2040 COMPREHENSIVE SEWER PLAN

Prepared for:
City of Chaska, MN

Prepared by:
Stantec Consulting Services Inc.

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1.0 INTRODUCTION

1.1 REGULATORY FRAMEWORK

The Metropolitan Land Planning Act (amended 1995) 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 wastewater plan element covering the collection and disposal of wastewater generated by the community. Similarly, the Metropolitan Sewer Act requires local governments to submit a Comprehensive Sewer Plan (CSP) which describes the current and future service needs required from the Metropolitan Council.

The Metropolitan Council's 2040 Water Resources Policy Plan (2040 WRPP) lays out requirements for the wastewater plan element of the comprehensive plan as well as the Comprehensive Sewer Plan. For simplicity, the Metropolitan Council has combined the required elements of both plans into a single set of criteria, contained in the 2040 WRPP.

This 2018 Chaska CSP addresses the criteria of the 2040 WRPP. It provides growth projections, design parameters for the existing sanitary sewer system, proposed improvements to or expansion of the system, and strategies for addressing infiltration and inflow in the system. The CSP updates previous sewer planning efforts and describes in detail the expansion of the City's sanitary sewer system to serve projected urban development, particularly along the Trunk Highway 212 corridor and future annexation areas abutting this corridor. Map 1 at the end of this report describes Chaska's existing sanitary trunk system and the expansion of this system to serve future development.

The Chaska CSP projects increases in sanitary sewer flows that Metropolitan Council can then use in its planning of the Metropolitan Disposal System or MDS, which is operated by Metropolitan Council Environmental Services (MCES). MCES also uses the CSP to determine whether capacity upgrades will be needed at the Blue Lake Wastewater Treatment Plant (WWTP). This CSP Update is necessary to reflect some minor land use changes that have occurred within the developed portions of Chaska since the previous comprehensive plan and to reflect changes to the proposed sewer service in newly identified urban growth areas.

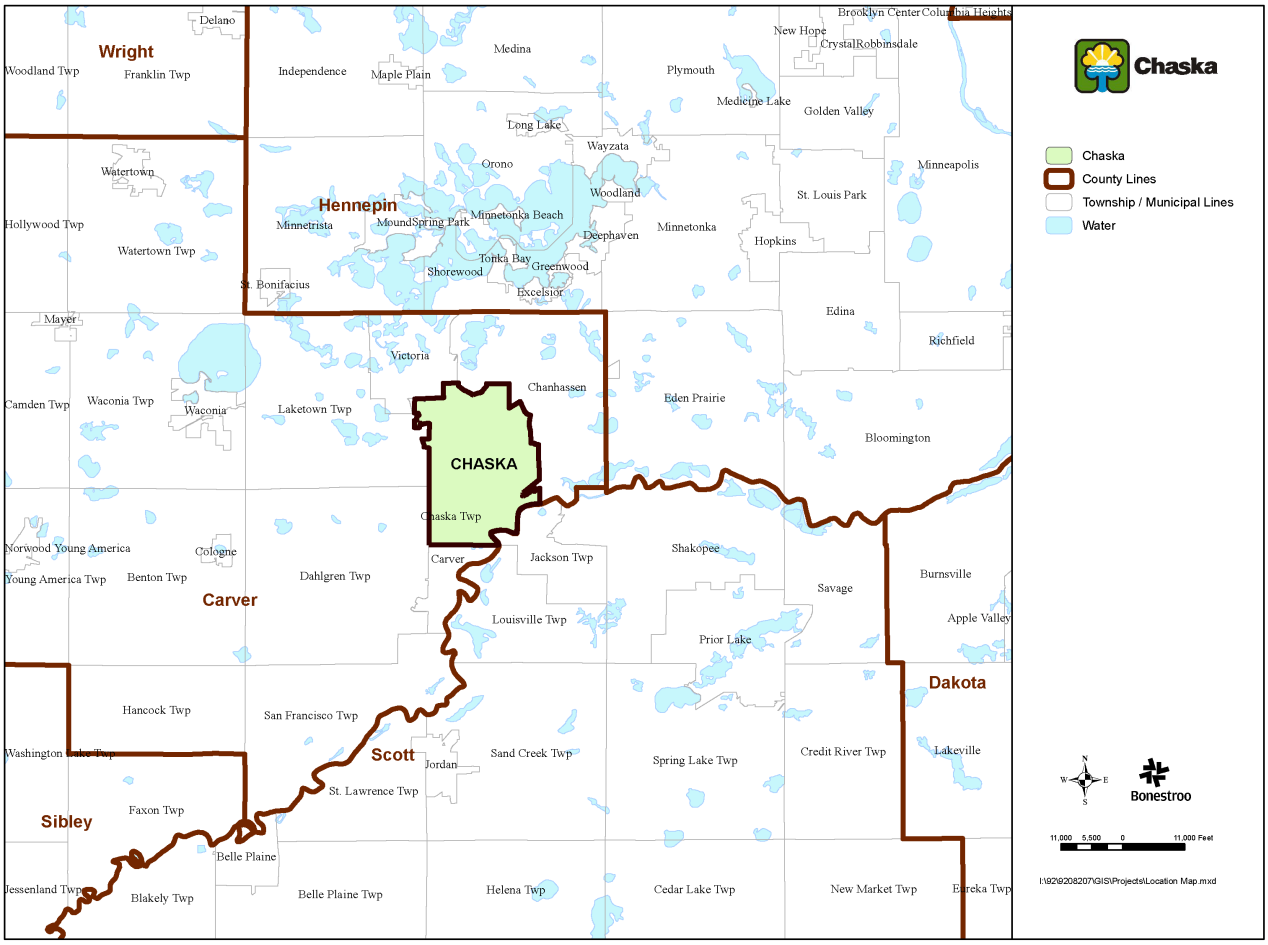
1.2 PHYSICAL SETTING

The City of Chaska is located in eastern Carver County in the southwestern portion of the Twin Cities Metropolitan Area. Figure 1 shows Chaska's location on the Minnesota River about 20 miles west of Minneapolis and Saint Paul. The original City is located on the Minnesota River and is now called Historic Downtown Chaska. Large land tracts were added by annexation in 1963 including an area surrounding Hazeltine Lake. The Jonathan area was added in 1967 by annexation. Areas of Chaska Township have been added since, bringing the City to its present size. Most of Chaska's residents live in the southern and central sections of the City, with easy access to Trunk Highways 41 and 212.

The sanitary sewer system was originally built in the 1920s to serve Historic Downtown Chaska. Sewage was discharged directly to the Minnesota River until 1963, when Chaska built a sewage treatment plant. The City of

Chaska operated the facility until 1970. The Metropolitan Sewer Board, now the Metropolitan Council Environment Services (MCES), took over operation at that time. MCES has phased out the Chaska Plant, and pumps Chaska's sewage to the Blue Lake Regional Wastewater Treatment Facility in Shakopee through its MCES L-71 sanitary sewage pumping station.

Figure 1 - Location Map



1.3 SCOPE OF STUDY

The discussion above generally describes the authority by which the Metropolitan Council requires Metropolitan Area municipalities to prepare comprehensive sewer plans. Beyond this general authority, the Metropolitan Council outlines requirements and provides guidance for the 2040 Comprehensive Sewer Plans due in 2018. According to its Local Planning Handbook, minimum requirements for Chaska's 2040 Comprehensive Sewer Plan include:

- Household, population, and wastewater flow forecasts through 2040
- Mapping of the trunk sanitary sewer system, including local sewer service districts, intercommunity connections, and connections to the Metropolitan system
- Copies of intercommunity service agreements
- Management program and ordinance for subsurface sewage treatment systems

- Tables of sewer trunk capacity and design flows
- Table describing timing of new trunk sewer construction
- Description of approach for reducing excessive infiltration and inflow (I/I) in the sewer system, including goals and strategies, ordinances, sources and extent of I/I, and implementation plan

In addition to specific Metropolitan Council requirements, this CSP also lays out a trunk sewer system to meet the ultimate sewer service needs of the City (see Map 1 at the end of the report). The local elements of conveyance are the sewer services, laterals, trunks, manholes, lift stations, force mains, and all correlated appurtenances associated with the collection and transportation of wastewater. This CSP is concerned with the trunk system, which includes all gravity lines 12 inches in diameter and larger, as well as force mains and other facilities (such as lift stations) which are a vital part of the sanitary sewer trunk system.

The sewer laterals and service lines are governed to a large extent by platting as the land is developed, and the developer is responsible for these system components. Trunk sewers are largely dependent on topography, soil conditions, physical features and manmade barriers all of which can be reasonably determined in this planning document.

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 and updating will be required. This review should include the relationship of trunk system construction to further planning and cost reevaluation.

The service area for the City's ultimate sewer system is shown on Map 1. It should be noted that the City has investigated an option that would service a small portion of the City of Carver annexation area. However, in order for this to occur, it would require a Met Council amendment to the regional sewer service area and an intercommunity flow agreement between Chaska and Carver.

2.0 FORECASTS

2.1 POPULATION, HOUSEHOLD, AND EMPLOYMENT PROJECTIONS

Table 2.1 presents the Metropolitan Council's projections of total population, households, and employees for the City of Chaska from the 2040 Water Resources Policy Plan. The numbers represent the most up-to-date figures from the Metropolitan Council regarding population, households, and employment within the City's current corporate boundary, which is included within the study area for this CSP. Table 2.2 presents the City's projections of sewered population, households, and employees. Table 2-3 presents City of Chaska projections of households and employees by MCES Interceptor.

Table 2.1 - Metropolitan Council City-Wide Projections

Year	Population	Households	Employment
2020	27,100	10,400	13,600
2030	32,000	12,300	16,000
2040	36,600	14,200	17,600

Table 2.2 – City of Chaska Sewered Projections

Year	Population	Households	Employment
2020	26,700	10,230	13,600
2030	31,800	12,215	16,000
2040	36,600	14,200	17,600

Table 2.3 – Metropolitan Council Growth Projections by MCES Facility

Year	Component	MCES L 71	MCES 8038
2020	Households	7,581	2,649
2020	Employment	8,495	5,105
2030	Households	9,052	3,163
2030	Employment	9,994	6,006
2040	Households	10,523	3,677
2040	Employment	10,993	6,607

The facilities described in this report are designed to serve the entire study area under conditions of ultimate development. The projections in Tables 2.1 and 2.2 reflect estimates of the timing of growth in the City. Actual growth rates will affect only the timing of trunk sewer construction and not the actual design of the system.

2.2 WASTEWATER FLOW PROJECTIONS

Table 2.4 presents projected wastewater flows for the City of Chaska, as provided by Metropolitan Council projections. It is assumed that Metropolitan Council projections pertain to Chaska only and do not include flows entering the interceptors from outside City limits.

Table 2.4 - Metropolitan Council Average Wastewater Flow Projections

Year	MCES Projected Average Flow (MGD)
2010	2.51
2020	2.67
2030	2.91
2040	3.13

3.0 SANITARY SEWER DESIGN CRITERIA

This Chaska Comprehensive Sewer Plan (CSP) provides an inventory of existing sewer facilities and a guide for building future trunk sewers for Chaska's ultimate development. To facilitate this function, the City is divided into major sanitary sewer service districts based on topography and sewer trunk access. These major districts are further divided into subdistricts. It is at the subdistrict level that land use-based sewage flows are generated and components of the sanitary sewer trunk system analyzed and evaluated.

3.1 LAND USE

The land use plan for the City of Chaska (Map 2) served as the basis for the development of the design sanitary sewer flow calculations and the analysis of Chaska's existing and proposed sanitary sewer trunk system. The land use plan is the 2040 land use plan included in the City of Chaska's 2040 Comprehensive Plan.

Using the 2040 land use plan, the area of each land use was determined for each sewer subdistrict. Detailed descriptions of the various land uses are found in the City of Chaska 2040 Comprehensive Plan. For purposes of sewer planning, various land use categories in the 2040 land use plan were combined into composite categories having the same estimated unit wastewater generation. For example, the Commercial, Office, Business Park, and Industrial land use categories were combined into a single Commercial/Industrial category.

In addition, the Agricultural, Rural Residential, and Conservation Residential land uses were considered to be 2040 land uses. As the CSP system addresses ultimate land use in the City, it was assumed for sewer planning purposes that these areas would generate wastewater at a rate reflecting urban land uses. These largely are low density residential in the northern and northwestern portions of the City and commercial/industrial in the southwestern portion of the City.

For the portions of the study area to the west of Chaska City limits, the 2040 land use from the City of Carver was used for sewer planning purposes.

The 2040 land use plan categories and the composite sewer planning land use categories are shown in Table 3.1. Areas of each sewer planning land use by subdistrict are presented in Appendix A.

3.2 ESTIMATED AVERAGE WASTEWATER FLOWS

Municipal wastewater is made up of a mixture of domestic sewage, commercial and industrial wastes, groundwater infiltration, and surface water inflows. With proper design and construction, groundwater infiltration and surface water inflows, often called infiltration/inflow (I/I), can be minimized. The City's efforts to address excessive I/I in the sewer system are presented in Chapter 5. The flows due to I/I are accounted for in the analysis and design of the trunk sewer system.

The anticipated average wastewater flows from the various subdistricts were determined by applying unit flow rates to each of the sewer planning land use categories. Note that several of these are composite categories consisting of several of the land use categories in the City's 2040 land use plan. The 2040 land use categories, sewer planning land use categories, and the "system design" unit flow rates are presented in Table 3.1. The average wastewater flows for each subdistrict are presented in Appendix B.

For all land uses, unit rates/acre were used to generate average flow projections. The units per acre assumptions for Low, Medium, and High Density Residential, Mixed Use, Business Campus, Commercial, Industrial, Institutional, and Office were based in part on information from the City Planning staff regarding projected number of units for each land use. Open Space, Park, Conservation Residential, Rural Residential, Golf Course, Agricultural, and Right-of-Way were all assumed to generate little to no sewer flows.

Table 3.1 - Unit Wastewater Flow Rates

2040 Land Use Type	Sewer Planning Composite Land Use Type	Average Unit Wastewater Flow, gal/acre/day
Low Density Residential, Rural Residential, Conservation Residential	Low Density Residential	500
Medium Density Residential, Mixed Residential	Medium Density Residential	1,000
High Density Residential	High Density Residential	1,500
Downtown Mixed Use, Commercial, Office, Business Park, Industrial	Commercial/Industrial	1,500
Public/Semi-Public	Public/Semi-Public	250

Table 3.1 presents the sewage-generating capability of land uses in Chaska's 2040 Land Use Plan. The subsequent sections of the CSP discuss sizing and planning the City's trunk system, and the spreadsheet sewer model results in the technical appendices support this purpose. The design criteria section, the spreadsheet sewer model, and the trunk system map describe a system that provides Chaska with the trunk reserve capacity necessary to meet localized high sewage-generating uses as they appear within Chaska's borders.

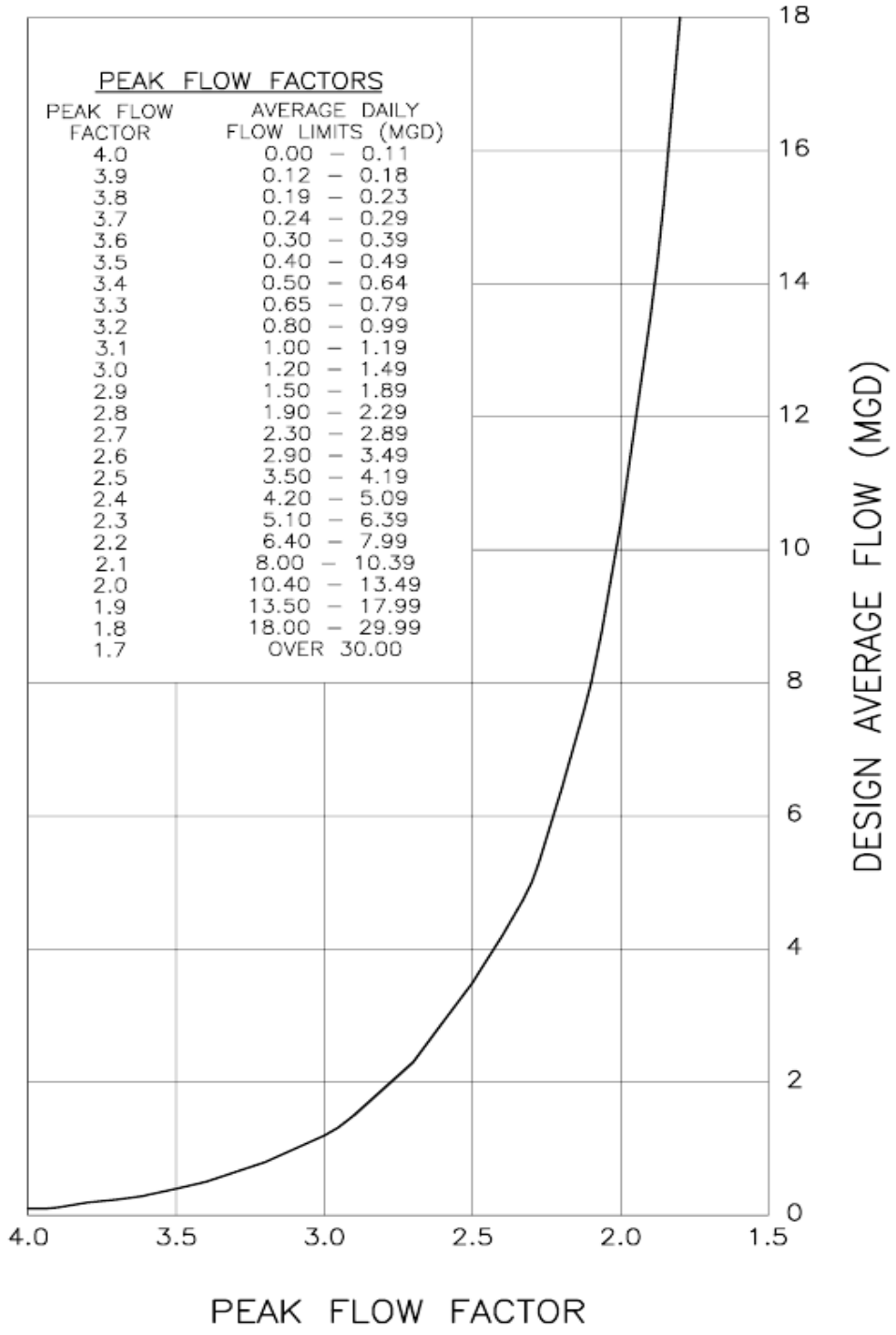
The purpose of the sewer flow model is to conservatively estimate demand at the subdistrict level so that no City trunk is undersized for its projected potential subdistrict flows. The commercial and industrial unit flow rates used in Appendix B to generate average flows represent standard commercial and industrial development as commonly seen in the metropolitan area. In certain specific locations, more intense sewage generation may occur. The conservative unit flow rates are intended to provide adequate capacity for these localized heavy sewage-generating uses.

3.3 PEAK FLOW FACTORS

The sanitary sewer system must be capable of handling the anticipated peak wastewater flow rate including any I/I. The design peak flow rate can be expressed as a variable ratio to the average flow rate. Curves used to describe this ratio (see Figure 2), called the Peak Flow Factor (PFF), indicate a decreasing ratio of peak flow to average flow with increasing average flow.

The PFF values applied in this study are shown in Figure 2 as a curve and in tabular form. These values are generally conservative and widely used throughout the state for municipal planning. They include a standard allowance for I/I, which is typical of new sanitary sewer construction as well as properly operating existing sewers. The design flows for each subdistrict are presented in Appendix C.

Figure 2 - Peak Flow Factors



4.0 SANITARY SEWER TRUNK SYSTEM

4.1 GENERAL

The trunk sewer system layout for the City of Chaska is presented on Map 1 at the back of this report. This map shows the main sanitary subdistricts, existing and proposed trunk sanitary sewers, and existing and proposed lift stations and forcemains.

The service area for the City's ultimate sewer system is shown on Map 1. As noted previously, the City has investigated an option that would service a small portion of the City of Carver annexation area. However, in order for this to occur, it would require a Met Council amendment to the regional sewer service area and an intercommunity flow agreement between Chaska and Carver.

Existing intercommunity flows from Chanhassen enter the Chaska system in Subdistricts NE-3, NE-4, and SE-1. Existing intercommunity flows from Laketown Township enter the Chaska system in Subdistrict W-6. Flows from Chaska enter the Carver system in Subdistrict SW-13. Intercommunity flow agreements are provided in Appendix H for the City and Gedney Pickle/Chanhassen and for the City and Laketown Township. There are no other formal intercommunity flow agreements since 2008. Instead, there is an administrative agreement between Chaska and Chanhassen that Chaska bills individual property owners for their respective sewer flows.

The design and modeling of the sanitary sewer system was based on a variety of parameters, such as: topography, property boundaries, land use, population density, and standard wastewater generation rates. Based on the topography of the undeveloped areas, the subdistricts were created and the most cost-effective locations for future trunk line facilities were determined. The locations of smaller sewer laterals and service lines are dependent upon future land development plats and cannot be accurately located from a study of this type.

Both the existing and proposed trunk sewer systems were evaluated and broken up into design segments. Each end of a design segment has a node assigned to it. The nodes were designated for the following reasons:

1. Flow from a subdistrict entering the pipe network.
2. Significant grade change has occurred.
3. Change in pipe size.
4. Two or more trunks connect.
5. Manmade elements (roads, railroads, etc.) affecting location and installation costs for the trunk system or lateral service of the subdistricts.

The proposed alignments shown on Map 1 generally follow the natural drainage of the land to minimize the use of lift stations and consequently provide the City with the most economical ultimate design sanitary sewer system. Minor adjustments in the routing and size of the trunk facilities will take place as determined by the specific land use and development conditions at the time of final design. Any such adjustments are expected to deviate minimally from this plan.

Each subdistrict contains at least one collection point where the subdistrict's sewage is defined to enter the pipe network. Upstream of that collection point, a lateral network of 8" gravity lines can serve future development areas. Lift stations and force mains will be required to service certain areas where low-lying ground makes gravity service

infeasible. All existing lift stations will remain as is, except the Yellow Brick Lift Station in Subdistrict SE-2, which is planned to be removed with the Downtown Redevelopment Project.

