	**$549,000**		
Total for Interim & Ultimate System	**$21,832,000**		

Capital Improvement Program

General

The summary of costs for the Capital Improvement Program based on estimated trunk sewer construction phasing is presented in Table 12. This table includes time periods of 2005-2007, 2007-2010, 2010-2020, and 2020+.

Table 12. Capital Improvement Summary

Area	2005-2007	2007-2010	2010-2020	2020+	Total
North District (NE Dayton)	$2,735,000	-	-	-	**$2,735,000**
North/West District (NW Dayton)	$2,806,000	-	-	-	**$2,806,000**
West District (SW Dayton)	$1,353,000	-	-	-	**$1,353,000**
North District	-	$869,000	$1,198,000	$1,725,000	**$3,792,000**
West District	-	$1,938,000	$3,880,000	$4,609,000	**$10,427,000**
Southeast District	-	$566,000	-	-	**$566,000**
Southwest District	-	$153,000	-	-	**$153,000**
Northwest District	-	-	-	-	**$0**
Total	**$6,894,000**	**$3,526,000**	**$5,078,000**	**$6,334,000**	**$21,832,000**

A more detailed Capital Improvement Program is found in Appendix F. Appendix F includes the service areas added in each sewer district, the estimated cost for serving each district, and the total expenditure for the time period. Costs in Appendix F are split into the periods 2005-2010, 2010-2020, and 2020+.

NE Dayton 2005-2007

The City of Dayton plans to serve the existing residential areas located in the northeast portion of the City. The infrastructure improvements are being planned in conjunction with the Dayton-Champlin Interceptor by MCES. Many of the existing homes (approximately 500) in this portion of the City were developed in the late 1960's and 1970's and consist of 15,000 square feet lots making it difficult to locate a second on-site treatment system. The Capital Improvements anticipated from 2005-2007 for the NE portion of the City are shown on Figure 7 (page 31).

NW Dayton 2005-2007

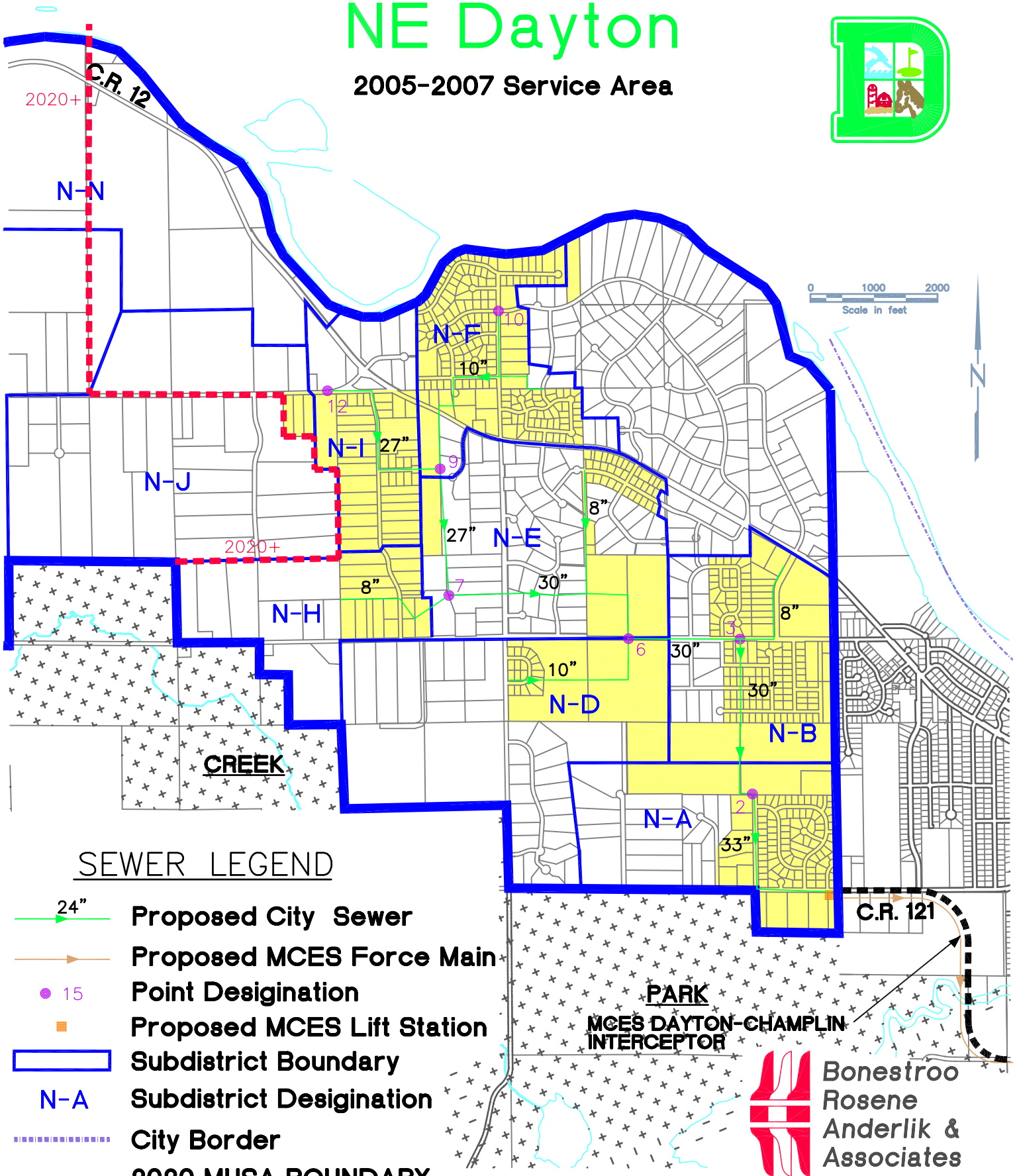
The City of Dayton's Sewer phasing Plan included in its Comprehensive Plan dated February 2001 assumed NW Dayton would be served by the Otsego Treatment Facility. The City of Dayton also recently received a petition expressing interest in developing land from property owners in the northwest portion of the City in accordance with its Comprehensive Plan. Therefore in accordance with Dayton's Comprehensive Plan, this plan provides for serving a portion of NW Dayton on an interim basis from the Otsego Treatment Facility. Dayton's officials and property owners will need to further review if serving this area is financially feasible. The Capital Improvements anticipated from 2005-2007 for the NW portion of the City are shown on Figure 8 (page 32).

SW Dayton 2005-2007

The City of Dayton is completing a Feasibility Report for the southwest portion of the City. The Feasibility Report is being prepared in response to new development in Dayton's industrial area located south of County Road 81 and north of I-94. The infrastructure improvements are being planned in conjunction with the Elm Creek Interceptor by MCES. The Capital Improvements anticipated from 2005-2007 for the SW portion of the City are shown on Figure 9 (page 33).

NE Dayton

2005-2007 Service Area



SEWER LEGEND

- 24" — Proposed City Sewer
- Proposed MCES Force Main
- 15 — Point Designation
- Proposed MCES Lift Station
- Subdistrict Boundary
- N-A — Subdistrict Designation
- City Border
- 2020 MUSA BOUNDARY
- 2005-2007 Service Area

FIGURE 7

Bonestroo Rosene Anderlik & Associates
Engineers & Architects

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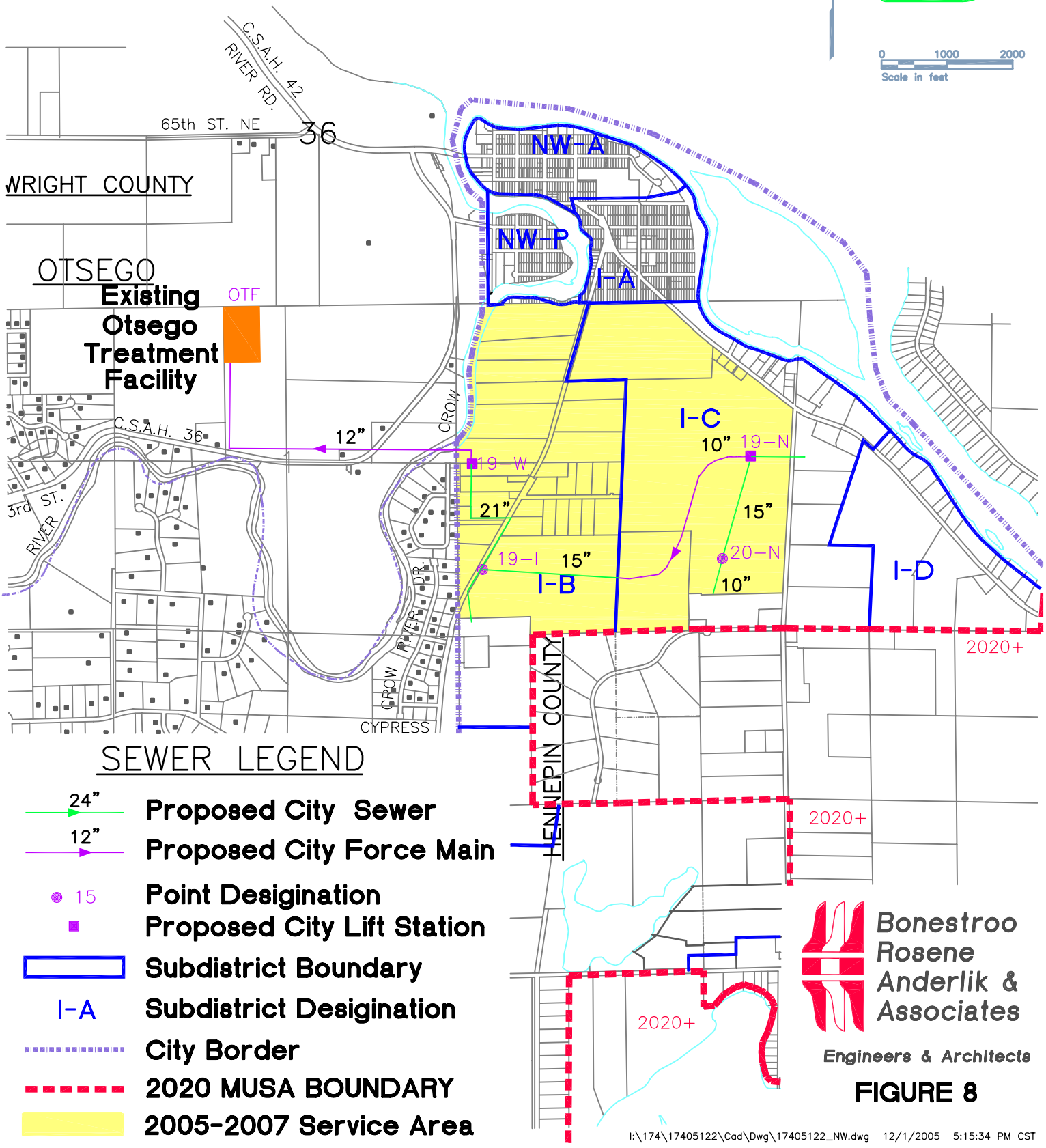
NW Dayton

2005-2007 Service Area



Bonestroo Rosene Anderlik & Associates

Engineers & Architects

FIGURE 8

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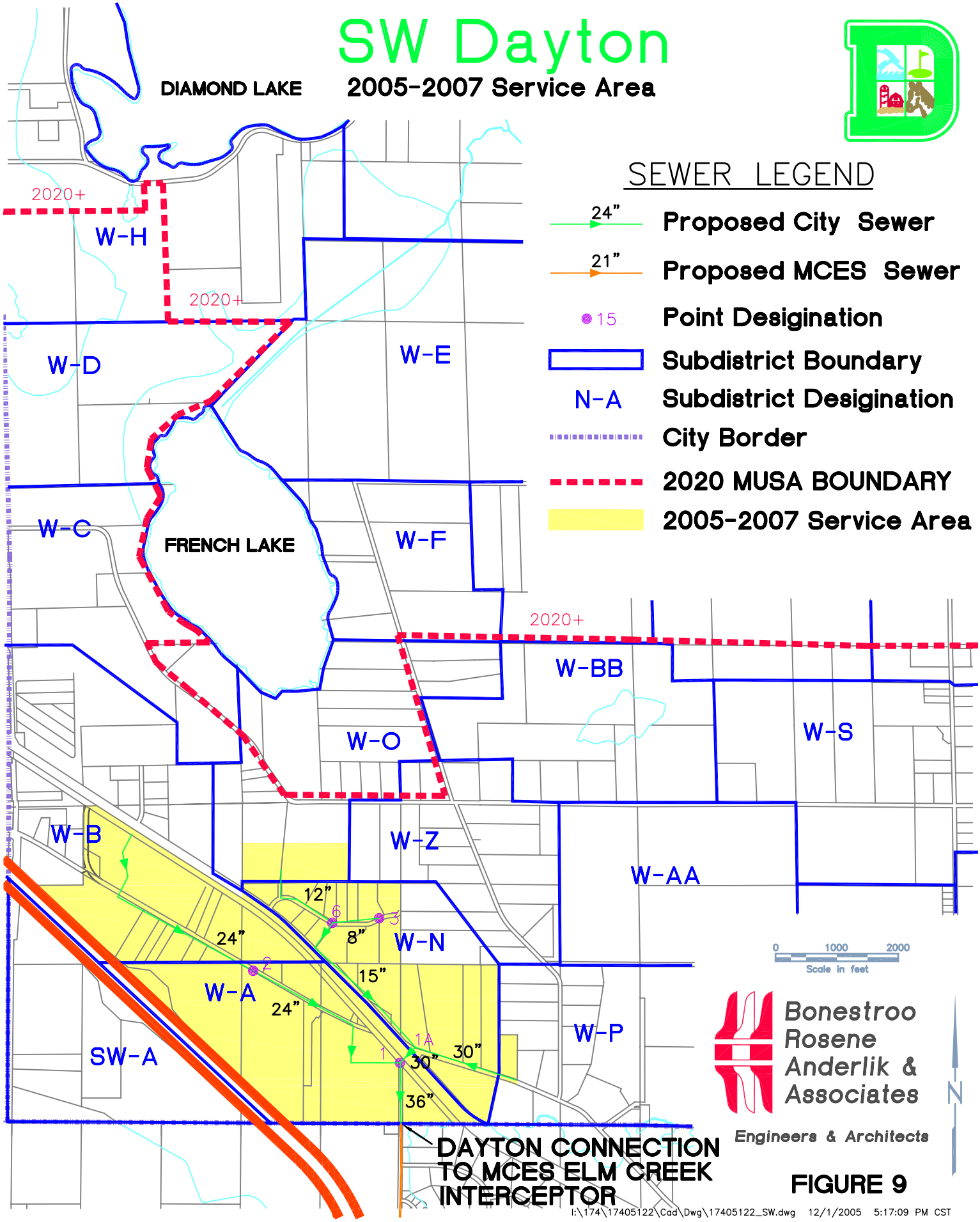
SW Dayton

2005-2007 Service Area



DAYTON CONNECTION TO MCES ELM CREEK INTERCEPTOR

Bonestroo Rosene Anderlik & Associates

Engineers & Architects

FIGURE 9

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9. On-site Wastewater Disposal Facilities

Currently, the majority of Dayton's homes and businesses use individual on-site facilities for the disposal of their wastewater. Figure 10 (page 35) shows the locations of these existing on-site wastewater disposal facilities. It is anticipated that the number of on-site systems would be reduced as municipal sanitary sewer service is extended throughout the districts. The policy of the City of Dayton is to allow existing on-site wastewater disposal facilities to be maintained within each of the sanitary sewer districts until the community desires service and service is brought into an area.

New on-site wastewater disposal facilities will be allowed by the City in the areas outside of the 2020 MUSA boundary. New on-site wastewater disposal facilities will be allowed by the City in the areas inside the 2020 MUSA boundary provided the properties agree to hook up to the City sewer system when available. The City of Dayton currently has an ordinance regulating the installation of on-site wastewater disposal systems (Appendix G). Under this ordinance, the design of the system is reviewed in accordance with the guidelines of Minnesota Pollution Control Agency Standards MN Rule 7080, and a permit is required before the system can be installed.

The City has an on-site wastewater disposal facility maintenance program which is stipulated in the On-site Wastewater Disposal Facility Ordinance (Appendix G). The program reviews the on-site wastewater treatment systems that are located within the City through information sent by landowners and septic inspectors or pumpers. Maintenance evaluations are to be performed by a registered inspector or pumper. The City tracks maintenance activities to determine compliance with their ordinance.

CITY OF

DAYTON, MINNESOTA

EXISTING ON-SITE WASTEWATER DISPOSAL FACILITIES

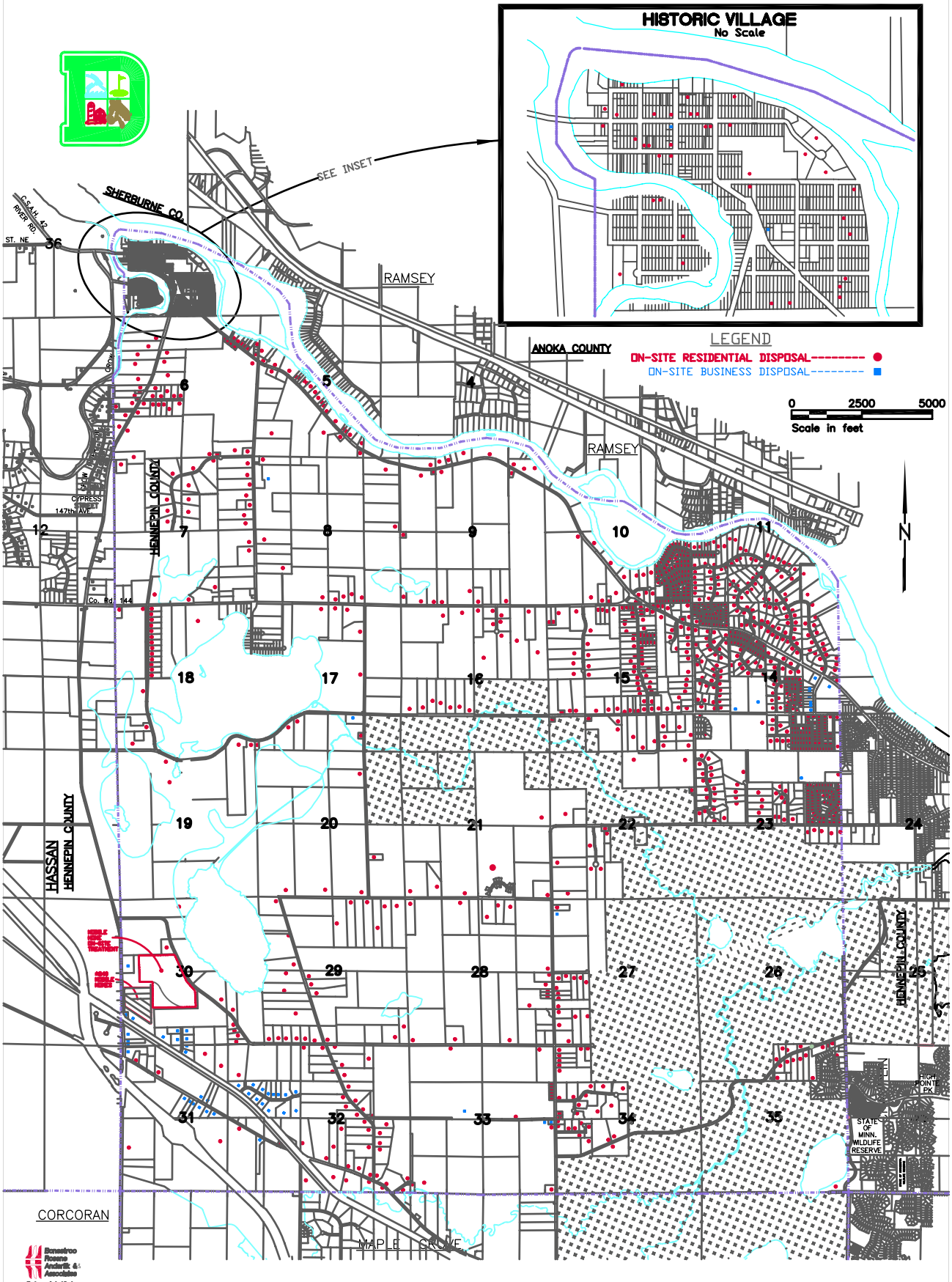


FIGURE 10

10. Summary and Recommendations

The Comprehensive Sanitary Sewer Plan is intended to serve as a guide to planning and implementing Dayton's sanitary sewer trunk system. The CSSP also serves to meet the sewer planning requirements for both the Metropolitan Council and the Metropolitan Council Environmental Services.

Adjustments in the routing and size of the trunk facilities can be expected as determined by the conditions at the time of final design; however, the general concepts should be adhered to for assurance of an economical and adequate ultimate system. The estimated cost to complete the trunk system is $21,832,000.

The following recommendations are presented for the City Council's consideration:

1. That this report be submitted to the Metropolitan Council for their approval.

2. That the existing ordinances and inspection policies for on-site disposal systems be regularly updated with changes in state legislation and MPCA regulations.

3. After review by the City Council a Capital Improvement Program as outlined herein be adopted in accordance with the Sanitary Sewer Phasing Plan.

4. That the MCES sewer connection to serve the North District and West District of Dayton be reviewed with MCES. Dayton is reviewing with MCES the feasibility of MCES extending sanitary sewer into Dayton to serve the North District in County Road 121 to Deerwood Lane. The West District would be served by MCES in Holly Lane at the Dayton/Maple Grove border. Review the estimated sewer flows for each district with MCES. The estimated sewer flows overall are higher than previous estimates because the density rate is higher to satisfy Metropolitan Council requirements for density.

