

APPENDIX M
Trunk Conveyance and Ponding Fee Report

STORMWATER TRUNK FEE JUSTIFICATION REPORT-2005 UPDATE

***FOR THE
CITY OF ROSEMOUNT***

***March 2002
December 2004***

Prepared By:

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CERTIFICATION

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

Peter R. Willenbring, P.E.

Date: December 2004

Reg. No. 15998

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TITLE SHEET

CERTIFICATION

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I. Introduction

This report has been prepared for the City of Rosemount to provide documentation and support to the stormwater trunk fee that the City intends to assess property owners developing land within the City. The fee outlined in this report is intended to be approximate and will be refined by Springstead Incorporated based on a further analysis of carrying costs and cash flow considerations. This fee will assist in funding future stormwater trunk conveyance system improvements proposed by the City (**Appendix A, Figure 1**).

For the purpose of calculating a stormwater trunk fee, a stormwater trunk conveyance system is defined as a drainage system that accommodates stormwater runoff from parcels of land that are outside of the ownership of a given property owner. A regional ponding system is defined as a ponding system that provides stormwater storage and treatment for more than one parcel. Stormwater trunk fees are necessary in order for the City to provide assurances that:

1. An adequate drainage system can be financed and constructed so that stormwater runoff from parcels within the City can be reasonably accommodated through downstream areas.
2. The City can acquire property for constructing the storm sewer system while new development takes place so that the plans of both the City and the developer can be coordinated.
3. Property owners within the City will be treated fairly. The implementation of this fee will allow new developments to pay for trunk infrastructure improvements that are needed to accommodate the new development. Failure to implement this fee would result in all taxpayers in the City paying for the cost of improvements that are for the most part only benefiting newly developing areas. The implementation of this program will also allow the City to compensate property owners for the additional cost associated with developing property that has stormwater runoff passing through it from upstream drainage areas.

The following sections contain a description of the procedures and methods followed in developing the trunk conveyance and ponding system design, a breakdown of the capital costs associated with the construction of the system, and stormwater trunk fee calculations.

II. Procedures and methods followed

The capital costs associated with installation of a trunk conveyance and ponding system for the City can generally be broken out into the capital costs associated with securing the land, and the capital costs associated with furnishing and installing the stormwater storage, treatment, and conveyance systems within the City.

As part of developing these costs, the City's engineering design standards associated with construction of trunk conveyance and ponding systems were used. Toward this end, please find outlined below the following specific design standards and considerations used in the development of the City's trunk conveyance and ponding fees.

A. Main trunk and lateral trunk conveyance design

- The City will work toward constructing gravity outlets for most systems. In cases where it can be demonstrated through a cost benefit analysis that the costs for using a lift station will be less than that associated with a gravity system, consideration for a lift station outlet from a given drainage area will be considered.
- The storm sewer conveyance system will be designed to accommodate the rates outlined in the City's Comprehensive Stormwater Management Plan.
- It will be the developer's responsibility to convey stormwater runoff from a given site to the designated trunk conveyance and ponding system. The construction of these systems from the site to the trunk conveyance and ponding system will accommodate a 10-year return frequency rainfall event. Overland overflows must also be available for these areas that are to be designed to meet the freeboard requirements in the City's Comprehensive Stormwater Management Plan.
- The City will give consideration to utilizing open drainage ways instead of storm sewers in situations where such a system can be built at reduced cost provided it can be demonstrated that long-term maintenance of that facility will not warrant the use of a lower maintenance but more capital intensive piping system.

B. Regional ponding, infiltration, and treatment design

- Stormwater storage will need to be provided for areas in their fully developed condition for a critical duration rainfall event having a 1% chance of occurrence in any given year.
- In accordance with general direction developed through the Nationwide Urban Runoff Program (NURP) and the Directives of the Metropolitan Council, developers will be required to provide treatment for stormwater runoff by constructing treatment ponds with dead water storage volumes equal to the runoff volume from a 2.5" rainfall event. Basin geometrics including length to width ratios and average depth will also be designed in accordance with the direction provided by NURP and Metropolitan Council Directives.
- Stormwater retention and treatment ponds will be lined with an impermeable membrane or soils in areas where land use activities are believed to provide a

significant potential for groundwater contamination. In cases where basins are constructed as two-cell systems, the primary cell will be lined but it will not be necessary to line the secondary cell with an impermeable membrane.

- Infiltration will be incorporated into the design to the extent reasonable and practical so as to provide a rate 1/12 of an acre-foot per tributary acre per day.
- Side slopes associated with the construction of the retention and treatment basins must be maintained at 10:1 over the first 10 feet waterward, followed by a maximum of 4:1 slope in the interior of these basins. This requirement does not apply in areas where natural depressions are going to be used to provide retention and treatment.
- The outlets from treatment basins will have a design configuration such that skimming of oil and floatables will be provided for low flow discharges. A two-stage design configuration for the pond shall also be utilized for these systems to improve retention and treatment functions of the basin.
- The City will attempt to delay construction of downstream retention and treatment facilities until such time as property in these areas is under development. In cases where an upstream system must be provided an outlet, the City will consider utilizing portable pumps to maintain normal water elevations in designated stormwater storage areas.

C. Methods associated with estimating revenue and cost

- The City anticipates using the stormwater trunk fee as a source of revenue to assist in funding necessary improvements to the City's storm drainage system. It is anticipated the storm water utility fees will generally be used for maintaining and replacing the system.
- It is anticipated that in order for the City to construct trunk storm drainage systems, it may be necessary for the City to bond for system improvements in order to allow development to occur. Once development occurs, the trunk conveyance and ponding fees collected, as a part of this development will be utilized to reimburse the trunk fund and pay off the bonds.
- It has been assumed that no revenue will be generated from areas outside of the City's municipal boundaries that drain into the City unless a joint powers agreement has been drafted between the City and an adjoining governmental unit that addresses each community's responsibility relative to funding the construction of such systems.
- Project costs for land acquisition and improvements have been derived from an engineer's estimate of average costs based on a variety of land acquisition and construction scenarios. The typical scenario utilized herein assumes that

the City would attempt to construct most projects concurrently with land development activities.

- The preliminary design and cost estimates for systems were developed using reasonable care. However, it will be necessary to periodically update the design assumptions and cost estimates contained herein. It is anticipated that this section of this report will be reviewed and updated annually or as necessary to reflect changes in construction costs or changes in the assumptions utilized for the trunk system design. Changes in construction costs will generally be tied to the Engineering News Record Construction Cost Index.
- The stormwater trunk fee will consist of a main trunk fee, lateral trunk conveyance fee, and a stormwater ponding fee. The main trunk and the lateral trunk line stormwater conveyance fees will be based on the total cost associated with the construction of the system divided by the acreage assessed. The stormwater ponding fee will be determined by calculating the cost to provide ponding and treatment for a 100-acre site divided by the net developable acreage within that site
- It is the intention of the City to apply the stormwater trunk and/or regional ponding fees to all properties that are developing, provided that these properties have not previously paid a trunk conveyance and/or ponding fee or storm sewer assessment that equals or exceeds the trunk and ponding fees in this report. In cases where a special benefit fee was applied to a given parcel as part of the stormwater utility fee, consideration will be given for a reduction in the stormwater trunk fee if it is deemed reasonable to do so.
- The cost associated with the trunk conveyance and ponding fees include administrative, legal, permitting, and engineering costs for all trunk and ponding drainage improvements. These administrative, legal, permitting, and engineering costs were estimated at 35% of the construction costs.
- Cost calculations associated with the excavation of material to construct stormwater storage in the conveyance systems is based on the assumption that material excavated will be removed at \$2.00 per yard.
- The City will require developers to provide at no cost easements or outlot dedications over parcels that will be utilized for stormwater storage, treatment, or conveyance system construction to accommodate runoff from their site. In addition, parks, floodplain, and wetland areas will also be required to be dedicated to the City at no cost. The above areas that are dedicated will be subtracted from the total acreage so that trunk conveyance and regional ponding fees are not assessed against these areas.