For study purposes, the City of Chaska was divided into major subdistricts. There are ten such major subdistricts, each defining the limits of service for a major trunk sewer. The major districts were further subdivided into subdistricts for the purpose of developing design flows within the small branch trunks and to determine the cumulative design flows in the main trunks. The subdistricts were named according to general location within the City and were identified by an abbreviation prefix followed by an identifying number. The prefix abbreviations are presented in Table 4.1.

Table 4.1 - Sewer Districts

East Creek Service Area	
District	**Prefix**
Northwest	NW
North	N
Northeast	NE
West	W
East	E
Southeast	SE
Old Town	O
West Creek Service Area	
District	**Prefix**
Southwest	SW
Heights	H
South	S

A description of the characteristics of each of the districts is presented below. Acreages of each of the major districts and subdistricts are contained in Appendix A of this report. Map 1 and the 2040 Land Use Map locate the major districts and subdistricts in relation to the proposed trunk system and proposed land use plan, respectively.

4.1.1 Northwest District

The Northwest Subdistrict contains approximately 1,760 acres of land and is located between CSAH 11 and McKnight Road and includes the northern drainage area of Lake Bavaria. Elevations range from a high of 1,040 feet above sea level north of Lake Bavaria to a low of 902 feet above sea level (elevation of McKnight Lake) at the eastern end of the district. The Northwest District is partially developed at this time with residential development in the southwestern portion of the district. With the exception of some large wetlands located in its north central and southeast areas, the district is well-drained, and it is expected that all remaining areas can be served with gravity sewers.

4.1.2 Northeast District

The Northeast District contains approximately 870 acres of land. Lake Hazeltine forms the southern boundary of this area. The area is nearly fully developed at this time. Industrial development is predominant except for the southwest corner west of Lake Hazeltine, which is designated residential. Several large wetlands exist north of the Chicago, Milwaukee, St. Paul, and Pacific Railroad. Elevations range from a high of 1,000 to a low of 916, the elevation of Lake Hazeltine.

4.1.3 North District

Approximately 1,110 acres are included in the North District. That part lying north of the Chicago, Milwaukee, St. Paul, and Pacific Railroad is undeveloped at this time with the exception of industrial development along the Trunk Highway 41 corridor. The middle and lower portion of the area contain part of the series of manmade lakes: Lake Jonathan and Lake Grace. This area primarily contains residential development with a centrally located local shopping center. The southern part of the district is the most densely developed area outside of Historic Downtown Chaska. The southern portion contains the original neighborhoods of the now defunct Jonathan Development Corporation. The Jonathan development concept utilized clustered housing with large centrally-located parks and open space.

4.1.4 West District

The West District encompasses approximately 2,250 acres. The extreme northwest part is located in Laketown Township. The West District is nearly fully developed. It consists primarily of low density residential land use and the Chaska Town Course. There are small undeveloped areas that remain in the southwest portion of the district. The northwest portion in Laketown Township is largely residential development with individual septic systems. However, Chaska provides sanitary sewer service to a residential neighborhood in Laketown Township via a trunk sewer within Subdistrict W-5 (Map 1).

A branch of Chaska's East Creek flows southeasterly through the West District, and several large wetland areas exist throughout. The elevations of the lower part of the district fall rapidly into the ravine system of East Creek. Elevations range from 1040 in the upper end to 850 at the outlet. The majority of the district is currently served by gravity sewer. The exception is the Clover Field development located in the west central portion. Here a larger lift station and force main serve a significant portion of this development as well as future development that will abut Clover Field.

4.1.5 East District

Large rolling hills characterize the East District with elevations falling rapidly into the ravine system of Chaska's East Creek. There are approximately 1,230 acres in the East District, including the Hazeltine National Golf Course. The City has completed major acquisitions for open space and park land around the ravines in the southern part of this area. Elevations range from a high of 980 south of Lake Hazeltine to a low of 800. The district is largely served by gravity sewer. The exception is the small development (Shadow Wood) at the extreme eastern edge north of CSAH No. 14 (Pioneer Trail) where a small lift station and force main provide connection to the sanitary system. Sanitary sewer elevations should be checked prior to developing the remaining land at the extreme southeastern end of Lake Hazeltine.

4.1.6 Southeast District

High plateau areas separated by steep ravines and bluffs characterize the Southeast District. Elevations range from a high of 950 to a low of 723 over the 1,880 acres of land. The southern part of the City along the Minnesota River below elevation 723 and outside of protective dikes is considered floodplain and is not included in any area computations for sewage volume. The area inside the Corps of Engineers levee system is included in the area computations. Part of the City of Chanhassen, including the M.A. Gedney Company, is also included in the Southeast District.

4.1.7 Old Town District

The Old Town District, otherwise known as Historic Downtown Chaska, contains approximately 410 acres of land, with the lower portion nearing full development with urban services. The largely undeveloped upper portion is a plateau area separated by bluffs from the district's lower areas. The upper portion is able to be served by gravity sewer. Elevations range from a high of 895 in the upper portion to a low of 708 in the lower portion of the Old Town District.

4.1.8 Southwest District

The Southwest District is the largest in the study area and contains approximately 4,740 acres in total. The easterly portion lies within the present corporate limits of Chaska, while the remainder is in Laketown and Dahlgren Townships. The Southwest District is still largely rural and agricultural in nature, but considerable residential development has occurred in the eastern portion of the district in the past few years. The topography generally consists of large plateau areas traversed by deep ravines formed by Chaska's West Creek. Elevations range from a high of 1,040 to a low of 730.

4.1.9 Heights District

The Heights District contains approximately 430 acres of land. A large portion of this area was part of the annexation of Chaska Township in 2003. A portion of this area has been developed along the lower portion of County Road 44. The remainder of the district remains largely agricultural. The topography consists of rolling plateaus occupying the central and western areas and bluffs and steep, heavily wooded ravines adjacent to Creek Road and County Road 61. Elevations range from a high of 950 at the west end near new Trunk Highway 212 to a low of 740 near County Road 61.

4.1.10 South District

The South District contains approximately 250 acres of largely undeveloped land. This district is very similar to the Southwest District in both existing land use and topography, with drainage falling rapidly in elevation through ravines to County Road 61. Elevations range from a high of 970 at the west end to a low of 740 near County Road 61.

4.2 RECOMMENDATIONS

4.2.1 General

The City of Chaska is divided into ten major districts based upon trunk service areas. These major districts are further divided into subdistricts based on connection points to the existing and proposed Chaska trunk sanitary sewer system, as shown on Map 1. Appendix A provides area summaries for each subdistrict based on Chaska' land use plan. The unit flow rates of Table 3.1 are multiplied by the land use areas to obtain the average design flows of Appendix B. Appendix C multiplies these average design flows by a peak flow factor (as shown in Figure 2) to obtain a peak hourly design flow. Appendix D takes these peak design flows and transmits them through the existing and proposed trunk sewer system. Within the existing system, a capacity-to-design flow calculation is performed to determine whether elements of the existing trunk system are adequately sized to support Chaska's land use plan and growth projections. Future trunks are sized to provide a capacity that exceeds the projected design flow. Appendix E provides a capital improvement plan for extending trunk sewer to serve the full extent of Chaska's 2040 Land Use Plan. Appendix F provides lift station data.

4.2.2 Metropolitan Facilities

Chaska's sewer system consists primarily of gravity trunk sewers with a few lift stations serving isolated subdistrict areas. All sewage is conveyed to one of two major Chaska sanitary sewer trunk pipes located in the Old Town District. Chaska's Hazeltine Interceptor and Heights/Southwest Trunk Sewers convey flow to the MCES L-71 pumping station located south of the Carver County Courthouse. The Hazeltine Interceptor discharges directly to MCES L-71 while the other trunks discharge into MCES Interceptor 8038, the Chaska West Interceptor. The Metropolitan Council pumps Chaska's sewage by forcemain south across the Minnesota River through Shakopee to the Blue Lake WWTP.

The Chaska West Interceptor was built to accommodate projected flows from the South, Heights, and Southwest Trunk Sewers. An option that would service a portion of a future Carver annexation area west of Chaska that is directly tributary to the Southwest Trunk and MCES Interceptor 8038 was investigated. However, in order for this to occur, it would require a Met Council amendment to the overall comprehensive sewer layout and a municipal sewer agreement between both Chaska and Carver.

4.2.3 Sanitary Sewer Layout

Chaska's sewer system is laid out in two main service areas, the East Creek and West Creek service areas. Most of Chaska's sewered development is in the East Creek service area. The West Creek service area is mostly rural and undeveloped. The sewers for the West Creek services are planned to be served through Historic Downtown Chaska (Old Town District) through the Chaska West Interceptor. Lift stations have been provided to serve low-lying areas (see Map 1 and Appendix F). In some cases, these are temporary facilities that will be removed when future trunk lines are installed.

4.2.4 Historic Downtown Chaska

Sewer lines were originally built in this area in the 1920s. As parts of Chaska Township were developed, 8-inch, 10-inch, and 12-inch clay sewers were extended for service. All sewage flows by gravity to MCES Interceptor 8038, which then conveys it to the MCES L-71 pumping station.

The existing clay sewers have adequate hydraulic capacity for all current and projected needs of this area. These older pipes are being inspected and evaluated for rehabilitation or replacement in conjunction with all street or utility projects. Many of these sewers are likely susceptible to excessive infiltration during wet weather and high river level periods. As described in section 5, Chaska regularly replaces these older sewers with its street reconstruction program. These replacements coincide with disconnecting any clearwater sources identified in each project area. The clear water sources include foundation drains and sump pumps. Where necessary, Chaska provides a separate storm sewer pipe for these clear water sources.

4.2.5 East Creek Service Area

The Hazeltine Interceptor is the main facility that serves the East Creek Service Area. The original Hazeltine Interceptor was built in 1965. A new Hazeltine Interceptor was built in 1995 to replace a major portion of the original facility that had inadequate capacity for the projected ultimate design flows.

The Jonathan Interceptor, built in 1968, extends west from the upper end of the Hazeltine Interceptor and serves the West Trunk and North Trunk sewers. The West Trunk serves the West District and the North Trunk serves the Northeast, North, and Northwest Districts.

Proposed Rural or Estate Residential land use in the Northwest District will delay or possibly eliminate the need to extend several trunk sewers. Sewer subdistricts NW-2, NW-3, and NW-4 and portions of NW-1, NW-6, NW-8, N-4, and W-6 are planned for development not requiring sanitary sewers. However, Chaska's proposed trunk sewer system and capital expenditure planning consider the alignment and cost of sewer extensions to these areas in the event that future land use plans consider providing sewer service to development in these areas.

4.2.6 West Creek Service Area

Only the easterly portion of the West Creek Service Area currently has sanitary sewer facilities. These are in the vicinity of Creek Road and County Road 44. Many facilities remain to be built to serve the Southwest and South Districts.

The easterly portion of the service area lies within the present corporate limits of Chaska, while the remainder is in Laketown and Dahlgren Townships. The area east of Highway 212 is still primarily agricultural today, but considerable residential development has occurred here in the past few years. Trunk lines have been extended in the Heights and Southwest Districts to serve this new development. Most areas west of Highway 212 are agricultural and proposed to remain that way for the 2040 Land Use Plan. However, the sanitary system planning considers alignment and costs for extending trunk sewers across this area in the event that future land use plans consider providing sewer service to development in these areas.

This CSP includes the alignment and costs for extending trunk sewer service to areas in Laketown and Dahlgren Townships, as shown on Map 1, in anticipation of the potential future need to serve these areas with sanitary sewer.

The construction of the trunk sewers to serve Subdistrict SW-13 will be dependent on the phasing of development in this area. Service to SW-13 is shown through Subdistrict SW-10 on Map 1. However, there would be the potential to serve the area through Subdistrict S-1 as well. In this event, the South Trunk would need to be extended to SW-13.

4.3 INDIVIDUAL SEWAGE TREATMENT SYSTEMS (ISTS)

There are currently 170 on-site sewage treatment systems in the City of Chaska. These individual facilities can be found in scattered locations throughout the west and northwest rural areas of the City (see Map 1). In addition, there are several scattered individual disposal systems within areas serviced by trunk facilities (large lot single family homes). Most on-site systems will be eliminated as municipal sewer service is extended throughout the City. At the present time, there are no known nonconforming systems or systems with problems in the City.

The City of Chaska has adopted ordinance provisions consistent with Minnesota Pollution Control Agency Standards (see Appendix G).

In 1983, Chaska adopted an On-site Treatment System Ordinance consistent with Metropolitan Council guidelines (Ordinance 10-A). Ordinance 10-A was amended in 1987 (New Ordinance 10-B). The revised ordinance strengthened several requirements. First, it adopted by reference the State regulations, Minnesota Rules Chapter 7080. The ordinance was also changed to permit alternative systems, such as mound and SB-2 systems, and provides regulations for their installation. Ordinance compliance, permit information, and licensing requirements were also improved to require pumping reports on a monthly basis from pumpers; to require annual licensing procedures for designers, installers, and pumpers; and to submit detailed design plans and plat plans indicating two drainfield sites for each lot.

The City of Chaska has since contracted with Carver County to manage Chaska's ISTS program. Carver County performs triennial inspections, maintains a data tracking/notification system, and enforces procedures to rectify imminent public health threats, such as occur with failing systems. Information regarding the County current ISTS regulation program can be found on the Carver County website.

4.4 PRIVATELY OWNED SEWAGE TREATMENT SYSTEMS

There are no publicly or privately owned wastewater treatment plants within the City of Chaska.

5.0 INFILTRATION AND FLOW

5.1 GENERAL

The Metropolitan Council instituted an Inflow and Infiltration (I/I) Surcharge Program (IISP) in 2006. The fundamental policy statement summarizing this program is that the Metropolitan Council "will not provide additional capacity within its interceptor system to serve excessive inflow and infiltration." The Council establishes inflow and infiltration thresholds for each of the communities that connect to its system. Communities that exceed the thresholds are required to eliminate the excess flow within a reasonable timeframe or pay a surcharge fee.

The Metropolitan Council identified Chaska as a community with observed excess I/I on its original list, but Chaska has since spent an adequate amount to be removed from the current list. Removal from the I/I surcharge program occurred through submittal of I/I Project and Cost Eligibility forms to Metropolitan Council for the years 2006 and 2007.

5.2 SOURCES AND EXTENT OF I/I

Potential sources of I/I in Chaska's sewer system could include

- Non-compliant residential sump pump connections to the sanitary sewer
- Leaky pipes and structures under groundwater or flooded conditions
- Service line leaks
- Inflow from floor drains of flooded structures

An estimated 1,140 homes in Chaska were built pre-1970. No pre-1970 private services have been evaluated for I/I susceptibility.

The EPA Guide for Estimating Infiltration and Inflow (June 2014) was used to estimate the proportion of I/I contribution in the City's wastewater system. Monthly flow data were obtained from Metropolitan Council Environmental Services, for the period from 1991 to 2016. 2012 to 2016 monthly data were used to obtain monthly average flows for the five-year period from March to November (representative of a wet portion of the year) and December to February (representative of a dry portion of the year). It was determined that the wet monthly average flow (March-November) was 78.46 mg, and that the dry monthly average flow (December-February) was 70.26 mg. Thus, on average, I/I contributes roughly 8.20 mg monthly (roughly 12% of base flows). The peak monthly flow for the City of Chaska is 104.00 mg in June 2014, which is roughly 48% above base flows. It should be noted that June 2014 was the State of Minnesota's wettest month of the modern record (per the MnDNR website), and Chaska had a record rainfall of 13.24" during the month, leading to the unusually high I/I that month. The next highest month was June 2012, which was 29% above base flows.

Chaska has experienced severe I/I problems during Minnesota River flooding. High river levels and heavy rains have been the main problem sources. Leaking manholes, pipes, foundation drains, and sump pumps were the main I/I contributors. Chaska has reduced I/I in the Old Town District along the river with flood control projects built in the 1990's. Furthermore, Chaska continues to rehabilitate the Old Town District and other sanitary sewer systems as reconstruction projects come forward.

5.3 GOALS, POLICIES, AND STRATEGIES TO ADDRESS I/I

Since excess I/I is a local concern to Chaska as well as a regional concern to Metropolitan Council, Chaska will continue to work on reducing I/I in its sanitary sewer. The City's primary goals regarding I/I are to

- Preserve capacity in the local and regional system
- Minimize I/I in the system
- Prevent excessive I/I, backups, and overflows

Sump pump and rooftop drain connections to the sanitary sewer system are prohibited by ordinance (Appendix G), and the City works to prevent I/I through inspection of connections to the sanitary sewer system. The City also uses modern materials and standards in new construction to prevent I/I. The focus of I/I mitigation efforts has been on the public improvements side through pipe rehabilitation and manhole sealing improvements. I/I mitigation on the private side is addressed voluntarily through educational efforts.

5.4 I/I IMPLEMENTATION PLAN

Chaska's work in reducing I/I has involved sewer repair and replacement, sewer service replacements, manhole reconstruction and repair, and installation of drain tiles to receive clear water discharges from individual home and business foundation drains and sump pumps.

Prior to the I/I surcharge program, the City had historically taken strong actions to minimize infiltration and inflow. The City has completed a comprehensive manhole inspection and rehabilitation program on all existing sanitary sewer lines, and periodically maintains pipes in the existing system. The City completed a major I/I analysis in 1981. The report indicated a number of possible I/I sources. Since then, the City has implemented some of the report's recommendations for I/I reduction. In 1995, the City completed a project that included the repair of sewer lines on the old Hazeltine Interceptor, which had previously been identified as high infiltration lines. The City has also lined a number of manholes on the North Interceptor as part of a rehabilitation project. Between 2009 and 2012, Chaska inspected every residential, commercial, and industrial property in the City for sump pump discharge compliance. Since then, Chaska randomly inspects areas for sump pump connections.

Infiltration/Inflow (I/I) improvements will continue to be made in the City of Chaska. The City has committed to I/I reduction as part of their reconstruction projects. The first street project that incorporated the City's new policy of providing individual drain tile connection points was the reconstruction of First Street in Historic Downtown Chaska. This project not only was the project that installed the Chaska West Interceptor, it improved the overall drainage of runoff and provided storm sewer to an area of town that had none. It also provided a separate drain tile system for hooking up foundation drains and sump pump discharges as part of the storm sewer design. Also, as part of the project, an inspection of all homes along the project was made. This was done to remedy any illegal connections to the sanitary sewer system.

Since the First Street Project, all reconstructions that have taken place in the downtown neighborhoods have included measures to provide a drain tile system for residents to connect foundation drains and sump pump to. This includes extending an individual drain tile service as well as providing a box to connect to for each individual residence. Inspections are made of each individual residence to correct any illegal connections and check for compliance. Similar procedures are being in incorporated in new construction as well.

A summary of ongoing implementation activities to prevent or eliminate excessive I/I from the system include

- Annually televise and inspect sewer facilities for degradation and leaks
- Perform annual maintenance, repairs, or rehabilitation of sewer facilities as needed
- Perform sewer lining
- Provide draintile in downtown neighborhood for roof drain and sump pump connection
- Replace old sewers as part of downtown street and utility reconstruction
- Install new sewer facilities in accordance with current standards for materials and construction
- Conduct plumbing and other inspections during installation and connection to the system
- Continue work towards disconnecting prohibited/unused connections to the sewer system

Table 5.1 presents a summary of budgeted implementation costs to address I/I in the City's system.

Table 5.1 – Estimated I/I Implementation Costs

I/I Implementation Activity	Cost
I/I program – inspection, maintenance, rehabilitation	$50,000/year
Annual sewer manhole and pipe lining	$50,000/year
Downtown draintile connection program	$12,000/year
Sewer replacement as part of downtown reconstruction	$450,000/year

6.0 COST ESTIMATES AND CAPITAL IMPROVEMENT PLAN

6.1 COST ESTIMATES

One of the basic objectives of this report was to determine the cost of completing the City of Chaska's Trunk Sanitary Sewer System, so that connection charges and trunk area assessments could be determined so as to ensure availability of sufficient funds for the required construction.

The cost estimates presented in this report are based on 2018 construction costs and can be related to the value of the ENR Index for Construction Costs of approximately 13,031 (August 2018). 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 6.1, and a detailed breakdown of the cost estimates is presented in Appendix E. The cost estimates in Table 6.1 include all costs associated with the completion of Chaska's trunk sanitary sewer system, including trunk sanitary sewer, lift stations, and forcemains.

The cost estimates include 20% for legal/design/administration costs, 5% for capitalized interest, 5% for construction contingencies, and 30% for planning contingencies. Actual estimated construction costs are approximately 60% of the total project costs shown. Land and easement acquisition costs are not directly included but may be partially offset by the contingencies.

Table 6.1 - Trunk Sewer System Cost Summary

Sewer District	Cost
Northwest District	$1,317,000
Southwest District	$5,215,000
South District	$368,000
Total Cost	**$6,899,000**

6.2 CAPITAL IMPROVEMENT PROGRAM

A Capital Improvement Program based on estimated phasing of trunk sewer construction is presented in Table 6.2. The proposed trunk sewer extensions are shown on Map 1. Note that the costs do not include annual maintenance, lift station upgrade, infiltration/inflow reduction, or sewer replacement costs.

Table 6.2 - Capital Improvement Plan

Trunk Segment		Pipe Size, inches	Projected Year of Construction	Cost, $
From Node	To Node			
Northwest District				
33	32	10	Post-2023	539,300
34	32	8	Post-2023	594,700
32	31	12	Post-2023	182,900
Southwest District				
83	82	8	Post-2023	461,500
82	81	8	Post-2023	221,000
81	78	10	Post-2023	292,500
80	79	10	Post-2023	119,000
79	78	10	Post-2023	74,400
78	74	15	Post-2023	656,100
88	77	10	Post-2023	428,400
77	76	15	Post-2023	381,100
76	75	12	Post-2023	155,500
75	74	15	2022	716,800
74	73	18	2020	1,402,700
73	68	18	2020	305,900
South District				
86	85	8	Post-2023	119,200
85	84	8	Post-2023	248,600
Total Cost				**$6,899,500**

7.0 SUMMARY AND OUTCOMES

The Comprehensive Sanitary Sewer Plan presented herein is intended to serve as an inventory of City of Chaska's existing sanitary sewer trunk facilities and as a guide for expanding the trunk sewer system to service future development in the City. Based on the information analyzed in this study and presented in this report, the following outcomes are desired:

- That the City Council adopts the sanitary sewer layout, as presented in the Trunk Sewer System Map, as the development guide for sanitary sewer construction within the study area.
- That the system design flows and criteria in Appendices C and D be used for sizing all future sanitary sewer trunk facilities, but that flow projections of Section 2 be used when representing the impact of Chaska's system on the Metropolitan Disposal System and the Blue Lake WWTP.