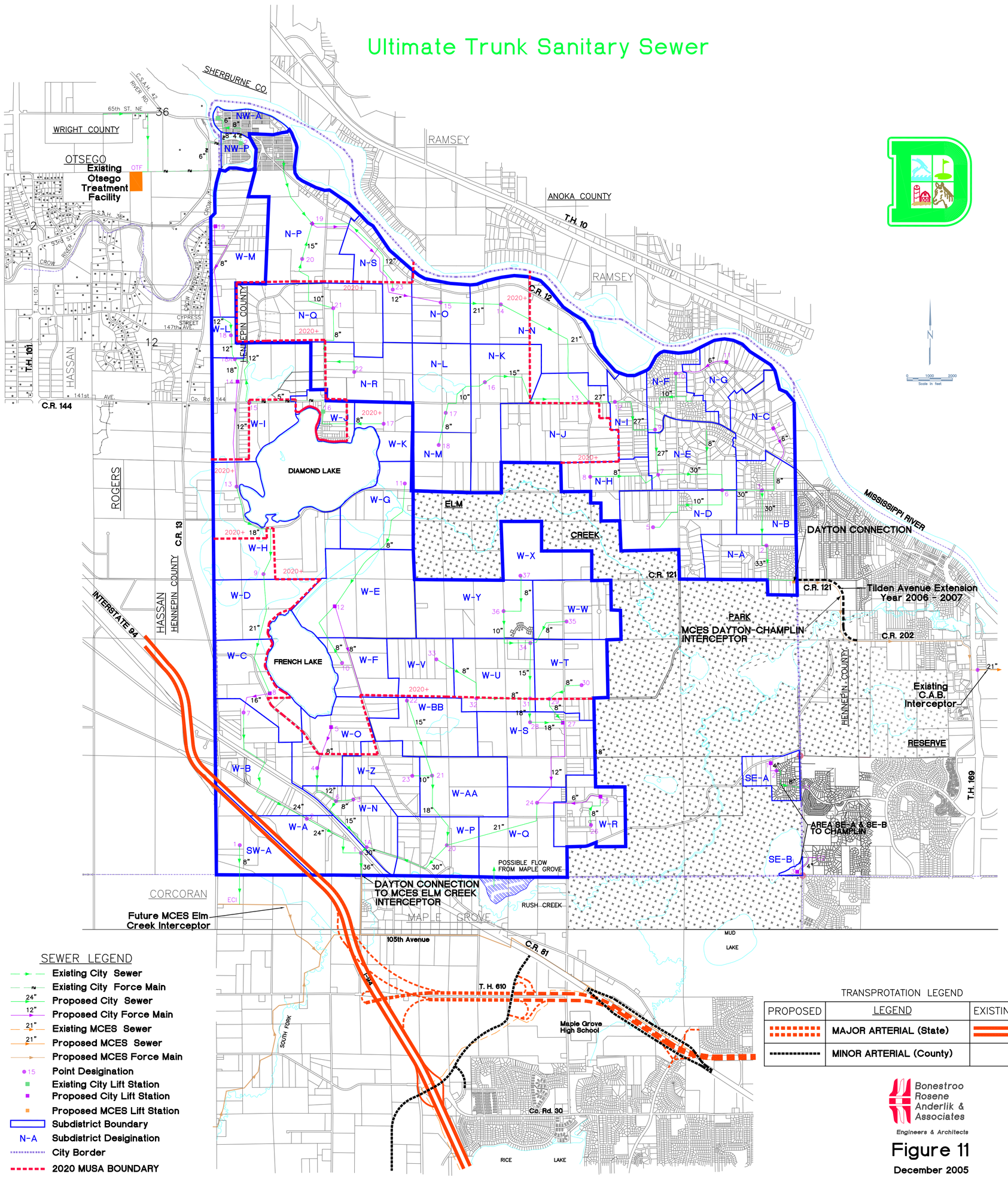
5. That the City of Dayton work with the City of Maple Grove to provide sewer service from sub-district SW-A to the Elm Creek Interceptor through Maple Grove's system.

6. That the interim sewer flow to Otsego be reviewed at the time a formal request is made to extend sewer service to Otsego

7. That the City of Dayton determine area charges for proposed development based on the information presented in Table 11. For purposes of this Comprehensive Sanitary Sewer

Plan, its recommended the trunk area charge be $2,600/acre ($2,199/acre x 15% Contingency) and $1,300/residential equivalent unit.

Ultimate Trunk Sanitary Sewer



SEWER LEGEND

- Existing City Sewer
- Existing City Force Main
- 24" Proposed City Sewer
- 12" Proposed City Force Main
- 21" Existing MCES Sewer
- 21" Proposed MCES Sewer
- Proposed MCES Force Main
- 15 Point Designation
- Existing City Lift Station
- Proposed City Lift Station
- Proposed MCES Lift Station
- Subdistrict Boundary
- N-A Subdistrict Designation
- City Border
- 2020 MUSA BOUNDARY

TRANSPROTATION LEGEND

PROPOSED	LEGEND	EXISTING
	MAJOR ARTERIAL (State)	
	MINOR ARTERIAL (County)	

Bonestroo Rosene Anderlik & Associates
Engineers & Architects

Figure 11

December 2005

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Appendix A
Sanitary Sewer System Areas

APPENDIX A - SEWER SYSTEM AREAS

Area Desig.	*Undevelopable (acres)*	*Estate (10+ acres) (acres)*	*Low Density Residential (acres)*	*Moderate Density Residential (acres)*	*High Density Residential (acres)*	*Comm/Ind. (acres)*	*Recreational/ Public (arces)*	***Total Area (acres)***
North (N)								
N-A	37.2		151.8				40.0	229.0
N-B	19.4		110.6			42.0	30.0	202.0
N-C	34.9		157.1				5.0	197.0
N-D	69.5		251.5				10.0	331.0
N-E	45.0		166.0				60.0	271.0
N-F	11.3		148.7				5.0	165.0
N-G	35.4		156.6				10.0	202.0
N-H	24.5		140.5					165.0
N-I	16.7		121.3					138.0
N-J	50.0	98.0	257.7				7.3	413.0
N-K	49.8	40.0	204.2					294.0
N-L	66.8		123.4		9.8		32.0	232.0
N-M		20.0	130.0				2.0	152.0
N-N	67.5		219.0	16.0	24.5		68.0	395.0
N-O	23.0		13.5	15.0	19.5	80.0	24.0	175.0
N-P	82.4		226.9	51.0	14.7	30.0	81.0	486.0
N-Q	43.0	190.0					180.0	413.0
N-R	59.1	45.0	143.2		14.7			262.0
N-S	31.1		79.2	15.2	69.5	13.0	3.0	211.0
TOTAL	766.6	393.0	2,801.2	97.2	152.7	165.0	557.3	4,933.0

APPENDIX A - SEWER SYSTEM AREAS

Area Desig.	*Undevelopable (acres)*	*Estate (10+ acres) (acres)*	*Low Density Residential (acres)*	*Moderate Density Residential (acres)*	*High Density Residential (acres)*	*Comm/Ind. (acres)*	*Recreational/ Public (arces)*	***Total Area (acres)***
West (W)								
W-A	20.0					150.0		170.0
W-B	63.4				21.4	276.0		360.8
W-C	45.8			36.0	13.3	127.9		223.0
W-D	81.3		65.2	44.0		14.7		205.2
W-E	150.6		271.4					422.0
W-F	49.5		51.0	69.5				170.0
W-G	81.0		109.0				40.0	230.0
W-H	231.0		56.0	50.0			103.0	440.0
W-I	121.0		238.0				57.3	416.3
W-J	20.7		79.3					100.0
W-K	45.1		64.0			10.0		119.1
W-L	12.5		36.6			1.8		50.9
W-M	75.5		194.5	108.5	11.0		5.5	395.0
W-N	37.0					138.0		175.0
W-O	76.0		24.0	26.0	100.0	3.0	41.0	270.0
W-P	44.4		70.6			70.0	45.0	230.0
W-Q	30.0		102.9	90.2		26.0	45.0	294.0
W-R	40.0		122.0	22.0				184.0
W-S	78.6		206.4				60.0	345.0
W-T	103.7		144.3					248.0
W-U	91.6		200.3			2.1		294.0
W-V	51.5		113.5					165.0
W-W	61.5		168.5					230.0
W-X	63.4		111.6					175.0
W-Y	132.1		197.9					330.0
W-Z	44.4		39.6		67.0	28.0		179.0
W-AA	53.0		117.0				78.0	248.0
W-BB	57.1		127.9				35.0	220.0
TOTAL	1,961.7	-	2,911.5	446.2	212.7	847.5	509.8	6,889.3

APPENDIX A - SEWER SYSTEM AREAS

Area Desig.	*Undevelopable (acres)*	*Estate (10+ acres) (acres)*	*Low Density Residential (acres)*	*Moderate Density Residential (acres)*	*High Density Residential (acres)*	*Comm/Ind. (acres)*	*Recreational/ Public (arces)*	***Total Area (acres)***
Southeast (SE)								
SE-A	10.0		85.0					95.0
SE-B	1.0		5.0					6.0
Total	11.0		90.0					101.0
Northwest (NW)								
NW-A	9.2		62.8			5.0	15.0	92.0
NW-P	13.2		21.8					35.0
Total	22.4		84.6			5.0	15.0	127.0
Southwest (SW)								
SW-A	55.0					124.0		179.0
Total	55.0					124.0		179.0
Summary of Ultimate Areas								
Total	2,816.7	393.0	5,887.3	543.4	365.4	1,141.5	1,082.1	12,229.3
Interim (I)*								
I-A	11.9		40.6	0.1		10.4	3.2	66.2
I-B	75.5		194.5	108.5	11.0		5.5	395.0
I-C	31.2		265.8	54.5	25.3	10.2	4.0	390.9
I-D	21.7		93.2	7.7	2.0	-	2.7	127.3
I-E	12.5		36.6			1.8		50.9
I-F	86.9	0.1	226.8				50.4	364.2
NW-A	9.2		62.8			5.0	15.0	92.0
NW-P	13.2		21.8					35.0
W-J	20.7		79.3					100.0
Total	282.8	0.1	1,021.3	170.8	38.2	27.4	80.9	1,621.4

*Interim areas only. Areas from Interim district included in Ultimate area calculations as portions of the North and West District

Appendix B
Sanitary Sewer System Average Flows

APPENDIX B - SEWER SYSTEM AVERAGE FLOWS

Area Desig.	Estate (MGD)	Low Density Residential (MGD)	Moderate Density Residential (MGD)	High Density Residential (MGD)	Comm/Ind. (MGD)	Rec/Public (MDG)	Total Flow (MGD)
North (N)							
N-A	-	0.094	-	-	-	0.010	0.104
N-B	-	0.069	-	-	0.034	0.008	0.110
N-C	-	0.098	-	-	-	0.001	0.099
N-D	-	0.156	-	-	-	0.003	0.159
N-E	-	0.103	-	-	-	0.015	0.118
N-F	-	0.092	-	-	-	0.001	0.094
N-G	-	0.097	-	-	-	0.003	0.100
N-H	-	0.087	-	-	-	-	0.087
N-I	-	0.075	-	-	-	-	0.075
N-J	0.003	0.160	-	-	-	0.002	0.165
N-K	0.001	0.127	-	-	-	-	0.128
N-L	-	0.077	-	0.016	-	0.008	0.101
N-M	0.001	0.081	-	-	-	0.001	0.082
N-N	-	0.136	0.019	0.041	-	0.017	0.213
N-O	-	0.008	0.018	0.033	0.064	0.006	0.129
N-P	-	0.141	0.061	0.025	0.024	0.020	0.271
N-Q	0.005	-	-	-	-	0.045	0.050
N-R	0.001	0.089	-	0.025	-	-	0.115
N-S	-	0.049	0.018	0.117	0.010	0.001	0.195
TOTAL	0.011	1.740	0.117	0.257	0.132	0.139	2.395

APPENDIX B - SEWER SYSTEM AVERAGE FLOWS

Area Desig.	Estate (MGD)	Low Density Residential (MGD)	Moderate Density Residential (MGD)	High Density Residential (MGD)	Comm/Ind. (MGD)	Rec/Public (MDG)	Total Flow (MGD)
West (W)							
W-A	-	-	-	-	0.120	-	0.120
W-B	-	-	-	0.036	0.221	-	0.257
W-C	-	-	0.043	0.022	0.102	-	0.168
W-D	-	0.040	0.053	-	0.012	-	0.105
W-E	-	0.169	-	-	-	-	0.169
W-F	-	0.032	0.083	-	-	-	0.115
W-G	-	0.068	-	-	-	0.010	0.078
W-H	-	0.035	0.060	-	-	0.026	0.121
W-I	-	0.148	-	-	-	0.014	0.162
W-J	-	0.049	-	-	-	-	0.049
W-K	-	0.040	-	-	0.008	-	0.048
W-L	-	0.023	-	-	0.001	-	0.024
W-M	-	0.121	0.130	0.018	-	0.001	0.271
W-N	-	-	-	-	0.110	-	0.110
W-O	-	0.015	0.031	0.168	0.002	0.010	0.227
W-P	-	0.044	-	-	0.056	0.011	0.111
W-Q	-	0.064	0.108	-	0.021	0.011	0.204
W-R	-	0.076	0.026	-	-	-	0.102
W-S	-	0.128	-	-	-	0.015	0.143
W-T	-	0.090	-	-	-	-	0.090
W-U	-	0.124	-	-	0.002	-	0.126
W-V	-	0.070	-	-	-	-	0.070
W-W	-	0.105	-	-	-	-	0.105
W-X	-	0.069	-	-	-	-	0.069
W-Y	-	0.123	-	-	-	-	0.123
W-Z	-	0.025	-	0.113	0.022	-	0.160
W-AA	-	0.073	-	-	-	0.020	0.092
W-BB	-	0.079	-	-	-	0.009	0.088
TOTAL	-	1.808	0.535	0.357	0.678	0.127	3.506

APPENDIX B - SEWER SYSTEM AVERAGE FLOWS

Area Desig.	Estate (MGD)	Low Density Residential (MGD)	Moderate Density Residential (MGD)	High Density Residential (MGD)	Comm/Ind. (MGD)	Rec/Public (MDG)	Total Flow (MGD)
Southeast (SE)							
SE-A	-	0.053	-	-	-	-	0.053
SE-B	-	0.003	-	-	-	-	0.003
TOTAL	-	0.056	-	-	-	-	0.056
Northwest (NW)							
NW-A	-	0.039	-	-	0.004	0.004	0.047
NW-P	-	0.014	-	-	-	-	0.014
TOTAL	-	0.053	-	-	0.004	0.004	0.060
Southwest (SW)							
SW-L	-	-	-	-	0.099	-	0.099
TOTAL	-	-	-	-	0.099	-	0.099
Total Ultimate Average Flow	0.011	3.656	0.652	0.614	0.913	0.271	6.116
Interim (I)							
I-A	-	0.025	0.000	-	0.008	0.001	0.034
I-B	-	0.121	0.130	0.018	-	0.001	0.271
I-C	-	0.165	0.065	0.042	0.008	0.001	0.282
I-D	-	0.058	0.009	0.003	-	0.001	0.071
I-E	-	0.023	-	-	0.001	-	0.024
I-F	0.000	0.141	-	-	-	0.013	0.153
NW-A	-	0.039	-	-	0.004	0.004	0.047
NW-P	-	0.014	-	-	-	-	0.014
W-J	-	0.049	-	-	-	-	0.049
TOTAL	0.000	0.634	0.205	0.064	0.022	0.020	0.946

Appendix C
Sanitary Sewer System Design Flows

APPENDIX C - SEWER SYSTEM DESIGN FLOWS (MGD)

From Point	To Point	Sub-district Added	Average Flow Added	Total Average Flow	PFF	Design Flow
NORTH DISTRICT (N)						
23	19	N-S	0.195	0.195	3.8	0.742
22	21	N-R	0.115	0.115	4.0	0.459
21	20	N-Q	0.050	0.165	3.9	0.643
20	19	N-P	0.271	0.436	3.5	1.526
19	15			0.631	3.4	2.147
15	14	N-O	0.129	0.760	3.3	2.510
14	13	N-N	0.213	0.974	3.2	3.116
18	17	N-M	0.082	0.082	4.0	0.327
17	16	N-L	0.101	0.183	3.9	0.713
16	13	N-K	0.128	0.311	3.6	1.119
13	12	N-J	0.165	1.449	3.0	4.347
12	9	N-I	0.075	1.524	2.9	4.421
11	10	N-G	0.100	0.100	4.0	0.399
10	9	N-F	0.094	0.193	3.8	0.735
9	7			1.718	2.9	4.982
8	7	N-H	0.087	0.087	4.0	0.349
7	6	N-E	0.118	1.923	2.8	5.385
5	6	N-D	0.159	0.159	3.9	0.619
6	3			2.082	2.8	5.829
4	3	N-C	0.099	0.099	4.0	0.395
3	2	N-B	0.110	2.290	2.8	6.413
2	1	N-A	0.104	2.395	2.7	6.466
1	C.A.B.[1]			2.395	2.7	6.466

[1]Dayton connection to MCES Dayton-Champlin Interceptor

APPENDIX C - SEWER SYSTEM DESIGN FLOWS (MGD)

From Point	To Point	Sub-district Added	Average Flow Added	Total Average Flow	PFF	Design Flow
WEST (W)						
19	18	W-M	0.271	0.271	3.7	1.002
18	18A	W-L	0.024	0.295	3.7	1.092
17	16	W-K	0.048	0.048	4.0	0.191
16	15	W-J	0.049	0.097	4.0	0.388
15	18A	W-I	0.162	0.259	3.7	0.959
18A	14			0.554	3.4	1.884
14	13			0.554	3.4	1.884
13	9	W-H	0.121	0.675	3.3	2.226
9	8	W-D	0.105	0.780	3.3	2.573
8	7	W-C	0.168	0.948	3.2	3.032
7	2	W-B	0.257	1.204	3.0	3.613
2	1	W-A	0.120	1.324	3.0	3.973
37	36	W-X	0.069	0.069	4.0	0.277
36	34	W-Y	0.123	0.192	3.8	0.730
35	34	W-W	0.105	0.105	4.0	0.419
34	31	W-U	0.126	0.423	3.5	1.480
33	32	W-V	0.070	0.070	4.0	0.282
32	31			0.070	4.0	0.282
31	28			0.493	3.5	1.727
28	27	W-S	0.143	0.637	3.4	2.164
30	29	W-T	0.090	0.090	4.0	0.358
29	27			0.090	4.0	0.358
27	24			0.726	3.3	2.396
26	25	W-R	0.102	0.102	4.0	0.409
25	24			0.102	4.0	0.409
24	20	W-Q	0.204	1.032	3.1	3.201
10	12	W-F	0.115	0.115	4.0	0.333
11	12	W-G	0.078	0.078	4.0	0.275
12	22	W-E	0.169	0.361	3.6	1.075
22	21	W-BB	0.088	0.449	3.5	1.573
23	21	W-Z	0.160	0.160	3.9	0.622
21	20	W-AA	0.092	0.701	3.3	2.314
20	1A	W-P	0.111	1.845	2.9	5.350
5	4	W-O	0.227	0.227	3.8	0.862
4	6		0.227	0.227	3.8	0.862
3	6	W-N	0.110	0.110	4.0	0.442
6	1A			0.337	3.6	1.214
1A	1			2.182	2.8	6.109
1	E.C.I.[1]			3.506	2.5	8.765

[1]Dayton connection to MCES Elm Creek Interceptor

APPENDIX C - SEWER SYSTEM DESIGN FLOWS (MGD)

From Point	To Point	Sub-district Added	Average Flow Added	Total Average Flow	PFF	Design Flow
SOUTHEAST (SE)						
1	2	SE-A	0.053	0.053	4.0	0.211
2	C1[1]			0.053	4.0	0.211
3	C2[1]	SE-B	0.003	0.003	4.0	0.012
NORTHWEST (NW)						
2	1	NW-P	0.014	0.014	4.0	0.054
1	OTF[2]	NW-A	0.047	0.060	4.0	0.241
SOUTHWEST (SW)						
1	ECI[3]	SW-A	0.099	0.099	4.0	0.397
Interim (I)						
16-W	RTF[4]	W-J	0.049	0.049	4.0	0.197
14-W	14-I	I-F	0.153	0.153	3.9	0.598
14-I	19-I	I-E	0.024	0.178	3.9	0.693
23-N	19-N	I-D	0.071	0.071	4.0	0.284
20-N	19-N	I-C	0.282	0.282	3.7	1.044
19-N	19-I			0.353	3.6	1.271
19-I	19-W	I-B	0.271	0.802	3.2	2.565
19-W	OTF[5]			0.802	3.2	2.565
3-I	1	I-A	0.034	0.034	4.0	0.138
2	1	NW-P	0.014	0.014	4.0	0.054
1	OTF[2]	NW-A	0.047	0.095	4.0	0.379

[1]Intercommunity connection to Champlin

[2]Intercommunity connection to the Otsego Treatment Facility

[3]Connection to MCES Elm Creek Interceptor in Maple Grove

[4]Interim Intercommunity connection to Rogers

[5]Interim Intercommunity connection to Otsego Treatment Facility

Appendix D
Sanitary Sewer System Pipe Design

APPENDIX D - ULTIMATE SYSTEM PIPE DESIGN

From Point	To Point	Design Flow (MGD)	Exist./ Prop.	Pipe Size (in)	Pipe Material	Length (ft)	Avg Slope (%)	CAPACITY					Capac./ Design Flow
								Inlet Control		Outlet Control		Capacity	
								(cfs)	(MGD)	(cfs)	(MGD)	(MGD)	
North District (N)													
23	**19**	0.742	Prop.	12	PVC	5,300	0.220	2.2	1.42	1.7	1.08	**1.08**	1.46
22	**21**	0.459	Prop.	8	PVC	4,400	0.400	1.4	0.90	0.8	0.49	**0.49**	1.08
21	**20**	0.643	Prop.	10	PVC	3,200	0.280	1.7	1.10	1.2	0.75	**0.75**	1.17
20	**19**	1.526	Prop.	15	PVC	1,650	0.150	4.1	2.65	2.5	1.62	**1.62**	1.06
19	**15**	2.147	Prop FM	12	PVC	7,550	N/A	Assumed a pumping rate of 5 feet per second				**2.54**	1.18
15	**14**	2.510	Prop.	21	PVC	2,700	0.100	9.1	5.88	5.0	3.24	**3.24**	1.29
14	**13**	3.116	Prop.	21	PVC	6,500	0.100	9.1	5.88	5.0	3.24	**3.24**	1.04
18	**17**	0.327	Prop.	8	PVC	1,500	0.400	1.4	0.90	0.8	0.49	**0.49**	1.51
17	**16**	0.713	Prop.	10	PVC	2,650	0.280	1.7	1.10	1.2	0.75	**0.75**	1.05
16	**13**	1.119	Prop.	15	PVC	5,500	0.150	4.1	2.65	2.5	1.62	**1.62**	1.45
13	**12**	4.347	Prop.	27	PVC	1,200	0.067	17.7	11.43	8.0	5.19	**5.19**	1.19
12	**9**	4.421	Prop.	27	PVC	2,800	0.067	17.7	11.43	8.0	5.19	**5.19**	1.17
11	**10**	0.399	Prop FM	6	PVC	2,250	N/A	Assumed a pumping rate of 5 feet per second				**0.63**	1.59
10	**9**	0.735	Prop.	10	PVC	3,300	0.280	1.7	1.10	1.2	0.75	**0.75**	1.02
9	**7**	4.982	Prop.	27	PVC	1,900	0.067	17.7	11.43	8.0	5.19	**5.19**	1.04
8	**7**	0.349	Prop.	8	PVC	3,200	0.400	1.4	0.90	0.8	0.49	**0.49**	1.42
7	**6**	5.385	Prop.	30	PVC	3,500	0.058	23.3	15.05	9.9	6.39	**6.39**	1.19
5	**6**	0.619	Prop.	10	PVC	4,500	0.280	1.7	1.10	1.2	0.75	**0.75**	1.21
6	**3**	5.829	Prop.	30	PVC	1,800	0.058	23.3	15.05	9.9	6.39	**6.39**	1.10
4	**3**	0.395	Prop FM	6	PVC	1,800	N/A	Assumed a pumping rate of 5 feet per second				**0.63**	1.60
4	**3**	0.395	Prop.	8	PVC	3,600	0.400	1.4	0.90	0.8	0.49	**0.49**	1.25
3	**2**	6.413	Prop.	30	PVC	2,700	0.058	23.3	15.05	9.9	6.39	**6.39**	1.00
2	**1**	6.466	Prop.	33	PVC	2,700	0.052	29.0	18.73	12.1	7.81	**7.81**	1.21
1	**C.A.B**	6.466	Prop.	33	PVC	50	0.052	29.0	18.73	12.1	7.81	**7.81**	1.21

