

*Protecting Our Water Environment*



*Metropolitan Water Reclamation District of Greater Chicago*

***RESEARCH AND DEVELOPMENT  
DEPARTMENT***

*REPORT NO. 01-9*

*ELEVATED NITRATE-N CONCENTRATIONS IN  
GROUNDWATER AT FIELD 10, FULTON COUNTY, ILLINOIS*

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**ELEVATED NITRATE-N CONCENTRATIONS IN GROUNDWATER AT  
FIELD 10, FULTON COUNTY, ILLINOIS**

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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

The Metropolitan Water Reclamation District of Greater Chicago (District) has owned and operated a 6,156 hectare (ha) (15,200 acre) land reclamation site in Fulton County, Illinois since the early 1970s. The site was developed for beneficial use of District biosolids to reclaim strip-mined land and to provide essential plant nutrients for crops grown at the site. A total of 1,862 ha (4,598 acres) of land at the site are permitted for biosolids applications. Biosolids applications to fields at the site were started in 1972 and continue to the present. During this interval, 47 fields have received biosolids applications.

Prior to applying any biosolids at the site, the District met with Illinois Environmental Protection Agency (IEPA) and local regulatory officials to design a monitoring program to be instituted at the Fulton County site. A program was instituted in 1971 to monitor groundwaters, surface waters, soils, and crops.

Monitoring in 1983 showed that nitrate-N concentrations were increasing in a groundwater seep, designated as Spring 1, located down gradient and adjacent to Field 10. Nitrate-N levels in Spring 1 fluctuated until increasing sharply in 1990, exceeding the United States Environmental Protection Agency (USEPA) drinking water standard of 10 mg/L. Because of the elevated nitrate-N levels, a study was initiated to: (1)

analyze the trend in the nitrate-N concentration of surface and groundwaters of Field 10, (2) determine whether USEPA drinking water standards were exceeded, and (3) recommend management practices for reducing the nitrate-N concentration in ground and surface waters of Field 10.

Field 10 is a centrally located 38 ha (94 acre) application field situated mainly on undisturbed forest soil. The field differs from most fields at the site in that coal beneath the field was removed by underground mining during the early part of the 1900s. The underground mining created an interconnected series of underground tunnels and chambers under Field 10 that extend beyond the boundaries of the field. Portions of the mine that extend beyond the field's boundaries to the east are overlain by fields not owned by the District, and farmed by conventional methods, whereby nitrogen inputs are generally in the form of chemical fertilizers. It is hydrologically impossible for the waters of similarly mined land to the west to mix with the waters originating beneath Field 10 as a valley separates them. Extensive investigation of the area and the plats and maps of the former mine company indicate that current drainage exits through three drainage points believed to be the remains of former mine entrances where the coal bearing strata outcrops in a valley adjacent to Field 10. These three drainage points are referred to as Springs 1, 2, and 4.

Field 10 received a cumulative biosolids application of 479 dry tons/acre between 1974 and 1992. The last biosolids application to the field occurred in 1992 with 122.6 dry tons/acre being applied. Cumulatively, 6.57 tons/acre of plant available nitrogen have been applied to Field 10 in the form of biosolids. It is not known whether any other nitrogenous materials from prior farming operations were present in the soil profile, nor is it known if nitrogenous material from prior mining operations were present in the underground mine chambers. Deep cores of the soil profile from the surface to bedrock (approximately 0- to 30- feet) throughout Field 10 and outside of the field were made in 1994 and 1995. Analysis of the soil cores showed that the concentrations of nitrate-N in the soil profile increased as compared to cores from outside the field. The highest nitrate-N level observed in the soil cores from Field 10 was 58.6 mg/kg as compared to 3.5 mg/kg outside the field.

No consistent pattern of significantly increased ammonium-N was observed in the soil cores from Field 10. The ammonium-N concentrations in the soil cores from within Field 10 ranged from 0.8 to 7.1 mg/kg as compared to 0.6 to 4.4 mg/kg in the cores from outside Field 10. The low levels of ammonium-N in the soil profile of Field 10 indicate that the ammonium-N was mineralized to nitrate-N, eliminating any buildup of ammonium-N in the soil profile.

A sizeable buildup of total Kjeldahl-N (TKN) occurred in the surface 18 inches of Field 10, with a maximum of 7,029 mg/kg being observed as compared to a maximum of 1,465 mg/kg outside the field. The mineralization of the biosolids applied nitrogen is a continuous source of nitrate-N in the soil profile of Field 10. From the observed mineralization rate of the biosolids organic carbon in the field, it is possible that nitrogen mineralization will continue to occur until about 2005, and nitrate-N levels in the spring water may continue to remain high.

Seven shallow monitoring wells were installed in and around Field 10 in 1995 to periodically monitor the groundwater above the rock layer overlaying the coal bearing strata. From 1996 to 1999, the five shallow wells inside Field 10 contained nitrate-N concentrations ranging from 87 to 275 mg/L. The two shallow wells outside Field 10 had mean nitrate-N levels of 2.03 and 0.96 mg/L, respectively.

Four deep wells, drilled into the mine chambers, were installed in 1995. These wells had mean nitrate-N concentrations ranging from 0.47 to 21.1 mg/L during 1996 to 1999. The two deep wells on the western side of Field 10 close to the spring drainage points had nitrate-N values ranging from 0.79 to 44.4 mg/L.

Sampling of the three springs draining the mine showed annual increases in nitrate-N concentrations that were probably related to the effects of seasonal precipitation leaching

the nitrate-N through the soil profile. The nitrate-N concentration in Spring 1, a District water monitoring location since 1972, showed that the nitrate-N levels in the spring water increased as the flow increased during the intensive 1996 to 1999 sampling period. Spring 1 showed nitrate-N concentrations ranging from 1.72 to 23.2 mg/L during the 1996 to 1999 sampling period.

In 1994 and 1995 an effort was made to determine the source and pathway of the travel of spring water and the possible sources of nitrate-N. Dye tests, using an optical brightener, were performed by injecting the dye into a mine tunnel intersected by a soil boring. Efforts to track the movement of water through the interconnected mine chambers and tunnels using dye tracing techniques were inconclusive.

Surface waters at points above and below Springs 1, 2, and 4 in the valley adjacent to Field 10 were sampled monthly for one year, between June 1999 and June 2000. The major nitrate-N inputs to the drainage area leading downstream to Big Creek are Springs 1, 2, and 4. Other springs and tributaries contributing to the drainage area appear to dilute the nitrate-N concentration in the water of Springs 1, 2, and 4. The mean nitrate-N concentration of Big Creek upstream and downstream of this tributary drainage area for this one-year period was 2.20 and 1.71 mg/L, respectively. This shows that the overall drainage from Field 10 does not elevate the concentrations of nitrate-N in Big Creek, and that Big Creek ni-

trate-N concentrations are well below the drinking water standard of 10 mg/L.

It cannot be concluded that the applications of biosolids and commercial fertilizer applied to Field 10 are the only two sources that caused the elevated concentrations of nitrate-N in the Field 10 drainage area. Field 10 differs from most fields because of the underground mine and drainage system underlying the field, and any unknown source of nitrogen contained in the subsurface of the mine may also be contributing to the elevated nitrate-N levels in the springs. Also, adjacent private properties to the east, which are underlain by the mine, may contribute to the elevated nitrate-N levels within the mine system because commercial fertilizers are used in crop production there.

Consequently, it is important to minimize the impact of previous applications of biosolids and commercial fertilizers by growing crops to remove the existing nitrate-N in the soil profile of Field 10 for the next several years. In the future, effective management of Field 10 requires that biosolids and commercial fertilizers should only be applied at rates to meet the agronomic nitrogen requirements of any crops grown.



RECOMMENDATIONS FOR REDUCING NITRATE-N CONCENTRATION IN THE  
SPRINGS ASSOCIATED WITH FIELD 10

Biosolids applications were last made to Field 10 in 1992 at 122.6 dry tons/acre. A cumulative amount of 479 dry tons/acre biosolids was applied to Field 10 from 1974 through 1992. The applied biosolids along with any other unknown sources of nitrogen are continuing to mineralize slowly, creating nitrate-N for leaching in the soil profile of Field 10. Additionally, unknown amounts of commercial fertilizer have been applied to the field prior to 1972 and during 1972, 1991, 1993, and 1994 in the course of crop production.

The monitoring of water quality in Springs 1, 2, and 4 clearly demonstrated that nitrate-N concentrations exceeded the USEPA's drinking water standard of 10 mg/L. Although it cannot be determined whether these high levels have resulted due to either the cumulative biosolids loading of 479 dry tons/acre during the period of 1974 through 1992, unknown sources of nitrogen, and/or the unknown amount of commercial fertilizer applied, corrective actions are needed to reduce the nitrate-N concentration in the water of the springs associated with Field 10.

In July of 2000, the leasee requested a release from the lease. This action was approved by the Board of Commissioners. Management of the field by M&O will prevent the uncontrolled application of commercial fertilizers in the future.

In order to reduce nitrate-N concentration in the water of Springs 1, 2, and 4, the following recommendations are made:

1. Biosolids and/or commercial fertilizers should not be applied until after 2005. This should include both N and P. As pointed out in the report, mineralization of the TKN that has built-up in the surface soil will provide more than adequate plant available N to support optimum yields of agronomic crops through 2005.
2. A management program which focuses on the export of N through crop removal should be adopted for Field 10 beginning in the spring of 2001. This can be achieved by planting corn, wheat, oats, or sorghum sudan grass and completely removing all grain and stover or straw at the time of harvest. This will optimize removal of nitrate-N that is produced through mineralization of organic N in the surface soil.
3. No leguminous crops should be grown on Field 10 through 2005. These crops can fix atmospheric N which will diminish the rate at which N is dissipated from the soil surface in Field 10. Furthermore, because legumes do not compete well with weedy species in high fertility soils, such as those in Field 10, there will be very little

crop to remove from the field at harvest time which also will retard the rate of N removal from the surface soils.

4. After 2005, based on the results of continued monitoring, nutrients may again be applied to Field 10 either as constituents of biosolids or commercial fertilizers. Regardless of the source of the nutrients, their inputs should be balanced by anticipated crop removal (i.e. applied at agronomic rates). This will minimize any further buildup of N in the soil profile of Field 10.
5. R&D will continue to monitor the site and the elevated levels of nitrate-N in both the springs and wells.

## INTRODUCTION

### Description of Fulton County Site

The Fulton County site is a large tract of land, 6,156 ha (15,200 acres), owned by the District, 200 miles southwest of Chicago in Fulton County, Illinois. The site was purchased in parcels during the early 1970s and developed in nine stages. The site was developed to serve as a primary location for recycling biosolids produced by the District. The site consists of numerous biosolids application fields of varying size and dimension.

Fields permitted by the IEPA for maximum biosolids application rates have berms around them and are designed to collect surface runoff which drains into retention basins. These basins must be sampled and analyzed for specific water quality parameters to meet IEPA permit criteria before the contents can be released into state waters. Other unbermed fields without retention basins exist for the application of supernatant and minimal amounts of biosolids (25 dry tons/acre/year) in accordance with the current IEPA permit. Between 1971 and the present, 1,747 ha (4,314 acres) of land were permitted for the application of biosolids.

Soils within the application fields at the site vary, with soils disturbed by surface mining being predominant. Acreages permitted for biosolids application include 1,341 ha (3,310 acres) of strip mined land and 407 ha (1,004 acres) of

undisturbed place land. At numerous locations, undisturbed soils exist because coal was removed through traditional subsurface mining techniques prior to the advent of surface mining. The District has demonstrated the value of applying biosolids on these mine spoil lands for reclamation by taking advantage of the nutrient value, organic matter, and soil restorative characteristics of biosolids.

Forty-seven fields at the Fulton County site have received biosolids since establishment of the facility. After being amended with biosolids during the summer months, the application fields are planted with winter wheat or rye during the fall. In the following year the fields are leased to local farmers who generally grow corn and soybeans in rotation. The District also plants alfalfa in some application fields and leases these fields for hay production.

To satisfy the IEPA permit requirements for operation of the site, the District established an Environmental Monitoring Program to ensure that the land application of biosolids for agronomic purposes would not adversely affect groundwaters, surface waters, soils, and crops. Water bodies found on the site include lakes, reservoirs, streams, and springs. These water bodies, as well as groundwater, might be adversely impacted if surface runoff from the application fields is not properly managed and monitored or sludge application rates exceed the permit limitations.

A monitoring program has been developed to protect water quality at the site. The site's IEPA permit requires that surface waters leaving bermed application fields be captured in retention basins and tested to meet specific permit requirements prior to their release into state waters. The permit also requires that surface waters (reservoirs, lakes, streams, and springs) be sampled and analyzed three times per year to measure the levels of chemical parameters (i.e., ammonium-N, nitrate-N, nitrite-N, total phosphorus, Cd, Cu, and Hg) associated with biosolids. Furthermore, the permit requires the sampling and analysis of waters four times yearly from 20 wells and 15 lysimeters on the site to monitor the quality of groundwaters beneath and near the sludge application areas.

In the monitoring of waters from retention basins, surface water sites, wells, and lysimeters, analysis for nitrate-N is required by the IEPA permit.

Beginning in 1983, it was noted that nitrate-N concentrations were increasing in Spring 1 adjacent to Field 10. Nitrate-N levels fluctuated until increasing sharply in 1990, exceeding the USEPA drinking water standard of 10 mg/L. Due to the elevation of nitrate-N concentrations in the water of the spring, a study was undertaken with the following objectives:

1. Analyze the trend in the nitrate-N concentration of surface and groundwaters.
2. Determine whether the USEPA drinking water standard for nitrate-N was exceeded.
3. Recommend management practices for reducing the nitrate-N concentration in ground and surface waters of Field 10.

#### Field 10 Description

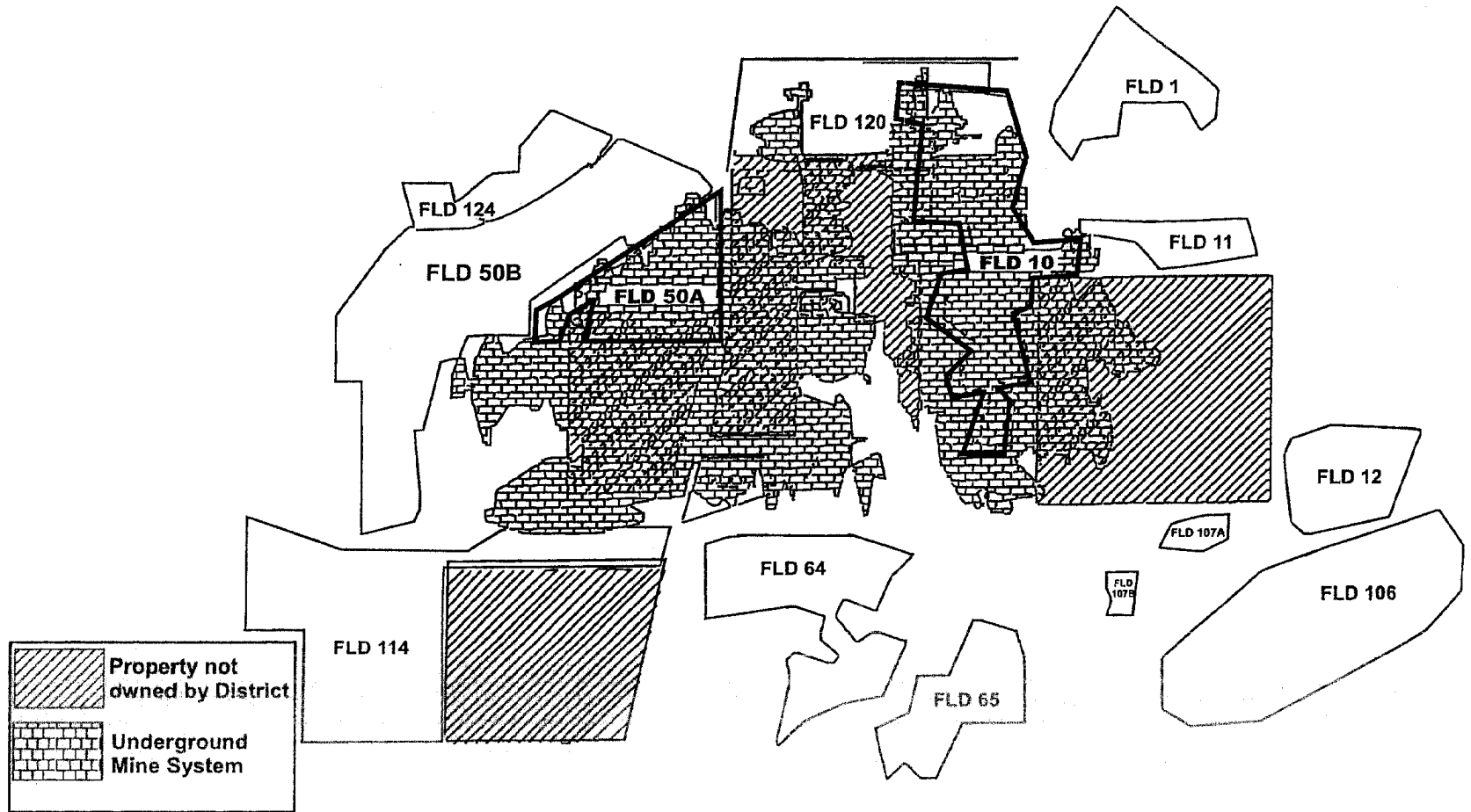
Field 10 is a centrally located, bermed, application field at the District's Fulton County site (Figure 1). Field 10 has a design area of 38 ha (94 acres) which includes berms and two retention basins. The total area available for application of biosolids is 28.1 ha (69.3 acres). Soil characteristics within the field vary, with the northeastern corner of the field being disturbed by surface mining. Underground mining was conducted beneath the rest of the field leaving undisturbed forest soil on the surface (Figure 2).