III. Service area and trunk fee districts

The service area associated with the City's trunk conveyance and ponding system will include all areas within the City's municipal boundary. For the purposes of developing the trunk conveyance and ponding fees within this area, three districts were identified. These districts are shown on **Figures 2 and 3 in Appendix A** and include the following:

- **Area 1 - Previously developed district:** This district includes the area that has been developed or has already paid a stormwater trunk and/or ponding fee as of the adoption of this report. This acreage is not included in the trunk conveyance and ponding fee calculations as it is unlikely revenue will be generated from land in this district.
- **Area 2 - Lateral trunk conveyance system district:** This district includes all of the developable area within the City that is not within Area 1 (**Appendix A, Figure 2**). Lateral trunk conveyance and ponding systems in this area are intended to convey, store, and treat stormwater prior to discharge into the main trunk conveyance line. This area is anticipated to generate lateral trunk system and ponding fees.
- **Area 3 - Main trunk system district:** Area 3 contains all of the developable area within Area 2 with the exception of the University of Minnesota property and the Flint Hills Company property (**Appendix A, Figure 3**). This area is anticipated to benefit from a main trunk conveyance system and is anticipated to develop in the future. The University of Minnesota property and the Flint Hills Company property have a very low probability of developing in the foreseeable future and therefore this acreage has been removed from the acreage that will generate revenue. This area is anticipated to generate a main trunk system fee.

IV. Main trunk and lateral conveyance system costs and fee calculations

For purposes of determining the stormwater trunk conveyance fee, two separate fees were calculated. One fee was based on the construction of the main stormwater trunk conveyance system and the second fee was based on construction of the lateral stormwater trunk conveyance system and ponding.

The main trunk line consists of one stormsewer outlet that begins at basin 1864 located north of CSAH 42 and east of the Bloomfield 4th addition and continues to the Mississippi River (**Appendix A, Figure 3**). All other stormwater improvements, including lift stations, are part of the lateral systems (**Appendix A, Figure 2**) and are included in the lateral trunk and improvement cost calculations. Outlined below is a narrative describing how the main trunk and lateral conveyance system fees were estimated.

A. Lateral trunk conveyance system fees

The lateral conveyance system fee was determined by estimating the lateral trunk conveyance system capital costs and dividing it by the net developable acreage within the area. Outlined below is an additional breakdown of how these fees were computed:

1. Determine the net developable acreage within the lateral trunk conveyance district

The net developable acreage within the district was determined by subtracting areas that would not likely be developed (based on current information) from the total drainage area within the City. The areas that were identified as unlikely to develop include land that is covered by lakes, wetlands, proposed storm water ponds, parks, public land, or floodplain areas. In addition, the City of Rosemount has been advised by the University of Minnesota and the Flint Hills Company which owns large parcels will not likely be developed in the foreseeable future.

Along with the above mentioned areas, any areas, particularly on the west end of the City, have already been developed and have paid for storm water management fees through direct assessments or other means in such a manner that it is unlikely fees would be generated from these parcels in the future. Based on this analysis, it is determined the City has 22,600 acres of land within its municipal boundaries, 8,745 acres have been identified as unlikely or unsuitable for development. This analysis indicates that approximately 13,700 acres are available to be defined as “net developable” acreage that could likely be assessed a lateral conveyance system fee at the time of this analysis.

2. Determination of lateral trunk conveyance system costs.

A further breakdown of the capital costs associated with the construction of the lateral conveyance system within the City is shown in **Appendix B, Table 1**. As can be observed on this table, the total capital costs associated with the lateral trunk conveyance system is estimated at \$109,900,000.

This cost reflects actual construction costs associated with the lateral trunk storm sewer system improvements, including the cost of pipe and lift stations, indirect costs for administrative, legal, permitting, and engineering, which is anticipated at 35% of the construction costs, and land acquisition costs based on acquiring a 40-foot easement over the pipe alignment with an average land cost of \$60,000 per acre residential land use and \$90,000 per acre commercial/industrial land use.

3. Lateral trunk conveyance system fee calculation

The fee associated with the lateral trunk conveyance system was calculated by taking the cost of \$109,900,000 for the lateral trunk conveyance system divided by the 13,700 acres benefited.

- The lateral trunk conveyance fee: **\$0.1842 per square foot**

B. Determination of main trunk system fee

The main trunk system fee was determined by estimating the main trunk conveyance system capital cost and dividing the cost by the net developable acreage within the district. Outlined below, please find additional discussion on the process followed in completing this determination:

1. Determination of net developable acres within the main trunk conveyance and ponding district

The net developable acreage within the main trunk district is determined by subtracting currently developed acreage and acreage having land use associated with lakes, wetlands, proposed storm water ponds, parks, public land, and floodplain areas from the total area. Based on the City's total acreage being estimated at 22,600 acres, and the currently developed areas along with lakes, wetlands, proposed storm water ponds, etc. covering 15,100 acres, the estimated remaining net developable area within this district is estimated at 7,500 acres .

2. Determination of main trunk conveyance system costs.

The capital costs associated with construction of the main conveyance system within the City is estimated at \$29,000,000 as shown in **Table 1 of Appendix B**. This cost reflects actual construction costs, indirect costs associated with administrative, legal, permitting, and engineering activities (estimated at 35% of the construction costs), and the cost for acquiring easements over proposed pipe alignment. These easement costs were based on securing a typical easement width of 100 feet across this conveyance system and having to pay average line costs of \$60,000 per acre.

3. Main trunk conveyance system fee calculation

The fee associated with the main trunk conveyance system was calculated by taking the cost of \$29,000,000 for the lateral trunk conveyance system divided by the 7,500 acres benefited. The fee is not rounded to the nearest cent for administrative application in determining the per acre fee.

- The main trunk conveyance fee: **\$0.0888 per square foot**

Table 1 in Appendix B summarizes the capital costs associated with the development of the main trunk and lateral trunk conveyance systems. Lateral trunk and main trunk fees are outlined on Table 2 of Appendix B.

V. *Stormwater ponding system costs and fee calculation*

The costs associated with constructing trunk stormwater storage and treatment facilities are not included in the main or lateral trunk conveyance costs. The trunk conveyance fee outlined in Section IV covers only the cost associated with trunk conveyance system improvements.

Separate costs are, however, included herein for stormwater storage and treatment system construction. These costs are included to allow the City to design and construct regional stormwater storage, treatment, and infiltration ponds and assess developing property for such regional improvements when it is deemed reasonable to do so. Under these conditions, if the City advises the developer they must utilize regional ponding systems, they will not be required or allowed to provide on-site ponding.

The stormwater trunk ponding fee was developed by considering the stormwater storage and treatment needs for a 100-acre parcel with residential 1-3 lots/acre, residential >3 lots/acre, and commercial/industrial land use.

The following assumptions were made to determine the trunk ponding fee:

- The detention storage required is the volume determined to be necessary to reduce the 100-year, critical event peak discharge rate to the rates outlined in the City's Stormwater Management Plan.
- The land area required to provide ponding was based on an average live water storage depth of four feet.
- In cases where land acquisition is required through the purchase of property, the average land cost was estimated at \$60,000/acre for residential and \$90,000/acre for commercial/industrial developments.

Based on this assessment, to compensate the City for providing these trunk ponding facilities, the following fees will be assessed to developing property where trunk ponding facilities are available or will be constructed:

- Residential lots having densities of 1-3 lots/acre: **\$0.0877/sq. foot**
- Residential lots with densities greater than 3 lots/acre: **\$0.1359/sq. foot**
- Commercial/Industrial Land: **\$0.2070/sq. foot**

A breakdown and summary of the costs used to determine the stormwater trunk ponding fee is shown on **Table 3** of **Appendix B**. A summary of the fee calculations can be seen in **Table 4** of **Appendix B**.

