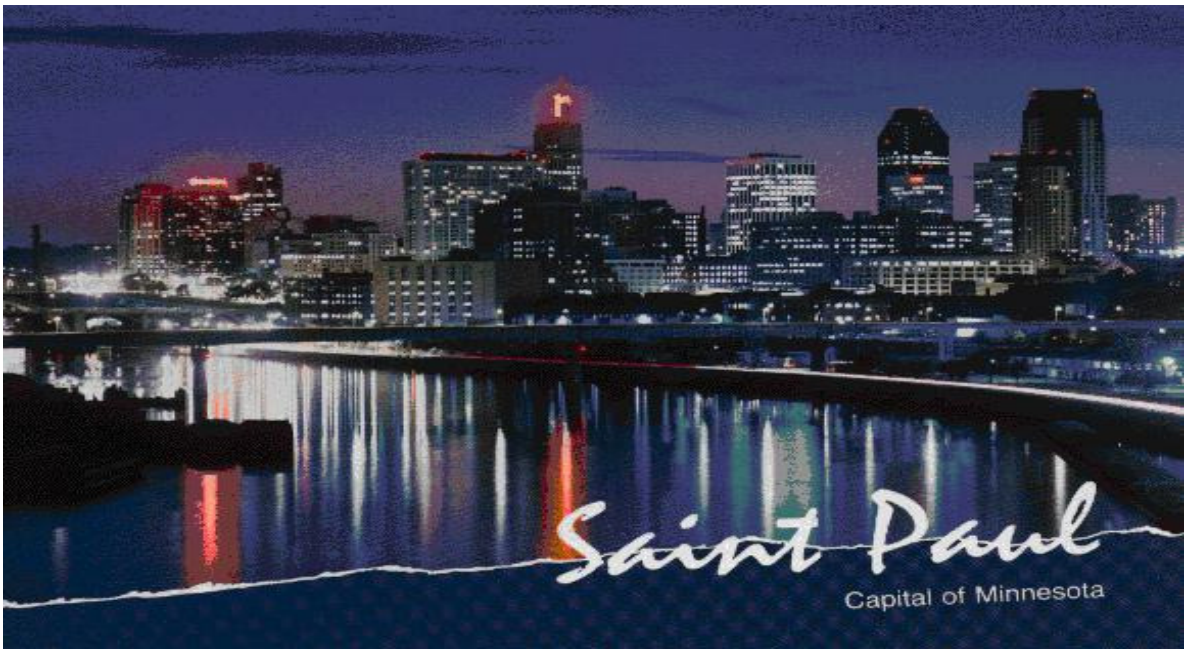
Policy for the

Determination and Review

of the

Storm Sewer System Charge



SAINT PAUL
The Most Livable City in America

January 2015

City of Saint Paul
Department of Public Works
Sewer Division

Introduction and Statement of Purpose

The City of Saint Paul has adopted an ordinance establishing a Storm Sewer System Charge for the purpose of paying a portion of the cost of construction, reconstruction, repair, enlargement and improvements necessitated by the separation of the combined sewer system and for the maintenance, operation and use of the separated storm sewer system. The storm sewer system includes all facilities pertaining to the management of storm water discharged from property, including but not limited to drainage ways, ponds, lakes, flood preventive measures, catch basins, storm sewer pipe, curbs and gutters.

The storm sewer system charge shall be based on a parcel's anticipated contribution of storm water runoff to the storm sewer system, which is a function of the parcel's size and its land use. Typically more intensively developed land uses have a higher percentage of impervious surfaces and contribute a greater volume of storm water to the storm sewer system. Similarly, a large parcel would contribute more runoff than a smaller parcel with the same land use.

Under the charging system established in this policy statement, a parcel that contributes a higher peak storm water runoff rate will pay a higher Storm Sewer System Charge. As a result, charges allocated under this methodology will better reflect a parcel's fair share of the costs of the storm sewer system. It is not feasible to inspect every parcel in the City of Saint Paul to determine its individual hydrological response to storm water. Therefore, to implement this charging policy, the numerous land uses found in the City of Saint Paul are classified by their expected peak storm water runoff. Each land use is grouped with other land uses that share similar hydrologic responses under certain standard conditions. Thus, two parcels of the same size with different land uses would pay an equal share of the costs of the storm sewer system if their land uses are determined to have a similar hydrologic response to storm water. Both parcels would be classified in the same land use classification for purposes of applying this charge.