Most of the coal beneath Field 10 was mined by the Cripple Creek Mining Company. The underground stope and tunnel method was utilized prior to the development of surface strip mining techniques which were employed after the 1920s. In this method of underground mining, walls and supporting columns were left to support the roof of the mine, creating an interconnected labyrinth of underground chambers and tunnels extending well beyond the boundaries of Field 10. Although

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FIGURE 1

MAP OF FIELD 10 SHOWING UNDERGROUND MINE SYSTEM IN RELATION  
TO NEARBY FULTON COUNTY FIELDS

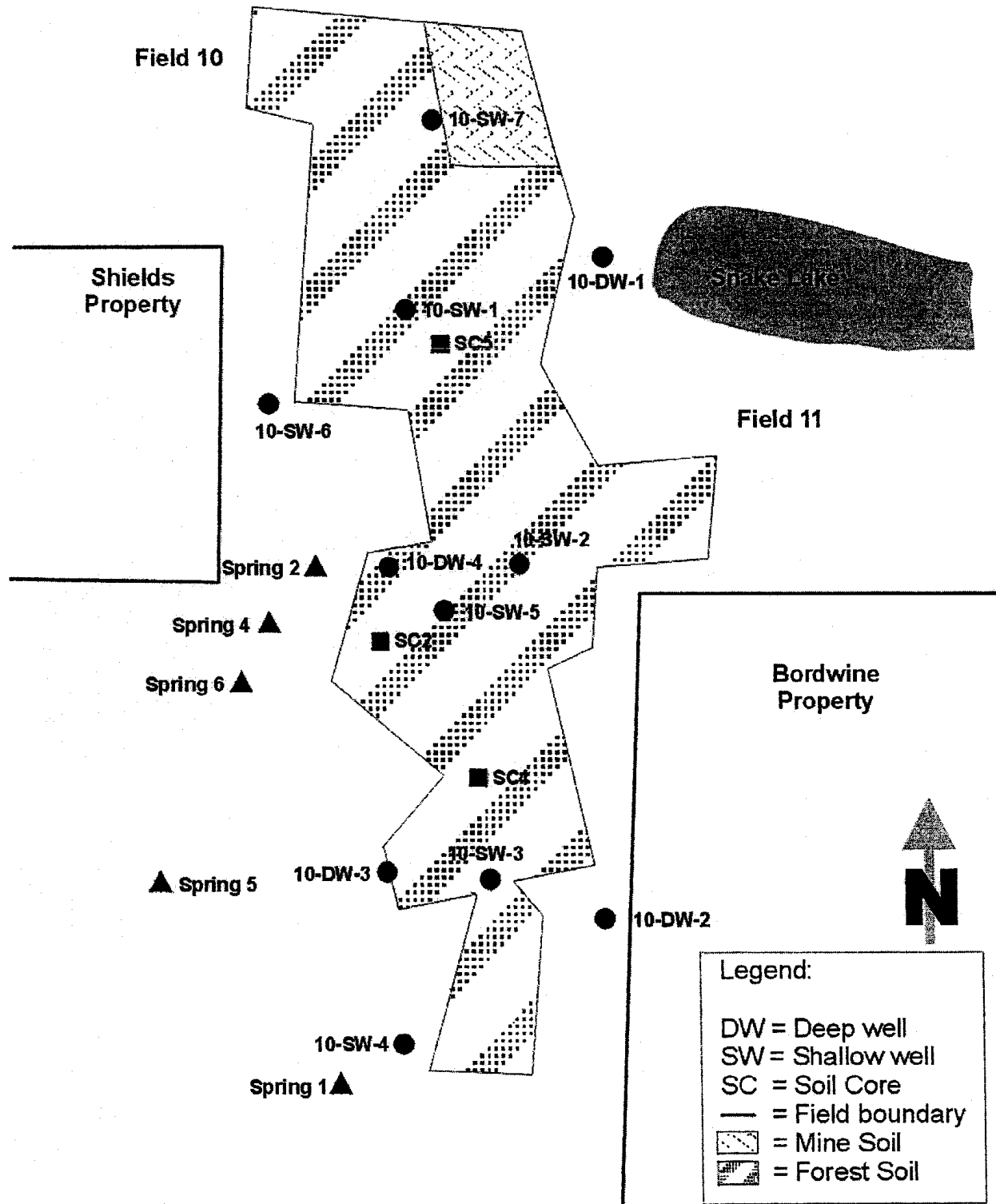




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FIGURE 2

FIELD 10 DEEP WELLS, SHALLOW WELLS, AND SOIL CORE SITES



entrances to the mine were closed, the interconnected tunnels and chambers still exist. Entrances to the mine were on the east side of the valley which borders Field 10 to the west.

Although the underground mine extends beyond the boundaries of Field 10, a valley to the west eliminates the possibility of water movement from similarly mined lands not owned by the District (referred to as Shields property) to the west. Property to the east, also not owned by the District (referred to as Bordwine property), overlies the mine, and may contribute to the nitrate-N found in spring waters. Snake Lake, also to the east, may contribute to the flow of water through the mine system. Underground mining activity ceased at the northern edge of Field 10, and the southern portion of the field is overlain by undisturbed forest soil. Underground mine entrances and mining structures have also been noted on the west side of the valley, indicating that it was heavily mined during the same period. Plats and maps of the Cripple Creek Mine exist, and they show the layout of the mine and elevations within the shafts. Tunnels and chambers under Field 10 slope toward the three "mine drainage points." These are currently referred to as springs.

Water entering the mine through the soil profile is thought to drain through the tunnels and chambers, ultimately exiting the mine as springs. All springs are located west of Field 10 (Figure 2).

Careful mapping and surveying of Field 10 was performed by Fulton County Maintenance and Operations (M&O) personnel. The results of this exercise were used along with old maps of the underground mine system made by the coal company to determine the proximity and relationship of Springs 1, 2, and 4 with the terminal points of the underground tunnels. The actual spring locations coincide with the end-points of major tunnels. It is apparent that the springs are fed by drainage from the underground mine system.

In the method of mining used in this mine, large amounts of ammonium nitrate based explosives were used for loosening coal prior to removal. Also, draft animals used for removal of the coal were commonly stabled within the mine, creating deposits of manure. It is not known whether any chemical or organic nitrogen bearing materials were abandoned within the mine upon its closure, nor is it known to what extent these materials may influence the elevated nitrate-N levels found within the mine system.

#### Application of Biosolids on Field 10

The first application of biosolids to Field 10 occurred in 1974. Field 10 received annual biosolids applications averaging 24.97 dry tons/acre/year, between 1974 and 1984, for a cumulative application of 274.7 dry tons/acre by the end of 1984. Biosolids applications were halted for three years (1985 - 1987), but they were resumed in 1988. In 1988 and

1990, biosolids applications of 40.2 and 41.5 dry tons/acre, respectively, were made. Biosolids were not applied in 1989 and 1991. In 1992, a final application of 122.6 dry tons/acre was made. Biosolids application history for Field 10 is given in Figure 3.

During 1990 and 1993, greater than average precipitation combined with the larger biosolids loading rates in 1988, 1990, and 1992, may have increased leaching of nitrate-N through the soil profile. In Figure 3, several surges in the mean annual nitrate-N concentration found in Spring 1 appear to coincide with the increased annual precipitation.

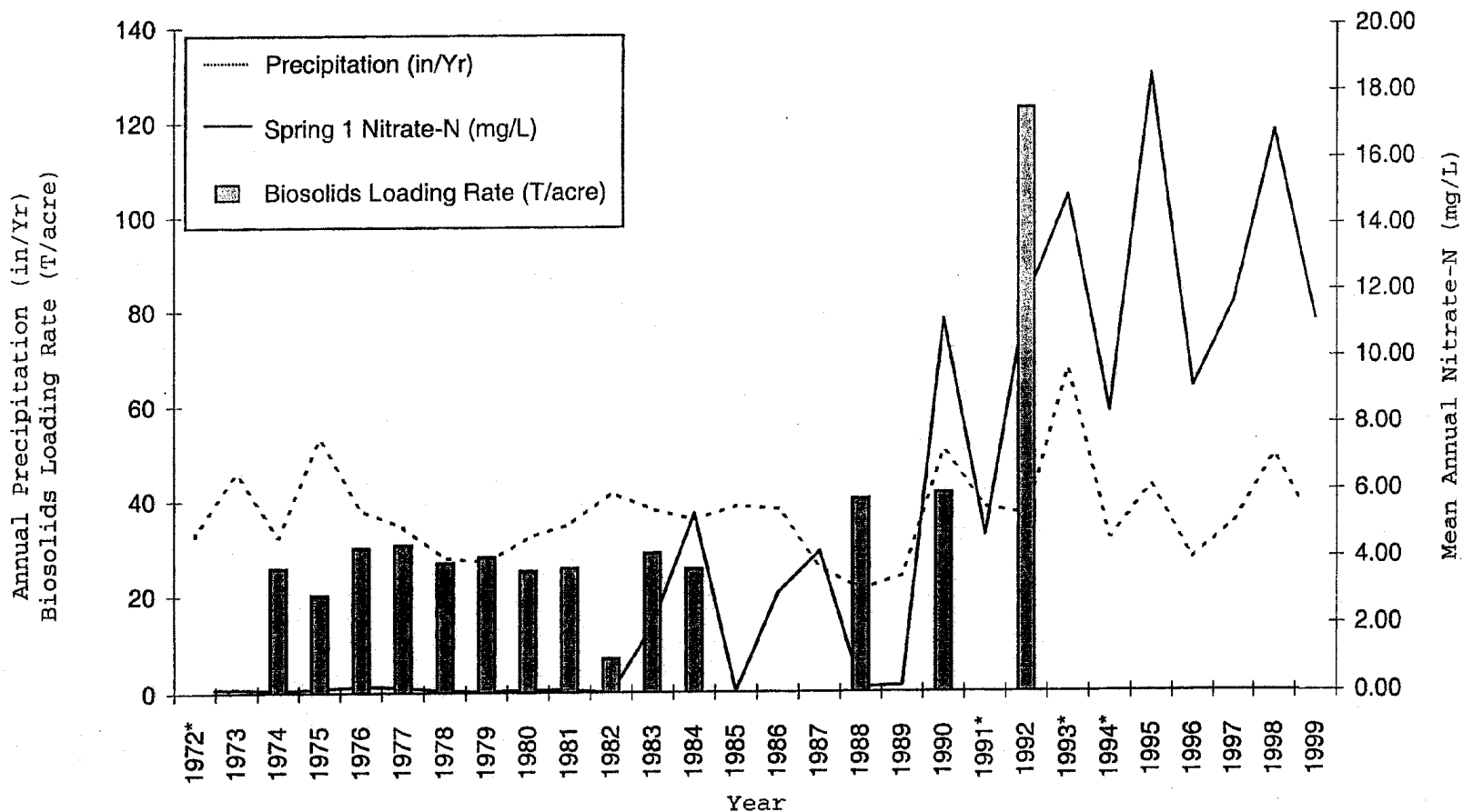
During 1991, 1993, and 1994, the field was not being used for biosolids application, and from 1993 to 2000, it was leased to local farmers for crop production. These farmers grew corn, soybeans, and alfalfa. Under the lease agreement, the farmer is permitted to grow crops for a variable number of years in return for a lease amount paid per acre. The farmer is responsible for all crop inputs and is expected to maintain reasonable control of weeds. The District's responsibility under this agreement is to provide the farmer with access to the leased fields.

Leaseholders of District fields use commercial fertilizer as a standard agronomic practice to enhance crop yields. Although the amount to be applied is often determined through soil testing, many farmers routinely apply a certain amount of fertilizer annually depending on the type of crop. In the

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FIGURE 3

FIELD 10 BIOSOLIDS LOADING RATES, ANNUAL PRECIPITATION, AND MEAN ANNUAL NITRATE-N CONCENTRATION IN SPRING 1 FROM 1972 THROUGH 1999



\*Commercial fertilizer applied.

four years that crops were grown on Field 10 (1972, 1991, 1993, and 1994), it is thought to have received commercial fertilizer. It is estimated that a total of 525 lbs./acre of actual nitrogen were applied. Beginning in 1974 and ending in 1992, it is estimated that 13,140 lbs./acre of plant available nitrogen were applied to Field 10 as biosolids. Although nitrate-N concentrations in the soil profile of Field 10 could be influenced by the application of commercial fertilizer, there is no way of determining the impact of commercial fertilizer on the nitrate-N concentration of the groundwater, since reporting of such applications and their rates were never required.

#### Monitoring Activities at Field 10

Since 1971, the District has been monitoring the concentration of nitrate-N in Spring 1 which is adjacent to Field 10. The spring was monitored monthly from 1971 through 1981, and then three times annually from 1982 to the present as per the requirement of the IEPA permit. The mean annual nitrate-N concentration in the spring was less than 0.4 mg/L until 1983 when it rose to 2.00 mg/L (Table 1).

During routine surface water sampling and analyses in 1984, nitrate-N concentrations approaching the USEPA's drinking water standard of 10 mg/L were first noted in Spring 1. Between 1983 and 1989, the mean annual nitrate-N concentration of Spring 1 fluctuated between 0.05 and 5.33 mg/L (Table 1).

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TABLE 1

MEAN, MINIMUM, AND MAXIMUM CONCENTRATION OF NITRATE-N IN  
 SPRING 1, ADJACENT TO FIELD 10, FROM 1971 THROUGH 1999

Nitrate-N Concentration in Spring 1			
YEAR	Minimum	Mean	Maximum
-----mg/L-----			
1971	0.05	0.39	1.95
1972	0.06	0.11	0.18
1973	0.06	0.12	0.26
1974	0.04	0.08	0.13
1975	0.09	0.13	0.20
1976	0.10	0.20	0.77
1977	0.04	0.17	0.77
1978	<0.01	0.07	0.13
1979	0.02	0.06	1.10
1980	0.01	0.08	0.26
1981	0.01	0.11	0.40
1982	<0.01	<0.01	0.01
1983	0.01	2.00	5.99
1984	0.26	5.33	8.59
1985	<0.01	0.05	0.11

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TABLE 1 (CONTINUED)

MEAN, MINIMUM, AND MAXIMUM CONCENTRATION OF NITRATE-N IN  
 SPRING 1, ADJACENT TO FIELD 10, FROM 1971 THROUGH 1999

Nitrate-N Concentration in Spring 1			
YEAR	Minimum	Mean	Maximum
-----mg/L-----			
1986	1.55	2.93	5.66
1987	1.13	4.19	7.82
1988	0.01	0.15	0.44
1989	0.01	0.20	0.48
1990	4.09	11.14	19.42
1991	1.25	4.66	10.47
1992	9.19	11.73	16.62
1993	12.12	14.88	24.22
1994	3.43	8.36	20.39
1995	9.08	18.52	35.53
1996	1.72	9.11	15.56
1997	6.29	11.64	20.14
1998	11.48	16.82	23.17
1999	2.98	11.10	17.10



From 1990 to 1999, the yearly mean nitrate-N concentration of Spring 1 varied from 4.66 to 18.52 mg/L. However, all the measured nitrate-N concentrations during this period varied within a range of 1.25 to 35.53 mg/L. The lowest and highest values occurred in 1991 and 1995, respectively (Table 1).

Springs 2 and 4 were discovered after 1993, when concern began to mount over the increase in nitrate-N concentrations found in Spring 1. Regular sampling and analysis of these springs began in 1994. Tables 2 and 3 give minimum, maximum, and mean nitrate-N concentrations for Springs 2 and 4, respectively, from 1994 through 1999. Both springs experienced their highest mean and maximum nitrate-N concentrations in 1995. Although Spring 2 generally exhibited higher minimum, mean, and maximum nitrate-N concentrations than Spring 4 during these years, it must be noted that it was typically dry during the seasons when nitrate-N concentrations found in all springs were at their lowest.

Since Springs 1, 2, and 4 emerge from the west side slope of Field 10, where biosolids were applied, it appears that their flow is directly from under the field. Hence, it was important to investigate and determine whether the application of biosolids on Field 10 was responsible for the observed elevation in the nitrate-N concentration in the springs since 1983.

An investigation of the elevated nitrate-N concentration in Springs 1, 2, and 4, the soil profile, groundwaters, and

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TABLE 2

MEAN, MINIMUM AND MAXIMUM CONCENTRATION OF NITRATE-N IN  
 SPRING 2, ADJACENT TO FIELD 10, FROM 1994 THROUGH 1999

YEAR	NITRATE-N CONCENTRATION IN SPRING 2		
	Minimum	Mean	Maximum
	----- mg/L -----		
1994	0.80	12.50	21.06
1995	4.65	31.76	53.55
1996	2.24	19.73	34.40
1997	14.34	28.24	40.35
1998	5.20	21.63	33.75
1999	11.72	19.07	32.45

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TABLE 3

MEAN, MINIMUM AND MAXIMUM CONCENTRATION OF NITRATE-N IN  
 SPRING 4, ADJACENT TO FIELD 10, FROM 1994 THROUGH 1999

YEAR	NITRATE-N CONCENTRATION IN SPRING 4		
	Minimum	Mean	Maximum
	----- mg/L -----		
1994	9.39	14.71	20.52
1995	11.25	30.93	49.10
1996	5.38	16.73	39.30
1997	4.26	17.39	39.30
1998	2.38	17.86	34.18
1999	6.15	16.19	30.15

surface waters was undertaken by the Research and Development Department.

Objectives of the investigation include:

1. Determine the relationship between nitrate-N concentration in the springs and precipitation events occurring at Field 10.
2. Monitor the chemical quality, including nitrate-N, of water found in the underground mine chambers and in groundwater at the soil/rock interface.
3. Determine the time of travel and the point of exit of water from the mine system.
4. Determine the nitrate-N, ammonium-N, and total Kjeldahl-N concentration in the soil profile overlaying the mine system.
5. Assess the influence of Field 10 waters on downstream water bodies.

To reach the goals of this investigation, the following steps were undertaken:

1. Monitoring of the flow and nitrate-N concentration in Springs 1, 2, and 4 was increased to weekly and more frequently, as needed, in an attempt to characterize their fluctuations.
2. Seven shallow wells and four deep wells were installed in and around the field for monthly sampling and analysis of groundwater at the

soil/rock interface and in the mine chambers beneath Field 10.

