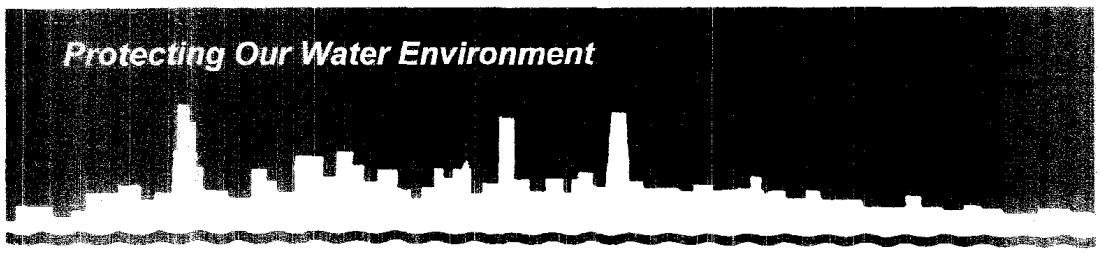

Metropolitan Water Reclamation District of Greater Chicago

RESEARCH AND DEVELOPMENT DEPARTMENT

REPORT NO. 02-10

DEVELOPMENT OF CORRELATION FOR ESTIMATING BOD_5 AND SS LOADS DISCHARGED TO RIVERS DURING CSO EVENTS BASED UPON CSO DISCHARGE VOLUMES

November 2002

Metropolitan Water Reclamation District of Greater Chicago

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DEVELOPMENT OF CORRELATION FOR ESTIMATING BOD_5 AND SS LOADS DISCHARGED TO RIVERS DURING CSO EVENTS BASED UPON CSO DISCHARGE VOLUMES

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DISCLAIMER

Mention of proprietary equipment and chemicals in this report does not constitute endorsement by the Metropolitan Water Reclamation District of Greater Chicago.

SUMMARY AND CONCLUSIONS

A combined sewer overflow (CSO) discharge to a receiving water carries certain amounts of pollutants. The new National Pollutant Discharge Elimination System (NPDES) permits (2002) for the Calumet, North Side, and Stickney Water Reclamation Plants (WRPs) of the Metropolitan Water Reclamation District of Greater Chicago (District) require that the District report annually the estimated amounts of BOD_5 and suspended solids (SS) discharged into the receiving waters in every CSO event occurring at various locations within the District service area. In an effort to make the estimation reliable, the Research and Development (R&D) Department of the District conducted a study to statistically analyze the historical CSO data to develop a correlation between the amounts of BOD_5 and SS discharged in CSO events and CSO discharge volumes. This is beneficial, as CSO discharge volume can be more accurately determined than the BOD_5 and SS concentrations of CSOs.

Prior to this study, the District had conducted three studies to characterize CSOs discharged at various locations within the District service area. One study was conducted in 1995 through 1997, as a fulfillment of the contractual obligation with the US Army Corps of Engineers (USACE), Chicago

District. In this study, seven locations, including two CSO pumping stations, three CSO outfalls, and two TARP drop shaft stations were grab sampled in several CSO events according to the predetermined sampling protocols. A follow-up study was conducted in 1999. The sampling locations and procedures in the 1999 study were the same as those in the earlier study. A third study was conducted in 2001 as a part of the modeling efforts made to study the impact of CSOs discharged to the Chicago waterway system on its water quality. Several CSOs discharged from two major CSO pumping stations were sampled in the study. Multiple grab samples were collected in each CSO event according to the same sampling protocols used in the USACE studies. In these three studies, BOD_5 and SS concentrations of most of the samples collected were measured, in addition to other parameters.

The data collected from the three previous studies, including BOD_5 and SS concentrations and sample collection times, which were archived in the District's Laboratory Information Management System (LIMS) were retrieved for this study. These data included information on the CSOs discharged to the Chicago, Little Calumet, and Des Plaines Rivers and the TARP systems. CSO flow and volume data for the CSO events sampled at various locations were obtained either from the operational

records of the Maintenance and Operations (M&O) Department of the District, or from the results of a joint study by USACE, Chicago District and the U.S. Geological Survey on collecting and analyzing flow data for CSOs in Riverside and Evanston, Illinois. The records from the M&O Department contained the starting and ending times of each operational pump during a CSO pumping event at the three pumping stations, along with the capacity of each pump. The data from the USACE, Chicago District, were 5-minute discharge rates under surcharge and non-surcharge conditions at 12 monitoring stations.

For this report, only data for the CSOs directly discharged into the rivers were selected. A total of 35 CSO events were sampled at six locations from 1995 through 2001 in the previous studies. The following is a list of these six locations and the corresponding receiving waters:

1. North Branch Pumping Station (NBPS) to the North Branch of Chicago River.
2. Racine Avenue Pumping Station (RAPS) to the South fork of South Branch of Chicago River.
3. 125th Street Pumping Station (125th St.) to the Little Calumet River.
4. Evanston Intercepting Sewer Outfall to the North Shore Channel.

5. Greenwood Avenue Relief Sewer Outfall to the North Shore Channel.
6. Olmsted Road Sewer Outfall to the Des Plaines River.

The CSO data collected for this study were analyzed in several steps. First, the CSO data, including concentrations of BOD_5 and SS and CSO discharge flow rates and volumes, were examined for their completeness in terms of CSO event coverage, and event-total CSO discharge volumes were calculated or estimated. Secondly, the missing BOD_5 and SS concentration values based on the designed sampling protocols, for the three pumping stations; namely, NBPS, RAPS, and 125th Street, were estimated using site- and parameter-specific mathematical models. Thirdly, the BOD_5 and SS event mean concentrations (EMCs) were calculated and evaluated. An EMC is defined as the mean value of all concentration values for the grab samples collected in one CSO event. Finally, the BOD_5 and SS loads of a sampled CSO event were calculated using its EMC and total discharge volume; the BOD_5 and SS loads as well as CSO discharge volumes for all the CSO events from six locations were pooled together; and a correlation between loads and CSO volumes was developed through nonlinear regression analysis.

After statistically analyzing the selected CSO data collected in the previous studies, it can be concluded that there are good correlations between amounts of BOD_5 and SS discharged and the corresponding CSO discharge volumes. The loads of BOD_5 (L_{BOD5}) and SS (L_{SS}) in pounds are correlated to the CSO discharge volume (V) in million gallons (MG) by the following equations.

$$L_{BOD5} = 558.1 * V - 0.08825 * V^2, \quad \text{and}$$

$$L_{ss} = 3333 * V - 0.6472 * V^2$$

The above correlations are statistically valid up to a CSO volume of 3,590 MG.

The results of nonlinear regression analysis showed that the adjusted R-squared values were 0.78 for BOD_5 loads versus CSO volumes and 0.67 for SS loads versus CSO volumes. A reasonable estimate of the amounts of BOD_5 and SS discharged into the receiving waters based on CSO discharge volume can be made using the above two equations. As only estimated amounts of BOD_5 and SS discharged via CSOs to the Chicago River System are required to be reported according to the new NPDES permits issued in 2002, the District could report the estimated BOD_5 and SS quantities derived by the above equations developed in this study for NPDES permit compliance. However, in order to

take a conservative approach for NPDES permit reporting purposes, it is recommended that the District use the maximum estimated BOD_5 loading of 882,400 lbs from the proposed regression equation for any CSO event exceeding 3,162 MG and similarly the maximum estimated SS loading of 4,291,000 lbs for any CSO event exceeding 2,575 MG.

INTRODUCTION

The new NPDES permits (2002) for the North Side, Stickney, and Calumet WRPs of the District require the District to report annually the estimated amounts of BOD_5 and suspended solids (SS) discharged into the receiving water in every combined sewer overflow (CSO) event occurring at certain locations in a reporting year. To make the estimation of amounts of BOD_5 and SS discharged in each CSO event, an event mean concentration (EMC) of BOD_5 and SS determined by flow weighted composite sampling and the CSO discharge volume needs to be known, or statistically estimated quantities can be reported, if correlations between the amounts of BOD_5 and SS discharged and CSO discharge volume exist. In an effort to make the estimation procedure cost-effective, the Research and Development (R&D) Department of the District conducted a study to develop such statistical correlations between the respective amounts of BOD_5 and SS and the volume of CSO discharged. Historical data collected over the years were used for this purpose.

Since 1995 the District has conducted several studies to characterize CSOs discharged at various locations within the District's service area in terms of the concentrations of

conventional pollutants in the CSOs. In these studies, CSOs discharged to receiving water and sometimes to the TARP system were monitored, and data related to the chemical characteristics of CSOs were collected. These data contain meaningful information on the quantity of conventional pollutants, i.e. BOD_5 and SS, discharged with CSOs.

One study was conducted in 1995 through 1997, as a fulfillment of a contractual obligation with the USACE, Chicago District. In this study, seven locations, including two CSO pumping stations, three outfall locations, and two TARP drop shaft stations, were selected to take a series of grab samples in a CSO event according to the predetermined sampling protocols. Along with several parameters, BOD_5 and SS were measured for most of the samples collected in this study. The results of this study were reported in a District report (R&D Report No. 2000-7) (1). A follow-up study was conducted in 1999. The sampling locations in the 1999 study were the same as those in the earlier study, as was the sampling procedure.

A third study was conducted in 2001 as a part of modeling efforts to study the impact of CSOs discharged to the Chicago waterway system on the water quality of the system. In this study, several CSO discharge events from two major pumping stations, the NBPS and the 125th St., were sampled. Multiple

grab samples were collected in each CSO event sampled according to the same sampling protocol used in the USACE studies. Eleven conventional pollutants including BOD_5 and SS were measured for each sample collected in this study. The data collected in the above-mentioned studies contain meaningful information on the amounts of BOD_5 and SS discharged at various locations in various volumes of CSOs.

The main objective of this study is to develop possible statistical correlations between the quantity of BOD_5 and SS discharged in CSOs, and CSO discharge volumes, based on the historic CSO data. Such correlations can be used to estimate the loads (lbs/event) of BOD_5 and SS in CSOs based on CSO volumes and to meet the regulatory reporting requirements.

Although data from more than six CSO discharge locations were collected during all studies, only discharge volume, BOD_5, and SS data from six locations that directly discharge to the Chicago area waterway system were used to develop the statistical correlations.

This report presents the results of this study, including the collection of historic CSO data, analyses of the data, and findings after statistically evaluating the data collected from these six locations (see Methodology section for a

listing of these locations). The methodology used to analyze the data is also described and presented in this report.

METHODOLOGY

Data Collection

In order to estimate the loads of BOD_5 and SS in a CSO discharged to a receiving water, the concentrations of BOD_5 and SS and volume of the CSO discharged are required. Data collection consisted of two main parts, concentrations of BOD_5 and SS in the CSO discharges and the corresponding CSO volumes. The first part involved the gathering and summarizing of all the pertinent information related to the samples collected in three previous CSO studies. This information included the times of sample collection and the locations from which samples were collected and the concentrations of BOD_5 and SS of the samples. The second part involved the collection of data of CSO volumes and flow rates for the CSO events sampled.

The BOD_5 and SS data were collected mainly from the Laboratory Information Management System (LIMS) of the District. Persons involved with collecting the samples for the previous studies were interviewed for identifying the precise sample locations and sampling intervals. The data from the previous studies were first screened. Only the data for the CSOs directly discharged into the rivers were selected for this

study. After screening, the following CSO discharge locations were identified as useful for this study. The name of each CSO discharge location, the receiving water into which the CSOs were discharged and the owner of the outfall is given.

1. North Branch Pumping Station (NBPS) to the North Branch of Chicago River owned by the District.
2. Racine Avenue Pumping Station (RAPS) to the South fork of South Branch of Chicago River owned by the District.
3. 125th Street Pumping Station (125th St.) to the Little Calumet River owned by the District.
4. Evanston Intercepting Sewer (Evanston) Outfall to the North Shore Channel owned by the District.
5. Greenwood Avenue Relief Sewer (Greenwood) Outfall to the North Shore Channel owned by the City of Evanston.
6. Olmsted Road Sewer (Olmsted) Outfall to the Des Plaines River owned by the Village of Riverside.

The detailed sampling locations for each of the six sites are described below. The sampling location at NBPS was located in the screen chamber of the pumping station. At RAPS, the sampling location was also located in the screen chamber

before the pumps. At 125th St., the sampling location was located on the South Park Intercepting Sewer near the pumping station prior to the 2001 modeling study, and inside the pumping station for the 2001 study. The sampling location at the Evanston Outfall was located outside the tide gate of the District control structure associated with the TARP drop shaft station DS-M106. The sampling location for the Greenwood Outfall was located inside the tide gate of a structure for the Greenwood Avenue Relief Sewer connecting to the TARP drop shaft station DS-M106. The Evanston and Greenwood outfalls are in close proximity on the east bank of the North Shore Channel at Lake Street. The sampling location for Olmsted Outfall was located inside a connecting structure connected to the District TARP drop shaft station DS-D45.

The data, including collection times and concentrations of BOD_5 and SS, for the CSOs sampled prior to 1996 were obtained from R&D Report No. 2000-7 (1) and for CSOs since 1996 from LIMS. It was observed that there was some minor discrepancy in sampling times between the LIMS database and the report for the 1996 and 1997 CSO data. For the sake of consistency, the data from LIMS were used for this study. A few apparent errors associated with the sampling date and time for the Evanston Outfall and the Greenwood Outfall were corrected

according to the designed sampling intervals. The designed sampling intervals in a CSO event were 15 minutes within the first 3 hours, 30 minutes in the next 6 hours, and 60 minutes thereafter for all the locations except for the Olmsted Outfall. For this outfall, the sampling intervals were 10 minutes in the first two hours and 20 minutes in the next 4 hours, followed by 30 minutes thereafter.

The CSO sampling data collected for this study, including collection times and BOD_5 and SS concentrations, are presented in Appendix Tables AI-1 through AI-6. The correction for some of the sampling collection times that are considered erroneous is exemplified below. From LIMS, the sample collection times in a CSO event were recorded as 24:15, 24:30, and 24:45 of December 5, 1999. These collection times were determined as 0:15, 0:30 and 0:45 on December 5, 1999, not on December 6, 1999, after finding that sampling for this CSO event started at 22:25 on December 4, 1999 and sampling interval should be 15 minutes within the first 3 hours.

CSO flow and volume data for the three pumping stations were calculated from the operational records of the M&O Department. The records contain the starting and ending times of each operational pump during a CSO pumping event at the three pumping stations. The capacity of each pump at these

three pumping stations was also obtained from the M&O Department. The CSO pumping data for the CSO events sampled at the three pumping stations are presented in Appendix Tables AII-1 through AII-3.

The CSO flow data for some of the CSO events sampled at the three outfall sites were obtained from USACE, Chicago District. To obtain design data for the McCook reservoir, USACE, in cooperation with the U.S. Geological Survey, conducted a study from March 1997 to December 1999 (2) on collecting and analyzing data in combined sewer systems in Riverside and Evanston, Illinois, where the three outfalls are located. In that study, continuous 2- and 5-minute stage and velocity data were collected during surcharge and non-surcharged conditions at 12 monitoring stations. In some of these 12 monitoring stations, the CSOs discharged to the Des Plaines River and the North Shore Channel through the three outfalls, which were sampled for water quality, were directly or indirectly monitored. The flow rates through each monitoring station were calculated using the stage and velocity data. The data of flow rates at these monitoring stations, along with a report describing the locations of the stations, were obtained from the USACE, Chicago District. The CSO flow data relevant to

the CSO events sampled at the three outfalls are shown in Appendix Tables AII-4 through AII-6.

Data Analysis

Analysis of the CSO data collected for this study was performed in several steps. First, the CSO data, including concentrations of BOD_5 and SS and CSO discharge flow rates and volumes, were examined for their completeness in terms of the CSO event coverage, and the CSO discharge volumes were calculated or estimated. Secondly, the missing concentration values for the three pumping stations were estimated using site-specific mathematical models (see "Statistical Methods" Section below). Thirdly, the EMCs were calculated and evaluated. Finally, the BOD_5 and SS loads of the sampled CSO events were calculated using EMC and total discharge volumes, and a correlation between loads and CSO volumes was developed through regression analysis.

At the three pumping stations (NBSP, RAPS, and 125th Street), both CSO duration and sampling periods for the CSO events sampled were well recorded. A CSO period was defined as the time between starting and ending of a CSO event, which was noted by the times that the first operational pump was turned on and the last operational pump closed at a pumping

station. The CSO sampling period was defined as the time between the first and last samples collected. The CSO duration and sampling periods for the CSO events sampled at these three pumping stations were examined and compared. The coverage was considered complete, if the sampling period covered more than 90 percent of the CSO period in a CSO event.

At the three outfalls (Evanston, Greenwood, and Olmsted), sample collection time for each CSO sample were recorded in LIMS, but the CSO discharge period for each event sampled was not clearly delineated due to the nature of the data. As CSO discharge flows were monitored continuously by stage and velocity sensors at these outfalls, the flow rates computed from the stage and velocity data fluctuated widely in some instances. Therefore, the CSO sampling coverage for the CSO events sampled at these outfalls was not examined.

The discharge volume of a CSO event at the three pumping stations was calculated based on the pumping duration and the capacity of the operational pumps. There were a few minor discrepancies between the total CSO volumes reported by the M&O Department and the calculated CSO volumes. For the sake of consistency, the calculated CSO volumes were used in this study.

The CSO discharge volumes for the CSO events sampled at the three outfalls were estimated using the flow rate data obtained from USACE, Chicago District. The flow rates of these events in 5-minute intervals from March 1997 to December 1999 were provided. A 5-minute CSO discharge volume was computed using the flow rate value multiplied by 5 minutes. There were positive as well as negative flow rates in the data provided. In the calculation, a zero value was assigned whenever there was a negative flow rate. The total CSO discharge volume of a CSO event was the sum of 5-minute volumes over a period that was corresponding to the sampling period and had larger than zero flow rates.

For the three pumping stations, if a CSO event was not completely covered in terms of CSO sampling, the missing concentration values corresponding to the designed sampling intervals were estimated using mathematical models. The mathematical models were developed using site- and parameter-specific data. In other words, different mathematical models were used for estimating BOD_5 and SS concentration values at a pumping station, respectively. The details about the model development are presented in the section of Statistical Methods.

With the missing concentration values estimated and included, EMCs for all the CSO events sampled were calculated using both arithmetic and volume-weighted averaging methods, as both methods can be useful with their unique features. In order to select a more appropriate method of calculating EMCs for this study, a specific statistical analysis was conducted to compare the results from these two methods. The details of this specific statistical analysis are given in the section of Statistical Methods. The results of the analysis will be presented later in this report.

The BOD_5 and SS loads for a CSO event were calculated using the EMC for the event multiplied by the total CSO discharge volume of the event. The loading values, along with the corresponding CSO volumes, for all the CSO events sampled in the previous three studies were pooled together. Nonlinear regression analysis was used to develop possible correlation between loads of SS and BOD_5 and CSO discharge volumes. The details of the nonlinear regression analysis are given below in the section of Statistical Methods.

Statistical Methods

COMPUTATION OF MISSING VALUES OF BOD_5 AND SS DURING SAMPLING EVENTS

All statistical analyses were performed using SAS software (SAS Institute, Cary, North Carolina) with customized programming. From the BOD_5 and SS concentration data, which were obtained from the samples collected in fixed time intervals, it is evident that a time series model is the most appropriate for estimating missing BOD_5 and SS concentration values when a CSO sampling coverage was incomplete. Time series models require that data must be collected in equally spaced time intervals or any equally spaced sequence. In some cases, data was unavailable according to the criteria of equally spaced time intervals, which was determined as 15 minutes for this study. An interpolation method was used to obtain the missing concentration values between measured values for the purpose of developing the time series model. From the characteristics of the measured data, Cubic Spline algorithm (3) was selected as the proper method to interpolate missing observations. Once the data sets were complete through interpolation with respect to data sequence, the auto correlation plots were constructed using all the data from one CSO discharge location, and were examined to derive the most

appropriate models for BOD_5 and SS, respectively (4, 5, 6). Then, the respective model was used to estimate the missing concentration values during the designed sampling period indicated in the sampling protocols previously established.

COMPARISON OF TWO METHODS FOR EMC CALCULATIONS

EMCs of BOD_5 and SS of a CSO event can be calculated using two methods, namely, using either a volume-weighted average or an arithmetic average. The methodology for testing the significance difference between the two means using the two methods is unconventional, and is very uncommon in the literature. The first step of this testing is to construct two empirical probability distributions for the corresponding set of BOD_5 or SS concentration data, which would be used to calculate an EMC. One empirical probability distribution was derived from the CSO volume fractions, corresponding to concentration values, divided by the total CSO volume for a CSO event. The other empirical distribution was constructed by giving equal weight to each concentration. In other words, this latter empirical distribution was a uniform one. An EMC by volume-weighted average can be calculated using the first empirical distribution and the corresponding concentration values, which is equal to the sum of the concentration

multiplied by corresponding probability. Similarly, an EMC by arithmetic average was calculated by using the other empirical distribution.

In the next step, the concentration values are arranged in an ascending order, and then a cumulative distribution function (CDF) is constructed for each probability distribution. From the two CDFs, the supremum difference (7) between the two corresponding cumulative probabilities was calculated. Supremum difference in this case is the maximum of the largest of the differences between the corresponding points and the largest of the differences between a point in one distribution and one point behind in the other distribution. Finally, Kolmogorov-Smirnov approximate distribution of the random variable of the supremum differences was used to obtain the significance probability (P-value). If the significance probability is greater than 0.10, the two probability distributions based on the same concentrations, one from volume fractions and the other from equal weight, are statistically identical, which signifies that all parameters, such as mean, standard deviation, etc., are, respectively, identical in their two distributions.

REGRESSION ANALYSIS OF BOD_5 AND SS LOADS

Regression analyses on BOD_5 and SS loads against CSO volume were conducted to establish a possible correlation between the BOD_5 or SS loads and CSO volumes, for prediction of future BOD_5 and SS loadings based on CSO volumes recorded. Simple linear regression analysis on the given data was found to be inappropriate, as all statistics required for a good fit were poor. Nonlinear regression models were then constructed, and found to be appropriate in term of a better R^2, standard error, and C(p) statistics.

RESULTS

A total of 35 CSO events at six locations were sampled from 1995 through 2001 in the previous studies. Table 1 presents a summary of all these events, including the location, date of event, CSO duration and sampling periods, and number of samples collected in each event. As seen, these CSO events occurred in almost all seasons, covering April to December. There were at least three or more CSO events sampled at each site. The number of grab samples collected varied from 7 to 60 in the various CSO events.

Results of CSO Events, Where Complete Data Were Collected

More CSO events were sampled at the three pumping stations than the outfalls. At the three pumping stations, the number of CSO events sampled were 7, 8 and 9 for NBPS, RAPS and 125th St., respectively. Of these 24 CSO events, 14 events had complete coverage of BOD_5 and SS values with respect to CSO duration, six at NBPS, three at RAPS, and five at 125th St. Figures 1 through 3 present three examples, one for each of the three pumping stations, of the concentrations of BOD_5 and SS and CSO flow rates for completely covered CSO events. With the available concentration and flow rate data, BOD_5 and SS loads can be reliably calculated for each of the

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TABLE 1

SUMMARY OF CSO EVENTS SAMPLED AT SIX CSO DISCHARGE LOCATIONS
IN PREVIOUS STUDIES IN 1995 THROUGH 2001

Station	Date of Event (m/d/yr)	CSO Period* (military time)	Sampling Period* (military time)	Number of Samples
North Branch Pumping Station	8/2/01	0831 - 2122	0840 - 2125	26
	8/9/01	2109 - 2325	2110 - 2325	10
	9/19/01	0157 - 1145	0210 - 1145	23
	9/20 - 9/21/01	2328 - 0531	23:0 - 0500	18
	9/23/01	1218 - 1648	1220 - 1635	15
	10/13 - 10/14/01	1301 - 1944	1345 - 0145	25
	10/23/01	0217 - 1120	0220 - 1130	22
Racine Avenue Pumping Station	7/20/95	1510 - 1845	1509 - 1639	7
	8/15/95	1230 - 2010	1500 - 2000	17
	11/10 - 11/11/95	1246 - 1700	1930 - 1630	22
	7/17 - 7/19/96	1447 - 0700	1545 - 0625	48
	7/18 - 7/19/97	1542 - 0035	1721 - 0013	18
	4/22 - 4/23/99	1345 - 1648	1340 - 1650	40
	6/1 - 6/2/99	2206 - 1930	2215 - 0705	22
	12/5/99	0022 - 1401	0025 - 1345	23
125th Street Pumping Station	11/10 - 11/11/95	1648 - 0623	1700 - 1945**	12
	7/17 - 7/18/96	1624 - 2400	1636 - 2330	39
	8/17/97	0155 - 1759	0200 - 0830	9
	4/22/99	1550 - 2100	1400 - 1630	11
	4/22 - 4/24/99	2205 - 0601	2350 - 0720	28
	6/1 - 6/2/99	2330 - 0415	2330 - 0400	13
	8/2/01	1120 - 1915	1145 - 1850	20
	8/25 - 8/26/01	1130 - 0610	1155 - 0435	28
	10/13 - 10/14/01	1900 - 1140	1910 - 0110	19

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TABLE 1 (Continued)

SUMMARY OF CSO EVENTS SAMPLED AT SIX CSO DISCHARGE LOCATIONS
IN PREVIOUS STUDIES IN 1995 THROUGH 2001

Station	Date of Event (m/d/yr)	CSO Period* (military time)	Sampling Period* (military time)	Number of Samples
Evanston Intercepting Sewer Outfall	7/17 - 7/18/96		1614 - 1910	35
	8/17/97		0445 - 0700	10
	6/1 - 6/2/99		2245 - 0220	15
	12/4 -12/6/99		2230 - 0340	45
Greenwood Avenue Relief Sewer Outfall	7/17 - 7/18/96		1607 - 1905	38
	4/22/99		1445 - 2305	25
	6/1 - 6/2/99		2245 - 0230	14
	12/4 -12/6/99		2240 - 0315	46
Olmsted Road Sewer Outfall	8/16 - 8/17/97		2030 - 2030	60
	4/23/99		0215 - 1415	37
	6/1 - 6/2/99		2107 - 0840	36

*The starting and ending times occurred on the corresponding dates given under Date of Event, unless otherwise noted.

**The ending time of sampling occurred on 11/10/95.

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FIGURE 1

BOD_5, SS, AND CSO FLOW PROFILES AT NORTH BRANCH PUMPING STATION
ON OCTOBER 23, 2001

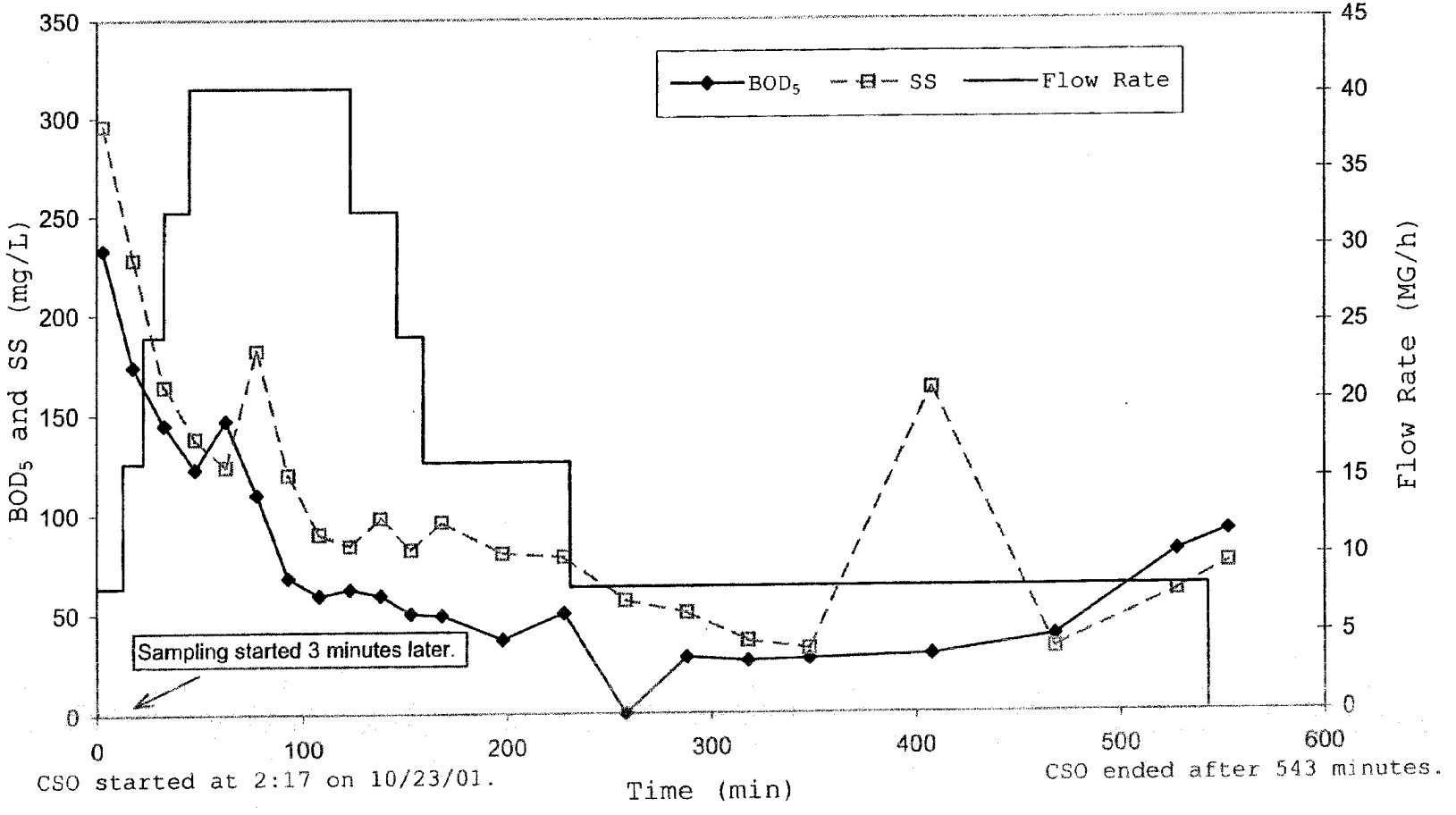

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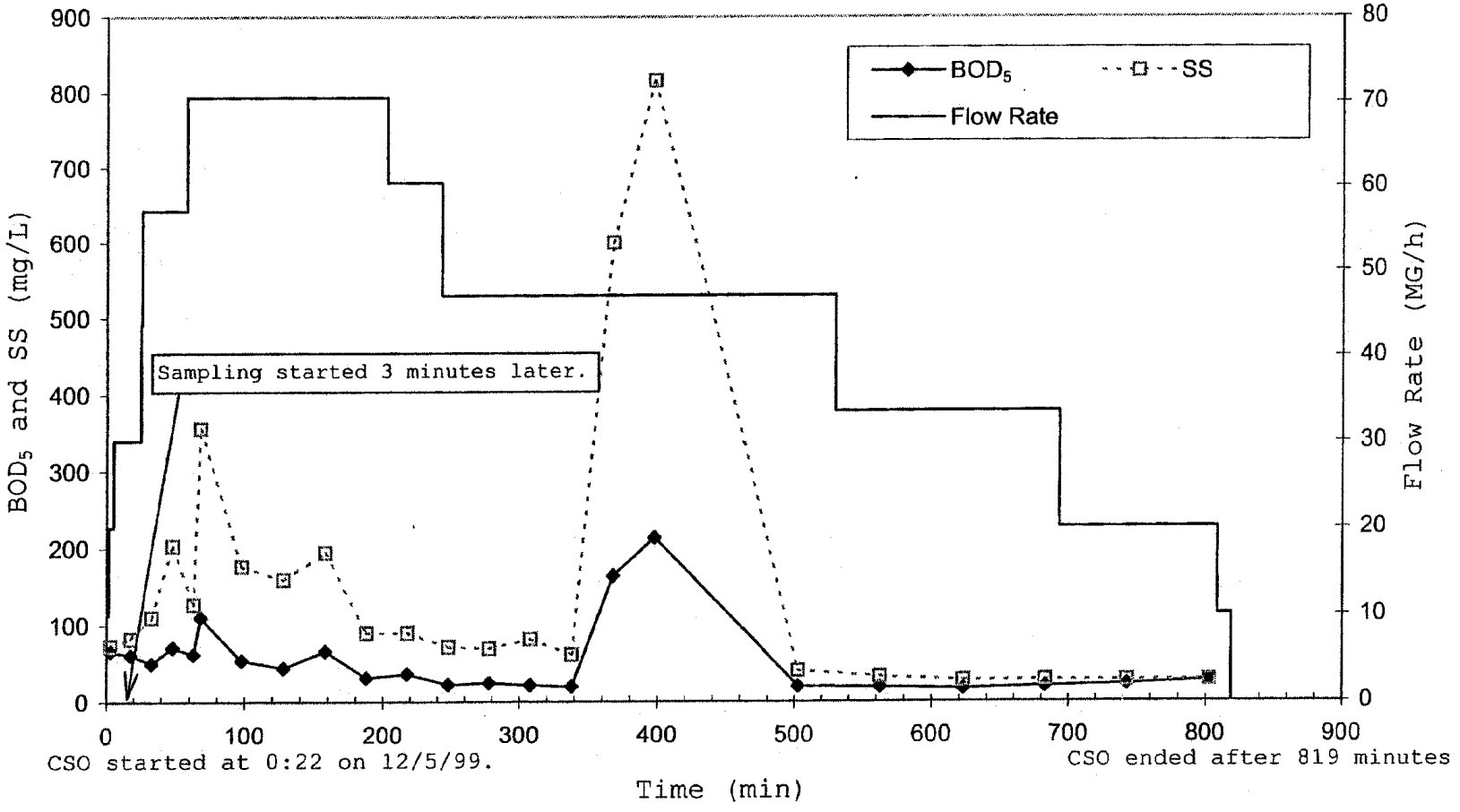
FIGURE 2