APPENDIX D - ULTIMATE SYSTEM PIPE DESIGN

From Point	To Point	Design Flow (MGD)	Exist./ Prop.	Pipe Size (in)	Pipe Material	Length (ft)	Avg Slope (%)	CAPACITY					Capac./ Design Flow
								Inlet Control		Outlet Control		Capacity	
								(cfs)	(MGD)	(cfs)	(MGD)	(MGD)	
West District (W)													
19	**18**	1.002	Prop FM	8	PVC	4,800	N/A	Assumed a pumping rate of 5 feet per second				**1.13**	1.12
19	**18**	1.002	Prop.	12	PVC	1,100	0.220	2.2	1.42	1.7	1.08	**1.08**	1.08
18	**18A**	1.092	Prop.	12	PVC	1,100	0.222	2.2	1.42	1.7	1.09	**1.09**	1.00
17	**16**	0.191	Prop.	8	PVC	3,200	0.400	1.4	0.90	0.8	0.49	**0.49**	2.59
16	**15**	0.388	Exist FM	5	HDPE	3,700	N/A	UPGRADE EXISTING PUMPS, 2 @ 150 GPM				**0.43**	1.11
15	**18A**	0.959	Prop.	12	PVC	2,600	0.220	2.2	1.42	1.7	1.08	**1.08**	1.13
18A	**14**	1.884	Prop.	18	PVC	1,100	0.120	6.2	4.01	3.6	2.36	**2.36**	1.25
14	**13**	1.884	Prop FM	12	PVC	4,700	N/A	Assumed a pumping rate of 5 feet per second				**2.54**	1.35
13	**9**	2.226	Prop.	18	PVC	4,900	0.120	6.2	4.01	3.6	2.36	**2.36**	1.06
9	**8**	2.573	Prop.	21	PVC	5,500	0.100	9.1	5.88	5.0	3.24	**3.24**	1.26
8	**7**	3.032	Prop FM	16	PVC	1,650	N/A	Assumed a pumping rate of 5 feet per second				**4.51**	1.49
7	**2**	3.613	Prop.	24	PVC	6,300	0.080	13.0	8.40	6.4	4.14	**4.14**	1.15
2	**1**	3.973	Prop.	24	PVC	3,300	0.080	13.0	8.40	6.4	4.14	**4.14**	1.04
37	**36**	0.277	Prop.	8	PVC	2,350	0.400	1.4	0.90	0.8	0.49	**0.49**	1.78
36	**34**	0.730	Prop.	10	PVC	2,550	0.280	1.7	1.10	1.2	0.75	**0.75**	1.03
35	**34**	0.419	Prop.	8	PVC	2,550	0.400	1.4	0.90	0.8	0.49	**0.49**	1.18
34	**31**	1.480	Prop.	15	PVC	6,450	0.150	4.1	2.65	2.5	1.62	**1.62**	1.09
33	**32**	0.282	Prop.	8	PVC	2,600	0.400	1.4	0.90	0.8	0.49	**0.49**	1.75
32	**31**	0.282	Prop.	8	PVC	2,200	0.400	1.4	0.90	0.8	0.49	**0.49**	1.75
31	**28**	1.727	Prop.	18	PVC	1,050	0.120	6.2	4.01	3.6	2.36	**2.36**	1.36
28	**27**	2.164	Prop.	18	PVC	1,500	0.120	6.2	4.01	3.6	2.36	**2.36**	1.09
30	**29**	0.358	Prop.	8	PVC	1,600	0.400	1.4	0.90	0.8	0.49	**0.49**	1.38
29	**27**	0.358	Prop.	8	PVC	1,250	0.400	1.4	0.90	0.8	0.49	**0.49**	1.38
27	**24**	2.396	Prop FM	12	PVC	4,300	N/A	Assumed a pumping rate of 5 feet per second				**2.54**	1.06
26	**25**	0.409	Prop.	8	PVC	1,550	0.400	1.4	0.90	0.8	0.49	**0.49**	1.21
25	**24**	0.409	Prop FM	6	PVC	2,950	N/A	Assumed a pumping rate of 5 feet per second				**0.63**	1.55
24	**20**	3.201	Prop.	21	PVC	4,900	0.100	9.1	5.88	5.0	3.24	**3.24**	1.01
10	**12**	0.333	Prop.	8	PVC	3,050	0.400	1.4	0.90	0.8	0.49	**0.49**	1.49
11	**12**	0.275	Prop.	8	PVC	6,500	0.400	1.4	0.90	0.8	0.49	**0.49**	1.80
12	**22**	1.075	Prop FM	8	PVC	6,300	N/A	Assumed a pumping rate of 5 feet per second				**1.13**	1.05
22	**21**	1.573	Prop.	15	PVC	3,250	0.150	4.1	2.65	2.5	1.62	**1.62**	1.03
23	**21**	0.622	Prop.	10	PVC	850	0.280	1.7	1.10	1.2	0.75	**0.75**	1.21
21	**20**	2.314	Prop.	18	PVC	3,350	0.120	6.2	4.01	3.6	2.36	**2.36**	1.02
20	**1A**	5.350	Prop.	30	PVC	4,200	0.058	23.3	15.05	9.9	6.39	**6.39**	1.20
5	**4**	0.862	Prop FM	8	PVC	1,950	N/A	Assumed a pumping rate of 5 feet per second				**1.13**	1.31
4	**6**	0.862	Prop.	12	PVC	1,950	0.220	2.2	1.42	1.7	1.08	**1.08**	1.26
3	**6**	0.442	Prop.	8	PVC	1,100	0.400	1.4	0.90	0.8	0.49	**0.49**	1.12
6	**1A**	1.214	Prop.	15	PVC	2,850	0.150	4.1	2.65	2.5	1.62	**1.62**	1.33
1A	**1**	6.109	Prop.	30	PVC	400	0.058	23.3	15.05	9.9	6.39	**6.39**	1.05
1	**E.C.I.**	8.765	Prop.	36	PVC	1,000	0.046	36.5	23.58	14.3	9.26	**9.26**	1.06

APPENDIX D - ULTIMATE SYSTEM PIPE DESIGN

From Point	To Point	Design Flow (MGD)	Exist./ Prop.	Pipe Size (in)	Pipe Material	Length (ft)	Avg Slope (%)	CAPACITY					Capac./ Design Flow
								Inlet Control		Outlet Control		Capacity	
								(cfs)	(MGD)	(cfs)	(MGD)	(MGD)	
Southeast District (SE)													
1	**2**	0.211	Prop FM	4	PVC	550	N/A	Assumed a pumping rate of 5 feet per second				**0.28**	1.33
2	**C1**	0.211	Exist.	8	PVC	---	0.400	1.4	0.90	0.8	0.49	**0.49**	2.34
3	**C2**	0.012	Prop FM	4	PVC	1,100	N/A	Assumed a pumping rate of 5 feet per second				**0.28**	22.68
Northwest District (NW)													
2	**1**	0.054	Exist FM	4	HDPE	---	N/A	2 PUMPS @ 86 GPM = 172 GPM = 0.25 MGD				**0.25**	4.57
2	**1**	0.054	Exist.	8	PVC	---	0.400	1.4	0.90	0.8	0.49	**0.49**	9.14
1	**OTF**	0.241	Exist FM	6	PVC	---	N/A	2 PUMPS @ 200 GPM = 400 GPM = 0.58 MGD				**0.58**	2.39
Southwest District (SW)													
1	**E.C.I.**	0.397	Prop.	8	PVC	2,600	0.400	1.4	0.90	0.8	0.49	**0.49**	1.25
Interim (I)*													
16-W	RTF	0.197	Exist FM	5	HDPE	---	N/A	2 PUMPS @ 100 GPM = 200 GPM = 0.29 MGD				**0.29**	1.46
14-W	14-I	0.598	Prop FM	6	PVC	3,200	N/A	Assumed a pumping rate of 5 feet per second				**0.63**	1.06
14-I	19-I	0.693	Prop.	10	PVC	2,500	0.280	1.7	1.10	1.2	0.75	**0.75**	1.08
23-N	19-N	0.284	Prop.	12	PVC	5,100	0.220	2.2	1.42	1.7	1.08	**1.08**	3.81
20-N	19-N	1.044	Prop.	15	PVC	1,650	0.150	4.1	2.65	2.5	1.62	**1.62**	1.55
19-N	19-I	1.271	Prop FM	10	PVC	3,200	N/A	Assumed a pumping rate of 5 feet per second				**1.76**	1.39
19-N	19-I	1.271	Prop.	15	PVC	2,100	0.150	4.1	2.65	2.5	1.62	**1.62**	1.27
19-I	19-W	2.565	Prop.	21	PVC	2,400	0.100	9.1	5.88	5.0	3.24	**3.24**	1.26
19	OTF	2.565	Prop FM	12	PVC	5,450	N/A	Assumed a pumping rate of 5 feet per second				**2.56**	1.00
3-I	1	0.138	Exist FM	4	HDPE	---	N/A	2 PUMPS @ 110 GPM = 220 GPM = 0.32 MGD				**0.32**	2.30
2	1	0.054	Exist FM	4	HDPE	---	N/A	2 PUMPS @ 86 GPM = 172 GPM = 0.25 MGD				**0.25**	4.57
1	OTF	0.379	Exist FM	6	PVC	---	N/A	2 PUMPS @ 200 GPM = 400 GPM = 0.58 MGD				**0.58**	1.52

*Pipe from point 7 to point 6 is oversize to be compatible with the Ultimate System

Appendix E
Cost Estimates

APPENDIX E- ULTIMATE SYSTEM COST ESTIMATE

FROM POINT	TO POINT	PIPE SIZE (in.)	LENGTH (ft.)	TOTAL COSTS ($)	NOTES
North District					
Installed during the Interim to service North District					
23-N	19-N	12	5,100	347,000	(1)
21	20-N	10	1,400	88,000	(1)
20-N	19-N	15	1,650	124,000	(1)
Lift Station					
at Point	19-N			950,000	(1)
19-N	19-I	10" FM	3,200	160,000	(2)
19-N	19-I	15	2,100	158,000	(2)
19-I	19-W	21	2,400	113,000	(3)
19-W	OTF	12" FM	5,450	150,000	(3)
			Subtotal	2,090,000	
			Interim Costs not benefitting the Ultimate System	581,000	(2)
			Interim Costs benefitting the Ultimate System	**1,509,000**	(1)
			Trunk Costs Benefitting the Interim System	**581,000**	
			Otsego Forcemain	150,000	(2)
			Sewer to serve N-P, N-S during Interim	431,000	(2)
Ultimate System servicing North District					
23	19	12	200	14,000	(1)
22	21	8	4,400	260,000	
21	20	10	1,800	113,000	(1)
20	19	15	-		(1)
Lift Station					
at Point	19	INSTALLED DURING INTERIM		-	(1)
19	15	12" FM	7,550	415,000	
15	14	21	2,700	254,000	
14	13	21	6,500	611,000	
18	17	8	1,500	89,000	
17	16	10	2,650	167,000	
16	13	15	5,500	413,000	
13	12	27	1,200	144,000	
12	9	27	2,800	336,000	
Lift Station					
at Point	11			250,000	
11	10	6" FM	2,250	90,000	
10	9	10	3,300	208,000	
9	7	27	1,900	228,000	
8	7	8	3,200	189,000	
7	6	30	3,500	497,000	
5	6	10	4,500	284,000	
6	3	30	1,800	256,000	
Lift Station					
at Point	4			250,000	
4	3	6" FM	1,800	72,000	
4	3	8	3,600	212,000	
3	2	30	2,700	383,000	
2	1	33	2,700	437,000	
1	C.A.B.	33	50	8,000	
			Subtotal	**6,180,000**	
			Trunk Costs Benefitting the Ultimate System	**7,689,000**	
North District Developable Area (Acres)				4,166	
Cost Per Acre				1,845	

Note Legend	
(1)	All or a portion installed during Interim phase, serves Ultimate
(2)	Installed during Interim phase, Temporary
(3)	Installed during Interim phase, split between N & W Districts, Temp

APPENDIX E- ULTIMATE SYSTEM COST ESTIMATE

FROM POINT	TO POINT	PIPE SIZE (in.)	LENGTH (ft.)	TOTAL COSTS ($)	NOTES
West District					
Installed during the Interim to service West District					
Lift Station					
at Point	14-W			800,000	(1)
14-W	14-I	6" FM	3,200	128,000	(2)
14-I	19-I	10	2,500	158,000	(2)
19-I	19-W	21	2,400	113,000	(3)
Lift Station					
at Point	19-W			800,000	(1)
19-W	OTF	12" FM	5,450	150,000	(3)
			Subtotal	2,149,000	
			Interim Costs not benefitting the Ultimate System	549,000	(2)
			Interim Costs benefitting the Ultimate System	**1,600,000**	(1)
			Trunk Costs Benefitting the Interim System	**549,000**	
			Otsego Forcemain	150,000	(2)
			Sewer to serve W-I, W-L during Interim	399,000	(2)
Ultimate System servicing West District					
Lift Station					
at Point	19	INSTALLED DURING INTERIM		-	(1)
19	18	8" FM	4,800	216,000	
19	18	12	1,100	75,000	
18	18A	12	1,100	75,000	
17	16	8	3,200	189,000	
Lift Station					
at Point	16	Upgrade Pumps		55,000	
16	15	5" FM	EXISTING	-	
15	18A	12	2,600	177,000	
18A	14	18	1,100	92,000	
Lift Station					
at Point	14	INSTALLED DURING INTERIM		-	(1)
14	13	12" FM	4,700	259,000	
13	9	18	4,900	412,000	
9	8	21	5,500	517,000	
Lift Station					
at Point	8			900,000	
8	7	16" FM	1,650	107,000	
7	2	24	3,650	369,000	
2	1	24	3,300	333,000	
37	36	8	2,350	139,000	
36	34	10	2,550	161,000	
35	34	8	2,550	150,000	
34	31	15	6,450	484,000	
33	32	8	2,600	153,000	
32	31	8	2,200	130,000	
31	28	18	1,050	88,000	
28	27	18	1,500	126,000	
30	29	8	1,600	94,000	
29	27	8	1,250	74,000	
Lift Station					
at Point	27			750,000	
27	24	12" FM	4,300	237,000	
26	25	8	1,550	91,000	
Lift Station					
at Point	25			250,000	
25	24	6" FM	2,950	118,000	
24	20	21	4,900	461,000	
10	12	8	3,050	180,000	
11	12	8	6,500	384,000	
Lift Station					
at Point	12			350,000	
12	22	8" FM	6,300	284,000	
22	21	15	3,250	244,000	
23	21	10	850	54,000	
21	20	18	3,350	281,000	
20	1A	30	4,200	596,000	
Lift Station					
at Point	5			300,000	
5	4	8" FM	1,950	88,000	
4	6	12	1,950	133,000	
3	6	8	1,100	65,000	
6	1A	15	2,850	214,000	
1A	1	30	400	57,000	
1	E.C.I.	36	1,000	182,000	
			Subtotal	**10,694,000**	
			West District Trunk Costs Benefitting the Ultimate System	**12,294,000**	
			West District Developable Area (Acres)	4,928	
			Cost per Acre	2,170	

Note Legend	
(1)	All or a portion installed during Interim phase, serves Ultimate
(2)	Installed during Interim phase, Temporary
(3)	Installed during Interim phase, split between N & W Districts, Temp

APPENDIX E- ULTIMATE SYSTEM COST ESTIMATE

FROM POINT	TO POINT	PIPE SIZE (in.)	LENGTH (ft.)	TOTAL COSTS ($)	NOTES
Southeast District					
Lift Station at Point	1			250,000	
1	2	4" FM	550	22,000	
2	C1	8	EXISTING	-	
Lift Station at Point	3			250,000	
3	C2	4" FM	1,100	44,000	
			Total Southeast District Costs	**566,000**	
Southeast District Developable Area (Acres)				90	
Cost per Acre				6,289	
Southwest District					
1	ECI	8	2,600	153,000	
			Total Southwest District Costs	**153,000**	
Southwest District Developable Area (Acres)				124	
Cost per Acre				1,234	
Northwest District					
Lift Station at Point	1		EXISTING	-	
1	OTF	6" FM	EXISTING	-	
Lift Station at Point	2		EXISTING	-	
2	1	4" FM	EXISTING	-	
2	1	8	EXISTING	-	
			Total Northwest District Costs	-	
Northwest District Developable Area (Acres)				105	
Cost per Acre				-	
SUBTOTAL COST FOR ULTIMATE SYSTEM				**20,702,000**	
Total Developable Acres				9,413	
Total Cost per Acre				2,199	
SUBTOTAL COST FOR INTERIM SYSTEM				**1,130,000**	
TOTAL COST FOR ULTIMATE & INTERIM SYSTEM				**21,832,000**	

Appendix F
Trunk Sewer Phasing

Appendix F - Trunk Sewer Phasing

YEAR	AREA ADDED	FROM POINT	TO POINT	INCREMENTAL COST ($)	TOTAL COST ($)
2005-2010					
ULTIMATE	N-N	14	13	611,000	
	N-J	13	12	144,000	
	N-I	12	9	336,000	
	N-F	10	9	208,000	
		9	7	228,000	
	N-E	7	6	497,000	
	N-D	5	6	284,000	
		6	3	256,000	
Gravity Portion		4	3	212,000	
	N-B	3	2	383,000	
	N-A	2	1	437,000	
		1	CAB	8,000	3,604,000
	W-Z	23	21	54,000	
	W-AA	21	20	281,000	
	W-P	20	1A	596,000	
	W-C	8	7	1,007,000	
	W-B	7	2	369,000	
	W-A	2	1	333,000	
	W-N	3	6	65,000	
Gravity Portion	W-O*	4	6	133,000	
		6	1A	214,000	
		1A	1	57,000	
		1	ECI	182,000	3,291,000
	SE-A	1	2	272,000	
	SE-B	3	C2	294,000	566,000
	SW-A	1	ECI	153,000	153,000
INTERIM - NW		21	20-N	88,000	
	I-C	20-N	19-N	124,000	
		19-N	19-I	1,268,000	
	I-B	19-I	19-W	226,000	
		19-W	OTF	1,100,000	2,806,000
					10,420,000

Appendix F - Trunk Sewer Phasing

YEAR	AREA ADDED	FROM POINT	TO POINT	INCREMENTAL COST ($)	TOTAL COST ($)
2010-2020					
ULTIMATE	N-G	11	10	340,000	
	N-H	8	7	189,000	
LS and FM portion	N-C	4	3	322,000	851,000
	W-D	9	8	517,000	
	W-BB	22	21	244,000	
	W-R	26	25	91,000	
		25	24	368,000	
	W-S	28	27	126,000	
		27	24	987,000	
	W-Q	24	20	461,000	2,794,000
INTERIM	I-F	14-W	14-I	928,000	
	I-E	14-I	19-I	158,000	
	I-D	23-N	19-N	347,000	1,433,000
					5,078,000

Appendix F - Trunk Sewer Phasing

YEAR	AREA ADDED	FROM POINT	TO POINT	INCREMENTAL COST ($)	TOTAL COST ($)
2020+					
	N-S	23	19	14,000	
	N-R	22	21	260,000	
	N-Q	21	20	113,000	
Installed during Interim	N-P	20	19	-	
		19	15	415,000	
	N-M	18	17	89,000	
	N-L	17	16	167,000	
	N-K	16	13	413,000	
	N-O	15	14	254,000	1,725,000
	W-M	19	18	291,000	
	W-J	16	15	55,000	
	W-I	15	18A	177,000	
	W-L	18	18A	75,000	
		18A	14	92,000	
		14	13	259,000	
	W-H	13	9	412,000	
	W-K	17	16	189,000	
	W-G	11	12	384,000	
	W-F	10	12	180,000	
	W-E	12	22	634,000	
	W-X	37	36	139,000	
	W-Y	36	34	161,000	
	W-W	35	34	150,000	
	W-U	34	31	484,000	
	W-V	33	32	153,000	
		32	31	130,000	
	W-T	30	29	94,000	
		29	27	74,000	
		31	28	88,000	
	W-O*	5	4	388,000	4,609,000
					6,334,000
				TOTAL FOR COMPLETE SYSTEM	**21,832,000**

Appendix G
On-site Wastewater Disposal Facility Ordinance

CITY CODES - DAYTON, MN
CHAPTER 401

INDIVIDUAL SEWAGE TREATMENT SYSTEM STANDARDS

401.01 Purpose and Intent

The purpose of the Sewage and Wastewater treatment ordinance shall be to provide minimum standards for and regulation of individual sewage treatment systems(ISTS) and septage disposal including the proper location, design, construction, operation, maintenance and repair to protect surface water and ground water from contamination by human sewage and waterborne household and commercial waste; to protect the public's health and safety, and to eliminate or prevent the development of public nuisances pursuant to the authority granted under Minnesota Statutes Chapters 115 and 145A and Minnesota Rules Chapter 7080 as amended that may pertain to sewage and wastewater treatment.

401.02 General Provisions

Subdivision1. Standards Adopted by Reference. The City hereby adopts by this reference, Minnesota Rules Parts 7080.0010 to 7080.0020 and 7080.0060 to 7080.0176, and 7080.0919, as allowed under the terms of this Ordinance.

Subdivision 2. Definitions. The terms shall be interpreted as defined in Minnesota Rules 7080.0020 DEFINITIONS.