Appendix A AREAS OF SEWER SUBDISTRICTS

APPENDIX A - 2040 AREAS OF SEWER SUBDISTRICTS

Area Designation	Low Density Residential (acres)	Medium Density Residential (acres)	High Density Residential (acres)	C/I (acres)	Public/ Semi-Public (acres)	Row (acres)	Open Space (acres)	Total (acres)
Northwest District								
NW-1	88	0	0	0	0	12	53	153
NW-2	211	0	0	0	19	4	14	249
NW-3	161	0	0	0	0	2	8	171
NW-4	306	0	0	0	53	12	3	374
NW-5	27	16	0	0	0	11	24	78
NW-6	152	0	0	0	2	25	50	229
NW-7	44	3	0	0	0	23	148	219
NW-8	148	0	0	0	0	44	95	287
Subtotal	1,137	19	0	0	73	135	395	1,759
North District								
N-1	75	28	41	20	22	90	97	372
N-2	0	24	0	48	9	20	76	177
N-3	79	0	0	72	0	10	79	240
N-4	77	0	0	107	72	19	48	323
Subtotal	231	52	41	247	103	139	301	1,113
Northeast District								
NE-1	0	0	0	127	0	29	40	196
NE-2	0	53	0	0	0	14	38	105
NE-3	0	0	0	187	0	25	4	217
NE-4	0	0	5	157	0	18	173	353
Subtotal	0	53	5	471	0	86	256	872
West District								
W-1	136	5	4	4	57	62	50	317
W-2	36	0	0	0	14	16	24	89
W-3	47	27	16	1	0	31	69	192
W-4	71	0	0	0	0	27	54	152
W-5	94	15	0	0	0	31	95	235
W-6	143	0	0	0	2	23	262	430
W-7	95	0	0	0	0	46	52	193
W-8	21	11	0	82	0	32	43	189
W-9	145	54	11	0	1	54	113	378
W-10	14	6	0	0	4	44	8	76
Subtotal	803	119	31	87	78	364	769	2,251

APPENDIX A - 2040 AREAS OF SEWER SUBDISTRICTS

Area Designation	Low Density Residential (acres)	Medium Density Residential (acres)	High Density Residential (acres)	C/I (acres)	Public/ Semi-Public (acres)	Row (acres)	Open Space (acres)	Total (acres)
East District								
E-1	107	65	0	20	58	68	279	598
E-2	42	0	0	0	39	36	111	228
E-3	205	1	0	4	14	111	66	401
Subtotal	354	66	0	24	112	214	456	1,227
Southwest District								
SW-1	47	0	0	6	0	11	74	138
SW-2	62	0	0	0	0	28	85	175
SW-3	25	0	0	0	0	34	21	80
SW-4	0	0	0	95	0	15	11	122
SW-5	60	0	0	15	0	10	26	111
SW-6	137	0	0	0	0	6	0	144
SW-7	142	0	0	0	8	12	0	162
SW-8	25	0	0	92	0	5	0	123
SW-10	6	0	0	255	0	13	24	299
SW-13	75	0	0	115	24	82	3	299
SW-14	13	50	0	0	0	28	8	99
SW-15	45	0	0	0	0	6	14	65
SW-16	32	29	0	0	0	21	13	95
Subtotal	668	79	0	579	33	271	280	1,910
South District								
S-1	125	13	1	0	0	61	36	235
Subtotal	125	13	1	0	0	61	36	235
Southeast District								
SE-1	16	81	0	123	16	51	88	374
SE-2	62	15	22	27	2	22	47	199
SE-3	183	17	5	15	118	79	73	490
SE-5	29	0	3	1	0	16	2	52
SE-6	8	113	15	16	0	9	29	191
SE-7	29	0	0	0	0	36	60	125
SE-8	195	9	0	3	6	58	179	450
Subtotal	521	235	45	185	142	273	478	1,880

APPENDIX A - 2040 AREAS OF SEWER SUBDISTRICTS

Area Designation	Low Density Residential (acres)	Medium Density Residential (acres)	High Density Residential (acres)	C/I (acres)	Public/ Semi-Public (acres)	Row (acres)	Open Space (acres)	Total (acres)
Old Town District								
O-1	32	95	8	30	42	93	107	406
Subtotal	32	95	8	30	42	93	107	406
Heights								
H-1	73	0	14	1	22	21	17	148
H-2	74	79	0	0	6	23	104	286
Subtotal	147	79	14	1	28	44	121	435
TOTALS	4,019	810	145	1,624	611	1,680	3,198	12,086

Appendix B AVERAGE FLOWS OF SEWER SUBDISTRICTS

APPENDIX B - 2040 SYSTEM AVERAGE FLOWS OF SEWER SUBDISTRICTS

Area Designation	Rural Residential (MGD)	Low Density Residential (MGD)	Medium Density Residential (MGD)	High Density Residential (MGD)	Comm./Ind. Office (MGD)	Public/ Semi-Public (MGD)	Row (MGD)	Open Space (MGD)	Total (MGD)
Northwest District									
NW-1	0.000	0.044	0.000	0.000	0.000	0.000	0.000	0.000	0.044
NW-2	0.000	0.106	0.000	0.000	0.000	0.005	0.000	0.000	0.110
NW-3	0.000	0.080	0.000	0.000	0.000	0.000	0.000	0.000	0.080
NW-4	0.000	0.153	0.000	0.000	0.000	0.013	0.000	0.000	0.166
NW-5	0.000	0.014	0.016	0.000	0.000	0.000	0.000	0.000	0.030
NW-6	0.000	0.076	0.000	0.000	0.000	0.000	0.000	0.000	0.076
NW-7	0.000	0.022	0.003	0.000	0.000	0.000	0.000	0.000	0.025
NW-8	0.000	0.074	0.000	0.000	0.000	0.000	0.000	0.000	0.074
Subtotal	0.000	0.568	0.019	0.000	0.000	0.018	0.000	0.000	0.606
North District									
N-1	0.000	0.037	0.028	0.061	0.029	0.006	0.000	0.000	0.161
N-2	0.000	0.000	0.024	0.000	0.072	0.002	0.000	0.000	0.099
N-3	0.000	0.039	0.000	0.000	0.108	0.000	0.000	0.000	0.147
N-4	0.000	0.039	0.000	0.000	0.161	0.018	0.000	0.000	0.217
Subtotal	0.000	0.115	0.052	0.061	0.370	0.026	0.000	0.000	0.624
Northeast District									
NE-1	0.000	0.000	0.000	0.000	0.191	0.000	0.000	0.000	0.191
NE-2	0.000	0.000	0.053	0.000	0.000	0.000	0.000	0.000	0.053
NE-3	0.000	0.000	0.000	0.000	0.281	0.000	0.000	0.000	0.281
NE-4	0.000	0.000	0.000	0.008	0.235	0.000	0.000	0.000	0.243
Subtotal	0.000	0.000	0.053	0.008	0.707	0.000	0.000	0.000	0.768
West District									
W-1	0.000	0.068	0.005	0.006	0.006	0.014	0.000	0.000	0.099
W-2	0.000	0.018	0.000	0.000	0.000	0.003	0.000	0.000	0.021
W-3	0.000	0.024	0.027	0.023	0.002	0.000	0.000	0.000	0.076
W-4	0.000	0.036	0.000	0.000	0.000	0.000	0.000	0.000	0.036
W-5	0.000	0.047	0.015	0.000	0.000	0.000	0.000	0.000	0.062
W-6	0.000	0.072	0.000	0.000	0.000	0.001	0.000	0.000	0.072
W-7	0.000	0.048	0.000	0.000	0.000	0.000	0.000	0.000	0.048
W-8	0.000	0.010	0.011	0.000	0.124	0.000	0.000	0.000	0.145
W-9	0.000	0.072	0.054	0.017	0.000	0.000	0.000	0.000	0.144
W-10	0.000	0.007	0.006	0.000	0.000	0.001	0.000	0.000	0.014
Subtotal	0.000	0.401	0.119	0.046	0.131	0.019	0.000	0.000	0.717

APPENDIX B - 2040 SYSTEM AVERAGE FLOWS OF SEWER SUBDISTRICTS

Area Designation	Rural Residential (MGD)	Low Density Residential (MGD)	Medium Density Residential (MGD)	High Density Residential (MGD)	Comm./Ind. Office (MGD)	Public/ Semi-Public (MGD)	Row (MGD)	Open Space (MGD)	Total (MGD)
East District									
E-1	0.000	0.053	0.065	0.000	0.031	0.015	0.000	0.000	0.164
E-2	0.000	0.021	0.000	0.000	0.000	0.010	0.000	0.000	0.031
E-3	0.000	0.102	0.001	0.000	0.006	0.004	0.000	0.000	0.113
Subtotal	0.000	0.177	0.066	0.000	0.036	0.028	0.000	0.000	0.308
Southwest District									
SW-1	0.000	0.023	0.000	0.000	0.010	0.000	0.000	0.000	0.033
SW-2	0.000	0.031	0.000	0.000	0.000	0.000	0.000	0.000	0.031
SW-3	0.000	0.012	0.000	0.000	0.000	0.000	0.000	0.000	0.012
SW-4	0.000	0.000	0.000	0.000	0.143	0.000	0.000	0.000	0.143
SW-5	0.000	0.030	0.000	0.000	0.022	0.000	0.000	0.000	0.052
SW-6	0.000	0.069	0.000	0.000	0.000	0.000	0.000	0.000	0.069
SW-7	0.000	0.071	0.000	0.000	0.000	0.002	0.000	0.000	0.073
SW-8	0.000	0.013	0.000	0.000	0.139	0.000	0.000	0.000	0.151
SW-10	0.000	0.003	0.000	0.000	0.383	0.000	0.000	0.000	0.386
SW-13	0.000	0.037	0.000	0.000	0.172	0.006	0.000	0.000	0.216
SW-14	0.000	0.006	0.050	0.000	0.000	0.000	0.000	0.000	0.056
SW-15	0.000	0.023	0.000	0.000	0.000	0.000	0.000	0.000	0.023
SW-16	0.000	0.016	0.029	0.000	0.000	0.000	0.000	0.000	0.045
Subtotal	0.000	0.334	0.079	0.000	0.868	0.008	0.000	0.000	1.290
South District									
S-1	0.000	0.063	0.013	0.001	0.000	0.000	0.000	0.000	0.076
Subtotal	0.000	0.063	0.013	0.001	0.000	0.000	0.000	0.000	0.076
Southeast District									
SE-1	0.000	0.008	0.081	0.000	0.184	0.004	0.000	0.000	0.276
SE-2	0.000	0.031	0.015	0.033	0.041	0.001	0.000	0.000	0.121
SE-3	0.000	0.092	0.017	0.007	0.022	0.030	0.000	0.000	0.167
SE-5	0.000	0.015	0.000	0.005	0.002	0.000	0.000	0.000	0.022
SE-6	0.000	0.004	0.113	0.023	0.025	0.000	0.000	0.000	0.165
SE-7	0.000	0.014	0.000	0.000	0.000	0.000	0.000	0.000	0.014
SE-8	0.000	0.098	0.009	0.000	0.004	0.001	0.000	0.000	0.112
Subtotal	0.000	0.261	0.235	0.068	0.278	0.036	0.000	0.000	0.877

APPENDIX B - 2040 SYSTEM AVERAGE FLOWS OF SEWER SUBDISTRICTS

Area Designation	Rural Residential (MGD)	Low Density Residential (MGD)	Medium Density Residential (MGD)	High Density Residential (MGD)	Comm./Ind. Office (MGD)	Public/ Semi-Public (MGD)	Row (MGD)	Open Space (MGD)	Total (MGD)
Old Town District									
O-1	0.000	0.016	0.095	0.012	0.044	0.010	0.000	0.000	0.178
Subtotal	0.000	0.016	0.095	0.012	0.044	0.010	0.000	0.000	0.178
Heights									
H-1	0.000	0.037	0.000	0.021	0.002	0.006	0.000	0.000	0.065
H-2	0.000	0.037	0.079	0.000	0.000	0.001	0.000	0.000	0.117
Subtotal	0.000	0.074	0.079	0.021	0.002	0.007	0.000	0.000	0.182
TOTALS	0.000	2.009	0.810	0.217	2.436	0.153	0.000	0.000	5.625

Appendix C DESIGN FLOWS

APPENDIX C - 2040 SYSTEM DESIGN FLOWS

From Point	To Point	Subdistrict Added	Average Flow Added (MGD)	Cumulative Average Flow (MGD)	Peak Flow Factor (PFF)	Design Flow (MGD)
Northwest District						
33	32	NW-4	0.166	0.166	3.9	0.648
34	32	NW-3	0.080	0.080	4.0	0.321
32	31	NW-2	0.110	0.357	3.6	1.285
37	36	NW-7	0.025	0.025	4.0	0.100
36	35		0.000	0.025	4.0	0.100
40	39	NW-8	0.074	0.074	4.0	0.295
39	38		0.000	0.074	4.0	0.295
38	35	NW-6	0.076	0.150	3.9	0.586
35	31	NW-5	0.030	0.205	3.8	0.780
31	30		0.000	0.562	3.4	1.911
30	21	NW-1	0.044	0.606	3.4	2.061
North District						
24	23	N-4	0.217	0.217	3.8	0.826
25	23	50% N-3	0.074	0.074	4.0	0.294
23	22		0.000	0.291	3.7	1.076
26	22	50% NE-1, NE-2	0.149	0.768	3.3	2.533
22	21	50% N-3	0.074	1.132	3.1	3.509
21	20	50% N-2	0.049	1.787	2.9	5.183
20	19	50% N-2	0.049	1.837	2.9	5.326
19	18	50% N-1	0.081	1.917	2.8	5.368
18	17	50% N-1	0.081	1.998	2.8	5.594
Northeast District						
29	27	NE-3	0.281	0.281	3.7	1.039
28	27	NE-4	0.243	0.243	3.7	0.898
27	26	50% NE-1	0.096	0.619	3.4	2.104
West District						
49	48	W-6	0.072	0.072	4.0	0.289
48	47	W-5	0.062	0.134	3.9	0.523
47	46		0.000	0.134	3.9	0.523
46	45	W-2, W-4	0.057	0.191	3.8	0.726
45	44	W-3	0.076	0.268	3.7	0.990
44	43	W-7	0.048	0.315	3.6	1.135
43	42		0.000	0.315	3.6	1.135
56	55	50% W-8	0.073	0.073	4.0	0.291
55	54	50% W-8	0.073	0.145	3.9	0.567
54	50		0.000	0.145	3.9	0.567
53	52	W-9	0.144	0.144	3.9	0.560
52	51		0.000	0.144	3.9	0.560
51	50		0.000	0.144	3.9	0.560
50	42	W-10	0.014	0.302	3.6	1.089
42	41		0.000	0.618	3.4	2.100
41	17	W-1	0.099	0.717	3.3	2.365
East District						
13	12	E-2, E-3	0.144	0.144	3.9	0.561
15	14	50% E-1	0.082	0.082	4.0	0.328
14	12	50% E-1	0.082	0.164	3.9	0.639

APPENDIX C - 2040 SYSTEM DESIGN FLOWS

From Point	To Point	Subdistrict Added	Average Flow Added (MGD)	Cumulative Average Flow (MGD)	Peak Flow Factor (PFF)	Design Flow (MGD)
Southwest District						
83	82	SW-7	0.073	0.073	4.0	0.291
82	81	SW-6	0.069	0.141	3.9	0.552
81	78	SW-5	0.052	0.194	3.8	0.736
80	79	SW-8	0.151	0.151	3.9	0.590
79	78		0.000	0.151	3.9	0.590
78	74	50% SW-4	0.071	0.416	3.5	1.457
88	77	SW-13	0.216	0.216	3.8	0.819
77	76		0.000	0.216	3.8	0.819
76	75	50% SW-10	0.193	0.409	3.5	1.431
75	74	50% SW-10	0.193	0.602	3.4	2.046
74	73	50% SW-4	0.071	1.089	3.1	3.377
73	68	SW-2, SW-3	0.043	1.133	3.1	3.511
72	71	SW-14	0.056	0.056	4.0	0.226
71	69	50% SW-16	0.023	0.079	4.0	0.316
70	69	SW-15	0.023	0.023	4.0	0.091
69	68	50% SW-16	0.023	0.124	3.9	0.484
68	67	50% SW-1	0.017	1.273	3.0	3.820
South District						
86	85	S-1	0.076	0.076	4.0	0.304
85	84		0.000	0.076	4.0	0.304
Southeast District						
17	16		0.000	2.715	2.7	7.329
16	11	SE-7	0.014	2.729	2.7	7.368
12	11		0.000	0.308	3.6	1.108
11	10		0.000	3.037	2.6	7.895
10	9	SE-8	0.112	3.149	2.6	8.186
9	8		0.000	3.149	2.6	8.186
8	2	50% SE-1	0.138	3.287	2.6	8.546
7	5	SE-6	0.165	0.165	3.9	0.642
6	5	SE-3	0.167	0.167	3.9	0.650
5	4		0.000	0.332	3.6	1.193
4	3	SE-5	0.022	0.353	3.6	1.272
3	2	SE-2	0.121	0.474	3.5	1.659
2	1	50% SE-1	0.138	3.899	2.5	9.748
Old Town District						
61	60		0.000	0.182	3.9	0.711
67	60	50% SW-1	0.017	1.290	3.0	3.870
60	59	25% O-1	0.044	1.517	2.9	4.399
58	57	50% O-1	0.089	0.089	4.0	0.356
Direct	MCES 8038	25% O-1	0.044	0.044	4.0	0.178
Heights District						
66	65	H-2	0.117	0.117	4.0	0.469
65	64		0.000	0.117	4.0	0.469
64	63	50% H-1	0.033	0.150	3.9	0.585
63	62	50% H-1	0.033	0.182	3.9	0.711
62	61		0.000	0.182	3.9	0.711

Total Cumulative Average Flow to Existing WWTP **5.63** **MGD**
Total Design Flow to Existing WWTP **12.94** **MGD**

Appendix D EXISTING/PROPOSED DESIGN AND CAPACITY INFORMATION

APPENDIX D - 2040 SYSTEM EXISTING/PROPOSED PIPE DESIGN AND CAPACITY INFORMATION

From Point	To Point	Design Flow (MGD)	Pipe-Existing/ Proposed	Size (in.)	Length (ft.)	Upstream Elev. (ft.)	Downstream Elev. (ft.)	Slope (%)	Upstream Rim Elev. (ft.)	Depth of cut (ft.)	Inlet Control Flow Rate (cfs)	Inlet Control Flow Rate (MGD)	Outlet Control Flow Rate (cfs)	Outlet Control Flow Rate (MGD)	Capacity (MGD)	Capacity/ Design Flow
Northwest District																
33	32	0.65	Proposed	10	3595	950.0	939.9	0.28	976.0	26	1.76	1.14	1.16	0.75	0.75	1.16
34	32	0.32	Proposed	8	3180	965.5	952.3	0.42	998.0	33	1.01	0.65	0.78	0.50	0.50	1.57
32	31	1.28	Proposed	12	820	939.0	910.9	3.42	971.0	32	2.78	1.80	6.61	4.27	1.80	1.40
37	36	0.10	Existing	8	598	946.2	916.6	4.95	958.4	12	1.01	0.65	2.69	1.74	0.65	6.50
36	35	0.10	Existing	12	1,491	911.1	906.5	0.31	922.6	11	2.78	1.80	1.99	1.28	1.28	12.78
40	39	0.30	Exist. FM	6	1,806	971.8	1023.3	2.85	998.3	NA	0.49	0.32	0.95	0.61	0.32	1.08
39	38	0.30	Existing	8	4990	1023.3	923.4	2.00	1033.5	10	1.01	0.65	1.71	1.11	0.65	2.21
38	35	0.59	Existing	15	1,224	923.4	906.2	1.40	946.7	23	4.86	3.14	7.67	4.96	3.14	5.36
35	31	0.78	Existing	21	1,305	905.9	903.3	0.20	919.4	13	11.27	7.28	7.07	4.57	4.57	5.86
31	30	1.91	Existing	24	978	903.1	899.7	0.35	918.9	16	15.74	10.17	13.35	8.62	8.62	4.51
30	21	2.06	Existing	24	2,495	899.7	894.2	0.22	919.4	20	15.74	10.17	10.64	6.88	6.88	3.34
North District																
24	23	0.83	Existing	12	2,152	915.0	905.4	0.44	930.0	15	2.78	1.80	2.38	1.54	1.54	1.86
25	23	0.29	Existing	12	1,070	908.4	905.4	0.28	919.3	11	2.78	1.80	1.89	1.22	1.22	4.15
23	22	1.08	Existing	12	310	905.4	901.6	1.24	919.7	14	2.78	1.80	3.97	2.56	1.80	1.67
26	22	2.53	Existing	21	1,957	903.9	900.8	0.16	923.1	19	11.27	7.28	6.36	4.11	4.11	1.62
22	21	3.51	Existing	24	4,598	900.6	893.7	0.15	917.9	17	15.74	10.17	8.74	5.65	5.65	1.61
21	20	5.18	Existing	30	2,840	893.7	889.9	0.14	911.6	18	27.50	17.77	15.19	9.81	9.81	1.89
20	19	5.33	Existing	30	2,063	889.8	886.8	0.15	902.5	13	27.50	17.77	15.78	10.19	10.19	1.91
19	18	5.37	Existing	21	1,932	886.8	863.9	1.18	903.0	16	11.27	7.28	17.28	11.16	7.28	1.36
18	17	5.59	Existing	24	3,329	863.9	846.0	0.54	880.1	16	15.74	10.17	16.61	10.73	10.17	1.82
Northeast District																
29	27	1.04	Existing	12	2,393	931.8	913.5	0.77	941.8	10	2.78	1.80	3.13	2.02	1.80	1.73
28	27	0.90	Existing	12	4,538	923.6	913.9	0.22	929.9	6	2.78	1.80	1.66	1.07	1.07	1.19
27	26	2.10	Existing	18	4,646	913.5	903.9	0.20	930.0	17	7.67	4.95	4.76	3.08	3.08	1.46
West District																
49	48	0.29	Existing	8	1,687	0.0	0.0	0.40	980.0	NA	1.01	0.65	0.77	0.49	0.49	1.71
48	47	0.52	Existing	12	2,425	947.0	928.6	0.76	953.1	6	2.78	1.80	3.11	2.01	1.80	3.43
47	46	0.52	Existing	12	3,274	928.6	909.8	0.58	941.2	13	2.78	1.80	2.71	1.75	1.75	3.34
46	45	0.73	Existing	12	500	909.8	907.4	0.48	922.4	13	2.78	1.80	2.47	1.59	1.59	2.19
45	44	0.99	Existing	15	2,875	907.0	885.1	0.76	918.7	12	4.86	3.14	5.64	3.65	3.14	3.17
44	43	1.13	Existing	18	858	884.6	878.5	0.71	897.4	13	7.67	4.95	8.88	5.73	4.95	4.36
43	42	1.13	Existing	15	170	879.0	878.0	0.61	890.9	12	4.86	3.14	5.04	3.25	3.14	2.77
56	55	0.29	Existing	12	2,515	890.8	885.7	0.20	899.0	8	2.78	1.80	1.61	1.04	1.04	3.57
55	54	0.57	Existing	18	1,754	884.9	881.7	0.18	919.3	34	7.67	4.95	4.47	2.89	2.89	5.09
54	50	0.57	Existing	18	1,719	881.7	879.5	0.13	920.0	38	7.67	4.95	3.84	2.48	2.48	4.38
53	52	0.56	Existing	10	652	928.3	915.9	1.91	935.7	7	1.76	1.14	3.03	1.96	1.14	2.04
52	51	0.56	Existing	12	945	902.4	898.9	0.37	927.5	25	2.78	1.80	2.17	1.40	1.40	2.50
51	50	0.56	Existing	18	375	880.1	879.5	0.16	917.2	37	7.67	4.95	4.17	2.70	2.70	4.82
50	42	1.09	Existing	18	1,287	879.5	877.8	0.14	916.0	36	7.67	4.95	3.89	2.51	2.51	2.31
42	41	2.10	Existing	18	1,099	877.8	870.5	0.66	891.7	14	7.67	4.95	8.57	5.53	4.95	2.36
41	17	2.36	Existing	15	2,838	870.2	845.0	0.89	895.1	25	4.86	3.14	6.10	3.94	3.14	1.33
East District																
13	12	0.56	Existing	10	1,981	863.0	800.6	3.15	877.9	15	1.76	1.14	3.90	2.52	1.14	2.03
15	14	0.33	Existing	12	1,921	900.1	871.3	1.50	925.0	25	2.78	1.80	4.37	2.82	1.80	5.48
14	12	0.64	Existing	12	3,002	871.2	800.0	2.37	883.6	12	2.78	1.80	5.50	3.55	1.80	2.81