It is recognized that assigning costs and making charges based on expected hydrologic response cannot be done with mathematical precision with the technology available at the present time, and can only be accomplished within reasonable and practical limits. It is intended that this policy and procedures will establish a just, equitable and practical methodology for making such charges.

Some parcels due either to their unique topographic, vegetative, geologic and other characteristics, or the existence and maintenance of an on-site storm drainage control, detention or retention facilities have a hydrologic response substantially different from that of similarly sized parcels of the same land use. Therefore, provisions are adopted in this policy statement to permit adjustments or credits to the Storm Sewer System Charge for those parcels with these unique and unusual characteristics.

Methodology for Developing Standardized Peak Runoff Rates

Runoff

The city's storm sewer system is developed and designed using the peak storm water runoff rate for a five year storm. The Storm Sewer System Charge is in part determined by utilizing this same criteria.

To establish the standardized peak runoff rate for a particular land use, Saint Paul utilizes the Modified Curve Number Method as outlined in the U.S. Department of Agriculture, Soil conservation Service Technical Release No. 55. This method takes into consideration the primary factors of land use and area among other factors such as soil types and topography or slope and develops a mathematical model to predict the runoff rates for rain storms of various intensities and duration. The rain storm applied to this analysis of runoff is a 5 year 24 hour storm with Type II rainfall distribution and a total rainfall of 3.6 inches.

Land Use Classifications

To organize its analysis of the numerous land uses within its boundaries, the city applied an already existing property identification system known as the Sub-Usage Code List which is prepared and used by the Ramsey County Department of Taxation (see Appendix A.). These Sub-Usage Code Listings were reviewed and regrouped according to their land use and the similarities of their runoff characteristics. The end results for purposes of this charging system are designated as "land use classifications".

For each of these land use classifications a standardized peak runoff rate was determined. The analytic method that was applied included examination of data provided by the above referenced five year storm model, as well as information derived from a random sampling of numerous parcels within the City of Saint Paul.

Standardized Peak Rates of Runoff

The standardized peak runoff rate identified for each land use classification is as follows:

Table 1
Standardized Peak Rates

Land Use Classification	Example of Land Use	Standardized Peak Runoff Rate Per Acre in cubic feet per second
A	Cemeteries, golf courses, parks, unimproved vacant land, and residential land in excess of 1/3rd acre	0.25 cfs
B	Railroad land	0.50 cfs
C	Residential, 1 & 2 family homes (up to 1/3rd acre)	1.00 cfs
D	Condominiums and town homes	2.00 cfs
E	Schools and community centers	1.50 cfs
F	Multiple dwellings; religious and government buildings	2.00 cfs
G	Commercial and industrial land; parking lots	2.70 cfs

Determination of the Storm Sewer System Rates

In General

The Council of the City of Saint Paul shall annually adopt a storm sewer system budget based on the anticipated expense to construct, operate and maintain the storm sewer system. A portion of this budget will be apportioned to all of the land use classifications, based on their standardized peak runoff rates per acre. The resultant rate per acre is the Storm Sewer System Rate. This amount reflects that portion of the annual expenses charged to a one acre parcel of a specific land use classification for providing some of these services.

The rates may be revised or amended by resolution; **Appendix B** gives the current Storm Sewer System Rates for properties located within the City of Saint Paul.

One and Two Family Residences

All one and two family residential parcels less than 1/3 of an acre in area are placed into a single land use classification to be charged on an equal per parcel basis.

A majority of the parcels within the city falls within this land use classification, which also is the most diverse in terms of area and intensity of use. For purposes of simplification and to provide equity in the allocation of costs, all one and two family residence parcels less than 1/3 of an acre in area are assumed to have the standardized peak runoff rate of a one and two family residence parcel of 7500 square feet.

Generally, smaller sized parcels of this land use have more impervious area in relation to their overall size, and larger sized parcels have less impervious area in relation to their overall size. Because of that, one and two family parcels less than 7500 square feet when compared to parcels greater than 7500 square feet but less than 1/3 of an acre, are likely to have a similar peak rate of storm water runoff. Therefore, the peak runoff rate of one and two family residence parcels less than 1/3 of an acre are considered equivalent for the purposes of the Storm Sewer System Charge Policy.