Subdivision 3. Permits.

a. No person shall install, alter, repair or extend any individual sewage treatment system in the City except in compliance with this code and without first applying for and obtaining a permit from the building official and at the same time paying a fee as listed in the fee schedule of the Zoning Ordinance. Such permit shall be valid for a period of twelve (12) months from the date of issuance.

b. No person shall cover any portion of any ISTS which is being constructed, altered or repaired unless in compliance with written inspection policies as developed and maintained from time to time by the City's Building Official.

c. Any structural activity, such as remodeling, which, in the opinion of the City Building Official, will add effluent to an ISTS shall be considered activity which constitutes construction, alteration or repair of an ISTS.

d. For the purposes of this code, a person responsible for violations hereof shall include the contractor performing any activity and shall also include the owner(s) of the parcel upon which the activity is being performed.

Subdivision 4. License Requirements. No person shall engage in the evaluation, inspection, design, installation, construction, alteration, extension, repair, maintenance, or pumping of on-site individual sewage treatment systems without first

obtaining a license to perform such tasks from the Minnesota Pollution Control Agency, except as provided under part 7080.0700, subpart 1.

Subdivision 5. Failing Septic Systems Notification and Requirements. A Notice of Noncompliance shall be issued and copies provided to the property owner and to the City within 30 days under the following conditions:

a. A failing ISTS shall be upgraded, replaced or its use discontinued within ten (10) years, unless it is inspected by a licensed inspector and not found to be an imminent threat to public health and safety. The system may continue to be used until it is found to be an imminent threat to health and safety.

b. An ISTS posing an imminent threat to public health or safety shall be upgraded, replaced or repaired, or its use discontinued, within an appropriate time no greater than 10 months.

Subdivision 6. Additional Soil Treatment Area Requirements.

a. On all lots created after the effective date of this ordinance, and on all lots which are existing on the effective date of this ordinance, and on all undeveloped lots, which are not connected to Sanitary Sewer or will not be connected to Sanitary Sewer prior to issuance of a Certificate of Occupancy shall include at least one (1) additional designated soil treatment area which can support a standard soil treatment system.

b. All soil treatment areas shall be protected before, during and after construction on the lot. The method of protection of the additional soil treatment area shall be approved by the building official and may include, but is not limited to, such things as snow fencing, permanent fencing and silt fencing.

c. No building permit shall be issued for construction on any property within the City until at least two (2) soil treatment areas have been identified and protected on all parcels for which a building permit is applied for.

Subdivision 7. Power to Enter Property. The City building official or person selected and appointed by him to do so, shall have the power to, between sunrise and sunset, enter such property reported to him or other property upon which written complaints have been made to him of individual sewage disposal systems which constitute a health hazard, to examine any vault, privy, cesspool, septic tank or private sewage disposal system, entry to be made upon showing of proper credentials.

401.03 Minimum Setback Distances

a.	Any well water supply	50 ft
b.	Septic drainfield to shallow well, less than 50 feet deep	100 ft
c.	Water under pressure	10 ft
d.	Wetlands	75 ft
e.	Property Lines	10 ft
f.	Septic drainfield setback to building	20 ft

g. Septic tank setback to building 10 ft

401.04 More Restrictive Standards

Subdivision 1. Section 7080.0130, subpart 3(A) is hereby modified requiring at least two (2) septic tanks with a minimum capacity of 1,000 gallons.

Subdivision 2. Section 7080.0160, subpart 1(c) is modified to require a minimum dosing tank of 1,000 gallons.

Subdivision 3. Section 7080.0910 specifying alternative and experimental systems shall be utilized only on existing developed lots with existing septic systems which have failed. Systems designed or installed in a slope greater than twelve (12%) percent shall be considered experimental on any lot.

Subdivision 4. All waste waters discharged into the septic system shall be metered on all non-single family uses

401.05 On-Site Sewage System Inspection, Maintenance and Repair.

Subdivision 1. Maintenance, Inspection and Cleaning.

a. The owner of any individual sewage treatment system shall have the septic tank(s) properly pumped, cleaned and inspected on a regular basis, but in no case less than once every 3 years.

b. A licensed pumper must be retained by the owner for pumping, cleaning, inspection, maintenance, and repair.

Subdivision 2. Maintenance Report Form.

a. Each property owner shall, at their sole expense, provide for inspection and maintenance of the system.

b. The property owner shall be responsible for ensuring that a completed Maintenance Report Form to be returned to the City by their septic pumper certifying that their septic system has been pumped, inspected and cleaned at least once every three years. Maintenance Report Forms will be available at City Hall and/or on the City website.

c. In the event a septic pumper fails to complete the Maintenance Report Form and return it to the City as required herein, the City, pursuant to Minnesota Statutes, section 429.101, the City shall provide written notice to the property owner. After providing a second written notice, the failure to submit documentation of pumping and inspection of a septic system shall be considered a violation of this ordinance and subject to the Criminal Penalties and/or Civil Remedies outlined in Section 401.06, the Enforcement Section of this ordinance. City may provide for the property owner's septic system to be pumped, cleaned and evaluated and for all costs related hereto to be assessed against the property benefited.

Subdivision 3. Cleaning and Evaluation.

a. Evaluation of the on-site sewage tank and system shall be made by a licensed inspector or pumper. A listing of licensed pumpers is available from the MPCA and will also be available from the City.
b. The above-described system maintenance shall include, but not be limited to, pumping and cleaning of the septic tank, evaluation of the condition of the tank, baffles and system, and an examination of the drain field for evidence of system failure.
c. For ISTS having inspection openings, the inspection should also include the following measurements:

i. The distance between sludge and the bottom of outlet baffles.
ii. The distance between scum and the bottom of outlet baffles.

d. Where there is less than 12 inches between the sludge and the bottom of the outlet baffles, or where the scum line is found less than 3 inches above the bottom of the outlet baffles, this condition shall be noted on the inspection report.
e. The owner shall require remedial activity to take place to correct deficiencies wherever found.

Subdivision 4. Failing Systems.

a. Upon inspection, if the system is found to be failing or creating a health hazard, the owner of the property shall have the system pumped and repaired or replaced pursuant to a schedule as determined by the City Building Inspector. Section 401.02 of this code regarding failing systems shall be followed.
b. In the event the property owner fails to comply with the pumping schedule or have the system repaired or replaced, the the failure to submit documentation of pumping, inspection, repair or replacement of a failing septic system shall be considered a violation of this ordinance and subject to the Criminal Penalties and/or Civil Remedies outlined in Section 401.06, the Enforcement Section of this ordinance. Tbe City pursuant to Minnesota Statutes, Section 429.101 may provide for the property owner's septic system to be pumped and repaired or replaced and for all costs related thereto to be assessed against the property benefited.

Subdivision 5. Costs

a. Any on-site inspection and/or pumping conducted or contracted by the City shall be invoiced to the property owner in an amount established by resolution of the City Council.
b.. Pursuant to Minnesota Statutes, Section 429.101, the City Council hereby authorizes the City Staff to certify any unpaid costs or charges imposed pursuant to this Ordinance to the County Auditor for collections as other taxes.

401.06 Enforcement

Subdivision 1. Criminal Penalty.

a. Any person who violates any of the provisions of this ordinance or who makes any false statement on a Certificate of Compliance shall be guilty of a misdemeanor, punishable by imprisonment or a fine or both as defined by law except as noted below.

b. **First pumping and/or inspection violation.** Any person who fails to conduct required ISTS pumping or inspection shall be guilty of a petty misdemeanor, punishable by a fine, as defined by law, for the first violation only.

c. **Additional pumping and/or inspection violation(s).** After a first violation, if the violation fails to be taken care of within a set period of time, regardless of whether the City pursues the charges of petty misdemeanor, a property owner who fails to conduct a required ISTS pumping or inspection shall be guilty of a misdemeanor, punishable by imprisonment or a fine or both as defined by law.

d. Any person who fails to repair and resolve a failing septic system which is an imminent health hazard or is approaching the status of an imminent health hazard shall be guilty of a misdemeanor, punishable by a fine or imprisonment or both as defined by law.

Subdivision 2. Civil Remedy. In the event of a violation of this Ordinance, in addition to other remedies, the City Attorney may institute appropriate actions or proceedings to prevent, restrain, correct or abate such violations.

Subdivision 3. Permits. No building permit, certificate of occupancy, license, or other permit shall be issued for the construction, use or occupancy of any parcel of property within the City of Dayton unless the requirements of this chapter are met with respect to said parcel of property.

(AMENDED July 8th, 2003)

Appendix H
Wastewater Ordinances

ORDINANCE NO. 2000-2

CITY OF DAYTON, MINNESOTA

409 MUNICIPAL WASTEWATER SYSTEM

AN ORDINANCE ESTABLISHING USE AND RATE REGULATIONS FOR THE CITY OF DAYTON HISTORIC VILLAGE WASTEWATER TREATMENT AND COLLECTION FACILITIES

An ordinance regulating the use of and establishing a charge system for public and private sewers, establishing methods for a sewer service charge system, and providing penalties for violations of the regulations herein defined.

Be it ordained and enacted by the Council of the City of Dayton, Minnesota as follows:

409.10 Definitions

Unless the context specifically indicates otherwise, the terms used in this Article shall have the meanings hereby designated:

Sec. 1. "Act" - The Federal Water Pollution Control Act, also referred to as the Clean Water Act, as amended, 33. U.S.C. 1251 et seq.

Sec. 2 "BOD5" or "Biochemical Oxygen Demand" - The quantity of oxygen utilized in the biochemical oxidation of organic matter standard laboratory procedures in five (5) days at 20 degrees Centigrade and as expressed in terms of milligrams per liter (mg/l).

Sec. 3. "Building Drain" - That point of a building which conveys wastewater to the building sewer, beginning 3ft. outside the building wall.

Sec. 4. "City" - The area within the corporate boundaries of the City of Dayton, the City Council, its Authorized Representative, or the Authorized Representative of the sanitary sewer district.

Sec. 5. "Debt Service Charge" - A charge to users of the wastewater treatment facility for the purpose of repaying capital costs.

Sec. 6. "Industrial User"

(a) Any entity as defined in the Standard Industrial Manual (latest edition) as categorized, that discharge wastewater to the public sewer.

Division A: Agriculture, Forestry and Fishing

Division B: Mining
Division D: Manufacturing

Division E: Transportation, Communications, Electric, Gas, and Sanitary Sewers

Division I: Services

(b) Any user whose discharges, singly or by interaction with other wastes:

- contaminate the sludge of the wastewater treatment system,
- injure or interfere with the treatment process,
- create a public nuisance or hazard,
- have an adverse effect on the waters receiving wastewater treatment plant discharges,
- exceed NDSW limitations,
- exceed normal residential unit volumes of wastewater.

Sec. 7. "Infiltration/Inflow (FI)" - Water other than wastewater that enters the sewer system from the ground or from surface runoff, as defined in Minnesota Rules.

Sec. 8. "MPCA" - Minnesota Pollution Control Agency.

Sec. 9. "National Categorical Pretreatment Standards" - Federal regulations establishing pretreatment standards for introduction of pollutants in publicly owned wastewater treatment facilities. Section 307(b) of the Act.

Sec. 10. "National Pollutant Discharge Elimination System (NPDES) Permit" - A permit issued by the MPC& setting limits on pollutants that a permittee may legally discharge pursuant to Sections 402 and 405 of the Act.

Sec. 11. "Natural Outlet" - Any outlet, including storm sewers and combined sewers, which flows into a body of surface water or ground water.

Sec. 12. "Normal Domestic Strength Waste"(NDSW) - Wastewater that primarily introduced by residential users with BOD5 concentrations not greater than 300 mg/l and total suspended solids (TSS) concentrations not greater than 300 mW1.

Sec. 13. "Non-residential User" - A user of the treatment facility whose building is not used as a private residence, and discharges NDSW.

Sec. 14. "Operation, Maintenance and Replacement Costs"(OM&R) - Expenditures necessary to provide for the dependable, economical, and efficient functioning of the treatment facility throughout its design life including operator training, and permit fees. Replacement refers to equipment replacement costs, not the cost of future replacement of the entire facility.

Sec. 15. "Owner" or "User" - Non-Residential User, Residential User and Industrial User.

Sec. 16. "Residential User"- A user of the treatment facility whose building is used primarily as a private residence and discharges NDSW.

Sec. 17. "Sewer" - A pipe or conduit that carries wastewater or drainage water.

(a) "Building Sewer" - The extension from the building drain to the public sewer or other place of disposal, also referred to as a service connection.

(b) "Sanitary Sewer" - A sewer designed to carry only liquid and water-carded wastes from residential, non-residential, and industrial sources together with minor quantities of I/I.

(c) "Storm Sewer" - A sewer intended to carry unpolluted surface and sub-surface water from any source.

Sec. 18. "Sewer Service Charge" - The total of the User Charge and the Debt Service Charge.

Sec. 19. "Slug" - A discharge of water or wastewater which in concentration or in quantity of flow exceeds for any period of duration longer than 15 minutes, more than 5 times the average 24-hour concentration of flows during normal operation.

Sec. 20. "State Disposal System (SDS) Permit" - A permit issued by the MPCA pursuant to Minn. Stat. § 115.07 for a disposal system as defined by Minn. Stat. § 115:01, subd. 8.

Sec. 21. "Total Suspended Solids"(TSS)- The total suspended matter that either floats on the surface of, or is in suspension in water, wastewater or other liquids, and is removable by laboratory filtering as prescribed in "Standard Methods for the Examination of Water and Wastewater" (latest edition).

Sec. 22. "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. An example could be non-contact cooling water.

Sec. 23. "User Charge" - A charge to users of a treatment facility for the user's proportionate share of the cost of operation and maintenance, including replacement.

Sec. 24. "Wastewater" - Liquid and water-carried wastes from residential, non-residential, and industrial users, together with any ground water, surface water, and storm water that may be present.

Sec. 25. "Wastewater Treatment Facilities" or "Treatment Facilities" - The land, devices, facilities, structures, equipment, and processes owned or used by the City for the purpose of the transmission, storage, treatment, recycling, and reclamation of municipal wastewater, and the disposal of residues resulting from such treatment.

409.20 Control by the Authorized Representative

The City Council shall appoint an Authorized Representative who shall have control and general supervision of all public sewers and service connections in the City, and shall be responsible for administering the provisions of this Ordinance to ensure that a proper and efficient public sewer is maintained. The Authorized Representative may delegate responsibilities to designated representatives.

409.30. Use of Public Sewers Required.

Subd. 1. Within 90 days of receiving official notification the Owners of all properties directly adjacent to the sanitary sewer collection system shall install a suitable service connection to the Sanitary Sewer, at their own expense in accordance with the provisions of this Ordinance. If any Owner has a septic system, at the time of receiving official notification, that is a fully functional system conforming to existing on-site septic system standards as determined by the Authorized Representative and has been constructed within five (5) years of receiving official notification, the Owner(s) shall have ~~two~~five (~~2~~5) years to install a suitable sewer service connection system, at their own expense in accordance with the provisions of this Ordinance.

409.40 Private Wastewater Disposal

Sec. 1. Where a public sewer is not available under the provisions of Article III, the building sewer shall be connected to a private wastewater disposal system complying with the provisions required by the City, the Minnesota Pollution Control Agency (MPCA), and all other regulatory agencies. The Owner(s) shall obtain the appropriate permits for construction and operation of a private wastewater disposal system. Operation of the private wastewater disposal system is subject to approval by the City and all other appropriate regulatory agencies.

Sec. 2. The Owner(s) shall operate and maintain the private wastewater disposal facilities in a sanitary manner at all times at no expense to the City.

Sec. 3. When the public sewer becomes available to a property serviced by a private wastewater disposal system, a direct connection shall be made to the public sewer within 90 days in compliance with this Ordinance, and within 120 days private wastewater disposal systems will be cleaned of all sludge. The bottom shall be broken to permit drainage, and the tank or pit filled with suitable material.

Sec. 4. No statement contained in this Article shall be construed to interfere with any additional requirements that may be imposed by the MPC& the State Department of Health, or other responsible federal, state or local agencies.

409.50 Building Sewers and Connections Design

Sec. 1.

(a) No person(s) shall make any alterations to the public sewer or any appurtenances thereof without first obtaining a written permit from the City. No private building drain shall extend beyond the limits of the building or property for which the permit has been given.

(b) Any new connection to the sanitary sewer system shall be prohibited unless sufficient capacity is available in all downstream facilities including, but not limited to, capacity for flow, BOD5, and TSS as determined by the authorized representative.

(c) Application for permit for public sewer service shall be made on printed forms, shall state the legal description and street and official house number of the premises and the nature of the improvement to be performed. The application for the written permit to connect to public sewer or alter connected service pipes shall be made jointly by the master plumber who will make the installation and by the owner of such premises or his or her authorized agent or by the occupant or person in possession of the premises. The permit shall issue to the owner and his or her master plumber applicant, and each applicant by such application shall subscribe to and be obligated to be bound by the City's applicable Ordinances and Rules and Regulations.

(d) Applicant must pay all required Permit fees and any other charges, which shall be set forth by resolution of the City Council.

(e) No person except a master plumber duly licensed in the State of Minnesota or duly authorized employee of the City is permitted to do any work on service pipes connected with public sewer.

Sec. 2. A separate and independent building sewer shall be provided for each building. Old building sewers may be used to service new buildings only when they are found to meet all requirements of this Ordinance.

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

Sec. 3. The construction and connection of the building sewer to the public sewer shall conform to the requirements of the State of Minnesota Building and Plumbing Code, applicable rules and regulations of the City and the materials and procedural specifications set forth in the American Society of Testing Materials (ASTM) and the Water Pollution Control Federation (WPFC) Manual of Practice No.9. All such connections shall be made gas and watertight, and verified by proper testing to prevent Infiltration/Inflow.

Sec. 4. No unpolluted water sources shall be connected to the Sanitary Sewer.

Sec. 5.

(a) No person except authorized persons employed by the City or master plumber permittee bearing specific authority by written permit required herein shall connect to public sewer.

(b) A master plumber permittee requesting a connection shall give notice at least eight (8) business hours in advance of need. The master plumber permittee requesting must help uncover the main and locate the tap if requested by the City. The connection shall be made under the supervision of a designated representative.

(c) A bond shall be filed with the City by the master plumber permittee requesting the connection in the sum of ten thousand dollars ($10,000.00) conditioned upon the full, complete, and satisfactory completion of each connection undertaken by the master plumber permittee in the City of Dayton. If the master plumber permittee is to do his or her own installation/excavation work the said ten thousand dollars ($10,000.00) bond shall also bond such installation/excavation work as required herein

(d) Prior to the issuance of the permit to connect to public sewer and/or for sewer service, insurance coverage shall be obtained by the person requesting such permit protecting against damage to property or injury to death to person, which policy or policies shall indemnify and hold harmless the City and all of its officers and personnel against any claims, demands, damages, actions or causes of action arising out of or by reason of the doing of the work or activities related to or incident to the permits

required herein and from any costs, disbursements or expenses of defending the same. The property damage insurance coverage shall be in the amount of two hundred thousand dollars ($200,000.00) or more, and the public liability insurance for injury or death to person shall be in the amount of one millions dollars ($1,000,000.00) aggregate for injury to each person. Proof of such insurance shall be filed with the City prior to the commencement of construction work and such policy shall provide that the City shall receive written notice at least ten (10) days before any termination or modification of such insurance.

(e) Should the insurance coverage hereinbefore provided be inadequate in amount, then such person shall indemnify and hold harmless the City and all of its officers and personnel like manner.

(f) If the master plumber permittee is to do his or her own installation/excavation work, the said insurance shall also insure such installation/excavation work required herein.

Sec. 6.

(a) An appropriate installation/excavation license is required to install a service connection. Any person desiring a license shall apply in writing to the City Council, Providing satisfactory evidence of the applicant's qualifications. If approved by the City Council, the license shall be issued by a designated representative upon the filing of a bond and insurance as hereinafter provided.

(b) At the time of granting such installation/excavation license a bond must be filed with the City by the person receiving the license, unless such installation/excavation licensee is excused therefor under this Ordinance, and said bond shall be in the sum of ten thousand dollars ($10,000.00) conditioned upon the full, complete and satisfactory completion of every installation/excavation undertaken in connection with the installation for which the licensee undertakes.

(c) Prior to the issuance of the installation/excavation license, insurance coverage shall be obtained by the person requesting such permit, unless such installation/excavation licensee is excused therefor under this Ordinance, protecting against damage to property or injury to death to person, which policy or policies shall indemnify and hold harmless the City and all of its officers and personnel against any claims, demands, damages, actions or causes of action arising out of or by reason of the doing of the work or activities related to or incident to the license required herein and from any costs, disbursements or expenses of defending the same. The property damage insurance coverage shall be in the amount of two hundred thousand dollars ($200,000.00) or more, and the public

liability insurance for injury or death to person shall be in the amount of one millions dollars ($1,000,000.00) aggregate for injury to each person. Proof of such insurance shall be filed with the City prior to the commencement of construction work and such policy shall provide that the City shall receive written notice at least ten (10) days before any termination or modification of such insurance.

(d) Should the insurance coverage hereinbefore provided be inadequate in amount, then such person shall indemnify and hold harmless the City and all of its officers and personnel like manner.

(e) The cost of a license for installation/excavation shall be set forth by resolution of the City Council. All licenses shall expire on December 31 of the license year unless the license is suspended or revoked by the City Council for any reasonable cause.

(f) The City Council may suspend or revoke any license issued under this article for any of the following causes:

(1) Giving false information in connection with the application for a license.

(2) Incompetence of the licensee.

(3) Willful violation of any provisions of this Article or any rule or regulation pertaining to the making of service connections.

(4) Failure to adequately protect and indemnify the city and the user.

Subd. 7. Maintenance, Repair and Replacement. The City shall maintain and repair or replace all sewer service connection lines within Public Right-of-Way or easement when rendered unserviceable through ordinary use. However, when replacement, repair or adjustment of any sewer service connection is rendered necessary by the act, neglect or carelessness of the owner or occupant of any premise, any expense caused by the City thereby shall be charged against and collected from the owner or occupant of the premises. Water and sewer service may be discontinued until the cause is corrected and the charge is collected.

Subd. 8. City Property. All sewer service connection lines within Public Right-of Way or easement shall remain the property of the City. All other sewer service connection line shall be the responsibility of the property owner.

409.60 Use of Public Wastewater Treatment Facilities

Sec. 1. No unpolluted water or storm water shall be discharged to the sanitary sewer. Such water shall be discharged only to storm sewers or to natural outlets approved by the City and other regulatory agencies.

Sec. 2. No person(s) shall discharge any of the following substances to the public sewer:

(a) Liquids, solids, gases, or other substances which singly or by interaction with others may cause fire or explosion.

(b) Solid or viscous substances which may cause obstruction to the flow in a sewer.

(c) Wastewater having a pH of less than 5.0 or greater than 9.5 or having any other corrosive or caustic property capable of causing damage or hazard.