VI. Policy administration

The trunk conveyance and ponding fee program will be administered by the City as outlined in the following procedure:

1. For Residential Development:

- a. The developer will submit plans and calculations to the City.
- b. The City will review the plans and calculations to determine if the design is reasonable, cost effective, and in conformance with the City's standards for drainage system design. Area calculations will also be reviewed to determine the area over which the stormwater trunk fee would apply.
- c. The City will include a condition of approval for the final plat requiring payment of the trunk stormwater fees prior to recording the plat.
- d. The City will calculate the stormwater trunk fee based on the land area information and hydrologic calculations submitted by the developer. This total amount due is then forwarded to the City Clerk.
- e. The City Clerk will collect payments made by the developer.

In the case of properties that have already been developed but have not paid a stormwater trunk fee because they were platted prior to the effective date of the stormwater trunk fee ordinance, the appropriate fee will be collected at such time as any new building permit is issued in accordance with the following procedure:

2. For Industrial and Commercial Development:

- a. The property owner shall submit a survey and area calculation for the site.
- b. The City will calculate the stormwater trunk fee based on the land area information submitted.
- c. The City will collect payments made by the property owner at the time of building permit issuance.

The City will also reserve the right to annually update this report and/or fee amount, as well as any service area expansions, subject to City Council approval.

VII. Summary

This justification report for stormwater trunk fees has been prepared for the City to provide documentation to support these fees that the City intends to assess property owners that are developing land within the City. These fees are necessary in order for the City to fund and construct storm drainage facilities that are needed to accommodate runoff from developing property in the City.

The costs associated with constructing the drainage system in the City were based on developing a system that meets the City Engineering design standards associated with the construction of new stormwater retention and treatment facilities, as well as conveyance systems. The City's Engineering design standards utilized in estimating the future cost for the trunk conveyance and ponding system are outlined in **Section II** of this report.

To allow for fair assessment of fees within the City, three trunk fee districts were defined in **Section III** of this report. The potential for future development of property within the City was the basis for the determination of these areas. Based on this analysis, 13,700 acres were identified as potential net developable acreage assuming the University of Minnesota and Flint Hills Company Properties are fully developed and assessed for these improvements.

If the University of Minnesota and Flint Hills Company Properties are not developed in the foreseeable future as both property owners have clearly indicated to the City of Rosemount, the net developable acreage within this district would be reduced to 7,500 acres.

- Area 2 Net developable acreage 13,700*
- * Includes University of Minnesota and Koch Refining Company properties
- Area 3 Net developable acreage 7,500

The capital costs associated with construction of the trunk conveyance and ponding systems in the City are outlined in **Sections IV and V** of this report. The anticipated capital costs associated with the construction of these systems are broken out into costs for land acquisition for both the retention and treatment facilities, as well as conveyance system facilities, and the construction costs for the retention and treatment facilities, as well as conveyance system facilities. A summary of main trunk and lateral conveyance and ponding costs is located in **Table I** of **Appendix B**.

- Cost for main trunk line \$29,000,000
- Cost for lateral trunk system improvements \$109,900,000
- Cost for regional ponding and infiltration \$52,100,000
- Total cost of all improvements **\$191,000,000**

Main trunk and lateral trunk conveyance system fees were calculated by dividing the cost of the trunk system improvements divided by the assessable acreage. These values are defined in **Section IV** of this report and summarized in **Table 2** of **Appendix B**.

- The lateral trunk conveyance fee: \$0.1842/sq. foot
- The main trunk conveyance fee: \$0.0888/sq. foot

Stormwater ponding fees were determined in this report by calculating the cost to provide ponding and treatment on a 100-acre site divided by the net developable acreage within that site. **Section V** of this report contains the calculations associated with stormwater ponding system costs and fees. Summaries of costs and fees associated with the stormwater ponding system are located in **Table 3** of **Appendix B** and **Table 4** of **Appendix B** respectively.

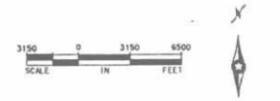
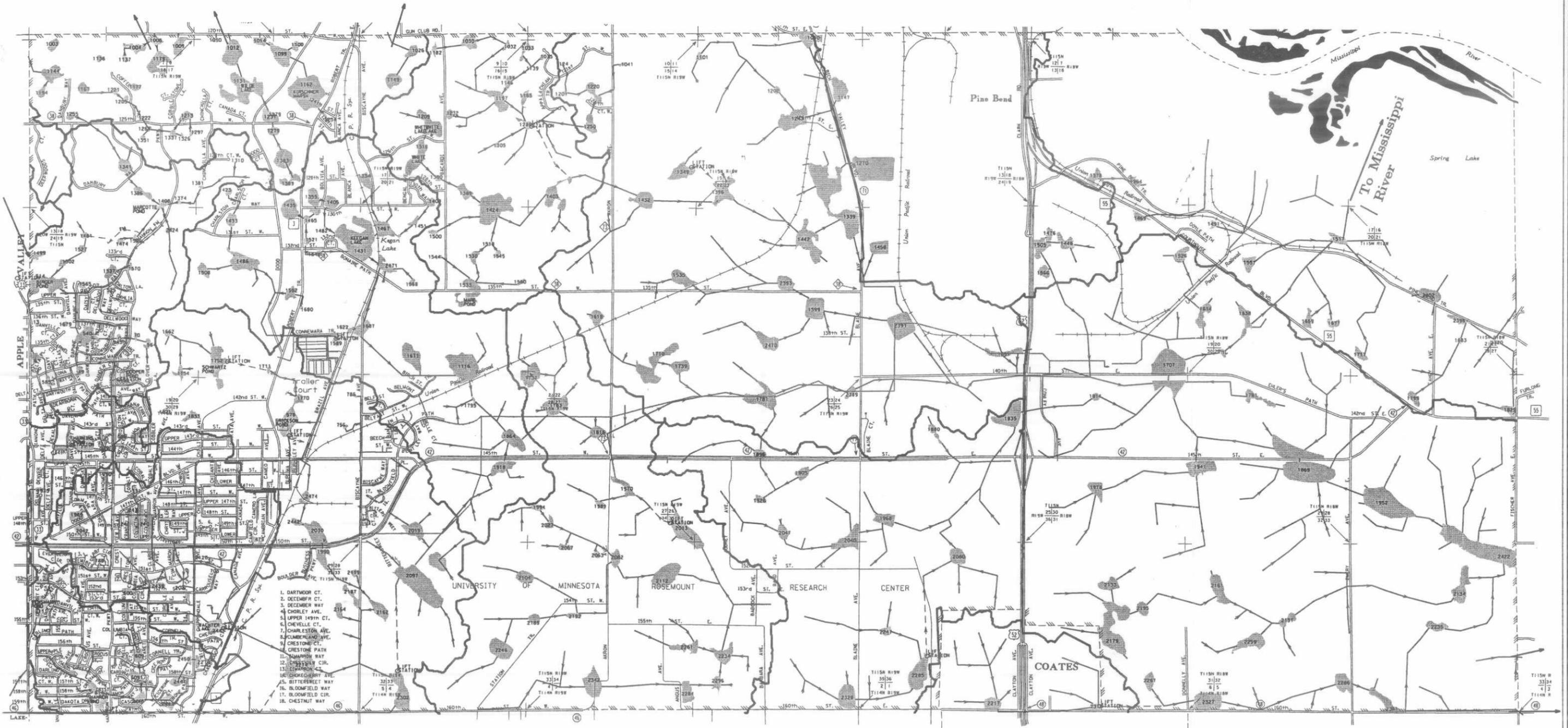
- Residential lots having densities of 1-3 lots/acre: \$0.0877/sq.foot
- Residential lots with densities greater than 3 lots/acre: \$0.1359/sq. foot
- Commercial/Industrial Land: \$0.2070/sq. foot

The total stormwater trunk fee for the City was determined by summing the main trunk and later trunk conveyance system fees with the stormwater ponding fees. Below is a summary of the total stormwater trunk fee organized by proposed land use. A breakdown of these values is included in **Table 5** of **Appendix B**.