APPENDIX D - 2040 SYSTEM EXISTING/PROPOSED PIPE DESIGN AND CAPACITY INFORMATION

From Point	To Point	Design Flow (MGD)	Pipe-Existing/ Proposed	Size (in.)	Length (ft.)	Upstream Elev. (ft.)	Downstream Elev. (ft.)	Slope (%)	Upstream Rim Elev. (ft.)	Depth of cut (ft.)	Inlet Control Flow Rate (cfs)	Inlet Control Flow Rate (MGD)	Outlet Control Flow Rate (cfs)	Outlet Control Flow Rate (MGD)	Capacity (MGD)	Capacity/ Design Flow
Southwest District																
83	82	0.29	Proposed	8	1,950	904.0	895.0	0.46	930.0	26	1.01	0.65	0.82	0.53	0.53	1.82
82	81	0.55	Proposed	8	1,700	895.0	875.0	1.18	920.0	25	1.01	0.65	1.31	0.85	0.65	1.18
81	78	0.74	Proposed	10	1,950	875.0	869.1	0.30	900.0	25	1.76	1.14	1.21	0.78	0.78	1.06
80	79	0.59	Proposed	10	1,000	900.0	897.0	0.30	918.0	18	1.76	1.14	1.20	0.78	0.78	1.32
79	78	0.59	Proposed	10	625	897.0	892.6	0.70	913.0	16	1.76	1.14	1.84	1.19	1.14	1.93
78	74	1.46	Proposed	15	2,700	869.0	865.5	0.13	907.0	38	4.86	3.14	2.33	1.51	1.51	1.03
88	77	0.82	Proposed	10	3,600	930.0	906.0	0.67	944.0	14	1.76	1.14	1.79	1.16	1.14	1.39
77	76	0.82	Proposed	10	1,850	906.0	884.0	1.19	940.0	34	1.76	1.14	2.39	1.55	1.14	1.39
76	75	1.43	Proposed	12	520	884.0	876.0	1.54	930.0	46	2.78	1.80	4.43	2.86	1.80	1.26
75	74	2.05	Proposed	15	2,080	876.0	865.5	0.50	910.0	34	4.86	3.14	4.60	2.97	2.97	1.45
74	73	3.38	Proposed	18	5,100	865.5	790.0	1.48	886.0	21	7.67	4.95	12.81	8.27	4.95	1.47
73	68	3.51	Proposed	18	1,900	785.7	748.7	1.95	799.0	13	7.67	4.95	14.70	9.49	4.95	1.41
72	71	0.23	Existing	8	530	901.2	898.2	0.57	935.0	34	1.01	0.65	0.91	0.59	0.59	2.61
71	69	0.32	Existing	10	866	898.3	888.9	1.09	917.7	19	1.76	1.14	2.29	1.48	1.14	3.61
70	69	0.09	Existing	10	585	872.6	870.9	0.29	909.5	37	1.76	1.14	1.18	0.76	0.76	8.42
69	68	0.48	Existing	10	2184	870.9	748.2	5.62	910.0	39	1.76	1.14	5.20	3.36	1.14	2.35
68	67	3.82	Existing	21	2,346	748.7	720.0	1.22	762.4	14	11.27	7.28	17.53	11.33	7.28	1.91
South District																
86	85	0.30	Proposed	8	342	762.0	726.0	10.53	780.0	18	1.01	0.65	3.93	2.54	0.65	2.14
85	84	0.30	Proposed	8	2,200	726.0	698.9	1.23	736.0	10	1.01	0.65	1.34	0.87	0.65	2.14
Southeast District																
17	16	7.33	Existing	24	3,469	844.3	791.8	1.51	858.6	14	15.74	10.17	27.89	18.02	10.17	1.39
16	11	7.37	Existing	36	1,212	790.8	788.5	0.20	808.2	17	43.38	28.02	29.62	19.13	19.13	2.60
12	11	1.11	Existing	15	560	799.7	789.3	1.87	814.7	15	4.86	3.14	8.85	5.71	3.14	2.83
11	10	7.90	Existing	27	2,424	788.0	764.8	0.96	800.0	12	21.13	13.65	30.38	19.63	13.65	1.73
10	9	8.19	Existing	36	1,043	764.8	756.6	0.78	784.1	19	43.38	28.02	59.09	38.17	28.02	3.42
9	8	8.19	Existing	36	4,030	757.2	715.2	1.04	773.8	17	43.38	28.02	68.25	44.09	28.02	3.42
8	2	8.55	Existing	36	3,603	715.2	706.6	0.24	722.1	7	43.38	28.02	32.61	21.07	21.07	2.47
7	5	0.64	Existing	21	1,291	738.1	732.3	0.45	750.6	13	11.27	7.28	10.61	6.86	6.86	10.67
6	5	0.65	Existing	10	1,451	746.5	732.7	0.95	764.2	18	1.76	1.14	2.14	1.38	1.14	1.75
5	4	1.19	Existing	21	618	732.3	731.1	0.19	744.0	12	11.27	7.28	7.00	4.52	4.52	3.79
4	3	1.27	Existing	21	828	731.0	729.3	0.20	742.5	12	11.27	7.28	7.13	4.61	4.61	3.62
3	2	1.66	Existing	21	1469	729.0	706.3	1.55	739.0	10	11.27	7.28	19.74	12.75	7.28	4.39
2	1	9.75	Existing	36	1,831	706.6	699.8	0.37	718.9	12	43.38	28.02	40.73	26.31	26.31	2.70
Old Town District																
61	60	0.71	Existing	24	1,130	714.5	703.6	0.96	731.7	17	15.74	10.17	22.26	14.38	10.17	14.30
67	60	3.87	Existing	21	2,351	720.0	703.7	0.69	739.2	19	11.27	7.28	13.19	8.52	7.28	1.88
60	59	4.40	Existing	24	373	703.7	697.7	1.59	725.9	22	15.74	10.17	28.56	18.45	10.17	2.31
58	57	0.36	Existing	12	1,259	753.3	698.4	4.36	760.1	7	2.78	1.80	7.46	4.82	1.80	5.05
Heights District																
66	65	0.47	Existing	10	1128	891.0	868.1	2.03	911.0	20	1.76	1.14	3.13	2.02	1.14	2.43
65	64	0.47	Existing	12	896	852.4	845.4	0.78	894.5	42	2.78	1.80	3.16	2.04	1.80	3.83
64	63	0.58	Existing	15	1335	845.4	785.8	4.47	869.8	24	4.86	3.14	13.68	8.84	3.14	5.37
63	62	0.71	Existing	12	810	785.4	740.8	5.50	798.4	13	2.78	1.80	8.38	5.41	1.80	2.53
62	61	0.71	Existing	12	430	740.8	715.1	5.98	753.6	13	2.78	1.80	8.73	5.64	1.80	2.53

Appendix E TRUNK SYSTEM COST ESTIMATES

APPENDIX E - 2040 TRUNK SYSTEM COST ESTIMATES

From Point	To Point	Gravity Line (inches)	Jacking Cost ($)	Pipe Length (feet)	Pipe Depth (feet)	Unit Cost ($)	Total Cost ($)
Northwest District							
33	32	10		3,595	26	150	539,250
34	32	8		3,180	33	187	594,660
32	31	12		820	32	223	182,860
Southwest District							
83	82	8	260000	1,550	26	130	461,500
82	81	8		1,700	25	130	221,000
81	78	10		1,950	25	150	292,500
80	79	10		1,000	18	119	119,000
79	78	10		625	16	119	74,375
78	74	15		2,700	38	243	656,100
88	77	10		3,600	14	119	428,400
77	76	10		1,850	34	206	381,100
76	75	12		520	46	299	155,480
75	74	15	260000	1,880	34	243	716,840
74	73	18	310000	4,900	21	223	1,402,700
73	68	18		1,900	13	161	305,900
South District							
86	85	8	97,500	192	18	113	119,196
85	84	8		2,200	10	113	248,600
						Total Trunk Sewer Cost	$6,899,461

Appendix F LIFT STATION DATA

Lift Station	Design Capacity, gpm
Autumn Woods East	118
Autumn Woods North	50
Cloverfield	811
Chevalle	230
Shadow Wood	190
Hazeltine 8th	100
Yellow Brick	100

Appendix G SEWERS AND SEWAGE DISPOSAL ORDINANCE

Chapter 19 - Sewers and Sewage Disposal

Article I. - In General

Section 01. - Definitions.

For the purposes of this chapter the following words and phrases shall have the meanings respectively ascribed to them by this section:

BOD shall mean the five-day twenty (20) degrees centigrade biochemical oxygen demand determined as set forth in the latest edition of "Standard Methods for Examination of Water and Sewage" as published by the American Public Health Association.

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

Building sewer shall mean the extension from the building drain to the public sewer or other place of disposal.

Combined sewer shall mean a sewer receiving both surface runoff and sewage.

Engineer shall mean the City Engineer.

Hotel or motel shall mean a building containing four (4) or more guest rooms in which lodging is provided with or without meals for compensation, which is open to transient or permanent guests or both, and where no provision is made for cooking in any guest room.

Industrial wastes shall mean the liquid wastes from industrial processes as distinct from sanitary sewage.

Inspector shall mean the persons duly authorized by the City to inspect and approve the installation of building sewers and their connection to the public sewer system.

Public sewer shall mean a sewer in which all owners of abutting properties have equal rights and is controlled by public authority.

Sanitary sewer shall mean a sewer which carries sewage and to which storm, surface, and ground waters are not intentionally admitted.

Sewage shall mean a combination of the water-carried wastes from residences, business buildings, institutions and industrial establishments together with such ground, surface and storm waters as may be present.

Sewerage works shall mean all facilities for collecting, pumping, treating and disposing of sewage.

Superintendent shall mean the Superintendent of Utilities of the City.

(Ord. No. 168, Sec. 1, 10/5/64)

Section 02. - Damaging equipment of sewerage system prohibited; penalty.

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 sewage works.

Section 03. - Superintendent of Utilities to direct and control sewer system.

The Superintendent of Utilities, under the direction of the City Council, shall have control of the drainage and sewer system, and of all drains and sewers hereafter built or authorized by the City, and the building, repair and maintenance thereof and connections therewith.

(Ord. No. 155, Sec. 1, 9/23/55)

Section 04. - Powers and authority of City employees.

The Superintendent, Inspector and other duly authorized employees of the City bearing proper credentials and identification shall be permitted to enter upon all properties for the purpose of inspection, observation, measurement, sampling and testing in accordance with the provisions of this chapter.

(Ord. No. 168, Sec. 8, 10/5/64)

Section 05. - Unsanitary disposal of wastes prohibited.

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 or in any area under the jurisdiction of the City, any human or animal excrement, garbage or other objectionable waste which ordinarily would be regarded as sewage or industrial wastes.

(Ord. No. 168, Sec. 4, 10/5/64)

Section 06. - Right of entry to inspect drains and sewers.

The Superintendent of Utilities, or any member of the Board of Health, shall have the right to enter upon any premises or into any building in the City at all reasonable hours to inspect the sewers and drains and traps and fixtures connected therewith. If it shall be found from such inspection or otherwise that the provisions of law are not being complied with in any respect or that any part of the drainage system is in need of clearing out or repair, the Superintendent or any such member of the Board of Health shall serve a notice at once, or as soon as may be possible, upon the owner, the occupant, and the person in charge of the premises, specifying the work necessary to be done to make the sewer system comply with the law, or to put it in good workable condition. The notice shall also specify such time as is reasonable, considering the amount of work to be done and the nature of the emergency, within which the defects must be remedied. It shall thereupon become the duty of every person served with such notice to comply therewith, and if it is not complied with, the City may cause the work to be done at the expense of any person so served.

(Ord. No. 155, Sec. 6, 9/23/55)

Section 07. - Violations.

(a) Unless otherwise provided, any person found to be violating any provision of this chapter shall be served by the City with written notice stating the nature of the violation and providing a reasonable time limit for the satisfactory correction thereof. The offender shall, within the period of time stated in such notice, permanently cease all violations, and in the event such violations continue beyond said time limit, the City Council may, in its discretion, terminate and discontinue sewage service to such offender.

(b)

Any person who shall continue any violation beyond the time limit provided for in this section shall be guilty of a misdemeanor, and upon conviction thereof shall be subject to the penalty provided for in Section 08 of Chapter 1. Each day in which any such violation shall continue shall be deemed a separate offense.

(c) Any person violating any of the provisions of this chapter shall become liable to the City for any expense, loss or damage occasioned the City by reason of such violation.

(Ord. No. 168, Sec. 10, 10/5/64)

Sections 08—20. - Reserved.

Article II. - Building Sewers and Connections

Section 21. - Duty to connect with sewer and have suitable toilet facilities.

(a) Where a public sanitary sewer is located within one hundred (100) feet of the property line of a lot, tract or parcel of land on which is situated any house or building used for human occupancy, employment, recreation or other purpose, such house or building must have suitable toilet facilities therein which are connected directly with such sewer. All such connections shall be made at the owner's expense and shall be made within sixty (60) days after official notice to make such connection.

(b) It shall be unlawful for any person to own, occupy or use any house or building which fails to meet the requirements of this section.

(Ord. No. 168, Sec. 4, 10/5/64)

Section 22. - Separate sewers required.

A separate and independent building sewer shall be provided for every building, except where one (1) building stands at the rear of another on an interior lot and no separate sewer is available or can be constructed to the rear building through an adjoining alley, court, yard or driveway. The building sewer from the front building may be extended to the rear building and the whole considered as one building sewer. Other exceptions will be allowed only by special permit granted by the City Council.

(Ord. No. 168, Sec. 6, 10/5/64)

Section 23. - Use of old sewers.

Old building sewers or portions thereof may be used in connection with new buildings only when they are found on examination and test by the Superintendent to meet all requirements of this chapter.

(Ord. No. 168, Sec. 6, 10/5/64)

Section 24. - Plans to be approved.

No drain shall be built, repaired, extended or connected with any public sewer or drain unless and until all of the provisions of this chapter are complied with and a permit for such building, repair or extension and connection has been issued as herein provided.

(Ord. No. 155, Sec. 2, 9/23/55)

Section 25. - Permit required.

No unauthorized person shall uncover, make any connection with or opening into, use, alter or disturb any public sanitary sewer or any public storm sewer, or any appurtenance thereof, without first obtaining a written permit from the City Clerk. No permit shall be issued to connect to any sanitary sewer main or sanitary sewer trunk system of the City either directly or indirectly from any lot or tract of land unless it should be determined that:

(a) The lot or tract of land to be served by such connection has been assessed for the cost of connection for the sanitary sewer or main and sanitary sewer trunk system with which the connection is made; or

(b) If no assessment has been levied for such construction cost;

(c) The proceedings for levying such assessments have been or will be commenced in due course; or

(d) The sanitary sewer main to which it is to be connected was constructed and financed by private individual and has been inspected and accepted as a public facility by the City.

(e) If none of the above requirements have been met the sum equal to the portion of costs for construction of said sanitary sewer main and sanitary sewer trunk system which would be assessable against said tract of land

must have been paid to the City. The City Administrator shall be responsible for determining the amount of pay of which will be based on the cost of constructing a similar facility based on present dollars.

(Ord. No. 168, Sec. 6, 10/5/64; Ord. No. 382, Sec. 1, 6/17/85)

Section 26. - Application for permits; contents; form.

(a) All applications for sewer permits shall be made to the City Clerk by the person employed to do the work. The applicant shall, before beginning work upon the sewer to be constructed, repaired, or extended, deposit with the City Clerk a sketch thereof showing the lot and block number upon which the proposed work is to be done and showing generally the location of the sewer proposed to be constructed, repaired or extended, with the location of all branches, traps and fixtures connected therewith. If the proposed sewer, as shown in the sketch, complies with the provisions of other ordinances and is satisfactory to the Superintendent of Utilities, he shall authorize the granting of the permit. The sketch shall be filed as a permanent record in the office of the City Clerk.

(b) The form of application for a sewer permit shall be substantially as follows, but the City Council, before approving the granting of the permit may add such other restrictions and conditions as are, in its opinion, necessary to secure the construction of a satisfactory sewer in compliance with all requirements of law:

APPLICATION FOR SEWER CONSTRUCTION PERMIT

I, _____ hereby apply for a permit to (construct), (repair), (extend) a sewer under the property at _____owned by_____and occupied by the following building or buildings _____to be connected with the public sewer at the following point (described precisely the point of connection) _____in accordance with the plans deposited this day with the City Clerk.

If the above application is granted, I agree to construct the said sewer of material and in a manner satisfactory to the Superintendent of Utilities, and in accordance with the ordinances of the municipality, and to notify the Superintendent of Utilities before any connection is made with the public sewer, when the excavation and sewer pipe as laid is open to inspection, and at such other times during the progress of construction as may be required by the Council.

It is understood that the granting of this application does not permit any connection to be made with the public sewer. Such connection can be made only after the granting of the Sewer Connection Permit below.

_____

Applicant

SEWER CONSTRUCTION PERMIT

The plans for the above described sewer having been submitted to and approved by the Council on the _____ day of _____, 200___ and the fee of $2.00 having been paid by the above applicant to the undersigned this _____day of 200___ the permit applied for is hereby granted, subject to the specified conditions.

_____

City Clerk

SEWER CONNECTION PERMIT

The sewer above described has been examined by the undersigned this _____day of 200___, and found satisfactory both as to materials and mode of construction; and permission is hereby granted to connect the same with the public sewer at the following point (describe precisely the point of connection)_____.

_____

Superintendent of Utilities

(c) After such application has been approved by the Council, and the applicant has paid to the City Clerk a fee as required by this article, the City Clerk shall grant the permit by fixing his signature on the blank provided for that purpose.

(Ord. No. 155, Sec. 3, 9/23/55; Ord. No. 168, Sec. 6, 10/5/64)

Section 27. - Bond required.

Before a permit may be issued for excavating for plumbing in any public street, way or alley, the person applying for such permit shall have executed and deposited with the City Clerk a corporate surety in the sum of not less than five hundred dollars ($500.00), 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 ordinances of the City pertaining to plumbing. This bond shall state that the person 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 unskillfulness or negligence on his part in connection with plumbing or excavating for plumbing as prescribed in this chapter. Such bond shall remain in force as to all penalties, claims and demands that may have accrued thereunder prior to such expiration. Copies of insurance shall be filed with the City Clerk and coverage shall conform to current requirements for construction contracts of the City.

(Ord. No. 155, Sec. 8, 9/23/55; Ord. No. 168, Sec. 6, 10/5/64)

Section 28. - Classes of building sewer permits.

There shall be two (2) classes of building sewer permits:

(a) For residential and commercial service; and

(b) For service to establishments producing industrial waste.

(Ord. No. 168, Sec. 6, 10/5/64)

Section 29. - Permit and inspection fees.

A permit and inspection fee of ten dollars ($10.00) for a residential or commercial building sewer permit and forty dollars ($40.00) for an industrial building sewer permit shall be paid to the City Clerk at the time the application is filed.

(Ord. No. 168, Sec. 6, 10/5/64; Ord. No. 243, Sec. 12, 1/3/77)

Section 30. - Owner to bear expenses for installations; indemnification of City.

All costs and expenses incident to the installation and connection of the building sewer shall be borne by the owner. The owner or the person installing the building sewer shall indemnify the City from any loss or damage that may directly or indirectly be occasioned by any such installation.

(Ord. No. 168, Sec. 6, 10/5/64)

Sections 31—41. - Reserved.

Article III. - Construction

Section 42. - Specifications generally.