For parcels larger than 1/3 acre, the excess will be considered equal to park land and charged on an area basis.

Condominiums and Townhouses

All condominium and townhouse parcels have also been placed into a single land use classification to be charged on an equal per unit basis.

A one acre parcel of townhouse units or condominium units has a standardized peak runoff rate equal to the standardized peak runoff rate for a one acre parcel of multiple unit dwellings. Unlike the individual units in multiple dwellings, a condominium or townhouse unit is typically owned by a single entity or person. As a result, the Ramsey County Department of Taxation bills condominium and townhouse units separately despite the fact they may be part of a single structure.

For the purpose of simplification in the billing process and to provide equity in the allocation of costs under this policy, a one acre parcel containing condominium units and/or townhouse units is assumed to have a density of 19 units per acre, which is the density of a typical multiple unit dwelling parcel. The per-unit charge in Appendix B reflects this.

Determination of the Storm Sewer System Charge

With the previously discussed exceptions of one and two family residence parcels and condominium and townhouse unit parcels, the Storm Sewer System Charge for a parcel shall be the sum of the multiplication of its area times the Storm Sewer System Rate specified for that parcel's land use classification.

Adjustment of the Storm Sewer System Charge

Where storm water management is employed or where other conditions exist such that the peak storm water runoff rate for a given parcel is substantially different as compared to the standardized peak runoff rates for parcels within its land use classification, the Director of Public Works or his designate may adjust the parcel's storm sewer system charge to an appropriate level in accordance with the following guidelines:

Procedure Statement

A request for a review of the charge must be made within 30 days after receiving the annual bill. Once the request has been made, the property owner has 30 additional days to submit sufficient information concerning that parcel's hydrologic characteristics to permit an accurate assessment of the conditions that exist. This information may include, but is not limited to:

1. A site plan showing locations of all buildings and other development contained within the parcel.

2. The total parcel area and area of impervious surfaces.

3. Site topography and contours of sufficient detail to ascertain flow directions, rates and volumes.

4. Size, details and/or volumetric characteristics of any drainage control facilities.

Land Use Intensity Credits

Where the actual peak storm water runoff rate from a parcel is shown to differ from the standardized peak runoff rate given in Table 1 by more than 10%, the Director of Public Works or his designate may adjust that parcel's storm sewer system charge in accordance with the following parameters:

1. Calculation of the parcel's peak storm water runoff rate shall be determined by the methods outlined in the USDA soil Conservation Service Technical Release No. 55. The design storm shall be the USDA soil Conservation Service 24 hour, Type II rainfall

distribution for a 5 year storm in Saint Paul, utilizing the parcel's soil group and a normal antecedent moisture condition. The total rainfall for this storm is 3.60 inches. The data for this storm is given in **Appendix C**.

2. If a parcel's calculated peak storm water runoff rate on a per acre basis differs from the rate listed in Table 1 by more than 10%, the parcel's storm sewer system charge will be adjusted by the ratio of the actual runoff rate to the parcel's assigned peak runoff rate.

3. Because the charges for 1 and 2 family residences under 1/3rd acre, condominium and townhouses are not based on actual parcel acreage, no adjustment for peak rate of runoff differences will be made.

4. For parcels with public drainage easements, calculation of the peak storm water runoff rate shall be based on the non-easement area.

Rate of Discharge Credits

Where the peak storm water runoff rate from a parcel is limited by on-site facilities such as ponds that are owned and maintained by the property owner, up to a 25% reduction in the Storm Sewer System Charge may be granted in accordance with the following parameters:

1. A 10% credit will be granted to parcels that provide on-site storage for the five year design storm that also limit its discharge to a maximum of 1.64 cfs per acre.

2. An additional 15% credit will be granted to parcels that provide on-site storage for the 100 year design storm that also limit its discharge to a maximum of 1.64 cfs per acre. Calculation of the parcel's peak storm water runoff rate shall be determined by the methods outlined in the USDA Soil Conservation Service Technical Release No. 55. The design storm shall be the USDA Soil Conservation Service 24 Hour, Type II rainfall distribution for a 100 year storm in Saint Paul, utilizing the parcel's soil group and a normal antecedent moisture condition. The total rainfall for this storm is 5.90 inches. The data for this storm is given in **Appendix D**.