- Residential lots 1-3 lots/acre: \$0.3607/sq. foot
- Residential lots >3 lots/acre: \$0.4089/sq. foot
- Commercial/ Industrial: \$0.4800/sq. foot

APPENDIX A – FIGURES

1. Proposed Stormwater Trunk Conveyance System Improvements
2. Lateral Trunk Fee District
3. Main Trunk Fee District



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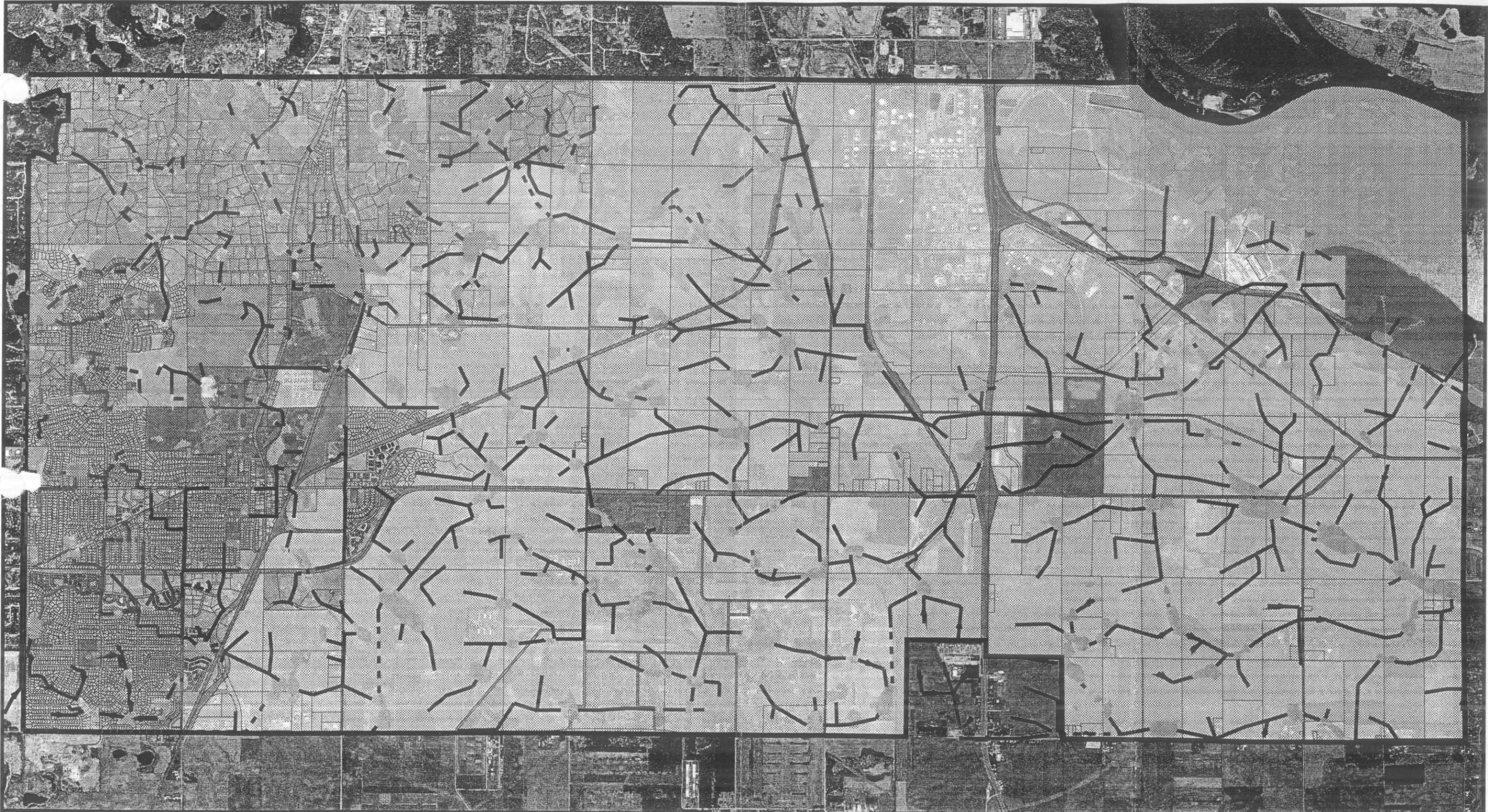
TRUNK FEE CALCULATION REPORT
STORMWATER TRUNK SYSTEM MAP
 Rosemount, Minnesota

WSB Project No. 1005-331

Date: April, 2002

**Proposed Stormwater Trunk
 Conveyance System Improvements**

**Figure
 1**



CITY OF ROSEMOUNT

TRUNK FEE CALCULATION REPORT

FIGURE: 2

LATERAL TRUNK FEE DISTRICT



<p>  PARCEL BOUNDARIES LATERAL TRUNK FEE DISTRICT = 13,854 AC </p>	<p> LEGEND  WETLANDS AND PROPOSED PONDS = 2,542 AC  PARK, PUBLIC, AND RIGHT OF WAY AREAS = 2,532 AC  PREVIOUSLY DEVELOPED = 3,671 AC </p>	<p>  EXISTING TRUNK SYSTEM  PROPOSED TRUNK SYSTEM </p>
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3000 0 3000 6000 Feet



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KOCH AREA = 3,540 AC

UNIVERSITY OF MINNESOTA AREA = 3,150 AC

CITY OF ROSEMOUNT

TRUNK FEE CALCULATION REPORT

FIGURE: 3

MAIN TRUNK FEE DISTRICT



LEGEND

	PARCEL BOUNDARY		WETLANDS AND PROPOSED PONDS = 1,773 AC
	MAIN TRUNK FEE DISTRICT = 7,934 AC		PARK, PUBLIC, AND RIGHT OF WAY AREAS = 2,532 AC
			PREVIOUSLY DEVELOPED = 3,670 AC



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APPENDIX B – TABLES

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**COMPREHENSIVE STORMWATER MANAGEMENT PLAN
CITY OF ROSEMOUNT, MN**

Table 2 - Main and Lateral Trunk Fee Calculations

	<i>Lateral Trunk District</i>	<i>Main Trunk District</i>
Total Capital Cost	\$109,900,000	\$29,000,000
Net Developable Acres *	13,700	7,500
Trunk Fee Per Acre	\$8,021.90	\$3,866.67
Trunk Fee per ft²	0.1842	0.0888

* Rounded to the nearest hundred

COMPREHENSIVE STORMWATER MANAGEMENT PLAN
CITY OF ROSEMOUNT, MN

Table 3 - Stormwater Storage and Treatment Costs

	Units	Commercial / Industrial *			>Than 3 Lots/Acre Residential *			1 to 3 Lots/Acre Residential *		
		Quantity	Price	Cost	Quantity	Price	Cost	Quantity	Price	Cost
Excavation	CY	82,764	\$2	\$165,528	69,202	\$2	\$138,404	42,127	\$2	\$84,254
Restoration Total	LS	1	\$1,518	\$1,518	1	\$1,489	\$1,489	1	\$1,407	\$1,407
Outlet Structure	LS	1	\$12,000	\$12,000	1	\$12,000	\$12,000	1	\$12,000	\$12,000
Subtotal				\$179,046			\$151,893			\$97,661
Indirect Costs (35%)	LS	1	\$62,666	\$62,666	1	\$53,163	\$53,163	1	\$34,181	\$34,181
Subtotal				\$241,712			\$205,056			\$131,842
Land Acquisition	AC	6.7	\$90,000	\$599,677	5.9	\$60,000	\$352,003	3.9	\$60,000	\$235,066
Total **				\$841,400			\$557,100			\$366,900