All building sewers shall be constructed of either vitrified-clay sewer pipe and fittings meeting the current A.S.T.M. *Specifications for Standard or Extra Strength Clay Sewer Pipe* or extra-heavy cast-iron soil pipe meeting the current A.S.T.M. specifications of the Department of Commerce, *Commercial Standards for Extra Heavy Cast Iron Soil Pipe and Fittings.* If installed in filled or unstable ground, the building sewer shall be of cast-iron soil pipe, except that vitrified-clay pipe may be accepted if laid on a suitable improved bed or cradle as approved by the Engineer or Superintendent, or their representative. Other sewer materials may be used if approved by resolution of the City Council.

(Ord. No. 168, Sec. 6, 10/5/64)

Section 43. - Size and slope of sewer.

The size and slope of the building sewer shall be subject to the approval of the Superintendent but in no event shall the diameter be less than four (4) inches. The slope of such four-inch pipe shall not be less than one-eighth (1/8) inch per foot. A slope of one-fourth (¼) inch per foot shall be used wherever practical.

(Ord. No. 168, Sec. 6, 10/5/64)

Section 44. - Sewer depth.

Whenever possible the building and sewer shall be brought to the building at an elevation below the basement floor. The depth shall be sufficient to afford protection from frost.

(Ord. No. 168, Sec. 6, 10/5/64)

Section 45. - Low drain.

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.

(Ord. No. 168, Sec. 6, 10/5/64)

Section 46. - Excavations.

(a) All excavations required for the installation of a building sewer shall be open trench work unless otherwise approved by Inspector. Pipe laying and backfill shall be performed in accordance with A.S.T.M. specifications (Designation C12) except that no backfill shall be placed until the work has been inspected by the Inspector or the Superintendent or his representative.

(b) Except as may otherwise be provided, the provisions of the excavation ordinance of the City as set out in Sections 55 through 71 of Chapter 21 shall control when making excavations for sewers within the City.

(Ord. No. 168, Sec. 6, 10/5/64)

Section 47. - Specifications for joints of building sewers.

All joints and connections shall be made gastight and watertight. Vitrified-clay sewer pipe shall be fitted with factory made resilient compression joints meeting the A.S.T.M. *Specifications for Vitrified Clay Pipe Joints Having Resilient Properties* (Designation C425). Before jointing the pipe in the trench, the bell-and-spigot surfaces shall be wiped free of dirt or other foreign matter. A lubricant or sealer as recommended by the pipe manufacturer shall be applied to the bell-and-spigot mating surfaces just before they are jointed together. The spigot end shall be positioned into the bell end of the pipe previously laid and shall then be shoved home to compress the joint and to assure a tight fit between the interfaces. Joints for cast-iron soil pipe shall be made by inserting a roll of hemp or jute and thoroughly caulking it into place and then following with pure molten lead well caulked, not less than one (1) inch deep; rubber ring joints will also be permitted. No paint, varnish or putty will be allowed in the joints until they have been tested and approved by the Inspector.

(Ord. No. 168, Sec. 6, 10/5/64)

Section 48. - Manner of connecting to public sewer.

The connection of the building sewer into the public sewer shall be made at the y branch designated to that property, if such branch is available at a suitable location. Any connection not made at the designated y branch in the main sewer, shall be made only as directed by the Superintendent.

(Ord. No. 168, Sec. 6, 10/5/64)

Section 49. - Notice to Superintendent when ready for connection; supervision of connection.

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

(Ord. No. 168, Sec. 6, 10/5/64)

Section 50. - Protection of work.

All excavations for building sewer installations shall be adequately guarded with barricades and lights so as to protect the public property disturbed in the course of the work and shall be restored in a manner satisfactory to the City Council.

(Ord. No. 168, Sec. 6, 10/5/64)

Sections 51—60. - Reserved.

Article IV. - Use

Section 61. - Prohibited discharges generally.

Except as otherwise provided, no person shall discharge or cause to be discharged any of the following described wastes or waters into any public sewer:

(a) Any liquid or vapor having a temperature higher than one hundred ninety (190) degrees Fahrenheit.

(b) Any water or waste containing more than one hundred (100) milligrams per liter by weight of fats, oils or greases.

(c) Any liquids, solids or gases which by reason of their nature or quality may cause fire or explosion, or be in any other way injurious to persons, to the sewerage works structures or to the operation of these works.

(d)

Any noxious or malodorous gas or substance, which either singly or by interaction with other wastes is capable of creating a public nuisance or hazard to life, or which may prevent entry into sewers or their maintenance and repair.

(e) Any ashes, cinders, sand, mud, straw, shavings, metal, glass, cesspool sludge, bones, feathers, rubber, tires, plastic, wood, paunch manure, swimming pool sludge, blood, butcher's offal, or any other solid or viscous substance capable of causing obstruction to the flow in sewers or other interference with the proper operation of the sewerage system or sewage treatment works.

(f) Any water or waste having a pH lower than 6.0 or higher than 9.5 or having any corrosive property capable of causing damage or hazards to structures, equipment or personnel of the sewerage works or affecting the biological treatment of the waste.

(g) Any water or waste containing toxic substances in quantities in excess of the following limits as measured at the point of discharge into the sewer system:

Item	Milligrams per liter
Cyanide (Cn)	None
Copper (Cu)	0.3
Chromium (hexavalent)	0.05
Cadmium (Cd)	0.4
Zinc (Zn)	0.3
Nickel (Ni)	2.0

or any substance which is toxic to fish or marine life or salts that will pass through the sewage treatment works and exceed the State, interstate or United States Public Health Service requirements for the receiving stream.

(h) Any water or waste containing suspended solids of such character and quantity that unusual attention or expense is required to handle such materials at the Sewage Treatment Plant; provided, however, that the City Council may issue a special permit to do so under such terms and conditions and charges as determined by the City Council.

(i) Any toxic radioactive isotopes; provided, however, that the City Council may issue a special permit to do so under such terms and conditions and charges as determined by the City Council.

(j) Swimming pool waste in an amount exceeding one-fourth (¼) of the capacity of the pool in any one (1) day shall not be drained into a public sewer without first notifying the Superintendent, and such draining shall be done at times and at such volume of flow as the Superintendent shall direct.

(k) Any sewage having a BOD or suspended solids concentration over one thousand two hundred (1,200) parts per million.

(Ord. No. 168, Sec. 2, 10/5/64)

Section 62. - Discharge of untreated sewage prohibited.

It shall be unlawful to discharge to any natural outlet within the City, or in any area under the jurisdiction of the City, any sanitary sewage, industrial waste or other polluted waters, except where suitable treatment has been provided in accordance with provisions of this chapter.

(Ord. No. 168, Sec. 4, 10/5/64)

Section 63. - Prohibited discharges into sanitary sewer.

(a) No person shall discharge or cause to be discharged any storm water, surface water, groundwater, roof runoff, subsurface drainage, cooling waters (except as may be permitted in this chapter) or unpolluted industrial or commercial process water into any sanitary sewer.

(b) Every person owning improved real estate that discharges into the City's sanitary sewer system shall allow the City of Chaska employee(s) to inspect the buildings to confirm that there is no sump pump or other prohibited discharge into the sanitary sewer system.

(c)

Every property owner who owns improved real estate which is connected to the City's sanitary sewer system shall, within thirty (30) days after written notice from the City:

(i) Allow a representative of the City to inspect both the inside and outside of buildings located on the property to confirm that there is no prohibitive discharge into the municipal sanitary sewer system; or

(ii) In lieu of having inspection by a City representative, the property owner shall furnish a certificate from a licensed plumber, in a form acceptable to the City, certifying that the property has no prohibited discharge into the municipal sanitary sewer system. Failure to provide such certificate of compliance within the above time shall make the property immediately subject to the surcharge provided for in Section 63(e) of this Chapter until the property is inspected and/or compliance is met, including any penalties and remedies that the City has provided in its policies and codes, by way of assessments, and administrative expenses in achieving compliance.

(d) The City Council may, by resolution, provide for a waiver by reason of hardship from the requirements of this Section.

(e) A surcharge in the amount of $100.00 shall be added to the monthly sanitary sewer bill as provided by Chapter 19, Article VI, to each property violating any provision of this Section until correction is made and verified by the City or any property wherein the property owner has refused to allow such inspection. Said surcharge shall be added every month to the regular sanitary sewer bill until the property is in compliance herewith.

(Ord. No. 801, 4/2/07; Ord. No. 840, 6/21/10)

Section 64. - Discharge of cooling water from air conditioning units into sanitary sewer prohibited.

(a) Inasmuch as the sanitary sewers of the City are not designed to handle the volume of cooling water produced by air conditioning units, the discharge of cooling water from air conditioning units, three (3) tons of refrigeration or air conditioning and larger, draining into any one (1) building drain without cooling towers or recirculating systems is prohibited without securing a special permit from the City Council. Cooling water which is free from bacteria and harmful chemicals should be drained into the storm and water drains.

(b)

The discharging of any water as set forth in (a) above into the Chaska municipal sanitary sewer system is prohibited and the provisions for inspection thereof and the surcharge as provided in Chapter 19, Article I, Section 63, above shall apply.

(Ord. No. 801, 4/2/07)

Section 65. - Policy regarding use of sanitary sewers for industrial wastes.

The economy and desirability of the combined treatment of industrial wastes and sanitary sewage is recognized, however, not all types and quantities of industrial wastes can be so treated; hence it shall be the established policy of the City to admit those types and quantities of industrial wastes that are not harmful or damaging to the structures, processes or operation of the sewerage works or are not specifically prohibited by this chapter. It is also recognized that to provide this service additional facilities are required, the cost of which must be borne by those persons receiving its benefits. The types and quantities of industrial wastes which may be admitted into the public sewage system of the City without pretreatment shall be established by the Engineer and approved by the City Council.

(Ord. No. 168, Sec. 3, 10/5/64)

Section 66. - Certain discharges subject to approval of City Council.

The discharge into the public sewers of any of the following waters or wastes shall be subject to the review and approval of the City Council:

(a) A five-day twenty (20) degrees centigrade BOD greater than four hundred (400) milligrams per liter;

(b) A suspended solids content greater than four hundred (400) milligrams per liter;

(c) A chlorine demand greater than twenty (20) milligrams per liter in any fifteen-minute time period;

(d) An average daily flow greater than two percent (2%) of the average daily sewage treatment works;

(e) Any toxic substance;

(f) Any wastes which are considered by the Engineer to offer possibilities of harm to structures, processes, or operation of the plant.

(Ord. No. 168, Sec. 3, 10/5/64)

Section 67. - Survey data required.

(a) All users of the sewerage system who are not discharging industrial wastes to the public sewers shall, upon request of the City Council, file with the Engineer within sixty (60) days, a questionnaire which shall furnish pertinent data, including quantity of flow, and an analysis of the water discharged into the sewerage works and treatment plant. Similarly any persons desiring to make a new connection to the sewerage system for the purpose of discharging industrial waters into the public sewers shall file with the Engineer an industrial waste questionnaire which shall furnish pertinent or predicted data, including quantity of flow and a complete analysis of the industrial waste to be discharged into the sewer system.

(b) When it can be shown that it is impractical to meet the schedule imposed under this section due to the size or complexity of the waste disposal problem of an industry, a request for a reasonable extension of time may be presented to the City Council.

(Ord. No. 168, Sec. 3, 10/5/64)

Section 68. - Sampling and analysis.

Samples shall be composite samples collected over a three-day period of operation so as to be a duly representative sample of the actual quality of the wastes. Samples for analysis must be collected by the Engineer or his representative. An analysis shall be made by a qualified sanitary engineer using the laboratory methods for the examination of industrial waste as set forth in the latest edition of "Standard Methods for Examination of Water and Sewage" as published by the American Public Health Association.

(Ord. No. 168, Sec. 3, 10/5/64)

Section 69. - Installation of control manhole.

Any establishment discharging industrial wastes into the sewerage system shall construct and maintain at their expense a suitable control manhole or manholes downstream from any treatment, storage or other approved works, to facilitate observation, measurement and sampling of all wastes, including domestic sewage, from the establishment. The control manhole or manholes shall be constructed at suitable and satisfactory locations and built in a manner

approved by the Engineer. The control manhole shall be accessible to the Engineer at all times for observing, measuring and sampling of such wastes. Persons using the sewerage system for industrial wastes shall also provide a flow-measuring device, approved by the Engineer, to record total flowage and rate of flow at no cost to the City for such device.

(Ord. No. 168, Sec. 3, 10/5/64)

Section 70. - Oil traps.

Any establishment discharging oils or grease to the sewerage system shall maintain a suitable device to trap and collect oil and grease before it enters the sewerage system.

(Ord. No. 168, Sec. 3, 0/5/64)

Section 71. - Pretreatment.

Any person using the City sewer system shall provide at their expense such preliminary treatment or handling as may be necessary to modify the objectionable characteristics or constituents to come within the limits set forth in this chapter.

(Ord. No, 168, Sec. 3, 10/5/64)

Section 72. - Special agreements between City and industrial users.

No statement contained in this chapter shall be construed as prohibiting any special agreement or arrangement between the City and person whereby an industrial waste of unusual strength or character may be admitted into the sanitary sewers for treatment by the City either before or after pretreatment.

(Ord. No. 168, Sec. 2, 10/5/64)

Sections 73—84. - Reserved.

Article V. - Private Sewer Disposal

Division 1. - Generally

Section 85. - Intent.

The improper design, location, installation, use and maintenance of on-site sewage treatment systems adversely affects the public health, safety and general welfare by discharge of inadequately treated sewage to surface and ground waters. The City of Chaska does herein provide the minimum requirements for the design, location, installation, use and maintenance of on-site sewage treatment systems. The City of Chaska, in adopting this ordinance, does not guarantee or warrant that compliance with the requirements herein will result in on-site sewage treatment systems that are fail safe, but consider that compliance with the requirements herein will result in on-site sewage treatment systems with a reasonable assurance of satisfactory performance when properly maintained.

Section 86. - Applicability.

This ordinance shall apply to the design, location, installation, use and maintenance of on-site sewage treatment systems constructed, altered, extended or repaired in the City of Chaska.

Section 87. - Definitions.

The following words and phrases, when used in this ordinance, unless the context clearly indicates otherwise, shall have the meanings ascribed to them in this section.

Agency when used in the standards adopted herein shall mean Department or Inspector where appropriate.

City Council shall mean the Chaska City Council.

Department shall mean the City/Carver County Inspection (Zoning) Departments.

Director or *Executive Director* when used in the standards adopted herein shall mean Inspector.

Failure shall mean the discharge of sewage, sewage tank effluent or seepage from a soil treatment system to the ground surface, abandoned wells, or bodies of surface water, or into any rock or soil formation the structure of which is not conducive to purification of water by filtration or into any well or where there is a demonstrated public health hazard.

Inspector shall mean the person or persons employed or engaged by the department and assigned the responsibility for the administration and implementation of this ordinance.

Person shall mean any human being, any governmental or political subdivision or public agency, any public or private corporation, any partnership, any firm, association or other organization, any receiver, trustee, assignee, agent, or other legal representative of any of the foregoing or any other legal entity.

Repair shall mean the act or process of storing or replacing a defective element of an on-site sewage treatment system to approximately its original function without altering its original location, capacity or operating characteristics. Only repairs or replacements performed downstream of the inlet of the distribution device or replacement of the septic tank or dosing chamber shall be considered repairs requiring a permit under this ordinance.

Section 88. - Compliance.

No person shall design, locate, install, construct, alter, extend, repair, use, maintain or perform percolation tests and/or soil evaluation for any on-site sewage treatment system, except in full compliance with this ordinance and standards adopted herein.

Section 89. - Conditions.

Violation of any condition imposed by the City on a license, permit, or variance shall be deemed a violation of this ordinance and subject to the penalty provisions set forth in this ordinance.

Section 90. - False information.

Omission of any information or submission of false information may constitute grounds for the denial of the license, permit or variance applied for, or the suspension or revocation of an issued license, permit or variance.

Sections 91—95. - Reserved.

Division 2. - Standards

Section 96. - Standards for health, safety, and environment preservation.

Any privy or privy vault installed on any lot or parcel of land where a sanitary sewer is available is hereby declared to be a nuisance.

Section 97. - Standards adopted.

The rules of the Minnesota Pollution Control Agency 6 MCAR 4.8040, Individual Sewage Treatment Systems Standards and Appendixes A and D are hereby adopted by reference and made a part of this ordinance as if set down fully herein.

Section 98. - Standards amended.

The above adopted rules, 6 MCAR 4.8040 are hereby amended as follows:

(a) Section C3 shall be deleted in its entirety.

(b) The table in Section F.2.b.(1) is amended to read as follows:

Number of Bedrooms	Tank Liquid Capacity - Gallons
2 or less	1,000
3 or 4	1,250
5 or 6	1,500
7, 8, or 9	2,000

(c) Section H.2A.(5) is amended to read as follows:

Table III gives the required bottom area assuming twelve (12) inches of filter material below the distribution pipe for trenches and beds. The required bottom area may be reduced, for trenches only, by the following percentages: 20 percent (20%) for eighteen (18) inches of filter material below the distribution pipe; 34 percent (34%) for twenty-four (24) inches. The filter material shall completely encase the distribution pipe to a depth of at least two (2) inches.

(d) Section K is deleted in its entirety.

Section 99. - Additional standards.

In addition to the above standards the following shall also apply:

(a) Alternative systems provided herein may be used only for the repair or replacement of existing non-conforming systems or on existing lots of record.

(b) The design, construction, and location of component parts of any alternative sewage treatment and disposal system shall comply, insofar as practical, with the design, construction, and location requirements for the equivalent components of a standard on-site sewage treatment and disposal system as set forth in this ordinance.

(c) Section 86.03(a) of this chapter provides for limited use of alternative sewage treatment system primarily to correct a failure to an existing system or to permit development on existing lots of record. The need for an alternative treatment system in these instances is because the land has characteristics which are not conducive to conventional on-site sewage treatment. Monitoring of the alternative system can provide valuable data related to the applicability of the particular design to other similar situations. For this reason, any person proposing to utilize an alternative sewage treatment system may be required to permit the Department to install monitoring devices at the time of initial construction, or upon any alteration, repair, or extension of said system. The cost of installing the monitoring device and any subsequent laboratory analysis shall be borne by the City of Chaska. The system owner shall permit reasonable access by the Department for the purpose of monitoring the system. The Department shall make its monitoring data available to the owner of the system.

(d) It shall be the responsibility of any person utilizing an alternative sewage treatment system to report to the Department all discharges from a malfunctioning alternative sewage treatment system as soon as possible but not later than eighteen (18) hours upon knowledge of such discharge, and further abate such discharge as soon as possible but no later than forty-eight (48) hours.

(e) All beds shall be sized at 1.25 times the soil treatment area required in 6 MCAR 4.8040 H.2a (4) Table III.

(f)

Where dosing a chamber is used the dosing chamber shall be sized so that in case of dosing device failure there will be storage capacity for three (3) days of restricted water use and the dosing chamber shall be equipped with a warning device to indicate dosing device failure.

(g) Where conditions prevent the construction, replacement, alteration and/or repair of an individual sewage treatment system on any existing developed parcel of real property, the Department may reduce property line and building setbacks and system sizing requirements provided said reduction does not endanger or unreasonably infringe on adjacent properties and with the concurrence of the affected properties.

(h) Not more than one (1) dwelling, commercial, business, institutional, or industrial unit shall be connected to an existing on-site sewage system unless such multiple connection has been approved by permit.

(i) All mounds shall be sized at 1.25 times the soil treatment area required in 6MCAR 4.8040 Appendix A, Section E, -1g. Mounds located in soils with percolation rates over sixty (60) minutes per inch shall be sized at least 1.5 times the soil treatment area required in 6 MCAR 4.8040 Appendix E, -1g.

Sections 100—105. - Reserved.

Division 3. - Permits

Section 106. - Permit required.

No person, firm, or corporation shall install, construct, alter, extend, or repair an on-site sewage treatment system in the City of Chaska without first obtaining a permit therefor from the Department for each specific installation, construction, alteration, extension, or repair. Such permits shall be valid for a period of twelve (12) months from the date of issuance.

Section 107. - Permit application requirements.

Application for permits shall be made in writing on forms furnished by the City Clerk and shall be signed by the applicant and the licensed installer.

Each application shall contain:

a. Legal description of the property.
b. Location description of the property.
c. Name, address and phone number of the property owner(s).
d. Name, address and phone number of the licensee.
e. Maximum number of bedrooms.
f. Estimated water usage if building is not a swelling unit.
g. List of water using appliances.
h. Estimate depth of well.

Each application shall be accompanied by:

1. Two (2) copies of a plot plan of the land drawn to scale showing:
    a. Boundary lines.
    b. Proposed and/or existing buildings.
    c. Location of well and water pipes.
    d. Location of septic tank.
    e. Location of drainfield.
    f. Location of building sewer.
    g. Location of distribution box(es).
    h. Location of any animal confinement areas within fifty (50) feet of septic tank or drainfield.
    i. Location of any water bodies located within two hundred (200) feet of septic tank or drainfield.
    j. Roads and driveway.
    k. Land elevations.
    l. Mature trees.
2. Two (2) copies of a complete on-site sewage system plan showing location, size and design of all parts of the system to be installed, altered, repaired, or extended.
3. Two (2) copies of the results of the site evaluation and percolation tests.
4. Any additional information that may be required by the Inspector to assure compliance with this ordinance.

Section 108. - Permit fees.

All permit and permit renewal applications must be accompanied by the appropriate fees. The amount of each permit, permit renewal fee, late fees or such other fees as may be needed for the administration of this ordinance, plus the method and time of payment thereof shall be determined by the resolution of the City Council.

Section 109. - Relation to other permits.

No building permit or occupancy permit, where required, will be issued until the on-site sewage system permit is approved and issued.

Section 110. - Permit denied.

If an application for a permit or permit renewal is denied, notice of denial shall be served on the applicant by mail. The notice shall state the reasons for denial and inform the applicant of his right to request a hearing as provided in Sections 92.06 and 92.07 of this chapter.

Section 111. - Permittee responsibilities.

It shall be the responsibility of the permittee to notify the Inspector that the job is ready for inspection at least twelve (12) City working hours prior to inspection time requested. It shall be the responsibility of the permittee to provide the Inspector with free access to the property at reasonable times for the purpose of making such inspections. The permittee and the licensee shall be responsible for the correction or elimination of all defects and no system shall be placed or replaced in service until all defects have been corrected or eliminated and a certificate of compliance has been issued. No part of the system shall be covered until it has been inspected and/or approved by the Inspector.

Section 112. - Reinspection charge.