3. For parcels with public drainage easements, calculation of the peak storm water runoff rate shall be based on the non-easement area.

Flood Plain Credits

Parcels in the RC-1 River Corridor Floodway District will be granted a 100% credit. Parcels in the RC-2 River Corridor Floodway District will be granted a 50% credit.

Multiple Credits

A property may be eligible for both a Land use intensity credit and Rate of Discharge credit but they cannot be applied together. If a parcel is eligible for both credits, the credit giving the higher discount will be granted.

Retroactivity

Credit adjustments shall not be made retroactively with respect to previous billing years.

Increases

A parcel's Storm Sewer System Charge shall be subject to increases as well as decreases by this procedure.

Special Cases

For special and unusual cases where the above procedures do not result in an appropriate storm sewer system charge, the Director of Public Works, upon recommendation of his staff, has the authority to make adjustments consistent with the intent of the ordinance establishing the storm sewer system charge and with this policy.

Periodic Inspection and Credit Adjustments

The Director of Public Works reserves the right to inspect periodically all storm drainage control facilities to ascertain that they are operating properly. If such a system due to improper maintenance or other reason, fails to detain storm water runoff in an effective manner, the director shall issue an order to complete the repairs of the facility within 60 days. If such repairs are not completed in a timely manner, the director may eliminate or reduce detention credits to an appropriate level. Any such facility shall not be eligible to apply for Storm Sewer System Charge adjustments for a period of 12 months following any credit adjustment.

Land Use Change

The issuance of any building permit or other action which changes or intensifies an existing land use shall be cause for an adjustment of the Storm Sewer System Charges to an appropriate level.

Connected Rain Leaders

No credits will be given for a property which has rain leaders (downspouts), catch basins or any other source of clear water discharge that is connected to the sanitary or combined sewer system.

Appendix A
Ramsey County Sub-Usage Codes

The following Sub-Usage Codes are included in Land Use Classification A

101. Cash Grain or General Farm
120. Timber or Forest Land
190. Other Agriculture Use
300. Industrial Vacant Land
400. Commercial Vacant Land
405. Apartment Vacant Land
463. Golf Courses
496. Marina (Small Boat)
500. Residential Vacant Land Lot
509. Residential New Plats Initial Year
519. Residential New Plats Initial + 1/3 difference
529. Residential New Plats Initial + 2/3 difference
539. Residential New Plats Third Year
549. Residential Problem Vacant Pins
559. Residential Condo / Co-Op Vacant
578. Residential Townhome Vacant
641. Vacant Land
645. Exempt HRA Vacant Land
646. Exempt Cultural & Nature Exhibits
690. Graveyards Monuments Cemeteries
821. Vacant Land

The following Sub-Usage Code is included in Land Use Classification B:

840. Railroad Real Property Used In Operations

The following Sub-Usage Codes are included in Land Use Classification C:

510. Single Family Dwelling Platted Lot
520. Two Family Dwelling Platted Lot
540. Double Dwelling
545. ½ Double Dwelling
525. Conversion

The following Sub-Usage Codes are included in Land Use Classification D:

550. Condo / Co-Op
570. Townhome - Inner
575. Townhome - Outer

The following Sub-Usage Codes are included in Land Use Classification E:

650. Exempt Property Owned By The Board Of Education
670. Exempt Property Owned By Private Schools

The following Sub-Usage Codes are included in Land Use Classification F:

401. Apartments 1-9 Rental Units
402. Apartments 10-19 Rental Units
403. Apartments 20-49 Rental Units
404. Apartments 50 or More Rental Units
406. Apartment Misc. Improvements
407. Fraternity / Sorority House
412. Nursing Homes & Private Hospitals
415. Trailer or Mobile Home Park
530. Three Family Dwelling Platted Lot
560. Mobile Home on Real Estate
599. Other Residential
600. Exempt Property Owned by USA
610. Exempt Property Owned by State of Minnesota
620. Exempt Property Owned by Counties
635. Fire Stations
640. Exempt Property Owned By Municipals
647. Exempt Community Recreational Facility
649. Library
680. Charitable Exempt Hospitals / Nursing Homes
685. Churches Etc. Public Worship Private