3. Dye was injected within the mine system in an attempt to trace the movement, path and exit point of waters from the mine.
4. Soil cores in and around the field were obtained by coring and in the course of well installation. These samples were analyzed to characterize the chemical constituents of the soil profile.
5. Waters from points upstream and downstream in the Field 10 drainage system were sampled and analyzed monthly in an attempt to characterize the influence of Field 10 drainage on downstream water bodies.

In addition, records were compiled and summarized of the amount of biosolids applied annually on Field 10 and the total and ammonium-N added to Field 10 each year via the biosolids. Figure 3 shows the relative amounts of biosolids applied to Field 10 from 1972 through 1999. The amount of N released from the Field 10 runoff retention basins each year was computed, and records of cropping history and inorganic N fertilization were summarized when such records were available.

It is very difficult to arrive at a nitrogen balance of Field 10. All the inputs of nitrogen (e.g., the amount of commercial fertilizer inorganic nitrogen applied, nitrogen

available from unknown nitrogen sources that may be present in the subsurface mines, nitrogen fixed by plants that grew on Field 10, etc.) are not available. In addition, losses of nitrogen due to volatilization of ammonia and denitrification were not measured. However, the total quantity of nitrate-N in the Field 10 soil profile was calculated and compared with the quantity of nitrate-N flowing from the field in the adjacent springs. These data were also used in assessing the impact of biosolids applications on Field 10 on the elevated levels of nitrate-N in the springs adjacent to the field.

## MATERIALS AND METHODS

All experimental work was conducted on or adjacent to Field 10 which is located in the center of the District's Fulton County property (Figure 1).

### Analytical Parameters and Methods

All analyses were conducted according to Standard Methods at the District's Fulton County R&D Laboratory, or at the Analytical Services Division's Laboratory at the Lue-Hing R&D Laboratory Complex. Soil analyses included ammonia-N, nitrate-N, nitrite-N, pH, EC, and TKN. Water analysis included ammonia-N, nitrate-N, nitrite-N, pH, and EC. Changes in nitrate-N analytical methods since 1972 included the adoption of a simplified chromotropic acid method which did not impact the change in nitrate-N concentrations detected in this investigation. This is evidenced by the lack of change in nitrate-N values obtained in the course of analytical work for other unrelated projects.

### Deep Soil and Rock Cores

Three soil cores were taken with a rotary drill rig equipped with a 4.25-inch (internal diameter) hollow stem auger and using a 5-foot split barrel continuous sampling system. This produced a 3-inch diameter continuous soil core to the depth of the top of the bedrock (approximately 20 feet below soil surface). The rock was cored with a 2-inch (internal

diameter) by 3-inch (external diameter) by 10-foot long conventional core barrel with a surface diamond bit.

All soil cores were split into 6-inch increments, air dried, processed, and analyzed for nitrate-N using Standard Methods. The rock samples were stored in waxed cardboard core boxes. The soil profile was characterized during the process of obtaining the soil cores for analysis. The successive horizons within the soil, rock, and mine tunnel profiles are described below.

#### Soil Profile

- 0 - 9.5 feet - Dark to mottled brown silty clay with traces of iron stain and root fibers
- 9.5 - 14 feet - Gray, clayey silt with trace iron stains
- 14 - 19.5 feet - Mottled brown, silty clay with black organic stains and trace iron stains
- 19.5 - 20.5 feet - Gray, clayey silt with traces of sand

#### Rock Profile

- 20.5 - 30 feet - Tan, silty claystone with traces of iron stain and mica
- 30 - 55.5 feet - Gray, massive bedded soft shale, iron stained with fractures on bedding planes



- 55.5 - 57.5 feet - Gray, massive bedded hard limestone, shaley and unweathered

#### Mine Tunnel

- 57.5 - 67 feet - Void assumed to be mine tunnel or chamber, black, fragmented coal

The locations of the three soil and rock cores (referred to henceforth as Core 2, Core 4, and Core 5) were carefully chosen so that they would intersect the mine tunnels and would be placed far enough from the western edge of Field 10 to produce soil cores representative of the biosolids-amended soil. The location of the cores is shown in Figure 2. Core 5 was taken on December 14, 1994, located in the north center of Field 10, 600 feet from the west edge of the field. Core 2 was taken on December 19, 1994, located 180 feet from the west edge of the field and slightly south of Springs 2 and 4, and Core 4 was taken on December 15, 1994, located 45 feet from the west edge of the field and several hundred yards north of Spring 1.

#### Dye Tracing Study

Using old maps of the mine and existing survey points of known elevation and coordinates, District surveyors were able to locate points thought to intersect with tunnels of the underground mine. In each core a void was encountered at a depth consistent with the elevation of the underground mine,

indicating success in locating tunnels or chambers. The tunnel intersected by Core 5 was the only one found to have a significant amount of water in it.

In an effort to determine the source and pathway of the spring waters, dye Tinopal CBS-X, a fluorescent whitening agent, was selected as a tracer for the flow of water. Invisible, nontoxic and detectable at 2 µg/L under ultra-violet light, the compound is a dye commonly used for tracing under a wide variety of circumstances.

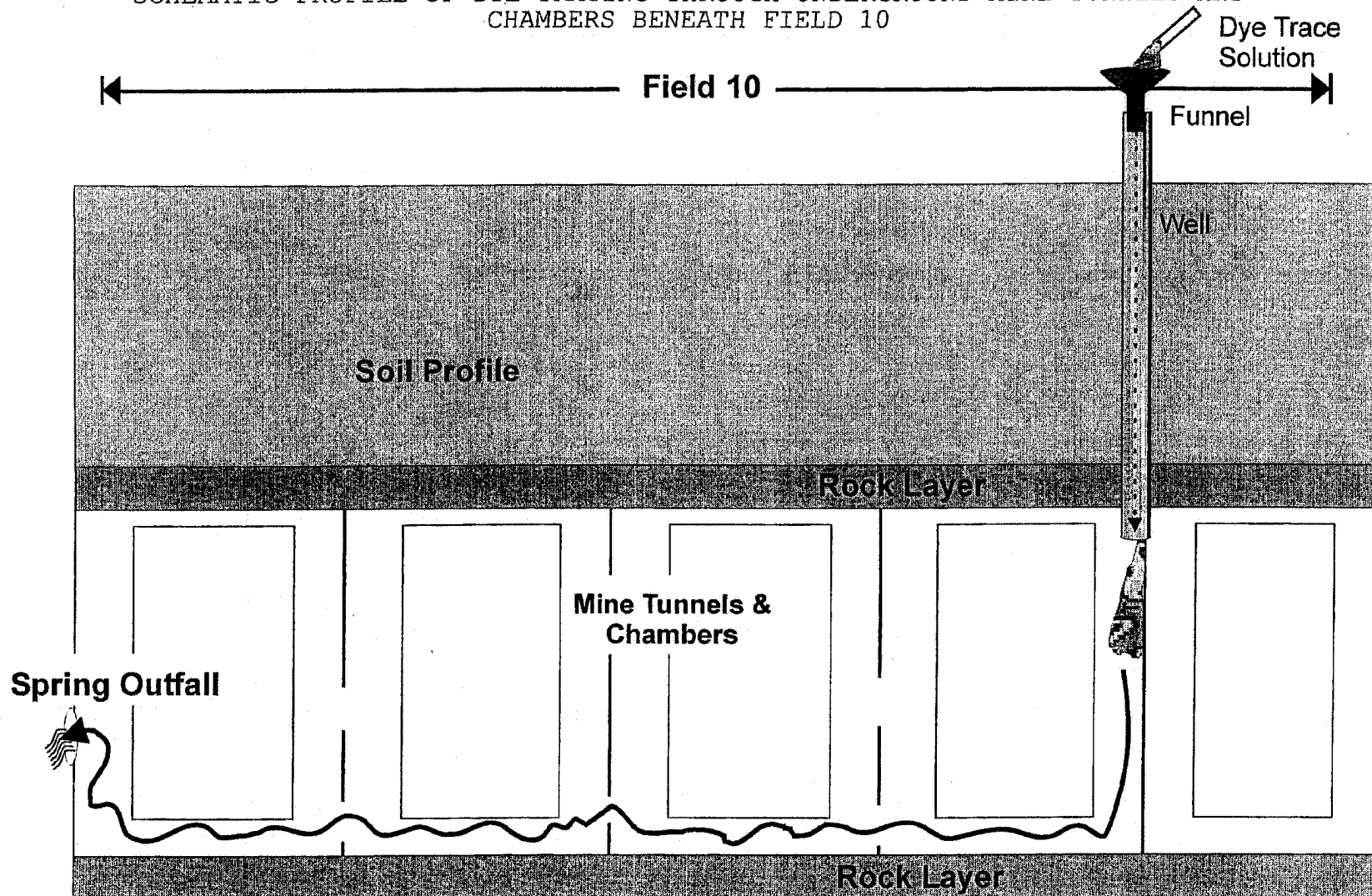
Five pounds of Tinopal CBS-X were mixed with 10 gallons of water and injected into the tunnel intersected by Core 5. A 1-inch PVC pipe was inserted into the tunnel from the surface to insure positive placement of the Tinopal CBS-X solution. All 10 gallons of Tinopal CBS-X solution were introduced to the tunnel through the PVC pipe with a funnel. Immediately afterward, 35 gallons of water were poured through the funnel and the 1-inch PVC pipe to flush the dye solution further into the tunnel (Figure 4).

Devices capable of absorbing and holding the optical brightener were placed at the discharge points on Springs 1, 2, and 4. The devices, called "bugs," consisted of a brick wrapped with two wires as shown in Figure 5. Each of these wires was wrapped around two rolled pads of unbleached cosmetic grade cotton. The pads were enclosed in stainless steel mesh to allow water to flow through them without allowing the

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FIGURE 4

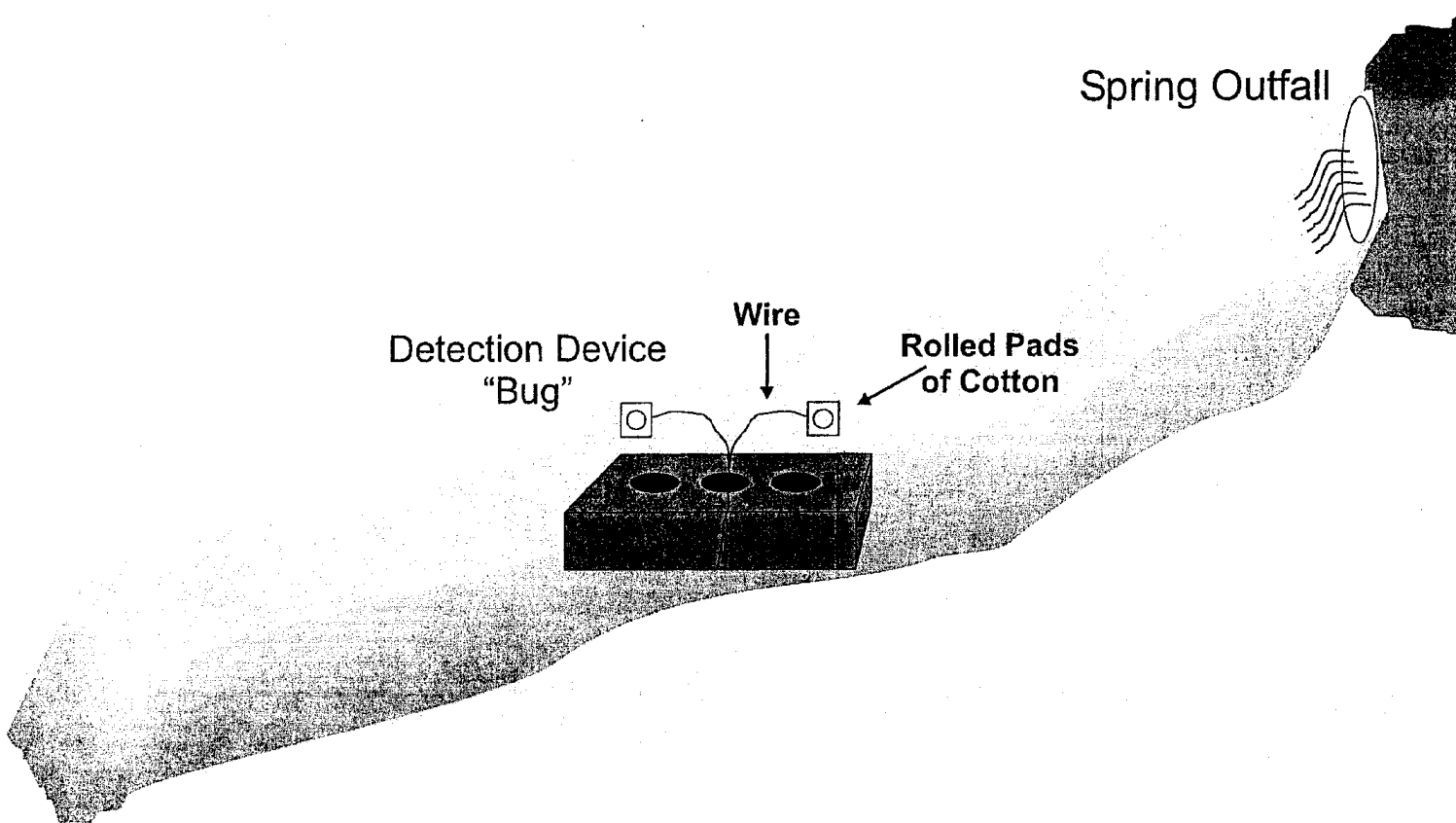
SCHEMATIC PROFILE OF DYE TRACING THROUGH UNDERGROUND MINE TUNNELS AND CHAMBERS BENEATH FIELD 10



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FIGURE 5

SCHEMATIC OF DETECTION DEVICE AND PLACEMENT FOR DYE TRACING THROUGH MINE TUNNELS  
AND CHAMBERS BENEATH FIELD 10



pad to be washed away due to the constant turbulence of the flow.

Initially, the bugs were removed and replaced three times per week. When removed, the devices were examined under a hand-held ultraviolet light to check for the presence of the optical brightener. To test the limits of detection, an aqueous 2 µg/L solution of Tinopal CBS-X was made and several pads were soaked in it. The pads were attached to a brick and placed downstream from the mouth of the spring with the heaviest flow (Spring 1, 56 gpm). After one week of continuous exposure to moving water, the device was removed and examined beneath an ultraviolet light. Since the brightener was still readily detectable, a decision was made to change the frequency with which the bugs were sampled to once per week. The bugs were continuously in place at Spring 1, 2, and 4 between December 20, 1994 and June 30, 1995.

#### Well Installation and Water Analyses

In the fall of 1995, seven shallow permanent monitoring wells were installed in and around Field 10 for the purposes of periodically monitoring groundwater above the rock layer (perched water) overlaying the coal bearing strata. Shallow wells were installed at depths ranging from 24.8- to 31.7-feet, where the surface of the underlying rock layer is found.

The method of obtaining soil cores during installation of the seven shallow wells was conducted identically to the method cited under "Deep Soil Cores" and the extracted cores were processed for chemical analysis of the soil. The soil cores obtained were analyzed for TKN, ammonium-N, nitrite-N, nitrate-N and organic carbon using the methods described by Page et al. (1982).

In addition four deep wells were installed through the soil and rock (Figure 2) and into the mine chambers for monitoring the waters within the tunnels. No soil cores were obtained in the installation of the four deep wells. Deep wells were installed at depths ranging from 56.6- to 78.6-feet, where voids assumed to be mineshafts or chambers were encountered.

To extract water from the deep and shallow wells, a 2.5-inch PVC pipe tipped with well screen was inserted in the well shaft and left standing at four feet above the soil surface. A 0.5-inch PVC pipe was run to the bottom of the well inside the 2.5-inch PVC pipe and was attached to a spigot held in place by the PVC well cap. An air valve on the well cap allowed compressed air to be introduced into the well, displacing the water within the well, and forcing the water up the 0.5 inch PVC pipe and out of the spigot.

Well water samples were collected monthly between 1996 and 1997, except for Deep Wells 3 and 4. These wells were

sampled weekly beginning in January of 1997 and ending in December of 1999.

Well water samples were analyzed for pH, EC, ammonium-N, nitrate-N, and nitrite-N using Standard Methods.

#### Spring Water Sample Collection

Spring water samples were collected directly from the mouth of the springs by filling 8 oz. plastic vials with water and covering with a plastic closure. The spring water samples were analyzed for ammonium-N, nitrite-N, and nitrate-N using Standard Methods. Sampling frequency of the springs has varied since initiation of the Fulton County project. Beginning in 1971, Spring 1 was sampled monthly as a surface water site as required by the IEPA permit. Sampling of this site was reduced to three times yearly in 1982. In 1991, the sampling frequency was increased to monthly which continued through 1993. In 1994, monthly sampling of Springs 2 and 4 began. However, an increased frequency of sampling (three times weekly) was undertaken for all springs in November and December of 1994. Beginning in 1995, and continuing through 1999, Springs 1, 2 and 4 were sampled once a week. The samples were analyzed weekly except for a period beginning April 10, 1995 and ending June 10, 1995 when the springs were sampled daily, Monday through Friday, in an attempt to characterize nitrogen fluctuations.

### Spring Flow Measurement

In an attempt to determine the volume of water being discharged from the underground mine, weirs were installed at the mouths of each spring in late 1994. In 1996, weekly measurement of spring flows at the time of sampling was begun and continued through the end of 1999.

The weirs were standard "V-notch" or "90-degree" weirs made of 0.25-inch steel and were equipped with graduated markings for measurement of head. The head measurements (inches) were convertible to gallon per minute (gmp) flows, accurate to the tenth of a gallon.