(d) Wastewater containing toxic pollutants, as defined in section 307(a) of the Water Pollution Control Act and Minn. Stat. § 115.01 subd. 14.

Sec. 3. Discharges of the following substances shall be limited to concentrations or quantities which will not harm the wastewater facility, streams, soils, vegetation, ground water, and will not otherwise create a hazard or nuisance. The Authorized Representative may set limitations lower than the prohibition limits outlined below. Consideration will be given to such factors as the quantity of waste in relation to flows and velocities, materials of construction, the City's NPDES and SDS permits, capacity of the treatment plant, degree of treatability of wastes and other pertinent factors:

(a) Wastewater having a temperature greater than 150° F (65.6° C), or causing, individually or in combination with other wastewater, the influent at the treatment facilities to have a temperature exceeding 104° F (40° C), or having heat in amounts which will be detrimental to biological activity in the treatment facilities.

(b) Wastewater containing fats, wax, grease or oils in excess of 100 mW1 or containing substances which may solidify or become viscous at temperatures between 32° F and 150° F (0° C and 65.6° C).

(c) A discharge of water or wastewater which in concentration or in quantity of flow exceeds for any period of duration longer than 15 minutes, more than 5 times the average 24-hour concentration of flows during normal operation.

(d) Food wastes not properly shredded to such a degree that all particles will be carded freely under normal flow conditions with no particle greater than 1/2 inch in any dimension.

(e) Noxious or malodorous liquids, gases, or solids.

(f) Wastewater with objectionable color not removed in the treatment process.

(g) Wastewater containing inert suspended solids in such quantities that would cause disruption to the wastewater treatment facilities.

(h) Radioactive wastes or isotopes in concentrations that exceed limits established by applicable state and federal regulations.

(i) Wastewaters with BOD5 or suspended solids levels that require additional treatment, except as may be permitted by specific written agreement with the City subject to Article VI, Sec. 11 of this Ordinance.

(j) Wastewater containing substances which cannot be treated to produce effluent quality required by the permit or causes a violation of any applicable local, state, or federal regulation.

Sec. 4. In the event of discharges to the public sewers which contain substances or possess characteristics prohibited in Secs. 2 and 3 of this Article or which in the judgment of the Authorized Representative, may have a deleterious effects to the treatment facility, receiving waters, soils, vegetation, or which create a hazard or nuisance, the Authorized Representative may:

(a) Refuse to accept the wastes.

(b) Require pretreatment to an acceptable condition for discharge to the public sewers, pursuant to Section 307(b) of the Act and all addenda thereof.

(c) Require control over the quantities and rates of discharge.

(d) Require payment to cover all the added costs of handling, treating, and disposing of wastes not covered by existing taxes or sewer charges.

If the Authorized Representative permits the pretreatment or equalization of waste flows, the design, installation, maintenance and efficient operation of the facilities and equipment shall be at the owner's expense and shall be subject to review and approval by the City pursuant to the requirements of the MPCA.

Sec. 5. No user shall increase the use of process water or in any manner attempt to dilute a discharge as a partial or complete substitute for adequate treatment to achieve compliance with the limitations contained in this Article, the National Categorical Pretreatment Standards, and any state or local requirement.

Sec. 6. Grease, oil and sand interceptors shall be provided at the Owner's expense when, in the opinion of the Authorized Representative, they are necessary for the proper handling of liquid wastes containing floatable grease in excessive amounts, any flammable wastes, sand or other harmful ingredients. All interceptors shall be readily and easily accessible for cleaning and inspection. The Owner shall be responsible for the maintenance of interceptors, including proper removal and disposal of the captured materials by appropriate means, and shall maintain a record of dates and means of disposal which are subject to review by the Authorized Representative.

Any material removal and hauling must be performed by the Owner's personnel or a currently licensed waste disposal firm and in compliance with all applicable laws and regulations.

Sec. 7. Where required by the Authorized Representative, Industrial Users shall install and maintain at their own expense a suitable structure or control manhole with such necessary meters and other testing equipment needed to facilitate observation, sampling, and measurement of wastewater. The manhole will be safe and accessible at all times. The City Council may require submission of laboratory analyses to illustrate compliance with this Ordinance and any special conditions for discharge established by the City Council or responsible regulatory agency. All measurements, tests and analyses to which reference is made in this Ordinance 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.

Sec. 8. Where required by the Authorized Representative, User(s) shall provide protection from an accidental discharge of substances regulated by this Ordinance. Where necessary, facilities to prevent accidental discharges of prohibited materials shall be provided and maintained at the Owner's expense. Detailed plans and operating procedures of said facilities shall be submitted to the Authorized Representative for review and approval prior to construction of the facility. Approval of such plans and operating procedures shall not relieve user from the responsibility of modifying the facility as necessary to meet the requirements of this Ordinance.

Users shall notify the Authorized Representative immediately if a slug or accidental discharge of wastewater occurs in violation of this Ordinance. Notification will allow measures to be taken to minimize damage to the treatment facilities. Notification will not relieve users of liability for any expense, loss or

damage to the treatment facilities, or for fines imposed on the City by any state or federal agency as a result of their actions.

A notice shall be permanently posted on the User's bulletin board or other prominent place advising employees of the emergency notification procedure in the event of a slug or accidental discharge.

Sec. 9. No person shall permit any substance or matter which may form a deposit or obstruction of flow to be discharged into the public sewer. Whenever any service connection becomes clogged, obstructed, detrimental to the use of the public sewer, or unfit for the purpose of drainage, the Owner shall make repairs as directed by the Authorized Representative.

Each day after 3 days that the Owner neglects to make said repairs, shall constitute a separate violation of this Section. The Authorized Representative may then cause the work to be done and recover related expenses from the owner or agent by an action in the name of the City.

Sec. 10. In addition to penalties that may be imposed for violation of any provision of this Article, the City may assess against the User the cost of repairing or restoring sewers and associated facilities damaged as a result of the discharge of prohibited wastes and may collect the assessment as an additional charge for the use of the public sewer system.

Sec. 11. No statement contained in this Article shall prevent any special agreement or arrangement between the City and any Industrial User. Industrial waste of unusual strength or character may be accepted by the facility for treatment, subject to adequate payment by the industrial user, providing that National Categorical Pretreatment Standards and the City's NPDES and SDS permit limitations are not violated.

409.70 Prosecution for Damages to the Facility

No person(s) shall willfully or negligently break, damage, destroy, uncover, deface or tamper with any structure, appurtenance, or equipment which is part of the wastewater treatment facilities. Any person violating this provision shall be subject to immediate arrest under the charge of a misdemeanor and shall reimburse the City for all costs.

409.80 Powers and Authority of Inspectors

Duly authorized employee(s) of the City, beating proper credentials and identification, shall be permitted to enter all properties for inspection, observations, measurement, sampling, testing, repair and maintenance in accordance with the provisions of this Ordinance.

Industrial Users shall be required to provide information concerning industrial processes which have a direct beating on the type and source of discharge to the collection system. An industry may withhold information considered confidential. However, the industry must establish that the information in question might result in an advantage to competitors and that the industrial process does not have deleterious results on the treatment process.

409.90 The Sewer Service Charge System

Sec. 1. The City hereby establishes a Sewer Service Charge System with fees being set by resolution developed in accordance with the provisions of Appendix A to this Ordinance. All revenue collected from Users of the wastewater treatment facilities will be used for annual operation, maintenance, replacement, and capital costs. Each User shall pay a proportionate share of operation, maintenance and replacement costs based on the users proportionate contribution to the total wastewater loading.

The Sewer Service Charge System shall set forth the projected operation, maintenance, and replacement (“OM&R") costs of all Users which shall serve as the basis for the unit charges made to users of the system. The Sewer Service Charge System may also set forth the assessment of additional charges and debt retirement costs which shall be an additional charge.

The Sewer Service Charge System adopted by resolution upon enactment of this Ordinance shall be published in the local newspaper and shall be effective upon publication. Subsequent changes in the sewer service rates and charges shall be adopted by City Council resolution and published in the local paper.

Revenues collected through the Sewer Service Charge System shall be deposited in a separate fund known as the Sewer Service Fund.

Sec. 2. The City hereby establishes a Sewer Service Fund as an income fund to receive all revenues generated by the Sewer Service Charge System and all other income dedicated to the wastewater treatment facility.

The Sewer Service Fund administered by a designated representative shall be separate and apart from all other accounts. Revenue received by the Sewer Service Fund shall be transferred to the following accounts established as income and expenditure accounts:

1) Operation and Maintenance

2) Equipment Replacement

3) Debt Retirement for the collection and treatment facility.

Sec. 3. Administration of the Sewer Service Fund

A designated representative shall maintain a proper system of accounts and records suitable for determining the OM&R and debt retirement costs of the treatment facilities, and shall furnish the City Council with a report of such costs annually.

At that time the City Council shall determine whether sufficient revenue is being generated for the effective management of the facilities and debt retirement. The City Council will also determine whether the user charges are distributed proportionately. If necessary, the Sewer Service Charge System shall be revised to ensure proportionality of user charges and sufficient funds.

In accordance with State requirements, each User will be notified annually in conjunction with a regular billing of that portion of the Sewer Service Charge attributable to OM&R.

Sewer Service Charges shall be billed on a quarterly basis. Any bill not paid in full 30 days after the due date will be considered delinquent. At that time the User will be notified regarding the delinquent bill and subsequent penalty. The penalty shall be computed as 1.5% of the original bill and shall be increased by the same percent for every quarter the bill is outstanding.

Sec. 4. Where required by the City, Users shall install and maintain, at their own expense, meter(s) on their water supply to facilitate measurement of wastewater generated. All Users other than Single Family Residential Users shall have meters installed for billing purposes. The meters shall be accessible to the City at all times.

409.10 Penalties

Sec. 1. Upon determination that a User has violated or is violating applicable provisions of this Ordinance or related permits, the Authorized Representative may issue a Notice of Violation. Within 10 days of such notification, the violator shall submit to the Authorized Representative an adequate explanation for the violation and a plan for the correction and prevention of such occurrences, including specific actions required. Submission of such a plan in no way relieves the violator of liability for any violations occurring before or after the issuance of the Notice of Violation.

Sec. 2. Any violation is subject to a fine not exceeding $700.00 and/or 90 days in jail. Each day in which any such violation occurs shall be deemed as a separate offense. Such fines may be added to the User's next sewer service charge, and will hence be subject to the same collection regulations as specified in Article IX, Sec. 3, of this Ordinance.

Sec. 3. To collect delinquent sewer service charge accounts, the City may file a civil action suit or levy a lien against the violator. Related attorneys fees fixed by court order shall also be collected. The violator shall be liable for interest on all balances at a rate of 18 percent annually.

Sec. 4. Any person violating any of the provisions of this Ordinance shall become liable to the City for any expense, loss or damage occasioned by the City by reason of such violation.

409.11 Validity

Sec. 1. This Ordinance shall be in full force and take effect from and after its passage and approval and publication as provided by law.

Sec. 2. All other ordinances and parts of other ordinances inconsistent or in conflict with any part of this Ordinance are hereby repealed to the extent of such inconsistency or conflict.

Sec. 3. Passed by the City Council of the City of Dayton, Minnesota on the 25th day of April, 2000.

_____
Mayor Donald Kjonaas

Attest:

_____
Clerk Sandra Borders

Published in the Champlin Dayton Press on the 9th day of May, 2000.

APPENDIX A

Determination of Sewer Service Charges (Metered)

Sec. 1. Users of the wastewater treatment facilities shall be permitted into one of the following

1) Residential
2) Non-residential
3) Industrial

Charges to Users who discharge NDSW will be calculated on the basis of metered water use.

Sec. 2. Each User shall pay operation, maintenance and replacement costs in proportion to the User's contribution of wastewater flows and loadings to the treatment plant, with a minimum rate for loadings of BOD and TSS being the rate established for normal domestic strength waste (NDSW) concentrations.

Those Industrial Users discharging only segregated NDSW can be classified as Non-residential Users for the purposes of rate determination.

Sec. 3. Charges for Residential and Non-residential Users will be determined proportionately according to billable wastewater flow.

RESIDENTIAL USERS: Billable wastewater volume for Residential Users shall be calculated on the basis of metered water usage. The quarterly billable wastewater volume will be equal to the quarterly metered water usage as averaged between the first and last quarters of the calendar year. The City may require Residential Users to install water meters for the purpose of determining billable wastewater volume.

NON-RESIDENTIAL USERS: Billable wastewater volume of Non-residential Users may be determined in the same manner as for Residential Users, except that if the City determines that there are significant seasonal variations in metered water usage resulting in a proportionate increase in wastewater volume, the billable wastewater volume will be:

1) Calculated on the basis of quarterly water usage as recorded throughout the year; or

2) Calculated on the basis of metered wastewater flow. The City may require Non- residential Users to install such additional water meters or wastewater flow meters as may be necessary to determine billable wastewater volume.

Sec. 4. Determination of User Charges

A. For producers of Normal Domestic Strength Wastes:

$$Uomr = \frac{Comr}{Tbwv}$$

Where: Uomr = Unit cost for Operation, Maintenance and Equipment Replacement in $/Kgal.
Comr = Total annual OM&R costs.
Tbwv = Total annual billable wastewater fl~w in Kgal.

B. Calculation of User Charges:

$$Uc = Uomr \times bwv$$

Where: Uc = User Charge.
Uomr = Unit cost for Operation, Maintenance and Equipment Replacement in $/Kgal,
bwv = Billable wastewater volume in Kgal.

Sec. 5. Recovery of Local Construction Costs:

A. Local construction costs for the wastewater treatment facility will be recovered through an assessment as described in Sections 1-3 of the Sewer Service Charge System.

B. Local construction costs for the wastewater treatment facility not recovered through assessments will be recovered through a per-connection debt service charge determined as follows:

$$Dc = \frac{Cds}{Tc}$$

Where: Dc = Debt Service Charge per connection.
Cds = Cost of annual debt service.
Tc = Total number of connections to the wastewater treatment facilities.

Sec. 6. Determination of Sewer Service Charges

The sewer service charge for a particular connection shall be determined as follows:

Where: SSC = Uc + Dc
SSC = Sewer Service Charge.
Uc = User Charge.
Dc = Debt Service Charge.

Sec. 7. The Sewer Service Charges established in this Ordinance will not prevent the assessment of additional charges to Users who discharge wastes in concentrations greater than NDSW or of unusual character (Industrial Users). Special contractual agreements can be made with such Users, subject to the following conditions:

1) The User pays OM&R costs in proportion to the User's contribution of wastewater flows and loadings to the treatment facility, and no User is charged at a rate inferior to the charge for normal domestic strength wastes.

2) The sampling of wastewater shall be conducted in accordance with the techniques established in "Standard Methods for the Examination of Water and Wastewater," latest edition.

A study of unit costs of collection and treatment processes attributable to flow, BOD, TSS, and other significant loadings shall be developed and used to determine the proportionate allocation of costs to flows and loadings for Industrial Users.

ORDINANCE NO. 2000-8

AN ORDINANCE AMENDING THE DAYTON CITY CODE

The City Council of the City of Dayton ordains as follows:

Section 1. MUNICIPAL WASTEWATER SYSTEM. The Dayton City Code Section 409 is hereby amended by adding the following underlined language and deleting the following underlined and deleting the following ~~strikethrough~~ language to read as follows:

409. Municipal Wastewater System.

409.30. Use of Public Sewers Required.

Subd. 1. Within 90 days of receiving official notification the Owners of all properties directly adjacent to the sanitary sewer collection system shall install a suitable service connection to the Sanitary Sewer, at their own expense in accordance with the provisions of this Ordinance. If any Owner has a septic system, at the time of receiving official notification, that is a fully functional system conforming to existing on-site septic system standards as determined by the Authorized Representative and has been constructed within five (5) years of receiving official notification, the Owner(s) shall have ~~two~~five (~~2~~5) years to install a suitable sewer service connection system, at their own expense in accordance with the provisions of this Ordinance.

409.50. Building Sewers and Connections Design.

Subd. 1.

(c) Application for permit for public sewer service shall be made on printed forms, shall state the legal description and street and official house number of the premises and the nature of the improvement to be performed. The application for the written permit to connect to public sewer or alter connected service pipes shall be made jointly by the master plumber who will make the installation and by the owner of such premises or his or her authorized agent or by the occupant or person in possession of the premises. The permit shall issue to the owner and his or her master plumber applicant, and each applicant by such application shall subscribe to and be obligated to be bound by the City's applicable Ordinances and Rules and Regulations.

(d) Applicant must pay all required Permit fees and any other charges, which shall be set forth by resolution of the City Council.

(e) No person except a master plumber duly licensed in the State of Minnesota or duly authorized employee of the City is permitted to do any work on service pipes connected with public sewer. . .

Subd. 5. ~~The applicant for the building sewer permit shall notify the City when the building sewer is ready for connection to the public sewer. The connection shall be made under the supervision of a designated representative.~~

(a) No person except authorized persons employed by the City or master plumber permittee bearing specific authority by written permit required herein shall connect to public sewer.

(b) A master plumber permittee requesting a connection shall give notice at least eight (8) business hours in advance of need. The master plumber permittee requesting must help uncover the main and locate the tap if requested by the City. The connection shall be made under the supervision of a designated representative.

(c) A bond shall be filed with the City by the master plumber permittee requesting the connection in the sum of ten thousand dollars ($10,000.00) conditioned upon the full, complete, and satisfactory completion of each connection undertaken by the master plumber permittee in the City of Dayton. If the master plumber permittee is to do his or her own installation/excavation work the said ten thousand dollars ($10,000.00) bond shall also bond such installation/excavation work as required herein

(d) Prior to the issuance of the permit to connect to public sewer and/or for sewer service, insurance coverage shall be obtained by the person requesting such permit protecting against damage to property or injury to death to person, which policy or policies shall indemnify and hold harmless the City and all of its officers and personnel against any claims, demands, damages, actions or causes of action arising out of or by reason of the doing of the work or activities related to or incident to the permits required herein and from any costs, disbursements or expenses of

defending the same. The property damage insurance coverage shall be in the amount of two hundred thousand dollars ($200,000.00) or more, and the public liability insurance for injury or death to person shall be in the amount of one millions dollars ($1,000,000.00) aggregate for injury to each person. Proof of such insurance shall be filed with the City prior to the commencement of construction work and such policy shall provide that the City shall receive written notice at least ten (10) days before any termination or modification of such insurance.

(e) Should the insurance coverage hereinbefore provided be inadequate in amount, then such person shall indemnify and hold harmless the City and all of its officers and personnel like manner.

(f) If the master plumber permittee is to do his or her own installation/excavation work, the said insurance shall also insure such installation/excavation work required herein.

Subd. 6.

(a) An appropriate construction installation/excavation license is required to install a service connection. Any person desiring a license shall apply in writing to the City Council, providing satisfactory evidence of the applicant's qualifications. If approved by the City Council, the license shall be issued by a designated representative upon the filing of a bond and insurance as hereinafter provided.

(b) At the time of granting such installation/excavation license a bond must be filed with the City by the person receiving the license, unless such installation/excavation licensee is excused therefor under this Ordinance, and said bond shall be in the sum of ten thousand dollars ($10,000.00) conditioned upon the full, complete and satisfactory completion of every installation/excavation undertaken in connection with the installation for which the licensee undertakes.

~~Subd. 7. A license for sewer service connection installation shall not be issued until a $2,000 bond to the City is filed and approved by the City Council. The licensee will indemnify the City from all suits, accidents and damage that may arise by reason of any opening in any street, alley or public ground, made by the licensee or by those I the licensee's employment.~~

(c) Prior to the issuance of the installation/excavation license, insurance coverage shall be obtained by the person requesting such permit, unless such installation/excavation licensee is excused therefor under this Ordinance, protecting against damage to property or injury to death to person, which policy or policies shall indemnify and hold harmless the City and all of its officers and personnel against any claims, demands, damages, actions or causes of action arising out of or by reason of the doing of the work or activities related to or incident to the license required herein and from any costs, disbursements or expenses of defending the same. The property damage insurance coverage shall be in the amount of two hundred thousand dollars ($200,000.00) or more, and the public liability insurance for injury or death to person shall be in the amount of one millions dollars ($1,000,000.00) aggregate for injury to each person. Proof of such insurance shall be filed with the City prior to the commencement of construction work and such policy shall provide that the City shall receive written notice at least ten (10) days before any termination or modification of such insurance.

(d) Should the insurance coverage hereinbefore provided be inadequate in amount, then such person shall indemnify and hold harmless the City and all of its officers and personnel like manner.

~~Subd. 8~~.

(e) The cost of a license for installation/excavation ~~making service connections is $25.00~~ shall be set forth by resolution of the City Council. All licenses shall expire on December 31 of the license year unless the license is suspended or revoked by the City Council for any reasonable cause.

~~Subd. 9~~.

(f) The City Council may suspend or revoke any license issued under this article for any of the following causes:

~~(a)~~ (1) Giving false information in connection with the application for a license.

~~(b)~~ (2) Incompetence of the licensee.

~~(c)~~ (3) Willful violation of any provisions of this Article or any rule or regulation pertaining to the making of service connections.

~~(d)~~ (4) Failure to adequately protect and indemnify the city and the user.

Subd. 7. Maintenance, Repair and Replacement. The City shall maintain and repair or replace all sewer service connection lines within Public Right-of-Way or easement when rendered unserviceable through ordinary use. However, when replacement, repair or adjustment of any sewer service connection is rendered necessary by the act, neglect or carelessness of the owner or occupant of any premise, any expense caused by the City thereby shall be charged against and collected from the owner or occupant of the premises. Water and sewer service may be discontinued until the cause is corrected and the charge is collected.

Subd. 8. City Property. All sewer service connection lines within Public Right-of Way or easement shall remain the property of the City. All other sewer service connection line shall be the responsibility of the property owner.

Section 2. EFFECTIVE DATE. This Ordinance shall be effective from and after its passage and publication in accordance with the law.

ORDINANCE NO. 2004-06

AN ORDINANCE FOR SECTIONS 26 AND 35 OF THE CITY, REGULATING THE OPERATION OF THE PUBLIC SANITARY SEWER SYSTEM, REQUIRING CONNECTIONS TO BE MADE TO THE PUBLIC SANITARY SEWER SYSTEM, PROVIDING FOR THE ISSUANCE OF PERMITS FOR AND SUPERVISION OF ALL CONNECTIONS TO THE PUBLIC SANITARY SEWER SYSTEM, PRESCRIBING CERTAIN MATERIALS AND METHODS TO BE USED FOR SAID CONNECTIONS, ESTABLISHING REGULATIONS AS TO TYPES AND KINDS OF WASTES THAT MAY BE DISPOSED OF BY USE OF THE PUBLIC SANITARY SEWER SYSTEM, PROHIBITING THE DISCHARGE OF ANY TYPE OR KIND OF SURFACE WATERS INTO THE PUBLIC SANITARY SEWER SYSTEM, PRESCRIBING RATES AND CHARGES FOR DISPOSAL SERVICES, REGULATING STREET EXCAVATIONS, AND PRESCRIBING PENALTIES FOR THE VIOLATION OF SAME.