* Calculations based on a 100 acre site with Commercial/Industrial, greater than 3 lots/acre residential, or 1 to 3 lots/acre residential land use

**COMPREHENSIVE STORMWATER MANAGEMENT PLAN
CITY OF ROSEMOUNT, MN**

Table 4 - Stormwater Storage and Ponding Fee Calculations

	<i>Commercial/ Industrial *</i>	<i>>Than 3 Lots/ Acre Residential *</i>	<i>1 to 3 Lots/ Acre Residential *</i>
Total Ponding Cost	\$841,400	\$557,100	\$366,900
Net Developable Acres	93.3	94.1	96.1
Ponding Fee Per Acre	\$9,018.22	\$5,920.30	\$3,817.90
Ponding Fee per ft²	\$0.2070	\$0.1359	\$0.0877

* Calculations based on a 100 acre site with Commercial/Industrial, greater than 3 lots/acre residential, or 1 to 3 lots/acre residential land use

**COMPREHENSIVE STORMWATER MANAGEMENT PLAN
CITY OF ROSEMOUNT, MN**

Table 5 - Summary of Stormwater Trunk Fees

<i>Future Land Use</i>	<i>Trunk Fee (/ft²)</i>	<i>Main Trunk Fee (/ft²)</i>	<i>Ponding Fee (/ft²)</i>	<i>Total Fee Per (/ft²)</i>	<i>Total Fee Per Acre</i>
1 to 3 Lots/Acre Residential	\$0.1842	\$0.0888	\$0.0877	\$0.3607	\$15,712
Greater than 3 Lots/Acre	\$0.1842	\$0.0888	\$0.1359	\$0.4089	\$17,812
Commercial/Industrial	\$0.1842	\$0.0888	\$0.2070	\$0.4800	\$20,909

COMPREHENSIVE STORMWATER MANAGEMENT PLAN
CITY OF ROSEMOUNT, MN
 Updated December 2, 2004

Table 1 - Estimated Costs for the Main and Lateral Trunk Stormwater Conveyance System

<i>Main Trunk Line</i>	<i>Cost</i>	<i>Lateral Trunk Line</i>	<i>Cost</i>
		Lateral Trunk Cost	\$75,786,374
		Lift Station Cost	\$1,761,750
Main Trunk Total	\$19,540,957	Lateral Trunk Total	\$77,548,124
Indirect Costs (35%)	\$6,839,335	Indirect Costs (35%)	\$27,141,843
Subtotal	\$26,380,292	Subtotal	\$104,689,967
100' Easements (\$140/LF)	\$2,600,000	40' Easements (\$60/LF)	\$5,200,000
Total*	\$29,000,000	Total*	\$109,900,000

* Rounded to the nearest hundred thousand

**CITY OF ROSEMOUNT
STORM WATER LATERAL TRUNK CONVEYANCE AND PONDING FEE CALCULATION
FORM "EZ" 2005 Update**

Development Name:

Date of Plans:

Date of Fee Calculation:

I. LATERAL TRUNK CONVEYANCE FEE

1. Total site area (acres):

2. Ponding area to HWL (acres):

Pond 1: _____

Pond 2: _____

Pond 3: _____

Total ponding area (acres): _____

3. Floodplain area not included in ponding area (acres):

4. Total wetland not included in ponding or floodplain area (acres):

5. Public park area (acres):

6. County and State road right-of-way area (acres):

7. Determine Net Developable Area:

Equation: Net Developable Area = Item 1 – Item 2 – Item 3 – Item 4 – Item 5 – Item 6

8. Determine Total Lateral Trunk Conveyance Fee:

8a. Fee at Time of Grading Permit

Equation: (Item I.7)(\$6,017/acre) = Lateral Trunk Conveyance Fee Part 1

8b. Fee at Time of Building Permit

Lateral Trunk Conveyance Fee Part 2:

Low Density Residential = \$669/lot

High Density Residential = \$251/unit

Commercial/Industrial and Other Land Uses = (Item I.7)(\$2,006/Net Developable Acre)

II. STORM WATER PONDING FEE

1. Is off-site ponding provided? If no, no fee required and skip to Item 2. If yes, skip to Item 3. Y N

2. Is on-site ponding oversized at the request of the City? If yes, skip to Section III. If no, enter \$0 in Item II.5 and skip to Section V Y N

3. Circle applicable fee scale:

- a. 1-3 lots/acre: \$3,820/acre
- b. Greater than 3 lots/acre: \$5,920/acre
- c. Commercial/Industrial: \$9,017/acre
- d. Public/Institutional
- e. Golf Course/Cemetery
- f. Schools
- g. Railroad, County, and State right-of-way
- h. Churches
- i. Hospitals
- j. Prisons
- k. Parks
- l. Other unique land uses

4. Determine Ponding Fee:

Equation: (Item I.7)(Fee scale in Item 3)= Ponding Fee

III. STORM WATER PONDING FEE CREDITS (If applicable)

1. On-site storage required (cubic yards):

2. On-site storage provided (cubic yards):

3. Excess storage provided:

Equation: Item 3 -- Item 2 = Excess cubic yards

4. Determine excess storage credit

Equation: (Item 4)(\$2/cubic yard) = Excess storage credit

5. Additional land required for pond (acres):

6. Determine excess land cost credit for pond

Equation: (Item 6)(\$60,000/acre-Res) = Excess land cost
(\$90,000/acre-Comm)

7. Determine Total Ponding Credit

Equation: Item 4 + Item 6 = Total Ponding Credit

IV. TOTAL STORM WATER PONDING FEE

1. Determine total storm water ponding fee

Equation: $\text{Item II.4} - \text{Item III.7} = \text{Total Storm Water Ponding Fee}$

V. OTHER CONSIDERATIONS

List any other considerations to be taken into account into the calculation of the fees:

VI. TOTAL LATERAL TRUNK CONVEYANCE FEE AND PONDING FEE

1. Determine Total Lateral Trunk Conveyance and Ponding Fee

Fee at Time of Grading Permit

Equation: $\text{Item I.8a} + \text{Item IV.1} = \text{Total Fee at Grading Permit}$

Fee at Time of Building Permit

Equation: $\text{Item I.8b} = \text{Total Fee at Building Permit}$

Calculations performed by _____

Date _____

CITY OF ROSEMOUNT
LATERAL TRUNK CONVEYANCE AND PONDING FEE CALCULATION
FORM "EZ" DIRECTIONS -2005 Update

Directions

SECTION I – LATERAL TRUNK CONVEYANCE FEE

- Item I.1: Determine total site area to the thousandth of an acre (ex. 423.144 acres).
- Item I.2: Calculate the area of each storm water pond or infiltration pond up to the 100-year HWL. Add the areas for each ponding area together and determine the total ponding area.
- Item I.3: Calculate the amount of 100-year floodplain in acres. This floodplain amount must not include area already accounted for in the storm pond areas in Item I.2.
- Item I.4: Calculate the amount of wetland within the site. This wetland amount must be the amount of wetland not already accounted for in the 100-year floodplain (Item I.3) or storm ponding areas (Item I.2).
- Item I.5: Calculate the amount of public park space in acres. This area must not include areas previously accounted for in Items I.2, I.3, or I.4.
- Item I.6: Calculate the amount of County and/or State right-of-way.
- Item I.7: Determine the Net Developable Area in acres to the nearest thousandth. Net Developable Area is determined by subtracting the ponding area (I.2), the floodplain area (I.3), the wetland area (Item I.4), the public park area (I.5), and the County/State right-of-way from the total site area (I.1).
- Item I.8: Determine the Lateral Trunk Fee to be paid at the time of the final plat and the Fee to be paid at the time of the building permit.
- Item I.8a and b: The Total Lateral Trunk Conveyance Fees are calculated with the following equations:

$$\text{Item I.8a: Lateral Trunk Fee at the Time of Final Plat} = \text{Net Developable Area} \times \$6,017/\text{acre.}$$

where the Net Developable Area is the number calculated in Item I.7.