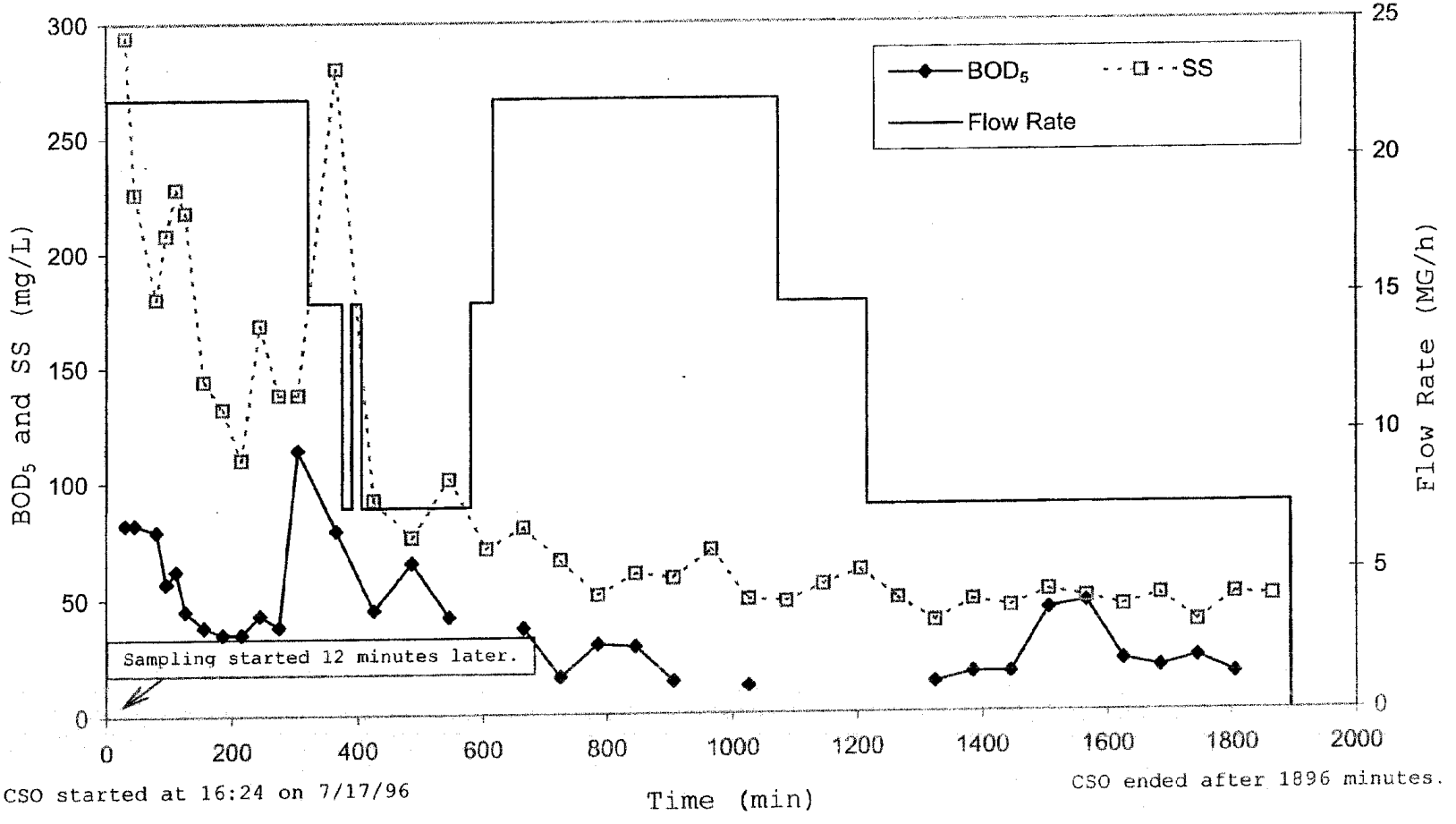
BOD_5, SS, AND CSO FLOW PROFILES AT RACINE AVENUE PUMPING STATION
ON DECEMBER 5, 1999



METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

FIGURE 3

BOD_5, SS, AND CSO FLOW PROFILES AT 125TH STREET PUMPING STATION
ON JULY 17 TO 18, 1996



CSO events. The BOD_5 or SS load was calculated by multiplying a particular EMC with the corresponding total CSO volume. An EMC may be computed using two different methods. The comparison of these two methods will be discussed later in this report.

Results of CSO Events with Missing Data

In the case of the remainder of the other 10 CSO events, the CSO sampling was incomplete, and the sampling coverage ranged from 20 to 80 percent. It is thought that calculating BOD_5 and SS loads for these incompletely sampled CSO events using only the existing data may be unreliable, because partial concentration data cannot be representative of the entire CSO event because of wide variation of BOD_5 and SS concentrations throughout a CSO event. Therefore, six site- and parameter-specific mathematical models, each for BOD_5 or SS at each location, were developed to estimate the BOD_5 and SS concentration values, which were missed during CSO sampling based on the designed sampling protocol. Figures 4 through 6 show three examples, one for each location, of incomplete CSO events filled with estimated values for possible missing samples. It is believed that the results of BOD_5 and SS loads

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FIGURE 4

BOD_5 AND SS WITH MISSING VALUES ESTIMATED ALONG WITH CSO FLOW RATE AT NORTH BRANCH PUMPING STATION ON OCTOBER 13 AND 14, 2001

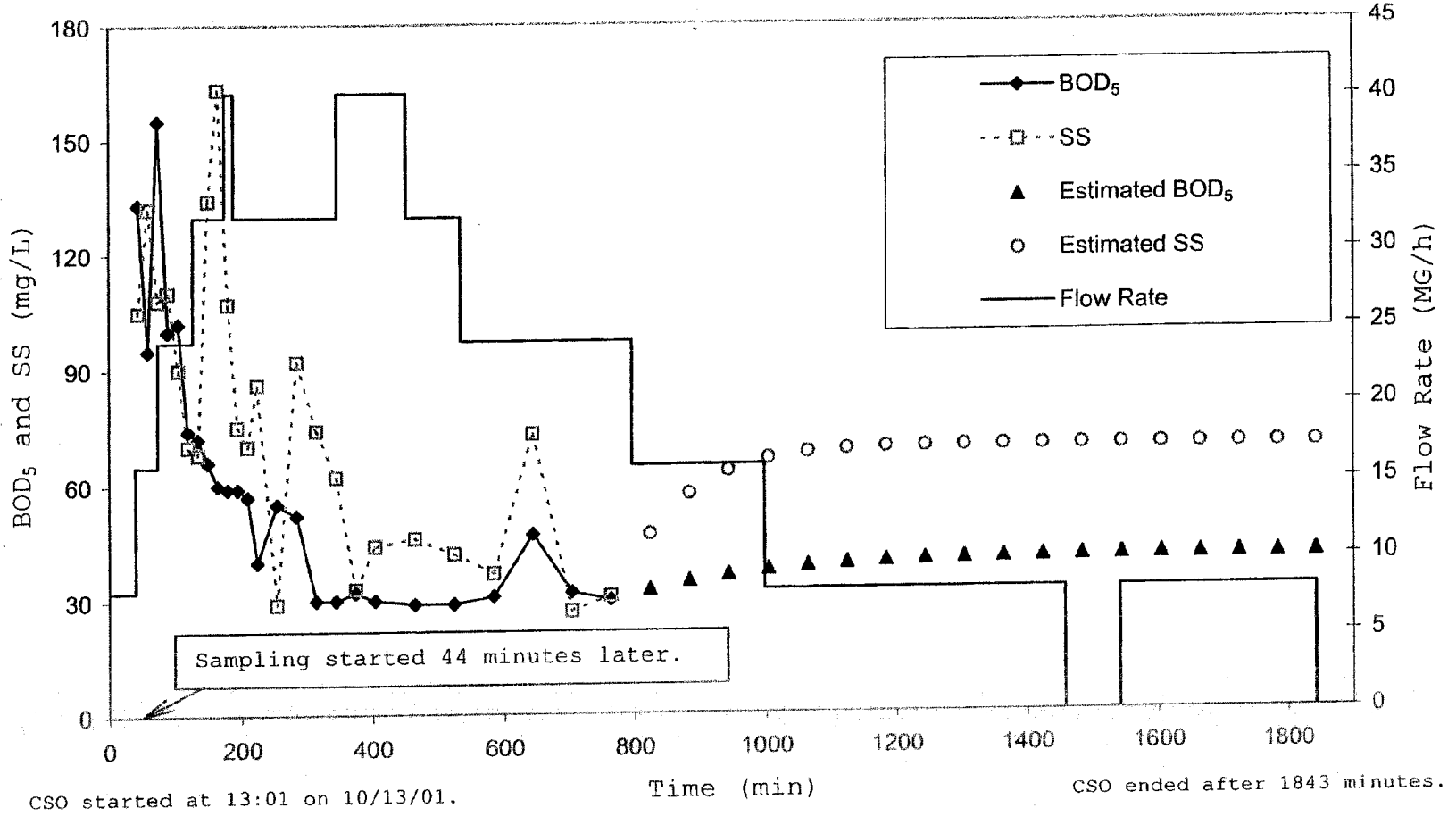

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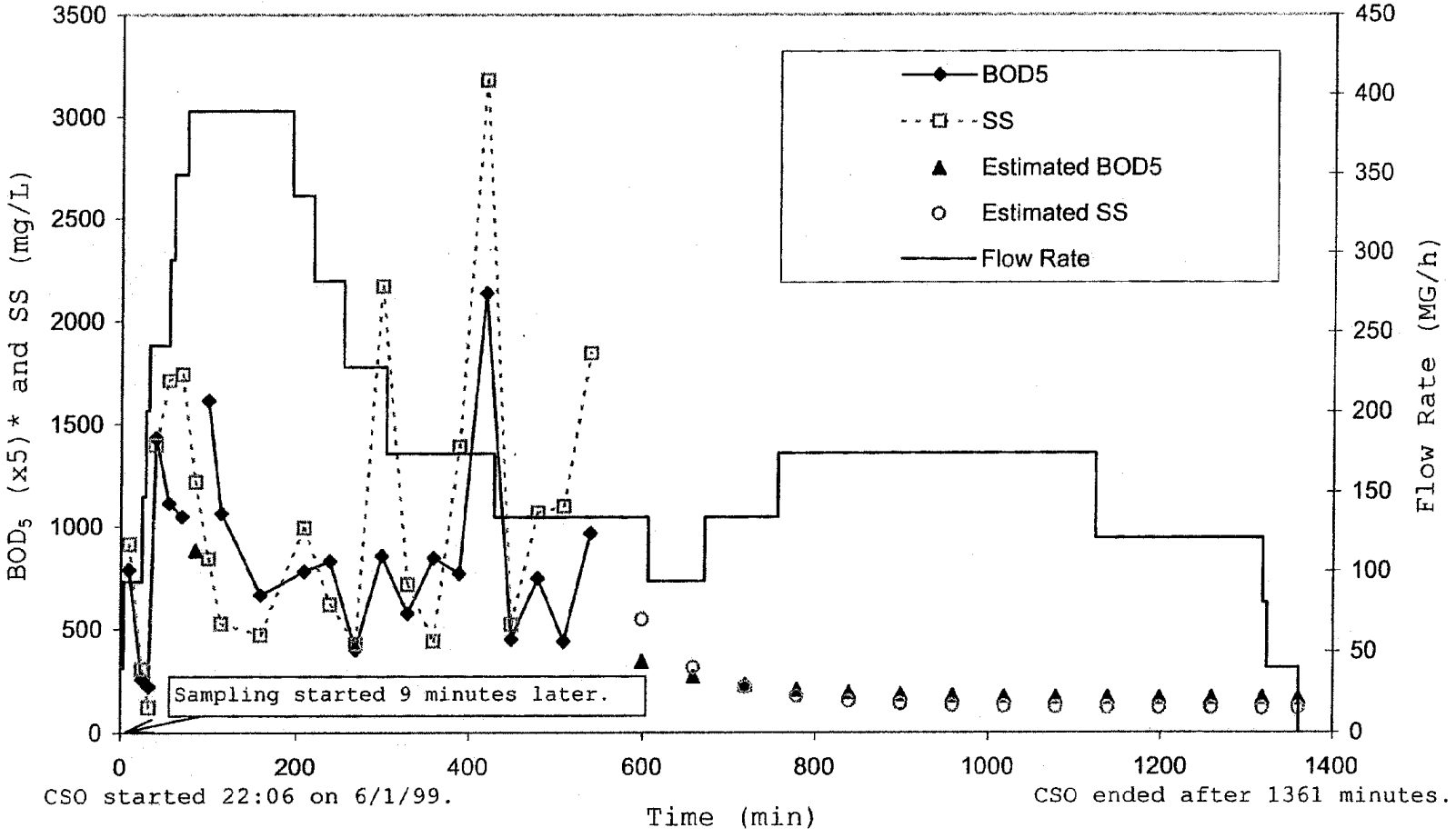
FIGURE 5

BOD_5 AND SS WITH MISSING VALUES ESTIMATED ALONG WITH CSO FLOW RATE
AT RACINE AVENUE PUMPING STATION ON JUNE 1 AND 2, 1999



*The BOD_5 values in the figure are 5 times the actual values.

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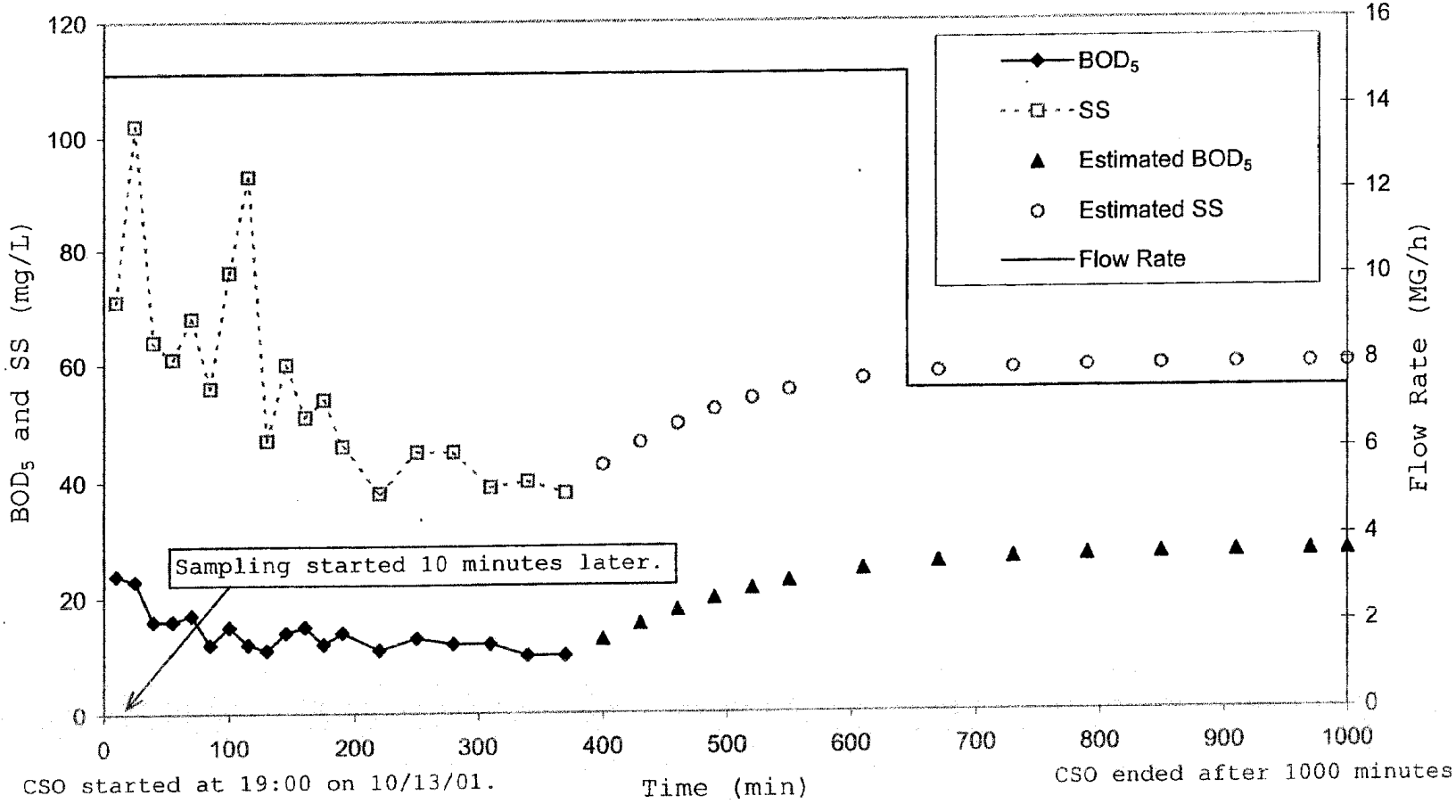
FIGURE 6

BOD_5 AND SS WITH MISSING VALUES ESTIMATED ALONG WITH CSO FLOW RATE
AT 125TH STREET PUMPING STATION ON OCTOBER 13 TO 14, 2001



calculated with the inclusion of estimated missing concentration values provide the best estimate of each CSO event.

The estimation of missing values using mathematical models was not employed for the three outfalls. The main reason for this was that the CSO periods at these locations could not always be defined due to the nature of CSO flow rate data provided. Without a definite CSO period, the coverage of CSO sampling cannot be determined. Therefore, it is assumed that the BOD_5 and SS concentration data of the CSO samples collected during each of the CSO events at the three outfalls are representative of that CSO event. The corresponding total CSO discharge volume for each of the CSO events was estimated using the flow rate data provided by USACE, Chicago District.

Calculation of EMC

With the missing concentration values estimated, all the CSO events sampled at the three pumping stations became complete with respect to CSO event coverage. The EMCs for these CSO events can be calculated using either the arithmetic mean or volume-weighted average. Intuitively, the second method appears to be more accurate because the concentrations of BOD_5 and SS vary and so does the CSO flow rate during a storm event. However, the first method has the advantage of

simplicity and consistency, as the corresponding increments of CSO discharge volumes for the three outfalls were sometimes unusable due to negative or zero values. Therefore, as explained later, the arithmetic mean method was used to calculate the EMC values.

The sampling protocols used in these studies, which were identical in all three studies, were designed with the consideration of variation in concentrations and representative of concentrations at the different stages of a CSO. It is assumed that an EMC determined by the arithmetic mean for the CSO event sampled with one of the designed sampling protocols (depending on location) can closely represent the true mean concentration for the event. To examine the difference in the results obtained from these two methods, statistical analysis was performed to compare the arithmetic means with the corresponding volume-weighted averages for the CSO events sampled at the NBPS and 125th St. The results of statistical analysis indicated that at a 90 percent confidence level, there were no statistical differences between 14 of the 15 BOD_5 mean values and 13 of the 15 SS mean values calculated using the two different methods. In all the cases where the means of BOD_5 and SS were statistically different using different calculation methods, the CSO events were initially incomplete with respect

to the sampling coverage. Therefore, arithmetic means were used to calculate the EMCs for all the CSO events that were used in this study to develop the correlation between BOD_5 and SS loads discharged and CSO discharge volumes.

Results of Regression Analysis of CSO Flow and Concentration Data

Nonlinear regression analysis was conducted for BOD_5 and SS loads versus CSO discharge volumes with the historic CSO data collected from six locations within the District service area from 1995 to 2001. Of the 35 CSO events sampled in the previous studies, 32 CSO events for BOD_5 and 29 CSO events for SS were used for the regression analysis. The exclusion of some CSO events was due to the lack of either flow rate data, mainly at the sewer outfall sites, or concentration data, mainly at the pumping stations. The BOD_5 and SS load values for regression analysis were computed using EMCs multiplied by CSO volumes and are presented in Table 2.

The results of the regression analysis indicated that statistically valid correlations exist between the loads and the discharge volumes with adjusted R-squared values of 0.78 for BOD_5 loads versus CSO volumes and 0.67 for SS loads versus CSO volumes. The regression equations for BOD_5 and SS loads versus volumes are given below:

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TABLE 2

DATA OF CSO VOLUME AND BOD_5 AND SS LOAD
FOR REGRESSION ANALYSIS

CSO Volume MG	BOD_5 Load lb/event	SS Load lb/event
3.1	875	2852
4.0	1075	6803
5.1	1207	5221
7.0	279	1086
7.3	866	3095
8.3	2998	7599
8.5	526	1992
14.9	1156	3249
15.3	4473	13248
36.5	18315	26770
37.5	34599	83008
38.3	8541	31925
44.4	8890	38482
106	ND	44150
136	38991	95263
139	84634	ND
147	96541	131518
154	43727	105638
183	39701	104435
202	107334	ND
203	30341	95745
237	103607	ND
264	89184	213644
275	77337	160659
336	54485	215231
456	146485	407250
536	228897	322733
580	309140	2298629
610	277656	785965
950	679663	2047258
1020	1013522	6212266
1745	280838	ND
3590	912452	3460279

Note: ND = no data

$L_{BOD5} = 558.1 * V - 0.08825 * V^2$, and

$L_{SS} = 3333 * V - 0.6472 * V^2$

where L_{BOD5} and L_{SS} are the BOD_5 and SS loads in pounds per event (lb/event), and

V is the total discharge volume in million gallons (MG) for a CSO event.

Figures 7 and 8 present the regression curves for BOD_5 and SS loads versus CSO volumes, respectively, along with the data points used in the regression analysis. Although the difference between the regression curve and some individual data points appears to be large, the mean square error between the regression curve and all data points was minimized in the analysis. These regression equations for BOD_5 and SS loads versus CSO volume can be reliably used to estimate BOD_5 and SS loads in the future CSO events based on discharge volumes alone, without knowing the concentrations of BOD_5 and SS in the CSO discharges. The BOD_5 and SS loads so determined can then be used for NPDES reporting purposes.

Both regression equations are statistically valid up to a CSO volume of 3,590 MG. The CSO event that discharged 3,590 MG occurred at RAPS on July 17 through 19, 1996 and was the largest CSO event recorded since TARP was put into service in

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

FIGURE 7

CORRELATION BETWEEN BOD_5 LOAD AND CSO DISCHARGE VOLUME

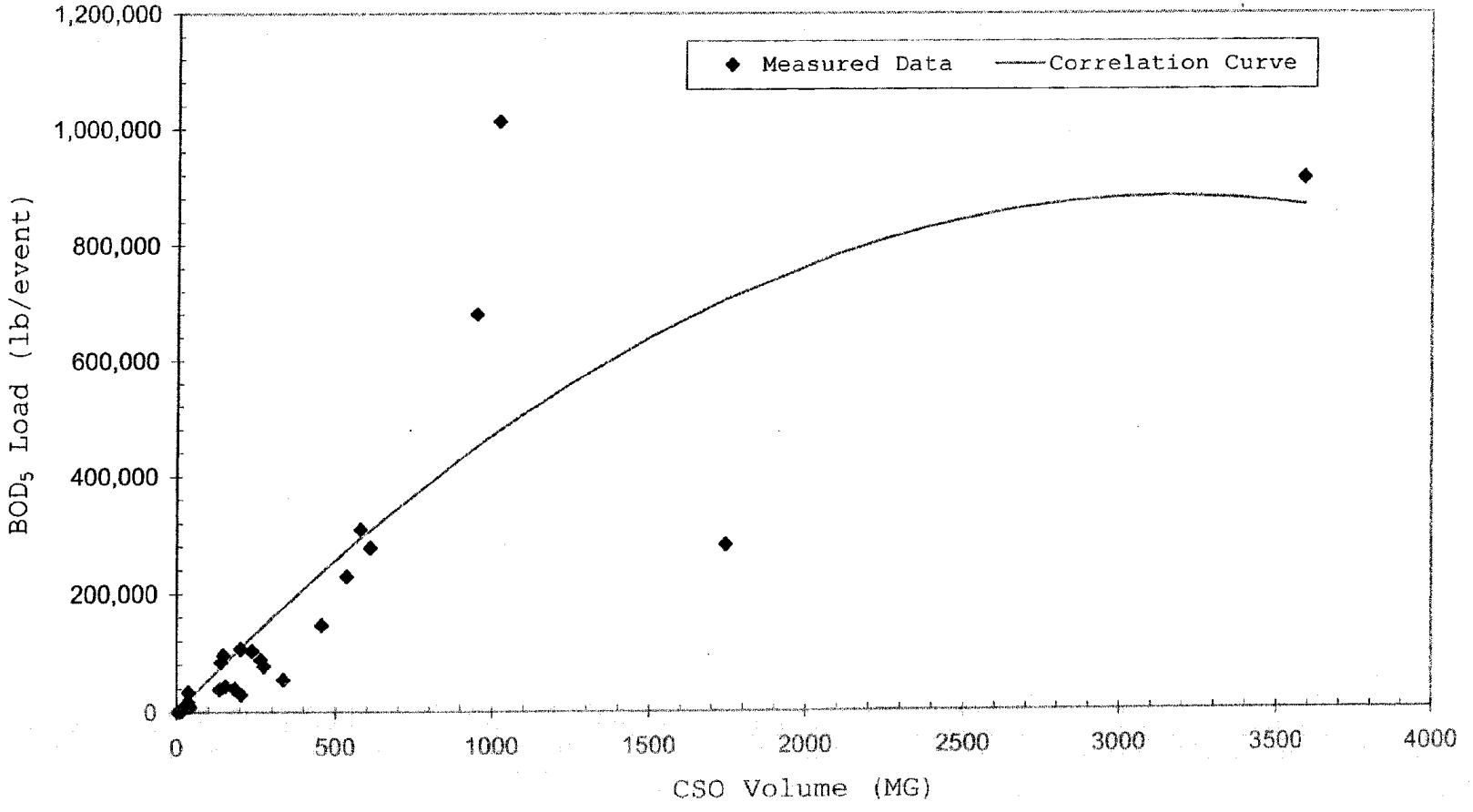

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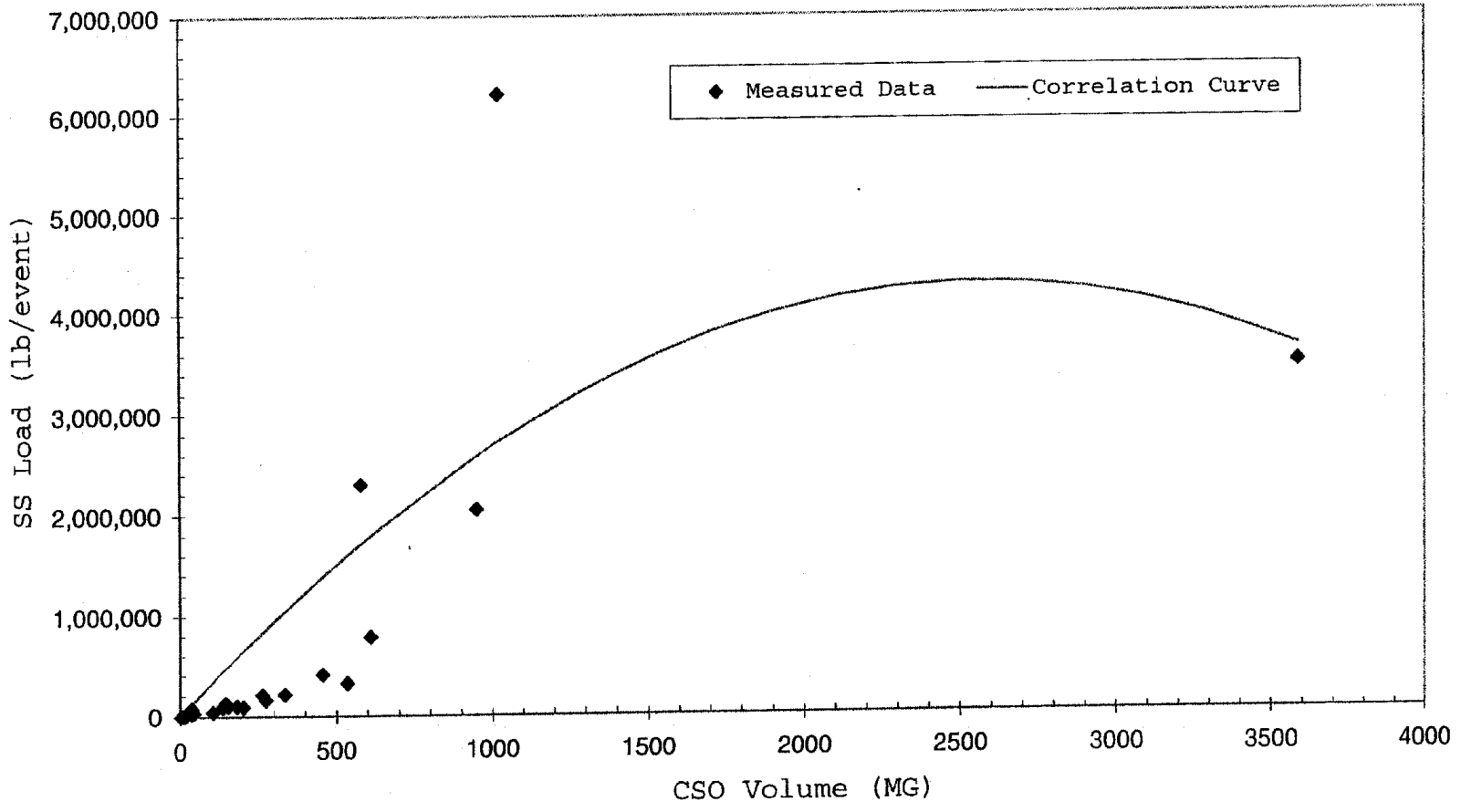
FIGURE 8

CORRELATION BETWEEN SS LOAD AND CSO DISCHARGE VOLUME



1985. However, in order to take a conservative approach for NPDES permit reporting purposes, it is recommended that the District use the maximum estimated BOD_5 loading of 882,400 lbs from the proposed regression equation for any CSO event exceeding 3,162 MG and similarly the maximum estimated SS loading of 4,291,000 lbs for any CSO event exceeding 2,575 MG.