Violations of this ordinance that necessitate follow-up inspection will be subject to a re-inspection fee. This inspection charge shall be established by resolution of the City Council. The re-inspection payment must be received by the Department within ten (10) days following the re-inspection. Failure by the licensee to pay a re-inspection charge shall be grounds for revocation of a license.

Sections 113—115. - Reserved.

Division 4. - Failing Systems

Section 116. - Failing systems.

All on-site sewage systems determined to be failing, by the Inspector, and in violation of this ordinance shall immediately abate the failure and the failing system shall be satisfactorily repaired or replaced.

(Ord. No. 168, Sec. 5, 10/5/64; Ord. No. 360, Sec. 88, 3/19/84)

Sections 117—120. - Reserved.

Division 5. - Maintenance

Section 121. - Pumping of septic tanks.

The owner of the on-site sewer system should ensure that the septic tank(s) are properly pumped in order to prevent the sludge from reaching any point closer than twelve (12) inches from the bottom of the outlet baffle or the scum from reaching a point closer than three (3) inches above the bottom of the outlet baffle.

Section 122. - Disposal of septage.

All septage removed from septic tanks or holding tanks shall be removed from the site in sealed containers and shall be disposed of in a location and manner approved by the Inspector and/or Minnesota Pollution Control Agency. If the septage is to be disposed of into the municipally controlled sewage facility or into a Metropolitan Waste Control Commission facility it shall be disposed of in a location and manner approved by said governmental authority.

Sections 123—126. - Reserved.

Division 6. - Abandonment

Section 127. - Abandonment.

When on-site sewage systems are abandoned all septic tanks, cesspools, and leaching pits shall be pumped to remove all liquid, sludge and scum. The covers to all septic tanks, cesspools and leaching pits shall be either collapsed or removed and tanks or cavities shall be filled with clean earth. The earth shall be adequately mounded to allow for settling.

Section 128. - Connection.

When municipal sewer services are available all failing systems shall make connection immediately.

Sections 129—135. - Reserved.

Division 7. - Licensing and Certification

Section 136. - License required.

No person, firm or corporation shall: (a) design; (b) install, construct, alter, extend or repair; (c) maintain or pump; (d) perform percolation tests, soil boring or soil evaluations for on-site sewage treatment systems within the City of Chaska without first obtaining a license to carry on such operation. Said license shall be issued by the Department, shall be renewable and may be denied, revoked or suspended for cause.

City acknowledges persons licensed through Carver County.

Section 137. - Application form.

Application for a license or license renewal shall be on a form furnished by the City Clerk. The applicant shall provide such information as may be required by this ordinance, and any further information as the Department may require for the administration and enforcement of said license.

Section 138. - License fee.

All license and licensee renewal applications must be accompanied by the appropriate fee. The amount of each license or license renewal fee, late fees, or such other fees as may be needed in the administration of this ordinance, plus the method and time of payment thereof shall be determined by resolution of the City Council.

Section 139. - License non-transferable.

A license obtained pursuant to this ordinance shall not be transferable.

Section 140. - License application requirements.

Before any license under this ordinance can be issued, an applicant for the license shall:

a. Demonstrate acquisition of suitable experience and training as determined by resolution of the City Council.
b. Provide certificate of insurance and/or performance bond as established by resolution of the City Council. The insurance and/or bond shall be written by an insurer or bonder licensed to do business in the State of Minnesota.
c. Provide within three (3) years of the effective date of this ordinance an individual Sewage Treatment System Certification issued by the Minnesota Pollution Control Agency and the Individual Sewage Treatment System Advisory Committee and satisfactorily maintain certification as required.
d. Pay the required license fee.

Section 141. - License denied.

If an application for license or license renewal is denied, notice of the denial shall be served on the applicant by mail. The notice shall state the reasons for the denial and inform the applicant of his right to request a hearing as provided in Sections 92.06 or 92.07 of this chapter.

Section 142. - Licensed installer responsibility.

The installer shall comply with provisions of this ordinance, the construction permit and installers license. The installer shall make three (3) as-built plans, one shall be kept by the installer for his records and two (2) copies to the City, one (1) shall be given to the permittee to be maintained on-site, and one (1) shall be retained by the Inspector to be maintained on file.

Section 143. - Licensed pumper responsibility.

Pumpers shall have equipment capable of agitating septage sludge and thoroughly remove sludge and scum from the septic tanks or holding tanks.

All septage removed from septic tanks or holding tanks shall be removed from the site in sealed containers and disposed of in accordance with Section 89.02 of this chapter. The pumper shall make reports monthly to the City reporting on the total number of systems pumped, approximate volume pumped and location of septage disposal.

Section 144. - Licensed percolation tester or site evaluator responsibilities.

All percolation tests, soil and/or site evaluation shall be done in compliance with this ordinance. All reports submitted to the City shall be submitted on forms approved by the Inspector.

Section 145. - Licensed designer responsibilities.

All on-site sewage treatment systems shall be in compliance with this ordinance. Designs submitted to the City shall be of sufficient detail and to scale so as to allow adequate review for compliance by the Inspector.

Section 146. - Effective dates of license requirements.

Requirements for licensing under this ordinance shall be in effect on the following dates:

a. Installer: Effective date of this ordinance June 1, 1984.
b. Pumper: June 1, 1984.
c. Designer: June 1, 1984.
d. Percolation Tester/Soil Evaluator: June 1 1984.

Section 147. - Authority to repair.

Repair shall be performed by licensed installer or licensed pumper. Repairs requiring a permit shall be performed by a licensed installer.

Sections 148—155. - Reserved.

Division 8. - Administration and Enforcement

Section 156. - Administration and enforcement.

The application for a permit required by this article shall be made on a form furnished by the City, which the applicant shall supplement by such plans, specifications and other information as are deemed necessary by the Superintendent.

Section 157. - Duties of the Inspector.

The Inspector shall be responsible for the administration and enforcement of this ordinance. The Inspector's duties shall include, but not necessarily be limited to the following:

a. Receive and review license or license renewal applications, permits or permit renewal applications pursuant to this ordinance, and issue licenses and permits in conformance with this ordinance.
b. Inspect new or repaired on-site sewage treatment systems and septage disposal sites as provided in this ordinance, issue certificates of compliance and investigate complaints of violations of his ordinance.
c. Recommend that legal proceedings be initiated by the City Attorney to compel compliance with the provisions of this ordinance.
d. Advise, consult, cooperate with the public and other governmental agencies in the fuselage of this ordinance.

Section 158. - Inspector.

The Inspector responsible for the administration and enforcement of this ordinance shall be certified as an Inspector by the Minnesota Pollution Control Agency.

Section 159. - Inspection.

The inspection and/or evaluation of the on-site sewage treatment systems will be made by the Inspector to determine compliance with the provisions of this ordinance. The permittee shall be provided with written notice of any deficiencies, recommendations for the correction, and a date by which the correction shall be accomplished. The permittee shall allow the Inspector or his authorized agent access for the purposes of making such inspections as may be necessary to determine compliance with the requirements of this ordinance and shall allow the Inspector to make any and all appropriate tests to determine compliance with this ordinance. Failure of the City to inspect shall not relieve or lessen the responsibility or liability of any person owning, operating, controlling or installing any on-site sewage treatment system.

Section 160. - Revocation of license.

Any license issued pursuant to this ordinance may be revoked by the City Council for violation of any provisions of this ordinance. Revocation shall not occur earlier than ten (10) calendar days, exclusive of the day of service, after written notice of revocation has been served on the licensee. Such written notice shall contain the effective date of revocation, the nature of the violation or violations constituting the basis for the revocation, the facts which support the conclusion that a violation or violations have occurred, and a statement that if the licensee desires a hearing, he must within ten (10) calendar days, exclusive of the day of service, file a written request with the Inspector. If the licensee fails to request a hearing, he shall forfeit any opportunity for a hearing. If a hearing is requested, the revocation shall be stayed pending the outcome of the hearing.

Section 161. - Suspension of license.

Any license required under this ordinance may be suspended for not longer than sixty (60) days by the City Council for violation of any provisions of this ordinance. Suspension shall not occur earlier than ten (10) calendar days exclusive of the day of service, after written notice of suspension has been served on the licensee. Such written notice shall contain the effective day of suspension, the nature of the violation or violations constituting the basis for the suspension, the facts which support the conclusion that a violation or violations have occurred and a statement that if the licensee desires a hearing that he must within ten (10) calendar days, exclusive of the day of service, file a written request with the Inspector. If the licensee fails to request a hearing, he shall forfeit any opportunity to a hearing. If a hearing is requested, the suspension shall be stayed pending the outcome of the hearing.

Section 162. - Administrative hearing.

Any person wishing to appeal an Inspector or departmental decision may request an administrative hearing. The request shall be in writing stating the grounds for appeal and served personally or by registered or certified mail on the Inspector's Department by 4:00 p.m. the fifth (5th) City working day following service of the Inspector or departmental decision in question. After receipt of an appeal request, the department shall set a time and place for the hearing. The department shall reply as soon as possible, not to exceed five (5) City working days of the receipt of the request for hearing and identify a hearing time within twenty (20) calendar days of the receipt of the request for hearing. If the department fails to grant an administrative hearing or if

after the hearing the person wishes to appeal the decision reached as a result of the administrative hearing they may request a formal hearing as identified in Section 92.07 of this chapter.

Section 163. - Hearings.

Whenever a formal hearing is requested in regard to an application, renewal, suspension or revocation of a license or permit or as provided in Section 92.06 of this chapter, the procedure shall be governed by the following:

a. Hearing officer. The City Council shall have the power to conduct public hearings pursuant to this Section. By resolution the City Council may appoint an individual learned in the law to be known as the hearing officer to assist the Council in the administration of the hearing or to conduct the hearing on behalf of the Council. If the individual conducts the hearing on behalf of the City Council, he shall submit to the City Council in writing, findings of fact, conclusions, and recommendations, and the City Council may adopt, modify or reject the report of the hearing officer.
b. Hearing date. Upon receipt of request for a hearing, the City Council shall set a hearing date which shall be set at a time convenient for the council, but in no case earlier than ten (10) days or no later than thirty (30) days exclusive of the day of service, after the date of the receipt of request.
c. Notice of decisions. The City Council shall notify the applicant or licensee in writing as to its decision within ninety (90) days after the close of the hearing.
d. If the applicant or licensee fails to appear at the hearing, he shall forfeit any right to a public hearing before the hearing officer.
e. Any applicant or licensee aggrieved by a decision of the City Council shall have the right to appeal to the District Court on questions of law and fact.

Sections 164—170. - Reserved.

Division 9. - Violations and Penalties

Section 171. - Misdemeanor.

Any person who fails to comply with the provisions of this ordinance is guilty of a misdemeanor. A separate offense shall be deemed committed upon each day during or on which a violation occurs or continues.

Section 172. - Injunctive relief.

In the event of a violation or a threat of violation of this ordinance, the City may institute appropriate actions or proceedings, including requesting injunctive to prevent, restrain, correct or abate such violations or threatened violations.

Section 173. - Civil action.

If a person fails to comply with the provisions of this ordinance, the City may recover cost or damages incurred in a civil action in any court of competent jurisdiction.

Sections 174—180. - Reserved.

Division 10. - Variances

Section 181. - Variances.

In any case where, upon written application by an applicant or the licensee it appears that by reason of exceptional circumstances the strict enforcement of any provision of this ordinance would cause hardship, or that strict conformity with the ordinance would be unreasonable, impractical, or not feasible under the circumstances, and in order to promote the effective and reasonable application and enforcement of the provisions of this ordinance, the City Council may grant a variance from the provisions of this ordinance upon such conditions as it may prescribe for on-site sewage system management consistent with the general purpose and intent of this ordinance, provided that:

a. The condition causing the hardship is unique to that property; and
b. The granting of the variance will not be contrary to the public interest or be damaging to rights property of others.

(Ord. No. 360, Secs. 85—94, 3/19/84)

Sections 182—200. - Reserved.

Article VI. - Rates and Charges

Division 1. - Generally

Section 201. - Sewer rental charges authorized.

For the purpose of providing funds to meet the cost of maintenance and operation of the sanitary sewers, the costs of construction, maintenance and operation of a sewage disposal plant, payment of capital charges represented by bonds, certificates of indebtedness, or otherwise, and the payment of reasonable requirements for replacement and obsolescence thereof, there is hereby levied and assessed upon each lot, parcel of land, building or premises presently or hereafter having any connection, directly or indirectly, with the public sanitary sewer system of the City, a sewer rental charge determined as provided in this article.

(Ord. No. 168, Sec. 9, 10/5/64)

Section 202. - Authority to classify users of system.

The City Council shall have the power to classify the sewage discharged into the sanitary sewerage system based upon its quantity, concentration, pollution, qualities in general and the costs of its disposal, to fix reasonable and equitable sewer rental charges therefor according to such classification, and shall have the power, by resolution, to modify from time to time any classification or sewer rental charge provided in this article as may be, in the exercise of its discretion, reasonably required.

(Ord. No. 168, Sec. 9, 10/5/64)

Section 203. - Classifications.

For the purpose of this chapter the following classifications of property according to the use of the sewerage system are hereby established:

Class 1. Residential: This classification shall include property used exclusively for residential purposes by a single-family unit, but does not include multiple residential buildings served by one (1) meter. Residential quarters constituting a single-family unit in buildings where a portion

thereof is used for other than residential purposes shall be included in this classification, if the water used in such residential quarters shall be separately metered. A "single-family unit" is hereby defined to include the following:

a. A single person occupying residential quarters having either a private bath or toilet or kitchen facilities.
b. Two (2) or more persons occupying residential quarters as a common residential unit and having either a private bath or toilet or kitchen facilities; and
c. Two (2) or more persons occupying separate residential quarters, but having in common with other such persons living separately the use of either the same private bath or the same toilet or the same kitchen facilities.

Class 2. Commercial: This classification shall include any property used by a single unit for any purposes not properly included in Classes 1 and 3, and which also include any multiple residential building served by one meter. A "single-unit" shall include:

a. Each establishment or office having a separate toilet or other water-using facilities; and
b. Two (2) or more establishments or offices occupied separately, but having in common with such other establishments or offices the use of the same toilet or other water-using facilities.

Notwithstanding anything to the contrary in this section, a "single-family unit" or single-unit" as used in this classification shall be defined as any such unit having not more than ten (10) "fixtures" as defined in the State of Minnesota Plumbing Code. Each unit having more than ten (10) such fixtures shall, for the purposes of sewer rents, rates and charges be considered a separate "single" unit for each ten (10) fixtures or fraction thereof located within said unit.

Class 3. Industrial: This classification shall include any property used by any establishment where any sewage or waste discharged into the public sewers therefrom has:

a. A five-day twenty (20) degrees centigrade BOD greater than four hundred (400) milligrams per liter; or
b. A suspended solids content greater than four hundred (400) milligrams per liter; or
c. A chlorine demand greater than twenty (20) milligrams per liter in any fifteen-

minute time period; or

d. An average daily flow greater than two percent (2%) of the average daily sewage flow at the sewage treatment works; or

e. Any toxic substance; or

f. Any wastes which are considered by the Engineer to offer possibilities of harm to structures, processes or the operation of the plant.

(Ord. No. 168, Sec. 9, 10/5/64; Ord. No. 217, Secs. 1, 2, 1/21/74)

Section 204. - City Clerk to compute amount due and render statements.

a. Effective for the month commencing January 1 1980, and each month thereafter, the City Clerk shall compute the amount due the City for sewer rents and charges in accordance with this article and shall render to the sewer system user's statements therefor monthly at the same time as the City water statements for the same month are rendered by him. Both charges shall be separately itemized and included in one (1) bill where both are properly chargeable by the City. Such statements shall be made for each water meter (or its equivalent if water is not supplied by the City), and shall include the sewer rental charges for all units whether classified as residential, commercial, industrial or any combination of such classifications, on each single meter. Such sewer rentals shall be due and shall become delinquent, respectively, at the same time as the City water charges for the same period.

b. In addition to the sewer rental rates and charges in a. above, a surcharge as provided in Chapter 19, Article I, Section 63, shall be charged.

(Ord. No. 168, Sec. 9, 10/5/64; Ord. No. 295, Sec. 1, 12/17/79; Ord. No. 801, Art. VI, Sec. 204 subd. (a), (b), 4/2/07)

Section 205. - Statements to be a charge against owner, lessee and occupant.

Prior to the furnishing of any sanitary sewer service to any user or property, a deposit or other security, as provided in Section 15 of Chapter 8, Code of Ordinances, shall be provided.

(Ord. No. 168, Sec. 9, 10/5/64, Ord. No. 388, Sec. 3, 12/16/85)

Section 206. - Recovery of unpaid bills.

Any unpaid and delinquent sewer rental charges may be recovered from the occupant of the premises billed therefor in a civil action by the City in any court of competent jurisdiction or, in the discretion of the City Council, may be certified to the County Auditor as taxes against any such property to be collected and paid over to the City along with other taxes. Either or both of such methods of collection thereof may be pursued by the City until payment in full has been made, and the initiation of one (1) such method of collection shall not be deemed to be an election stopping the City from thereafter using the other method of collection until paid in full. Payment of delinquent sewer rentals collected shall le credited to the same fund hereinafter provided for current sewer rentals, deducting therefrom any costs of collection accruing to the City therefor.

(Ord. No. 168, Sec. 9, 10/5/64; Ord. No. 388, Sec. 4, 2/16/85)

Section 207. - Charges collected to be placed in separate fund.

The sewer rentals provided for in this article shall be placed and deposited in a separate general sewer fund to be known as the sewage disposal fund of the City, and shall be disbursed only for the purpose specified in Section 106 of this chapter.

(Ord. No. 168, Sec. 9, 10/5/64)

Sections 208—220. - Reserved.

Division 2. - Rental Charges

Section 221. - Imposed.

The sewer rates, charges and rentals to be charged against property shall be based upon the quantity of water used thereon and the quality of sewage generated there from and shall be determined as follows:

a. The charges each calendar month shall be based on the amount of water used on said property measured as provided in Section 19-122 and are hereby established as follows:

   Four dollars and sixteen cents ($4.16) per thousand (1,000) gallons per calendar month.

b.

The charges each calendar month for residential properties located on Co Rd 10 within the City of Chaska and those units in that portion of Planning Area 9-B/9-C located in Chaska Township involved in the 201 Sanitary Sewer Project, and elect to choose a flat sewer user fee for on-site wastewater treatment systems are hereby established as follows:

Sewer Rental Fee, Per Month\$22.65

Pumping Fee, Per Month\$7.35

(Ord. No. 772, Chap. 19, Art. VI, Div. 2, Sec. 221, 1/3/05; Ord. No. 817, Sec. 221, 1/7/08; Ord. No. 845, Art. VI, Div. 2, Sec. 221(b), 12/20/10; Ord. No. 864, Art. VI, Div. 2, Sec. 221, 12/17/12; Ord. No. 879, Chap. 19, Art. VI, Div. 2, Sec. 221 a and b, 12/16/13; Ord. No. 897 , Sec. 1, 12/15/14; Ord. No. 911 , Sec. 1, 1/4/16; Ord. No. 928 , Sec. 1, 12/19/16; Ord. No. 930 , Sec. 1, 1/9/17; Ord. No. 944 , § 1, 1/8/18)

Section 222. - Minimum charges.

Notwithstanding anything to the contrary otherwise appearing in this article the minimum sewer rental charge, according to classification of property use as provided by the article shall be as follows:

		Minimum Charges	
		Sewer Rental Charge	Service Charge
Class 1	Residential, per month	$7.65	$2.00
Class 2	Commercial, per month	$7.65	$2.00
Class 3	Industrial, per month	$21.70	$20.00
Class 4	Sewer Rental Fee, per month	$22.65	n/a
Class 5	Sewer Pumping Fee, per month	$7.35	n/a

The above stated minimum service charge as applied to single-family dwelling townhouses, condominiums, apartments and duplex homes shall be two dollars and zero cents ($2.00) for each living unit contained therein.

(Ord. No. 845, Art. VI, Div. 2, Sec. 222, 12/20/10; Ord. No. 864, Art. VI, Div. 2 Sec. 222, 12/17/12; Ord. No. 879, Chap. 19, Art. VI, Div. 2, Section 222, 12/16/13./; Ord. No. 897 , Sec. 2, 12/15/14; Ord. No. 911 , Sec. 2, 1/4/16; Ord. No. 928 , Sec. 2, 12/19/16; Ord. No. 930 , Sec. 2, 1/9/17; Ord. No. 944 , § 2, 1/8/18)

Section 223. - Determining amount of water used.

The measure of volume of sewage waste for purposes of determining the rates and charges provided for in Section 222 of this chapter shall be based on the amount of water used on said premises and determined as follows:

a. In the event water used on any such property is supplied fully by the City water system, the number of gallons of water supplied to such premises by the City water system as measured by the City water meter therein in use shall be the gallonage figure used in determining the sewer use and charges as hereinbefore provided, except that where such property is classified as residential, the charge each month shall be based upon the number of gallons of water supplied thereto by the City water system, except that the monthly charge for the months of May through and including November of any year shall be based upon the less of:
    1. The number of gallons of water supplied thereto by the City water system; or
    2. The average number of gallons of water supplied thereto for the monthly charge of the previous December, through and including April adjusted to 105% of average,
b. In the event water used on any such property is supplied in whole or in part with water not obtained from the City water system, the number of gallons used on said premises, as if wholly supplied by the City water system as measured by a water meter(s) metering the source of all water used on such property, shall be the gallonage figure used in determining the sewer use and

charges as hereinbefore provided, except that where such property is classified as residential the charge each month shall be based upon the number of gallons of water used on said premises, except that the monthly charge for the months of May through and including November of any year shall be based upon the less of:

1. The number of gallons of water supplied thereto by the City water system; or
2. The average number of gallons of water supplied thereto for the monthly charge of the previous December, through and including April adjusted to 105% of average.

It shall be the duty of any such owner, lessee or occupant thereof, and all of them to have installed by them, at no expense to the City, the necessary metering equipment as approved by the Utility Superintendent to measure the total amount of water used on said premises.

Until such time such owner, lessee or occupant installs the necessary metering equipment to measure the total amount of water used thereon, or where it is not practical to measure the same by metering equipment, the Utility Superintendent shall cause to be determined in such manner and by such methods as he shall reasonably determine, considering conditions and attendant circumstances in each case, the estimated total amount of water used thereon, and such estimate shall be used in lieu of the meter volume of water to determine the sewer rental charges thereon; except that where such property is classified as residential the charge each month shall be based upon the estimated number of gallons of water used on said premises, except that the monthly charge for the months of May through and including November of any year shall be based upon the less of:

1. The estimated number of gallons of water supplied thereto by the City water system; or
2. The estimated average number of gallons of water supplied thereto for the monthly charge of the previous December, through and including April adjusted to 105% of average.