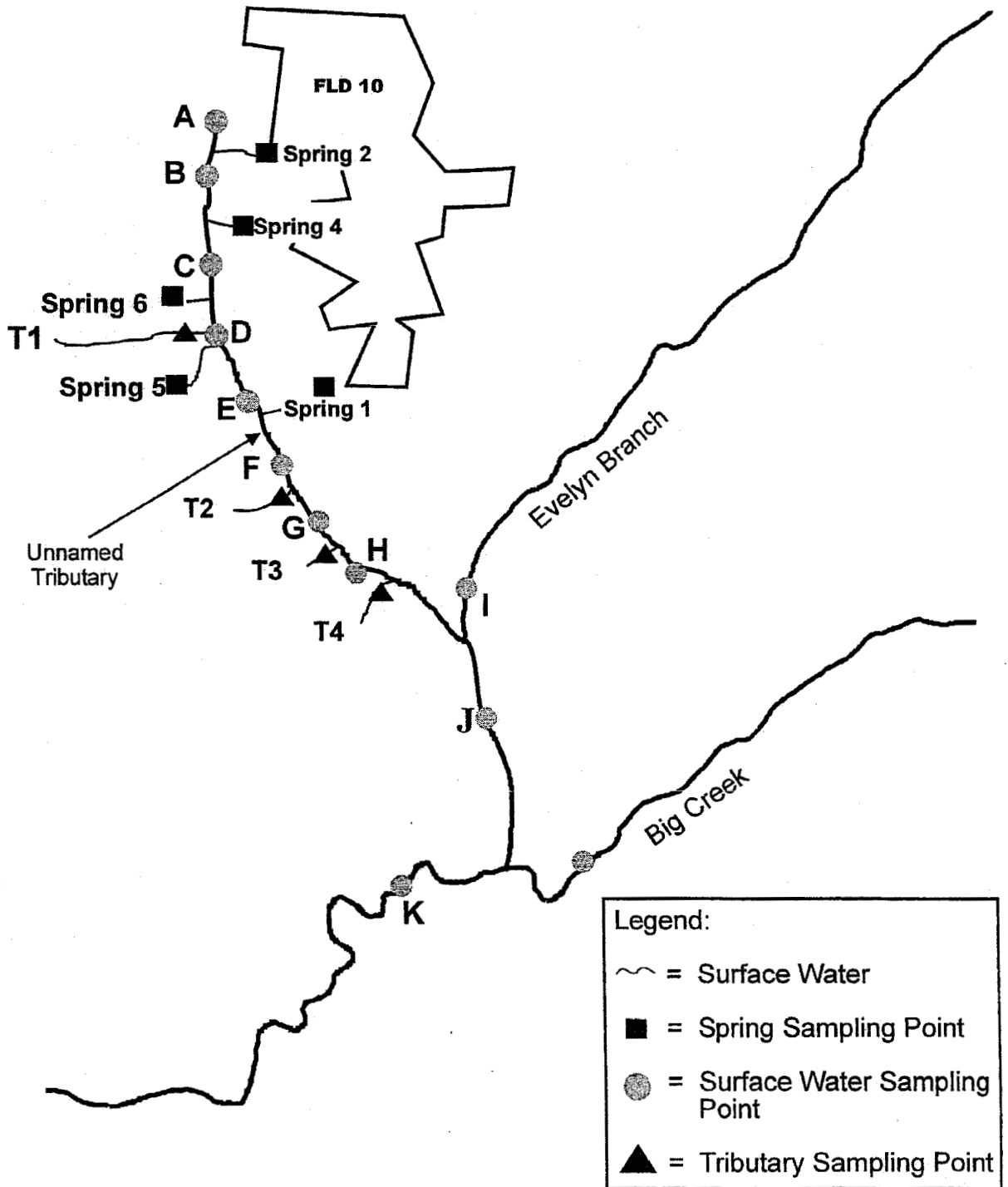
### Downstream Water Sampling

In the summer of 1999, it was decided that monitoring should be undertaken to examine the contribution and impact of nitrate-N from Springs 1, 2, and 4 on downstream surface waters as well as the nitrate-N contributions from other sources within the drainage area ultimately leading to and including Big Creek. In July of 1999, monthly sampling was begun at 19 points upstream and downstream from Springs 1, 2, and 4 including any springs, surface waters, and small creeks that contributed to the flow discharging into Big Creek (Figure 6). These samples were analyzed for ammonium-N, nitrate-N, and nitrite-N using Standard Methods.



FIGURE 6

SAMPLING LOCATIONS DOWNSTREAM OF FIELD 10



### Data Reduction and Statistical Analysis

Data were compiled and tabulated for the soil nitrogen series, shallow and deep well water nitrogen series, spring water nitrogen series and flows, monthly precipitation, and water nitrogen series for sampling locations on the Field 10 downstream drainage system. These data are tabulated and are shown in Appendices I to VI.

## RESULTS AND DISCUSSION

### Mineralization of Nitrogen in the Soil of Field 10

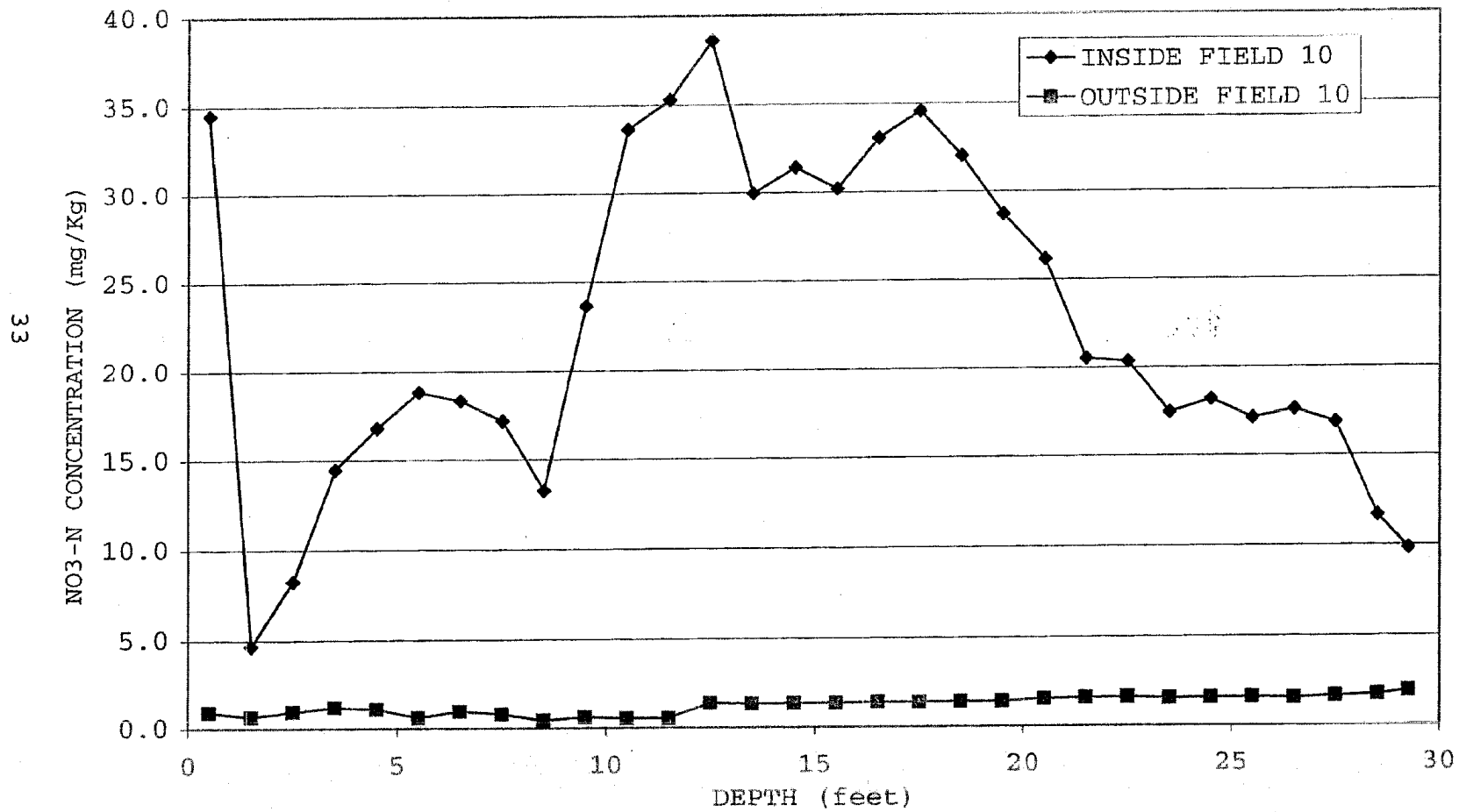
Deep cores of the soil profile were collected throughout Field 10 in December of 1994 and October of 1995. In order to determine the extent to which nitrogen has migrated through the soil profile of Field 10, the nitrate-N, ammonium-N, and TKN concentrations in these cores were determined. The complete set of data resulting from these analyses are presented in Appendix I.

As no soil core samples were taken from outside the Field 10 biosolids application area in 1994, it is not possible to determine background nitrate-N concentrations that existed in the soil profile in 1994. Therefore, the effect of applications of biosolids and fertilizers on the concentration of N throughout the soil profile of Field 10 could not be determined from the 1994 corings. However, a comparison of the mean nitrate-N concentrations in the soil profile of SW4 and SW6 (soil cores from outside the bermed biosolids application area) with the mean concentrations of nitrate-N in the soil profile of corings SW1, SW2, SW3, SW5 and SW7 (cores within the biosolids application area) indicates that biosolids and fertilizer applications in Field 10 appear to have increased the concentration of nitrate-N in the soil profile above background levels (Figure 7).

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FIGURE 7

COMPARISON OF MEAN NITRATE-N CONCENTRATION IN THE SOIL PROFILE FROM CORES INSIDE AND OUTSIDE OF FIELD 10 IN 1995



The data presented in Figure 7 make it apparent that biosolids and fertilizer applications to Field 10 have significantly increased the concentration of nitrate-N in the soil profile. The mean concentration of nitrate-N in the soil profile under unamended soil surrounding Field 10 was less than 1.9 mg/kg (Figure 7). In contrast, the mean concentration of nitrate-N at the 0- to 1-foot depth below the surface of Field 10 was 34.5 mg/kg. The mean concentration of nitrate-N rose from 4.7 mg/kg in the 1- to 2-foot depth to 38.6 mg/kg at the 12- to 13-foot depth below the surface of Field 10. The mean nitrate-N concentration was greater than 20 mg/kg from the 9- to 23-foot depth beneath the surface of Field 10.

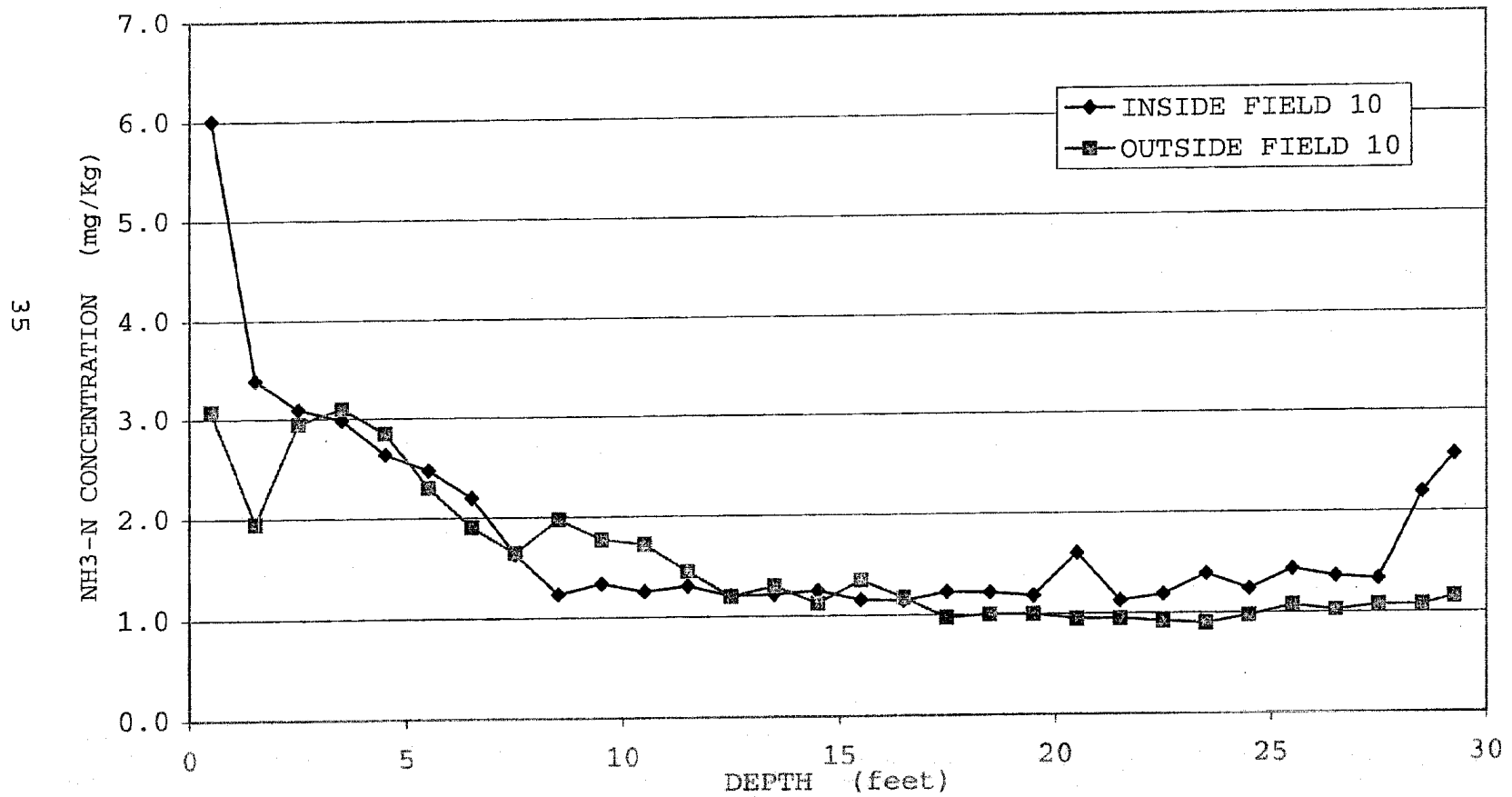
A similar increasing trend in ammonium-N concentration was not observed in the soil profile. At the 0- to 1-foot depth below the surface the mean ammonium-N concentration was twice as high in the soil under Field 10 as in soil under unamended areas outside of Field 10. No consistent pattern of increased ammonium-N concentration occurred with depth in Field 10 soils amended with biosolids (Figure 8). This is presumably due to the fact that ammonium-N exists as a cation Figure 6 ( $\text{NH}_4^+$ ) in the soil, and it is not as prone to leaching as is being produced from mineralization of organic N. The nitrification of ammonium-N eliminated its build up in the soil profile.

Three of the cores taken in 1995 were in close proximity to the cores taken in 1994. On the north end of Field 10, C5

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FIGURE 8

COMPARISON OF MEAN AMMONIUM-N CONCENTRATION IN THE SOIL PROFILE FROM CORES INSIDE AND OUTSIDE OF FIELD 10 IN 1995



and SW1 were in close proximity. In the west-center of Field 10, C2 and SW5 were in close proximity. On the south end of Field 10, C4 and SW3 were in close proximity to each other. The mean nitrate-N concentrations in the soil profiles of the three cores taken in 1994 (C2, C4, and C5), and the mean nitrate-N concentrations in the soil profiles of the three cores taken nearby in 1995 (SW1, SW5 and SW3) are plotted in Figure 9. This plot shows how the concentration of nitrate-N has changed with depth and time in the soil profile under Field 10.

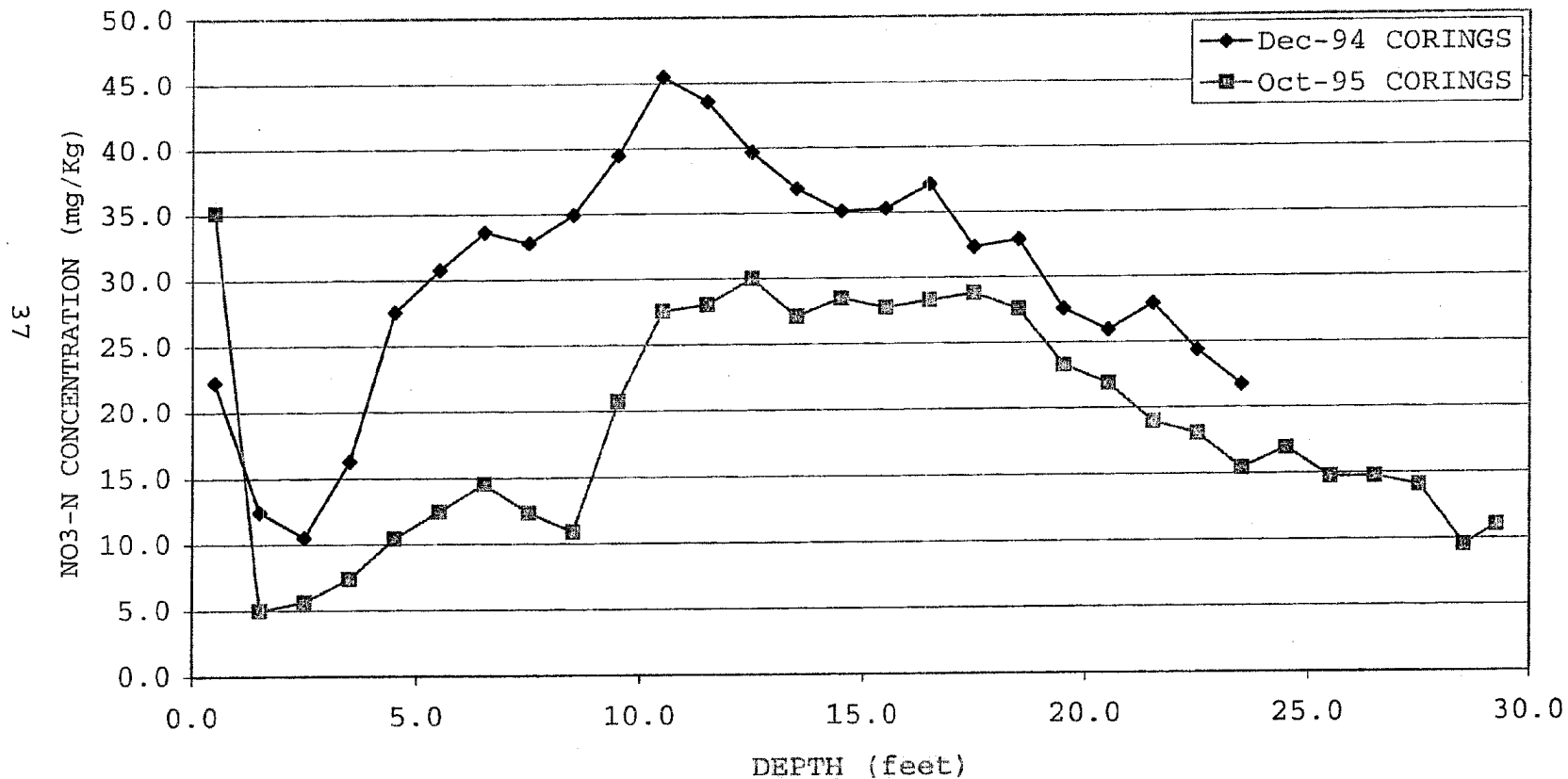
The mean concentration of nitrate-N in the soil profile under Field 10 decreased from 1994 to 1995 at all depths sampled except in the top 12 inches. In 1994 the mean nitrate-N concentration increased from a low of 10.5 mg/Kg at 2.5 feet to a maximum of 45.5 mg/Kg at 10.5 feet. In 1995 the nitrate-N concentrations increased from a minimum of 5.0 mg/Kg at 1.5 feet to a maximum of 30.0 mg/Kg at 12.5 feet. The overall pattern of nitrate-N concentrations is remarkably similar in the two sets of corings. There is a difference in that the band of the highest nitrate-N concentration appears to be somewhat lower in 1995 than in 1994. The concentration of nitrate-N shows a decreasing trend in 1994 and 1995 after the 17-foot depth (Figure 9).