The estimation of BOD_5 and SS loads based on CSO discharge volume using the equations developed from the regression curves for BOD_5 and SS in Figures 7 and 8, along with the conservative approach mentioned above, should serve the purpose well for NPDES reporting of BOD_5 and SS loads discharged into the receiving waters during any CSO event.

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APPENDIX AI

BOD_5 AND SS DATA FOR SAMPLED CSO EVENTS AT NORTH BRANCH PUMPING STATION, RACINE AVENUE PUMPING STATION, 125TH STREET PUMPING STATION, EVANSTON INTERCEPTING SEWER OUTFALL, GREENWOOD AVENUE RELIEF SEWER OUTFALL, AND OLMSTED ROAD SEWER OUTFALL

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TABLE AI-1

BOD_5 AND SS DATA FOR SAMPLED CSO EVENTS
AT NORTH BRANCH PUMPING STATION

Date	Time Collected	BOD_5 mg/L	SS mg/L	Date	Time Collected	BOD_5 mg/L	SS mg/L
8/2/01	0840	59	156	9/19/01	0210	53	122
8/2/01	0925	47	158	9/19/01	0225	50	113
8/2/01	0940	49	165	9/19/01	0240	40	103
8/2/01	0955	26	164	9/19/01	0255	45	104
8/2/01	1010	21	159	9/19/01	0310	34	101
8/2/01	1025	21	131	9/19/01	0325	31	98
8/2/01	1040	18	123	9/19/01	0340	28	190
8/2/01	1055	19	120	9/19/01	0355	17	28
8/2/01	1110	17	118	9/19/01	0410	17	72
8/2/01	1125	20	98	9/19/01	0425	19	59
8/2/01	1140	21	118	9/19/01	0440	17	61
8/2/01	1155	20	87	9/19/01	0455	13	50
8/2/01	1210	23	100	9/19/01	0510	12	47
8/2/01	1225	20	102	9/19/01	0540	11	44
8/2/01	1255	22	98	9/19/01	0610	12	43
8/2/01	1325	26	62	9/19/01	0640	11	38
8/2/01	1355	26	64	9/19/01	0710	19	41
8/2/01	1425	33	41	9/19/01	0740	16	36
8/2/01	1455	31	65	9/19/01	0810	18	39
8/2/01	1525	37	59	9/19/01	0910	20	28
8/2/01	1625	55	57	9/19/01	1010	23	27
8/2/01	1725	57	66	9/19/01	1110	35	51
8/2/01	1825	66	59	9/19/01	1145	56	76
8/2/01	1925	73	45				
8/2/01	2025	110	42	9/20/01	2330	110	179
8/2/01	2125	135	64	9/20/01	2345	75	136
				9/21/01	0000	55	105
8/9/01	2110	139	375	9/21/01	0015	48	113
8/9/01	2125	105	239	9/21/01	0030	40	97
8/9/01	2140	283	317	9/21/01	0045	36	114
8/9/01	2155	85	241	9/21/01	0100	30	106
8/9/01	2210	74	253	9/21/01	0115	36	79
8/9/01	2225	86	203	9/21/01	0130	40	70
8/9/01	2240	115	269	9/21/01	0145	31	85
8/9/01	2255	80	302	9/21/01	0200	23	91
8/9/01	2310	71	214	9/21/01	0215	20	82
8/9/01	2325	67	239	9/21/01	0230	20	97

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

TABLE AI-1 (Continued)

BOD_5 AND SS DATA FOR SAMPLED CSO EVENTS
AT NORTH BRANCH PUMPING STATION

Date	Time Collected	BOD_5 mg/L	SS mg/L	Date	Time Collected	BOD_5 mg/L	SS mg/L
9/21/01	0300	14	45	10/13/01	1715	55	29
9/21/01	0330	13	41	10/13/01	1745	52	92
9/21/01	0400	12	32	10/13/01	1815	30	74
9/21/01	0430	14	34	10/13/01	1845	30	62
9/21/01	0500	15	28	10/13/01	1915	32	33
				10/13/01	1945	30	44
9/23/01	1220	51	41	10/13/01	2045	29	46
9/23/01	1235	60	129	10/13/01	2145	29	42
9/23/01	1250	58	109	10/13/01	2245	31	37
9/23/01	1305	50	62	10/13/01	2345	47	73
9/23/01	1320	60	69	10/14/01	0045	32	27
9/23/01	1335	65	81	10/14/01	0145	30	31
9/23/01	1350	63	89				
9/23/01	1405	78	154	10/23/01	0220	233	296
9/23/01	1420	61	114	10/23/01	0235	174	228
9/23/01	1435	73	111	10/23/01	0250	145	164
9/23/01	1450	67	108	10/23/01	0305	123	138
9/23/01	1505	65	120	10/23/01	0320	147	124
9/23/01	1535	55	71	10/23/01	0335	110	182
9/23/01	1605	47	52	10/23/01	0350	68	120
9/23/01	1635	56	48	10/23/01	0405	59	90
				10/23/01	0420	62	84
10/13/01	1345	133	105	10/23/01	0435	59	98
10/13/01	1400	95	132	10/23/01	0450	50	82
10/13/01	1415	155	108	10/23/01	0505	49	96
10/13/01	1430	100	110	10/23/01	0535	37	80
10/13/01	1445	102	90	10/23/01	0605	50	78
10/13/01	1500	74	70	10/23/01	0635	ND	56
10/13/01	1515	72	68	10/23/01	0705	28	50
10/13/01	1530	66	134	10/23/01	0735	26	36
10/13/01	1545	60	163	10/23/01	0805	27	32
10/13/01	1600	59	107	10/23/01	0905	29	162
10/13/01	1615	59	75	10/23/01	1005	38	32
10/13/01	1630	57	70	10/23/01	1105	80	60
10/13/01	1645	40	86	10/23/01	1130	90	74

Note: ND = no data.

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

TABLE AI-2

BOD_5 AND SS DATA FOR SAMPLED CSO EVENTS
AT RACINE AVENUE PUMPING STATION

Date	Time Collected	BOD_5 mg/L	SS mg/L	Date 0000	Time Collected	BOD_5 mg/L	SS mg/L
7/20/95	1509	52	ND	11/11/95	0730	21	ND
7/20/95	1524	61	ND	11/11/95	0830	10	ND
7/20/95	1539	36	ND	11/11/95	0930	15	ND
7/20/95	1554	60	ND	11/11/95	1030	12	ND
7/20/95	1609	98	ND	11/11/95	1130	6	ND
7/20/95	1624	118	ND	11/11/95	1230	10	ND
7/20/95	1639	103	ND	11/11/95	1330	14	ND
				11/11/95	1430	12	ND
8/15/95	1500	43	ND	11/11/95	1530	12	ND
8/15/95	1515	39	ND	11/11/95	1630	10	ND
8/15/95	1530	63	ND				
8/15/95	1545	60	ND	7/17/96	1545	75	ND
8/15/95	1600	45	ND	7/17/96	1600	48	ND
8/15/95	1615	72	ND	7/17/96	1615	59	ND
8/15/95	1630	53	ND	7/17/96	1630	68	406
8/15/95	1645	75	ND	7/17/96	1645	33	182
8/15/95	1700	50	ND	7/17/96	1700	78	324
8/15/95	1715	57	ND	7/17/96	1715	51	152
8/15/95	1730	57	ND	7/17/96	1730	35	132
8/15/95	1745	50	ND	7/17/96	1745	23	100
8/15/95	1800	44	ND	7/17/96	1800	24	104
8/15/95	1830	38	ND	7/17/96	1815	24	126
8/15/95	1900	40	ND	7/17/96	1830	59	130
8/15/95	1930	50	ND	7/17/96	1840	18	ND
8/15/95	2000	55	ND	7/17/96	1910	17	ND
				7/17/96	1940	14	ND
11/10/95	1930	12	ND	7/17/96	2010	17	ND
11/10/95	2030	10	ND	7/17/96	2040	ND	ND
11/10/95	2130	12	ND	7/17/96	2310	34	ND
11/10/95	2230	18	ND	7/17/96	2330	20	92
11/10/95	2330	17	ND	7/18/96	0030	22	ND
11/11/95	0030	17	ND	7/18/96	0130	19	ND
11/11/95	0130	16	ND	7/18/96	0230	23	ND
11/11/95	0230	12	ND	7/18/96	0330	19	ND
11/11/95	0330	21	ND	7/18/96	0430	18	ND
11/11/95	0430	20	ND	7/18/96	0530	27	ND
11/11/95	0530	16	ND	7/18/96	0630	ND	ND
11/11/95	0630	18	ND	7/18/96	0730	11	ND

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

TABLE AI-2 (Continued)

BOD_5 AND SS DATA FOR SAMPLED CSO EVENTS
AT RACINE AVENUE PUMPING STATION

Date	Time Collected	BOD_5 mg/L	SS mg/L	Date 0000	Time Collected	BOD_5 mg/L	SS mg/L
7/18/96	0830	10	ND	7/18/97	2113	21	78
7/18/96	0930	14	ND	7/18/97	2143	28	156
7/18/96	1030	11	ND	7/18/97	2213	36	178
7/18/96	1140	12	76	7/19/97	0013	24	90
7/18/96	1240	20	70				
7/18/96	1340	14	62	4/22/99	1340	138	254
7/18/96	1440	15	54	4/22/99	1355	141	275
7/18/96	1540	16	52	4/22/99	1410	68	168
7/18/96	1640	18	56	4/22/99	1425	80	212
7/18/96	1740	17	64	4/22/99	1440	88	192
7/18/96	1840	19	72	4/22/99	1455	515	1918
7/18/96	1940	18	66	4/22/99	1510	140	225
7/18/96	2040	18	58	4/22/99	1525	125	900
7/18/96	2140	18	66	4/22/99	1540	93	670
7/18/96	2240	19	64	4/22/99	1555	72	378
7/18/96	2325	21	52	4/22/99	1610	72	350
7/19/96	0025	27	62	4/22/99	1625	93	314
7/19/96	0125	26	52	4/22/99	1635	88	362
7/19/96	0225	30	38	4/22/99	1705	105	424
7/19/96	0325	32	42	4/22/99	1735	115	358
7/19/96	0425	31	22	4/22/99	1805	98	164
7/19/96	0525	26	20	4/22/99	1835	104	320
7/19/96	0625	24	20	4/22/99	1905	82	232
				4/22/99	1935	53	142
7/18/97	1721	172	2442	4/22/99	2005	59	82
7/18/97	1736	98	644	4/22/99	2035	52	148
7/18/97	1750	197	656	4/22/99	2105	124	128
7/18/97	1751	53	336	4/22/99	2135	40	62
7/18/97	1806	38	192	4/22/99	2205	38	74
7/18/97	1821	43	320	4/22/99	2225	52	88
7/18/97	1836	39	272	4/22/99	2325	59	186
7/18/97	1851	30	160	4/23/99	0025	71	326
7/18/97	1906	34	254	4/23/99	0125	57	173
7/18/97	1921	33	160	4/23/99	0225	76	162
7/18/97	1936	37	144	4/23/99	0325	55	221
7/18/97	1951	28	120	4/23/99	0425	49	128
7/18/97	2006	26	112	4/23/99	0525	66	190
7/18/97	2043	19	112	4/23/99	0925	58	152

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

TABLE AI-2 (Continued)

BOD_5 AND SS DATA FOR SAMPLED CSO EVENTS
AT RACINE AVENUE PUMPING STATION

Date	Time Collected	BOD_5 mg/L	SS mg/L	Date 0000	Time Collected	BOD_5 mg/L	SS mg/L
4/23/99	1050	31	59	12/5/99	0025	67	74
4/23/99	1150	39	40	12/5/99	0040	62	83
4/23/99	1250	39	38	12/5/99	0055	51	110
4/23/99	1350	46	32	12/5/99	0110	72	203
4/23/99	1450	68	40	12/5/99	0125	63	127
4/23/99	1550	60	55	12/5/99	0130	110	356
4/23/99	1650	111	189	12/5/99	0200	55	176
				12/5/99	0230	45	159
6/1/99	2215	158	914	12/5/99	0300	67	194
6/1/99	2230	52	310	12/5/99	0330	32	90
6/1/99	2238	45	125	12/5/99	0400	37	90
6/1/99	2245	287	1402	12/5/99	0430	23	72
6/1/99	2300	223	1712	12/5/99	0500	25	70
6/1/99	2315	210	1742	12/5/99	0530	22	82
6/1/99	2330	ND	1222	12/5/99	0600	20	62
6/1/99	2345	323	842	12/5/99	0630	163	600
6/2/99	0000	213	527	12/5/99	0700	213	816
6/2/99	0045	133	472	12/5/99	0845	20	41
6/2/99	0135	156	992	12/5/99	0945	19	33
6/2/99	0205	166	618	12/5/99	1045	17	28
6/2/99	0235	80	428	12/5/99	1145	20	29
6/2/99	0305	171	2170	12/5/99	1245	23	28
6/2/99	0335	115	716	12/5/99	1345	28	28
6/2/99	0405	169	442				
6/2/99	0435	154	1392				
6/2/99	0505	427	3180				
6/2/99	0535	90	522				
6/2/99	0605	149	1068				
6/2/99	0635	88	1100				
6/2/99	0705	193	1844				

Note: ND = no data.

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

TABLE AI-3

BOD_5 AND SS DATA FOR SAMPLED CSO EVENTS
AT 125TH STREET PUMPING STATION

Date	Time Collected	BOD_5 mg/L	SS mg/L	Date	Time Collected	BOD_5 mg/L	SS mg/L
11/10/95	1700	166	ND	7/18/96	0830	ND	70
11/10/95	1715	156	ND	7/18/96	0930	12	49
11/10/95	1730	164	ND	7/18/96	1030	ND	48
11/10/95	1745	124	ND	7/18/96	1130	ND	55
11/10/95	1800	98	ND	7/18/96	1230	ND	61
11/10/95	1815	35	ND	7/18/96	1330	ND	49
11/10/95	1830	77	ND	7/18/96	1430	13	39
11/10/95	1845	90	ND	7/18/96	1530	17	48
11/10/95	1900	102	ND	7/18/96	1630	17	45
11/10/95	1915	80	ND	7/18/96	1730	44	52
11/10/95	1930	65	ND	7/18/96	1830	47	49
11/10/95	1945	86	ND	7/18/96	1930	22	45
				7/18/96	2030	19	50
				7/18/96	2130	23	38
7/17/96	1636	ND	ND	7/18/96	2230	16	50
7/17/96	1655	82	294	7/18/96	2330	ND	49
7/17/96	1710	82	226				
7/17/96	1745	79	180				
7/17/96	1800	57	208	8/17/97	0200	36	194
7/17/96	1815	62	228	8/17/97	0230	ND	58
7/17/96	1830	45	218	8/17/97	0300	ND	42
7/17/96	1900	38	144	8/17/97	0330	ND	68
7/17/96	1930	35	132	8/17/97	0430	ND	12
7/17/96	2000	35	110	8/17/97	0530	ND	12
7/17/96	2030	43	168	8/17/97	0630	ND	16
7/17/96	2100	38	138	8/17/97	0730	ND	28
7/17/96	2130	114	138	8/17/97	0830	ND	12
7/17/96	2230	79	280				
7/17/96	2330	45	92				
7/18/96	0030	65	76	4/22/99	1400	39	178
7/18/96	0130	42	101	4/22/99	1415	40	224
7/18/96	0230	ND	71	4/22/99	1430	43	214
7/18/96	0330	37	80	4/22/99	1445	42	147
7/18/96	0430	16	66	4/22/99	1500	26	117
7/18/96	0530	30	51	4/22/99	1515	37	136
7/18/96	0630	29	60	4/22/99	1530	43	191
7/18/96	0730	14	58	4/22/99	1545	39	180

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

TABLE AI-3 (Continued)

BOD_5 AND SS DATA FOR SAMPLED CSO EVENTS
AT 125TH STREET PUMPING STATION

Date	Time Collected	BOD_5 mg/L	SS mg/L	Date	Time Collected	BOD_5 mg/L	SS mg/L
4/22/99	1600	37	200	6/2/99	0045	23	105
4/22/99	1615	40	119	6/2/99	0100	58	147
4/22/99	1630	25	152	6/2/99	0130	15	243
4/22/99	2350	51	219	6/2/99	0200	15	88
4/23/99	0050	41	198	6/2/99	0230	41	83
4/23/99	0150	31	132	6/2/99	0300	13	64
4/23/99	0250	27	109	6/2/99	0330	14	51
4/23/99	0350	45	113	6/2/99	0400	21	57
4/23/99	0450	46	108				
4/23/99	0550	25	104				
4/23/99	0650	32	84	8/2/01	1145	21	92
4/23/99	0750	35	116	8/2/01	1200	140	85
4/23/99	1305	49	39	8/2/01	1215	115	112
4/23/99	1405	36	28	8/2/01	1230	15	63
4/23/99	1505	45	24	8/2/01	1245	19	56
4/23/99	1605	45	26	8/2/01	1300	10	69
4/23/99	1705	42	27	8/2/01	1315	10	68
4/23/99	1805	30	46	8/2/01	1330	11	62
4/23/99	1905	27	31	8/2/01	1345	11	69
4/23/99	2005	28	36	8/2/01	1400	17	58
4/23/99	2105	25	31	8/2/01	1415	20	68
4/23/99	2205	26	31	8/2/01	1430	42	106
4/23/99	2305	35	70	8/2/01	1445	39	120
4/24/99	0005	37	41	8/2/01	1515	21	90
4/24/99	0120	23	26	8/2/01	1545	22	100
4/24/99	0220	20	26	8/2/01	1615	20	296
4/24/99	0320	20	22	8/2/01	1645	16	49
4/24/99	0420	19	24	8/2/01	1715	42	71
4/24/99	0520	19	18	8/2/01	1745	63	47
4/24/99	0620	15	26	8/2/01	1850	22	41
4/24/99	0720	13	21				
				8/25/01	1155	15	79
6/1/99	2330	26	133	8/25/01	1210	20	150
6/1/99	2345	26	117	8/25/01	1225	13	60
6/2/99	0000	21	92	8/25/01	1240	15	108
6/2/99	0015	21	95	8/25/01	1255	12	82
6/2/99	0030	18	76	8/25/01	1310	11	76

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

TABLE AI-3 (Continued)

BOD_5 AND SS DATA FOR SAMPLED CSO EVENTS
AT 125TH STREET PUMPING STATION

Date	Time Collected	BOD_5 mg/L	SS mg/L	Date	Time Collected	BOD_5 mg/L	SS mg/L
8/25/01	1325	10	61	10/13/01	1910	24	71
8/25/01	1340	10	82	10/13/01	1925	23	102
8/25/01	1355	13	85	10/13/01	1940	16	64
8/25/01	1410	10	84	10/13/01	1955	16	61
8/25/01	1425	13	77	10/13/01	2010	17	68
8/25/01	1440	13	66	10/13/01	2025	12	56
8/25/01	1455	24	96	10/13/01	2040	15	76
8/25/01	1525	15	77	10/13/01	2055	12	93
8/25/01	1555	51	79	10/13/01	2110	11	47
8/25/01	1625	20	109	10/13/01	2125	14	60
8/25/01	1655	20	152	10/13/01	2140	15	51
8/25/01	1725	21	98	10/13/01	2155	12	54
8/25/01	1755	18	141	10/13/01	2210	14	46
8/25/01	1835	15	15	10/13/01	2240	11	38
8/25/01	1936	14	10	10/13/01	2310	13	45
8/25/01	2036	18	44	10/13/01	2340	12	45
8/25/01	2136	32	135	10/14/01	0010	12	39
8/26/01	0035	29	52	10/14/01	0040	10	40
8/26/01	0132	18	36	10/14/01	0110	10	38
8/26/01	0235	23	34				
8/26/01	0335	17	11				
8/26/01	0435	15	28				

Note: ND = no data.

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

TABLE AI-4 (Continued)

BOD_5 AND SS DATA FOR SAMPLED CSO EVENTS
AT EVANSTON INTERCEPTING SEWER OUTFALL

Date*	Time Collected*	BOD_5 mg/L	SS mg/L	Date*	Time Collected*	BOD_5 mg/L	SS mg/L
7/17/96	1614	24	160	8/17/97	0445	11	46
7/17/96	1629	23	182	8/17/97	0500	10	38
7/17/96	1644	20	140	8/17/97	0515	9	22
7/17/96	1659	23	106	8/17/97	0530	7	24
7/17/96	1714	20	82	8/17/97	0545	7	36
7/17/96	1729	28	80	8/17/97	0600	7	24
7/17/96	1744	28	76	8/17/97	0615	6	34
7/17/96	1759	25	66	8/17/97	0630	7	28
7/17/96	1814	22	78	8/17/97	0645	6	18
7/17/96	1829	23	44	8/17/97	0700	5	14
7/17/96	1844	21	46				
7/17/96	1859	21	32				
7/17/96	2231	39	90	6/2/99	2245	56	492
7/17/96	2301	36	48	6/1/99	2250	61	ND
7/18/96	0026	ND	138	6/2/99	2300	49	282
7/18/96	0056	67	122	6/2/99	2315	30	270
7/18/96	0126	61	260	6/2/99	2330	35	318
7/18/96	0156	31	184	6/2/99	2345	27	188
7/18/96	0226	26	104	6/2/99	0000	24	404
7/18/96	0256	21	92	6/2/99	0015	47	286
7/18/96	0326	15	42	6/2/99	0030	19	134
7/18/96	0356	13	44	6/2/99	0045	20	92
7/18/96	0602	8	30	6/2/99	0100	18	92
7/18/96	0702	8	14	6/2/99	0115	23	84
7/18/96	0802	12	42	6/2/99	0130	29	62
7/18/96	0902	12	52	6/2/99	0150	23	96
7/18/96	1002	19	44	6/2/99	0220	21	48
7/18/96	1102	17	20				
7/18/96	1202	21	18				
7/18/96	1410	6	12				
7/18/96	1510	6	28				
7/18/96	1610	6	26				
7/18/96	1710	20	42				
7/18/96	1810	27	142				
7/18/96	1910	29	210				

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

TABLE AI-4

BOD_5 AND SS DATA FOR SAMPLED CSO EVENTS
AT EVANSTON INTERCEPTING SEWER OUTFALL

Date*	Time Collected*	BOD_5 mg/L	SS mg/L	Date*	Time Collected*	BOD_5 mg/L	SS mg/L
12/4/99	2230	93	392	12/5/99	0650	13	20
12/4/99	2245	69	312	12/5/99	0730	ND	4
12/4/99	2300	67	456	12/5/99	0830	ND	36
12/4/99	2315	61	260	12/5/99	0930	ND	24
12/4/99	2330	56	232	12/5/99	1030	ND	72
12/4/99	2345	47	204	12/5/99	1130	ND	24
12/4/99	2400	35	192	12/5/99	1230	ND	16
12/5/99	0015	32	128	12/5/99	1330	ND	76
12/5/99	0030	33	136	12/5/99	1430	ND	208
12/5/99	0045	31	596	12/5/99	1530	ND	76
12/5/99	0100	27	168	12/5/99	1630	ND	48
12/5/99	0115	22	192	12/5/99	1640	ND	40
12/5/99	0120	23	148	12/5/99	1740	ND	28
12/5/99	0150	17	328	12/5/99	1840	ND	16
12/5/99	0220	18	100	12/5/99	2040	ND	28
12/5/99	0250	ND	60	12/5/99	2140	ND	32
12/5/99	0320	20	48	12/5/99	2240	ND	28
12/5/99	0350	23	36	12/5/99	2340	ND	12
12/5/99	0420	27	20	12/6/99	0040	ND	20
12/5/99	0450	25	48	12/6/99	0140	ND	40
12/5/99	0520	17	28	12/6/99	0240	ND	16
12/5/99	0550	15	28	12/6/99	0340	ND	16
12/5/99	0620	15	20				

Note: ND = no data.
*Some sampling dates and collection times were changed based on the designed time intervals.

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

TABLE AI-5

BOD_5 AND SS DATA FOR SAMPLED CSO EVENTS
AT GREENWOOD AVENUE RELIEF SEWER OUTFALL

Date*	Time Collected*	BOD_5 mg/L	SS mg/L	Date*	Time Collected*	BOD_5 mg/L	SS mg/L
7/17/96	1607	27	304	4/22/99	1445	44	224
7/17/96	1622	26	526	4/22/99	1450	48	ND
7/17/96	1637	22	330	4/22/99	1500	43	192
7/17/96	1652	21	122	4/22/99	1515	40	204
7/17/96	1707	23	130	4/22/99	1530	43	156
7/17/96	1722	23	122	4/22/99	1545	42	130
7/17/96	1737	27	112	4/22/99	1600	37	130
7/17/96	1752	24	106	4/22/99	1615	36	112
7/17/96	1807	28	76	4/22/99	1630	41	106
7/17/96	1822	22	68	4/22/99	1645	38	110
7/17/96	1837	21	44	4/22/99	1700	34	80
7/17/96	1852	20	48	4/22/99	1715	37	80
7/17/96	2208	55	98	4/22/99	1730	41	88
7/17/96	2238	39	102	4/22/99	1735	43	60
7/17/96	2308	31	48	4/22/99	1805	40	104
7/18/96	0024	54	122	4/22/99	1835	34	58
7/18/96	0054	52	226	4/22/99	1905	26	36
7/18/96	0124	37	340	4/22/99	1935	32	62
7/18/96	0154	28	202	4/22/99	2005	64	94
7/18/96	0224	25	104	4/22/99	2035	90	118
7/18/96	0254	20	94	4/22/99	2105	65	112
7/18/96	0324	21	58	4/22/99	2135	48	100
7/18/96	0354	18	50	4/22/99	2205	40	94
7/18/96	0424	22	34	4/22/99	2235	37	92
7/18/96	0558	10	26	4/22/99	2305	34	80
7/18/96	0658	10	38				
7/18/96	0758	12	66				
7/18/96	0858	21	70				
7/18/96	0958	16	18				
7/18/96	1058	23	36				
7/18/96	1158	17	34				
7/18/96	1258	17	22				
7/18/96	1415	51	210				
7/18/96	1515	25	152				
7/18/96	1615	16	24				
7/18/96	1715	6	26				
7/18/96	1815	6	10				
7/18/96	1915	6	16				

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

TABLE AI-5 (Continued)

BOD_5 AND SS DATA FOR SAMPLED CSO EVENTS
AT GREENWOOD AVENUE RELIEF SEWER OUTFALL

Date*	Time Collected*	BOD_5 mg/L	SS mg/L	Date*	Time Collected*	BOD_5 mg/L	SS mg/L
6/2/99	2245	65	304	12/5/99	0330	26	40
6/2/99	2300	42	260	12/5/99	0400	29	64
6/2/99	2315	34	154	12/5/99	0430	27	68
6/2/99	2330	39	116	12/5/99	0500	28	48
6/2/99	2345	34	200	12/5/99	0530	20	32
6/2/99	0000	27	122	12/5/99	0600	17	32
6/2/99	0015	23	82	12/5/99	0630	19	44
6/2/99	0030	23	92	12/5/99	0700	18	32
6/2/99	0045	23	100	12/5/99	0710	ND	28
6/2/99	0100	17	72	12/5/99	0810	ND	76
6/2/99	0115	17	76	12/5/99	0910	ND	32
6/2/99	0130	18	56	12/5/99	1010	ND	44
6/2/99	0200	17	52	12/5/99	1110	ND	44
6/2/99	0230	19	36	12/5/99	1210	ND	48
				12/5/99	1310	ND	32
12/4/99	2240	93	536	12/5/99	1410	ND	84
12/4/99	2255	52	264	12/5/99	1510	ND	60
12/4/99	2310	30	244	12/5/99	1610	ND	48
12/4/99	2325	57	192	12/5/99	1615	ND	8
12/4/99	2340	50	216	12/5/99	1715	ND	4
12/4/99	2355	57	240	12/5/99	1815	ND	20
12/5/99	0010	45	104	12/5/99	1915	ND	12
12/5/99	0025	42	88	12/5/99	2015	ND	24
12/5/99	0040	42	112	12/5/99	2115	ND	16
12/5/99	0055	35	220	12/5/99	2215	ND	24
12/5/99	0110	30	304	12/5/99	2315	ND	8
12/5/99	0125	24	388	12/6/99	0015	ND	20
12/5/99	0130	23	376	12/6/99	0115	ND	16
12/5/99	0200	25	200	12/6/99	0215	ND	8
12/5/99	0230	26	192	12/6/99	0315	ND	20
12/5/99	0300	26	64				

Note: ND = no data.
*Some sampling dates and collection times were changed based on the designed time intervals.

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

TABLE AI-6

BOD_5 AND SS DATA FOR SAMPLED CSO EVENTS
AT OLMSTED ROAD SEWER OUTFALL

Date	Time Collected	BOD_5 mg/L	SS mg/L	Date	Time Collected	BOD_5 mg/L	SS mg/L
8/16/97	2030	13	69	8/17/97	0910	6	ND
8/16/97	2040	10	55	8/17/97	0940	7	11
8/16/97	2041	13	124	8/17/97	1010	5	8
8/16/97	2050	10	52	8/17/97	1040	26	8
8/16/97	2100	11	54	8/17/97	1110	7	8
8/16/97	2110	10	65	8/17/97	1140	6	11
8/16/97	2120	12	81	8/17/97	1210	6	9
8/16/97	2130	31	56	8/17/97	1240	22	11
8/16/97	2140	21	19	8/17/97	1310	9	11
8/16/97	2150	11	64	8/17/97	1340	8	ND
8/16/97	2200	10	63	8/17/97	1410	7	ND
8/16/97	2210	12	70	8/17/97	1440	7	ND
8/16/97	2220	11	38	8/17/97	1500	7	10
8/16/97	2310	10	34	8/17/97	1530	7	11
8/16/97	2330	10	27	8/17/97	1600	7	4
8/16/97	2350	10	28	8/17/97	1630	7	10
8/17/97	0010	9	26	8/17/97	1700	7	8
8/17/97	0030	8	21	8/17/97	1730	7	ND
8/17/97	0050	9	20	8/17/97	1800	8	ND
8/17/97	0110	10	20	8/17/97	1830	7	8
8/17/97	0130	10	19	8/17/97	1900	7	14
8/17/97	0150	8	20	8/17/97	1930	9	20
8/17/97	0210	8	20	8/17/97	2000	10	23
8/17/97	0230	10	22	8/17/97	2030	11	22
8/17/97	0250	7	22				
8/17/97	0300	ND	14				
8/17/97	0330	5	20	4/23/99	0215	ND	42
8/17/97	0400	7	11	4/23/99	0225	6	40
8/17/97	0430	6	9	4/23/99	0230	5	62
8/17/97	0500	7	11	4/23/99	0235	4	44
8/17/97	0530	4	5	4/23/99	0245	8	46
8/17/97	0600	5	12	4/23/99	0255	8	51
8/17/97	0630	5	13	4/23/99	0305	6	26
8/17/97	0700	6	13	4/23/99	0315	6	30
8/17/97	0730	4	9	4/23/99	0325	5	30
8/17/97	0800	6	11	4/23/99	0335	5	31
8/17/97	0830	9	14	4/23/99	0345	5	26

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

TABLE AI-6 (Continued)

BOD_5 AND SS DATA FOR SAMPLED CSO EVENTS
AT OLMSTED ROAD SEWER OUTFALL

Date	Time Collected	BOD_5 mg/L	SS mg/L	Date	Time Collected	BOD_5 mg/L	SS mg/L
4/23/99	0355	5	29	6/1/99	2147	22	128
4/23/99	0405	5	26	6/1/99	2157	22	94
4/23/99	0425	7	46	6/1/99	2207	19	80
4/23/99	0445	8	47	6/1/99	2217	18	56
4/23/99	0505	6	38	6/1/99	2227	16	64
4/23/99	0525	6	35	6/1/99	2237	16	60
4/23/99	0545	6	32	6/1/99	2247	17	50
4/23/99	0605	6	27	6/1/99	2257	14	46
4/23/99	0625	6	24	6/1/99	2307	15	48
4/23/99	0645	5	22	6/1/99	2327	14	32
4/23/99	0705	4	21	6/1/99	2347	13	26
4/23/99	0725	5	18	6/2/99	0007	12	27
4/23/99	0745	5	18	6/2/99	0027	12	25
4/23/99	0805	8	21	6/2/99	0047	11	28
4/23/99	0845	10	19	6/2/99	0107	13	25
4/23/99	0915	9	20	6/2/99	0127	12	25
4/23/99	0945	9	20	6/2/99	0147	10	24
4/23/99	1015	10	18	6/2/99	0207	10	22
4/23/99	1045	11	20	6/2/99	0227	9	21
4/23/99	1115	11	23	6/2/99	0247	12	21
4/23/99	1145	12	23	6/2/99	0310	7	18
4/23/99	1215	12	27	6/2/99	0340	7	34
4/23/99	1245	12	19	6/2/99	0410	5	18
4/23/99	1315	12	21	6/2/99	0440	7	18
4/23/99	1345	12	19	6/2/99	0510	7	30
4/23/99	1415	10	19	6/2/99	0540	5	20
				6/2/99	0610	6	22
				6/2/99	0640	6	28
6/1/99	2107	62	178	6/2/99	0710	5	20
6/1/99	2117	43	180	6/2/99	0740	6	22
6/1/99	2127	24	172	6/2/99	0810	6	22
6/1/99	2137	20	114	6/2/99	0840	6	22

Note: ND = no data.