Any person using the sewerage works of the City may install, at no expense to the City, a meter of a style and type approved by the Utility Superintendent to meter actual sewage volume discharged from such property, and in that event, that gallonage figure shall be used in determining the sewer use for such property. Such metering equipment shall be maintained to

provide accurate measurement of the sewer use and shall be tested and calibrated at the Utility Superintendent's request or at least annually with test results and maintenance records submitted to the Utility Superintendent for his review and approval. This shall be done by a competent metering contractor approved by the Utility Superintendent and at no expense to the City. If the above maintenance and testing is not done as required, the City shall hire an approved contractor to perform this work and the cost thereof shall be added to the customer's sewer charges.

(Ord. No. 168, Sec. 9, 10/5/64; Ord. No. 279, Sec. 1, 3/5/79; Ord. No. 287, Sec. 1, 9/17/79; Ord. No. 295, Sec. 4, 12/17/79; Ord. No. 495, Sec. 3, 12/16/91; Ord. No. 519, Sec. 4, 12/21/92)

Section 224. - Determination of BOD.

The BOD or suspended solids concentration in anyone (1) calendar quarter shall be determined from an average of three (3) standard tests for such concentrations taken by the Superintendent or his representative any time during said calendar quarter. Such test shall be taken and the analysis determined as provided in Section 68 of this chapter.

(Ord. No. 168, Sec. 9, 10/5/64)

Section 225. - Payment for sewer services.

Payment for sewer services billed shall be made to the office of the City Clerk and shall be due on or before the fifteenth (15th) day of the month in which the bill is received by the customer. A five percent (5%) penalty shall be added to bills not paid by the close of the business day on the fifteenth (15th) day of the month.

(Ord. No. 243, Sec. 16, 1/3/77; Ord. No. 295, Sec. 5, 12/17/79)

Section 226. - Industrial user's strength charges.

a. *Establishment of strength charges.* For the purpose of paying the costs allocated to the City of Chaska each year by the Metropolitan Waste Control Commission that are based upon the strength of discharge of all industrial user's receiving waste treatment services within or served by the City, there is hereby established, in addition to the sewer charge based upon volume of discharge as hereinbefore

provided, a sewer charge upon each company or corporation receiving waste treatment services within or served by the City, based upon strength of industrial waste discharged into the sewer system by the City called the "strength charge."

b. *Establishment of strength charge formula.* For the purpose of computation of the strength charge established by Subsection (a) hereof, there is hereby established a strength charge formula as designated in Resolution No. 76-172 adopted by the governing body of the Metropolitan Waste Control Commission on June 15, 1976, which is hereby made a part of this section as if fully set forth herein, such formula being based upon pollution quality and difficulty of disposal of the sewage produced through an evaluation of pollution qualities and quantities in excess of an annual average base and the proportionate cost of operation and maintenance of waste treatment services provided by the Metropolitan Waste Control Commission.

c. *Strength charge payment.* It is hereby determined that the strength charge established by Subsection (a) hereof shall be paid by each industrial user receiving waste treatment services and subject thereto before the twentieth (20th) day next succeeding the date of billing thereof to such user by or on behalf of the City and such payment thereof shall be deemed to be delinquent if not so paid to the billing entity before such date. Furthermore, it is hereby established 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 of 1%) on the unpaid balance due.

d. *Establishment of tax lien.* As provided by Minnesota Statutes, Section 444.075 Subdivision 3, it is hereby determined that if payment of the strength charge as established by Subsection (a) hereof is not paid before the sixtieth (60th) 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 Subsection (c) hereof, shall be deemed to be a charge against the owner, lessee or occupant of the property served and the City or its agents shall certify such unpaid delinquent balance to the County Auditor as taxes against the property served for collection as other taxes are collected; provided, however, that such certification shall not preclude the City or its agents from recovery of such delinquent sewer strength charge and interest thereon under any other available remedy.

(Ord. No. 143, Sec. 17, 1/3/77)

Sections 227—235. - Reserved.

Division 3. - Connection Charges

Section 236. - Purpose and intent.

a. For the purpose of paying for the establishment, obtainment, construction, reconstruction, repair, replacement, depreciation, enlargement, and improvement of the total municipal sewer system including but not limited to the cost of collection and conveyance; it is hereby determined by the City Council of the City that charges, in accordance with the schedules provided, shall be paid to the City as set forth by resolution for every lot, piece, or parcel of land connecting to the municipal sanitary sewer system, or additional use causing excessive discharge of sewage or additional living units constructed upon land already connected to the system. Said charges are reviewed and, if necessary, revised each November, effective January first of the following year.
b. It is hereby determined to be the policy of the City that the benefit to any lot, piece, or parcel of land developed within the drainage district hereinafter defined and within the classifications set forth in this division, for sanitary sewer interceptor, trunk or subtrunk service or availability is similar and that payment for said service or availability should be collected on as fair, reasonable and equitable basis as possible. It is further determined that the charges as set forth by resolution and determined fairly and reasonably represent a benefit to said land in addition in any amount previously assessed for sanitary sewer interceptor, trunk or subtrunk service or availability or any amount paid for any permit fee and charges paid for inspection of said connection pursuant to any other ordinance of the City or any other governmental entity or agency.

(Ord. No. 208, Sec. 1, 1/23/73)

Section 237. - Definitions.

As used in this division the following terms shall have the meanings given:

Acreage availability charges is the amount of dollars per acre as determined and set forth by resolution. The acreage used in computation of the acreage availability charge shall be the net developable land area exclusive of lakes, major parks, major recreational areas, major greenways and major thoroughfares and external collector streets as shown on the appropriate comprehensive guide plans of he City, or amendments thereof.

Basic Equivalent Unit (BEU) for the purpose of this division the classification of property, and the computation of the number of BEUs applicable for each connection to the municipal sewerage system, shall be in accordance with the classification and computation of the Metropolitan Council Environmental Services procedures for classification and computation of its service availability charge as more particularly set forth in that document identified as Service Availability Charge Procedures Manual, January 1998.

Basic equivalent unit charge is the amount of dollars per Basic Equivalent Unit as set forth by resolution.

Connection to sewer system: For purpose of this division every lot, piece or parcel of land is considered to be connected to the sanitary sewer system at the time a sewer connection permit is issued. Where a sanitary sewer is available the sewer connection permit shall be applied for at the time of application for a building permit.

Drainage district shall mean the area of land within the City within the East Creek Drainage area is more particularly shown on the sewer map, identified as Figure 4, as amended, of the Comprehensive Sewer Report dated 1972 as transmitted February 14, 1972, which map is marked "Exhibit A", attached hereto and made a part hereof.

Sanitary sewer charge shall mean the total amount of charges against a lot, piece or parcel of land to be paid to the City for sanitary sewer interceptor, trunk or subtrunk service or availability, exclusive of sanitary sewer laterals, service connections and use charges, and that said total sanitary sewer charge shall be a combination of the acreage availability charge (AAC) and basic equivalent unit (BEU) charge.

(Ord. No. 208, Sec. 2, 1/23/72; Ord. No. 326, Sec. 1 5/3/82)

Section 238. - Establishment of charges.

In order to accomplish the purpose and intent of this division there is hereby established a sanitary sewer charge against every lot, piece or parcel of land within the drainage district, which charge shall be collected as follows:

At the appropriate time the City Clerk, or his duly authorized representative, shall compute the total acreage availability charge and the basic equivalent charge against the land to be subdivided, to be developed or for which a building permit is requested, or which is to be connected to the municipal sanitary sewer system. The sum total of the above two (2) charges shall constitute the sanitary sewer charge for said land. From the sanitary sewer charge shall be deducted the principal amount of any sanitary interceptor, trunk or subtrunk assessments previously levied against said land pursuant to Minnesota Statues, Chapter 429 together with interest paid on the total amount of any such assessment principal in excess of eight hundred eighty four dollars ($884.00) per acre, as determined from the respective assessment rolls and adjusted to net developable acres, to December 31 of the year in which connection is made to the municipal sanitary sewer system. The remaining balance shall constitute the amount of the sanitary sewer charge to be paid prior to the issuance of a sewer permit.

(Ord. No. 208, Sec. 3, 1/23/73; Ord. No. 277, Sec. 1, 3/19/79; Ord. No. 417, Sec. 1, 8/3/87, Policy 08-01-94)

Section 239. - Continued payment of assessment levied.

A property owner may continue to make assessment payments as provided in the original assessment roll. In that event an amount equal to the total principal assessed together with interest on any such assessment principal in excess of eight hundred eighty four dollars ($884.00) per acre, to December 31 of the year in which the property is connected to the municipal sanitary sewer system shall be deducted from the sanitary sewer charge and the difference shall be paid in cash prior to the issuance of a sewer permit pursuant to this chapter, unless paid as so permitted in Section 142 of this chapter.

(Ord. No. 208, Sec. 3, 1/23/73; Ord. No. 277, Sec. 2, 3/19/79, Policy 08-01-94)

Section 240. - Credits against future assessment payments.

A property owner may in the event that more than eight hundred eighty four dollars ($884.00) per acre, as adjusted to net developable acres, is assessed against the land which is to be connected to the municipal sanitary sewer system, have the total amount assessed in excess

of eight hundred eighty four dollars ($884.00) per acre together with the interest paid on such excess amount credited against future payments of assessments already levied against other property of the owner.

(Ord. No. 208, Sec. 3, 1-23-73; Ord. No. 277, Sec. 2, 3/19/79, Policy 08-01-94)

Section 241. - Payment for additional living units.

Prior to the issuance of a building permit for construction of additional living units on any land already connected to the municipal sanitary sewer system an amount equal to the basic equivalent unit charge for each of such additional living units to be constructed thereon shall be paid to the City.

(Ord. No. 208, Sec. 3, 11/23/73)

Section 242. - Payment for excessive sewage.

In the event that the discharge of sewage from any land already connected to the sanitary sewer system within the classification as set forth in Section 136 of this chapter shall exceed two hundred thousand (200,000) gallons per acre per year, the City Clerk shall recalculate the basic equivalent unit charge based upon such increased discharge. From the basic equivalent unit charge as so determined shall be deducted any basic equivalent unit charges theretofore paid and the remaining balance shall be the additional basic equivalent unit charge to be paid to the City for such excessive discharge.

(Ord. No. 208, Sec. 3, 11/23/73)

Section 243. - Rates.

The sanitary sewer charge established as of January 1997 and thereafter, or until changed, as hereinafter set forth is the sum total of the following:

Acreage availability charge	$884.00 per acre
Basic equivalent unit charge	$520.00 per BEU

Because of the added tax base, the addition of new jobs and employment opportunities. it is in the best interest of the City to encourage the subdivision of land in accordance with the Subdivision Ordinance of the City, business, commercial and industrial development within the City, and in connection therewith it is hereby determined that the basic equivalent unit (BEU) charge for any land subdivided or for any development within the classification as defined in Section 136 of this chapter shall be paid in cash, or assessed if requested of the owner or developer, at the time the land is subdivided or developed, whichever occurs first, and if assessed, be paid over a period of years not to exceed ten (10) years within the guidelines hereinafter set forth:

a. If the BEU charge is assessed the City Council shall, by resolution, after taking into consideration the amount of the charge, the results of the latest fiscal analysis as set forth in Section 244 of this chapter and any other factors they deem necessary and advisable, determine the number of years over which the assessment is to be spread.
b. The City Council in said resolution shall determine the number of years said charge shall be spread and the amount of interest to be charged thereon. Said payments may be spread over a period of not less than three (3) nor more than ten (10) years at an interest rate dependent upon the municipal investment market at that time.
c. Prior to said charges being paid over a period of years, the land owner and/or Developer shall execute an agreement with the City whereby the land owner and/or Developer agrees that said charges shall be spread on the same basis as, and shall be considered as assessments against the land developed; and that said charges be a first and prior lien against the property in question and on a parity with other assessments levied pursuant to Minnesota Statutes, Chapter 429, if any.

The Acreage Availability Charge (AAC) if not paid in cash, shall be assessed as provided above time of development or subdivision of land, whichever occurs first. The Basic Equivalent Unit (BEU) charge, if not paid in cash or assessed as above provided, shall be collected at time of obtaining a building permit.

(Ord. No. 208, Sec. 4, 1/23/73; Ord. No. 277, Sec. 4, 3/19/79; Ord. No. 417, Sec. 2, 8/3/87)

Section 244. - Annual review of charges.

A complete fiscal analysis and review of current and projected revenue capital expansion and projected growth shall be made prior to each major interceptor, trunk or subtrunk capital improvement project or at least annually by the City Administrator, together with such other persons as he deems necessary and advisable, and it shall be reported to the City Council on or before January 1 of each year.

Such analysis shall include and take into account changes in the estimated capital costs resulting from inflation or deflation, engineering design, technology, location and alignment of sewer lines; increase or decrease in lateral benefits from the interceptors, trunks or subtrunks, amendments to the comprehensive sewer layout, new materials, governmental grants, State and Federal regulations, and any other items or considerations which will have an affect upon the total cost of the municipal sanitary sewer system. Changes or potential changes in land use, zoning, density, rate of growth, interest earned on sinking funds and prepayments, or any other financial considerations or other factors affecting projected revenue of the system shall also be considered.

The acreage availability charge and/or basic equivalent unit connection charge may be adjusted to reflect any changes shown to be necessary by said fiscal review.

(Ord. No. 208, Sec. 5, 1/23/73)

Section 245. - Separate account.

All charges collected under this division not specifically pledged to the repayment of a past or future bond issue shall be placed in a separate account. Revenues from time to time received in excess of amounts so pledged may be pledged by resolution of the governing body, or may be used, though not so pledged, for the payment of principal and interest on obligations issued pursuant to Minnesota Statutes Chapter 444 or 475 for sanitary sewer interceptors, trunks and subtrunks or for any other purpose permitted under Minnesota Statutes Chapter 444.

(Ord. No. 208, Sec. 6, 1/23/73)

Sections 246—255. - Reserved.

Division 4. - Reserve Capacity Charges

Section 256. - Recitals.

The Metropolitan Sewer Board has determined to reserve unused capacity in the metropolitan disposal system each year commencing in 1973 for local government units in which new buildings will be connected, and new connections will be made, to that system during such year and to allocate that debt service costs of such unused capacity for the year among such local government units. In order for the City to pay such costs allocated to it each year, it will be necessary to establish sewer service availability and connection charges for all buildings constructed or connected to the metropolitan disposal system on or after January 1, 1973.

(Ord. No. 207, Sec. 1, 12/18/72)

Section 257. - Establishment of charges and amount of charges.

a. For the purpose of paying the costs of reserve capacity allocated to the City each year by the Metropolitan Sewer Board, there is hereby established a charge for:
    1. The availability of treatment works and interceptors comprising the metropolitan disposal system; and
    2. Connections, direct and indirect, to the metropolitan disposal system.

The charge is hereby imposed on each building in the City, and on each connection to the metropolitan disposal system directly or through the City's system, which is within any sewer area established by the Metropolitan Sewer Board, construction of which building is commenced, or which connection is made, on or after January 1, 1973. The charge shall be payable at the time of, and as conditioned to, the issuance of a building permit or a connection permit, as the case may be, but no charge shall be due upon the issuance of a connection permit if a charge was paid upon issuance of a building permit.

b. The charge for each building shall be equal to the number of units of sewage volume which it will discharge, multiplied by the effective rate determined by the Metropolitan Wastewater Services. The charge after 1977 shall be as the City Council, by ordinance, may determine. A unit of sewage volume shall be one hundred thousand (100,000) gallons per year and shall be assigned as follows:
    1. Single-family dwellings and each living unit within any townhouse development, duplex and mobile homes greater than fourteen (14) feet in width shall comprise one unit;
    2.

Each living unit within condominiums for residential use and apartments and mobile homes fourteen (14) feet in width or less shall each comprise eighty percent (80%) of a unit;

3. All other buildings shall be assigned one (1) unit for each one hundred thousand (100,000) gallons of flow or part thereof which the City estimates they will discharge;
4. Buildings for residential use and existing or for which building permits were issued prior to January 1, 1973, shall be counted as one-half (½) the unit equivalent for that type of residential building if connected to the metropolitan disposal system prior to January 1, 1974, and shall be counted at the full rate thereafter.

(Ord. No. 207, Sec. 2, 12/18/72)

Section 258. - Administration.

The City Administrator, or his duly authorized representative, shall prepare or revise building permits and sewage connection permit application forms to provide information necessary for the computation of the number of units assignable to the building in question. The Administrator shall make such information available to the Metropolitan Sewer Board upon request.

(Ord. No. 207, Sec. 2, 2/18/72)

Section 259. - Council may change charges.

The City Council may by ordinance increase, diminish, or change the amount and basis of the charges herein established, from time to time.

(Ord. No. 207, Sec. 2, 12/18/72)

Section 260. - Charges to be in addition to other charges.

The charges herein established shall be in addition to, and not in lieu of, all other charges imposed from time to time by the City for building permits, sewer connection permits and sewer rental charges.

(Ord. No. 207, Sec. 2, 12/18/72)

Appendix H INTERCOMMUNITY FLOW AGREEMENTS

AGREEMENT FOR INSTALLATION OF FLOW METER

THIS AGREEMENT, Made and entered intothis 3RD day of JANUARY, 2013, by and between the City of Chaska, a municipal corporation organized under the laws of the State of Minnesota, hereinafter referred to as "Chaska", and Stoughton Avenue Ventures, LLC, a limited liability company organized under the laws of the State of Minnesota, doing business as Gedney Pickle, hereinafter referred to as "Gedney"; **WITNESSETH:**

RECITAL NO. 1.

Gedney is situated on property located in the City of Chanhassen upon which it conducts a pickle processing enterprise.

RECITAL NO. 2.

The domestic sanitary sewage generated by Gedney is deposited into a sanitary sewer line situated within Chaska and is then conveyed to the Metropolitan Sanitary Sewer Treatment Facility.

RECITAL NO. 3.

The Cities of Chaska and Chanhassen have heretofore entered into a Joint Water and Sanitary Sewer Agreement dated July 13, 1992, which addresses intra-City utility connections.

RECITAL NO. 4.

The amount of said sewage is estimated and recent monitoring has indicated that said estimated flow does not adequately represent the actual full amount of sanitary sewage generated by Gedney.

RECITAL NO. 5.

It is the desire of the parties hereto to enter into this Agreement providing for a flow meter to be installed to accurately measure the amount of sanitary sewage generated by Gedney and for the payment of the cost thereof.

NOW, THEREFORE, it is agreed by and between the parties hereto as follows:

1. **Construction.** Chaska shall design and cause to be constructed a sanitary sewer flow meter and which meter shall be installed in a manhole on Gedney property.

2. **Cost.** The estimated cost of said sanitary sewer flow meter is $20,000.00. In addition, Chaska has accrued expenditures in the amount of $11,500.00 performing temporary

flow monitoring and meter design. Gedney will reimburse Chaska for 50% of the temporary monitoring and design costs and 100% of the construction costs in five annual installments of principal and interest, with interest at the rate of five percent (5%) per annum on the unpaid principal balance. As soon as the final cost can be determined, notice thereof shall be given to Gedney and thirty (30) days thereafter the first annual payment of principal and interest shall be due. Interest shall commence on the date written notice is given. Each payment shall be applied first to the payment of the interest due on such date and the remainder in reduction of the principal.

3. **Invoice for Sanitary Sewer Usage.** In addition to the above, Chaska shall invoice Gedney for future use of the sanitary sewer lines of Chaska for conveying said sanitary sewage, and for the cost of treatment,at the approved monthly rate for Chaska businesses based upon the actual amount of sanitary sewage as measured by said flow meter. Gedney shall pay said amount within thirty (30) days of receipt of an invoice therefor.

4. **Repairs and Replacement.** In the event said flow meter is required to be repaired or replaced, Gedney shall complete such repair or replacement in a timely manner at Gedney's cost.

IN WITNESS WHEREOF, the parties hereto have caused these presents to be executed the day and year first above written.

CITY OF CHASKA

By_____
Its Mayor

By_____
Its City Clerk

GEDNEY FOODS COMPANY

By_____
Its VP-TECHNICAL SERVICES

JOINT POWERS AGREEMENT BETWEEN
THE CITY OF CHASKA AND THE
TOWNSHIP OF LAKETOWN RELATING
TO 201 SANITARY SEWER PROJECT

THIS AGREEMENT, Made and entered into this _____ day of _____, 1983, by and between the City of Chaska, a municipal corporation organized under the laws of the State of Minnesota, hereinafter referred to as "City", party of the first part, and the Township of Laketown, a municipal corporation organized under the laws of the State of Minnesota, hereinafter refered to as "Township", party of the second part;

WITNESSETH:

WHEREAS, an area of Laketown Township situated in Sections 24 and 25, Township 116 North, Range 24 West, and a very small portion of the City of Chaska situated in Section 19, Township 116 North, Range 23 West, are included in the "Carver County Joint Communities Wastewater Facilities Plan" and as more particularly described in said Plan as Planning Area 6-E; and

WHEREAS, Planning Area 6-E is shown on said plan to have malfunctioning on-site wastewater treatment systems, and it further has been found to be feasible to construct a small diameter septic tank effluent collection system and discharging septic tank effluent to the City's existing wastewater collection system to alleviate health and environmental problems caused by said malfunctioning facilities; and

WHEREAS, the Minnesota Pollution Control Agency proposes to fund construction of a small diameter collection system in said Planning Area 6-E; and

WHEREAS, by the nature of the location of the planning area in the City and in the Township, it is in the best interests of both the City and the Township to enter into a joint powers agreement concerning the planning, design, construction and maintenance of a small diameter septic tank effluent collection system for said Planning Area 6-E; and

WHEREAS, it is the desire of the City and the Township to enter into a joint powers agreement regarding the cost allocation on a fair and equitable basis between the parties hereto for the installation and operation and maintenance of said system as above proposed and as more particularly set forth in the Step II plans and specifications Carver County Joint Communities Step Two - 201 Project.