The following Sub-Usage Codes are included in Land Use Classification G:

108. Nurseries
109. Greenhouses Vegetables & Floraculture
310. Food & Drink Process Plants & Storage
320. Foundries & Heavy Manufacturing Plants
340. Manufacturing & Assembly Light
370. Small Shops (Machine Tool & Die etc)
390. Grain Elevators
399. Other Industrial Structures
410. Motels & Tourist Cabins
411. Hotels
420. Small (Under 10,000 sf) Detach Retail
421. Supermarkets
422. Discount Stores & Jr. Dept. Stores
423. Medium Detached Retail
424. Full Line Department Stores
425. Neighborhood Shopping Center
426. Community Shopping Center
427. Regional Shopping Center
428. Veterinary Clinic
429. Other Retail Structures
430. Restaurant Cafeteria and / or bar
431. Small Strip Center
432. Convenience Store
435. Drive-in Restaurant / Food Service Facility
437. Day Care Centers
440. Dry Cleaning Plant & Laundries
441. Funeral Homes
442. Medical Clinic & Offices
444. Full Service Banks
445. Savings & Loans
447. Office Building 1-2 Stories
448. Office Building 3 or More Stories Walk-up
449. Office Building 3 or More Stories Elevator
450. Condominium Office Units
451. Gas Station
452. Automotive Service Station
453. Car Washes
454. Auto Car Sales & Services
456. Parking Garage Structure & Lots
457. Parking Ramp
460. Theaters
461. Drive-in Theaters
462. Golf Driving Range & Mini Golf Courses
464. Bowling Alleys
465. Lodge Hall & Amusement Parks
479. Flex Industrial Center
480. Commercial Warehouses
481. Mini Warehouse
482. Commercial Truck Terminals
485. Research & Development Facility
490. Marine Service Facilities
499. Other Commercial Structures
625. St. Paul Airport & MAC Property
644. Sport / Public Assemble Facility
682. Welfare / Charitable Facility
687. Exempt Office Buildings
695. Skyways
830. Comm LD & Impro Own By Pub Uti Th Rail
850. Railroad Real Property Not Used In Operations

Appendix B
Storm Sewer System Charge Rates

The Council of the City of Saint Paul adopted the following Storm Sewer System Charge Rates for various Land Use Classifications within the City for 2013:

Land Use Classification	Example of Land Use	2014 Storm Sewer System Charge Rate
A	Cemeteries, golf courses, parks, unimproved vacant land, and residential land in excess of 1/3rd acre	$142.78 per acre
B	Railroad land	$541.57 per acre
C	Residential, 1 & 2 family homes (up to 1/3rd acre)	$85.36 per parcel
D	Condominiums and town homes	$57.42 per unit
E	Schools and community centers	$783.69 per acre
F	Multiple dwellings; religious and government buildings	$1,045.95 per acre
G	Commercial and industrial land; parking lots	$1,409.08 per acre

Appendix C Rainfall Distribution – 5 Yr. Storm

Rainfall Intensity in Inches/Hour

Hrs	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0	Hrs
0	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	1
1	0.04	0.04	0.05	0.04	0.04	0.05	0.04	0.05	0.05	0.05	2
2	0.04	0.05	0.04	0.05	0.05	0.05	0.05	0.04	0.05	0.05	3
3	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	4
4	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.06	0.06	5
5	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	6
6	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	7
7	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	8
8	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.11	0.11	9
9	0.11	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.14	10
10	0.14	0.14	0.18	0.18	0.18	0.22	0.22	0.22	0.22	0.25	11