APPENDIX AII

CSO PUMPING AND DISCHARGE DATA FROM NORTH BRANCH PUMPING STATION, RACINE AVENUE PUMPING STATION, 125TH STREET PUMPING STATION, EVANSTON INTERCEPTING SEWER OUTFALL, GREENWOOD AVENUE RELIEF SEWER OUTFALL, AND OLMSTED ROAD SEWER OUTFALL

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

TABLE AII-1

CSO PUMPING DATA FROM NORTH BRANCH PUMPING STATION

Date	Pump No.*	Time On (military time)	Time Off (military time)	Time in Service (minutes)	Volume Discharged (MG)
8/2/01	4	0940	1240	180	24.3
	5	0936	1321	225	30.4
	6	0835	0840	5	0.7
	6	0925	1440	315	42.5
	7	0931	2122	711	96.0
	8	0831	0842	11	1.5
	8	0922	1752	510	68.9
Event Total					264.2
8/9/01	5	2113	2325	132	17.8
	6	2109	2208	59	8.0
	7	2127	2254	87	11.7
Event Total					37.5
9/19/01	4	0157	0520	203	27.4
	5	0216	0815	359	48.5
	6	0203	0543	220	29.7
	7	0209	1145	576	77.8
Event Total					183.3
9/20/01	4	2328	2400	32	4.3
	5	2348	2400	12	1.6
	6	2332	2400	28	3.8
	7	2338	2400	22	3.0
	8	2335	2400	25	3.4
9/21/01	4	0000	0117	77	10.4
	5	0000	0531	331	44.7
	6	0000	0316	196	26.5
	7	0000	0153	113	15.3
	8	0000	0502	302	40.8
Event Total					153.6

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

TABLE AII-1 (Continued)

CSO PUMPING DATA FROM NORTH BRANCH PUMPING STATION

Date	Pump No.*	Time On (military time)	Time Off (military time)	Time in Service (minutes)	Volume Discharged (MG)
9/23/01	8	1218	1648	270	36.5
Event Total					36.5
10/13/01	4	1555	1609	14	1.9
	4	1846	2032	106	14.3
	5	1507	2400	533	72.0
	6	1301	2400	659	89.0
	7	1341	2400	619	83.6
	8	1415	2155	460	62.1
10/14/01	5	0000	0538	338	45.6
	6	0000	0217	137	18.5
	7	0000	1319	799	107.9
	8	1442	1944	302	40.8
Event Total					535.5
10/23/01	4	0302	0420	78	10.5
	5	0217	0443	146	19.7
	6	0230	0456	146	19.7
	7	0240	0608	208	28.1
	8	0250	1120	510	68.9
Event Total					146.9

* Every pump at NBPS has a pumping capacity of 0.135 million gallons (MG) per minute.

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

TABLE AII-2

CSO PUMPING DATA FROM RACINE AVENUE PUMPING STATION

Date	Pump No. *	Time On (military time)	Time Off (military time)	Time in Service (minutes)	Volume Discharged (MG)
7/20/95	2	1510	1645	95	16.0
	4	1515	1715	120	20.2
	6	1520	1755	155	26.0
	8	1540	1840	180	40.3
	10	1600	1845	165	37.0
Event total					139.4
8/15/95	2	1230	2010	460	77.3
	4	1308	1827	319	53.6
	6	1315	1821	306	51.4
	10	1356	1800	244	54.7
Event total					236.9
11/10/95	2	1246	1505	139	23.4
	2	1637	2400	443	74.4
	4	1248	2400	672	112.9
	5	1713	2355	402	67.5
	6	1251	2400	669	112.4
	8	1645	2400	435	97.4
	9	1755	2105	190	34.0
	10	1315	2400	645	144.5
	12	1352	2400	608	136.2
	14	1330	2400	630	141.1
	16	1255	2400	665	149.0
	18	1335	2400	625	140.0
11/11/95	2	0000	0020	20	3.4
	2	0718	1720	602	101.1
	4	0000	0350	230	38.6
	6	0000	1006	606	101.8
	8	0000	0105	65	14.6
	10	0000	0120	80	17.9
	12	0000	0025	25	5.6
	14	0000	0450	290	65.0
	16	0000	0205	125	28.0
	18	0000	1010	610	136.6
Event total					1745.4

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

TABLE AII-2 (Continued)

CSO PUMPING DATA FROM RACINE AVENUE PUMPING STATION

Date	Pump No. *	Time On (military time)	Time Off (military time)	Time in Service (minutes)	Volume Discharged (MG)
7/17/96	2	1505	2400	535	89.9
	3	1524	2400	516	86.7
	4	1455	2400	545	91.6
	5	1640	2400	440	73.9
	6	1508	2400	532	89.4
	7	1516	2230	434	77.7
	8	1443	2400	557	124.8
	9	1515	2047	332	59.4
	10	1510	2400	530	118.7
	12	1445	2045	360	80.6
	14	1447	2400	553	123.9
	16	1452	2400	548	122.8
	18	1450	2400	550	123.2
7/18/96	2	0000	0225	145	24.4
	2	0350	1355	605	101.6
	3	0000	0235	155	26.0
	4	0000	2400	1440	241.9
	5	0000	0835	515	86.5
	6	0000	2400	1440	241.9
	8	0000	1515	915	205.0
	10	0000	1715	1035	231.8
	12	0335	2025	1010	226.2
	14	0000	1337	817	183.0
	16	0000	2400	1440	322.6
	18	0000	2050	1250	280.0
7/19/96	4	0000	0700	420	70.6
	6	0000	0340	220	37.0
	16	0000	0340	220	49.3
Event total					3590.3
7/18/97	2	1603	1843	160	26.9
	4	1600	2315	435	73.1
	6	1557	1852	175	29.4
	8	1542	1942	240	53.8
	10	1545	2015	270	60.5
	12	1548	2400	492	110.2
	14	1615	1915	180	40.3
	16	1554	2054	300	67.2

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

TABLE AII-2 (Continued)

CSO PUMPING DATA FROM RACINE AVENUE PUMPING STATION

Date	Pump No. *	Time On (military time)	Time Off (military time)	Time in Service (minutes)	Volume Discharged (MG)
	18	1551	2400	489	109.5
7/19/97	12	0000	0001	1	0.2
	18	0000	0035	35	7.8
Event total					578.9
4/22/99	4	2325	2400	35	5.9
	6	1406	2400	594	99.8
	8	1440	2400	560	125.4
	10	1443	1453	10	2.2
	10	2245	2400	75	16.8
	12	1447	1456	9	2.0
	12	2250	2400	70	15.7
	14	2320	2400	40	9.0
	16	1345	1900	315	70.6
	18	1445	1729	164	36.7
4/23/99	4	0000	0804	484	81.3
	4	1350	1648	178	29.9
	6	0000	1200	720	121.0
	8	0000	0015	15	3.4
	10	0000	0020	20	4.5
	12	0000	1530	930	208.3
	14	0000	0845	525	117.6
Event total					950.0
6/1/99	2	2320	2400	40	6.7
	4	2238	2400	82	13.8
	6	2206	2400	114	19.2
	8	2209	2400	111	24.9
	10	2230	2400	90	20.2
	12	2234	2400	86	19.3
	14	2305	2400	55	12.3
	18	2300	2400	60	13.4
6/2/99	2	0000	0812	492	82.7
	2	1042	2047	605	101.6
	4	0000	0515	315	52.9
	4	0918	2005	647	108.7
	6	0000	2010	1210	203.3

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

TABLE AII-2 (Continued)

CSO PUMPING DATA FROM RACINE AVENUE PUMPING STATION

Date	Pump No. *	Time On (military time)	Time Off (military time)	Time in Service (minutes)	Volume Discharged (MG)
	8	0000	0120	80	17.9
	10	0000	0145	105	23.5
	12	0000	0310	190	42.6
	14	0000	0220	140	31.4
	18	0000	1650	1010	226.2
Event total					1020.5
12/5/99	2	0022	1351	809	135.9
	4	0024	1401	817	137.3
	6	0027	0345	198	33.3
	8	0047	1155	668	149.6
	12	0048	0912	504	112.9
	14	0120	0425	185	41.4
Event total					610.4

*Nos. 2, 3, 4, 5 and 6 pumps at the Racine Avenue Pumping Station have a pumping capacity of 0.168 million gallons per minute (MG/min), Nos. 7 and 9 have 0.179 MG/min, and Nos. 8, 10, 12, 14, 16 and 18 have 0.224 MG/min.

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

TABLE AII-3

CSO PUMPING DATA FROM 125TH STREET PUMPING STATION

Date	Pump No. *	Time On (military time)	Time Off (military time)	Time in Service (minutes)	Volume Discharged (MG)
11/10/95	1	1830	1855	25	1.1
	1	1940	2145	125	5.6
	2	1940	2000	20	0.9
	3	1830	1855	25	1.1
	3	1940	2110	90	4.0
	4	1710	2400	410	50.6
	5	1805	1920	75	9.3
	6	1648	2400	432	53.3
11/11/95	1	0119	0623	304	13.6
	3	0101	0420	199	8.9
	4	0000	0103	63	7.8
	6	0000	0610	370	45.7
Event Total					202.0
7/17/96	4	1624	2240	376	46.4
	5	1625	2311	406	50.1
	6	1626	2146	320	39.5
	6	2255	2400	65	8.0
7/18/96	4	0241	2400	1279	157.8
	5	0205	1240	635	78.4
	6	0000	1017	617	76.1
Event Total					456.3
8/17/97	3	1035	1759	444	19.9
	5	0155	0610	255	31.5
	6	0315	1040	445	54.9
Event Total					106.3
4/22/99	4	1550	2100	310	38.3
Event Total					38.3

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

TABLE AII-3 (Continued)

CSO PUMPING DATA FROM 125TH STREET PUMPING STATION

Date	Pump No. *	Time On (military time)	Time Off (military time)	Time in Service (minutes)	Volume Discharged (MG)
4/22/99	4	2205	2400	115	14.2
4/23/99	4	0000	2400	1440	177.7
	6	0300	0810	310	38.3
4/24/99	4	0000	0601	361	44.5
Event Total					274.7
6/1/99	5	2330	2400	30	3.7
	6	2345	2400	15	1.9
6/2/99	5	0000	0415	255	31.5
	6	0000	0100	60	7.4
Event Total					44.4
8/2/01	4	1126	1915	469	57.9
	5	1120	1447	207	25.5
	6	1133	1838	425	52.4
Event Total					135.9
8/25/01	4	1130	2400	750	92.6
	5	1130	2400	750	92.6
	6	1600	2400	480	59.2
8/26/01	5	0000	0610	370	45.7
	6	0000	0610	370	45.7
Event Total					335.6
10/13/01	4	1900	2400	300	37.0
	6	1900	2400	300	37.0
10/14/01	4	0000	0545	345	42.6
	6	0000	1140	700	86.4
Event Total					203.0

*Nos. 1, 2 and 3 pumps at 125th Street Pumping Station have a pumping capacity of 0.04488 million gallons per minute (MG/min), and Nos. 4, 5 and 6 have 0.1234 MG/min.

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

TABLE AII-4

CSO DISCHARGE DATA AT EVANSTON INTERCEPTING SEWER OUTFALL

Date / Time	Stage (ft)	Cross-Sectional Area (ft^2)	Velocity (ft/s)	Discharge (ft^3/s)	Discharge Volume* (MG)
8/17/97 1:00	0.03	0.3	-1.15	-0.35	0
8/17/97 1:15	0.02	0.2	1.01	0.20	0.001
8/17/97 1:30	0.02	0.2	-0.43	-0.09	0
8/17/97 1:45	0.05	0.5	-1.12	-0.56	0
8/17/97 2:00	0.03	0.3	-1.13	-0.34	0
8/17/97 2:15	2.12	21.2	2.97	62.96	0.424
8/17/97 2:30	3.74	37.4	0.33	12.34	0.083
8/17/97 2:45	4.02	40.2	1.59	63.92	0.430
8/17/97 3:00	4.10	41.0	2.19	89.79	0.604
8/17/97 3:15	4.23	42.3	2.60	109.98	0.740
8/17/97 3:30	4.19	41.9	2.48	103.91	0.700
8/17/97 3:45	4.29	42.9	2.39	102.53	0.690
8/17/97 4:00	4.21	42.1	1.47	61.89	0.417
8/17/97 4:15	4.18	41.8	1.97	82.35	0.554
8/17/97 4:30	4.09	40.9	1.73	70.76	0.476
8/17/97 4:45	4.01	40.1	1.12	44.91	0.302
8/17/97 5:00	3.85	38.5	1.01	38.89	0.262
8/17/97 5:15	3.68	36.8	0.94	34.59	0.233
8/17/97 5:30	3.52	35.2	0.75	26.40	0.178
8/17/97 5:45	3.42	34.2	1.00	34.20	0.230
8/17/97 6:00	3.22	32.2	0.86	27.69	0.186
8/17/97 6:15	3.11	31.1	1.09	33.90	0.228
8/17/97 6:30	3.03	30.3	1.03	31.21	0.210
8/17/97 6:45	2.90	29.0	1.12	32.48	0.219
8/17/97 7:00	2.76	27.6	1.01	27.88	0.188
8/17/97 7:15	2.62	26.2	0.98	25.68	0.173
8/17/97 7:30	2.48	24.8	0.89	22.07	0.149
8/17/97 7:45	2.24	22.4	1.42	31.81	0.214
8/17/97 8:00	1.88	18.8	1.10	20.68	0.139
8/17/97 8:15	1.62	16.2	1.66	26.89	0.181
8/17/97 8:30	1.33	13.3	2.40	31.92	0.215
8/17/97 8:45	0.82	8.2	-0.60	-4.92	0
8/17/97 9:00	0.58	5.8	0.29	1.68	0.011
8/17/97 9:15	0.39	3.9	0.53	2.07	0.014
8/17/97 9:30	0.13	1.3	0.38	0.49	0.003
8/17/97 9:45	0.06	0.6	1.05	0.63	
Event Total:					8.456

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

TABLE AII-4 (Continued)

CSO DISCHARGE DATA AT EVANSTON INTERCEPTING SEWER OUTFALL

Date / Time	Stage (ft)	Cross-Sectional Area (ft^2)	Velocity (ft/s)	Discharge (ft^3/s)	Discharge Volume* (MG)
6/1/99 21:30	-0.02	0.0	0.00	0.00	0
6/1/99 21:35	0.00	0.0	0.00	0.00	0
6/1/99 21:40	1.19	11.9	-4.18	-49.74	0
6/1/99 21:45	0.81	8.1	-5.03	-40.74	0
6/1/99 21:50	0.55	5.5	-5.60	-30.80	0
6/1/99 21:55	0.98	9.8	-4.77	-46.75	0
6/1/99 22:00	0.93	9.3	-5.46	-50.78	0
6/1/99 22:05	1.51	15.1	-4.86	-73.39	0
6/1/99 22:10	0.95	9.5	6.05	57.48	0.129
6/1/99 22:15	0.81	8.1	-4.39	-35.56	0
6/1/99 22:20	1.02	10.2	-5.33	-54.37	0
6/1/99 22:25	1.23	12.3	-5.28	-64.94	0
6/1/99 22:30	1.15	11.5	7.23	83.15	0.187
6/1/99 22:35	1.41	14.1	6.10	86.01	0.193
6/1/99 22:40	1.22	12.2	-4.47	-54.53	0
6/1/99 22:45	0.93	9.3	-7.06	-65.66	0
6/1/99 22:50	1.15	11.5	-4.62	-53.13	0
6/1/99 22:55	1.20	12.0	4.89	58.68	0.132
6/1/99 23:00	0.99	9.9	6.25	61.88	0.139
6/1/99 23:05	1.36	13.6	6.12	83.23	0.187
6/1/99 23:10	1.51	15.1	4.82	72.78	0.163
6/1/99 23:15	1.10	11.0	-3.86	-42.46	0
6/1/99 23:20	1.44	14.4	5.21	75.02	0.168
6/1/99 23:25	1.10	11.0	7.52	82.72	0.186
6/1/99 23:30	1.43	14.3	5.77	82.51	0.185
6/1/99 23:35	1.50	15.0	-4.97	-74.55	0
6/1/99 23:40	1.33	13.3	4.32	57.46	0.129
6/1/99 23:45	1.36	13.6	4.13	56.17	0.126
6/1/99 23:50	1.45	14.5	5.99	86.86	0.195
6/1/99 23:55	1.48	14.8	5.40	79.92	0.179
6/2/99 0:00	1.46	14.6	5.44	79.42	0.178
6/2/99 0:05	1.64	16.4	4.25	69.70	0.156
6/2/99 0:10	1.68	16.8	3.92	65.86	0.148
6/2/99 0:15	1.57	15.7	4.44	69.71	0.156
6/2/99 0:20	1.56	15.6	3.72	58.03	0.130
6/2/99 0:25	1.61	16.1	3.71	59.73	0.134
6/2/99 0:30	1.67	16.7	3.60	60.12	0.135
6/2/99 0:35	1.60	16.0	3.01	48.16	0.108

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

TABLE AII-4 (Continued)

CSO DISCHARGE DATA AT EVANSTON INTERCEPTING SEWER OUTFALL

Date / Time	Stage (ft)	Cross-Sectional Area (ft^2)	Velocity (ft/s)	Discharge (ft^3/s)	Discharge Volume* (MG)
6/2/99 0:40	1.58	15.8	2.80	44.24	0.099
6/2/99 0:45	1.57	15.7	2.65	41.61	0.093
6/2/99 0:50	1.60	16.0	2.36	37.76	0.085
6/2/99 0:55	1.60	16.0	1.56	24.96	0.056
6/2/99 1:00	1.55	15.5	1.56	24.18	0.054
6/2/99 1:05	1.57	15.7	0.95	14.92	0.033
6/2/99 1:10	1.54	15.4	0.89	13.71	0.031
6/2/99 1:15	1.53	15.3	0.98	14.99	0.034
6/2/99 1:20	1.51	15.1	0.50	7.55	0.017
6/2/99 1:25	1.51	15.1	0.31	4.68	0.011
6/2/99 1:30	1.50	15.0	0.28	4.20	0.009
6/2/99 1:35	1.48	14.8	0.28	4.14	0.009
6/2/99 1:40	1.47	14.7	0.21	3.09	0.007
6/2/99 1:45	1.44	14.4	0.23	3.31	0.007
6/2/99 1:50	1.42	14.2	0.00	0.00	0
6/2/99 1:55	1.41	14.1	0.24	3.38	0.008
6/2/99 2:00	1.37	13.7	0.00	0.00	0
6/2/99 2:05	1.35	13.5	0.19	2.57	0.006
6/2/99 2:10	1.32	13.2	0.00	0.00	0
6/2/99 2:15	1.30	13.0	0.00	0.00	0
6/2/99 2:20	1.27	12.7	0.19	2.41	0.005
6/2/99 2:25	1.24	12.4	0.15	1.86	0.004
6/2/99 2:30	1.21	12.1	0.00	0.00	0
6/2/99 2:35	1.20	12.0	-0.22	-2.64	0
6/2/99 2:40	1.13	11.3	-0.42	-4.75	0
6/2/99 2:45	1.08	10.8	-0.41	-4.43	0
6/2/99 2:50	1.01	10.1	-0.88	-8.89	0
6/2/99 2:55	0.92	9.2	-0.59	-5.43	0
6/2/99 3:00	0.88	8.8	-1.02	-8.98	
Event Total:					4.013
12/4/99 22:00	0.01	0.10	0.00	0.00	0
12/4/99 22:05	0.00	0.00	0.00	0.00	0
12/4/99 22:10	0.83	8.30	1.12	9.30	0.021
12/4/99 22:15	0.66	6.60	3.35	22.11	0.050
12/4/99 22:20	0.74	7.40	-3.22	-23.83	0
12/4/99 22:25	0.96	9.60	4.40	42.24	0.095

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

TABLE AII-4 (Continued)

CSO DISCHARGE DATA AT EVANSTON INTERCEPTING SEWER OUTFALL

Date / Time	Stage (ft)	Cross-Sectional Area (ft^2)	Velocity (ft/s)	Discharge (ft^3/s)	Discharge Volume* (MG)
12/4/99 22:30	0.72	7.20	3.01	21.67	0.049
12/4/99 22:35	0.83	8.30	-2.91	-24.15	0
12/4/99 22:40	0.70	7.00	2.91	20.37	0.046
12/4/99 22:45	0.80	8.00	2.95	23.60	0.053
12/4/99 22:50	0.75	7.50	3.77	28.28	0.063
12/4/99 22:55	0.82	8.20	2.42	19.84	0.045
12/4/99 23:00	0.81	8.10	2.82	22.84	0.051
12/4/99 23:05	0.79	7.90	2.60	20.54	0.046
12/4/99 23:10	0.79	7.90	3.08	24.33	0.055
12/4/99 23:15	0.79	7.90	2.77	21.88	0.049
12/4/99 23:20	0.80	8.00	2.98	23.84	0.053
12/4/99 23:25	0.71	7.10	0.93	6.60	0.015
12/4/99 23:30	0.71	7.10	0.83	5.89	0.013
12/4/99 23:35	0.73	7.30	0.72	5.26	0.012
12/4/99 23:40	0.71	7.10	0.88	6.25	0.014
12/4/99 23:45	0.63	6.30	0.85	5.36	0.012
12/4/99 23:50	0.65	6.50	0.49	3.19	0.007
12/4/99 23:55	0.67	6.70	0.56	3.75	0.008
12/5/99 0:00	0.74	7.40	0.93	6.88	0.015
12/5/99 0:05	0.78	7.80	1.01	7.88	0.018
12/5/99 0:10	0.77	7.70	0.96	7.39	0.017
12/5/99 0:15	0.79	7.90	1.41	11.14	0.025
12/5/99 0:20	0.81	8.10	1.06	8.59	0.019
12/5/99 0:25	0.71	7.10	2.06	14.63	0.033
12/5/99 0:30	0.87	8.70	1.92	16.70	0.037
12/5/99 0:35	0.83	8.30	3.74	31.04	0.070
12/5/99 0:40	0.80	8.00	-2.78	-22.24	0
12/5/99 0:45	0.97	9.70	3.86	37.44	0.084
12/5/99 0:50	0.73	7.30	4.95	36.14	0.081
12/5/99 0:55	1.04	10.40	3.53	36.71	0.082
12/5/99 1:00	0.97	9.70	5.60	54.32	0.122
12/5/99 1:05	1.08	10.80	-4.55	-49.14	0
12/5/99 1:10	1.15	11.50	6.43	73.95	0.166
12/5/99 1:15	0.99	9.90	-4.73	-46.83	0
12/5/99 1:20	0.78	7.80	3.89	30.34	0.068
12/5/99 1:25	1.06	10.60	4.14	43.88	0.098
12/5/99 1:30	0.94	9.40	3.88	36.47	0.082
12/5/99 1:35	0.89	8.90	4.27	38.00	0.085

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

TABLE AII-4 (Continued)

CSO DISCHARGE DATA AT EVANSTON INTERCEPTING SEWER OUTFALL

Date / Time	Stage (ft)	Cross-Sectional Area (ft^2)	Velocity (ft/s)	Discharge (ft^3/s)	Discharge Volume* (MG)
12/5/99 1:40	0.86	8.60	4.94	42.48	0.095
12/5/99 1:45	0.88	8.80	-3.39	-29.83	0
12/5/99 1:50	0.93	9.30	2.99	27.81	0.062
12/5/99 1:55	0.89	8.90	5.53	49.22	0.110
12/5/99 2:00	0.72	7.20	4.42	31.82	0.071
12/5/99 2:05	0.80	8.00	2.73	21.84	0.049
12/5/99 2:10	0.83	8.30	2.87	23.82	0.053
12/5/99 2:15	0.77	7.70	2.30	17.71	0.040
12/5/99 2:20	0.79	7.90	1.54	12.17	0.027
12/5/99 2:25	0.70	7.00	0.73	5.11	0.011
12/5/99 2:30	0.74	7.40	1.06	7.84	0.018
12/5/99 2:35	0.72	7.20	0.79	5.69	0.013
12/5/99 2:40	0.70	7.00	0.81	5.67	0.013
12/5/99 2:45	0.66	6.60	0.73	4.82	0.011
12/5/99 2:50	0.56	5.60	0.88	4.93	0.011
12/5/99 2:55	0.44	4.40	1.28	5.63	0.013
12/5/99 3:00	0.38	3.80	0.47	1.79	0.004
12/5/99 3:05	0.33	3.30	1.12	3.70	0.008
12/5/99 3:10	0.22	2.20	0.85	1.87	0.004
12/5/99 3:15	0.18	1.80	0.68	1.22	0.003
12/5/99 3:20	0.14	1.40	0.48	0.67	0.002
12/5/99 3:25	0.13	1.30	0.80	1.04	0.002
12/5/99 3:30	0.09	0.90	0.77	0.69	0.002
12/5/99 3:35	0.09	0.90	0.50	0.45	0.001
12/5/99 3:40	0.09	0.90	0.56	0.50	0.001
12/5/99 3:45	0.08	0.80	0.44	0.35	0.001
12/5/99 3:50	0.08	0.80	3.29	2.63	0.006
12/5/99 3:55	0.10	1.00	0.35	0.35	0.001
12/5/99 4:00	0.10	1.00	-2.71	-2.71	0
12/5/99 4:05	0.09	0.90	0.59	0.53	0.001
12/5/99 4:10	0.09	0.90	0.72	0.65	0.001
12/5/99 4:15	0.08	0.80	1.99	1.59	0.004
12/5/99 4:20	0.10	1.00	0.42	0.42	0.001
12/5/99 4:25	0.13	1.30	0.34	0.44	0.001
12/5/99 4:30	0.14	1.40	0.82	1.15	0.003
12/5/99 4:35	0.14	1.40	0.35	0.49	0.001
12/5/99 4:40	0.18	1.80	0.72	1.30	0.003
12/5/99 4:45	0.18	1.80	0.32	0.58	0.001

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

TABLE AII-4 (Continued)

CSO DISCHARGE DATA AT EVANSTON INTERCEPTING SEWER OUTFALL

Date / Time	Stage (ft)	Cross-Sectional Area (ft^2)	Velocity (ft/s)	Discharge (ft^3/s)	Discharge Volume* (MG)
12/5/99 4:50	0.25	2.50	0.38	0.95	0.002
12/5/99 4:55	0.31	3.10	-2.04	-6.32	0
12/5/99 5:00	0.35	3.50	-0.50	-1.75	0
12/5/99 5:05	0.39	3.90	-0.49	-1.91	0
12/5/99 5:10	0.43	4.30	0.44	1.89	0.004
12/5/99 5:15	0.44	4.40	0.98	4.31	0.010
12/5/99 5:20	0.45	4.50	1.30	5.85	0.013
12/5/99 5:25	0.56	5.60	0.61	3.42	0.008
12/5/99 5:30	0.68	6.80	0.50	3.40	0.008
12/5/99 5:35	0.70	7.00	0.55	3.85	0.009
12/5/99 5:40	0.69	6.90	1.04	7.18	0.016
12/5/99 5:45	0.66	6.60	0.61	4.03	0.009
12/5/99 5:50	0.63	6.30	0.45	2.84	0.006
12/5/99 5:55	0.66	6.60	0.85	5.61	0.013
12/5/99 6:00	0.60	6.00	1.11	6.66	0.015
12/5/99 6:05	0.63	6.30	1.37	8.63	0.019
12/5/99 6:10	0.71	7.10	-0.61	-4.33	0
12/5/99 6:15	0.74	7.40	1.04	7.70	0.017
12/5/99 6:20	0.69	6.90	-1.13	-7.80	0
12/5/99 6:25	0.64	6.40	-0.39	-2.50	0
12/5/99 6:30	0.64	6.40	0.60	3.84	0.009
12/5/99 6:35	0.56	5.60	0.58	3.25	0.007
12/5/99 6:40	0.50	5.00	0.57	2.85	0.006
12/5/99 6:45	0.44	4.40	0.43	1.89	0.004
12/5/99 6:50	0.41	4.10	0.91	3.73	0.008
12/5/99 6:55	0.34	3.40	0.91	3.09	0.007
12/5/99 7:00	0.33	3.30	0.53	1.75	0.004
12/5/99 7:05	0.35	3.50	0.62	2.17	0.005
12/5/99 7:10	0.35	3.50	0.60	2.10	0.005
12/5/99 7:15	0.36	3.60	0.44	1.58	0.004
12/5/99 7:20	0.35	3.50	0.69	2.42	0.005
12/5/99 7:25	0.28	2.80	0.90	2.52	0.006
12/5/99 7:30	0.23	2.30	0.35	0.81	0.002
12/5/99 7:35	0.20	2.00	0.83	1.66	0.004
12/5/99 7:40	0.17	1.70	0.43	0.73	0.002
12/5/99 7:45	0.17	1.70	0.75	1.28	0.003
12/5/99 7:50	0.14	1.40	0.42	0.59	0.001
12/5/99 7:55	0.13	1.30	0.48	0.62	0.001

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

TABLE AII-4 (Continued)

CSO DISCHARGE DATA AT EVANSTON INTERCEPTING SEWER OUTFALL

Date / Time	Stage (ft)	Cross-Sectional Area (ft^2)	Velocity (ft/s)	Discharge (ft^3/s)	Discharge Volume* (MG)
12/5/99 8:00	0.11	1.10	0.88	0.97	0.002
12/5/99 8:05	0.07	0.70	0.37	0.26	0.001
12/5/99 8:10	0.09	0.90	0.47	0.42	0.001
12/5/99 8:15	0.09	0.90	0.42	0.38	0.001
12/5/99 8:20	0.09	0.90	0.35	0.32	0.001
12/5/99 8:25	0.07	0.70	1.85	1.30	0.003
12/5/99 8:30	0.06	0.60	0.45	0.27	0.001
12/5/99 8:35	0.06	0.60	-2.12	-1.27	0
12/5/99 8:40	0.06	0.60	0.24	0.14	0.000
12/5/99 8:45	0.04	0.40	-0.20	-0.08	0
12/5/99 8:50	0.04	0.40	0.08	0.03	0.000
12/5/99 8:55	0.04	0.40	0.00	0.00	0
12/5/99 9:00	0.03	0.30	0.00	0.00	0
12/5/99 9:05	0.03	0.30	0.07	0.02	0.000
12/5/99 9:10	0.03	0.30	0.00	0.00	0
12/5/99 9:15	0.02	0.20	0.06	0.01	0.000
12/5/99 9:20	0.01	0.10	0.05	0.01	0.000
12/5/99 9:25	0.02	0.20	0.09	0.02	0.000
12/5/99 9:30	0.01	0.10	0.12	0.01	0.000
12/5/99 9:35	0.01	0.10	0.00	0.00	0
12/5/99 9:40	0.04	0.40	0.00	0.00	0
12/5/99 9:45	0.05	0.50	0.32	0.16	0.000
12/5/99 9:50	0.04	0.40	0.28	0.11	0.000
12/5/99 9:55	0.03	0.30	0.07	0.02	0.000
12/5/99 10:00	0.04	0.40	0.06	0.02	0.000
12/5/99 10:05	0.05	0.50	0.08	0.04	0.000
12/5/99 10:10	0.06	0.60	0.30	0.18	0.000
12/5/99 10:15	0.08	0.80	0.32	0.26	0.001
12/5/99 10:20	0.09	0.90	-2.38	-2.14	0
12/5/99 10:25	0.10	1.00	0.21	0.21	0.000
12/5/99 10:30	0.10	1.00	1.13	1.13	0.003
12/5/99 10:35	0.10	1.00	0.32	0.32	0.001
12/5/99 10:40	0.15	1.50	0.45	0.68	0.002
12/5/99 10:45	0.16	1.60	0.46	0.74	0.002
12/5/99 10:50	0.16	1.60	0.74	1.18	0.003
12/5/99 10:55	0.16	1.60	0.46	0.74	0.002
12/5/99 11:00	0.15	1.50	0.79	1.19	0.003
12/5/99 11:05	0.14	1.40	0.77	1.08	0.002