Item I.8b: The Lateral Trunk Fee at the Time of Building Permit is the fee indicated in Item I.8b multiplied by the rate shown on the form. Fees for residential development are charged be lot or unit. Fees for other land uses are charged by the acre.*

SECTION II – STORM WATER PONDING FEE

- Item II.1: Determine if off-site ponding is provided. If off-site ponding is not provided, no Ponding Fee is required. If off-site ponding is provided, the Fees in Item II.3 apply.
- Item II.2: If ponding is provided on-site, determine if the pond has been oversized at the request of the City. If pond has not been oversized, circle "no", and put a "\$0" in Section III.7. If the pond has been oversized, circle

“yes” and complete Section III.

- Item II.3 Determine the appropriate ponding fee scale based on the type of development.
- Commercial/Industrial includes but is not limited to uses such as public, institutional, golf courses, churches, and hospitals.
- Railroad, County, and State right-of-way is not included in this calculation.

- Item II.4: Calculate the Ponding Fee by the following equation:

$$\text{Ponding Fee} = \text{Net Developable Area} \times \text{Ponding Fee Scale}$$

Where the Net Developable Area is the number calculated in Item I.7 and the Ponding Fee Scale is the fee scale determined in Item II.3.

SECTION III – STORM WATER PONDING FEE CREDITS

This section is used only if Item II.2 is circled “yes” since the on-site pond was oversized at the request of the City.

- Item III.1 Calculate the amount of storage required for the project in cubic yards. The City’s policies require that the runoff volume from the 100-year, 24-hour event be stored on-site.

- Item III.2 Calculate the amount of storage provided on site for the 100-year, 24-hour event based on the site plans.

- Item III.3 Calculate the amount of excess storage provided in cubic yards by the following equation:

$$\text{Excess storage (cy)} = \text{Amount of storage provided} - \text{amount of storage required}$$

- Item III.4 Determine the excess storage credit by the following equation:

$$\text{Credit} = \text{Excess storage} \times \$2/\text{cubic yard}$$

- Item III.5 Determine the additional land required for the pond in acres.

- Item III.6 Calculate the land cost for the additional land required for the excess ponding by the following equation:

$$\text{Excess Land cost} = \text{Additional land} \times \$60,000/\text{ac/Res}$$

$$\text{Excess Land cost} = \text{Additional land} \times \$90,000/\text{ac/Comm}$$

- Item III.7 Determine the Total Ponding Credit by the following equation:

$$\text{Total Ponding Credit} = \text{Excess Land Cost} + \text{Excess Storage Credit}$$

SECTION IV – DETERMINE TOTAL STORM WATER PONDING

- Item IV.1 Determine the Total Storm Water Ponding Fee by calculating the following equation:

$$\text{Total Ponding Fee} = \text{Ponding Fee} - \text{Ponding Credits}$$

where the Ponding Fee is the fee calculated in Item II.4 and the ponding credits is the credit calculated in Section III.8.

SECTION V – OTHER CONSIDERATIONS

Item V List any other considerations that were list listed about to be taken into account when determining the trunk fee.

SECTION VI – CALCULATE THE TOTAL LATERAL TRUNK CONVEYANCE FEE AND PONDING FEE

Item VI.1 Calculate the Total Lateral Trunk and Ponding Fee for both the fee at the final plat and fee at the building permit by completing the following equations:

$$\begin{aligned} \text{Fee at Time of Final Plat: Total Lateral Trunk Fee} + \text{Ponding Fee} \\ = \text{Trunk Fee} + \text{Ponding Fee} \end{aligned}$$

where the Lateral Trunk Fee is the fee calculated in Item I.8 and the Ponding Fee is calculated in Item IV.1.

$$\begin{aligned} \text{Fee at Time of Building Permit} = \text{Lateral Trunk Fee at time of} \\ \text{building permit} \end{aligned}$$

where the fee is the amount calculated in Item I.8b.

* The \$8,024/acre fee is derived from the \$0.1842/sf Lateral Trunk Fee defined in the Trunk Fee Justification Report. The \$0.1842/sf was converted to a per acre cost. This fee was then split to have 75% of the fee paid at the time of the final plat and 25% paid at the time of the building permit. To determine the per lot fee at the time of the building permit, the per acre fee was divided by 3 for low density residential (3 lots per acre) and divided by 8 for high density residential (8 units/acre). Other uses are determined at a per acre basis for the fee at the time of the building permit.