A sizeable build up of TKN was observed in the surface of Field 10. Biosolids applications have raised the TKN concentration in the top 6 inches of soil in Field 10 from a back

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FIGURE 9

COMPARISON OF MEAN NITRATE-N CONCENTRATIONS IN THE SOIL PROFILES AT THREE CORE SITES IN DECEMBER 1994 AND AT THREE NEARBY CORE SITES IN OCTOBER 1995





ground level of 1,095 to 6,231 mg/Kg from 1974 to 1995. In the 6- to 12-inch depth the concentration increased from 715 to 4,111 mg/Kg, and in the 12- to 18-inch depth the concentration increased from 598 to 1,608 mg/Kg. These data indicate that biosolids applications have increased the TKN concentrations in the soil of Field 10 by 5,136 mg/Kg in the 0- to 6-inch layer, by 3,396 mg/Kg in the 6- to 12-inch layer, and by 1,010 mg/Kg in the 12- to 18-inch layer.

This build up of TKN in the surface 18 inches of soil provides a source for continuously mineralizing organic nitrogen. The resulting ammonium-N is nitrified and is introduced as nitrate-N into the soil profile.

The rate at which nitrate-N is being introduced into the soil profile can be estimated as follows.

Since the biosolids amended surface layer (0- to 6-inches) in Field 10 has a bulk density of approximately 1.14 g/cm<sup>3</sup> (Hinesly and Hansen, 1983), and the subsurface layers have a bulk density of approximately 1.5 g/cm<sup>3</sup>, and considering the TKN concentrations in each of these layers, then the surface 18 inches of soil in Field 10 contained 16,912 lbs of biosolids TKN per acre in 1995. Examination of organic C concentrations in the surface 6 inches of Field 10 obtained from routine annual monitoring of soils at the Fulton County site indicates that from 1995 to 1999, the mean organic C concentration decreased from 6.06 mg/Kg to 5.73 mg/Kg. This represents approximately a 5.4 percent decrease in soil organic C

over the four-year period from 1995 when the samples were taken in this study to 1999.

From these data we have determined that the organic C is mineralizing at a rate of 1.35 percent per year (5.4 percent ÷ 4 yrs.). Assuming that the TKN is also mineralized at the same rate, the 16,912 lbs. of TKN/acre in 1995 would yield approximately 228 lbs. of plant available N per acre in that year. This should be sufficient to support a 175 bu/acre corn grain crop, a 99 bu/acre wheat crop, a 207 bu/acre oat crop, or a 5.7 ton/acre sorghum-sudan grass crop (IEPA, 1984).

It should be noted that recent research indicates that the mineralization of organic C in District biosolids applied to fields at the Fulton County site proceeds quite slowly and may cease approximately 12 years following termination of applications (Granato et al., 2001). Because approximately one-third of the total amount of biosolids added to Field 10 was applied in 1990 and 1992, it is expected that significant mineralization will continue until the year 2005. It does not appear to be necessary to apply fertilizer to the field prior to that time.

#### Nitrate-N Concentrations in Shallow Well Groundwater

The detailed analytical data (pH, EC, ammonium-N, nitrate-N, nitrite-N) of shallow well groundwaters for 1996 through 1999 are given in Appendix II. However, the mean, maximum, and minimum nitrate-N concentration values are given

for the shallow wells inside and outside Field 10 in Table 4. From 1996 through 1999, five shallow wells inside Field 10 contained nitrate-N concentration in the range of 87 to 275 mg/L. This area received applications of biosolids or commercial fertilizer. In contrast, samples from Shallow Wells 4 and 6, located outside the field, had mean nitrate-N values in the range of 0.9 to 2.4 mg/L, respectively, over the four-year period. It is probable that these low values are due to the fact that no biosolids or commercial fertilizer were applied to the surface above these wells and lateral movement of any nitrate-N within the soil profile is minimal. Thus, it appears that the application of biosolids and commercial fertilizer on Field 10 appears to correlate with the occurrence of high concentrations of nitrate-N in the groundwaters perched on the bedrock underlying Field 10.

#### Nitrate-N Concentrations in Deep Well Groundwater

The detailed analytical data (pH, EC, ammonium-N, nitrate-N, nitrite-N) of the groundwater sampled from deep wells for 1996 through 1999 are given in Appendix III. However, the mean, maximum, and minimum nitrate-N concentration values for Deep Wells 1 through 4 for the years 1996 through 1999 are given in Table 5. Deep Wells 1, 2, 3, and 4 had nitrate-N values ranging from 0.00 to 44.4 mg/L during 1996 to 1999. Deep Wells 1 and 2, slightly outside of Field 10 to the east, had lower concentrations of nitrate-N, ranging from 0.0 to 8.3

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TABLE 4

YEARLY MEAN, MINIMUM, AND MAXIMUM NITRATE-N CONCENTRATIONS IN  
FIELD 10 SHALLOW WELLS 1 THROUGH 7 FROM 1996 THROUGH 1999

Well Number	Year	Mean	Minimum	Maximum	Standard Deviation
----- mg/L -----					
Inside Field 10					
SW 1	1996	229	203	251	16.4
	1997	201	172	235	18.9
	1998	195	166	223	15.8
	1999	175	161	195	10.8
SW 2	1996	234	197	270	19.7
	1997	227	196	259	16.6
	1998	226	209	245	11.3
	1999	206	154	228	19.7
SW 3	1996	205	181	225	18.8
	1997	171	158	211	19.9
	1998	156	142	170	10.0
	1999	139	119	168	16.4

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TABLE 4 (Continued)

YEARLY MEAN, MINIMUM, AND MAXIMUM NITRATE-N CONCENTRATIONS IN  
FIELD 10 SHALLOW WELLS 1 THROUGH 7 FROM 1996 THROUGH 1999

Well Number	Year	Mean	Minimum	Maximum	Standard Deviation
		----- mg/L -----			
SW 5	1996	131	87	162	19.6
	1997	133	117	144	7.43
	1998	130	116	139	6.17
	1999	118	107	131	6.08
SW 7	1996	245	202	275	18.3
	1997	235	208	268	15.3
	1998	234	203	274	21.4
	1999	202	183	225	14.7
Outside Field 10					
SW 4	1996	2.23	0.78	3.74	1.02
	1997	2.40	0.47	6.25	1.61
	1998	1.68	0.43	5.12	1.31
	1999	1.28	0.98	1.88	0.52

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TABLE 4 (Continued)

YEARLY MEAN, MINIMUM, AND MAXIMUM NITRATE-N CONCENTRATIONS IN  
FIELD 10 SHALLOW WELLS 1 THROUGH 7 FROM 1996 THROUGH 1999

Well Number	Year	Mean	Minimum	Maximum	Standard Deviation
		----- mg/L -----			
SW 6	1996	1.13	0.27	3.15	1.37
	1997	0.90	0.00	1.52	0.55
	1998	0.90	0.54	1.26	0.29
	1999	0.99	0.75	1.81	0.38

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TABLE 5

YEARLY MEAN, MINIMUM, AND MAXIMUM NITRATE-N CONCENTRATIONS IN  
FIELD 10 DEEP WELLS 1 THROUGH 4 FROM 1996 THROUGH 1999

Well Number	Year	Mean	Minimum	Maximum	Standard Deviation
----- mg/L -----					
East Side of Field 10					
DW 1	1996	0.47	0.00	2.03	0.56
	1997	5.43	2.96	6.81	1.39
	1998	5.50	3.09	8.33	2.02
	1999	3.66	0.94	6.70	1.99
DW 2	1996	0.93	0.34	1.70	0.70
	1997	NA	NA	NA	NA
	1998	NA	NA	NA	NA
	1999	NA	NA	NA	NA
West Side of Field 10					
DW 3	1996	15.1	5.29	34.1	9.68
	1997	15.7	3.88	44.4	11.0
	1998	21.1	1.89	39.0	12.5
	1999	17.6	6.02	28.8	7.63

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TABLE 5 (Continued)

YEARLY MEAN, MINIMUM, AND MAXIMUM NITRATE-N CONCENTRATIONS IN  
FIELD 10 DEEP WELLS 1 THROUGH 4 FROM 1996 THROUGH 1999

Well Number	Year	Mean	Minimum	Maximum	Standard Deviation
		----- mg/L -----			
DW 4	1996	6.05	2.44	16.8	4.96
	1997	6.41	0.79	13.4	3.43
	1998	6.47	1.41	11.4	2.95
	1999	5.08	2.81	7.42	1.15

NA = Not available.



mg/L, while Deep Wells 3 and 4 on or near the western perimeter of the field had nitrate-N values ranging from 0.79 to 44.4 mg/L.

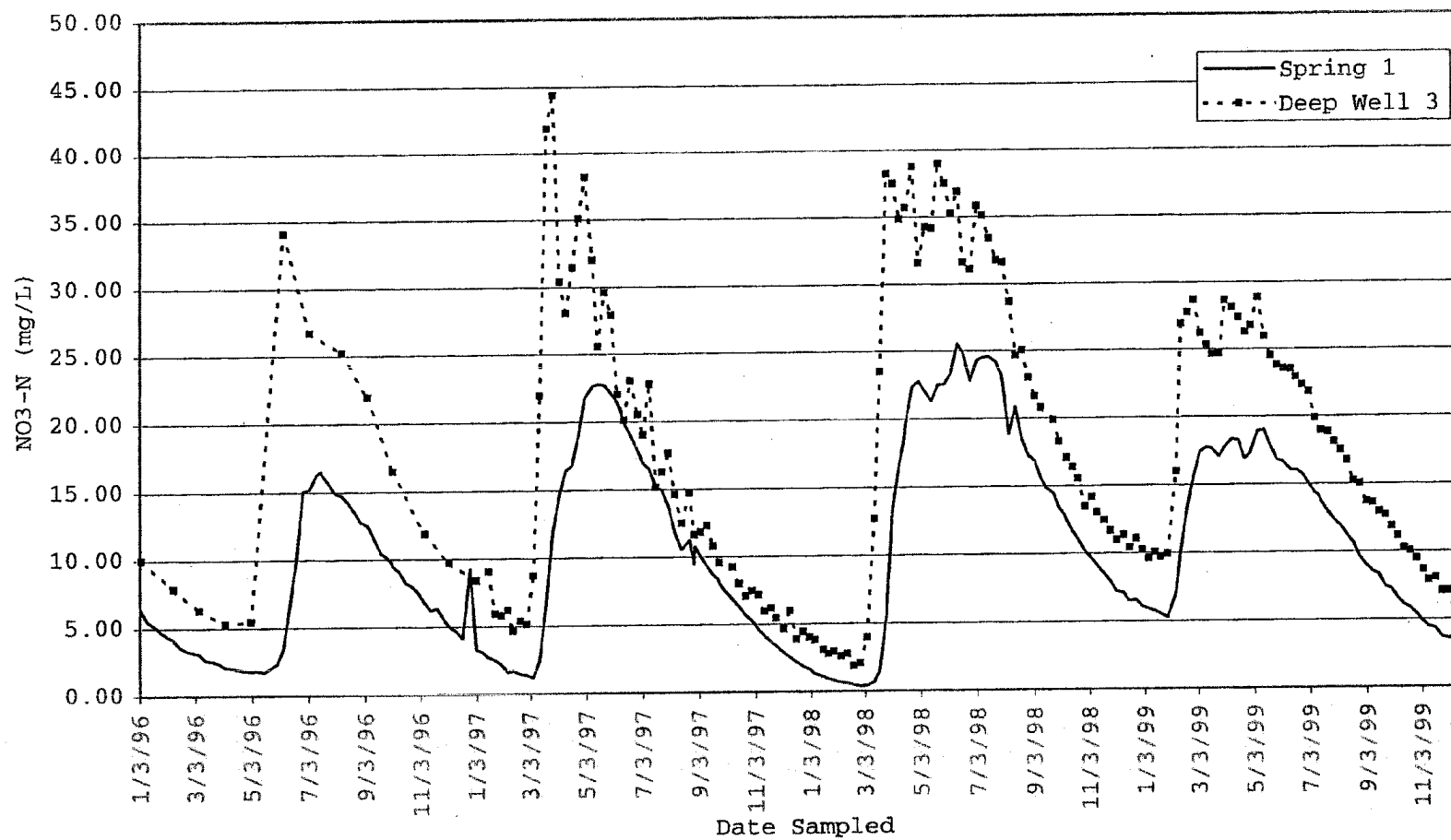
The eastern side of the field and the mine is higher in elevation than the western side. The groundwater from within the mine on the eastern side (Deep Wells 1 and 2) also has lower nitrate-N concentrations than on the western side (Deep Wells 3 and 4). Hence, it is possible that the groundwaters (Deep Wells 1 and 2) are moving downhill underground and are not yet as affected by the nitrate-N leaching through the profile beneath Field 10 as the groundwater on the western side of the field (Deep Wells 3 and 4). Deep Wells 3 and 4 on the western side of Field 10 are on the low end of the underground mine drainage system. They are near the terminal discharge points of Springs 1, 2, and 4. Consequently, this may account for the elevated nitrate-N concentrations found in these wells, as the waters leaching through the profile and into the mine converge in a system of tunnels and chambers.

Nitrate-N concentrations found in Deep Well 3 and Spring 1 (Figure 10) between 1996 and 1999 exhibited patterns similar to each other in their annual fluctuations. Nitrate-N concentrations found in Spring 1 during this period were lower than those found in Deep Well 3, indicating further dilution of the mine water after passing Deep Well 3 and prior to its suspected discharge from Spring 1.

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

FIGURE 10

HISTORICAL COMPARISON OF NITRATE-N CONCENTRATIONS IN DEEP WELL 3 AND SPRING 1



Nitrate-N concentrations found in Spring 4 and Spring 2 between 1996 and 1999 were almost identical (Figure 11), suggesting a common source of drainage water from the mine. Due to their close proximity (Figure 2), this is not surprising. Unlike the similarity of the pattern of fluctuations of nitrate-N between Deep Well 3 and Spring 1 (Figure 10), Springs 2 and 4 consistently had nitrate-N concentrations higher than Deep Well 4 during the four-year period (Figure 11). Although Deep Well 4 had lower nitrate-N concentrations than Springs 2 and 4 during this period, the similarity in their fluctuations suggests a common source. Possibly, these patterns of nitrate-N are likely due to waters of higher nitrate-N concentration entering the mine drainage area after passing the Deep Well 4 area and prior to discharge from Springs 2 and 4, resulting in higher concentrations of nitrate-N being found in these springs than in the well associated with them.