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

TABLE AII-4 (Continued)

CSO DISCHARGE DATA AT EVANSTON INTERCEPTING SEWER OUTFALL

Date / Time	Stage (ft)	Cross-Sectional Area (ft^2)	Velocity (ft/s)	Discharge (ft^3/s)	Discharge Volume* (MG)
12/5/99 11:10	0.16	1.60	0.59	0.94	0.002
12/5/99 11:15	0.13	1.30	-0.86	-1.12	0
12/5/99 11:20	0.12	1.20	-0.57	-0.68	0
12/5/99 11:25	0.11	1.10	0.23	0.25	0.001
12/5/99 11:30	0.10	1.00	-0.49	-0.49	0
12/5/99 11:35	0.10	1.00	0.34	0.34	0.001
12/5/99 11:40	0.09	0.90	0.40	0.36	0.001
12/5/99 11:45	0.10	1.00	-0.39	-0.39	0
12/5/99 11:50	0.10	1.00	0.14	0.14	0.000
12/5/99 11:55	0.10	1.00	0.22	0.22	0.000
12/5/99 12:00	0.10	1.00	0.16	0.16	0.000
12/5/99 12:05	0.11	1.10	-0.18	-0.20	0
12/5/99 12:10	0.11	1.10	-0.28	-0.31	0
12/5/99 12:15	0.11	1.10	0.31	0.34	0.001
12/5/99 12:20	0.10	1.00	0.29	0.29	0.001
12/5/99 12:25	0.12	1.20	0.30	0.36	0.001
12/5/99 12:30	0.10	1.00	0.43	0.43	0.001
12/5/99 12:35	0.10	1.00	0.27	0.27	0.001
12/5/99 12:40	0.11	1.10	-0.14	-0.15	0
12/5/99 12:45	0.11	1.10	0.26	0.29	0.001
12/5/99 12:50	0.12	1.20	0.17	0.20	0.000
12/5/99 12:55	0.13	1.30	0.17	0.22	0.000
12/5/99 13:00	0.13	1.30	0.28	0.36	0.001
12/5/99 13:05	0.14	1.40	0.26	0.36	0.001
12/5/99 13:10	0.21	2.10	0.33	0.69	0.002
12/5/99 13:15	0.24	2.40	0.12	0.29	0.001
12/5/99 13:20	0.34	3.40	0.53	1.80	0.004
12/5/99 13:25	0.43	4.30	-0.32	-1.38	0
12/5/99 13:30	0.52	5.20	-0.59	-3.07	0
12/5/99 13:35	0.58	5.80	0.85	4.93	0.011
12/5/99 13:40	0.62	6.20	0.74	4.59	0.010
12/5/99 13:45	0.70	7.00	0.85	5.95	0.013
12/5/99 13:50	0.73	7.30	0.92	6.72	0.015
12/5/99 13:55	0.77	7.70	1.04	8.01	0.018
12/5/99 14:00	0.73	7.30	1.54	11.24	0.025
12/5/99 14:05	0.76	7.60	1.03	7.83	0.018
12/5/99 14:10	0.75	7.50	0.80	6.00	0.013
12/5/99 14:15	0.75	7.50	0.62	4.65	0.010

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

TABLE AII-4 (Continued)

CSO DISCHARGE DATA AT EVANSTON INTERCEPTING SEWER OUTFALL

Date / Time	Stage (ft)	Cross-Sectional Area (ft^2)	Velocity (ft/s)	Discharge (ft^3/s)	Discharge Volume* (MG)
12/5/99 14:20	0.74	7.40	0.39	2.89	0.006
12/5/99 14:25	0.75	7.50	0.85	6.38	0.014
12/5/99 14:30	0.72	7.20	0.63	4.54	0.010
12/5/99 14:35	0.72	7.20	0.70	5.04	0.011
12/5/99 14:40	0.71	7.10	0.65	4.62	0.010
12/5/99 14:45	0.71	7.10	0.43	3.05	0.007
12/5/99 14:50	0.68	6.80	0.66	4.49	0.010
12/5/99 14:55	0.62	6.20	0.60	3.72	0.008
12/5/99 15:00	0.60	6.00	0.50	3.00	0.007
12/5/99 15:05	0.58	5.80	0.83	4.81	0.011
12/5/99 15:10	0.54	5.40	0.80	4.32	0.010
12/5/99 15:15	0.51	5.10	0.55	2.81	0.006
12/5/99 15:20	0.47	4.70	0.86	4.04	0.009
12/5/99 15:25	0.43	4.30	0.42	1.81	0.004
12/5/99 15:30	0.36	3.60	0.38	1.37	0.003
12/5/99 15:35	0.32	3.20	0.47	1.50	0.003
12/5/99 15:40	0.24	2.40	0.74	1.78	0.004
12/5/99 15:45	0.18	1.80	0.95	1.71	0.004
12/5/99 15:50	0.12	1.20	1.45	1.74	0.004
12/5/99 15:55	0.10	1.00	0.73	0.73	0.002
12/5/99 16:00	0.08	0.80	0.59	0.47	0.001
12/5/99 16:05	0.07	0.70	0.85	0.60	0.001
12/5/99 16:10	0.06	0.60	0.22	0.13	0.000
12/5/99 16:15	0.06	0.60	1.97	1.18	0.003
12/5/99 16:20	0.03	0.30	-0.18	-0.05	0
12/5/99 16:25	0.04	0.40	0.06	0.02	0.000
12/5/99 16:30	0.04	0.40	0.12	0.05	0.000
12/5/99 16:35	0.01	0.10	0.00	0.00	
Event Total:					3.070

* A zero value is assigned to the discharge volume if a discharge rate is negative in value.

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

TABLE AII-5

CSO DISCHARGE DATA AT GREENWOOD AVENUE RELIEF SEWER OUTFALL

Date / Time	Stage (ft)	Cross-Sectional Area (ft^2)	Velocity (ft/s)	Discharge (ft^3/s)	Discharge Volume (MG)
4/22/99 13:00	2.18	11.9	0.00	0.00	0.000
4/22/99 13:05	2.20	12.1	0.00	0.00	0.000
4/22/99 13:10	2.24	12.4	0.00	0.00	0.000
4/22/99 13:15	2.25	12.4	0.00	0.00	0.000
4/22/99 13:20	2.29	12.7	4.66	59.23	0.133
4/22/99 13:25	2.38	13.5	5.04	67.84	0.152
4/22/99 13:30	2.46	14.1	5.56	78.25	0.176
4/22/99 13:35	2.52	14.5	4.15	60.35	0.135
4/22/99 13:40	2.57	15.0	3.97	59.37	0.133
4/22/99 13:45	2.61	15.3	3.68	56.29	0.126
4/22/99 13:50	2.67	15.8	3.35	52.92	0.119
4/22/99 13:55	2.67	15.8	3.44	54.34	0.122
4/22/99 14:00	2.76	16.5	3.26	53.81	0.121
4/22/99 14:05	2.83	17.1	3.38	57.82	0.130
4/22/99 14:10	2.88	17.6	3.40	59.76	0.134
4/22/99 14:15	2.92	17.9	3.06	54.81	0.123
4/22/99 14:20	2.96	18.3	3.00	54.75	0.123
4/22/99 14:25	2.99	18.5	2.65	48.90	0.110
4/22/99 14:30	3.02	18.8	2.86	53.62	0.120
4/22/99 14:35	3.06	19.1	2.52	48.15	0.108
4/22/99 14:40	3.09	19.4	3.18	61.58	0.138
4/22/99 14:45	3.16	19.9	2.70	53.74	0.121
4/22/99 14:50	3.20	20.2	2.43	49.18	0.110
4/22/99 14:55	3.21	20.4	2.47	50.33	0.113
4/22/99 15:00	3.23	20.5	2.00	41.01	0.092
4/22/99 15:05	3.26	20.8	1.98	41.10	0.092
4/22/99 15:10	3.28	21.0	1.89	39.62	0.089
4/22/99 15:15	3.32	21.3	1.96	41.75	0.094
4/22/99 15:20	3.35	21.6	1.86	40.11	0.090
4/22/99 15:25	3.34	21.5	1.60	34.42	0.077
4/22/99 15:30	3.38	21.8	1.54	33.61	0.075
4/22/99 15:35	3.40	22.0	1.53	33.65	0.076
4/22/99 15:40	3.40	22.0	1.34	29.53	0.066
4/22/99 15:45	3.41	22.1	1.55	34.18	0.077
4/22/99 15:50	3.42	22.2	1.11	24.60	0.055
4/22/99 15:55	3.41	22.1	1.10	24.32	0.055
4/22/99 16:00	3.42	22.2	1.11	24.59	0.055

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

TABLE AII-5 (Continued)

CSO DISCHARGE DATA AT GREENWOOD AVENUE RELIEF SEWER OUTFALL

Date / Time	Stage (ft)	Cross-Sectional Area (ft^2)	Velocity (ft/s)	Discharge (ft^3/s)	Discharge Volume (MG)
4/22/99 16:05	3.41	22.1	0.91	20.08	0.045
4/22/99 16:10	3.43	22.3	0.99	22.08	0.050
4/22/99 16:15	3.44	22.3	0.93	20.76	0.047
4/22/99 16:20	3.42	22.2	0.81	17.99	0.040
4/22/99 16:25	3.44	22.3	0.93	20.77	0.047
4/22/99 16:30	3.43	22.3	1.05	23.41	0.053
4/22/99 16:35	3.43	22.2	1.03	22.90	0.051
4/22/99 16:40	3.38	21.8	0.68	14.85	0.033
4/22/99 16:45	3.39	21.9	0.63	13.82	0.031
4/22/99 16:50	3.40	22.0	0.55	12.10	0.027
4/22/99 16:55	3.41	22.1	0.52	11.47	0.026
4/22/99 17:00	3.37	21.7	0.58	12.60	0.028
4/22/99 17:05	3.40	22.0	0.35	7.69	0.017
4/22/99 17:10	3.38	21.9	0.38	8.31	0.019
4/22/99 17:15	3.35	21.6	0.30	6.48	0.015
4/22/99 17:20	3.34	21.5	0.46	9.88	0.022
4/22/99 17:25	3.35	21.6	0.28	6.04	0.014
4/22/99 17:30	3.34	21.5	0.29	6.23	0.014
4/22/99 17:35	3.33	21.4	0.30	6.42	0.014
4/22/99 17:40	3.32	21.3	0.22	4.69	0.011
4/22/99 17:45	3.32	21.3	0.00	0.00	0.000
4/22/99 17:50	3.33	21.4	0.00	0.00	0.000
4/22/99 17:55	3.32	21.3	0.00	0.00	0.000
4/22/99 18:00	3.28	21.0	0.11	2.31	0.005
4/22/99 18:05	3.28	21.0	0.00	0.00	0.000
4/22/99 18:10	3.30	21.1	0.00	0.00	0.000
4/22/99 18:15	3.27	20.9	0.00	0.00	0.000
4/22/99 18:20	3.27	20.9	0.00	0.00	0.000
4/22/99 18:25	3.26	20.8	0.00	0.00	0.000
4/22/99 18:30	3.27	20.8	0.00	0.00	0.000
4/22/99 18:35	3.23	20.5	0.00	0.00	0.000
4/22/99 18:40	3.23	20.5	0.00	0.00	0.000
4/22/99 18:45	3.23	20.5	0.00	0.00	0.000
4/22/99 18:50	3.23	20.5	0.00	0.00	0.000
4/22/99 18:55	3.21	20.4	0.00	0.00	0.000
4/22/99 19:00	3.20	20.3	0.00	0.00	0.000
4/22/99 19:05	3.20	20.3	0.00	0.00	0.000

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

TABLE AII-5 (Continued)

CSO DISCHARGE DATA AT GREENWOOD AVENUE RELIEF SEWER OUTFALL

Date / Time	Stage (ft)	Cross-Sectional Area (ft^2)	Velocity (ft/s)	Discharge (ft^3/s)	Discharge Volume (MG)
4/22/99 19:10	3.19	20.2	0.00	0.00	0.000
4/22/99 19:15	3.17	20.0	0.00	0.00	0.000
4/22/99 19:20	3.17	20.0	0.00	0.00	0.000
4/22/99 19:25	3.17	20.0	0.21	4.20	0.009
4/22/99 19:30	3.17	20.0	0.32	6.39	0.014
4/22/99 19:35	3.15	19.9	0.24	4.76	0.011
4/22/99 19:40	3.15	19.9	0.27	5.37	0.012
4/22/99 19:45	3.17	20.0	0.53	10.62	0.024
4/22/99 19:50	3.09	19.4	0.91	17.62	0.040
4/22/99 19:55	3.12	19.6	1.27	24.84	0.056
4/22/99 20:00	3.12	19.6	1.77	34.62	0.078
4/22/99 20:05	3.12	19.6	1.90	37.28	0.084
4/22/99 20:10	3.13	19.6	2.05	40.26	0.090
4/22/99 20:15	3.15	19.8	1.94	38.45	0.086
4/22/99 20:20	3.14	19.7	1.69	33.33	0.075
4/22/99 20:25	3.15	19.8	2.02	40.03	0.090
4/22/99 20:30	3.15	19.9	2.11	41.91	0.094
4/22/99 20:35	3.14	19.7	2.54	50.14	0.113
4/22/99 20:40	3.18	20.1	2.00	40.19	0.090
4/22/99 20:45	3.19	20.2	1.89	38.17	0.086
4/22/99 20:50	3.22	20.4	1.87	38.22	0.086
4/22/99 20:55	3.22	20.5	1.92	39.32	0.088
4/22/99 21:00	3.23	20.5	2.14	43.94	0.099
4/22/99 21:05	3.25	20.7	2.26	46.75	0.105
4/22/99 21:10	3.25	20.7	2.30	47.60	0.107
4/22/99 21:15	3.33	21.4	2.21	47.37	0.106
4/22/99 21:20	3.36	21.6	2.38	51.51	0.116
4/22/99 21:25	3.38	21.8	2.54	55.35	0.124
4/22/99 21:30	3.43	22.2	2.74	60.92	0.137
4/22/99 21:35	3.50	22.9	2.08	47.65	0.107
4/22/99 21:40	3.53	23.2	1.89	43.81	0.098
4/22/99 21:45	3.64	24.1	1.79	43.18	0.097
4/22/99 21:50	3.68	24.5	1.93	47.30	0.106
4/22/99 21:55	3.80	25.5	2.32	59.24	0.133
4/22/99 22:00	3.91	26.5	2.00	53.01	0.119
4/22/99 22:05	4.02	27.5	2.03	55.89	0.125
4/22/99 22:10	4.13	28.5	2.27	64.72	0.145

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

TABLE AII-5 (Continued)

CSO DISCHARGE DATA AT GREENWOOD AVENUE RELIEF SEWER OUTFALL

Date / Time	Stage (ft)	Cross-Sectional Area (ft^2)	Velocity (ft/s)	Discharge (ft^3/s)	Discharge Volume (MG)
4/22/99 22:15	4.30	30.0	2.56	76.71	0.172
4/22/99 22:20	4.42	31.1	2.39	74.24	0.167
4/22/99 22:25	4.51	31.9	1.82	58.12	0.130
4/22/99 22:30	4.66	33.2	1.09	36.24	0.081
4/22/99 22:35	4.75	34.0	1.46	49.71	0.112
4/22/99 22:40	4.85	35.0	1.54	53.87	0.121
4/22/99 22:45	4.95	35.9	1.18	42.35	0.095
4/22/99 22:50	5.04	36.7	0.75	27.51	0.062
4/22/99 22:55	5.12	37.4	0.88	32.91	0.074
4/22/99 23:00	5.24	38.4	1.62	62.24	0.140
4/22/99 23:05	5.24	38.5	1.05	40.38	0.091
4/22/99 23:10	5.30	39.0	0.00	0.00	
Event Total:					8.340
6/1/99 21:30	1.20	5.0	0.00	0.00	0.000
6/1/99 21:35	1.24	5.3	0.00	0.00	0.000
6/1/99 21:40	1.76	8.7	6.24	54.51	0.122
6/1/99 21:45	2.05	10.9	6.32	68.95	0.155
6/1/99 21:50	2.14	11.6	6.87	79.50	0.178
6/1/99 21:55	2.12	11.4	6.81	77.97	0.175
6/1/99 22:00	2.06	11.0	6.41	70.42	0.158
6/1/99 22:05	2.13	11.5	6.81	78.13	0.175
6/1/99 22:10	2.25	12.5	6.28	78.30	0.176
6/1/99 22:15	2.20	12.1	6.47	78.01	0.175
6/1/99 22:20	2.35	13.3	6.15	81.51	0.183
6/1/99 22:25	2.56	14.9	5.53	82.43	0.185
6/1/99 22:30	2.62	15.4	5.33	82.18	0.184
6/1/99 22:35	2.80	16.9	4.64	78.40	0.176
6/1/99 22:40	2.91	17.8	4.66	82.92	0.186
6/1/99 22:45	3.01	18.6	4.05	75.49	0.169
6/1/99 22:50	3.08	19.2	3.99	76.78	0.172
6/1/99 22:55	3.22	20.4	4.35	88.87	0.199
6/1/99 23:00	3.34	21.5	3.80	81.68	0.183
6/1/99 23:05	3.46	22.5	3.34	75.20	0.169
6/1/99 23:10	3.54	23.2	3.55	82.36	0.185
6/1/99 23:15	3.60	23.8	3.55	84.45	0.190

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

TABLE AII-5 (Continued)

CSO DISCHARGE DATA AT GREENWOOD AVENUE RELIEF SEWER OUTFALL

Date / Time	Stage (ft)	Cross-Sectional Area (ft^2)	Velocity (ft/s)	Discharge (ft^3/s)	Discharge Volume (MG)
6/1/99 23:20	3.68	24.5	4.08	99.95	0.224
6/1/99 23:25	3.77	25.3	2.68	67.81	0.152
6/1/99 23:30	3.83	25.8	2.80	72.22	0.162
6/1/99 23:35	3.88	26.3	2.21	58.02	0.130
6/1/99 23:40	3.95	26.8	1.91	51.27	0.115
6/1/99 23:45	3.98	27.2	1.56	42.38	0.095
6/1/99 23:50	4.04	27.6	1.41	38.99	0.087
6/1/99 23:55	4.12	28.3	1.19	33.73	0.076
6/2/99 0:00	4.13	28.5	1.16	33.06	0.074
6/2/99 0:05	4.16	28.7	0.55	15.79	0.035
6/2/99 0:10	4.19	29.0	0.63	18.28	0.041
6/2/99 0:15	4.20	29.1	0.33	9.61	0.022
6/2/99 0:20	4.25	29.6	0.29	8.57	0.019
6/2/99 0:25	4.27	29.7	0.54	16.04	0.036
6/2/99 0:30	4.28	29.8	0.49	14.61	0.033
6/2/99 0:35	4.28	29.8	0.88	26.25	0.059
6/2/99 0:40	4.24	29.5	0.38	11.21	0.025
6/2/99 0:45	4.27	29.7	0.69	20.51	0.046
6/2/99 0:50	4.26	29.6	0.23	6.82	0.015
6/2/99 0:55	4.27	29.8	0.40	11.91	0.027
6/2/99 1:00	4.27	29.8	0.37	11.01	0.025
6/2/99 1:05	4.27	29.7	0.28	8.33	0.019
6/2/99 1:10	4.27	29.7	0.55	16.34	0.037
6/2/99 1:15	4.22	29.3	0.30	8.80	0.020
6/2/99 1:20	4.23	29.4	0.30	8.81	0.020
6/2/99 1:25	4.23	29.4	0.00	0.00	0.000
6/2/99 1:30	4.22	29.3	0.00	0.00	0.000
6/2/99 1:35	4.21	29.2	0.00	0.00	0.000
6/2/99 1:40	4.20	29.1	0.00	0.00	0.000
6/2/99 1:45	4.17	28.9	0.00	0.00	0.000
6/2/99 1:50	4.16	28.8	0.00	0.00	0.000
6/2/99 1:55	4.15	28.7	0.00	0.00	0.000
6/2/99 2:00	4.13	28.5	0.00	0.00	0.000
6/2/99 2:05	4.11	28.3	0.00	0.00	0.000
6/2/99 2:10	4.09	28.2	0.00	0.00	0.000
6/2/99 2:15	4.07	27.9	0.00	0.00	0.000
6/2/99 2:20	4.06	27.8	0.00	0.00	0.000

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

TABLE AII-5 (Continued)

CSO DISCHARGE DATA AT GREENWOOD AVENUE RELIEF SEWER OUTFALL

Date / Time	Stage (ft)	Cross-Sectional Area (ft^2)	Velocity (ft/s)	Discharge (ft^3/s)	Discharge Volume (MG)
6/2/99 2:25	4.03	27.6	0.00	0.00	0.000
6/2/99 2:30	4.02	27.5	0.00	0.00	0.000
6/2/99 2:35	3.99	27.3	0.00	0.00	0.000
6/2/99 2:40	3.96	27.0	0.00	0.00	0.000
Event Total:					5.0902
12/4/99 22:00	0.87	3.1	0.00	0.00	0.000
12/4/99 22:05	0.87	3.1	0.00	0.00	0.000
12/4/99 22:10	1.32	5.8	5.15	29.80	0.067
12/4/99 22:15	1.69	8.3	5.74	47.58	0.107
12/4/99 22:20	1.72	8.5	6.06	51.52	0.116
12/4/99 22:25	1.73	8.6	5.90	50.49	0.113
12/4/99 22:30	1.56	7.4	5.95	43.80	0.098
12/4/99 22:35	1.61	7.7	5.89	45.58	0.102
12/4/99 22:40	1.61	7.7	5.80	44.84	0.101
12/4/99 22:45	1.58	7.5	5.55	41.69	0.094
12/4/99 22:50	1.58	7.5	5.78	43.34	0.097
12/4/99 22:55	1.56	7.4	5.36	39.68	0.089
12/4/99 23:00	1.52	7.1	5.93	42.29	0.095
12/4/99 23:05	1.52	7.1	5.55	39.39	0.088
12/4/99 23:10	1.57	7.5	5.42	40.49	0.091
12/4/99 23:15	1.51	7.0	5.89	41.29	0.093
12/4/99 23:20	1.51	7.1	5.65	39.87	0.089
12/4/99 23:25	1.49	6.9	5.89	40.73	0.091
12/4/99 23:30	1.52	7.1	5.57	39.68	0.089
12/4/99 23:35	1.56	7.4	5.16	38.02	0.085
12/4/99 23:40	1.50	7.0	5.96	41.54	0.093
12/4/99 23:45	1.51	7.0	5.64	39.69	0.089
12/4/99 23:50	1.46	6.7	5.51	37.00	0.083
12/4/99 23:55	1.51	7.1	5.48	38.67	0.087
12/5/99 0:00	1.54	7.3	5.51	39.96	0.090
12/5/99 0:05	1.57	7.5	5.76	42.95	0.096
12/5/99 0:10	1.58	7.5	5.72	43.12	0.097
12/5/99 0:15	1.65	8.0	5.69	45.57	0.102
12/5/99 0:20	1.68	8.2	5.71	46.89	0.105
12/5/99 0:25	1.68	8.2	5.44	44.52	0.100

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

TABLE AII-5 (Continued)

CSO DISCHARGE DATA AT GREENWOOD AVENUE RELIEF SEWER OUTFALL

Date / Time	Stage (ft)	Cross-Sectional Area (ft^2)	Velocity (ft/s)	Discharge (ft^3/s)	Discharge Volume (MG)
12/5/99 0:30	1.76	8.8	5.97	52.32	0.117
12/5/99 0:35	1.76	8.8	5.89	51.75	0.116
12/5/99 0:40	1.78	8.9	5.56	49.36	0.111
12/5/99 0:45	1.76	8.8	5.76	50.60	0.114
12/5/99 0:50	1.79	9.0	5.96	53.64	0.120
12/5/99 0:55	1.82	9.2	6.04	55.62	0.125
12/5/99 1:00	1.82	9.2	6.04	55.54	0.125
12/5/99 1:05	1.81	9.2	6.02	55.14	0.124
12/5/99 1:10	1.90	9.8	5.93	57.90	0.130
12/5/99 1:15	1.87	9.6	5.95	56.91	0.128
12/5/99 1:20	1.85	9.4	5.74	53.90	0.121
12/5/99 1:25	1.87	9.6	5.81	55.62	0.125
12/5/99 1:30	1.90	9.8	6.31	61.84	0.139
12/5/99 1:35	1.83	9.2	5.80	53.58	0.120
12/5/99 1:40	1.95	10.1	5.32	53.86	0.121
12/5/99 1:45	1.90	9.7	4.91	47.87	0.107
12/5/99 1:50	1.89	9.7	4.98	48.36	0.109
12/5/99 1:55	1.96	10.2	4.86	49.57	0.111
12/5/99 2:00	1.94	10.1	4.73	47.78	0.107
12/5/99 2:05	1.94	10.1	4.52	45.56	0.102
12/5/99 2:10	1.99	10.5	4.55	47.59	0.107
12/5/99 2:15	2.01	10.6	4.15	43.90	0.099
12/5/99 2:20	2.01	10.6	3.96	42.01	0.094
12/5/99 2:25	2.07	11.0	4.21	46.47	0.104
12/5/99 2:30	2.05	10.9	3.99	43.56	0.098
12/5/99 2:35	2.14	11.6	4.28	49.53	0.111
12/5/99 2:40	2.14	11.6	4.23	48.92	0.110
12/5/99 2:45	2.17	11.8	3.69	43.49	0.098
12/5/99 2:50	2.19	12.0	3.44	41.26	0.093
12/5/99 2:55	2.17	11.8	3.08	36.40	0.082
12/5/99 3:00	2.18	11.9	2.75	32.71	0.073
12/5/99 3:05	2.19	11.9	2.46	29.37	0.066
12/5/99 3:10	2.18	11.9	2.21	26.24	0.059
12/5/99 3:15	2.19	12.0	2.00	23.91	0.054
12/5/99 3:20	2.24	12.3	1.74	21.44	0.048
12/5/99 3:25	2.22	12.2	1.70	20.77	0.047
12/5/99 3:30	2.21	12.1	1.70	20.63	0.046

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

TABLE AII-5 (Continued)

CSO DISCHARGE DATA AT GREENWOOD AVENUE RELIEF SEWER OUTFALL

Date / Time	Stage (ft)	Cross-Sectional Area (ft^2)	Velocity (ft/s)	Discharge (ft^3/s)	Discharge Volume (MG)
12/5/99 3:35	2.23	12.3	1.51	18.56	0.042
12/5/99 3:40	2.21	12.2	1.39	16.90	0.038
12/5/99 3:45	2.22	12.2	1.27	15.47	0.035
12/5/99 3:50	2.21	12.1	1.22	14.80	0.033
12/5/99 3:55	2.22	12.2	1.38	16.84	0.038
12/5/99 4:00	2.21	12.1	1.39	16.82	0.038
12/5/99 4:05	2.20	12.0	1.40	16.84	0.038
12/5/99 4:10	2.21	12.1	1.45	17.61	0.040
12/5/99 4:15	2.25	12.4	1.33	16.52	0.037
12/5/99 4:20	2.23	12.3	1.46	17.89	0.040
12/5/99 4:25	2.22	12.2	1.46	17.85	0.040
12/5/99 4:30	2.24	12.3	1.71	21.11	0.047
12/5/99 4:35	2.23	12.3	1.65	20.21	0.045
12/5/99 4:40	2.24	12.4	1.79	22.12	0.050
12/5/99 4:45	2.22	12.2	1.87	22.79	0.051
12/5/99 4:50	2.25	12.5	2.14	26.67	0.060
12/5/99 4:55	2.24	12.4	2.27	28.09	0.063
12/5/99 5:00	2.26	12.5	2.62	32.77	0.074
12/5/99 5:05	2.26	12.5	2.52	31.50	0.071
12/5/99 5:10	2.27	12.6	2.47	31.14	0.070
12/5/99 5:15	2.27	12.6	2.88	36.18	0.081
12/5/99 5:20	2.27	12.6	2.92	36.82	0.083
12/5/99 5:25	2.30	12.8	2.88	36.88	0.083
12/5/99 5:30	2.31	12.9	3.55	45.85	0.103
12/5/99 5:35	2.31	12.9	3.38	43.63	0.098
12/5/99 5:40	2.30	12.9	3.34	42.93	0.096
12/5/99 5:45	2.33	13.0	3.83	49.95	0.112
12/5/99 5:50	2.36	13.3	3.39	45.07	0.101
12/5/99 5:55	2.33	13.0	3.32	43.32	0.097
12/5/99 6:00	2.33	13.1	3.24	42.38	0.095
12/5/99 6:05	2.34	13.2	3.51	46.16	0.104
12/5/99 6:10	2.36	13.3	3.29	43.74	0.098
12/5/99 6:15	2.37	13.3	3.50	46.72	0.105
12/5/99 6:20	2.36	13.3	3.37	44.80	0.101
12/5/99 6:25	2.38	13.4	3.59	48.24	0.108
12/5/99 6:30	2.37	13.3	3.35	44.69	0.100
12/5/99 6:35	2.34	13.2	2.99	39.35	0.088

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

TABLE AII-5 (Continued)

CSO DISCHARGE DATA AT GREENWOOD AVENUE RELIEF SEWER OUTFALL

Date / Time	Stage (ft)	Cross-Sectional Area (ft^2)	Velocity (ft/s)	Discharge (ft^3/s)	Discharge Volume (MG)
12/5/99 6:40	2.35	13.2	2.95	38.94	0.087
12/5/99 6:45	2.34	13.2	2.89	38.03	0.085
12/5/99 6:50	2.33	13.1	2.45	32.03	0.072
12/5/99 6:55	2.33	13.1	2.61	34.10	0.077
12/5/99 7:00	2.36	13.3	2.02	26.82	0.060
12/5/99 7:05	2.34	13.1	2.28	29.88	0.067
12/5/99 7:10	2.32	13.0	2.38	30.87	0.069
12/5/99 7:15	2.32	13.0	2.59	33.61	0.075
12/5/99 7:20	2.36	13.3	2.39	31.73	0.071
12/5/99 7:25	2.33	13.1	2.21	28.94	0.065
12/5/99 7:30	2.34	13.1	1.82	23.88	0.054
12/5/99 7:35	2.33	13.1	1.89	24.72	0.055
12/5/99 7:40	2.30	12.9	1.63	20.95	0.047
12/5/99 7:45	2.31	12.9	1.66	21.48	0.048
12/5/99 7:50	2.32	13.0	1.45	18.83	0.042
12/5/99 7:55	2.32	13.0	1.34	17.37	0.039
12/5/99 8:00	2.28	12.7	1.45	18.39	0.041
12/5/99 8:05	2.31	12.9	1.16	14.95	0.034
12/5/99 8:10	2.27	12.6	1.00	12.59	0.028
12/5/99 8:15	2.28	12.6	0.95	12.01	0.027
12/5/99 8:20	2.26	12.5	0.85	10.66	0.024
12/5/99 8:25	2.27	12.6	1.01	12.74	0.029
12/5/99 8:30	2.26	12.5	1.11	13.87	0.031
12/5/99 8:35	2.23	12.3	0.92	11.32	0.025
12/5/99 8:40	2.25	12.4	0.71	8.83	0.020
12/5/99 8:45	2.24	12.4	0.65	8.04	0.018
12/5/99 8:50	2.25	12.5	0.74	9.22	0.021
12/5/99 8:55	2.24	12.3	0.80	9.86	0.022
12/5/99 9:00	2.21	12.2	0.47	5.71	0.013
12/5/99 9:05	2.24	12.3	0.73	8.99	0.020
12/5/99 9:10	2.21	12.1	0.35	4.23	0.009
12/5/99 9:15	2.19	12.0	0.54	6.46	0.014
12/5/99 9:20	2.19	12.0	0.36	4.30	0.010
12/5/99 9:25	2.18	11.9	0.00	0.00	0.000
12/5/99 9:30	2.21	12.1	0.56	6.77	0.015
12/5/99 9:35	2.17	11.8	0.41	4.84	0.011
12/5/99 9:40	2.17	11.8	0.41	4.85	0.011