The City Council of the City of Dayton ordains as follows:

SECTION 1. ADOPTION. The Dayton City Code Section 413 is hereby adopted, to reads as follows:

413. Municipal Wastewater/Sanitary Sewer System

413.05 Applicability. This ordinance shall only apply to the part of the City of Dayton within Sections 26 and 35.

413.10. Definitions. Unless the context specifically indicates otherwise, the terms used in this Article shall have the meanings hereby designated:

Subd. 1. "Act" - The Federal Water Pollution Control Act, also referred to as the Clean Water Act, as amended, 33. U.S.C. §1251 et seq.

Subd. 2 "BOD5" or "Biochemical Oxygen Demand" - The quantity of oxygen utilized in the biochemical oxidation of organic matter standard laboratory procedures in five (5) days at 20 degrees Centigrade and as expressed in terms of milligrams per liter (mg/l).

Subd. 3. "Building Drain" - That part of the lowest horizontal piping of a drainage system which receives the discharge from soil, waste, and other drainage pipe inside the walls of the building and conveys it to the building sewer beginning at least one (1) foot outside the outer face of the building footings.

Subd. 4. "City" - The area within the corporate boundaries of the City of Dayton, the City Council, its duly appointed agents and Authorized Representatives, or the Authorized Representative of the sanitary sewer district.

Subd. 5. “Connection Charge” shall mean a charge levied by the City to contribute to payment of the cost of the Sanitary Sewer facilities.

Subd. 6. "Debt Service Charge" - A charge to users of the wastewater treatment facility for the purpose of repaying capital costs.

Subd. 7. “Inspector” shall mean the person or persons authorized by the City to inspect and approve the installation of building sewers and their connections to the public sewer system.

Subd. 8. "Industrial User"

(a) Any entity as defined in the Standard Industrial Manual (latest edition) as categorized, that discharge wastewater to the public sewer.

1) Division A: Agriculture, Forestry and Fishing

2) Division B: Mining

3) Division D: Manufacturing

4) Division E: Transportation, Communications, Electric, Gas, and Sanitary Sewers

5) Division I: Services

(b) Any user whose discharges, singly or by interaction with other wastes:

1) contaminate the sludge of the wastewater treatment system,

2) injure or interfere with the treatment process,

3) create a public nuisance or hazard,

4) have an adverse effect on the waters receiving wastewater treatment plant discharges,

5) exceed NDSW limitations,

6) exceed normal residential unit volumes of wastewater.

Subd. 9. "Infiltration/Inflow (I/I)" - Water other than wastewater that enters the sewer system from the ground or from surface runoff, as defined in Minnesota Rules.

Subd. 10. "MPCA" - Minnesota Pollution Control Agency.

Subd. 11. "National Categorical Pretreatment Standards" - Federal regulations establishing pretreatment standards for introduction of pollutants in publicly owned wastewater treatment facilities. Section 307(b) of the Act.

Subd. 12. "National Pollutant Discharge Elimination System (NPDES) Permit" - A permit issued by the MPCA, setting limits on pollutants that a permittee may legally discharge pursuant to Sections 402 and 405 of the Act.

Subd. 13. "Natural Outlet" - Any outlet, including storm sewers and combined sewers, which flows into a body of surface water or ground water.

Subd. 14. "Normal Domestic Strength Waste"(NDSW) - Wastewater that primarily introduced by residential users with BOD5 concentrations not greater than 300 mg/l and total suspended solids (TSS) concentrations not greater than 300 mg/l.

Subd. 15. "Non-residential User" - A user of the treatment facility whose building is not used as a private residence, and discharges NDSW.

Subd. 16. "Operation, Maintenance and Replacement Costs"(OM&R) - Expenditures necessary to provide for the dependable, economical, and efficient functioning of the treatment facility throughout its design life including operator training, and permit fees. Replacement refers to equipment replacement costs, not the cost of future replacement of the entire facility.

Subd. 17. “Owner” or “User” - Non-Residential User, Residential User and Industrial User.

Subd. 18. “Person”" shall mean any individual, firm, company, association, society, corporation or group.

Subd. 19. "Residential User"- A user of the treatment facility whose building is used primarily as a private residence and discharges NDSW.

Subd. 20. “Service Availability Charge” shall mean a fixed fee levied by the Metropolitan Waste Control Commission and collected at the time a building permit is

issued for a new housing unit or commercial development or any connection to the sewer system where metropolitan sewer service disposal is or becomes available.

Subd. 21. "Sewer" - A pipe or conduit that carries wastewater or drainage water.

(a) "Building Sewer" - The extension from the building drain to the public sewer or other place of disposal, also referred to as a service connection.

(b) "Sanitary Sewer" - A sewer designed to carry only liquid and water-carried wastes (sewage) from residential, non-residential, and industrial sources together with minor quantities of I/I. Storm, surface, and ground waters are not intentionally admitted.(c) "Storm Sewer" - A sewer intended to carry unpolluted surface and sub-surface water from any source.

(d) “Private Sewage System” shall mean any septic tank, or drainfield used for the disposal of sewage.

(e) “Private Sewer” shall mean a sewer in which all owners of abutting property have equal rights and is controlled by the City.

Subd. 22. "Sewer Service Charge" - The total of the User Charge and the Debt Service Charge.

Subd. 23. "Slug" - A discharge of water or wastewater which in concentration or in quantity of flow exceeds for any period of duration longer than 15 minutes, more than 5 times the average 24-hour concentration of flows during normal operation.

Subd. 24. "State Disposal System (SDS) Permit" - A permit issued by the MPCA pursuant to Minn. Stat. §115.07 for a disposal system as defined by Minn. Stat. §115.01, subd. 8.

Subd. 25. "Total Suspended Solids"(TSS)- The total suspended matter that either floats on the surface of, or is in suspension in water, wastewater or other liquids, and is removable by laboratory filtering as prescribed in "Standard Methods for the Examination of Water and Wastewater" (latest edition).

Subd. 26. "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. An example could be non-contact cooling water.

Subd. 27. "User Charge" - A charge to users of a treatment facility for the user's proportionate share of the cost of operation and maintenance, including replacement.

Subd. 28. "Wastewater" - Liquid and water-carried wastes from residential, non-residential, and industrial users, together with any ground water, surface water, and storm water that may be present.

Subd. 29. "Wastewater Treatment Facilities" or "Treatment Facilities" - The land, devices, facilities, structures, equipment, and processes owned or used by the City for the purpose of the transmission, storage, treatment, recycling, and reclamation of municipal wastewater, and the disposal of residues resulting from such treatment.

413.20. Control by the Authorized Representative. The City Council shall appoint an Authorized Representative who shall have control and general supervision of all public sewers and service connections in the City, and shall be responsible for administering the provisions of this Ordinance to ensure that a proper and efficient public sewer is maintained. The Authorized Representative may delegate responsibilities to designated representatives.

413.30. Use of Public Sewers Required.

Subd. 1. It shall be unlawful for any person to place, deposit, or permit to be deposited in an unsanitary manner upon public or private property within the City, any human excrement, sewage, garbage, or other objectionable waste which ordinarily would be regarded as sewage or industrial wastes.

Subd. 2. It shall be unlawful to discharge to any natural outlet within the City any sanitary sewage, industrial wastes, or other polluted waters.

Subd. 3. Except as hereafter provided, when public sewer is available, it shall be unlawful to construct or maintain any privy, privy vault, septic tank, cesspool, or other facility intended or used for the disposal of sewage.

Subd. 4. The owner of all houses, buildings or property used for human occupancy, employment, recreation, or other purposes which is served or intended to be served (as determined by the City Council) by a public sanitary sewer of the City is required, at his expense, to install suitable toilet facilities and to connect such facilities with the proper public sewer, in accordance with the provisions of this Chapter, in the required timeframe: ~~in the case of sewers which are constructed after the effective date of this Chapter, within two (2) years after such sanitary sewer service becomes available.~~

(a) Within 90 days of receiving official notification that sewer is available, the Owners of all properties directly adjacent to the sanitary sewer collection system shall install a suitable service connection to the Sanitary Sewer, at their own expense in accordance with the provisions of this Ordinance.

(b) If any Owner has a septic system, at the time of receiving official notification, that is a fully functional system conforming to existing on-site septic system standards as

determined by the Authorized Representative and has been constructed within five (5) years of receiving official notification, the Owner(s) shall have five (5) years to install a suitable sewer service connection system, at their own expense in accordance with the provisions of this Ordinance.Subd. 5. In the event an Owner shall fail to connect to a public sewer in compliance with a notice given under this Ordinance, the City will have said connection made and shall assess the cost against the benefited property.

Subd. 6. Except as provided hereinafter, it shall be unlawful to construct or maintain any private facility intended or used for the disposal of wastewater.
Subd. 7. The City Council shall have the power to adjust and make exceptions to the provisions of this Chapter which require connection to the public sewer to the extent of the following and no further:

(a) To vary or modify the strict application of the connection provisions contained in this Ordinance in cases in which there are practical difficulties or unnecessary hardships in the way of such strict application provided that modification or adjustment will not materially affect adversely the health or safety of persons residing or working in the neighborhood and will not be discriminatory.

413.40. Private Wastewater Disposal.

Subd. 1. Where a public sewer is not available under the provisions of Section 413.30 of the Dayton City Code, the building sewer shall be connected to a private wastewater disposal system complying with the provisions required by the City, the Minnesota Pollution Control Agency (MPCA), and all other regulatory agencies. The Owner(s) shall obtain the appropriate permits for construction and operation of a private wastewater disposal system. Operation of the private wastewater disposal system is subject to approval by the City and all other appropriate regulatory agencies.

Subd. 2. The Owner(s) shall operate and maintain the private wastewater disposal facilities in a sanitary manner at all times at no expense to the City.

Subd. 3. When the public sewer becomes available to a property serviced by a private wastewater disposal system, a direct connection shall be made to the public sewer in compliance with Section 413.30 subd. 4 of this Ordinance, and within 30 days following the connection to public sewer, private wastewater disposal systems including any septic tanks, cesspools and other private disposal facilities shall be cleaned of all sludge, abandoned and treated as follows.

~~(a)~~

(a) If the said private facility is concrete and the cover is four (4) feet or more below grade with a solid bottom to the tank, the facility may be abandoned without opening, pumping and filling.

(b) If the said private facility or the cover thereof is wood and/or the cover is less than four (4) feet below grade, the facility shall be opened, pumped and filled with suitable gravel material.

Subd. 4. No statement contained in this Article shall be construed to interfere with any additional requirements that may be imposed by the MPCA, the State Department of Health, or other responsible federal, state or local agencies.

413.50. Building Sewers and Connections Design.

Subd. 1. (a) No person(s) shall uncover, make any connection with or opening into, or discharge into, use, alter, repair, or disturb any public sewer or building sewer, or any appurtenances thereof without first obtaining a written permit from the City. No private building drain shall extend beyond the limits of the building or property for which the permit has been given.

(b) Any new connection to the sanitary sewer system shall be prohibited unless sufficient capacity is available in all downstream facilities including, but not limited to, capacity for flow, BOD5, and TSS as determined by the authorized representative.

(c) Application for permit for public sewer service shall be made on printed forms, shall state the legal description and street and official house number of the premises and the nature of the improvement to be performed. A licensed master plumber shall make application for a building sewer installation permit on a special form furnished by the City. The permit application shall be supplemented by any plans, specifications or other information which the inspector may reasonably require. A permit and inspection fee as set by City Council Resolution for a building sewer permit shall be paid to the City at the time the application is filed.The permit shall issue to the owner and his or her master plumber applicant, and each applicant by such application shall subscribe to and be obligated to be bound by the City's applicable Ordinances and Rules and Regulations.(d) Before a permit may be issued for excavating for plumbing, for a connection to any public sewer in any public street, way or public easement, or alley, a licensed master plumber (under the laws of the State of Minnesota) shall apply for such permit and shall have executed unto the City and deposited with the City, a bond approved by the City in the sum of $2,000.00 conditioned that he will perform faithfully all work with due care and skill and in accordance with the laws, rules and regulations established under the authority of any Ordinance of the City. This bond shall state the principal and surety will indemnify and save harmless the City and the owner of the premises against all damages, costs, expenses, outlays, and claims of every nature and kind arising out of Ordinance

violation, lack of skill, or negligence on his part in connection with plumbing or excavating for plumbing. Such bond shall remain in force and must be executed for a period of one (1) year except that on such expiration it shall remain in force as to all penalties, claims and demands that may have accrued thereunder prior to such expiration.

(e) Prior to commencement of construction work, the licensed master plumber shall take out and maintain insurance in some company approved by the City against damages of property or injury or death to persons, which policy or policies shall indemnify and save harmless the property owner, whose premises the work will serve, the City and all of its officers and personnel against any claim, demand for damages, action arising out of or by reason of the doing of the work or activities relating or incidental thereto, and from any costs, disbursements, or expense of defending the same. The property damage insurance coverage shall be in the amount of $50,000.00 or more, and the public liability insurance coverage limits for injury or death to any one person in any one accident shall be $100,000.00 or more, and the policy limits for any one accident shall be $300,000.00. Proof of insurance shall be filed with the City Clerk prior to commencement of the construction work. The policy or policies shall provide that the City shall be notified immediately of any termination of or modification to such insurance.

(f) Should the insurance coverage provided for in this section be inadequate in amount, then, the licensed master plumber shall indemnify and save harmless the said property owner, the City, and all its officers and personnel in like manner. (d) Applicant must pay all required Permit fees and any other charges, which shall be set forth by resolution of the City Council.

(e) No person except a master plumber duly licensed in the State of Minnesota or duly authorized employee of the City is permitted to do any work on service pipes connected with public sewer

Subd. 2.

(a) A separate and independent building sewer shall be provided for each building. Old building sewers may be used to service new buildings only when they are found to meet all requirements of this Ordinance.

(b) Whenever possible, the building sewer shall be brought to the building at an elevation below the basement floor. In all buildings in which any building drain is too low to permit gravity

flow to the public sewer, wastewater shall be lifted by an approved means and discharged to the building sewer.

(c) Where a building sewer is laid across or over an existing cesspool or septic tank, one (1) continuous piece of Schedule 40 plastic or equivalent shall be used for that portion of the building sewer which is laid across or over the existing cesspool or septic tank.

Subd. 3. The construction and connection of the building sewer to the public sewer shall conform to the requirements of the State of Minnesota Building and Plumbing Code, applicable rules and regulations of the City and the materials and procedural specifications set forth in the American Society of Testing Materials (ASTM) and the Water Pollution Control Federation (WPFC) Manual of Practice No.9. All such connections shall be made gas and watertight, and verified by proper testing to prevent Infiltration/Inflow.

Subd. 4. No unpolluted water sources shall be connected to the Sanitary Sewer.

Subd. 5.

(a) No person except authorized persons employed by the City or master plumber permittee bearing specific authority by written permit required herein shall connect to public sewer.

(b) A master plumber permittee requesting a connection shall give notice at least eight (8) business hours in advance of need. The master plumber permittee requesting must help uncover the main and locate the tap if requested by the City. The connection shall be made under the supervision of a designated representative.

(c) A bond shall be filed with the City by the master plumber permittee requesting the connection in the sum of ten thousand dollars ($10,000.00) conditioned upon the full, complete, and satisfactory completion of each connection undertaken by the master plumber permittee in the City of Dayton. If the master plumber permittee is to do his or her own installation/excavation work the said ten thousand dollars ($10,000.00) bond shall also bond such installation/excavation work as required herein

(d) Prior to the issuance of the permit to connect to public sewer and/or for sewer service, insurance coverage shall be obtained by the person requesting such permit protecting against damage to property or injury to death to person, which policy or policies shall indemnify and hold harmless the City and all of its officers and

personnel against any claims, demands, damages, actions or causes of action arising out of or by reason of the doing of the work or activities related to or incident to the permits required herein and from any costs, disbursements or expenses of defending the same. The property damage insurance coverage shall be in the amount of two hundred thousand dollars ($200,000.00) or more, and the public liability insurance for injury or death to person shall be in the amount of one million dollars ($1,000,000.00) aggregate for injury to each person. Proof of such insurance shall be filed with the City prior to the commencement of construction work and such policy shall provide that the City shall receive written notice at least ten (10) days before any termination or modification of such insurance.

(e) Should the insurance coverage hereinbefore provided be inadequate in amount, then such person shall indemnify and hold harmless the City and all of its officers and personnel like manner.

(f) If the master plumber permittee is to do his or her own installation/excavation work, the said insurance shall also insure such installation/excavation work required herein.

Subd. 6.

(a) An appropriate installation/excavation license is required to install a service connection. Any person desiring a license shall apply in writing to the City Council, providing satisfactory evidence of the applicant's qualifications. If approved by the City Council, the license shall be issued by a designated representative upon the filing of a bond and insurance as hereinafter provided.

(b) At the time of granting such installation/excavation license a bond must be filed with the City by the person receiving the license, unless such installation/excavation licensee is excused therefor under this Ordinance, and said bond shall be in the sum of ten thousand dollars ($10,000.00) conditioned upon the full, complete and satisfactory completion of every installation/excavation undertaken in connection with the installation for which the licensee undertakes.

(c) Prior to the issuance of the installation/excavation license, insurance coverage shall be obtained by the person requesting such permit, unless such installation/excavation licensee is excused therefor under this Ordinance, protecting against damage to property or injury to death to person, which policy or policies shall indemnify and hold harmless the City and all of its officers and

personnel against any claims, demands, damages, actions or causes of action arising out of or by reason of the doing of the work or activities related to or incident to the license required herein and from any costs, disbursements or expenses of defending the same. The property damage insurance coverage shall be in the amount of two hundred thousand dollars ($200,000.00) or more, and the public liability insurance for injury or death to person shall be in the amount of one million dollars ($1,000,000.00) aggregate for injury to each person. Proof of such insurance shall be filed with the City prior to the commencement of construction work and such policy shall provide that the City shall receive written notice at least ten (10) days before any termination or modification of such insurance.

(d) Should the insurance coverage hereinbefore provided be inadequate in amount, then such person shall indemnify and hold harmless the City and all of its officers and personnel like manner.

(e) The cost of a license for installation/excavation making service connections shall be set forth by resolution of the City Council. All licenses shall expire on December 31 of the license year unless the license is suspended or revoked by the City Council for any reasonable cause.

(f) The City Council may suspend or revoke any license issued under this article for any of the following causes:

1) Giving false information in connection with the application for a license.

2) Incompetence of the licensee.

3) Willful violation of any provisions of this Article or any rule or regulation pertaining to the making of service connections.

4) Failure to adequately protect and indemnify the city and the user.

Subd. 7. Maintenance, Repair and Replacement. The City shall maintain and repair or replace all sewer service connection lines within Public Right-of-Way or easement when rendered unserviceable through ordinary use. However, when replacement, repair or adjustment of any sewer service connection is rendered necessary by the act, neglect or carelessness of the owner or occupant of any premise, any expense caused

by the City thereby shall be charged against and collected from the owner or occupant of the premises. Water and sewer service may be discontinued until the cause is corrected and the charge is collected.

412.60. Materials and Methods.

Subd. 1. Approved materials and methods shall be prescribed by the City.

Subd. 2. Whenever possible, the building sewer shall be brought to the building at an elevation below the basement floor. Its depth shall be sufficient to afford protection from frost. All excavations required for the installation of a building sewer shall be open trench work unless otherwise approved by the said Inspector. No backfill shall be placed until the work has been inspected by the City. Back casting method may be used under supervision of the Inspector and extra inspector's fees are to be paid to the City at the rate of current wages per hour.

Subd. 3. In all buildings in which any building drain is too low to permit gravity flow to the public sewer, sanitary sewage carried by such drains shall be lifted by approved artificial means and discharged to the building sewer. No water operated sewage ejector shall be used.

Subd. 4. Before excavation is commenced, the applicant of the building sewer must obtain the location of all public utilities installed. The applicant is responsible for the location of the sanitary sewer service at the property line.

Subd. 5. The applicant for the building sewer shall notify the said Inspector when the building sewer is ready for inspection and connection to the public sewer. The connection shall be made under the supervision of the Inspector or his representative.

Subd. 6. The applicant shall obtain acknowledgement from a representative of each public utility serving the particular area that no utilities installed have been disturbed by the building sewer constructor's work.

Subd. 7. All excavating within four (4) feet of the public sewer (horizontal or vertical measurement) shall be by hand excavation only.

Subd. 8. The City shall make the final decision as to the type of

pipe used for sanitary sewer construction when it lies within City right-of-way. The internal diameter of the pipe shall also be determined by the City.

412.70. Connections.

Subd. 1. Approved types of house service connection shall be one of the following:

(a) Type 1. Connections to existing vitrified clay wye branches shall be made with an approved type of joint material of the bituminous type or an approved compression coupling. The connection shall be completely watertight. No connection shall be allowed to a damaged wye branch. If damage occurs during the making of the connection, the wye branch shall be taken out of the main sewer by the plumber and replaced either by another undamaged wye or by straight vitrified clay pipe. If straight pipe is used in the replacement, other approved connection methods shall be used. Concrete encasement of the wye branch, connection joint, or any other part of the connection shall not be deemed watertight and shall not be allowed as a method or repairing a damaged joint.

(b) Type 2. Connections of the saddle type shall be made in a smooth, round hole, machine drilled into the main sewer pipe. The fittings used in the connection shall be made in such a manner as to insure that no protrusion of the fitting into the main sewer pipe shall result. The connector shall fit perfectly the contour of the inside of the sanitary sewer and shall be specifically designed to fit the particular size main sewer pipe into which the connection is made. The machine drilled hole shall be of such size to provide one-eighth (1/8) inch clearance between the outside of the fitting and the hole. The space thus provided shall be completely filled with joint material. The space between the shoulder of the fittings and the face of the main sewer pipe shall be one-eighth (1/8) inch thick and this space shall be completely filled with joint material. The joint material used for the Type 2 house service connection shall be completely waterproof and shall be capable of withstanding any condition of stress or strain likely to be encountered in normal sanitary sewer construction or maintenance. Concrete encasement will not be considered waterproof. The fitting shall be manufactured of either cast aluminum alloy or vitrified clay pipe and shall be capable of receiving

all normally used types of pipe for house service connections.