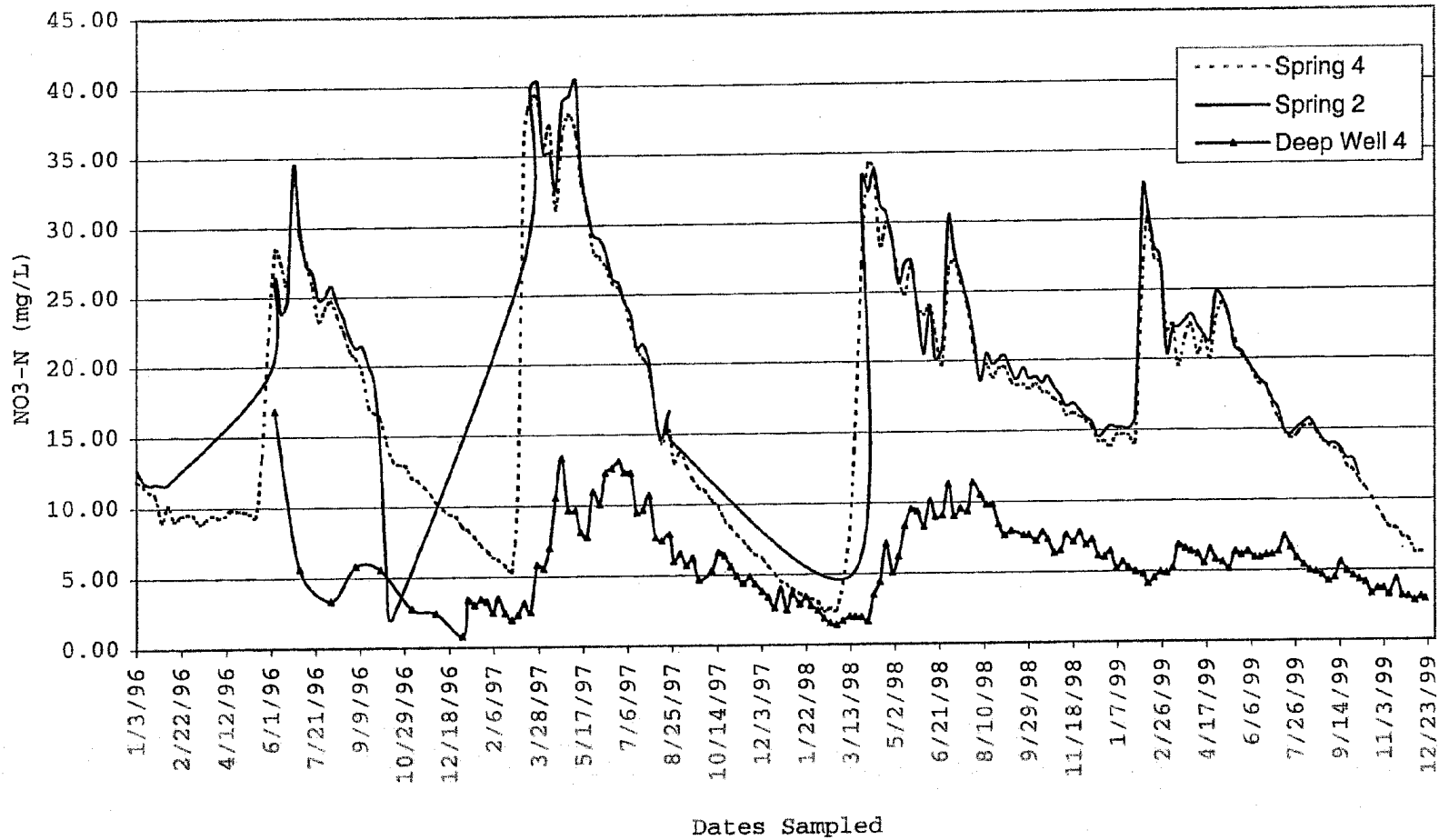
#### Effect of Precipitation on the Flow of Springs and Their Nitrate-N Concentrations

Springs 1 and 4 had continuous flow during the six years (1994 through 1999) that flow measurements were made. Spring analyses data are shown in Appendix IV. Spring 2 periodically ceased to flow or only trickled, which typically happened during January and September of the year after periods when precipitation was minimal and water within the soil profile was depleted. Springs 1, 2, and 4 each experienced an annual increase in nitrate-N concentration, and this may probably be

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

FIGURE 11

HISTORICAL COMPARISON OF NITRATE-N CONCENTRATIONS IN SPRING 2,  
SPRING 4, AND DEEP WELL 4



attributed to the effects of seasonal precipitation leaching the nitrate-N through the soil profile. Although it is unknown if other sources contribute to the water flow through the mine drainage system underlying Field 10, it is presumed that the majority of the water enters the system as a result of precipitation percolating through the soil profile.

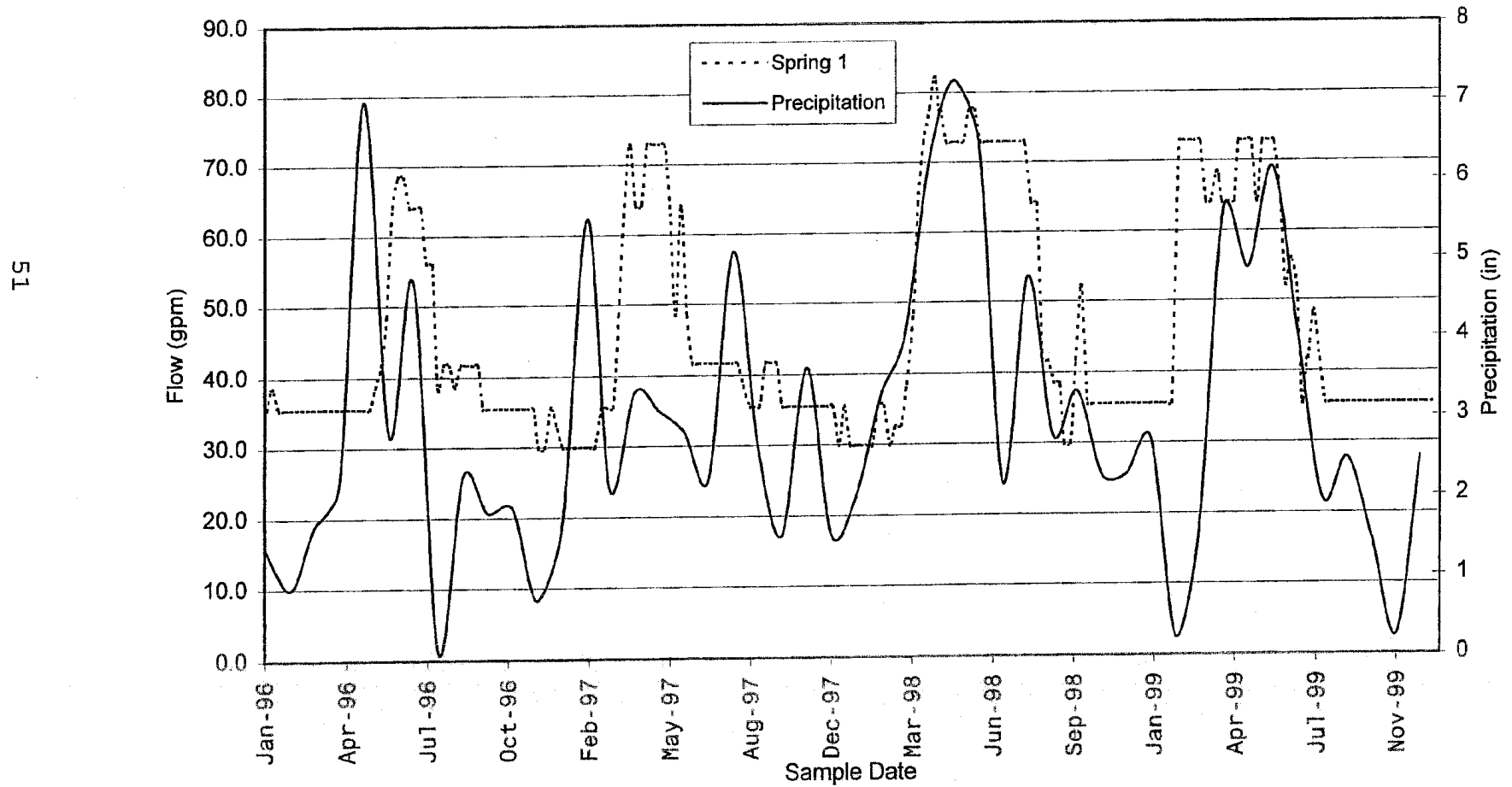
The relationship between spring flows and monthly precipitation is shown in Figures 12, 13, and 14 for Springs 1, 2 and 4, respectively. It is difficult to elucidate precise relationships between the precipitation and spring flow data in these figures because the data patterns are so complex and precipitation is expressed only as a monthly mean. However, it appears that Springs 1 and 2 frequently experienced delayed increases in flow after periods of heavy precipitation. This is attributed to the time needed for the water to move through the soil profile and into and through the mine drainage system. At other times, significant amounts of precipitation did not result in an increased flow in Springs 1 and 2. This could be attributed to a dry soil profile capable of absorbing and holding the soil moisture against gravity, or a very saturated soil profile incapable of absorbing more water, in which case the precipitation would leave the field as surface runoff.

Nitrate-N concentrations in Spring 1 varied directly with flow in that as the flow increased, nitrate-N concentrations increased (Figure 15). Spring 2 exhibited a similar general

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

FIGURE 12

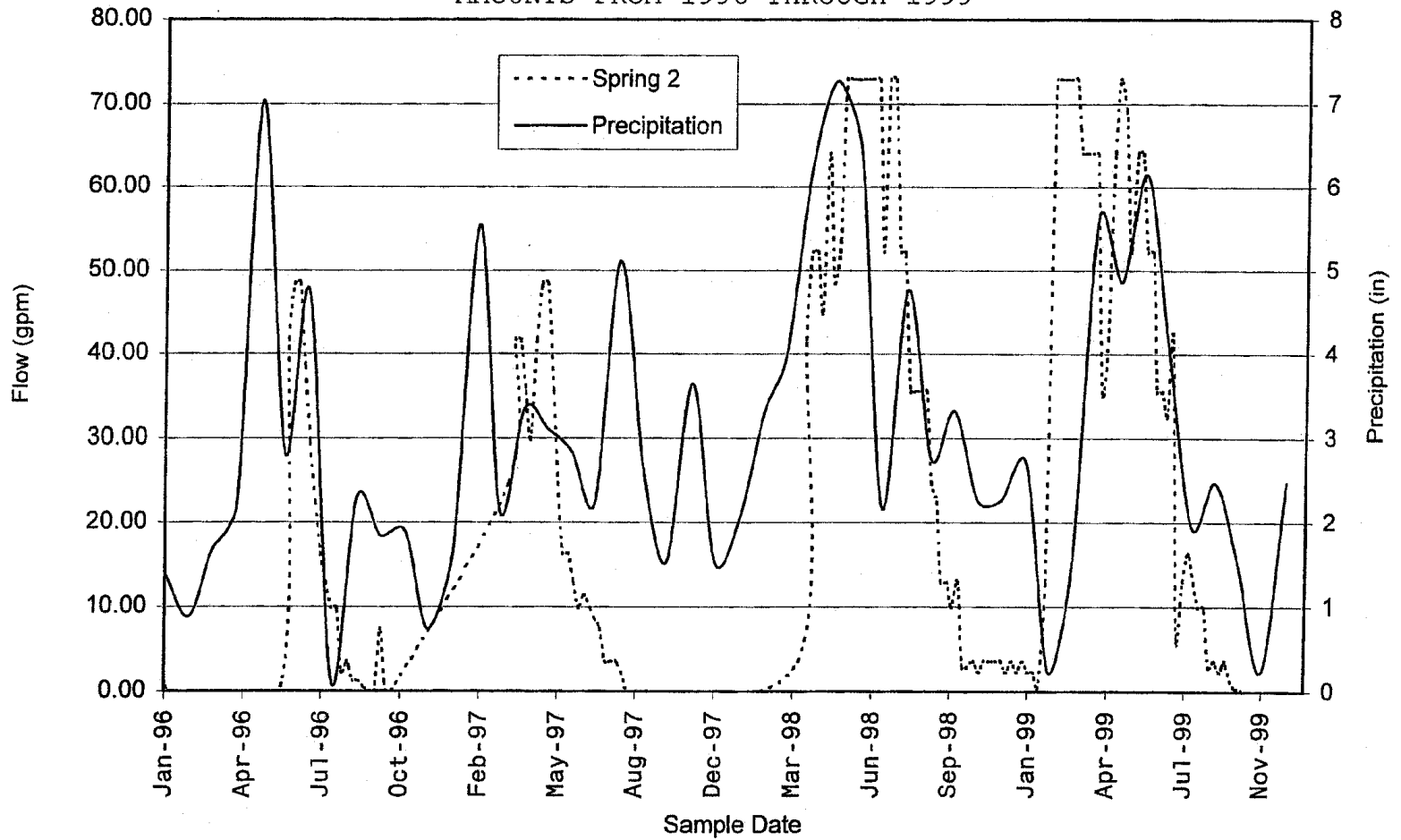
HISTORICAL COMPARISON OF SPRING 1 FLOW RATE AND PRECIPITATION AMOUNTS FROM 1996 THROUGH 1999



METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

FIGURE 13

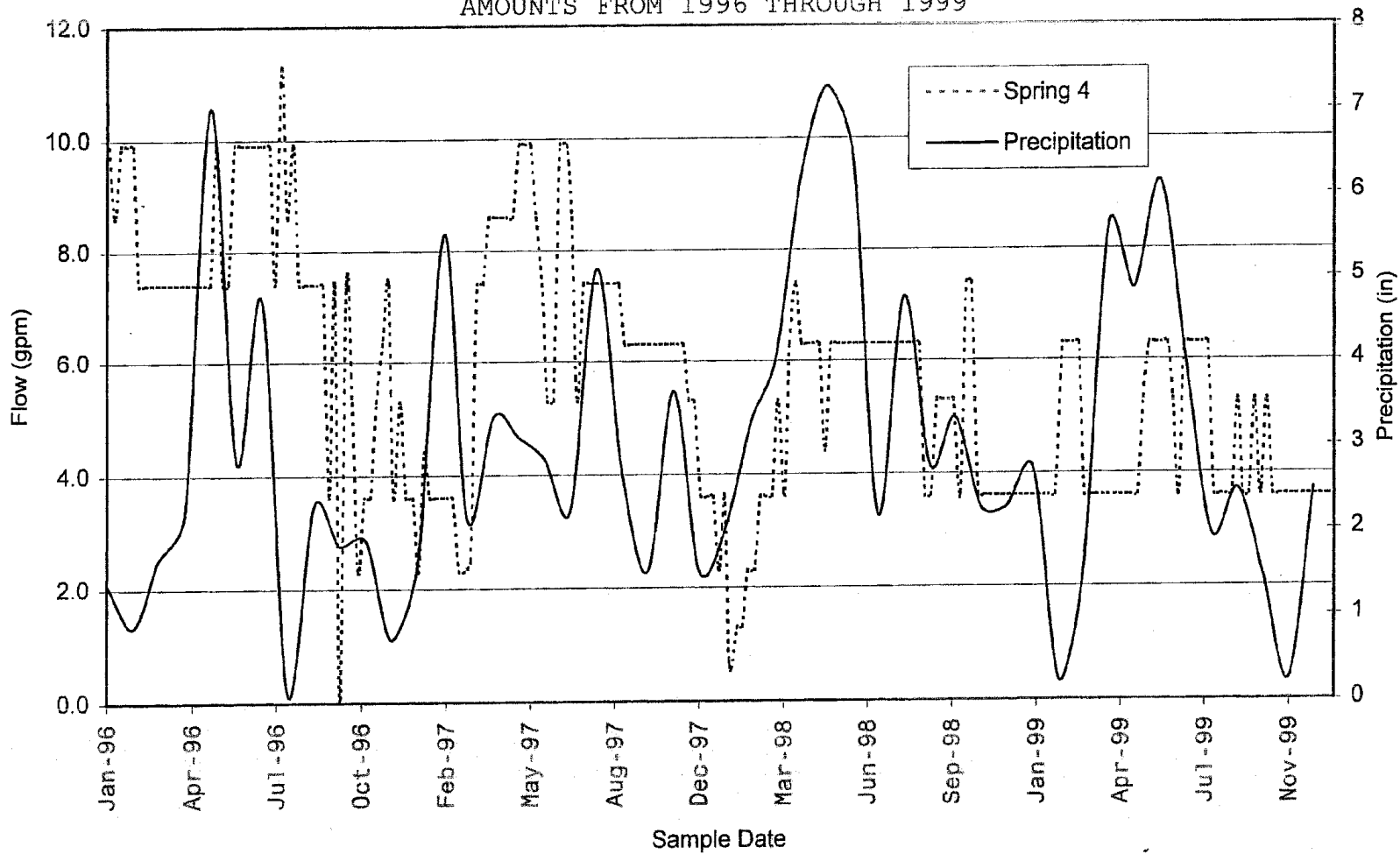
HISTORICAL COMPARISON OF SPRING 2 FLOW RATE AND PRECIPITATION AMOUNTS FROM 1996 THROUGH 1999



METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

FIGURE 14

HISTORICAL COMPARISON OF SPRING 4 FLOW RATE AND PRECIPITATION AMOUNTS FROM 1996 THROUGH 1999

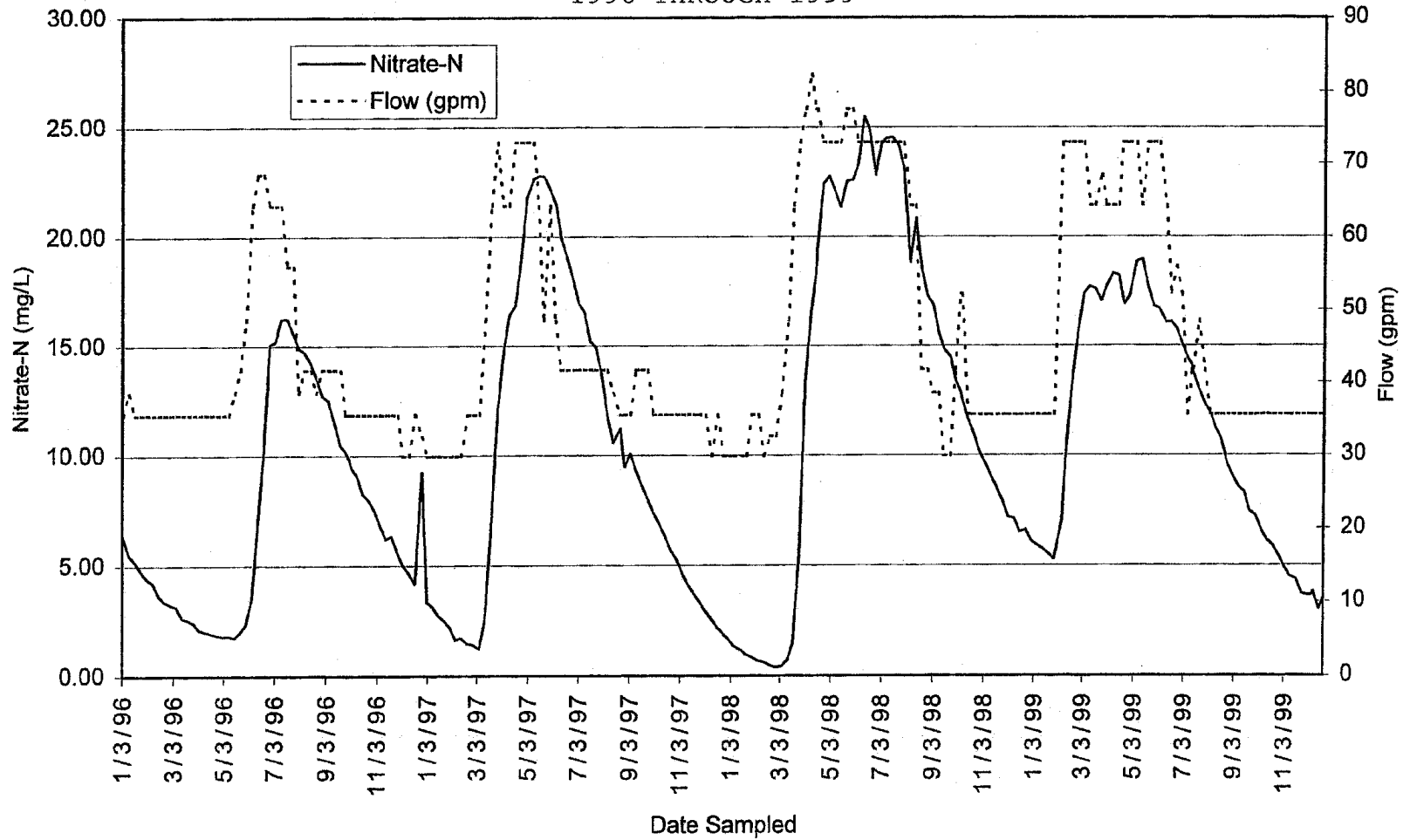




METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

FIGURE 15

HISTORICAL COMPARISON OF NITRATE-N AND FLOW IN SPRING 1 FROM 1996 THROUGH 1999



pattern over the four-year period (Figure 16). Its nitrate-N concentrations increased as its flow increased. The difference is that the nitrate-N concentration of Spring 2 increased more quickly as flow increased, as compared to Spring 1. Spring 4 exhibited an annual increase in nitrate-N concentration over the four-year period (Figure 17), but maintained a low and continuous flow relative to Springs 1 and 2; therefore, it appears that no direct or inverse relationship can be drawn between flow and nitrate-N concentration for this spring.