10	0.14	0.14	0.18	0.18	0.18	0.22	0.22	0.22	0.22	0.25	11
11	0.25	0.29	0.29	0.32	0.58	0.97	1.62	2.34	6.12	2.63	12
12	0.79	0.54	0.54	0.36	0.36	0.36	0.29	0.25	0.22	0.22	13
13	0.22	0.22	0.22	0.18	0.16	0.15	0.15	0.14	0.14	0.14	14
14	0.14	0.13	0.13	0.12	0.12	0.12	0.11	0.11	0.11	0.11	15
15	0.11	0.11	0.11	0.09	0.09	0.09	0.09	0.09	0.09	0.09	16
16	0.09	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	17
17	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	18
18	0.07	0.07	0.07	0.07	0.07	0.06	0.06	0.06	0.06	0.06	19
19	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	20
20	0.05	0.05	0.05	0.05	0.05	0.05	0.04	0.04	0.04	0.04	21
21	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	22
22	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	23
23	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	24

Cumulative Rainfall in Inches

Hrs	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0	Hrs
0	0.00	0.01	0.01	0.01	0.02	0.02	0.03	0.03	0.03	0.04	1
1	0.04	0.04	0.05	0.05	0.06	0.06	0.07	0.07	0.07	0.08	2
2	0.08	0.09	0.09	0.10	0.10	0.11	0.11	0.12	0.12	0.12	3
3	0.13	0.13	0.14	0.14	0.15	0.15	0.16	0.16	0.17	0.17	4
4	0.18	0.18	0.19	0.19	0.20	0.21	0.21	0.22	0.22	0.23	5
5	0.23	0.24	0.25	0.25	0.26	0.26	0.27	0.28	0.28	0.29	6
6	0.30	0.30	0.31	0.32	0.32	0.33	0.34	0.35	0.35	0.36	7
7	0.37	0.37	0.38	0.39	0.40	0.40	0.41	0.42	0.42	0.43	8
8	0.44	0.45	0.46	0.47	0.48	0.49	0.49	0.50	0.51	0.53	9
9	0.54	0.55	0.56	0.57	0.59	0.60	0.61	0.62	0.64	0.65	10
10	0.67	0.68	0.70	0.72	0.73	0.7	0.78	0.80	0.82	0.85	11
11	0.87	0.90	0.93	0.96	1.02	1.12	1.28	1.51	2.12	2.39	12
12	2.47	2.52	2.57	2.61	2.65	2.68	2.71	2.74	2.76	2.78	13
13	2.80	2.82	2.84	2.86	2.88	2.89	2.91	2.92	2.94	2.95	14
14	2.97	2.98	2.99	3.00	3.02	3.03	3.04	3.05	3.06	3.07	15
15	3.08	3.09	3.10	3.11	3.12	3.13	3.14	3.15	3.16	3.17	16
16	3.18	3.18	3.19	3.20	3.20	3.21	3.22	3.23	3.23	3.24	17
17	3.25	3.25	3.26	3.27	3.28	3.28	3.29	3.30	3.30	3.31	18
18	3.32	3.33	3.33	3.34	3.35	3.35	3.36	3.37	3.37	3.38	19
19	3.38	3.39	3.39	3.40	3.40	3.41	3.41	3.42	3.42	3.43	20
20	3.43	3.43	3.44	3.44	3.45	3.45	3.46	3.46	3.47	3.47	21
21	3.47	3.48	3.48	3.49	3.49	3.50	3.50	3.50	3.51	3.51	22
22	3.52	3.52	3.53	3.53	3.54	3.54	3.54	3.55	3.55	3.56	23
23	3.56	3.57	3.57	3.57	3.58	3.58	3.59	3.59	3.60	3.60	24

Appendix D
Rainfall Distribution – 100 Yr. Storm

Rainfall Intensity in Inches/Hour

Hrs	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0	Hrs
0	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	1
1	0.06	0.06	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	2
2	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.08	0.08	3
3	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.09	0.09	4
4	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	5
5	0.09	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	6
6	0.11	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	7
7	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	8
8	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.18	0.18	9
9	0.18	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.24	10
10	0.24	0.24	0.29	0.30	0.30	0.30	0.35	0.35	0.35	0.41	11
11	0.41	0.47	0.47	0.53	0.94	1.59	2.66	3.83	10.03	4.31	12
12	1.30	0.89	0.89	0.59	0.59	0.59	0.47	0.41	0.35	0.35	13
13	0.35	0.35	0.35	0.30	0.26	0.25	0.25	0.24	0.24	0.24	14
14	0.24	0.21	0.21	0.20	0.20	0.19	0.18	0.18	0.18	0.18	15
15	0.18	0.18	0.18	0.15	0.15	0.15	0.15	0.15	0.15	0.15	16
16	0.15	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	17
17	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	18
18	0.12	0.12	0.12	0.12	0.12	0.09	0.09	0.09	0.09	0.09	19
19	0.09	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	20
20	0.08	0.08	0.08	0.08	0.08	0.08	0.07	0.07	0.07	0.07	21
21	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	22
22	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	23
23	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	24