Subd. 2. Type 1 and 2 connections. Type 1 (wye) connections may be used in existing sanitary sewers when wye branches previously installed are readily and conveniently available. If existing wye branches cannot be found after diligent search or are not located properly for providing the needed service, Type 2 (saddle) connections shall be made, provided the Inspector approves. When new sanitary sewers are constructed Type 1 connections may be made in cases where the connection to the house is made during the construction and before backfilling of the sanitary main sewer trench. No wye branches shall be installed and covered up for future use. Type 2 connections shall be made in all cases where house services are installed subsequent to construction and backfilling operations.

Subd. 3. Wherever the sewer constructed traverses the interior of an established lot, block or parcel containing lands suitable for development upon either side of the sewer, if the lands have been assessed only one-half (1/2) of the cost of the sewer line, then, an additional assessment charge of $3.00 per foot of sewer shall be made when a connection is applied for, to serve a building sewer running to the side of the sewer not previously served. An additional charge of $3.00 per foot of sewer may be assessed for building sewers designed to serve portions of a corner or parcel developed after construction of the sewer.

Subd. 4. A connection charge shall be paid to the City before any building sewer shall be permitted to be connected to the public sewer. This connection charge shall be established by resolution of the City Council.

Subd. 5. A Service Availability Charge as fixed by the Metropolitan Waste Control Commission shall be collected by the City for the Metropolitan Waste Control Commission at the time a building permit is issued for a building where Metro Sewer Service is available.

Subd. 6. City Property. All sewer service connection lines within Public Right-of Way or easement shall remain the property of the City. All other sewer service connection line shall be the responsibility of the property owner.

413.60. Use of Public Wastewater Treatment Facilities.

Subd. 1. No person shall discharge any waste, or cause or allow any waste to be discharged into the public sewer unless in accordance with these rules and regulations.

No unpolluted water or stormwater shall be discharged to the sanitary sewer. Such water shall be discharged only to storm sewers or to natural outlets approved by the City and other regulatory agencies.

Subd. 2. No person(s) shall discharge any of the following substances to the public sewer:

(a) Liquids, solids, gases, or other substances which singly or by interaction with others may cause fire or explosion.

(b) Solid or viscous substances which may cause obstruction to the flow in a sewer.

(c) Wastewater having a pH of less than 5.0 or greater than 9.5 or having any other corrosive or caustic property capable of causing damage or hazard.

(d) Wastewater containing toxic pollutants, as defined in section 307(a) of the Water Pollution Control Act and Minn. Stat. §115.01 subd. 14.

Subd. 3. Use of public sewer shall be in conformance with the Metropolitan Waste Control Commission Sewage and Waste Control rules and regulations for the Metropolitan Disposal System. In the event of conflict between said rules and regulations and this Ordinance then the provisions of this Ordinance shall control.

Subd. 4. Discharges of the following substances shall be limited to concentrations or quantities which will not harm the wastewater facility, streams, soils, vegetation, ground water, and will not otherwise create a hazard or nuisance. The Authorized Representative may set limitations lower than the prohibition limits outlined below. Consideration will be given to such factors as the quantity of waste in relation to flows and velocities, materials of construction, the City's NPDES and SDS permits, capacity of the treatment plant, degree of treatability of wastes and other pertinent factors:

(a) Wastewater having a temperature greater than 150° F (65.6° C), or causing, individually or in combination with other wastewater, the influent at the treatment facilities to have a temperature exceeding 104° F (40° C), or having heat in amounts which will be detrimental to biological activity in the treatment facilities.

(b) Wastewater containing fats, wax, grease or oils in excess of 100 mg/l or containing substances which may solidify or become viscous at temperatures between 32° F and 150° F (0° C and 65.6° C).

(c) A discharge of water or wastewater which in concentration or in quantity of flow exceeds for any period of duration longer than 15 minutes, more than 5 times the average 24-hour concentration of flows during normal operation.

(d) Food wastes not properly shredded to such a degree that all particles will be carried freely under normal flow conditions with no particle greater than 1/2 inch in any dimension.

(e) Noxious or malodorous liquids, gases, or solids.

(f) Wastewater with objectionable color not removed in the treatment process.

(g) Wastewater containing inert suspended solids in such quantities that would cause disruption to the wastewater treatment facilities.

(h) Radioactive wastes or isotopes in concentrations that exceed limits established by applicable state and federal regulations.

(i) Wastewaters with BOD5 or suspended solids levels that require additional treatment, except as may be permitted by specific written agreement with the City subject to Article VI, Subd. 11 of this Ordinance.

(j) Wastewater containing substances which cannot be treated to produce effluent quality required by the permit or causes a violation of any applicable local, state, or federal regulation.

Subd. 5.

(a) In the event of discharges to the public sewers which contain substances or possess characteristics prohibited in Subdivisions 3 and 4 of this Section or which in the judgment of the Authorized Representative, may have a deleterious effects to the treatment facility, receiving waters, soils, vegetation, or which create a hazard or nuisance, the Authorized Representative may:

1) Refuse to accept the wastes.

2) Require pretreatment to an acceptable condition for discharge to the public sewers, pursuant to Section 307(b) of the Act and all addenda thereof.

3) Require control over the quantities and rates of discharge.

4) Require payment to cover all the added costs of handling, treating, and disposing of wastes not covered by existing taxes or sewer charges.

(b) If the Authorized Representative permits the pretreatment or equalization of waste flows, the design, installation, maintenance and efficient operation of the facilities and equipment shall be at the owner's expense and shall be subject to review and approval by the City pursuant to the requirements of the MPCA.

Subd. 6. No user shall increase the use of process water or in any manner attempt to dilute a discharge as a partial or complete substitute for adequate treatment to achieve compliance with the limitations contained in this Article, the National Categorical Pretreatment Standards, and any state or local requirement.

Subd. 7.

(a) Grease, oil and sand interceptors shall be provided at the Owner’s expense when, in the opinion of the Authorized Representative, they are necessary for the proper handling of liquid wastes containing floatable grease in excessive amounts, any flammable wastes, sand or other harmful ingredients. All interceptors shall be readily and easily accessible for cleaning and inspection. The Owner shall be responsible for the maintenance of interceptors, including proper removal and disposal of the captured materials by appropriate means, and shall maintain a record of dates and means of disposal which are subject to review by the Authorized Representative.

(b) Any material removal and hauling must be performed by the Owner's personnel or a currently licensed waste disposal firm and in compliance with all applicable laws and regulations.

Subd. 8. Where required by the Authorized Representative, Industrial Users shall install and maintain at their own expense a suitable structure or control manhole with such necessary meters and other testing equipment needed to facilitate observation, sampling, and measurement of wastewater. The manhole will be safe and accessible at all times. The

City Council may require submission of laboratory analyses to illustrate compliance with this Ordinance and any special conditions for discharge established by the City Council or responsible regulatory agency. All measurements, tests and analyses to which reference is made in this Ordinance 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.

Subd. 9.

(a) Where required by the Authorized Representative, User(s) shall provide protection from an accidental discharge of substances regulated by this Ordinance. Where necessary, facilities to prevent accidental discharges of prohibited materials shall be provided and maintained at the Owner's expense. Detailed plans and operating procedures of said facilities shall be submitted to the Authorized Representative for review and approval prior to construction of the facility. Approval of such plans and operating procedures shall not relieve user from the responsibility of modifying the facility as necessary to meet the requirements of this Ordinance.

(b) Users shall notify the Authorized Representative immediately if a slug or accidental discharge of wastewater occurs in violation of this Ordinance. Notification will allow measures to be taken to minimize damage to the treatment facilities. Notification will not relieve users of liability for any expense, loss or damage to the treatment facilities, or for fines imposed on the City by any state or federal agency as a result of their actions.

(c) A notice shall be permanently posted on the User's bulletin board or other prominent place advising employees of the emergency notification procedure in the event of a slug or accidental discharge.

Subd. 10.

(a) No person shall permit any substance or matter which may form a deposit or obstruction of flow to be discharged into the public sewer. Whenever any service connection becomes clogged, obstructed, detrimental to the use of the public sewer, or unfit for the purpose of drainage, the Owner shall make repairs as directed by the Authorized Representative.

(b) Each day after 3 days that the Owner neglects to make said repairs, shall constitute a separate violation of this Section. The Authorized Representative may then cause the work to be done and

recover related expenses from the owner or agent by an action in the name of the City.

Subd. 11. In addition to penalties that may be imposed for violation of any provision of this Article, the City may assess against the User the cost of repairing or restoring sewers and associated facilities damaged as a result of the discharge of prohibited wastes and may collect the assessment as an additional charge for the use of the public sewer system.

Subd. 12. Use of the Public Sewers The sewer drain from the customer's building to the public sewer (located in the street) is the property owner's responsibility. Under this section the property owner is responsible for repairing and cleaning this sewer service.

Subd. 13. In the event that a building that is connected to the public sewer is to be demolished, then, prior to the commencement of the demolition, the building sewer leading to the public sewer shall be plugged by a licensed master plumber at the lot line or within three (3) feet thereof, at the owner's expense. An inspection fee, as established by the City Council Resolution shall be paid to the City before the demolition commences. In the event that a building that is connected to the public sewer is destroyed by accident, explosion, fire, wind storm or other casualty, then within forty-eight (48) hours after the destruction, the building sewer leading to the public sewer shall be plugged by the above method.

Subd. 14. No statement contained in this Article shall prevent any special agreement or arrangement between the City and any Industrial User. Industrial waste of unusual strength or character may be accepted by the facility for treatment, subject to adequate payment by the industrial user, providing that National Categorical Pretreatment Standards and the City's NPDES and SDS permit limitations are not violated.

413.70. Prosecution for Damages to the Facility. No person(s) shall willfully or negligently break, damage, destroy, uncover, deface or tamper with any structure, appurtenance, or equipment which is part of the wastewater treatment facilities. Any person violating this provision shall be subject to immediate arrest under the charge of a misdemeanor and shall reimburse the City for all costs.

413.80. Powers and Authority of Inspectors.

Subd. 1. Duly authorized employee(s) of the City, bearing proper credentials and identification, shall be permitted to enter all properties for inspection, observations, measurement, sampling, testing, repair and maintenance in accordance with the provisions of this Ordinance. The City shall have the right to enter upon any premises connected with any public sewer or drain at all reasonable hours for the purpose of ascertaining whether the provisions of this chapter or any other ordinance in regard to house drains or connections have been complied with and whether the

sewer or drain connecting such premises with the public sewers is in good condition. If such sewer or drain or its appurtenances do not conform to the provisions of law in regard thereto, or have become clogged, obstructed, broken or out of order, the City shall notify the owner, agent or occupant or person having charge of the building or premises which are drained by such sewer or drain. It shall thereupon be the duty of such owner, agent, occupant or person having charge of the building or premises to cause the sewer or drain or appurtenances to be removed, reconstructed, repaired, altered or cleansed as the condition of such sewer or drain or appurtenances may require, and in case of neglect or refusal of the owner, agent, occupant or other person to remove, reconstruct, repair, alter or cleanse such sewer or drain or appurtenances within three (3) days after receiving such notice from the City, the City shall cause such work to be done in such a manner as deemed expedient and shall charge the expense thereof to the owner, agent, occupant or other person aforesaid.

Subd. 2. Industrial Users shall be required to provide information concerning industrial processes which have a direct bearing on the type and source of discharge to the collection system. An industry may withhold information considered confidential. However, the industry must establish that the information in question might result in an advantage to competitors and that the industrial process does not have deleterious results on the treatment process.

413.85. Industrial Users.

Subd. 1. Definitions. For the purpose of this Section the following words and terms shall have the meanings given them herein:

(a) "Commission" shall mean the Metropolitan Waste Control Commission.

(b) "Act" shall mean the Federal Water Pollution Control Act Amendments of 1972 and regulations thereunder.

(c) "Strength Charge" a charge to those receiving waste treatment services within or served by the City, based upon strength of industrial waste discharge into the sewer system of the City.

Subd. 2. Recitals. The Commission, in order to receive and retain grants in compliance with the Act, has determined to impose an industrial user sewer strength charge upon users of the Metropolitan Disposal System (as defined in Minnesota Statutes, Section 473.121, Subdivision 24) to recover operation and maintenance costs of treatment works attributable to the strength of the discharge of industrial waste, such sewer strength charge being in addition to the charge based upon the volume of discharge. In order for the City to pay such costs based upon strength of industrial discharge and allocated to it

each year by the Commission, it is hereby found, determined and declared to be necessary to establish sewer strength charges and a formula for the computation thereof for all industrial users receiving waste treatment services within or served by the City. Furthermore, Minnesota Statutes, Section 444.075, Subdivision 3, empowers the City to make such sewer charge a charge against the owner, lessee, occupant or all of them and certify unpaid charges to the county auditor as a tax lien against the property served.

Subd. 3. Establishment of Strength Charges. For the purpose of paying the costs allocated to the City each year by the Commission that are based upon the strength of discharge of all industrial users receiving waste treatment services within or served by the City, there is hereby approved, adopted and established, in addition to the sewer charge based upon the volume of discharge, a sewer charge upon each person, company or corporation receiving waste treatment services within or served by the City, based upon the Strength Charge.

Subd. 4. Establishment of Strength Charge Formula. For the purpose of computation of the Strength Charge, there is hereby established, approved and adopted in compliance with the Act the same strength charge formula designated in Resolution No. 76-172 adopted by the governing body of the Commission on June 15, 1976, such formula being based upon pollution qualities and difficulty of disposal of the sewage produced through and evaluation of pollution qualities and quantities in excess of an annual average base and the proportionate costs of operation and maintenance of waste treatment services provided by the Commission.

Subd. 5. Strength Charge Payment. It is hereby approved, adopted and established that the Strength Charge shall be paid by each industrial user receiving waste treatment services and subject thereto before the twentieth (20) day next succeeding the date of billing thereof to such user by or on behalf of the City, and such payment thereof shall be deemed to be delinquent if not so paid to the billing entity before such date. Furthermore, it is hereby established, approved and adopted that if such payment is not paid before such date an industrial user shall pay interest compounded monthly at the rate of two-thirds of one percent (2/3%) per month on the unpaid balance due.

Subd. 6. Establishment of Tax Lien. As provided by Minnesota Statutes, Section 444.075, Subdivision 3, it is hereby approved, adopted and established that if payment of the Strength Charge is not paid before the sixteenth (16) day next succeeding the date of billing thereof to the industrial user by or on behalf of the City, said delinquent sewer strength charge, plus accrued interest established pursuant to Subd. 5 above, shall be deemed to be a charge against the owner, lessee and occupant of the property served, and the City or its agent shall certify such unpaid delinquent balance to the county auditor with taxes against the property served for collection as other taxes are collected; provided, however, that such certification shall not preclude the City or its agent from recovery of such delinquent sewer strength charge and interest thereon under any other available remedy.

413.90. The Sewer Service Charge System. Charges for sewer use shall be established by City Council Resolution.

Subd. 1.

(a) The City hereby establishes a Sewer Service Charge System with fees being set by resolution developed in accordance with the provisions of Section 413.95 of the Dayton City Code. All revenue collected from Users of the wastewater treatment facilities will be used for annual operation, maintenance, replacement, and capital costs. Each User shall pay a proportionate share of operation, maintenance and replacement costs based on the users proportionate contribution to the total wastewater loading.

(b) The Sewer Service Charge System shall set forth the projected operation, maintenance, and replacement ("OM&R") costs of all Users which shall serve as the basis for the unit charges made to users of the system. The Sewer Service Charge System may also set forth the assessment of additional charges and debt retirement costs which shall be an additional charge.

(c) The Sewer Service Charge System adopted by resolution upon enactment of this Ordinance shall be published in the local newspaper and shall be effective upon publication. Subsequent changes in the sewer service rates and charges shall be adopted by City Council resolution and published in the local paper.

(d) Revenues collected through the Sewer Service Charge System shall be deposited in a separate fund known as the Sewer Service Fund.

Subd. 2. Penalty for Late Payment. If the monthly service charge is not paid when due, a penalty of ten percent (10%) shall be added thereto.

Subd. 3. Bills for sewage service shall be rendered at regular intervals, as determined by the City Council. Each charge levied pursuant to this Ordinance, plus reasonable clerical expense is hereby made a lien upon the corresponding property land or premises served by a connection to the sewer system of the City. Any amounts due for sewer charges hereunder may be collected in a civil action, or the City may certify to the County Auditor the amount due, together with a legal description of the premises served, and the County Auditor shall thereupon enter such amount as part of the tax levy on said premises to be collected during the ensuing year. A minimum charge of five dollars ($5.00) or ten percent (10%) of the delinquent charges, whichever is larger, shall be attached for expense.

Subd. 4.

(a) The City hereby establishes a Sewer Service Fund as an income fund to receive all revenues generated by the Sewer Service Charge System and all other income dedicated to the wastewater treatment facility.

(b) The Sewer Service Fund administered by a designated representative shall be separate and apart from all other accounts. Revenue received by the Sewer Service Fund shall be transferred to the following accounts established as income and expenditure accounts:

1) Operation and Maintenance

2) Equipment Replacement

3) Debt Retirement for the collection and treatment facility.

Subd. 5. Administration of the Sewer Service Fund.

(a) A designated representative shall maintain a proper system of accounts and records suitable for determining the OM&R and debt retirement costs of the treatment facilities, and shall furnish the City Council with a report of such costs annually.

(b) At that time the City Council shall determine whether sufficient revenue is being generated for the effective management of the facilities and debt retirement. The City Council will also determine whether the user charges are distributed proportionately. If necessary, the Sewer Service Charge System shall be revised to ensure proportionality of user charges and sufficient funds.

(c) In accordance with State requirements, each User will be notified annually in conjunction with a regular billing of that portion of the Sewer Service Charge attributable to OM&R.

(d) Sewer Service Charges shall be billed on a quarterly basis. Any bill not paid in full 30 days after the due date will be considered delinquent. At that time the User will be notified regarding the delinquent bill and subsequent penalty. The penalty shall be computed as 1.5% of the original bill and shall be increased by the same percent for every quarter the bill is outstanding.

Subd. 6. Where required by the City, Users shall install and maintain, at their own expense, meter(s) on their water supply to facilitate measurement of wastewater generated. All Users other than Single Family Residential Users shall have meters installed for billing purposes. The meters shall be accessible to the City at all times.

413.95. Determination of Sewer Service Charges (Metered).

Subd. 1.

(a) Users of the wastewater treatment facilities shall be permitted into one of the following classes:

1) Residential
2) Non-residential
3) Industrial

(b) Charges to Users who discharge NDSW will be calculated on the basis of metered water use.

Subd. 2.

(a) Each User shall pay operation, maintenance and replacement costs in proportion to the User's contribution of wastewater flows and loadings to the treatment plant, with a minimum rate for loadings of BOD and TSS being the rate established for normal domestic strength waste (NDSW) concentrations.

(b) Those Industrial Users discharging only segregated NDSW can be classified as Non-residential Users for the purposes of rate determination.

Subd. 3. Charges for Residential and Non-residential Users will be determined proportionately according to billable wastewater flow.

(a) RESIDENTIAL USERS: Billable wastewater volume for Residential Users shall be calculated on the basis of metered water usage. The quarterly billable wastewater volume will be equal to the quarterly metered water usage as averaged between the first and last quarters of the calendar year. The City may require Residential Users to install water meters for the purpose of determining billable wastewater volume.

(b) NON-RESIDENTIAL USERS: Billable wastewater volume of Non-residential Users may be determined in the same manner as for Residential Users, except that if the City determines that there

are significant seasonal variations in metered water usage resulting in a proportionate increase in wastewater volume, the billable wastewater volume will be:

1) Calculated on the basis of quarterly water usage as recorded throughout the year; or

2) Calculated on the basis of metered wastewater flow. The City may require Non-residential Users to install such additional water meters or wastewater flow meters as may be necessary to determine billable wastewater volume.

Subd. 4. Determination of User Charges.

(a) For producers of Normal Domestic Strength Wastes:

1) $Uomr = \frac{Comr}{Tbwv}$

2) Where: Uomr = Unit cost for operation, Maintenance and Equipment Replacement in $/Kgal.
Comr = Total annual OM&R costs.
Tbwv = Total annual billable Wastewater flow in Kgal.

(b) Calculation of User Charges:

1) $Uc = Uomr \times bwv$

2) Where: Uc = User Charge.
Uomr = Unit cost for Operation, Maintenance and Equipment Replacement in $/Kgal.
bwv = Billable wastewater volume in Kgal.

Subd. 5. Recovery of Local Construction Costs.

(a) Local construction costs for the wastewater treatment facility will be recovered through an assessment as described in Sections 1-3 of the Sewer Service Charge System.

(b) Local construction costs for the wastewater treatment facility not recovered through assessments will be recovered through a per-connection debt service charge determined as follows:

1) $Dc = \frac{Cds}{Tc}$

2) Where: Dc = Debt Service Charge per connection.
Cds = Cost of annual debt service.
Tc = Total number of connections to the wastewater treatment facilities.

Subd. 6. Determination of Sewer Service Charges.

(a) The sewer service charge for a particular connection shall be determined as follows:

1) SSC = Uc + Dc

2) Where: SSC = Sewer Service Charge.
Uc = User Charge.
Dc = Debt Service Charge.

Subd. 7.

(a) The Sewer Service Charges established in this Ordinance will not prevent the assessment of additional charges to Users who discharge wastes in concentrations greater than NDSW or of unusual character (Industrial Users). Special contractual agreements can be made with such Users, subject to the following conditions:

1) The User pays OM&R costs in proportion to the User's contribution of wastewater flows and loadings to the treatment facility, and no User is charged at a rate inferior to the charge for normal domestic strength wastes.

2) The sampling of wastewater shall be conducted in accordance with the techniques established in "Standard Methods for the Examination of Water and Wastewater," latest edition.

(b) A study of unit costs of collection and treatment processes attributable to flow, BOD, TSS, and other significant loadings shall be developed and used to determine the proportionate allocation of costs to flows and loadings for Industrial Users.

412.100. Protection From Damage. No person shall maliciously, willfully or negligently break, damage, destroy, uncover, deface or tamper with any structure, appurtenance or equipment which is a part of the public sewer.

413.100. Penalties. Any person convicted of violating any of the provisions of the Chapter, unless otherwise specified, shall be guilty of a misdemeanor. Each act of violation and every day upon which a violation occurs or continues shall constitute a

separate offense.

Subd. 1. Upon determination that a User has violated or is violating applicable provisions of this Ordinance or related permits, the Authorized Representative may issue a Notice of Violation. Within 10 days of such notification, the violator shall submit to the Authorized Representative an adequate explanation for the violation and a plan for the correction and prevention of such occurrences, including specific actions required. Submission of such a plan in no way relieves the violator of liability for any violations occurring before or after the issuance of the Notice of Violation.

Subd. 2. Any violation is subject to a fine not exceeding $700.00 and/or 90 days in jail. Each day in which any such violation occurs shall be deemed as a separate offense. Such fines may be added to the User's next sewer service charge, and will hence be subject to the same collection regulations as specified in Section 413.90, Subdivision 3, of the Dayton City Code.