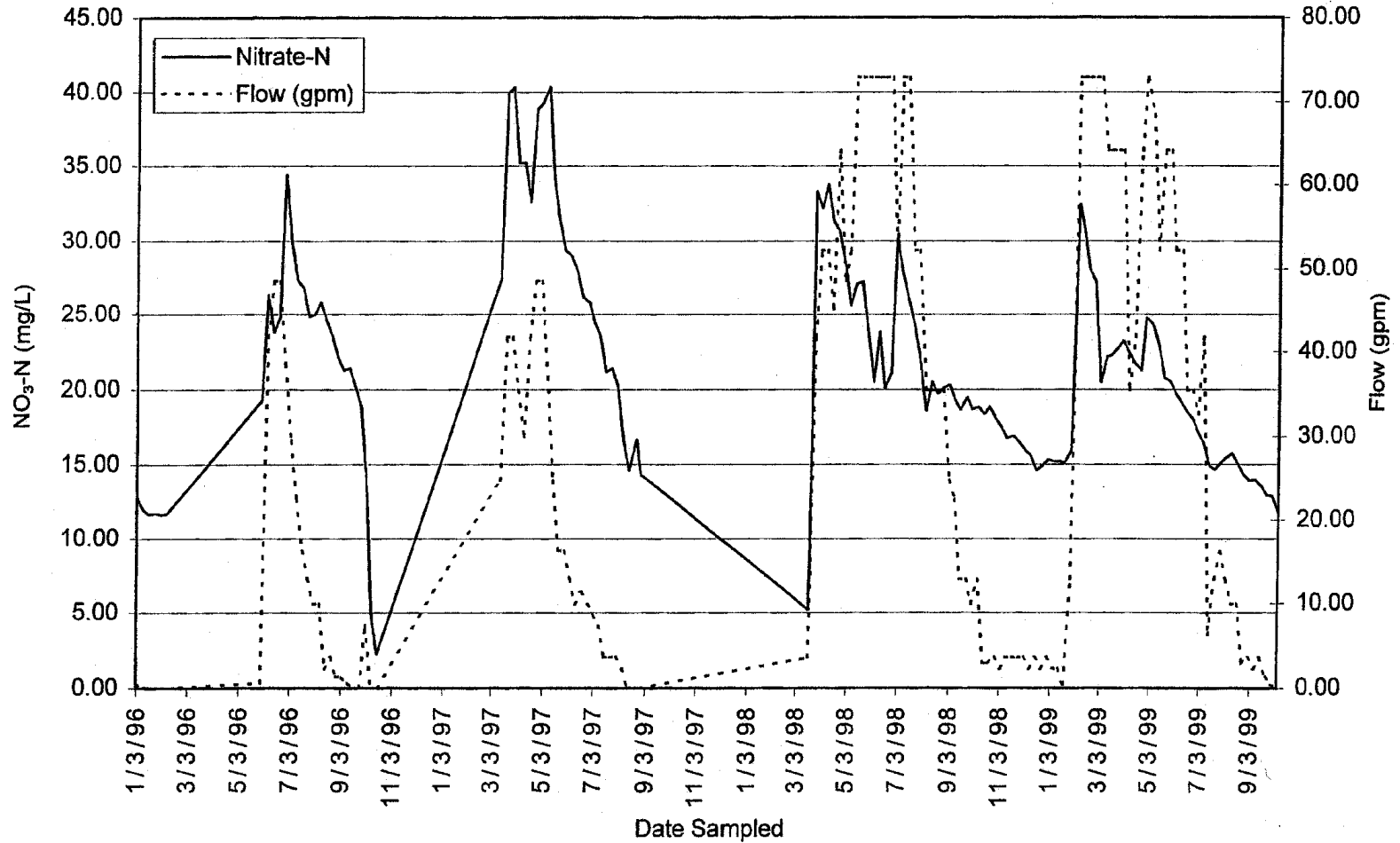
#### Dye Tracing Study Results

Dye tests were performed to determine the travel time and confirm the pathway of the movement of water in the mine chambers to the springs. This was done to understand the relationship between the nitrate-N concentrations in spring water and the possible sources for this nutrient. However, the results from these tests were inconclusive. Between December 1994 and June 1995 the dye testing devices were monitored weekly and no trace of optical brightener was detected. It is possible that the dye was introduced into a section of the mine that was isolated due to subsidence, or that the effect of the optical brightener was lost due to the absorption onto materials within the mine, or through dilution.

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

FIGURE 16

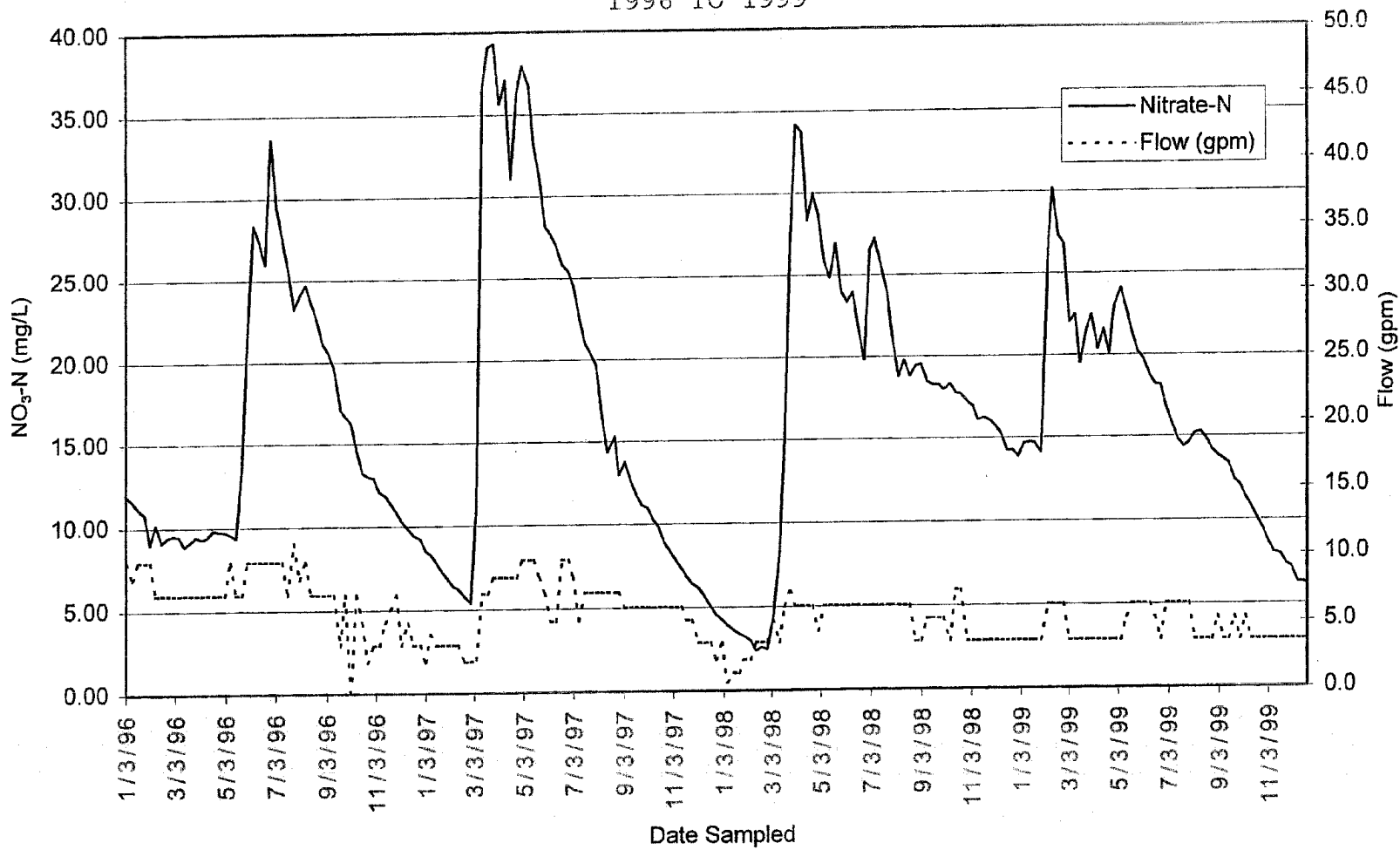
HISTORICAL COMPARISON OF NITRATE-N AND FLOW IN SPRING 2 FROM 1996 THROUGH 1999



METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

FIGURE 17

HISTORICAL COMPARISON OF NITRATE-N AND FLOW IN SPRING 4 FROM 1996 TO 1999



Effect of Field 10 Drainage Waters on Nitrate-N  
Concentration of Big Creek

Springs 1, 2, and 4 in the drainage basin of Field 10 are among the contributors to another water body known as Big Creek. There are other springs and tributaries to this drainage system as shown in Figure 6. To determine if drainage waters from Springs 1, 2, and 4 were elevating the nitrate-N concentration of Big Creek, one-year of monitoring was performed.

Coupe and Macy (1993) examined the surface-water and streambed-sediment quality of streams draining the District's Fulton County site from 1972 to 1989. They also reported that the nutrient concentrations in Big Creek decreased between Big Creek at St. David, Illinois and Big Creek near Bryant, Illinois because of dilution from drainage that occurs between the two sites. The drainage came from the District's Fulton County site.

Locations above and below Springs 1, 2, and 4 in the Field 10 drainage system were sampled monthly between July 1999 and June 2000 (Figure 6). Data collected during the sampling of downstream drainage locations are shown in Appendix VI. Mean, minimum, and maximum nitrate-N concentrations for each sampling location are given in Table 6.

The major nitrate-N inputs to the drainage system leading to Big Creek are Springs 1, 2, and 4. Other springs and tributaries contributing to the drainage system serve to dilute the

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

TABLE 6

MEAN VALUES OF NITRATE-N AT SAMPLE SITES ABOVE AND BELOW BIG CREEK FROM JULY 1999 THROUGH JUNE 2000

Sample <sup>1</sup> Location	Mean	Minimum	Maximum	Standard Deviation
	----- mg/L -----			
A	8.35	0.16	15.36	7.13
Spring 2	14.38	11.72	16.40	2.05
B	8.00	0.19	14.69	6.90
Spring 4	7.29	0.00	15.73	5.58
C	6.43	0.54	14.25	5.35
Spring 6	0.20	0.06	0.43	0.14
D	1.59	0.10	4.04	1.49
T1	1.70	1.70	1.70	0.00
Spring 5	0.23	0.04	0.56	0.17
E	1.43	0.14	2.94	0.98
Spring 1	4.58	0.00	14.39	4.91
F	2.37	0.11	5.97	2.25
T2	0.14	0.01	0.36	0.09
G	2.47	0.09	5.69	2.20
T3	0.81	0.03	2.61	0.85
H	2.35	0.06	5.28	1.99

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

TABLE 6 (Continued)

MEAN VALUES OF NITRATE-N AT SAMPLE SITES ABOVE AND BELOW BIG CREEK FROM JULY 1999 THROUGH JUNE 2000

Sample Location	Mean	Minimum	Maximum	Standard Deviation
	----- mg/L -----			
T4	0.11	0.06	0.16	0.03
I	2.20	0.02	5.13	1.98
Evelyn Branch	0.51	0.14	1.17	0.33
J	0.72	0.16	1.79	0.62
Big Creek	2.20	1.12	3.52	0.75
K	1.71	1.06	2.55	0.52

<sup>1</sup>Refer to Figure 6 for indication of sample point location in the Big Creek watershed.

nitrate-N concentration of the water from these springs. These sources contain very low nitrate-N concentrations, resulting in a mean nitrate-N concentration of 0.72 mg/L at Sample Point J, located on the Evelyn Branch, above its confluence with Big Creek.

Big Creek's mean nitrate-N concentration upstream from this confluence during this period was 2.20 mg/L. After the entry of waters from the Field 10 drainage system into Big Creek, sample location K (Figure 6), the mean nitrate-N concentration dropped to 1.71 mg/L. This nitrate-N concentration of 1.71 mg/L downstream of Big Creek at sampling point K indicates that the drainage waters from Field 10 actually dilute Big Creek, lowering the nitrate-N concentrations of water downstream. Thus, there was no adverse impact on water quality in Big Creek with respect to the input of nitrate-N from springs associated with Field 10.



## FINDINGS

Fulton County Field 10 received 479 dry tons/acre of biosolids from 1974 through 1992. Environmental monitoring of the Fulton County site showed higher yearly maximum concentrations of nitrate-N in Spring 1 west of Field 10 after 1983. In 1990, nitrate-N concentrations in Spring 1 exceeded the USEPA drinking water standards limit of 10 mg/L for nitrate-N. Springs 1, 2, and 4 have consistently exceeded nitrate-N concentrations of 20 mg/L during the summer season in the late 1990s. In response to this a detailed study of Field 10 was launched in 1994. Following are the findings of this study:

1. Sampling of Springs 1, 2, and 4 showed elevated nitrate-N levels during the 1996 to 1999 sampling period that exceeded the USEPA drinking water standard of 10 mg/L for nitrate-N. These springs also showed annual increases in nitrate-N levels that appeared to be related to increased seasonal precipitation, indicating leaching of nitrate-N through the soil profile of Field 10.
2. Five shallow wells installed in Field 10 during 1995 showed groundwater nitrate-N concentrations ranging from 87 to 275 mg/L during sampling conducted from 1996 to 1999. Four deep wells installed into the mine underlaying

Field 10 in 1995 showed groundwater mean nitrate-N concentrations ranging from 0.47 to 21.1 mg/L in 1996 through 1999.

3. Dye injected within the mine system was never recovered. This indicates that it was trapped within an isolated portion of the mine, absorbed by material within the mine, or diluted.
4. Soil cores taken in Field 10 in 1994 and 1995 showed higher levels of nitrate-N in the soil profile of Field 10 with concentrations up to 58.6 mg/kg being observed as compared to 3.5 mg/kg in soil cores taken outside the field. Low levels of ammonium-N were observed in Field 10 soils indicating that the ammonium-N was being mineralized to nitrate-N in the soil profile. Organic carbon levels in Field 10 suggest that the mineralization of the sludge applied nitrogen would probably continue until 2005.
5. Sampling of surface water downstream of Field 10 from July 1999 through June 2000 showed that the major inputs to the drainage system were Springs 1, 2, and 4. These springs are drainage points from the mine underlying Field 10, and they are probably former en-

trances to the mine. Other springs and tributaries contributing to the surface waters downstream of the Field 10 system dilute the nitrate-N concentration of these waters, resulting in a reduction of the nitrate-N concentration in Big Creek. During the sampling period, a mean nitrate-N level of 2.20 mg/L was observed on Big Creek upstream of the Field 10 drainage system discharge, as compared to a mean concentration of 1.71 mg/L being observed downstream of the discharge on Big Creek.