NOW, THEREFORE, pursuant to Minnesota Statutes, Section 471.59 and in consideration of the mutual covenants and promises hereinafter contained, it is agreed by and between the City of Chaska and the Township of Laketown as follows:

1. Definitions. For purposes of this Agreement the following words and terms shall have the meanings hereinafter ascribed to them:

* City shall mean the City of Chaska, Carver County, Minnesota.

* City Council shall mean the duly elected and qualified and acting City Council of the City of Chaska, Minnesota.

* Township shall mean the Township of Laketown, Carver County, Minnesota.

* Town Board shall mean the duly elected, qualified and acting Board of Supervisors of the Township of Laketown, Carver County, Minnesota.

* Metropolitan Waste Control Commission (MWCC) shall mean the Metropolitan Waste Control Commission as provided by Minnesota Statutes or any successor to said Agency having control over the wastewater in the City of Chaska and Township of Laketown as provided by Minnesota Statutes.

* Minnesota Pollution Control Agency (MPCA) shall mean the Minnesota Pollution Control Agency as provided by Minnesota Statutes or any successor agency having similar powers as provided by Minnesota Statutes.

* Treatment Facilities shall mean the sanitary sewer treatment facilities owned by the MWCC situated in the City of Chaska or such other treatment facilities as provided by MWCC and which provides treatment for sanitary sewage for the City.

* Code shall mean Chapter 19 of the Code of Ordinances of the City of Chaska and such other provisions of the Code as are, or may be from time to time, applicable.

* Plan shall mean the Carver County Joint Communities Waste Water Facilities Plan including but not limited to Step I, Step II, Step III, together with such other plans, specifications and other documents implementing said Plan.

* Project Engineer shall mean the engineering firm of Maier, Stewart and Associates, Inc. or such other engineering firm employed by the City and the Township or the County of Carver for the purposes of planning, designing, engineering and constructing the facilities contemplated by the Plan in Planning Area 6-E.

* Planning Area 6-E as used for purposes of this agreement shall mean the following portions of the Township and the City:

That part of the South 1/2 of Section 24, T 116 N, R 24 W lying east of County Road 11 and south of Lake Bavaria; and

That part of the East 1/2 of the North 1/2 of Section 25, T 116 N, R 24 W lying north of a line extended westward from the southernmost boundary of the Oakwood Terrace subdivision plus the parcel described on page 260 in Book of Deeds 82 on file in the office of the Carver County Recorder; and

The southwest 1/4 of the South 1/2 of Section 19, T 116 N, R 23 W.

* City Engineer shall mean the duly appointed, qualified and acting City Engineer of the City of Chaska.

* System shall mean all sanitary sewer laterals, interceptors, manholes, connections, pipes, tanks, septic systems and such other necessary and related appurtenances to the small diameter septic tank effluent collection system constructed in Planning Area 6-E and constructed under the Plan.

* Other Definitions shall have the meaning ascribed to them as set forth in Chapter 19 or other applicable Chapters of the Code.

2. Adoption of the Plan. Those portions of the Plan as approved by the City and Township are hereby incorporated into this Agreement by reference the same as if said Plan was fully set forth herein and the City and Township shall keep on file in their respective corporate offices such approved portions of said Plan.

3. Conveyance of Sewage. The City does agree to permit the Township to convey sewage from the Township through the City's sanitary sewer system to the MWCC's treatment facilities located in Chaska all in accordance with the Plan.

4. Proceed with Plan. Both the City and the Township agree to proceed with the Plan and to take such action as necessary to effectuate said Plan in a timely and efficient manner.

5. Construction Cost Sharing. The local government share of the costs of engineering, financing and system construction of the Step III project in Planning Area 6-E shall be shared by the City and Township on the basis of the relative number of potential residential connections. The City will pay 4.63% of the Step III local costs and the Township will pay 95.37% of the Step III local costs.

6. Easements. The City and Township shall each be responsible for the acquisition of necessary easements in their respective jurisdictions including any costs attributable thereto.

7. Connection to the System. Upon completion of construction of the system as set forth in the Plan, both the City and Township shall require that all existing housing units within Planning Area 6-E be connected to said system. Any new housing units shall be connected to the system prior to occupancy.

8. Operation and Maintenance. The Township shall own, operate and maintain the System upstream of the Flow Meter Manhole as shown on the Plan including said manhole and flow meter. The City shall own, operate and maintain the eight inch interceptor downstream of the Flow Meter Manhole. The City herein grants the Township authority to construct those portions of the system located within the City in accordance with the Plan and to occupy those easements acquired by the City for that purpose. The Township herein authorizes the City to occupy those easements within the Township, acquired by the Township for the purposes of constructing the eight inch interceptor to be owned by the City.

9. Reconstruction. In the event of damage, destruction or deterioration of any part of the system to an extent greater than can reasonably be reconstructed through use of sewer user charges; the cost of reconstruction shall be borne in accordance with the cost sharing as set forth in paragraph 5 above.

10. Flow Meter. The Township shall cause to be installed, as part of the initial construction, one indicating, totalizing and recording Parshall flume flow meter capable of providing accurate seven day totals of the amount of wastewater delivered by the System to the City of Chaska sewer system. The flow meter shall be located as shown in the Plan. The Township shall calibrate the flow meter at least annually and shall furnish the City evidence of such calibration. The Township does hereby grant unto the City the right to read and monitor the meter, and to inspect and test said flow meter as to accuracy and if same is not functioning properly the Township does agree to cause said meter to function properly; and if the same is not completed within thirty (30) days of date of notice, the City may so correct said flow meter and bill the cost thereof to the Township on its next succeeding monthly bill.

11. Billing and User Charge. Upon the Township discharging wastewater into the System the City shall, monthly, bill to the Township user charges for the conveyance and treatment of wastewater pursuant to Chapter 19, Code of Ordinances of the City of Chaska. It shall be the responsibility of the

Township to impose and collect such user charges as it deems necessary and the City of Chaska hereby grants unto the Township the right and authority to impose and collect such user charges as it deems necessary from those properties situated in the City of Chaska and connected to the System; and the Township does agree that the user charges imposed and collected from such property situated in the City of Chaska shall be on the same basis as user charges imposed upon those properties situated in the Township and connected to the System.

12. Connection Charges. The Township shall pay to the City connection charges on the following basis:

a. Prior to the City receiving any wastewater flow from the System;

(1) Township shall pay City the then current single family residential Metro Sewer Availability Charge (SAC) for each existing dwelling unit situated within the Township in Planning Area 6-E, which had not previously been assessed a Metro SAC. The City shall transmit this payment to MWCC together with the Metro SAC required for the dwellings situated in that portion of Planning Area 6-E located within the City; and ($165.00 current SAC)

(2) Township shall pay City the sum of $35,475.00, said payment being based on the total area of Planning Area 6-E located within the Township multiplied by the City's Acreage Charge of $430.00 per acre; and

(3) Township shall pay the City an amount equal to $220.00 for each dwelling unit then existing in that portion of Planning Area 6-E located within the Township, said payment constituting the City's Connection Charge.

b. At the time a building permit is issued for a new dwelling in that portion of Planning Area 6-E located within the Township, Township shall pay the City a Metro SAC and a City Connection Charge in the amount being charged at that time for new connections within the City.

13. Limitations on Future Connections. The City herein grants the Township the right to connect one single family dwelling for each building lot of record existing in Planning Area 6-E on the date of this agreement. Connection to serve additionally created lots in the future requires prior written approval of the City. In the event that the MWCC places any restrictions on future connections within the City, said restrictions shall also apply in that portion of Planning Area 6-E located within the Township.

14. Prohibited Discharges into System. Neither the City nor the Township shall allow any property to discharge, or cause to be discharged, into the System any storm water, surface water, ground water, roof runoff, cooling waters, or waters from sump pumps; further, the Township shall not permit the discharge into the System of any waste or any other substance other than as same is permitted by Chapter 19 of the Code of Ordinances of the City of Chaska or in accordance with the rules and regulations of MWCC.

15. City's Right to Inspect. The Township does hereby grant to the City the right to approve the plans and specifications and inspect the construction of the System to assure construction in accordance with said plans and specifications as approved.

16. City's Right to Correct Deficiency. Upon the completion of the System and the use thereof; in the event of unusual discharge of ground water or any other discharge in the System other than as contemplated in the Plan, the City shall notify the Township of same and if the Township does not correct such deficiency within thirty (30) days of such notification the City shall have the right to cause said deficiencies to be completed and to bill the cost thereof to the Township on the next monthly user billings as above provided.

17. Future Improvements. Nothing contained in this Agreement shall prohibit the City or the Township, as is appropriate, to assess any further sanitary sewer improvements benefiting property connected to this System based upon benefits received pursuant to the then current laws of the State of Minnesota.

18. Duration of Agreement. This agreement shall remain in effect so long as:

a. The MWCC or some other Agency of the State of Minnesota provides treatment facilities connected to the sanitary sewer system of the City of Chaska, or

b. Until such time as another method of collecting, containing and treating of sanitary sewage is agreed upon by and between the City and the Township, or

c. Until such time as this agreement is amended and said amendment(s) is approved by a majority vote of the Chaska City Council and a majority vote of Laketown Board of Supervisors.

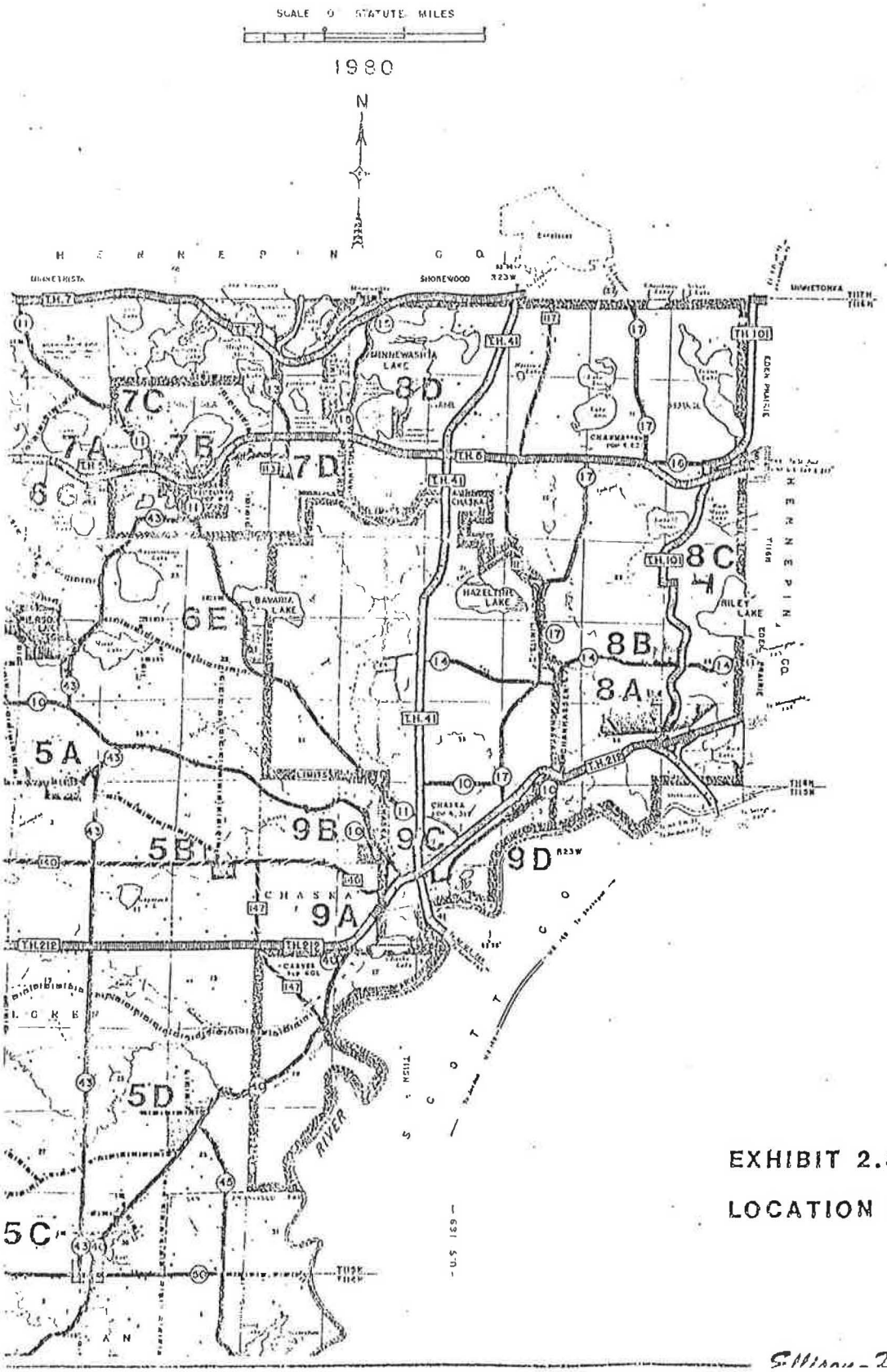
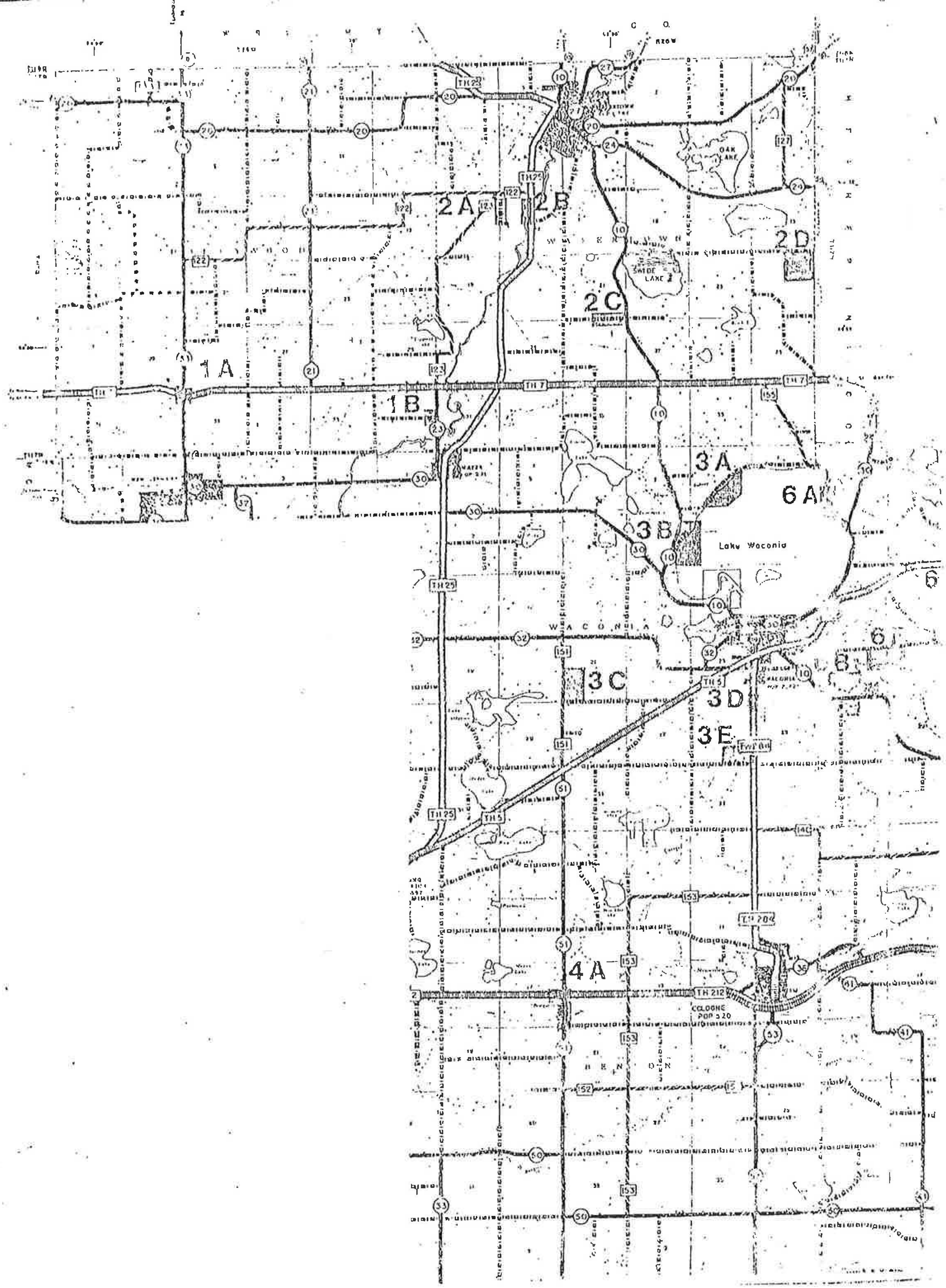


EXHIBIT 2.3

LOCATION OF PLANNING AREAS


1A
1B
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2B
2C
2D
3A
3B
3C
3D
3E
4A
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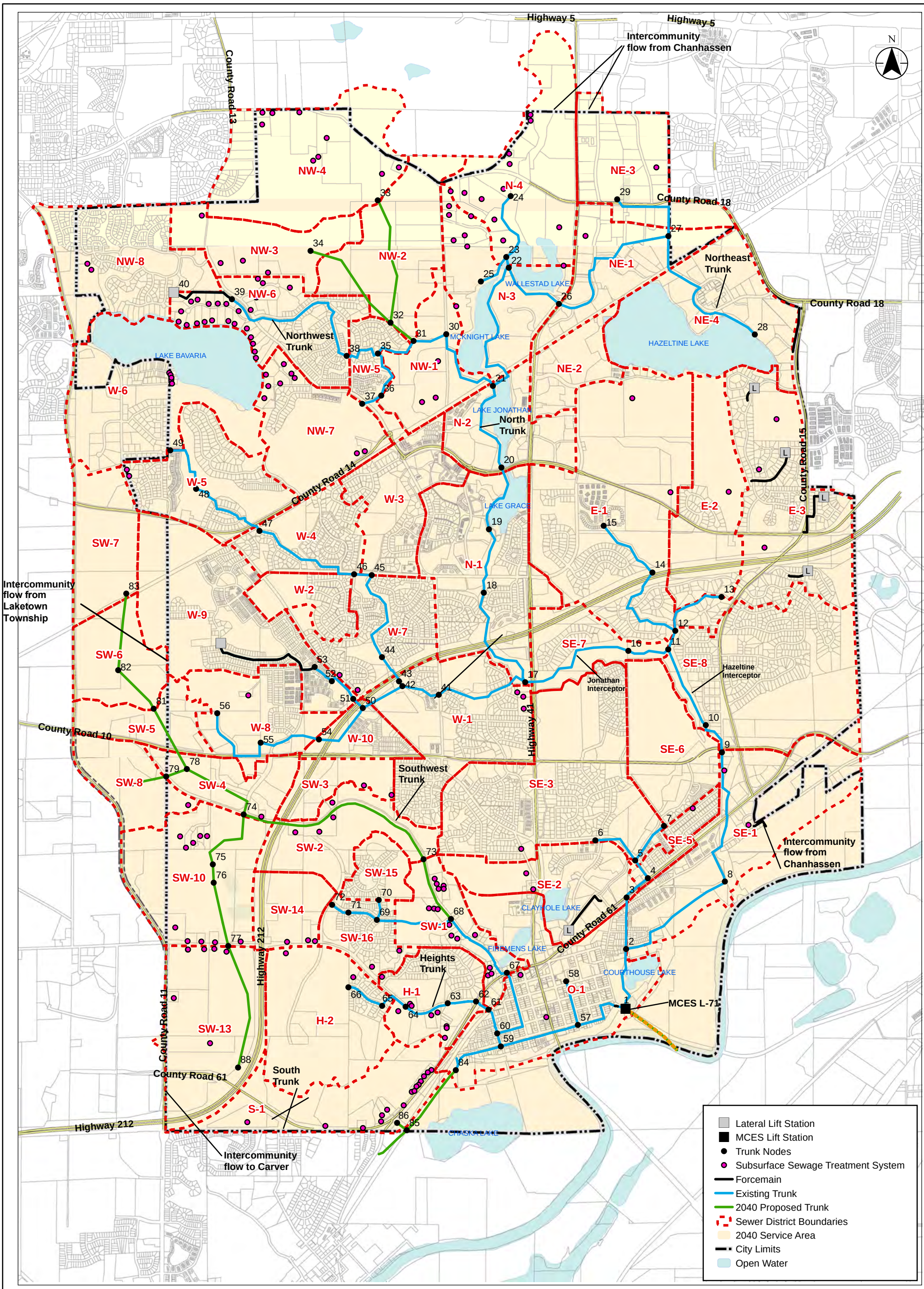
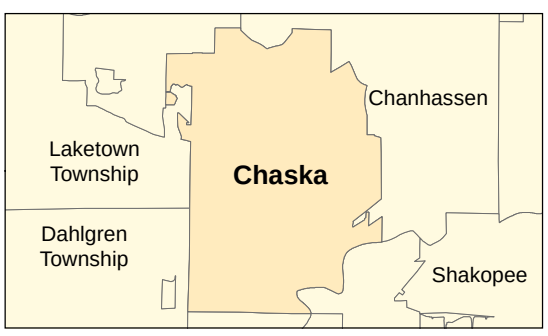
Lake Waconia
OAK LAKE
SWEDE LAKE
TH 7
TH 25
TH 5
TH 212
COLOGNE POP 520





Trunk Sewer System
Chaska, Minnesota
Comprehensive Sewer Plan

Map 1

0 750 1,500 3,000 4,500 6,000 Feet

1 inch = 2,500 feet (At original document size of 11x17)

Stantec

Revised: 2019-08-07 By: hduan

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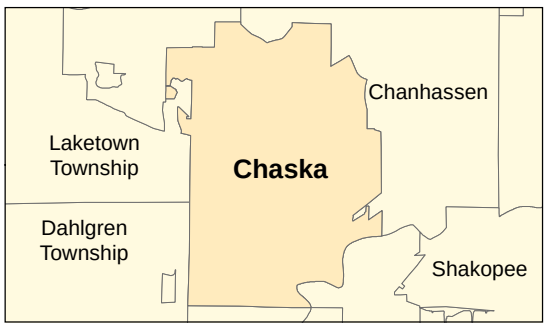
Trunk Sewer System with 2040 Land Use Plan

Chaska, Minnesota Comprehensive Sewer Plan

Map 2



0 750 1,500 3,000 4,500 6,000 Feet

1 inch = 2,500 feet

(At original document size of 11x17)

Stantec

Revised: 2018-10-11 By: hduan

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