Subd. 3. In addition to the assessment procedures previously detailed in this ordinance, if additional measures are necessary to collect delinquent sewer service charge accounts, the City may file a civil action suit or levy a lien against the violator. Related attorneys fees fixed by court order shall also be collected. The violator shall be liable for interest on all balances at a rate of 18 percent annually.

Subd. 4. Any person violating any of the provisions of this Ordinance shall become liable to the City for any expense, loss or damage occasioned by the City by reason of such violation.

SECTION 2. EFFECTIVE DATE. This Ordinance shall be effective from and after its passage and publication in accordance with the law.

PASSED this _____ day of _____, 2004, by the Dayton City Council.

City of Dayton

_____

Mayor

Attest:

_____

Clerk

Appendix I
City of Dayton Growth Management Policy Ordinance and Resolution

RESOLUTION NO. 62-05

RESOLUTION REGARDING THE ADOPTION OF A GROWTH MANAGEMENT POLICY

WHEREAS, the City of Dayton (hereinafter referred to as the "City") is a municipal corporation organized and existing under the laws of the State of Minnesota; and

WHEREAS, the City of Dayton adopted a comprehensive plan that includes goals and policies to guide planning and the growth of the City; and

WHEREAS, managing growth through the orderly provision of infrastructure and other means promotes the goals and policies of the comprehensive plan. It is in the best interests of the public to create rational, cost effective means of managing growth so that it will be orderly, efficient, and environmentally sound; and

WHEREAS, unplanned growth does not meet community needs and is injurious to the public health, safety, and welfare. Inadequately planned growth has created and may create or aggravate negative conditions such as:

a. overburdened public facilities
b. underutilized public facilities resulting in wasteful investment of public resources
c. an inadequate variety of housing choices that does not meet community needs
d. environmentally detrimental development projects and patterns; and

WHEREAS, the comprehensive plan establishes future land uses, staged growth areas, growth goals, and a Metropolitan Urban Service Area (hereinafter referred to as "MUSA") reserve for the city, namely the area outside the 2020 MUSA line, and proposed to be served by sewer after the year 2020; and

WHEREAS, the Stage 1 growth area is the geographic limit for growth prior to year 2010 (hereinafter "Existing MUSA" or "Stage 1"). The Stage 2 area is for growth from 2010 to 2020 (hereinafter "MUSA Reserve" or "Stage 2"); and

WHEREAS, the MUSA Reserve contained within the comprehensive plan includes 1,796.88 acres of vacant developable land for Stage 1; and

WHEREAS, there is undeveloped land within the existing MUSA; and

WHEREAS, inadequately planned, speculative residential development has sometimes created, and may create or aggravate, the following conditions:

a. Wasteful construction of public facilities;
b. Overburdened municipal services and utilities;

c. Unavailability of adequate low-and-moderate-cost housing to serve the needs of the elderly and persons of low and moderate incomes;
d. Premature and inefficient commitment of undeveloped lands to urbanization; and,
e. Environmentally detrimental development patterns; and

WHEREAS, the Zoning Ordinance alone cannot provide the comprehensive development review procedures, which will insure the high level of environmental protection, sequential orderly development and achievement of other goals set forth in the Comprehensive Plan; and

WHEREAS, the public welfare requires the establishment of a Growth Management Policy. The city hereby establishes an initial phasing program for development within the City of Dayton in order to accomplish the following goals:

a. Prevent premature development in the absence of necessary utilities and municipal services;
b. Coordinate city planning and land regulation in a manner consistent with the general plan;
c. Facilitate and implement the realization of the Comprehensive Plan;
d. Provide incentives to developers to include low and moderate income housing in their developments;
e. Prevent unplanned growth which has no relationship to community needs and capabilities; and,
f. Encourage developers to dedicate additional public open space; and

WHEREAS, a growth management policy is necessary, in addition to official controls such as the zoning and subdivision ordinances, to implement the comprehensive plan and promote the public health, safety, and welfare; and

WHEREAS, the comprehensive plan calls for development from the corners of the City.

WHEREAS, the City staff studied the matter, made a report, and provided other information to the City Council; and

WHEREAS, the Planning Commission held a public hearing at its May 5, 2005 meeting and has considered this matter and provided the City Council with a recommendation; and

WHEREAS, the City Council at its July 12, 2005, meeting, has considered this matter.

NOW THEREFORE BE IT RESOLVED that the City Council of the City of Dayton hereby adopts the following Growth Management Policy for the City:

1. Promoting development within the Existing MUSA is preferable to expanding the developing area of the City by granting MUSA Reserve acres. This preference is intended to promote the cost-effective use of public investment by maximizing the utilization of existing infrastructure. The Comprehensive Plan of the City includes a sewer phase map (7.1) to show how development in the City will be phased over the next 20 plus years. The phasing plan shows three stages 2000-2010 (stage 1), 2010-2020 (stage 2), and 2020+ (stage 3).

2. New growth prior to year 2010 shall occur only in a Stage 1 (2000-2010) growth area. However, a Stage 1 (2000-2010) growth area does not grant rights to MUSA Reserve acres and development approval. (If an area outside the 2000-2010 sewer phase would like to be eligible for development, it must request an amendment to the Comprehensive Plan Sewer Phasing to be reguided into the 2000-2010 sewer, to be eligible for sewer prior to 2010.)

3. Premature development shall not be allowed. This applies to all development proposals, inside the Existing MUSA as well as those needing MUSA Reserve. The development is premature if it does not meet the conditions established in Section 1002.15 of the Subdivision Ordinance of the City Code.

4. A development phasing plan shall be approved as a part of the approval process for preliminary plats and planned unit developments for each of the tracts of land set forth on the sewer phase map. Preliminary plats and planned unit developments shall be reviewed and approved in accordance with the development schedule set forth in the sewer phase map. The number of lots created through the platting process in a given year shall be controlled through the extension of utilities and assessment of properties developed for the utility extension

5. Residential, Lot Allocation:

   a. A total of approximately 1,800 Existing MUSA acres is designated for residential development in the 2000-2010 sewer phase. If spread evenly over the remainder of the time period, 2005-2010, it would allow 360 acres annually to be developed, resulting in approximately 1,000 dwelling units per year. The City currently has for the past 5 years, had approximately 10 new residential building permits per year, a substantially smaller number of dwelling units than the 1,000 that could occur once sewer is available. As established previously in this Resolution, such extensive growth so quickly could potentially result in unintended results, potentially unplanned growth and overburdened public facilities and other negative results.

   b. In 2004, the City preliminary platted approximately 130 dwelling units of which 50 were final platted in 2004. In 2005, 29 dwelling units have been final platted thus far.

c. The City will allow the following number of units/lots to be final platted/ final approved per year:

	2005	*2006*	*2007*	*2008*	*2009*	*2010*
Maximum New Final Plated Residential Dwelling Units Per Year	*100*	*100*	*150*	*200*	*250*	*250*

d. Single family residential units shall count as 1 unit. Attached multi-family, including townhomes, shall count as .5 for each unit. Rental apartments are excluded from counting.

e. This Section 5 includes all residential growth: both within the Existing MUSA and in areas that would need MUSA Reserve. At the discretion of the City Council, the number of lots approved for any one year may vary by 20% over or below the above maximum. Exceeding the new growth target will necessitate reducing the number of lots available for future years. This refers to units in future plats, not to units on lots in final plats approved prior to 2005.

f. No single development project should be awarded an entire year's number of new housing units. This requirement is intended to:

1. avoid or minimize potential monopoly price effects
2. promote timely development: one project often will not be able to build all available lots in one year
3. promote housing diversity
4. avoid inefficient concentration of infrastructure expansion that could impede financial return on investments elsewhere in the city
5. distribute and minimize potential negative impacts of development
6. promote fairness by distributing growth among several projects while observing the goal for new growth.

g. The per year new lot limits in sections 5.d and 9.b of this resolution will not apply to parcels of 20 acres or less in size, even if such a parcel is purchased or owned by a developer or land owner set forth in the sewer map, or their successors or assigns. These exception parcels shall be of record as of September 1, 2005. The purpose of this exemption is to encourage the incorporation of smaller parcels into larger development plans to provide for more continuity of design and neighborhood compatibility. The City Council also recognizes the adverse affects that the inclusion of smaller parcels in the allocation process would have on the current owners of those parcels. The density and allocations assigned to the exception parcels of less than 20 acres can be used anywhere within the adjacent development which it becomes a part of. This exemption

shall not apply to those parcels 20 acres in size or less that are or were owned by the same property owner as an abutting property on or after September 1, 2005.

6. The City Council may consider allowing an increase in the unit allocation and density if the amount of open space dedicated, in addition to the required Park Dedication requirements, as part of the development reaches 15 percent. The areas proposed to be dedicated to open space must be consistent with the city's Comprehensive Plan or must be adjacent to or provide an enhancement to existing park facilities. Property dedicated must be useable upland (not wetlands, ponds or utility easements, etc.). The City Council will retain the discretionary right to determine whether or not it will accept the property proposed to be dedicated for open space.
7. An amendment of this Resolution shall be required if, in order to accommodate a specific development project, the annual target for new growth (units/year) or residential MUSA Reserve allocation (acres/year) would be exceeded by more than 20%. The City Council shall consider such an amendment only if the specific development project will promote a clearly identified public purpose. The public purpose may include but is not limited to:

    a. provision of housing unit variety that contributes toward meeting housing goals, such as medium density, high-density, and mixed-use developments in locations designated for them in the comprehensive plan
    b. provision of infrastructure that will provide benefits beyond the project site, in accordance with City transportation, sewer, or water plans, that is not financially feasible without exceeding the target
    c. preservation of environmental features that would not occur without exceeding the target
    d. provision of economic benefits to the City that would not occur without exceeding the target

8. Use of Stage 2 (2010-2020) MUSA Reserve acres prior to year 2010 shall require amendment of the comprehensive plan.

9. Residential, Phasing:

    a. All preliminary plats and residential development greater than 50 lots/units must have, as condition of approval, a phasing plan that establishes:

        i. a schedule for final platting a specified number of lots/units on an annual basis
        ii. specifies the location of and number of lots/units in each phase (final plat).

    b. The maximum number of lots in each phase is 50.

c. The City will maintain an inventory of approved phasing plans indicating the number of units/lots scheduled for final plat approval in future years.

d. The City will not approve a new project's preliminary plat if, according to the phasing plan inventory (final platting schedule), a new project could not final plat its first phase within one year of preliminary plat approval without exceeding the MUSA or new growth goals.

e. An approved preliminary plat phasing plan is a commitment by the City to approve final plats and grant MUSA Reserve acres according to the phasing plan. MUSA Reserve is actually granted at the same time as final plat approval. The phasing plan does not in any way eliminate the requirements of the subdivision ordinance, zoning ordinance, and other official controls, as may be amended.

Adopted this 11th day of October 2005, by the City Council of City of Dayton.

Mayor

ATTEST:

City Clerk

The motion for the adoption of the foregoing resolution was made by Hoke and duly seconded by Forseth. All aye. No nays. One absent. Motion Passed 4-0-1

ORDINANCE NO. 2005-11

AN ORDINANCE AMENDING DAYTON CITY CODE CHAPTER 1002 REGARDING ADOPTION OF A GROWTH MANAGEMENT POLICY AND PREMATURE SUBDIVISIONS

The City Council of the City of Dayton ordains as follows:

SECTION 1. AMENDMENT. The Dayton City Code Chapter 1002, is hereby amended by adding the following language:

1002.14. Growth Management Policy.

Subd. 1. Adoption of Policy. All applications for subdivision shall be subject to the City's Growth Management Policy, which shall be adopted by resolution of the City Council. Any application not satisfying the criteria set forth in the City's Growth Management Policy shall be considered premature and shall be denied by the City Council.

Subd. 2. Lot Allocation.

(1) The City will allow the following number of units/lots to be final platted/ final approved per year:

	2005	*2006*	*2007*	*2008*	*2009*	*2010*
Maximum New Final Plated Residential Dwelling Units Per Year	*100*	*100*	*150*	*200*	*250*	*250*

(2) Single family residential units shall count as 1 unit. Attached multi-family, including townhomes, shall count as .5 for each unit. Rental apartments are excluded from counting.

(3) Subdivision 2(1) above shall include all residential growth: both within the Existing Metropolitan Urban Services Area ("MUSA") and in areas that would need MUSA Reserve (that area defined as Stage 2 on the City's Comprehensive Plan). At the discretion of the City Council, the number of lots approved for any one year may vary by 20% over or below the above maximum. Exceeding the new growth target will necessitate reducing the number of lots available for future years. This refers to units in future plats, not to units on lots in final plats approved prior to 2005. In the event there is an application which has been given preliminary approval but which has not received final plat approval by the end of any year, the City Council in its discretion may add the number of units in any such approved preliminary application to the number of units available in the following year.

(4) No single development project should be awarded an entire year's number of new housing units. This requirement is intended to:

a. avoid or minimize potential monopoly price effects
b. promote timely development: one project often will not be able to build all available lots in one year
c. promote housing diversity
d. avoid inefficient concentration of infrastructure expansion that could impede financial return on investments elsewhere in the city
e. distribute and minimize potential negative impacts of development
f. promote fairness by distributing growth among several projects while observing the goal for new growth.

(5) The per year new lot limits of Ordinance 1002.14, Subd 2 (1) and 1002.14, Subd. 3 (2) will not apply to parcels of 20 acres or less in size, even if such a parcel is purchased or owned by a developer or land owner set forth in the sewer map, or their successors or assigns. These exception parcels shall be of record as of September 1, 2005. The purpose of this exemption is to encourage the incorporation of smaller parcels into larger development plans to provide for more continuity of design and neighborhood compatibility. The City Council also recognizes the adverse affects that the inclusion of smaller parcels in the allocation process would have on the current owners of those parcels. The density and allocations assigned to the exception parcels of less than 20 acres can be used anywhere within the adjacent development which it becomes a part of. This exemption shall not apply to those parcels 20 acres in size or less that are or were owned by the same property owner as an abutting property on or after September 1, 2005.

(6) The City Council may consider allowing an increase in the unit allocation and density if the amount of open space dedicated as part of the development reaches 15 percent. The areas proposed to be dedicated to open space must be consistent with the city's Comprehensive Plan or must be adjacent to or provide an enhancement to existing park facilities. Property dedicated must be usable upland (not wetlands, ponds or utility easements, etc.). The City Council will retain the discretionary right to determine whether or not it will accept the property proposed to be dedicated for open space.

(7) An amendment of this Section shall be required if, in order to accommodate a specific development project, the annual target for new growth (units/year) or residential MUSA Reserve allocation (acres/year) would be exceeded by more than 20%. The City Council shall consider such an amendment only if the specific development project will promote a clearly identified public purpose. The public purpose may include but is not limited to:

a. provision of housing unit variety that contributes toward meeting housing goals, such as medium density, high-density, and mixed-use developments in locations designated for them in the comprehensive plan

b. provision of infrastructure that will provide benefits beyond the project site, in accordance with City transportation, sewer, or water plans, that is not financially feasible without exceeding the target
c. preservation of environmental features that would not occur without exceeding the target
d. provision of economic benefits to the City that would not occur without exceeding the target

Subd. 3. Phasing.

(1) All preliminary plats and residential development greater than 50 lots/units must have, as condition of approval, a phasing plan that establishes:

a. a schedule for final platting a specified number of lots/units on an annual basis
b. specifies the location of and number of lots/units in each phase (final plat).

(2) The maximum number of lots in each phase is 50.

(3) The City will maintain an inventory of approved phasing plans indicating the number of units/lots scheduled for final plat approval in future years.

(4) The City will not approve a new project's preliminary plat if, according to the phasing plan inventory (final platting schedule), a new project could not final plat its first phase within one year of preliminary plat approval without exceeding the MUSA or new growth goals.

(5) An approved phasing plan is a commitment by the City to approve final plats and grant MUSA Reserve acres according to the phasing plan. MUSA Reserve is actually granted at the same time as final plat approval. The phasing plan does not in any way eliminate the requirements of the subdivision ordinance, zoning ordinance, and other official controls, as may be amended.

1002.15. Premature Subdivision. Only those applications for preliminary planned unit development, final planned unit development, concept plan, preliminary plat, and final plat that meet the criteria set forth in Subdivisions 1 and 2 below shall be eligible to receive approval. Any such application not meeting the below criteria shall be considered premature and shall be denied by the City Council.

Subd. 1. Infrastructure Point System.

(1) A point system has been developed to assist the City in evaluating and judging the infrastructure need for proposed developments within the City. The point system considers the following:

a. Availability of existing infrastructure to serve development.

b. Fiscal impact of infrastructure.
c. Easements and/or right-of-way for infrastructure.
d. Park availability for development

(2) All applications for preliminary and final plat shall be assessed by the below point system.

(3) Points are given within each of the above defined categories based on a number of factors outlined below. **A minimum of 12 points is required for a development to not be premature and to be eligible to receive preliminary planned unit development, final planned unit development, concept plan, preliminary plat and/or final plat approval.**

1. Current availability of existing infrastructure to serve development.	Points Possible 8			
	Storm Sewer	Sanitary Sewer	Water	Roads
A. Currently available within the development	2	2	2	
B. Adjacent to or within 300 feet of Development	1	1	1	
C. Between 300 feet and 2500 feet of Development	.5	.5	.5	
D. Paved arterial roads can be accessed in both (2) directions when leaving the subdivision via existing paved roads, or via roads paved or paid for by the Developer				2
E. Main Paved Roads can be accessed in one (1) direction when leaving the subdivision via existing paved roads or via roads paved or paid for by the Developer				1
F. The existing roads serving the subdivision are not paved.				-2

2. Funding of Infrastructure	Points Possible 4			
	Storm Sewer	Sanitary Sewer	Water	Roads
Development will Utilize Existing Infrastructure and Provide a Financial Pay Back to the City	1	1	1	1
Developer will not require new trunk funding of Infrastructure	1	1	1	1
Developer will "Cash Flow" new trunk funding	1	1	1	1

3. Easements and Right-of-Way Infrastructure	Points Possible 2			
	Storm Sewer	Sanitary Sewer	Water	Roads
All easements and right of way for development will be provided	.5	.5	.5	.5
Easements/right-of-way required to be acquired by the City	-1	-1	-1	-1
City purchased existing easements for infrastructure in development with no reassessment provision	-1	-1	-1	-1

4. Park *("Served by Existing Park" is defined as: neighborhood park within ¼ - ½ mile, or community park within 1 mile)*	Points Possible 2 Parks			
A. Development will be served by Existing Park	2			
B. Development will not be served by existing park, but will provide land for park in conformance with park plan.	2			
C. Development will not be served by existing park, but will provide land for park, not in conformance with park plan but in alternate acceptable location.	1			
D. Development does not include park and is not served by an existing park	0			

Subd. 2. Other Conditions Establishing a Premature Subdivision. An application for preliminary planned unit development, final planned unit development, concept plan, preliminary plat, and final plat shall be deemed premature should any of the following conditions not be met:

(1) Consistency with the Comprehensive Plan including any of the following:
- a. Land use plan.
- b. Transportation plan.
- c. Utility (sewer and water) plans.
- d. Local water management plan.
- e. Capital improvement plan.
- f. Sewer Phase Plan.
- g. Infrastructure Point System and other Growth management Policies
- h. Park and Open Space Plans.

(2) Consistency with Infill Policies. A proposed urban subdivision shall meet the City's infill policies:

- a. The subdivision must be located within the Metropolitan Urban Service Area ("MUSA") or the appropriate staged growth area as established by the City's Comprehensive Plan.
- b. The cost, operation and maintenance of the utility system are consistent with the normal costs as projected by the Water and Sewer Rate Study.
- c. The developer payments will offset additional costs of utility installation or future operation and maintenance.

(3) Roads or Highways to Serve the Subdivision. A proposed subdivision shall meet the following requirements for level of service ("LOS"), as defined by the Highway Capacity Manual:

- a. If the existing LOS outside of the proposed subdivision is A or B, traffic generated by a proposed subdivision will not degrade the level of service more than one grade.

b. If the existing LOS outside of the proposed subdivision is C, traffic generated by a proposed subdivision will not degrade the level of service below C.

c. If the existing LOS outside of the proposed subdivision is D, traffic generated by a proposed subdivision will not degrade the level of service below D.

d. The existing LOS must be D or better for all streets and intersections providing access to the subdivision. If the existing level of service is E or F, the subdivision developer must provide, as part of the proposed project, improvements needed to ensure a level of service D or better.

e. Existing roads and intersections providing access to the subdivision must have the structural capacity to accommodate projected traffic from the proposed subdivision or the developer will pay to correct any structural deficiencies.

f. The traffic generated from a proposed subdivision shall not require City street improvements that are inconsistent with the City of Dayton Capital Improvement Plan. However, the City may, at its discretion, consider developer-financed improvements to correct any street deficiencies.

g. At City discretion, interchange impacts must be evaluated in conjunction with Hennepin County and the Minnesota Dept. of Transportation, and a plan must be prepared to determine improvements needed to resolve deficiencies. This plan must determine traffic generated by the subdivision project, how this traffic contributes to the total traffic, and the time frame of the improvements. The plan also must examine financing options, including project contribution and cost sharing among other jurisdictions and other properties that contribute to traffic at the interchange.

h. The City does not relinquish any rights it has by law to make a local determination for LOS.

(4) Water Supply. A proposed subdivision shall be deemed to have an adequate water supply when:

a. The City water system has adequate wells, storage, or pipe capacity to serve the subdivision.

b. The water utility extension is consistent with the Dayton Water Plan and offers the opportunity for water main looping to serve the urban subdivision.

c. The extension of water mains will provide adequate water pressure for personal use and fire protection.

d. Rural subdivision can demonstrate that each of the proposed lots can be provided with a potable water supply.

(5) Waste Disposal Systems. A proposed subdivision shall be served with adequate waste disposal systems when:

a. The urban sewered subdivision is located inside the City's MUSA or is consistent with the MUSA allocation criteria.

b. The City has sufficient MUSA and pipe capacity to serve the subdivision if developed to its maximum density.

c. The subdivision will result in a sewer extension consistent with Dayton Sewer Plan and Capital Improvement Plan.

d. A rural subdivision can demonstrate that each lot can be served by an adequate sanitary sewer disposal system.

(6) Any other condition that the City Council reasonably determines establishes the subdivision as premature.

SECTION 2. EFFECTIVE DATE. This Ordinance shall be effective from and after its passage and publication in accordance with the law.

PASSED this 11th day of October 2005, by the Dayton City Council.

City of Dayton

Mayor

Attest:

Clerk

Published in the October 18th on C/D Press.