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

TABLE AII-5 (Continued)

CSO DISCHARGE DATA AT GREENWOOD AVENUE RELIEF SEWER OUTFALL

Date / Time	Stage (ft)	Cross-Sectional Area (ft^2)	Velocity (ft/s)	Discharge (ft^3/s)	Discharge Volume (MG)
12/5/99 9:45	2.15	11.6	0.76	8.85	0.020
12/5/99 9:50	2.15	11.7	0.86	10.04	0.023
12/5/99 9:55	2.11	11.3	0.87	9.87	0.022
12/5/99 10:00	2.08	11.2	0.75	8.36	0.019
12/5/99 10:05	2.10	11.3	0.92	10.36	0.023
12/5/99 10:10	2.09	11.2	1.15	12.85	0.029
12/5/99 10:15	2.10	11.3	1.34	15.12	0.034
12/5/99 10:20	2.09	11.2	1.21	13.54	0.030
12/5/99 10:25	2.06	11.0	1.61	17.69	0.040
12/5/99 10:30	2.06	11.0	1.74	19.06	0.043
12/5/99 10:35	2.07	11.0	1.84	20.31	0.046
12/5/99 10:40	2.07	11.1	1.88	20.84	0.047
12/5/99 10:45	2.04	10.8	1.90	20.50	0.046
12/5/99 10:50	2.06	10.9	2.10	22.99	0.052
12/5/99 10:55	2.04	10.8	2.26	24.44	0.055
12/5/99 11:00	2.04	10.8	2.00	21.67	0.049
12/5/99 11:05	2.03	10.7	1.98	21.24	0.048
12/5/99 11:10	2.02	10.7	1.94	20.67	0.046
12/5/99 11:15	2.02	10.7	2.17	23.18	0.052
12/5/99 11:20	2.01	10.6	1.98	20.92	0.047
12/5/99 11:25	2.02	10.7	1.90	20.24	0.045
12/5/99 11:30	1.97	10.3	2.13	21.88	0.049
12/5/99 11:35	1.99	10.5	2.01	21.07	0.047
12/5/99 11:40	1.98	10.4	1.44	14.92	0.033
12/5/99 11:45	1.95	10.1	1.60	16.19	0.036
12/5/99 11:50	1.97	10.3	1.75	17.99	0.040
12/5/99 11:55	1.97	10.3	1.83	18.91	0.042
12/5/99 12:00	1.95	10.1	1.86	18.83	0.042
12/5/99 12:05	1.96	10.2	1.83	18.73	0.042
12/5/99 12:10	1.94	10.1	1.74	17.55	0.039
12/5/99 12:15	1.94	10.1	1.80	18.20	0.041
12/5/99 12:20	1.91	9.9	1.80	17.76	0.040
12/5/99 12:25	1.92	9.9	1.74	17.28	0.039
12/5/99 12:30	1.89	9.7	1.66	16.06	0.036
12/5/99 12:35	1.89	9.7	2.01	19.58	0.044
12/5/99 12:40	1.89	9.7	1.91	18.54	0.042
12/5/99 12:45	1.92	9.9	2.02	20.02	0.045

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

TABLE AII-5 (Continued)

CSO DISCHARGE DATA AT GREENWOOD AVENUE RELIEF SEWER OUTFALL

Date / Time	Stage (ft)	Cross-Sectional Area (ft^2)	Velocity (ft/s)	Discharge (ft^3/s)	Discharge Volume (MG)
12/5/99 12:50	1.91	9.9	2.08	20.49	0.046
12/5/99 12:55	1.91	9.9	2.06	20.37	0.046
12/5/99 13:00	1.94	10.1	2.06	20.75	0.047
12/5/99 13:05	1.91	9.9	1.83	18.03	0.040
12/5/99 13:10	1.88	9.6	2.56	24.60	0.055
12/5/99 13:15	1.92	9.9	2.45	24.35	0.055
12/5/99 13:20	1.99	10.5	2.92	30.59	0.069
12/5/99 13:25	1.99	10.4	2.91	30.31	0.068
12/5/99 13:30	2.00	10.5	3.40	35.79	0.080
12/5/99 13:35	2.01	10.6	3.63	38.38	0.086
12/5/99 13:40	2.01	10.6	3.62	38.35	0.086
12/5/99 13:45	2.02	10.7	3.93	42.08	0.094
12/5/99 13:50	2.06	11.0	4.20	46.04	0.103
12/5/99 13:55	2.13	11.5	4.12	47.46	0.106
12/5/99 14:00	2.12	11.4	4.02	45.81	0.103
12/5/99 14:05	2.14	11.6	4.16	48.14	0.108
12/5/99 14:10	2.17	11.8	3.97	46.92	0.105
12/5/99 14:15	2.21	12.1	3.51	42.62	0.096
12/5/99 14:20	2.18	11.9	3.82	45.32	0.102
12/5/99 14:25	2.22	12.2	3.62	44.04	0.099
12/5/99 14:30	2.20	12.0	3.65	43.89	0.098
12/5/99 14:35	2.27	12.6	3.98	50.03	0.112
12/5/99 14:40	2.27	12.6	3.99	50.15	0.113
12/5/99 14:45	2.28	12.6	3.93	49.71	0.112
12/5/99 14:50	2.27	12.6	3.36	42.21	0.095
12/5/99 14:55	2.29	12.7	3.71	47.24	0.106
12/5/99 15:00	2.26	12.5	3.48	43.50	0.098
12/5/99 15:05	2.26	12.5	3.31	41.43	0.093
12/5/99 15:10	2.27	12.6	3.27	41.10	0.092
12/5/99 15:15	2.30	12.8	3.04	38.93	0.087
12/5/99 15:20	2.25	12.5	2.92	36.41	0.082
12/5/99 15:25	2.26	12.5	3.00	37.59	0.084
12/5/99 15:30	2.24	12.4	2.56	31.62	0.071
12/5/99 15:35	2.22	12.2	2.72	33.26	0.075
12/5/99 15:40	2.22	12.2	2.21	26.97	0.061
12/5/99 15:45	2.23	12.3	2.07	25.39	0.057
12/5/99 15:50	2.22	12.2	1.97	23.98	0.054

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

TABLE AII-5 (Continued)

CSO DISCHARGE DATA AT GREENWOOD AVENUE RELIEF SEWER OUTFALL

Date / Time	Stage (ft)	Cross-Sectional Area (ft^2)	Velocity (ft/s)	Discharge (ft^3/s)	Discharge Volume (MG)
12/5/99 15:55	2.18	11.9	1.48	17.60	0.040
12/5/99 16:00	2.17	11.8	1.25	14.76	0.033
12/5/99 16:05	2.15	11.6	1.43	16.64	0.037
12/5/99 16:10	2.13	11.5	1.17	13.49	0.030
12/5/99 16:15	2.11	11.4	0.88	10.00	0.022
12/5/99 16:20	2.11	11.4	0.94	10.69	0.024
12/5/99 16:25	2.10	11.2	0.86	9.67	0.022
12/5/99 16:30	2.09	11.2	0.77	8.62	0.019
12/5/99 16:35	2.08	11.1	0.69	7.66	0.017
12/5/99 16:40	2.07	11.0	0.64	7.07	0.016
12/5/99 16:45	2.05	10.9	0.31	3.38	0.008
12/5/99 16:50	2.06	10.9	0.00	0.00	0.000
12/5/99 16:55	2.06	11.0	0.00	0.00	0.000
12/5/99 17:00	2.04	10.8	0.00	0.00	0.000
12/5/99 17:05	1.99	10.5	0.00	0.00	0.000
12/5/99 17:10	2.01	10.6	0.00	0.00	
Event Total:					15.269

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

TABLE AII-6

CSO DISCHARGE DATA AT OLMSTED ROAD SEWER OUTFALL

Date / Time	Outfall Chamber 1 CSO Flow* (ft^3/s)	Outfall Chamber 1 CSO Volume** (MG)	Outfall Chamber 2 CSO Flow* (ft^3/s)	Outfall Chamber 2 CSO Volume** (MG)	Total CSO Discharge Volume (MG)
8/16/97 18:00	0.79	0.0018	0.00	0	0.002
8/16/97 18:05	0.71	0.0016	3.42	0.0077	0.009
8/16/97 18:10	0.84	0.0019	0.00	0	0.002
8/16/97 18:15	1.67	0.0037	-0.75	0	0.004
8/16/97 18:20	14.93	0.0335	-6.38	0	0.033
8/16/97 18:25	-96.08	0	130.22	0.2922	0.292
8/16/97 18:30	0.18	0.0004	28.95	0.0650	0.065
8/16/97 18:35	22.74	0.0510	26.64	0.0598	0.111
8/16/97 18:40	17.40	0.0391	28.53	0.0640	0.103
8/16/97 18:45	-27.83	0	30.96	0.0695	0.069
8/16/97 18:50	8.13	0.0182	27.92	0.0627	0.081
8/16/97 18:55	21.80	0.0489	25.78	0.0579	0.107
8/16/97 19:00	22.91	0.0514	25.59	0.0574	0.109
8/16/97 19:05	18.53	0.0416	24.21	0.0543	0.096
8/16/97 19:10	11.44	0.0257	26.98	0.0605	0.086
8/16/97 19:15	11.35	0.0255	30.48	0.0684	0.094
8/16/97 19:20	10.93	0.0245	26.29	0.0590	0.084
8/16/97 19:25	-0.14	0	23.14	0.0519	0.052
8/16/97 19:30	2.56	0.0057	29.75	0.0668	0.073
8/16/97 19:35	2.28	0.0051	23.48	0.0527	0.058
8/16/97 19:40	12.34	0.0277	-1.49	0	0.028
8/16/97 19:45	4.39	0.0098	22.25	0.0499	0.060
8/16/97 19:50	0.92	0.0021	23.60	0.0530	0.055
8/16/97 19:55	4.72	0.0106	13.59	0.0305	0.041
8/16/97 20:00	4.67	0.0105	24.23	0.0544	0.065
8/16/97 20:05	1.52	0.0034	20.00	0.0449	0.048
8/16/97 20:10	3.17	0.0071	25.20	0.0565	0.064
8/16/97 20:15	4.93	0.0111	16.12	0.0362	0.047
8/16/97 20:20	1.67	0.0038	20.54	0.0461	0.050
8/16/97 20:25	9.24	0.0207	20.47	0.0459	0.067
8/16/97 20:30	2.87	0.0064	15.58	0.0350	0.041
8/16/97 20:35	3.74	0.0084	22.14	0.0497	0.058
8/16/97 20:40	5.89	0.0132	18.07	0.0405	0.054
8/16/97 20:45	2.01	0.0045	8.86	0.0199	0.024
8/16/97 20:50	3.11	0.0070	-56.10	0	0.007
8/16/97 20:55	7.17	0.0161	14.05	0.0315	0.048

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

TABLE AII-6 (Continued)

CSO DISCHARGE DATA AT OLMSTED ROAD SEWER OUTFALL

Date / Time	Outfall Chamber 1 CSO Flow* (ft^3/s)	Outfall Chamber 1 CSO Volume** (MG)	Outfall Chamber 2 CSO Flow* (ft^3/s)	Outfall Chamber 2 CSO Volume** (MG)	Total CSO Discharge Volume (MG)
8/16/97 21:00	3.38	0.0076	-134.64	0	0.008
8/16/97 21:05	6.95	0.0156	-66.90	0	0.016
8/16/97 21:10	3.96	0.0089	14.53	0.0326	0.041
8/16/97 21:15	5.97	0.0134	11.05	0.0248	0.038
8/16/97 21:20	7.18	0.0161	7.87	0.0177	0.034
8/16/97 21:25	6.35	0.0143	7.16	0.0161	0.030
8/16/97 21:30	6.67	0.0150	10.03	0.0225	0.037
8/16/97 21:35	5.68	0.0128	9.63	0.0216	0.034
8/16/97 21:40	7.00	0.0157	20.78	0.0466	0.062
8/16/97 21:45	7.13	0.0160	11.09	0.0249	0.041
8/16/97 21:50	-18.05	0	34.24	0.0768	0.077
8/16/97 21:55	-71.00	0	85.18	0.1911	0.191
8/16/97 22:00	-115.93	0	129.77	0.2912	0.291
8/16/97 22:05	5.49	0.0123	26.16	0.0587	0.071
8/16/97 22:10	9.67	0.0217	3.83	0.0086	0.030
8/16/97 22:15	5.72	0.0128	6.58	0.0148	0.028
8/16/97 22:20	5.64	0.0127	26.55	0.0596	0.072
8/16/97 22:25	4.68	0.0105	6.27	0.0141	0.025
8/16/97 22:30	3.98	0.0089	6.74	0.0151	0.024
8/16/97 22:35	4.35	0.0098	6.92	0.0155	0.025
8/16/97 22:40	4.07	0.0091	6.54	0.0147	0.024
8/16/97 22:45	1.44	0.0032	9.74	0.0219	0.025
8/16/97 22:50	2.91	0.0065	6.50	0.0146	0.021
8/16/97 22:55	-0.37	0	6.68	0.0150	0.015
8/16/97 23:00	2.62	0.0059	6.51	0.0146	0.020
8/16/97 23:05	1.60	0.0036	7.31	0.0164	0.020
8/16/97 23:10	-0.97	0	10.02	0.0225	0.022
8/16/97 23:15	1.09	0.0024	5.14	0.0115	0.014
8/16/97 23:20	1.05	0.0024	5.49	0.0123	0.015
8/16/97 23:25	20.43	0.0458	-9.57	0	0.046
8/16/97 23:30	20.12	0.0452	-8.15	0	0.045
8/16/97 23:35	-4.01	0	14.73	0.0331	0.033
8/16/97 23:40	20.33	0.0456	-15.10	0	0.046
8/16/97 23:45	9.29	0.0209	1.89	0.0042	0.025
8/16/97 23:50	9.07	0.0204	-2.37	0	0.020
8/16/97 23:55	22.45	0.0504	-15.53	0	0.050

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

TABLE AII-6 (Continued)

CSO DISCHARGE DATA AT OLMSTED ROAD SEWER OUTFALL

Date / Time	Outfall Chamber 1 CSO Flow* (ft^3/s)	Outfall Chamber 1 CSO Volume** (MG)	Outfall Chamber 2 CSO Flow* (ft^3/s)	Outfall Chamber 2 CSO Volume** (MG)	Total CSO Discharge Volume (MG)
8/17/97 0:00	16.25	0.0365	-9.70	0	0.036
8/17/97 0:05	-0.48	0	7.08	0.0159	0.016
8/17/97 0:10	1.93	0.0043	9.26	0.0208	0.025
8/17/97 0:15	19.41	0.0436	-8.26	0	0.044
8/17/97 0:20	9.69	0.0217	1.38	0.0031	0.025
8/17/97 0:25	-3.82	0	14.76	0.0331	0.033
8/17/97 0:30	1.21	0.0027	-16.96	0	0.003
8/17/97 0:35	1.40	0.0031	35.30	0.0792	0.082
8/17/97 0:40	4.67	0.0105	22.28	0.0500	0.060
8/17/97 0:45	5.02	0.0113	45.29	0.1016	0.113
8/17/97 0:50	21.15	0.0475	26.20	0.0588	0.106
8/17/97 0:55	112.14	0.2516	-95.24	0	0.252
8/17/97 1:00	-3.73	0	18.74	0.0420	0.042
8/17/97 1:05	-17.85	0	35.35	0.0793	0.079
8/17/97 1:10	-77.50	0	95.20	0.2136	0.214
8/17/97 1:15	-46.69	0	66.09	0.1483	0.148
8/17/97 1:20	0.37	0.0008	26.87	0.0603	0.061
8/17/97 1:25	2.63	0.0059	21.26	0.0477	0.054
8/17/97 1:30	6.05	0.0136	38.34	0.0860	0.100
8/17/97 1:35	-6.46	0	24.16	0.0542	0.054
8/17/97 1:40	-67.43	0	117.83	0.2644	0.264
8/17/97 1:45	2.45	0.0055	31.71	0.0712	0.077
8/17/97 1:50	4.13	0.0093	12.44	0.0279	0.037
8/17/97 1:55	-81.45	0	94.36	0.2117	0.212
8/17/97 2:00	-102.50	0	117.84	0.2644	0.264
8/17/97 2:05	-5.23	0	21.14	0.0474	0.047
8/17/97 2:10	6.20	0.0139	8.94	0.0201	0.034
8/17/97 2:15	6.33	0.0142	9.03	0.0203	0.034
8/17/97 2:20	6.19	0.0139	8.24	0.0185	0.032
8/17/97 2:25	-27.95	0	60.48	0.1357	0.136
8/17/97 2:30	-111.83	0	153.42	0.3443	0.344
8/17/97 2:35	-12.20	0	29.95	0.0672	0.067
8/17/97 2:40	7.36	0.0165	11.50	0.0258	0.042
8/17/97 2:45	-101.88	0	121.07	0.2717	0.272
8/17/97 2:50	5.64	0.0126	37.04	0.0831	0.096
8/17/97 2:55	7.78	0.0175	17.91	0.0402	0.058

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

TABLE AII-6 (Continued)

CSO DISCHARGE DATA AT OLMSTED ROAD SEWER OUTFALL

Date / Time	Outfall Chamber 1 CSO Flow* (ft^3/s)	Outfall Chamber 1 CSO Volume** (MG)	Outfall Chamber 2 CSO Flow* (ft^3/s)	Outfall Chamber 2 CSO Volume** (MG)	Total CSO Discharge Volume (MG)
8/17/97 3:00	-14.37	0	53.59	0.1202	0.120
8/17/97 3:05	6.32	0.0142	25.27	0.0567	0.071
8/17/97 3:10	-28.98	0	72.09	0.1618	0.162
8/17/97 3:15	5.88	0.0132	11.29	0.0253	0.039
8/17/97 3:20	-72.77	0	88.89	0.1995	0.199
8/17/97 3:25	-101.42	0	111.17	0.2495	0.249
8/17/97 3:30	-3.17	0	15.74	0.0353	0.035
8/17/97 3:35	6.36	0.0143	8.59	0.0193	0.034
8/17/97 3:40	-4.15	0	17.81	0.0400	0.040
8/17/97 3:45	-17.17	0	31.65	0.0710	0.071
8/17/97 3:50	-31.93	0	46.44	0.1042	0.104
8/17/97 3:55	14.08	0.0316	0.00	0	0.032
8/17/97 4:00	6.94	0.0156	6.20	0.0139	0.029
8/17/97 4:05	-99.46	0	112.76	0.2530	0.253
8/17/97 4:10	5.28	0.0118	7.32	0.0164	0.028
8/17/97 4:15	6.14	0.0138	7.00	0.0157	0.029
8/17/97 4:20	6.19	0.0139	6.20	0.0139	0.028
8/17/97 4:25	4.21	0.0094	8.11	0.0182	0.028
8/17/97 4:30	-50.56	0	62.66	0.1406	0.141
8/17/97 4:35	5.61	0.0126	6.20	0.0139	0.027
8/17/97 4:40	7.81	0.0175	4.45	0.0100	0.028
8/17/97 4:45	5.19	0.0116	6.36	0.0143	0.026
8/17/97 4:50	2.45	0.0055	8.75	0.0196	0.025
8/17/97 4:55	4.86	0.0109	5.89	0.0132	0.024
8/17/97 5:00	5.38	0.0121	5.41	0.0121	0.024
8/17/97 5:05	4.91	0.0110	6.36	0.0143	0.025
8/17/97 5:10	1.00	0.0022	10.34	0.0232	0.025
8/17/97 5:15	0.52	0.0012	9.38	0.0211	0.022
8/17/97 5:20	3.37	0.0076	5.60	0.0126	0.020
8/17/97 5:25	2.66	0.0060	7.00	0.0157	0.022
8/17/97 5:30	9.51	0.0213	0.00	0	0.021
8/17/97 5:35	9.50	0.0213	0.00	0	0.021
8/17/97 5:40	9.20	0.0207	0.00	0	0.021
8/17/97 5:45	1.29	0.0029	7.32	0.0164	0.019
8/17/97 5:50	9.07	0.0203	0.00	0	0.020
8/17/97 5:55	3.99	0.0090	5.57	0.0125	0.021

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

TABLE AII-6 (Continued)

CSO DISCHARGE DATA AT OLMSTED ROAD SEWER OUTFALL

Date / Time	Outfall Chamber 1 CSO Flow* (ft^3/s)	Outfall Chamber 1 CSO Volume** (MG)	Outfall Chamber 2 CSO Flow* (ft^3/s)	Outfall Chamber 2 CSO Volume** (MG)	Total CSO Discharge Volume (MG)
8/17/97 6:00	-6.69	0	15.27	0.0343	0.034
8/17/97 6:05	27.53	0.0618	-18.29	0	0.062
8/17/97 6:10	18.79	0.0422	-10.02	0	0.042
8/17/97 6:15	19.71	0.0442	-11.13	0	0.044
8/17/97 6:20	18.11	0.0406	-9.70	0	0.041
8/17/97 6:25	8.78	0.0197	0.00	0	0.020
8/17/97 6:30	0.08	0.0002	7.32	0.0164	0.017
8/17/97 6:35	7.61	0.0171	0.00	0	0.017
8/17/97 6:40	14.58	0.0327	-7.00	0	0.033
8/17/97 6:45	7.44	0.0167	0.00	0	0.017
8/17/97 6:50	7.31	0.0164	0.00	0	0.016
8/17/97 6:55	7.95	0.0178	0.00	0	0.018
8/17/97 7:00	7.79	0.0175	0.00	0	0.017
8/17/97 7:05	7.69	0.0173	0.00	0	0.017
8/17/97 7:10	7.31	0.0164	0.00	0	0.016
8/17/97 7:15	18.97	0.0426	-11.61	0	0.043
8/17/97 7:20	17.49	0.0392	-10.66	0	0.039
8/17/97 7:25	7.51	0.0168	0.00	0	0.017
8/17/97 7:30	13.86	0.0311	-7.48	0	0.031
8/17/97 7:35	7.11	0.0159	0.00	0	0.016
8/17/97 7:40	6.98	0.0157	0.00	0	0.016
8/17/97 7:45	13.62	0.0306	-7.48	0	0.031
8/17/97 7:50	6.41	0.0144	0.00	0	0.014
8/17/97 7:55	6.66	0.0149	0.00	0	0.015
8/17/97 8:00	7.04	0.0158	0.00	0	0.016
8/17/97 8:05	14.32	0.0321	-7.63	0	0.032
8/17/97 8:10	6.83	0.0153	0.00	0	0.015
8/17/97 8:15	6.63	0.0149	0.00	0	0.015
8/17/97 8:20	14.27	0.0320	-7.63	0	0.032
8/17/97 8:25	6.43	0.0144	0.00	0	0.014
8/17/97 8:30	6.44	0.0145	0.00	0	0.014
8/17/97 8:35	6.81	0.0153	0.00	0	0.015
8/17/97 8:40	13.59	0.0305	-7.48	0	0.031
8/17/97 8:45	5.83	0.0131	0.00	0	0.013
8/17/97 8:50	6.05	0.0136	0.00	0	0.014
8/17/97 8:55	13.24	0.0297	-7.32	0	0.030

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

TABLE AII-6 (Continued)

CSO DISCHARGE DATA AT OLMSTED ROAD SEWER OUTFALL

Date / Time	Outfall Chamber 1 CSO Flow* (ft^3/s)	Outfall Chamber 1 CSO Volume** (MG)	Outfall Chamber 2 CSO Flow* (ft^3/s)	Outfall Chamber 2 CSO Volume** (MG)	Total CSO Discharge Volume (MG)
8/17/97 9:00	5.74	0.0129	0.00	0	0.013
8/17/97 9:05	14.19	0.0318	-7.95	0	0.032
8/17/97 9:10	5.74	0.0129	0.00	0	0.013
8/17/97 9:15	13.31	0.0299	-7.48	0	0.030
8/17/97 9:20	5.76	0.0129	0.00	0	0.013
8/17/97 9:25	13.05	0.0293	-7.32	0	0.029
8/17/97 9:30	5.72	0.0128	0.00	0	0.013
8/17/97 9:35	6.61	0.0148	0.00	0	0.015
8/17/97 9:40	13.95	0.0313	-7.79	0	0.031
8/17/97 9:45	12.29	0.0276	-6.68	0	0.028
8/17/97 9:50	13.48	0.0303	-7.63	0	0.030
8/17/97 9:55	5.91	0.0133	0.00	0	0.013
8/17/97 10:00	5.94	0.0133	0.00	0	0.013
8/17/97 10:05	5.75	0.0129	0.00	0	0.013
8/17/97 10:10	12.81	0.0287	-7.63	0	0.029
8/17/97 10:15	13.36	0.0300	-7.63	0	0.030
8/17/97 10:20	13.68	0.0307	-7.95	0	0.031
8/17/97 10:25	4.95	0.0111	0.00	0	0.011
8/17/97 10:30	12.80	0.0287	-7.63	0	0.029
8/17/97 10:35	12.95	0.0291	-7.79	0	0.029
8/17/97 10:40	11.97	0.0269	-7.00	0	0.027
8/17/97 10:45	5.19	0.0116	0.00	0	0.012
8/17/97 10:50	12.81	0.0288	-7.63	0	0.029
8/17/97 10:55	12.50	0.0281	-7.63	0	0.028
8/17/97 11:00	12.62	0.0283	-7.32	0	0.028
8/17/97 11:05	5.37	0.0121	0.00	0	0.012
8/17/97 11:10	12.83	0.0288	-7.63	0	0.029
8/17/97 11:15	4.82	0.0108	0.00	0	0.011
8/17/97 11:20	5.40	0.0121	0.00	0	0.012
8/17/97 11:25	12.55	0.0282	-7.48	0	0.028
8/17/97 11:30	4.79	0.0107	0.00	0	0.011
8/17/97 11:35	19.55	0.0439	-14.47	0	0.044
8/17/97 11:40	4.79	0.0107	0.00	0	0.011
8/17/97 11:45	17.53	0.0393	-16.01	0	0.039
8/17/97 11:50	18.55	0.0416	-13.36	0	0.042
8/17/97 11:55	12.57	0.0282	-7.63	0	0.028

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

TABLE AII-6 (Continued)

CSO DISCHARGE DATA AT OLMSTED ROAD SEWER OUTFALL

Date / Time	Outfall Chamber 1 CSO Flow* (ft^3/s)	Outfall Chamber 1 CSO Volume** (MG)	Outfall Chamber 2 CSO Flow* (ft^3/s)	Outfall Chamber 2 CSO Volume** (MG)	Total CSO Discharge Volume (MG)
8/17/97 12:00	4.44	0.0100	0.00	0	0.010
8/17/97 12:05	12.18	0.0273	-10.63	0	0.027
8/17/97 12:10	4.76	0.0107	0.00	0	0.011
8/17/97 12:15	4.46	0.0100	-2.66	0	0.010
8/17/97 12:20	11.98	0.0269	-10.18	0	0.027
8/17/97 12:25	4.53	0.0102	-2.74	0	0.010
8/17/97 12:30	4.44	0.0100	-1.83	0	0.010
8/17/97 12:35	21.80	0.0489	-19.49	0	0.049
8/17/97 12:40	4.36	0.0098	-2.62	0	0.010
8/17/97 12:45	12.06	0.0271	-10.30	0	0.027
8/17/97 12:50	12.06	0.0271	-10.46	0	0.027
8/17/97 12:55	4.57	0.0102	-1.94	0	0.010
8/17/97 13:00	4.35	0.0098	-2.67	0	0.010
8/17/97 13:05	11.98	0.0269	-10.44	0	0.027
8/17/97 13:10	4.27	0.0096	-2.40	0	0.010
8/17/97 13:15	4.23	0.0095	-3.21	0	0.009
8/17/97 13:20	11.65	0.0262	-8.92	0	0.026
8/17/97 13:25	3.98	0.0089	-2.47	0	0.009
8/17/97 13:30	4.11	0.0092	-2.75	0	0.009
8/17/97 13:35	12.15	0.0273	-11.02	0	0.027
8/17/97 13:40	3.96	0.0089	-1.72	0	0.009
8/17/97 13:45	11.48	0.0258	-10.66	0	0.026
8/17/97 13:50	4.05	0.0091	0.00	0	0.009
8/17/97 13:55	3.93	0.0088	0.00	0	0.009
8/17/97 14:00	11.48	0.0258	-11.39	0	0.026
8/17/97 14:05	4.01	0.0090	-1.83	0	0.009
8/17/97 14:10	11.95	0.0268	-9.43	0	0.027
8/17/97 14:15	4.08	0.0092	-1.07	0	0.009
8/17/97 14:20	3.91	0.0088	-1.10	0	0.009
8/17/97 14:25	4.16	0.0093	-1.11	0	0.009
8/17/97 14:30	3.53	0.0079	-1.17	0	0.008
8/17/97 14:35	3.97	0.0089	-1.09	0	0.009
8/17/97 14:40	3.73	0.0084	-1.55	0	0.008
8/17/97 14:45	3.96	0.0089	0.00	0	0.009
8/17/97 14:50	4.05	0.0091	-0.99	0	0.009
8/17/97 14:55	3.67	0.0082	-1.44	0	0.008

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

TABLE AII-6 (Continued)