Cumulative Rainfall in Inches

Hrs	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0	Hrs
0	0.01	0.01	0.02	0.02	0.03	0.04	0.04	0.05	0.05	0.06	1
1	0.06	0.07	0.08	0.09	0.09	0.10	0.11	0.12	0.12	0.13	2
2	0.14	0.14	0.15	0.16	0.17	0.17	0.18	0.19	0.20	0.20	3
3	0.21	0.22	0.23	0.23	0.24	0.25	0.26	0.27	0.27	0.28	4
4	0.29	0.30	0.31	0.32	0.33	0.34	0.35	0.35	0.36	0.37	5
5	0.38	0.39	0.40	0.41	0.42	0.43	0.44	0.45	0.46	0.47	6
6	0.48	0.50	0.51	0.52	0.53	0.54	0.55	0.57	0.58	0.59	7
7	0.60	0.61	0.63	0.64	0.65	0.66	0.67	0.68	0.70	0.71	8
8	0.72	0.74	0.75	0.77	0.78	0.80	0.81	0.83	0.84	0.86	9
9	0.88	0.90	0.92	0.94	0.96	0.98	1.00	1.02	1.04	1.07	10
10	1.09	1.12	1.14	1.17	1.20	1.24	1.27	1.31	1.35	1.39	11
11	1.43	1.48	1.52	1.58	1.67	1.83	2.09	2.48	3.48	3.91	12
12	4.04	4.13	4.22	4.28	4.34	4.40	4.44	4.48	4.52	4.55	13
13	4.59	4.63	4.66	4.69	4.72	4.74	4.77	4.79	4.81	4.84	14
14	4.86	4.88	4.90	4.92	4.94	4.96	4.98	5.00	5.01	5.03	15
15	5.05	5.07	5.09	5.10	5.12	5.13	5.14	5.16	5.17	5.19	16
16	5.20	5.22	5.23	5.24	5.25	5.26	5.27	5.29	5.30	5.31	17
17	5.32	5.33	5.35	5.36	5.37	5.38	5.39	5.40	5.42	5.43	18
18	5.44	5.45	5.46	5.48	5.49	5.50	5.51	5.52	5.52	5.53	19
19	5.54	5.55	5.56	5.57	5.57	5.58	5.59	5.60	5.61	5.61	20
20	5.62	5.63	5.64	5.64	5.65	5.66	5.67	5.67	5.68	5.69	21
21	5.69	5.70	5.71	5.72	5.72	5.73	5.74	5.74	5.75	5.76	22
22	5.77	5.77	5.78	5.79	5.79	5.80	5.81	5.82	5.82	5.83	23
23	5.84	5.84	5.85	5.86	5.86	5.87	5.88	5.89	5.89	5.90	24

Chapter 81. Storm Sewer System Charge

Sec. 81.01. Statement of purpose.

For the purpose of paying for the construction, reconstruction, repair, enlargement and improvements necessitated by the separation of the combined sewer system in Saint Paul and for the maintenance, operation and use of the separated storm sewer system, the City of Saint Paul acting pursuant to Chapter 14, Article 19, 1st Special Session, Laws of Minnesota, 1985, and all other laws and Charter provisions applicable hereto, hereby establishes an annual storm sewer system charge to be made against all properties located within the city limits of Saint Paul but excluding all public street and alley rights-of-way. All charges shall be established, collected and accounted for in the manner as set forth under this chapter. The storm sewer shall be under the jurisdiction of the Department of Public Works together with existing sewer systems. (Ord. No. 17359, 6-3-86)

Sec. 81.02. Findings of the council.