APPENDIX N
DNR Water Appropriations Information

DNR Water Appropriation Permits

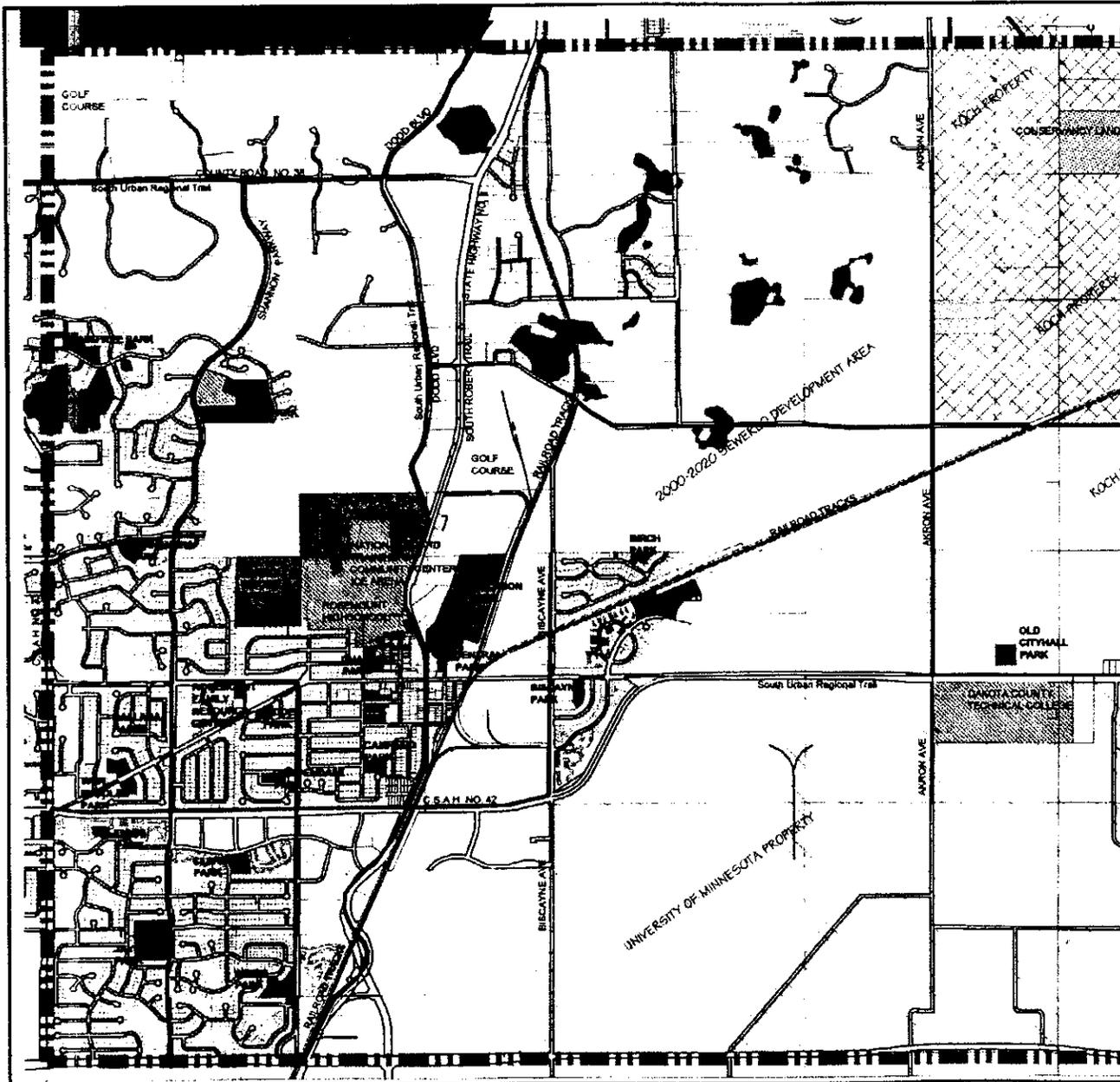
All Active Permits - By Permittee

9/12/2002

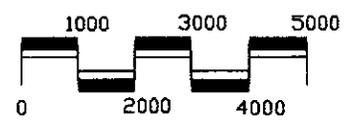
Permittee	Permit #	Inst	Use	CO	Twp	Rng	Sec	QQQQ	Water Well		Resource Code/Name	----- Permitted -----			-- Reported Pumping --					Stat
									shed	Unique		Acres	GPM	MGY	1997	1998	1999	2000	2001	
ROMINE, JEROME, CARMEL AND WILLIAM	773465	- 4	290	73	122	27	17	CBC	17		5	100	500	29.0			2.4	0.9	6.2	1
ROONEY & BONDERSO	776087	- 1	290	19	114	18	3	CBD	38	170866	1 OPDCCJDN	140	700	41.0	1.6	7.1	9.0	12.0	25.9	1
ROOT RIVER COUNTRY CLUB	895035	- 1	281	*23	102	13	21	DAD	43	242385	1	23	100	16.0					14.0	1
ROOT RIVER COUNTRY CLUB	915114	- 1	281	23	102	13	21	AD	43		3 ROOT RIVER S BRANCH	23	260	6.5	5.4	7.3	6.0	5.8	16.0	1
ROSCOE, CITY OF	793147	- 1	211	73	123	31	30	BDD	16	144067	1 QWTA		100	4.3	3.4	3.2	3.2	3.4	1	
ROSE CREEK, CITY OF	845047	- 1	211	50	102	17	26	DDAD	48	226402	1 QBAA		385	20.0	2.7	3.5	2.4	2.9	2.4	1
ROSE CREEK, CITY OF	845047	- 2	211	50	102	17	26	DDA	48	226403	1 DCVA		385	20.0	7.4	7.3	6.8	7.5	7.4	1
ROSE LAKE GOLF CLUB INC	874034	- 1	281	46	102	30	13	CDA	30	184628	1 QBAA	77	550	23.5	11.0	8.7	11.5	9.1	9.6	1
ROSE LAKE GOLF CLUB INC	874034	- 2	281	46	102	30	13	CDA	30	184629	1 QBAA	77	550	23.5	4.8	2.4	4.1	6.0	6.8	1
ROSEAU, CITY OF	611084	- 5	211	68	162	40	22	ADA	71	220237	1 QBAA		1400	230.0					0.0	2
ROSEAU, CITY OF	611084	- 7	211	68	162	40	23	BBC	71	220240	1 QBAA		1400	230.0	69.2	78.3	59.7	58.1	62.5	1
ROSEAU, CITY OF	611084	- 8	211	68	162	40	23	BBC	71	533054	1		1400	230.0	75.7	71.4	60.9	55.8	19.8	1
ROSEAU, CITY OF	611084	- 9	211	68	162	40	23	BCB	71	552737	1 QBAA		1400	230.0	54.9	33.2	50.3	62.1	90.0	1
ROSEMOUNT AEROSPACE INC	846059	- 1	283	19	115	21	26	BAC	33	194950	1 OPDC	13	210	12.0	4.1	3.8	3.5	2.3	3.1	1
ROSEMOUNT INC	690167	- 2	249	*27	116	22	14	BA	33	224097	1 OPDC		365	10.0	1.1	0.6	1.0	1.0	1.4	1
ROSEMOUNT, CITY OF	026001	- 1	261	19	115	19	18	DD	38		2 MARCOTTE POND		6735	320.0					6.0	1
ROSEMOUNT, CITY OF	766069	- 3	211	19	115	19	29	ACC	38	211999	1 CJDN		5200	450.0	59.3	64.5	53.3	56.6	70.4	1
ROSEMOUNT, CITY OF	766069	- 7	211	19	115	19	29	CCC	38	112212	1 CJDN		5200	450.0	171.2	99.8	95.2	108.8	125.9	1
ROSEMOUNT, CITY OF	766069	- 8	211	19	115	19	31	CAA	38	509060	1 CJDN		5200	450.0	92.6	150.3	144.9	129.5	143.6	1
ROSEMOUNT, CITY OF	766069	- 9	211	19	115	19	31	ACB	38	554248	1 CJDN		5200	450.0	70.0	107.3	138.2	229.0	230.1	1
ROSEMOUNT, CITY OF	766069	- RR1	211	19	115	19	27	ADC	38	457167	1 CJDN		5200	450.0	0.0	1.3	0.0		9.2	1
ROSEMOUNT, CITY OF	766069	- RR2	211	19	115	19	27	ADC	38	474335	1 CJDN		5200	450.0	12.2	14.0	14.9	12.3	8.1	1
ROSENHAMMER, GREGORY	814222	- 1	290	8	108	32	16	BBBA	31	132298	1 QWTA	110	650	47.0	9.7	7.8	9.9	10.1	21.0	1
ROSENQUIST, FRANS	814319	- 1	290	34	120	33	1	DDB	18	175926	1 QBAAQBAA	160	700	64.0	21.7	8.4	22.0	30.4	16.8	1
ROSEVILLE, CITY OF	866105	- 1	281	62	29	23	10	CAB	20		7 ZIMMERMAN LAKE	20	200	2.3					0.0	2
ROSHA, DELMAR	773166	- 1	290	73	123	28	34	CDC	17		1	110	1000	35.8					0.0	1
ROSKE, HARVEY	763158	- 1	290	73	125	29	36	BDD	15	118046	1 QBAA	160	1000	58.0	3.5	12.8	10.4	11.7	14.9	1
ROSKE, HARVEY	813101	- 1	290	73	125	28	31	BBB	15	176557	1 QBAA	170	800	62.0	10.5	16.8	10.2	27.8	33.9	1
ROSS BROS & WENZEL BROS	771783	- 1	290	60	150	47	30	BD	63		3 RED LAKE RIVER	150	1000	12.1					0.0	1
ROSS BROTHERS	901260	- 1	290	60	150	47	27	ADA	63		3 RED LAKE RIVER	464	1000	49.4	7.4	12.3		17.1	0.0	1
ROSS, JIM	911113	- 1	290	60	150	48	16	DDDD	63		3 RED LAKE RIVER	300	500	28.5	0.5	11.0		4.0	1.6	1
ROSS, KEVIN & JOEL & JAY	981191	- 1	290	60	150	49	1	BAA	63		3 RED LAKE RIVER	79	550	15.0		4.0			0.0	1
ROSS, ROBERT	761336	- 1	290	60	150	46	26	DDA	63		3 RED LAKE RIVER	76	500	13.0					0.0	1
ROTH RIVERSIDE FARMS	003216	- 1	290	80	134	34	17	AA	13		5	130	800	52.1				26.1	23.4	1
ROTH RIVERSIDE FARMS	763145	- 1	290	80	134	35	27	BAC	13	250403	1	140	600	32.0	6.1	18.4	12.1	18.5	31.5	1
ROTH RIVERSIDE FARMS	763146	- 1	290	80	134	35	22	DBB	13	250402	1	70	400	21.0	6.7	12.2	4.9	8.5	17.0	1
ROTH RIVERSIDE FARMS	843261	- 1	290	80	135	34	36	B	13	156769	1 QBAAQBAA	135	900	55.3	18.5	24.8	25.6	33.4	25.0	1
ROTH RIVERSIDE FARMS	843275	- 1	290	80	135	33	26	CCD	12	190718	1 QWTAQWTA	160	850	53.3	28.3	31.2	31.2	35.9	32.9	1
ROTH RIVERSIDE FARMS	863015	- 1	290	80	134	33	18	DCD	12	507928	1	135	800	55.0	8.6	8.0	18.6	20.7	6.4	1
ROTH RIVERSIDE FARMS	863015	- 2	290	80	134	33	18	CAD	13	401160	1	135	800	55.0					0.0	1
ROTH RIVERSIDE FARMS	863015	- 3	290	80	134	33	18	CDA	13	401161	1	135	800	55.0					0.0	1
ROTH RIVERSIDE FARMS	881178	- 1	290	56	133	36	32	ABDA	13	129223	1 QBAA	135	750	44.0		24.0	14.0	9.3	15.3	1
ROTH RIVERSIDE FARMS	893330	- 1	290	80	134	33	6	DBA	13	452222	1 QBAAQBAA	135	800	55.0	11.0	25.3	21.8	14.1	24.1	1
ROTH RIVERSIDE FARMS	893340	- 1	290	80	135	33	31	BBB	13		1	209	950	86.0	17.6	30.0	21.2	43.7	49.4	1
ROTH, BRIAN	983114	- 1	290	80	134	35	22	CCA	13	571720	1 QWTA	130	800	52.1		18.1	13.0	24.0	37.1	1
ROTH, BRIAN	983114	- 2	290	80	134	35	22	CCA	13	571724	1 QWTA	130	800	52.1					0.0	1
ROTH, BRIAN	983120	- 1	290	80	134	34	16	CBA	13	567269	1	120	800	48.1		24.7	12.4	11.2	32.7	1
ROTH, BRIAN	983120	- 2	290	80	134	34	16	CBA	13	567266	1	120	800	48.1					0.0	1
ROTH, MAURICE J	823129	- 1	290	11	134	32	19	BC	12	167899	1 QWTAQWTA	169	950	69.0	19.1	16.2	31.5	25.4	32.4	1
ROTH, MAURICE J	823129	- 2	290	11	134	32	19	BC	12	190701	1 QWTAQWTA	169	950	69.0					0.0	1