CSO DISCHARGE DATA AT OLMSTED ROAD SEWER OUTFALL

Date / Time	Outfall Chamber 1 CSO Flow* (ft^3/s)	Outfall Chamber 1 CSO Volume** (MG)	Outfall Chamber 2 CSO Flow* (ft^3/s)	Outfall Chamber 2 CSO Volume** (MG)	Total CSO Discharge Volume (MG)
8/17/97 15:00	3.64	0.0082	0.94	0.0021	0.010
8/17/97 15:05	3.82	0.0086	-0.86	0	0.009
8/17/97 15:10	3.80	0.0085	-0.86	0	0.009
8/17/97 15:15	3.79	0.0085	0.88	0.0020	0.010
8/17/97 15:20	3.92	0.0088	0.80	0.0018	0.011
8/17/97 15:25	4.08	0.0091	-0.82	0	0.009
8/17/97 15:30	3.89	0.0087	0.77	0.0017	0.010
8/17/97 15:35	3.70	0.0083	-11.20	0	0.008
8/17/97 15:40	3.78	0.0085	-0.87	0	0.008
8/17/97 15:45	3.88	0.0087	-0.71	0	0.009
8/17/97 15:50	3.65	0.0082	-2.38	0	0.008
8/17/97 15:55	3.76	0.0084	-10.01	0	0.008
8/17/97 16:00	3.56	0.0080	-14.16	0	0.008
8/17/97 16:05	3.69	0.0083	-0.79	0	0.008
8/17/97 16:10	3.42	0.0077	-0.63	0	0.008
8/17/97 16:15	3.63	0.0082	-0.58	0	0.008
8/17/97 16:20	3.43	0.0077	-0.53	0	0.008
8/17/97 16:25	3.46	0.0078	-0.53	0	0.008
8/17/97 16:30	3.65	0.0082	-0.57	0	0.008
8/17/97 16:35	3.37	0.0076	0.50	0.0011	0.009
8/17/97 16:40	3.44	0.0077	0.48	0.0011	0.009
8/17/97 16:45	11.95	0.0268	-9.37	0	0.027
8/17/97 16:50	3.37	0.0076	0.45	0.0010	0.009
8/17/97 16:55	3.35	0.0075	-0.52	0	0.008
8/17/97 17:00	3.50	0.0078	0.50	0.0011	0.009
8/17/97 17:05	3.84	0.0086	-0.79	0	0.009
8/17/97 17:10	15.16	0.0340	-10.64	0	0.034
8/17/97 17:15	6.52	0.0146	0.00	0	0.015
8/17/97 17:20	7.00	0.0157	0.00	0	0.016
8/17/97 17:25	13.85	0.0311	-6.92	0	0.031
8/17/97 17:30	15.30	0.0343	-6.84	0	0.034
8/17/97 17:35	10.14	0.0228	-2.91	0	0.023
8/17/97 17:40	-84.03	0	96.06	0.2156	0.216
8/17/97 17:45	5.91	0.0133	6.84	0.0153	0.029
8/17/97 17:50	6.01	0.0135	6.20	0.0139	0.027
8/17/97 17:55	-69.79	0	81.11	0.1820	0.182

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

TABLE AII-6 (Continued)

CSO DISCHARGE DATA AT OLMSTED ROAD SEWER OUTFALL

Date / Time	Outfall Chamber 1 CSO Flow* (ft^3/s)	Outfall Chamber 1 CSO Volume** (MG)	Outfall Chamber 2 CSO Flow* (ft^3/s)	Outfall Chamber 2 CSO Volume** (MG)	Total CSO Discharge Volume (MG)
8/17/97 18:00	17.03	0.0382	-7.16	0	0.038
8/17/97 18:05	18.18	0.0408	-7.79	0	0.041
8/17/97 18:10	17.15	0.0385	-7.48	0	0.038
8/17/97 18:15	9.39	0.0211	0.00	0	0.021
8/17/97 18:20	7.90	0.0177	0.00	0	0.018
8/17/97 18:25	8.24	0.0185	0.00	0	0.018
8/17/97 18:30	15.07	0.0338	-7.48	0	0.034
8/17/97 18:35	7.53	0.0169	0.00	0	0.017
8/17/97 18:40	13.71	0.0308	-7.00	0	0.031
8/17/97 18:45	13.91	0.0312	-7.63	0	0.031
8/17/97 18:50	13.87	0.0311	-7.63	0	0.031
8/17/97 18:55	5.31	0.0119	0.00	0	0.012
8/17/97 19:00	12.48	0.0280	-7.48	0	0.028
8/17/97 19:05	12.48	0.0280	-10.29	0	0.028
8/17/97 19:10	4.92	0.0110	0.00	0	0.011
8/17/97 19:15	12.13	0.0272	-7.63	0	0.027
8/17/97 19:20	11.57	0.0260	-9.47	0	0.026
8/17/97 19:25	12.17	0.0273	-7.79	0	0.027
8/17/97 19:30	11.65	0.0261	-9.75	0	0.026
8/17/97 19:35	12.09	0.0271	-9.71	0	0.027
8/17/97 19:40	12.29	0.0276	-7.79	0	0.028
8/17/97 19:45	11.83	0.0266	-9.71	0	0.027
8/17/97 19:50	11.46	0.0257	-9.59	0	0.026
8/17/97 19:55	11.45	0.0257	-9.67	0	0.026
8/17/97 20:00	11.64	0.0261	-9.69	0	0.026
8/17/97 20:05	3.81	0.0085	-2.03	0	0.009
8/17/97 20:10	3.84	0.0086	-1.82	0	0.009
8/17/97 20:15	3.45	0.0077	-1.79	0	0.008
8/17/97 20:20	3.50	0.0079	-1.67	0	0.008
8/17/97 20:25	3.74	0.0084	-2.69	0	0.008
8/17/97 20:30	3.41	0.0076	0.00	0	0.008
8/17/97 20:35	3.62	0.0081	0.00	0	0.008
8/17/97 20:40	11.17	0.0251	-9.12	0	0.025
8/17/97 20:45	3.66	0.0082	0.00	0	0.008
8/17/97 20:50	10.99	0.0247	-7.56	0	0.025
8/17/97 20:55	3.44	0.0077	0.00	0	0.008

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

TABLE AII-6 (Continued)

CSO DISCHARGE DATA AT OLMSTED ROAD SEWER OUTFALL

Date / Time	Outfall Chamber 1 CSO Flow* (ft^3/s)	Outfall Chamber 1 CSO Volume** (MG)	Outfall Chamber 2 CSO Flow* (ft^3/s)	Outfall Chamber 2 CSO Volume** (MG)	Total CSO Discharge Volume (MG)
8/17/97 21:00	3.39	0.0076	0.00	0	0.008
8/17/97 21:05	3.48	0.0078	0.00	0	0.008
8/17/97 21:10	10.97	0.0246	-9.09	0	0.025
8/17/97 21:15	3.55	0.0080	0.00	0	0.008
8/17/97 21:20	3.40	0.0076	-0.98	0	0.008
8/17/97 21:25	3.39	0.0076	0.86	0.0019	0.010
8/17/97 21:30	3.45	0.0077	-1.00	0	0.008
8/17/97 21:35	3.44	0.0077	-0.90	0	0.008
8/17/97 21:40	3.52	0.0079	0.00	0	0.008
8/17/97 21:45	3.16	0.0071	-1.19	0	0.007
8/17/97 21:50	3.29	0.0074	-0.87	0	0.007
8/17/97 21:55	3.64	0.0082	-0.85	0	0.008
8/17/97 22:00	3.46	0.0078	-0.77	0	0.008
8/17/97 22:05	9.95	0.0223	-7.75	0	0.022
8/17/97 22:10	3.19	0.0072	-0.72	0	0.007
8/17/97 22:15	10.13	0.0227	-7.68	0	0.023
8/17/97 22:20	3.71	0.0083	-0.66	0	0.008
8/17/97 22:25	3.50	0.0079	-0.61	0	0.008
8/17/97 22:30	3.39	0.0076	-0.57	0	0.008
8/17/97 22:35	3.76	0.0084	0.00	0	0.008
8/17/97 22:40	3.71	0.0083	-0.76	0	0.008
8/17/97 22:45	3.51	0.0079	-0.87	0	0.008
8/17/97 22:50	3.61	0.0081	-1.14	0	0.008
8/17/97 22:55	9.97	0.0224	-7.69	0	0.022
8/17/97 23:00	3.35	0.0075	0.00	0	0.008
8/17/97 23:05	3.33	0.0075	0.00	0	0.007
8/17/97 23:10	3.17	0.0071	-0.89	0	0.007
8/17/97 23:15	3.05	0.0069	0.00	0	0.007
8/17/97 23:20	3.23	0.0073	0.00	0	0.007
8/17/97 23:25	3.49	0.0078	-0.88	0	0.008
8/17/97 23:30	3.20	0.0072	0.00	0	0.007
8/17/97 23:35	3.37	0.0076	0.00	0	0.008
8/17/97 23:40	3.19	0.0072	0.00	0	0.007
8/17/97 23:45	3.25	0.0073	0.00	0	0.007
8/17/97 23:50	3.11	0.0070	0.00	0	0.007
8/17/97 23:55	3.01	0.0068	-0.96	0	0.007

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

TABLE AII-6 (Continued)

CSO DISCHARGE DATA AT OLMSTED ROAD SEWER OUTFALL

Date / Time	Outfall Chamber 1 CSO Flow* (ft^3/s)	Outfall Chamber 1 CSO Volume** (MG)	Outfall Chamber 2 CSO Flow* (ft^3/s)	Outfall Chamber 2 CSO Volume** (MG)	Total CSO Discharge Volume (MG)
8/18/97 0:00	2.99	0.0067	0.00	0	0.007
8/18/97 0:05	9.64	0.0216	-6.60	0	0.022
8/18/97 0:10	3.10	0.0069	-1.21	0	0.007
8/18/97 0:15	3.14	0.0070	-1.05	0	0.007
8/18/97 0:20	2.98	0.0067	-1.28	0	0.007
8/18/97 0:25	2.88	0.0065	-0.81	0	0.006
8/18/97 0:30	3.12	0.0070	0.00	0	0.007
8/18/97 0:35	3.12	0.0070	0.00	0	0.007
8/18/97 0:40	9.57	0.0215	-6.60	0	0.021
8/18/97 0:45	2.76	0.0062	0.00	0	0.006
8/18/97 0:50	2.75	0.0062	0.00	0	0.006
8/18/97 0:55	3.04	0.0068	0.00	0	0.007
8/18/97 1:00	2.88	0.0065	0.00	0	0.006
8/18/97 1:05	9.39	0.0211	-6.45	0	0.021
8/18/97 1:10	2.74	0.0061	0.00	0	0.006
8/18/97 1:15	9.27	0.0208	-6.60	0	0.021
8/18/97 1:20	2.77	0.0062	0.00	0	0.006
8/18/97 1:25	9.30	0.0209	-7.38	0	0.021
8/18/97 1:30	2.77	0.0062	0.00	0	0.006
8/18/97 1:35	2.80	0.0063	0.00	0	0.006
8/18/97 1:40	9.36	0.0210	-7.88	0	0.021
8/18/97 1:45	2.92	0.0066	-0.77	0	0.007
8/18/97 1:50	2.88	0.0065	-0.61	0	0.006
8/18/97 1:55	2.74	0.0061	0.00	0	0.006
8/18/97 2:00	2.85	0.0064	0.00	0	0.006
8/18/97 2:05	9.23	0.0207	-7.69	0	0.021
8/18/97 2:10	2.85	0.0064	0.00	0	0.006
8/18/97 2:15	2.90	0.0065	0.00	0	0.007
8/18/97 2:20	2.57	0.0058	0.00	0	0.006
8/18/97 2:25	2.64	0.0059	-0.81	0	0.006
8/18/97 2:30	2.84	0.0064	0.00	0	0.006
8/18/97 2:35	2.62	0.0059	0.00	0	0.006
8/18/97 2:40	2.54	0.0057	0.00	0	0.006
8/18/97 2:45	2.54	0.0057	-0.77	0	0.006
8/18/97 2:50	2.79	0.0063	0.00	0	0.006
8/18/97 2:55	2.73	0.0061	-0.88	0	0.006

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

TABLE AII-6 (Continued)

CSO DISCHARGE DATA AT OLMSTED ROAD SEWER OUTFALL

Date / Time	Outfall Chamber 1 CSO Flow* (ft^3/s)	Outfall Chamber 1 CSO Volume** (MG)	Outfall Chamber 2 CSO Flow* (ft^3/s)	Outfall Chamber 2 CSO Volume** (MG)	Total CSO Discharge Volume (MG)
8/18/97 3:00	2.40	0.0054	-0.63	0	0.005
8/18/97 3:05	2.64	0.0059	-0.81	0	0.006
8/18/97 3:10	2.68	0.0060	0.00	0	0.006
8/18/97 3:15	2.65	0.0060	-0.77	0	0.006
8/18/97 3:20	2.52	0.0057	0.00	0	0.006
8/18/97 3:25	2.41	0.0054	0.00	0	0.005
8/18/97 3:30	2.37	0.0053	0.00	0	0.005
8/18/97 3:35	2.52	0.0057	0.00	0	0.006
8/18/97 3:40	2.80	0.0063	0.00	0	0.006
8/18/97 3:45	9.24	0.0207	-6.57	0	0.021
8/18/97 3:50	2.71	0.0061	0.00	0	0.006
8/18/97 3:55	2.58	0.0058	0.00	0	0.006
8/18/97 4:00	8.90	0.0200	-7.05	0	0.020
8/18/97 4:05	2.49	0.0056	0.00	0	0.006
8/18/97 4:10	9.08	0.0204	-7.23	0	0.020
8/18/97 4:15	2.41	0.0054	0.00	0	0.005
8/18/97 4:20	2.47	0.0055	0.00	0	0.006
8/18/97 4:25	2.44	0.0055	0.00	0	0.005
8/18/97 4:30	2.41	0.0054	-0.65	0	0.005
8/18/97 4:35	2.42	0.0054	0.00	0	0.005
8/18/97 4:40	2.49	0.0056	0.00	0	0.006
8/18/97 4:45	2.38	0.0053	0.00	0	0.005
8/18/97 4:50	2.43	0.0055	0.00	0	0.005
8/18/97 4:55	8.83	0.0198	-7.11	0	0.020
8/18/97 5:00	8.83	0.0198	-7.05	0	0.020
8/18/97 5:05	9.12	0.0205	-7.15	0	0.020
8/18/97 5:10	2.50	0.0056	0.00	0	0.006
8/18/97 5:15	2.61	0.0058	0.00	0	0.006
8/18/97 5:20	9.06	0.0203	-7.18	0	0.020
8/18/97 5:25	8.99	0.0202	-7.45	0	0.020
8/18/97 5:30	8.75	0.0196	-7.04	0	0.020
8/18/97 5:35	2.44	0.0055	0.00	0	0.005
8/18/97 5:40	2.55	0.0057	-0.65	0	0.006
8/18/97 5:45	2.48	0.0056	-0.80	0	0.006
8/18/97 5:50	2.56	0.0058	0.00	0	0.006
8/18/97 5:55	2.46	0.0055	0.00	0	0.006

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

TABLE AII-6 (Continued)

CSO DISCHARGE DATA AT OLMSTED ROAD SEWER OUTFALL

Date / Time	Outfall Chamber 1 CSO Flow* (ft^3/s)	Outfall Chamber 1 CSO Volume** (MG)	Outfall Chamber 2 CSO Flow* (ft^3/s)	Outfall Chamber 2 CSO Volume** (MG)	Total CSO Discharge Volume (MG)
8/18/97 6:00	2.52	0.0057	0.00	0	0.006
8/18/97 6:05	2.53	0.0057	-0.66	0	0.006
8/18/97 6:10	2.46	0.0055	-0.61	0	0.006
8/18/97 6:15	2.42	0.0054	0.00	0	0.005
8/18/97 6:20	2.41	0.0054	-0.65	0	0.005
8/18/97 6:25	2.34	0.0053	0.00	0	0.005
8/18/97 6:30	2.36	0.0053	0.00	0	0.005
8/18/97 6:35	2.49	0.0056	-0.60	0	0.006
8/18/97 6:40	8.66	0.0194	-6.29	0	0.019
8/18/97 6:45	8.49	0.0191	-5.98	0	0.019
8/18/97 6:50	2.54	0.0057	0.00	0	0.006
8/18/97 6:55	2.41	0.0054	-0.65	0	0.005
8/18/97 7:00	2.30	0.0052	0.00	0	0.005
8/18/97 7:05	2.31	0.0052	0.00	0	0.005
8/18/97 7:10	2.49	0.0056	-0.66	0	0.006
8/18/97 7:15	2.39	0.0054	0.00	0	0.005
8/18/97 7:20	9.04	0.0203	-7.30	0	0.020
8/18/97 7:25	2.28	0.0051	0.00	0	0.005
8/18/97 7:30	2.39	0.0054	-0.65	0	0.005
8/18/97 7:35	2.35	0.0053	0.00	0	0.005
8/18/97 7:40	2.41	0.0054	0.00	0	0.005
8/18/97 7:45	2.55	0.0057	-1.46	0	0.006
8/18/97 7:50	2.41	0.0054	0.00	0	0.005
8/18/97 7:55	2.26	0.0051	-0.33	0	0.005
8/18/97 8:00	2.33	0.0052	0.00	0	0.005
8/18/97 8:05	2.52	0.0057	-0.63	0	0.006
8/18/97 8:10	2.44	0.0055	0.00	0	0.005
8/18/97 8:15	2.42	0.0054	-0.73	0	0.005
8/18/97 8:20	2.43	0.0054	-0.98	0	0.005
8/18/97 8:25	2.32	0.0052	-0.80	0	0.005
8/18/97 8:30	-0.05	0	1.68	0.0038	0.004
8/18/97 8:35	2.30	0.0052	-0.81	0	0.005
8/18/97 8:40	2.34	0.0052	-0.90	0	0.005
8/18/97 8:45	2.24	0.0050	-0.68	0	0.005
8/18/97 8:50	7.82	0.0176	-6.37	0	0.018
8/18/97 8:55	2.21	0.0050	-0.70	0	0.005

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

TABLE AII-6 (Continued)

CSO DISCHARGE DATA AT OLMSTED ROAD SEWER OUTFALL

Date / Time	Outfall Chamber 1 CSO Flow* (ft^3/s)	Outfall Chamber 1 CSO Volume** (MG)	Outfall Chamber 2 CSO Flow* (ft^3/s)	Outfall Chamber 2 CSO Volume** (MG)	Total CSO Discharge Volume (MG)
8/18/97 9:00	7.74	0.0174	-6.34	0	0.017
8/18/97 9:05	2.43	0.0055	-0.64	0	0.005
8/18/97 9:10	7.19	0.0161	-4.80	0	0.016
8/18/97 9:15	2.43	0.0055	0.00	0	0.005
8/18/97 9:20	2.43	0.0055	0.00	0	0.005
8/18/97 9:25	2.44	0.0055	-0.82	0	0.005
8/18/97 9:30	2.35	0.0053	0.00	0	0.005
8/18/97 9:35	2.40	0.0054	0.00	0	0.005
8/18/97 9:40	2.37	0.0053	0.00	0	0.005
8/18/97 9:45	2.29	0.0051	-0.72	0	0.005
8/18/97 9:50	2.45	0.0055	0.00	0	0.005
8/18/97 9:55	2.20	0.0049	-0.58	0	0.005
8/18/97 10:00	2.40	0.0054	-1.07	0	0.005
8/18/97 10:05	2.23	0.0050	0.00	0	0.005
8/18/97 10:10	2.30	0.0052	0.00	0	0.005
8/18/97 10:15	2.34	0.0052	0.00	0	0.005
8/18/97 10:20	2.09	0.0047	-0.55	0	0.005
8/18/97 10:25	2.06	0.0046	0.00	0	0.005
8/18/97 10:30	2.21	0.0050	0.00	0	0.005
8/18/97 10:35	2.26	0.0051	0.00	0	0.005
8/18/97 10:40	2.22	0.0050	0.00	0	0.005
8/18/97 10:45	2.22	0.0050	0.00	0	0.005
8/18/97 10:50	2.32	0.0052	0.00	0	0.005
8/18/97 10:55	2.15	0.0048	0.00	0	0.005
8/18/97 11:00	2.22	0.0050	0.00	0	0.005
8/18/97 11:05	2.12	0.0048	0.00	0	0.005
8/18/97 11:10	2.21	0.0049	0.00	0	0.005
8/18/97 11:15	2.24	0.0050	0.00	0	0.005
8/18/97 11:20	0.00	0	0.00	0	0.000
Event Total:					14.861
4/23/99 0:30	2.99	0.0067	6.14	0.0138	0.020
4/23/99 0:35	-0.50	0	5.88	0.0132	0.013
4/23/99 0:40	-0.09	0	5.82	0.0131	0.013
4/23/99 0:45	-0.02	0	8.18	0.0184	0.018

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

TABLE AII-6 (Continued)

CSO DISCHARGE DATA AT OLMSTED ROAD SEWER OUTFALL

Date / Time	Outfall Chamber 1 CSO Flow* (ft^3/s)	Outfall Chamber 1 CSO Volume** (MG)	Outfall Chamber 2 CSO Flow* (ft^3/s)	Outfall Chamber 2 CSO Volume** (MG)	Total CSO Discharge Volume (MG)
4/23/99 0:50	17.70	0.0397	-6.38	0	0.040
4/23/99 0:55	5.48	0.0123	10.23	0.0229	0.035
4/23/99 1:00	3.05	0.0068	2.09	0.0047	0.012
4/23/99 1:05	-130.93	0	140.75	0.3158	0.316
4/23/99 1:10	-75.22	0	87.95	0.1974	0.197
4/23/99 1:15	-30.76	0	43.26	0.0971	0.097
4/23/99 1:20	3.04	0.0068	6.52	0.0146	0.021
4/23/99 1:25	-76.83	0	86.84	0.1949	0.195
4/23/99 1:30	-65.52	0	78.09	0.1752	0.175
4/23/99 1:35	122.11	0.2740	-111.11	0	0.274
4/23/99 1:40	94.71	0.2125	-81.52	0	0.213
4/23/99 1:45	-22.56	0	44.21	0.0992	0.099
4/23/99 1:50	5.42	0.0122	11.45	0.0257	0.038
4/23/99 1:55	-2.23	0.0050	-13.91	-0.0312	0.036
4/23/99 2:00	4.80	0.0108	16.44	0.0369	0.048
4/23/99 2:05	1.15	0.0026	10.03	0.0225	0.025
4/23/99 2:10	-0.15	0	9.83	0.0221	0.022
4/23/99 2:15	3.23	0.0073	3.76	0.0084	0.016
4/23/99 2:20	7.46	0.0167	8.00	0.0179	0.035
4/23/99 2:25	4.34	0.0097	12.91	0.0290	0.039
4/23/99 2:30	-2.05	0	23.89	0.0536	0.054
4/23/99 2:35	1.23	0.0028	12.49	0.0280	0.031
4/23/99 2:40	3.01	0.0067	10.69	0.0240	0.031
4/23/99 2:45	2.42	0.0054	4.39	0.0098	0.015
4/23/99 2:50	1.40	0.0031	10.02	0.0225	0.026
4/23/99 2:55	3.82	0.0086	10.02	0.0225	0.031
4/23/99 3:00	2.57	0.0058	8.59	0.0193	0.025
4/23/99 3:05	-22.99	0	32.60	0.0732	0.073
4/23/99 3:10	7.38	0.0166	7.16	0.0161	0.033
4/23/99 3:15	5.06	0.0114	8.27	0.0186	0.030
4/23/99 3:20	-101.75	0	112.44	0.2523	0.252
4/23/99 3:25	-57.06	0	70.46	0.1581	0.158
4/23/99 3:30	3.08	0.0069	8.11	0.0182	0.025
4/23/99 3:35	-10.62	0	20.04	0.0450	0.045
4/23/99 3:40	-53.04	0	65.84	0.1478	0.148
4/23/99 3:45	-78.94	0	88.91	0.1995	0.200

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

TABLE AII-6 (Continued)

CSO DISCHARGE DATA AT OLMSTED ROAD SEWER OUTFALL

Date / Time	Outfall Chamber 1 CSO Flow* (ft^3/s)	Outfall Chamber 1 CSO Volume** (MG)	Outfall Chamber 2 CSO Flow* (ft^3/s)	Outfall Chamber 2 CSO Volume** (MG)	Total CSO Discharge Volume (MG)
4/23/99 3:50	-23.60	0	32.60	0.0732	0.073
4/23/99 3:55	9.71	0.0218	0.00	0	0.022
4/23/99 4:00	-23.23	0	35.47	0.0796	0.080
4/23/99 4:05	4.81	0.0108	7.00	0.0157	0.026
4/23/99 4:10	-63.95	0	73.00	0.1638	0.164
4/23/99 4:15	3.22	0.0072	6.36	0.0143	0.021
4/23/99 4:20	2.39	0.0054	7.00	0.0157	0.021
4/23/99 4:25	8.49	0.0191	0.00	0	0.019
4/23/99 4:30	1.64	0.0037	6.52	0.0146	0.018
4/23/99 4:35	2.36	0.0053	6.68	0.0150	0.020
4/23/99 4:40	2.77	0.0062	8.43	0.0189	0.025
4/23/99 4:45	-1.53	0	9.23	0.0207	0.021
4/23/99 4:50	2.52	0.0057	6.04	0.0136	0.019
4/23/99 4:55	2.17	0.0049	6.20	0.0139	0.019
4/23/99 5:00	2.41	0.0054	5.89	0.0132	0.019
4/23/99 5:05	16.87	0.0378	-8.59	0	0.038
4/23/99 5:10	1.32	0.0030	6.36	0.0143	0.017
4/23/99 5:15	2.21	0.0050	5.41	0.0121	0.017
4/23/99 5:20	0.88	0.0020	6.52	0.0146	0.017
4/23/99 5:25	1.10	0.0025	8.59	0.0193	0.022
4/23/99 5:30	0.34	0.0008	7.95	0.0178	0.019
4/23/99 5:35	0.42	0.0009	7.00	0.0157	0.017
4/23/99 5:40	0.61	0.0014	6.68	0.0150	0.016
4/23/99 5:45	-0.01	0	7.32	0.0164	0.016
4/23/99 5:50	0.83	0.0019	6.20	0.0139	0.016
4/23/99 5:55	2.54	0.0057	5.25	0.0118	0.017
4/23/99 6:00	1.64	0.0037	6.20	0.0139	0.018
4/23/99 6:05	-2.09	0	9.23	0.0207	0.021
4/23/99 6:10	-1.09	0	8.75	0.0196	0.020
4/23/99 6:15	1.36	0.0030	6.68	0.0150	0.018
4/23/99 6:20	1.49	0.0033	7.00	0.0157	0.019
4/23/99 6:25	-0.93	0	9.23	0.0207	0.021
4/23/99 6:30	1.01	0.0023	7.00	0.0157	0.018
4/23/99 6:35	-0.07	0	7.16	0.0161	0.016
4/23/99 6:40	0.97	0.0022	6.52	0.0146	0.017
4/23/99 6:45	-1.83	0	9.38	0.0211	0.021

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

TABLE AII-6 (Continued)

CSO DISCHARGE DATA AT OLMSTED ROAD SEWER OUTFALL

Date / Time	Outfall Chamber 1 CSO Flow* (ft^3/s)	Outfall Chamber 1 CSO Volume** (MG)	Outfall Chamber 2 CSO Flow* (ft^3/s)	Outfall Chamber 2 CSO Volume** (MG)	Total CSO Discharge Volume (MG)
4/23/99 6:50	1.02	0.0023	6.68	0.0150	0.017
4/23/99 6:55	-0.07	0	8.43	0.0189	0.019
4/23/99 7:00	2.08	0.0047	5.89	0.0132	0.018
4/23/99 7:05	17.42	0.0391	-10.34	0	0.039
4/23/99 7:10	15.85	0.0356	-8.27	0	0.036
4/23/99 7:15	17.33	0.0389	-9.15	0	0.039
4/23/99 7:20	-0.43	0	7.16	0.0161	0.016
4/23/99 7:25	0.74	0.0017	7.56	0.0170	0.019
4/23/99 7:30	-1.94	0	8.43	0.0189	0.019
4/23/99 7:35	-2.35	0	8.27	0.0186	0.019
4/23/99 7:40	-3.07	0	9.95	0.0223	0.022
4/23/99 7:45	-1.85	0	7.79	0.0175	0.017
4/23/99 7:50	-1.47	0	8.92	0.0200	0.020
4/23/99 7:55	-1.14	0	8.47	0.0190	0.019
4/23/99 8:00	-0.52	0	7.00	0.0157	0.016
4/23/99 8:05	0.98	0.0022	5.09	0.0114	0.014
4/23/99 8:10	2.72	0.0061	2.95	0.0066	0.013
4/23/99 8:15	-0.34	0	7.64	0.0172	0.017
4/23/99 8:20	-0.66	0	8.16	0.0183	0.018
4/23/99 8:25	0.19	0.0004	7.28	0.0163	0.017
4/23/99 8:30	-2.64	0	9.66	0.0217	0.022
4/23/99 8:35	-0.82	0	7.92	0.0178	0.018
4/23/99 8:40	13.15	0.0295	-5.92	0	0.029
4/23/99 8:45	-0.91	0	8.40	0.0189	0.019
4/23/99 8:50	13.74	0.0308	-7.63	0	0.031
4/23/99 8:55	13.84	0.0311	-7.00	0	0.031
4/23/99 9:00	15.90	0.0357	-8.18	0	0.036
4/23/99 9:05	-0.89	0	7.48	0.0168	0.017
4/23/99 9:10	-0.93	0	7.16	0.0161	0.016
4/23/99 9:15	15.42	0.0346	-7.66	0	0.035
4/23/99 9:20	14.20	0.0319	-7.48	0	0.032
4/23/99 9:25	13.92	0.0312	-5.95	0	0.031
4/23/99 9:30	17.10	0.0384	-10.02	0	0.038
4/23/99 9:35	15.49	0.0348	-9.07	0	0.035
4/23/99 9:40	14.04	0.0315	-7.63	0	0.031
4/23/99 9:45	16.85	0.0378	-10.66	0	0.038

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

TABLE AII-6 (Continued)

CSO DISCHARGE DATA AT OLMSTED ROAD SEWER OUTFALL

Date / Time	Outfall Chamber 1 CSO Flow* (ft^3/s)	Outfall Chamber 1 CSO Volume** (MG)	Outfall Chamber 2 CSO Flow* (ft^3/s)	Outfall Chamber 2 CSO Volume** (MG)	Total CSO Discharge Volume (MG)
4/23/99 9:50	14.15	0.0317	-6.43	0	0.032
4/23/99 9:55	13.55	0.0304	-7.16	0	0.030
4/23/99 10:00	21.42	0.0481	-15.43	0	0.048
4/23/99 10:05	-1.50	0	7.63	0.0171	0.017
4/23/99 10:10	13.28	0.0298	-7.00	0	0.030
4/23/99 10:15	6.02	0.0135	1.25	0.0028	0.016
4/23/99 10:20	13.48	0.0302	-6.84	0	0.030
4/23/99 10:25	13.39	0.0301	-7.00	0	0.030
4/23/99 10:30	15.05	0.0338	-8.75	0	0.034
4/23/99 10:35	12.45	0.0279	-6.84	0	0.028
4/23/99 10:40	13.49	0.0303	-7.32	0	0.030
4/23/99 10:45	13.53	0.0304	-7.32	0	0.030
4/23/99 10:50	13.08	0.0293	-5.31	0	0.029
4/23/99 10:55	12.97	0.0291	-7.16	0	0.029
4/23/99 11:00	12.90	0.0289	-7.00	0	0.029
4/23/99 11:05	11.57	0.0260	-6.52	0	0.026
4/23/99 11:10	12.98	0.0291	-7.32	0	0.029
4/23/99 11:15	5.23	0.0117	0.00	0	0.012
4/23/99 11:20	12.96	0.0291	-7.16	0	0.029
4/23/99 11:25	12.89	0.0289	-7.16	0	0.029
4/23/99 11:30	13.22	0.0297	-7.63	0	0.030
4/23/99 11:35	13.07	0.0293	-7.63	0	0.029
4/23/99 11:40	13.13	0.0295	-7.79	0	0.029
4/23/99 11:45	12.51	0.0281	-6.68	0	0.028
4/23/99 11:50	12.63	0.0283	-7.16	0	0.028
4/23/99 11:55	12.23	0.0274	-7.16	0	0.027
4/23/99 12:00	12.86	0.0289	-7.48	0	0.029
4/23/99 12:05	13.36	0.0300	-7.48	0	0.030
4/23/99 12:10	12.55	0.0282	-7.00	0	0.028
4/23/99 12:15	12.96	0.0291	-7.48	0	0.029
4/23/99 12:20	5.00	0.0112	0.00	0	0.011
4/23/99 12:25	13.24	0.0297	-7.48	0	0.030
4/23/99 12:30	12.19	0.0274	-7.16	0	0.027
4/23/99 12:35	13.99	0.0314	-7.32	0	0.031
4/23/99 12:40	5.07	0.0114	0.00	0	0.011
4/23/99 12:45	12.75	0.0286	-7.63	0	0.029

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

TABLE AII-6 (Continued)