The determination of the annual storm sewer system charges is in part based upon expected storm water runoff and, therefore, cannot be done with mathematical precision but can only be accomplished within reasonable and practical limits. The provisions of this chapter undertake to establish a just, equitable and practical methodology for making such changes.
(Ord. No. 17359, 6-3-86)

Sec. 81.03. Definitions.

The following definitions shall apply in the interpretation and enforcement of this chapter:

(l) Land use classification is that classification designated for a parcel in the sub-usage code list of properties as established in the record of the Ramsey County Department of Taxation or as otherwise determined by the department of public works.

(2) Area is the total square footage of all the improved and unimproved property contained within the boundaries of each parcel of land in the City of Saint Paul as determined from the records of the Ramsey County Department of Property Taxation or from other appropriate records.

(3) Storm sewer system rate is that portion of the total annual expenses which the city

council determines is to be charged to a one-acre parcel with a specific land use classification to provide such services as the management and operation of the storm sewer system as well as the construction, reconstruction, repair, enlargement, maintenance, use and operation of all improvements necessitated by the separation of the combined sewer system.

This per-acre rate is a function of the expected peak rate of storm water runoff for the land use classification under consideration, based on hydrological data developed by the Soil Conservation Service of the United States Department of Agriculture for a Type II rainfall distribution, soil group "B" with a normal antecedent moisture condition for the Saint Paul five-year design storm. The five-year design storm is a storm that has a statistical probability of occurring in the City of Saint Paul once every five (5) years.

(4) Storm sewer system charge is the actual charge imposed against each parcel of land within the City of Saint Paul. (Ord. No. 17359, 6-3-86)

Sec. 81.04. Determination of the storm sewer system rates.

The council may from time to time, by resolution, establish the storm sewer system rate for the various land use classifications which will be based upon the data provided by the department of public works. Prior to the adoption or any amendment of these rates, the council shall conduct a public hearing and shall publish a notice of the hearing in a newspaper of general circulation at least ten (10) days prior to the hearing. (Ord. No. 17359, 6-3-86)

Sec. 81.05. Calculation of the storm sewer system charges.

(a) Each year, the department of finance and management services, applying the current storm sewer system rates established pursuant to Section 81.04, shall calculate the storm sewer system charge to be applied to each parcel of land within the City of Saint Paul. The charges, including any administrative costs incurred by the finance department in processing the charges, shall then be collected by billing all parcels within the city. These charges are due and payable on or before October 1st of the billing year.

(b) All billing invoices shall include the parcel's Ramsey County property tax identification number, its area, the applicable storm sewer system rate, the storm sewer system charge and notice of the owner's right to request a review of this charge pursuant to Section 81.06. All invoices shall be sent to the person or persons shown to be the owners of the parcel in the records of the Ramsey County Department of Property Taxation or other appropriate records. All charges when collected shall be maintained in a separate activity object code account established for management of the storm sewer system. (Ord. No. 17359, 6-3-86)

Sec 81.06. Review of the storm sewer system charge.

(a) Property owners may seek review of their storm sewer system charge by filing a written request for review with the department of public works. The request must be filed within thirty (30) days of the mailing of the annual bill and shall set forth the particular grounds upon which the review is sought.

(b) Grounds for review are limited to questions relating to the city's determination of the parcel's area and its determination of the parcel's hydrological response established as part of the storm sewer system rate. Any person who fails to file the request for review within the thirty-day time period shall be barred from raising these issues in any other proceeding.

(c) The council, by resolution and upon the recommendation of the director of public works shall adopt guidelines and policies for the review of these petitions. The director shall follow these guidelines and policies and consider all pertinent data including that provided by the property owner before making a determination of the merits of each petition.

(d) The payment of the annual storm system charge shall not be deferred when a property owner files a petition for review. The property owner shall pay the annual charge when due, and if not so paid, certification and collection shall be made pursuant to Section 81.07. Upon the director's determination of the merits of the petition any adjustments or credits shall be paid or refunded without interest. (Ord. No. 17359, 6-3-86)

Sec. 81.07. Certification of unpaid charges.

Any unpaid storm sewer system charges as of October 1 of any year shall be certified to the Ramsey County Department of Property Taxation for collection with real estate, taxes in the following year pursuant to Minnesota Statutes, Section. 444.075, Subdivision 3. (Ord. No. 17, 6-3-86).