APPENDIX O
Zoning Map and Parks Map

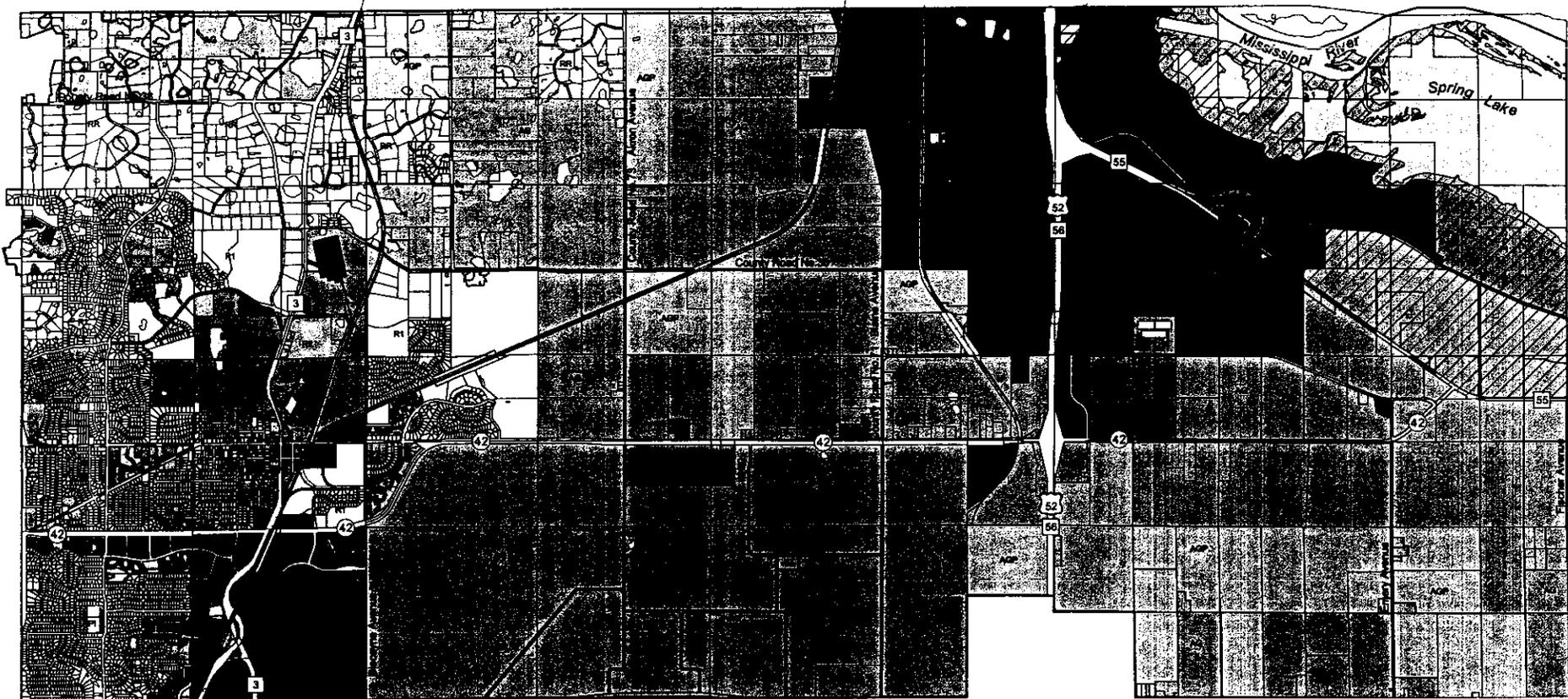
Existing Rosemount Parks & Trails Map



North



Scale in Feet



Zoning Designations:

- | | |
|-----------------------------------|-----------------------------|
| Residential: | Industrial: |
| RR - Rural Residential | BP - Business Park |
| R1 - Low Density Residential | IP - Industrial Park |
| R1A - Low Density Residential | GI - General Industrial |
| R2 - Moderate Density Residential | |
| R3 - Medium Density Residential | Other: |
| R4 - High Density Residential | AGP - Agriculture Preserve |
| | AG - Agriculture |
| Commercial: | PI - Public / Institutional |
| C1 - Convenience Commercial | FP - Flood Plain |
| C2 - Community Commercial | WM - Waste Management |
| C3 - Highway Service Commercial | W - Water |
| C4 - General Commercial | ROW - Right-of-Way |

 Railroad
 Mississippi River Critical Area & MNRRRA Corridor



The Zoning Designations on this Land Use map should be interpreted in light of the accompanying text and policies contained in the complete Rosemount Zoning Ordinance. Zoning Designations are subject to change as part of the City's ongoing planning process.

Zoning Map

City of Rosemount



Dakota County Surveyors & Land Information Department
 City of Rosemount Community Development & Engineering/Public Works Dept.

Map Date: 4/04/01
 Update: 6/20/02

APPENDIX P
Pollutant Source Information



CITY OF



ROSEMOUNT

COMPREHENSIVE STORM WATER
MANAGEMENT PLAN

APPENDIX P POLLUTANT SOURCE LOCATION MAP

SOURCE: MINNESOTA POLLUTION CONTROL AGENCY

THE MASTER ENTITY SYSTEM LIST COMBINES
14 STATE AND FEDERAL POLLUTANT LISTS AND
SYSTEMS INCLUDING BROWNFIELD SITES,
NATIONAL PRIORITIES LIST, AND OTHERS.



LEGEND

- LEAKING UNDERGROUND STORAGE TANK
- MASTER ENTITY SYSTEM LIST SITE