CSO DISCHARGE DATA AT OLMSTED ROAD SEWER OUTFALL

Date / Time	Outfall Chamber 1 CSO Flow* (ft^3/s)	Outfall Chamber 1 CSO Volume** (MG)	Outfall Chamber 2 CSO Flow* (ft^3/s)	Outfall Chamber 2 CSO Volume** (MG)	Total CSO Discharge Volume (MG)
4/23/99 12:50	5.16	0.0116	0.00	0	0.012
4/23/99 12:55	12.77	0.0286	-7.48	0	0.029
4/23/99 13:00	12.85	0.0288	-7.48	0	0.029
4/23/99 13:05	12.45	0.0279	-7.00	0	0.028
4/23/99 13:10	13.11	0.0294	-7.63	0	0.029
4/23/99 13:15	12.31	0.0276	-7.32	0	0.028
4/23/99 13:20	12.95	0.0291	-7.48	0	0.029
4/23/99 13:25	12.47	0.0280	-7.16	0	0.028
4/23/99 13:30	5.22	0.0117	0.00	0	0.012
4/23/99 13:35	5.01	0.0112	0.00	0	0.011
4/23/99 13:40	13.86	0.0311	-7.48	0	0.031
4/23/99 13:45	5.36	0.0120	0.00	0	0.012
4/23/99 13:50	12.64	0.0284	-7.32	0	0.028
4/23/99 13:55	12.03	0.0270	-7.16	0	0.027
4/23/99 14:00	11.91	0.0267	-7.16	0	0.027
4/23/99 14:05	12.63	0.0283	-7.48	0	0.028
4/23/99 14:10	12.53	0.0281	-7.63	0	0.028
4/23/99 14:15	12.09	0.0271	-6.10	0	0.027
4/23/99 14:20	12.07	0.0271	-7.16	0	0.027
4/23/99 14:25	12.42	0.0279	-7.48	0	0.028
4/23/99 14:30	12.24	0.0275	-5.94	0	0.027
4/23/99 14:35	12.42	0.0279	-7.32	0	0.028
4/23/99 14:40	12.01	0.0270	-7.32	0	0.027
4/23/99 14:45	11.63	0.0261	-7.32	0	0.026
4/23/99 14:50	12.05	0.0270	-9.14	0	0.027
4/23/99 14:55	4.55	0.0102	-1.58	0	0.010
4/23/99 15:00	11.17	0.0251	-8.49	0	0.025
4/23/99 15:05	11.81	0.0265	-7.32	0	0.026
4/23/99 15:10	11.70	0.0263	-8.50	0	0.026
4/23/99 15:15	11.70	0.0262	-7.16	0	0.026
4/23/99 15:20	4.65	0.0104	0.00	0	0.010
4/23/99 15:25	11.62	0.0261	-7.32	0	0.026
4/23/99 15:30	10.92	0.0245	-8.30	0	0.025
4/23/99 15:35	4.69	0.0105	-1.62	0	0.011
4/23/99 15:40	12.10	0.0272	-7.32	0	0.027
4/23/99 15:45	12.03	0.0270	-7.32	0	0.027

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

TABLE AII-6 (Continued)

CSO DISCHARGE DATA AT OLMSTED ROAD SEWER OUTFALL

Date / Time	Outfall Chamber 1 CSO Flow* (ft^3/s)	Outfall Chamber 1 CSO Volume** (MG)	Outfall Chamber 2 CSO Flow* (ft^3/s)	Outfall Chamber 2 CSO Volume** (MG)	Total CSO Discharge Volume (MG)
4/23/99 15:50	12.05	0.0270	-9.10	0	0.027
4/23/99 15:55	12.24	0.0275	-9.02	0	0.027
4/23/99 16:00	12.26	0.0275	-9.14	0	0.028
Event Total:					6.962
6/1/99 19:30	1.09	0.002	0.00	0	0.002
6/1/99 19:35	1.13	0.003	0.00	0	0.003
6/1/99 19:40	1.07	0.002	0.00	0	0.002
6/1/99 19:45	0.96	0.002	0.00	0	0.002
6/1/99 19:50	0.97	0.002	0.04	0.0001	0.002
6/1/99 19:55	1.40	0.003	0.19	0.0004	0.004
6/1/99 20:00	3.11	0.007	1.18	0.0026	0.010
6/1/99 20:05	26.86	0.060	4.33	0.0097	0.070
6/1/99 20:10	9.38	0.021	19.38	0.0435	0.065
6/1/99 20:15	6.29	0.014	18.26	0.0410	0.055
6/1/99 20:20	4.78	0.011	8.15	0.0183	0.029
6/1/99 20:25	6.24	0.014	24.44	0.0549	0.069
6/1/99 20:30	7.28	0.016	17.18	0.0385	0.055
6/1/99 20:35	3.48	0.008	14.05	0.0315	0.039
6/1/99 20:40	-2.20	0	29.60	0.0664	0.066
6/1/99 20:45	5.12	0.011	14.39	0.0323	0.044
6/1/99 20:50	9.76	0.022	13.92	0.0312	0.053
6/1/99 20:55	8.18	0.018	14.35	0.0322	0.051
6/1/99 21:00	7.92	0.018	14.87	0.0334	0.051
6/1/99 21:05	9.56	0.021	16.31	0.0366	0.058
6/1/99 21:10	5.33	0.012	17.49	0.0393	0.051
6/1/99 21:15	4.16	0.009	17.96	0.0403	0.050
6/1/99 21:20	7.00	0.016	14.91	0.0335	0.049
6/1/99 21:25	1.75	0.004	15.59	0.0350	0.039
6/1/99 21:30	9.29	0.021	7.46	0.0167	0.038
6/1/99 21:35	6.12	0.014	10.51	0.0236	0.037
6/1/99 21:40	9.17	0.021	8.52	0.0191	0.040
6/1/99 21:45	8.10	0.018	8.62	0.0193	0.038
6/1/99 21:50	5.28	0.012	10.52	0.0236	0.035
6/1/99 21:55	7.14	0.016	8.01	0.0180	0.034

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

TABLE AII-6 (Continued)

CSO DISCHARGE DATA AT OLMSTED ROAD SEWER OUTFALL

Date / Time	Outfall Chamber 1 CSO Flow* (ft^3/s)	Outfall Chamber 1 CSO Volume** (MG)	Outfall Chamber 2 CSO Flow* (ft^3/s)	Outfall Chamber 2 CSO Volume** (MG)	Total CSO Discharge Volume (MG)
6/1/99 22:00	-39.97	0	57.28	0.1285	0.129
6/1/99 22:05	7.02	0.016	9.53	0.0214	0.037
6/1/99 22:10	-17.85	0	33.75	0.0757	0.076
6/1/99 22:15	6.00	0.013	11.25	0.0252	0.039
6/1/99 22:20	-87.26	0	103.99	0.2334	0.233
6/1/99 22:25	6.14	0.014	11.64	0.0261	0.040
6/1/99 22:30	3.80	0.009	13.18	0.0296	0.038
6/1/99 22:35	8.16	0.018	8.00	0.0179	0.036
6/1/99 22:40	0.91	0.002	14.53	0.0326	0.035
6/1/99 22:45	5.41	0.012	22.40	0.0503	0.062
6/1/99 22:50	-70.27	0	83.51	0.1874	0.187
6/1/99 22:55	-17.86	0	32.77	0.0735	0.074
6/1/99 23:00	-105.97	0	116.74	0.2620	0.262
6/1/99 23:05	-1.89	0	12.41	0.0278	0.028
6/1/99 23:10	-156.46	0	165.55	0.3715	0.371
6/1/99 23:15	-98.48	0	105.54	0.2368	0.237
6/1/99 23:20	3.13	0.007	4.99	0.0112	0.018
6/1/99 23:25	3.40	0.008	3.73	0.0084	0.016
6/1/99 23:30	0.95	0.002	6.71	0.0151	0.017
6/1/99 23:35	-0.29	0	7.39	0.0166	0.017
6/1/99 23:40	6.03	0.014	0.69	0.0016	0.015
6/1/99 23:45	-1.66	0	6.55	0.0147	0.015
6/1/99 23:50	13.08	0.029	-8.12	0	0.029
6/1/99 23:55	12.98	0.029	-11.00	0	0.029
6/2/99 0:00	15.07	0.034	-18.61	0	0.034
6/2/99 0:05	12.24	0.027	-5.86	0	0.027
6/2/99 0:10	14.22	0.032	-12.08	0	0.032
6/2/99 0:15	4.74	0.011	-3.72	0	0.011
6/2/99 0:20	21.53	0.048	-20.02	0	0.048
6/2/99 0:25	11.45	0.026	-10.10	0	0.026
6/2/99 0:30	11.10	0.025	-9.76	0	0.025
6/2/99 0:35	16.90	0.038	-16.08	0	0.038
6/2/99 0:40	10.40	0.023	-8.95	0	0.023
6/2/99 0:45	14.25	0.032	-12.49	0	0.032
6/2/99 0:50	10.77	0.024	-9.30	0	0.024
6/2/99 0:55	13.74	0.031	-13.10	0	0.031

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

TABLE AII-6 (Continued)

CSO DISCHARGE DATA AT OLMSTED ROAD SEWER OUTFALL

Date / Time	Outfall Chamber 1 CSO Flow* (ft^3/s)	Outfall Chamber 1 CSO Volume** (MG)	Outfall Chamber 2 CSO Flow* (ft^3/s)	Outfall Chamber 2 CSO Volume** (MG)	Total CSO Discharge Volume (MG)
6/2/99 1:00	15.98	0.036	-14.78	0	0.036
6/2/99 1:05	12.02	0.027	-11.16	0	0.027
6/2/99 1:10	3.92	0.009	-2.82	0	0.009
6/2/99 1:15	10.11	0.023	-9.53	0	0.023
6/2/99 1:20	10.02	0.022	-9.52	0	0.022
6/2/99 1:25	12.01	0.027	-11.45	0	0.027
6/2/99 1:30	13.61	0.031	-12.27	0	0.031
6/2/99 1:35	10.19	0.023	-9.55	0	0.023
6/2/99 1:40	9.76	0.022	-9.45	0	0.022
6/2/99 1:45	13.77	0.031	-12.62	0	0.031
6/2/99 1:50	10.27	0.023	-8.72	0	0.023
6/2/99 1:55	10.04	0.023	-8.87	0	0.023
6/2/99 2:00	10.18	0.023	-9.10	0	0.023
6/2/99 2:05	9.44	0.021	-8.60	0	0.021
6/2/99 2:10	3.24	0.007	-2.79	0	0.007
6/2/99 2:15	9.74	0.022	-8.85	0	0.022
6/2/99 2:20	11.93	0.027	-11.43	0	0.027
6/2/99 2:25	3.53	0.008	-2.70	0	0.008
6/2/99 2:30	9.36	0.021	-8.64	0	0.021
6/2/99 2:35	12.69	0.028	-11.67	0	0.028
6/2/99 2:40	3.26	0.007	-2.66	0	0.007
6/2/99 2:45	14.16	0.032	-13.73	0	0.032
6/2/99 2:50	9.47	0.021	-8.32	0	0.021
6/2/99 2:55	9.33	0.021	-8.31	0	0.021
6/2/99 3:00	12.04	0.027	-11.66	0	0.027
6/2/99 3:05	9.20	0.021	-8.41	0	0.021
6/2/99 3:10	3.01	0.007	-2.21	0	0.007
6/2/99 3:15	9.39	0.021	-8.38	0	0.021
6/2/99 3:20	12.61	0.028	-11.47	0	0.028
6/2/99 3:25	9.02	0.020	-8.09	0	0.020
6/2/99 3:30	13.69	0.031	-13.27	0	0.031
6/2/99 3:35	8.98	0.020	-8.04	0	0.020
6/2/99 3:40	9.19	0.021	-8.24	0	0.021
6/2/99 3:45	8.97	0.020	-7.98	0	0.020
6/2/99 3:50	3.03	0.007	-1.95	0	0.007
6/2/99 3:55	8.56	0.019	-7.83	0	0.019

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

TABLE AII-6 (Continued)

CSO DISCHARGE DATA AT OLMSTED ROAD SEWER OUTFALL

Date / Time	Outfall Chamber 1 CSO Flow* (ft^3/s)	Outfall Chamber 1 CSO Volume** (MG)	Outfall Chamber 2 CSO Flow* (ft^3/s)	Outfall Chamber 2 CSO Volume** (MG)	Total CSO Discharge Volume (MG)
6/2/99 4:00	11.50	0.026	-10.54	0	0.026
6/2/99 4:05	8.82	0.020	-7.74	0	0.020
6/2/99 4:10	8.45	0.019	-7.44	0	0.019
6/2/99 4:15	8.71	0.020	-4.53	0	0.020
6/2/99 4:20	11.37	0.026	-11.13	0	0.026
6/2/99 4:25	2.83	0.006	-2.28	0	0.006
6/2/99 4:30	9.21	0.021	-8.31	0	0.021
6/2/99 4:35	2.59	0.006	-1.25	0	0.006
6/2/99 4:40	2.85	0.006	-1.63	0	0.006
6/2/99 4:45	8.59	0.019	-7.65	0	0.019
6/2/99 4:50	8.81	0.020	-8.00	0	0.020
6/2/99 4:55	8.84	0.020	-8.50	0	0.020
6/2/99 5:00	2.82	0.006	-1.74	0	0.006
6/2/99 5:05	8.60	0.019	-8.18	0	0.019
6/2/99 5:10	2.63	0.006	-1.98	0	0.006
6/2/99 5:15	2.83	0.006	-2.11	0	0.006
6/2/99 5:20	2.82	0.006	-2.43	0	0.006
6/2/99 5:25	2.60	0.006	-1.58	0	0.006
6/2/99 5:30	2.58	0.006	-1.45	0	0.006
6/2/99 5:35	2.67	0.006	-1.87	0	0.006
6/2/99 5:40	8.45	0.019	-7.57	0	0.019
6/2/99 5:45	2.64	0.006	-1.50	0	0.006
6/2/99 5:50	2.80	0.006	-1.59	0	0.006
6/2/99 5:55	2.53	0.006	-1.28	0	0.006
6/2/99 6:00	8.22	0.018	-7.11	0	0.018
6/2/99 6:05	2.57	0.006	-1.80	0	0.006
6/2/99 6:10	8.54	0.019	-7.41	0	0.019
6/2/99 6:15	10.69	0.024	-9.32	0	0.024
6/2/99 6:20	8.53	0.019	-7.13	0	0.019
6/2/99 6:25	8.52	0.019	-7.62	0	0.019
6/2/99 6:30	2.67	0.006	-1.12	0	0.006
6/2/99 6:35	8.76	0.020	-4.29	0	0.020
6/2/99 6:40	8.35	0.019	-6.91	0	0.019
6/2/99 6:45	8.67	0.019	-4.67	0	0.019
6/2/99 6:50	8.43	0.019	-7.29	0	0.019
6/2/99 6:55	8.76	0.020	-7.59	0	0.020

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

TABLE AII-6 (Continued)

CSO DISCHARGE DATA AT OLMSTED ROAD SEWER OUTFALL

Date / Time	Outfall Chamber 1 CSO Flow* (ft^3/s)	Outfall Chamber 1 CSO Volume** (MG)	Outfall Chamber 2 CSO Flow* (ft^3/s)	Outfall Chamber 2 CSO Volume** (MG)	Total CSO Discharge Volume (MG)
6/2/99 7:00	8.38	0.019	-7.37	0	0.019
6/2/99 7:05	2.55	0.006	-1.26	0	0.006
6/2/99 7:10	8.44	0.019	-7.08	0	0.019
6/2/99 7:15	8.18	0.018	-6.80	0	0.018
6/2/99 7:20	2.71	0.006	-1.37	0	0.006
6/2/99 7:25	2.53	0.006	-1.68	0	0.006
6/2/99 7:30	8.50	0.019	-7.43	0	0.019
6/2/99 7:35	2.55	0.006	-1.13	0	0.006
6/2/99 7:40	2.31	0.005	-1.19	0	0.005
6/2/99 7:45	8.09	0.018	-4.59	0	0.018
6/2/99 7:50	8.67	0.019	-6.73	0	0.019
6/2/99 7:55	9.39	0.021	-4.32	0	0.021
6/2/99 8:00	10.88	0.024	-5.14	0	0.024
6/2/99 8:05	11.19	0.025	-2.83	0	0.025
6/2/99 8:10	16.50	0.037	-7.86	0	0.037
6/2/99 8:15	14.85	0.033	-9.06	0	0.033
6/2/99 8:20	5.82	0.013	-0.36	0	0.013
6/2/99 8:25	16.85	0.038	-21.95	0	0.038
6/2/99 8:30	5.01	0.011	-7.74	0	0.011
6/2/99 8:35	11.25	0.025	-11.98	0	0.025
6/2/99 8:40	3.81	0.009	-2.87	0	0.009
6/2/99 8:45	3.97	0.009	-3.23	0	0.009
6/2/99 8:50	10.31	0.023	-9.55	0	0.023
6/2/99 8:55	9.93	0.022	-9.96	0	0.022
6/2/99 9:00	3.41	0.008	-3.67	0	0.008
6/2/99 9:05	9.89	0.022	-9.68	0	0.022
6/2/99 9:10	9.38	0.021	-10.08	0	0.021
6/2/99 9:15	9.34	0.021	-9.04	0	0.021
6/2/99 9:20	9.30	0.021	-8.65	0	0.021
6/2/99 9:25	3.06	0.007	-2.90	0	0.007
6/2/99 9:30	3.02	0.007	-3.89	0	0.007
6/2/99 9:35	2.66	0.006	-2.97	0	0.006
6/2/99 9:40	9.28	0.021	-10.21	0	0.021
6/2/99 9:45	8.90	0.020	-8.79	0	0.020
6/2/99 9:50	2.66	0.006	-2.71	0	0.006
6/2/99 9:55	8.79	0.020	-8.77	0	0.020

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

TABLE AII-6 (Continued)

CSO DISCHARGE DATA AT OLMSTED ROAD SEWER OUTFALL

Date / Time	Outfall Chamber 1 CSO Flow* (ft^3/s)	Outfall Chamber 1 CSO Volume** (MG)	Outfall Chamber 2 CSO Flow* (ft^3/s)	Outfall Chamber 2 CSO Volume** (MG)	Total CSO Discharge Volume (MG)
6/2/99 10:00	8.95	0.020	-9.18	0	0.020
6/2/99 10:05	2.39	0.005	-2.21	0	0.005
6/2/99 10:10	2.37	0.005	-2.03	0	0.005
6/2/99 10:15	2.20	0.005	-2.83	0	0.005
6/2/99 10:20	8.79	0.020	-8.86	0	0.020
6/2/99 10:25	8.52	0.019	-8.36	0	0.019
6/2/99 10:30	2.19	0.005	-2.98	0	0.005
6/2/99 10:35	8.18	0.018	-8.27	0	0.018
6/2/99 10:40	8.36	0.019	-8.28	0	0.019
6/2/99 10:45	8.35	0.019	-8.48	0	0.019
6/2/99 10:50	8.37	0.019	-8.92	0	0.019
6/2/99 10:55	8.29	0.019	-7.78	0	0.019
6/2/99 11:00	2.26	0.005	-2.01	0	0.005
6/2/99 11:05	2.21	0.005	-1.78	0	0.005
6/2/99 11:10	2.25	0.005	-1.76	0	0.005
6/2/99 11:15	2.20	0.005	-1.80	0	0.005
6/2/99 11:20	8.11	0.018	-8.53	0	0.018
6/2/99 11:25	8.38	0.019	-7.80	0	0.019
6/2/99 11:30	2.22	0.005	-1.34	0	0.005
6/2/99 11:35	2.27	0.005	-2.16	0	0.005
6/2/99 11:40	2.09	0.005	-1.57	0	0.005
6/2/99 11:45	2.17	0.005	-2.08	0	0.005
6/2/99 11:50	2.20	0.005	-1.85	0	0.005
6/2/99 11:55	8.77	0.020	-8.14	0	0.020
6/2/99 12:00	2.11	0.005	-2.12	0	0.005
6/2/99 12:05	8.01	0.018	-3.82	0	0.018
6/2/99 12:10	7.95	0.018	-3.95	0	0.018
6/2/99 12:15	8.09	0.018	-7.96	0	0.018
6/2/99 12:20	8.11	0.018	-7.51	0	0.018
6/2/99 12:25	8.13	0.018	-7.95	0	0.018
6/2/99 12:30	8.17	0.018	-7.39	0	0.018
6/2/99 12:35	2.00	0.004	-1.60	0	0.004
6/2/99 12:40	8.15	0.018	-7.64	0	0.018
6/2/99 12:45	2.15	0.005	-1.84	0	0.005
6/2/99 12:50	8.13	0.018	-7.11	0	0.018
6/2/99 12:55	7.87	0.018	-8.06	0	0.018

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

TABLE AII-6 (Continued)

CSO DISCHARGE DATA AT OLMSTED ROAD SEWER OUTFALL

Date / Time	Outfall Chamber 1 CSO Flow* (ft^3/s)	Outfall Chamber 1 CSO Volume** (MG)	Outfall Chamber 2 CSO Flow* (ft^3/s)	Outfall Chamber 2 CSO Volume** (MG)	Total CSO Discharge Volume (MG)
6/2/99 13:00	1.97	0.004	-1.86	0	0.004
6/2/99 13:05	8.01	0.018	-7.90	0	0.018
6/2/99 13:10	1.90	0.004	-1.65	0	0.004
6/2/99 13:15	1.94	0.004	-1.48	0	0.004
6/2/99 13:20	1.97	0.004	-1.29	0	0.004
6/2/99 13:25	1.94	0.004	1.44	0.0032	0.008
6/2/99 13:30	7.92	0.018	-4.54	0	0.018
6/2/99 13:35	1.92	0.004	1.38	0.0031	0.007
6/2/99 13:40	7.85	0.018	-7.37	0	0.018
6/2/99 13:45	1.85	0.004	-1.74	0	0.004
6/2/99 13:50	2.01	0.004	-1.45	0	0.004
6/2/99 13:55	7.66	0.017	-7.31	0	0.017
6/2/99 14:00	1.88	0.004	-1.54	0	0.004
6/2/99 14:05	7.65	0.017	-7.06	0	0.017
6/2/99 14:10	1.99	0.004	-1.32	0	0.004
6/2/99 14:15	7.79	0.017	-7.20	0	0.017
6/2/99 14:20	7.78	0.017	-4.45	0	0.017
6/2/99 14:25	7.77	0.017	-7.45	0	0.017
6/2/99 14:30	1.72	0.004	-1.47	0	0.004
6/2/99 14:35	1.85	0.004	-1.66	0	0.004
6/2/99 14:40	1.96	0.004	-1.49	0	0.004
6/2/99 14:45	1.83	0.004	-1.20	0	0.004
6/2/99 14:50	1.87	0.004	-1.21	0	0.004
6/2/99 14:55	1.78	0.004	-1.05	0	0.004
6/2/99 15:00	7.65	0.017	-6.89	0	0.017
6/2/99 15:05	7.55	0.017	-7.17	0	0.017
6/2/99 15:10	1.89	0.004	-1.00	0	0.004
6/2/99 15:15	1.81	0.004	-0.97	0	0.004
6/2/99 15:20	1.89	0.004	-1.36	0	0.004
6/2/99 15:25	1.80	0.004	-1.04	0	0.004
6/2/99 15:30	1.71	0.004	-1.13	0	0.004
6/2/99 15:35	1.75	0.004	1.15	0.0026	0.007
6/2/99 15:40	7.62	0.017	-6.90	0	0.017
6/2/99 15:45	1.84	0.004	-0.77	0	0.004
6/2/99 15:50	7.52	0.017	-6.62	0	0.017
6/2/99 15:55	1.76	0.004	-0.74	0	0.004

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

TABLE AII-6 (Continued)

CSO DISCHARGE DATA AT OLMSTED ROAD SEWER OUTFALL

Date / Time	Outfall Chamber 1 CSO Flow* (ft^3/s)	Outfall Chamber 1 CSO Volume** (MG)	Outfall Chamber 2 CSO Flow* (ft^3/s)	Outfall Chamber 2 CSO Volume** (MG)	Total CSO Discharge Volume (MG)
6/2/99 16:00	1.69	0.004	-1.08	0	0.004
6/2/99 16:05	7.66	0.017	-4.81	0	0.017
6/2/99 16:10	1.64	0.004	-0.77	0	0.004
6/2/99 16:15	7.43	0.017	-4.79	0	0.017
6/2/99 16:20	1.61	0.004	1.24	0.0028	0.006
6/2/99 16:25	7.42	0.017	-4.41	0	0.017
6/2/99 16:30	7.41	0.017	-6.60	0	0.017
6/2/99 16:35	1.66	0.004	-1.30	0	0.004
6/2/99 16:40	1.73	0.004	1.22	0.0027	0.007
6/2/99 16:45	7.46	0.017	-6.69	0	0.017
6/2/99 16:50	7.41	0.017	-4.73	0	0.017
6/2/99 16:55	1.70	0.004	-1.53	0	0.004
6/2/99 17:00	7.40	0.017	-4.67	0	0.017
6/2/99 17:05	7.43	0.017	-4.57	0	0.017
6/2/99 17:10	1.74	0.004	-0.69	0	0.004
6/2/99 17:15	7.37	0.017	-4.96	0	0.017
6/2/99 17:20	7.44	0.017	-6.83	0	0.017
6/2/99 17:25	7.35	0.016	-6.53	0	0.016
6/2/99 17:30	7.23	0.016	-4.72	0	0.016
6/2/99 17:35	1.73	0.004	-0.68	0	0.004
6/2/99 17:40	7.27	0.016	-6.26	0	0.016
6/2/99 17:45	7.31	0.016	-6.69	0	0.016
6/2/99 17:50	7.14	0.016	-6.46	0	0.016
6/2/99 17:55	1.60	0.004	-0.82	0	0.004
6/2/99 18:00	1.70	0.004	0.98	0.0022	0.006
6/2/99 18:05	7.27	0.016	-6.83	0	0.016
6/2/99 18:10	1.67	0.004	-1.17	0	0.004
6/2/99 18:15	1.67	0.004	1.13	0.0025	0.006
6/2/99 18:20	1.63	0.004	-0.72	0	0.004
6/2/99 18:25	7.19	0.016	-4.84	0	0.016
6/2/99 18:30	6.98	0.016	-4.82	0	0.016
6/2/99 18:35	1.67	0.004	-0.63	0	0.004
6/2/99 18:40	7.17	0.016	-4.80	0	0.016
6/2/99 18:45	7.21	0.016	-6.27	0	0.016
6/2/99 18:50	1.58	0.004	-0.85	0	0.004
6/2/99 18:55	7.17	0.016	-6.23	0	0.016

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

TABLE AII-6 (Continued)

CSO DISCHARGE DATA AT OLMSTED ROAD SEWER OUTFALL

Date / Time	Outfall Chamber 1 CSO Flow* (ft^3/s)	Outfall Chamber 1 CSO Volume** (MG)	Outfall Chamber 2 CSO Flow* (ft^3/s)	Outfall Chamber 2 CSO Volume** (MG)	Total CSO Discharge Volume (MG)
6/2/99 19:00	7.21	0.016	-6.40	0	0.016
6/2/99 19:05	7.16	0.016	-6.11	0	0.016
6/2/99 19:10	7.14	0.016	-6.36	0	0.016
6/2/99 19:15	1.71	0.004	-0.86	0	0.004
6/2/99 19:20	7.20	0.016	-6.24	0	0.016
6/2/99 19:25	1.70	0.004	-0.54	0	0.004
6/2/99 19:30	7.00	0.016	-4.69	0	0.016
6/2/99 19:35	1.64	0.004	-1.28	0	0.004
6/2/99 19:40	7.11	0.016	-4.85	0	0.016
6/2/99 19:45	7.12	0.016	-4.94	0	0.016
6/2/99 19:50	7.09	0.016	-6.99	0	0.016
6/2/99 19:55	7.08	0.016	-6.04	0	0.016
6/2/99 20:00	7.25	0.016	-5.42	0	0.016
6/2/99 20:05	7.00	0.016	-5.30	0	0.016
6/2/99 20:10	7.01	0.016	-5.44	0	0.016
6/2/99 20:15	6.92	0.016	-4.20	0	0.016
6/2/99 20:20	6.96	0.016	-5.27	0	0.016
6/2/99 20:25	6.83	0.015	-5.16	0	0.015
6/2/99 20:30	1.59	0.004	0.03	0.0001	0.004
6/2/99 20:35	6.96	0.016	-5.28	0	0.016
6/2/99 20:40	6.86	0.015	-5.25	0	0.015
6/2/99 20:45	1.50	0.003	0.02	0.0000	0.003
6/2/99 20:50	6.86	0.015	-4.38	0	0.015
6/2/99 20:55	1.49	0.003	0.50	0.0011	0.004
6/2/99 21:00	1.56	0.003	0.02	0.0000	0.004
6/2/99 21:05	6.87	0.015	-5.24	0	0.015
6/2/99 21:10	1.53	0.003	-0.10	0	0.003
6/2/99 21:15	6.76	0.015	-5.29	0	0.015
6/2/99 21:20	6.83	0.015	-5.30	0	0.015
6/2/99 21:25	1.57	0.004	-1.28	0	0.004
6/2/99 21:30	6.78	0.015	-5.28	0	0.015
6/2/99 21:35	1.56	0.004	0.02	0.0000	0.004
6/2/99 21:40	6.71	0.015	-5.08	0	0.015
6/2/99 21:45	6.72	0.015	-5.19	0	0.015
6/2/99 21:50	6.64	0.015	-6.24	0	0.015
6/2/99 21:55	6.89	0.015	-6.67	0	0.015

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

TABLE AII-6 (Continued)

CSO DISCHARGE DATA AT OLMSTED ROAD SEWER OUTFALL

Date / Time	Outfall Chamber 1 CSO Flow* (ft^3/s)	Outfall Chamber 1 CSO Volume** (MG)	Outfall Chamber 2 CSO Flow* (ft^3/s)	Outfall Chamber 2 CSO Volume** (MG)	Total CSO Discharge Volume (MG)
6/2/99 22:00	6.84	0.015	-5.76	0	0.015
6/2/99 22:05	6.73	0.015	-5.12	0	0.015
6/2/99 22:10	7.03	0.016	-5.18	0	0.016
6/2/99 22:15	7.00	0.016	-5.43	0	0.016
6/2/99 22:20	6.70	0.015	-5.10	0	0.015
6/2/99 22:25	6.84	0.015	-5.21	0	0.015
6/2/99 22:30	6.69	0.015	-5.09	0	0.015
6/2/99 22:35	6.67	0.015	-5.09	0	0.015
6/2/99 22:40	6.67	0.015	-5.19	0	0.015
6/2/99 22:45	1.50	0.003	0.01	0.0000	0.003
6/2/99 22:50	6.75	0.015	-5.21	0	0.015
6/2/99 22:55	6.76	0.015	-5.28	0	0.015
6/2/99 23:00	6.62	0.015	-5.15	0	0.015
6/2/99 23:05	1.43	0.003	0.01	0.0000	0.003
6/2/99 23:10	6.71	0.015	-5.28	0	0.015
6/2/99 23:15	6.56	0.015	-5.04	0	0.015
6/2/99 23:20	6.55	0.015	-5.13	0	0.015
6/2/99 23:25	1.35	0.003	0.33	0.0007	0.004
6/2/99 23:30	6.58	0.015	-4.96	0	0.015
6/2/99 23:35	1.31	0.003	0.01	0.0000	0.003
6/2/99 23:40	1.33	0.003	0.01	0.0000	0.003
6/2/99 23:45	6.55	0.015	-5.12	0	0.015
6/2/99 23:50	6.44	0.014	-5.08	0	0.014
Event Total:					7.343

Note: The Riverside Sewer Outfall consists of two outfall chambers and it is assumed that the total discharge volume is the sum of the discharge volumes from the two chambers.

* CSO flow data were obtained from USACE, Chicago District.

** CSO volume values were calculated based on CSO flow and duration, i.e. 5 minutes. A zero value is assigned to the discharge volume if a CSO flow is negative in value.