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APPENDIX I

CONCENTRATIONS OF  $\text{NO}_3\text{-N}$ ,  $\text{NH}_3\text{-N}$ , AND TKN  
IN SOIL CORES FROM FIELD 10

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

TABLE AI-1

MEAN NH<sub>3</sub>-N AND NO<sub>3</sub>-N CONCENTRATIONS IN THE SOIL CORES  
(C2, C4, C5)  
TAKEN IN FIELD 10 IN DECEMBER 1994

Depth feet	Core C2		Core C4		Core C5	
	NH <sub>3</sub> -N mg/kg	NO <sub>3</sub> -N mg/kg	NH <sub>3</sub> -N mg/kg	NO <sub>3</sub> -N mg/kg	NH <sub>3</sub> -N mg/kg	NO <sub>3</sub> -N mg/kg
0 to 1	5.9	14.2	7.6	16.7	7.9	35.9
1 to 2	3.5	7.0	3.7	9.6	3.6	20.8
2 to 3	5.6	6.1	5.1	5.7	3.9	19.7
3 to 4	4.2	14.8	3.8	11.1	3.0	23.0
4 to 5	3.4	35.2	2.6	20.9	2.4	26.8
5 to 6	2.8	36.0	2.6	27.6	1.9	28.7
6 to 7	1.6	38.4	2.3	34.3	1.8	28.3
7 to 8	1.6	45.9	1.2	28.9	1.5	23.6
8 to 9	2.1	43.4	1.3	37.5	1.5	23.9
9 to 10	2.7	49.5	1.5	45.2	1.1	23.9
10 to 11	2.3	52.4	1.6	54.6	1.1	29.5
11 to 12	1.7	41.8	1.4	55.3	1.2	33.6
12 to 13	2.5	37.0	1.6	52.3	1.1	29.9
13 to 14	3.2	35.0	1.6	46.1	1.1	29.5
14 to 15	4.7	31.5	1.9	42.0	1.3	31.9
15 to 16	6.1	34.4	1.7	36.6	1.1	34.9
16 to 17	8.6	36.6	1.9	38.6	1.3	36.3
17 to 18	8.5	21.1	1.9	38.8	1.0	37.2
18 to 19	1.3	29.5	1.4	35.8	1.0	33.4
19 to 20	1.4	24.7	1.1	33.6	0.8	24.6
20 to 21	1.5	22.3	1.0	32.2	0.7	23.4
21 to 22	1.8	28.0				
22 to 23	1.5	24.4				
23 to 23.5	1.7	21.7				

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

TABLE AI-2

NO<sub>3</sub>-N CONCENTRATIONS IN THE SHALLOW WELL BORINGS  
 (SW1, SW2, SW3, SW4, SW5, SW6, SW7)  
 TAKEN IN FIELD 10 IN OCTOBER 1995

Depth feet	SW1 mg/kg	SW2 mg/kg	SW3 mg/kg	SW4 mg/kg	SW5 mg/kg	SW6 mg/kg	SW7 mg/kg
0 to 1	16.7	47.7	29.5	1.0	59.4	0.9	19.4
1 to 2	4.5	3.2	1.7	0.7	8.9		5.3
2 to 3	3.5	9.8	3.1	1.0	10.3		14.5
3 to 4	6.0	21.1	4.7	1.2	11.5		29.3
4 to 5	10.4	22.8	5.4	1.1	15.5		29.9
5 to 6	16.0	21.4	1.9	0.6	19.4		35.4
6 to 7	21.7	23.1	3.4	1.0	18.6		24.9
7 to 8	22.2	28.0	1.3	0.8	13.5		20.9
8 to 9	22.6	18.5	3.8	0.5	6.2	0.4	15.4
9 to 10	42.6	35.0	2.4	0.9	17.3	0.4	21.1
10 to 11	51.8	49.9	16.4	0.8	14.6	0.3	35.5
11 to 12	53.4	58.6	15.6	0.8	15.2	0.3	33.6
12 to 13	50.9	58.2	17.1	2.6	22.1	0.2	44.6
13 to 14	49.0	46.8	13.3	2.5	19.1	0.2	21.8
14 to 15	50.7	43.2	14.1	2.6	20.7	0.2	28.6
15 to 16	45.8	37.2	16.5	2.6	21.1	0.2	30.6
16 to 17	49.6	40.7	18.8	2.7	16.5	0.2	39.8
17 to 18	44.7	45.1	24.7	2.6	17.1	0.2	41.2
18 to 19	42.3	42.4	24.0	2.7	16.5	0.2	35.2
19 to 20	31.5	44.2	24.7	2.6	13.6	0.3	29.5
20 to 21	23.7	40.5	24.3	2.9	17.7	0.3	24.7
21 to 22	23.9	23.4	20.3	3.0	12.7	0.3	22.3
22 to 23	22.0	19.5	19.6	3.0	12.7	0.3	28.0
23 to 24	18.9	16.6	15.1	2.8	12.4	0.3	24.4
24 to 25	19.0	18.3	16.8	2.9	15.1	0.3	21.7
25 to 26	16.6	21.8		2.9	12.9	0.3	
26 to 27	17.0	23.2		2.9	12.5	0.3	
27 to 28	17.2	22.4		3.1	11.0	0.3	
28 to 29	18.3	16.0		3.2	0.8	0.3	
29 to 29.5	21.5	7.4		3.5	0.6	0.4	

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

TABLE AI-3

NH<sub>3</sub>-N CONCENTRATIONS IN THE SHALLOW WELL BORINGS  
 (SW1, SW2, SW3, SW4, SW5, SW6, SW7)  
 TAKEN IN FIELD 10 IN OCTOBER 1995

Depth feet	SW1 mg/kg	SW2 mg/kg	SW3 mg/kg	SW4 mg/kg	SW5 mg/kg	SW6 mg/kg	SW7 mg/kg
0 to 1	7.1	5.0	5.7	1.8	3.9	4.4	8.5
1 to 2	3.4	2.4	3.7	2.0	2.6		4.9
2 to 3	2.1	3.2	3.4	3.0	3.0		3.9
3 to 4	2.6	3.0	3.1	3.1	2.9		3.5
4 to 5	2.5	2.6	2.1	2.9	2.4		3.7
5 to 6	2.5	2.2	2.3	2.3	2.2		3.2
6 to 7	2.3	2.3	1.9	1.9	1.9		2.7
7 to 8	1.7	1.9	1.3	1.7	1.3		2.1
8 to 9	1.1	1.2	1.1	1.1	1.3	2.9	1.5
9 to 10	1.1	1.2	1.2	1.0	1.4	2.6	1.8
10 to 11	1.1	1.2	1.3	1.0	1.2	2.5	1.6
11 to 12	1.4	1.2	1.4	1.0	1.0	1.9	1.7
12 to 13	1.1	1.1	1.2	0.8	1.1	1.7	1.5
13 to 14	1.4	1.3	1.2	0.8	1.0	1.8	1.3
14 to 15	1.2	1.3	1.4	0.7	1.1	1.6	1.4
15 to 16	1.1	1.3	1.3	1.1	0.9	1.6	1.3
16 to 17	1.2	1.1	1.4	1.0	0.8	1.4	1.3
17 to 18	1.1	1.4	1.6	0.6	1.0	1.4	1.2
18 to 19	0.8	1.4	1.5	0.6	1.1	1.4	1.3
19 to 20	0.8	1.4	1.5	0.7	1.0	1.4	1.3
20 to 21	0.9	1.5	1.3	0.6	3.0	1.3	1.4
21 to 22	0.9	0.9	1.3	0.6	1.2	1.3	1.5
22 to 23	1.1	0.8	1.3	0.6	1.0	1.3	1.8
23 to 24	1.2	0.9	1.3	0.5	2.1	1.3	1.5
24 to 25	1.1	1.0	1.3	0.7	1.2	1.3	1.7
25 to 26	1.3	1.2		0.9	1.8	1.3	
26 to 27	1.2	1.3		0.7	1.7	1.4	
27 to 28	1.2	1.3		0.9	1.6	1.3	
28 to 29	1.4	1.6		0.9	3.6	1.3	
29 to 29.5	1.5	2.4		0.8	3.8	1.6	



METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

TABLE AI-4

TOTAL KJELDAHL N CONCENTRATIONS IN THE SHALLOW WELL BORINGS  
(SW1, SW2, SW3, SW4, SW5, SW6, SW7)  
TAKEN IN FIELD 10 IN OCTOBER 1995

Depth feet	SW1 mg/kg	SW2 mg/kg	SW3 mg/kg	SW4 mg/kg	SW5 mg/kg	SW6 mg/kg	SW7 mg/kg
0 to 0.5	7029	5766	6130	725	4658	1465	7573
0.5 to 1.0	6020	3658	3885	715	1702		5290
1.0 to 1.5	3946	653	583	598	395		2462
1.5 to 2.0	377	173	423	460	219		737
2.0 to 2.5	259	233	358	388	324		485
2.5 to 3.0	218	305	215	350	299		243
3.0 to 3.5	244	363	190	345	241		158
3.5 to 4.0	236	163	220	295	285		225
4.0 to 4.5	264	235	395	303	241		310
4.5 to 5.0	248	258	388	310	213		195
5.0 to 5.5	263			338	194		
5.5 to 6.0	252			250	244		
6 to 7	205			258	175		
7 to 8	122			103	91		
8 to 9	122			150	284		
9 to 10	150			128	139		
10 to 11	174			210	75		
11 to 12	232			420	172		
12 to 13	245			305	172		
13 to 14	245			288	144		
14 to 15	263			365	166		
15 to 16	234			368	172		
16 to 17	262			383	131		
17 to 18	130			330	146		
18 to 19	164			363	218		
19 to 20	236			545	263		
20 to 21	186			450	210		
21 to 22	201			433	201		
22 to 23	133			468	240		
23 to 24	194			433	236		
24 to 25	113			503	252		

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

TABLE AI-4 (Continued)

TOTAL KJELDAHL N CONCENTRATIONS IN THE SHALLOW WELL BORINGS  
 (SW1, SW2, SW3, SW4, SW5, SW6, SW7)  
 TAKEN IN FIELD 10 IN OCTOBER 1995

Depth feet	SW1 mg/kg	SW2 mg/kg	SW3 mg/kg	SW4 mg/kg	SW5 mg/kg	SW6 mg/kg	SW7 mg/kg
25 to 26	262			443	353		
26 to 27	260			373	414		
27 to 28	234			590	439		
28 to 29	181			450	456		
29 to 29.5	238				416		

APPENDIX II

FULTON COUNTY FIELD 10 SHALLOW WELL ANALYSES 1996-1999

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

TABLE AII-1

FULTON COUNTY FIELD 10  
SHALLOW WELL #1 ANALYSES 1996 - 1999

Well	Date	pH	EC mS/m	NH <sub>3</sub> -N mg/L	NO <sub>3</sub> -N mg/L	NO <sub>2</sub> -N mg/L
SW-1	01/03/96	6.9	344.0	1.52	237.5	1.250
SW-1	02/07/96	6.8	340.5	0.66	216.0	0.300
SW-1	03/06/96	6.8	365.5	0.55	241.5	0.070
SW-1	04/03/96	6.9	316.0	0.47	238.0	0.039
SW-1	05/01/96	6.9	337.0	0.28	247.0	0.033
SW-1	06/05/96	7.0	284.5	0.39	215.9	0.015
SW-1	07/03/96	6.8	316.5	0.22	214.0	0.071
SW-1	08/07/96	6.8	318.0	0.19	247.0	0.045
SW-1	09/04/96	6.8	313.5	0.13	251.0	0.029
SW-1	10/02/96	6.8	336.0	0.20	219.0	0.007
SW-1	11/06/96	6.8	325.0	0.19	203.2	0.008
SW-1	12/03/96	6.9	332.5	0.19	214.8	0.009
SW-1	01/08/97	6.9	365.0	0.33	211.8	0.007
SW-1	02/05/97	6.9	336.0	0.05	234.8	0.004
SW-1	03/05/97	6.8	334.5	0.13	232.5	0.008
SW-1	04/02/97	6.9	300.5	0.28	201.5	0.017
SW-1	05/08/97	6.7	306.5	0.15	189.5	0.021
SW-1	06/04/97	6.9	286.0	0.09	188.0	0.003
SW-1	07/02/97	6.9	297.5	0.08	192.0	0.004
SW-1	08/06/97	7.0	290.5	0.13	172.0	0.002
SW-1	09/03/97	6.9	304.5	0.10	197.8	0.001
SW-1	11/05/97	7.1	335.0	0.08	191.8	0.000
SW-1	12/03/97	7.2	327.0	0.08	198.0	0.000
SW-1	01/06/98	7.2	325.5	0.17	223.2	0.002
SW-1	02/04/98	6.8	347.0	0.06	204.2	0.001
SW-1	03/04/98	6.9	328.0	0.09	213.5	0.002
SW-1	04/01/98	7.0	312.5	0.15	200.0	0.020
SW-1	05/06/98	7.0	296.5	0.10	198.8	0.002
SW-1	06/03/98	7.5	251.0	0.17	191.5	0.002
SW-1	07/01/98	6.9	286.5	0.19	199.9	0.002
SW-1	08/05/98	6.8	299.0	0.12	166.1	0.003

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

TABLE AII-1 (Continued)

FULTON COUNTY FIELD 10  
SHALLOW WELL #1 ANALYSES 1996 - 1999

Well	Date	pH	EC mS/m	NH <sub>3</sub> -N mg/L	NO <sub>3</sub> -N mg/L	NO <sub>2</sub> -N mg/L
SW-1	09/02/98	6.8	305.5	0.14	179.5	0.003
SW-1	10/07/98	6.8	302.5	0.17	202.8	0.000
SW-1	11/04/98	6.8	325.0	0.07	184.5	0.004
SW-1	12/02/98	7.0	309.0	0.11	181.2	0.000
SW-1	01/06/99	6.9	298.5	0.13	194.5	0.000
SW-1	02/05/99	6.9	305.5	0.08	189.0	0.039
SW-1	03/03/99	6.8	313.5	0.12	160.8	0.002
SW-1	04/07/99	6.8	304.0	0.20	186.2	0.006
SW-1	05/05/99	6.8	249.5	0.09	165.8	0.003
SW-1	06/02/99	7.0	204.8	0.11	163.5	0.005
SW-1	07/07/99	7.0	217.6	0.26	176.2	0.005
SW-1	08/04/99	7.3	191.7	0.16	166.8	0.001
SW-1	09/01/99	6.8	199.2	0.11	173.0	0.004
SW-1	10/06/99	6.8	169.3	0.08	183.0	0.002
SW-1	11/03/99	7.1	171.4	0.11	169.2	0.002
SW-1	12/01/99	7.0	105.8	0.11	174.5	0.002

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

TABLE AII-2

FULTON COUNTY FIELD 10  
SHALLOW WELL #2 ANALYSES 1996 - 1999

Well	Date	pH	EC mS/m	NH <sub>3</sub> -N mg/L	NO <sub>3</sub> -N mg/L	NO <sub>2</sub> -N mg/L
SW-2	01/03/96	7.2	325.5	0.60	230.5	1.600
SW-2	02/07/96	6.9	312.5	0.08	218.8	1.260
SW-2	03/06/96	6.9	326.5	0.11	231.8	0.030
SW-2	04/03/96	7.2	296.0	0.24	235.8	0.023
SW-2	05/01/96	7.1	326.5	0.13	242.0	0.018
SW-2	06/05/96	7.0	300.0	0.08	197.3	0.015
SW-2	07/03/96	6.8	321.0	0.02	225.0	0.008
SW-2	08/07/96	6.9	313.5	0.10	263.0	0.013
SW-2	09/04/96	6.9	317.5	0.02	270.2	0.012
SW-2	10/02/96	6.9	338.5	0.08	236.5	0.005
SW-2	11/06/96	6.9	324.0	0.10	215.5	0.003
SW-2	12/03/96	7.0	335.0	0.08	239.5	0.002
SW-2	01/08/97	6.9	355.5	0.13	219.2	0.003
SW-2	02/05/97	6.9	336.5	0.13	244.2	0.001
SW-2	03/05/97	6.7	349.0	0.08	259.0	0.004
SW-2	04/02/97	6.8	311.5	0.12	226.0	0.010
SW-2	05/08/97	6.7	331.5	0.11	238.0	0.008
SW-2	06/04/97	7.0	308.5	0.09	231.0	0.004
SW-2	07/02/97	6.9	318.5	0.06	221.8	0.003
SW-2	08/06/97	7.0	307.5	0.14	196.0	0.002
SW-2	09/03/97	6.9	322.0	0.02	225.8	0.004
SW-2	11/05/97	7.0	334.0	0.07	214.0	0.000
SW-2	12/03/97	6.9	336.5	0.04	218.2	0.001
SW-2	01/06/98	7.0	328.5	0.08	241.2	0.001
SW-2	02/04/98	6.8	343.5	0.06	220.2	0.002
SW-2	03/04/98	6.7	350.0	0.18	231.8	0.001
SW-2	04/01/98	6.8	338.0	0.06	226.8	0.002
SW-2	05/06/98	6.8	312.0	0.10	219.6	0.002
SW-2	06/03/98	7.2	275.0	0.17	228.0	0.002
SW-2	07/01/98	6.9	306.5	0.18	245.2	0.002
SW-2	08/05/98	6.8	302.0	0.12	210.4	0.001

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

TABLE AII-2 (Continued)

FULTON COUNTY FIELD 10  
SHALLOW WELL #2 ANALYSES 1996 - 1999

Well	Date	pH	EC mS/m	NH <sub>3</sub> -N mg/L	NO <sub>3</sub> -N mg/L	NO <sub>2</sub> -N mg/L
SW-2	09/02/98	6.8	327.5	0.14	236.0	0.001
SW-2	10/07/98	6.9	325.5	0.14	220.2	0.000
SW-2	11/04/98	6.8	347.0	0.06	220.0	0.004
SW-2	12/02/98	6.9	330.0	0.14	209.2	0.000
SW-2	01/06/99	7.0	316.5	0.09	225.2	0.000
SW-2	02/05/99	6.8	333.5	0.14	228.0	0.003
SW-2	03/03/99	6.8	350.5	0.09	153.8	0.001
SW-2	04/07/99	6.8	339.5	0.18	195.5	0.005
SW-2	05/05/99	6.8	280.8	0.08	213.2	0.003
SW-2	06/02/99	7.0	228.4	0.14	204.2	0.006
SW-2	07/07/99	7.2	236.2	0.16	223.8	0.006
SW-2	08/04/99	7.3	208.3	0.15	196.6	0.001
SW-2	09/01/99	6.9	221.2	0.11	204.0	0.003
SW-2	10/06/99	6.8	185.8	0.10	215.8	0.002
SW-2	11/03/99	6.9	186.8	0.20	204.0	0.002
SW-2	12/01/99	6.9	107.4	0.07	211.0	0.002

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

TABLE AII-3

FULTON COUNTY FIELD 10  
SHALLOW WELL #3 ANALYSES 1996 - 1999

Well	Date	pH	EC mS/m	NH <sub>3</sub> -N mg/L	NO <sub>3</sub> -N mg/L	NO <sub>2</sub> -N mg/L
SW-3	06/05/96	7.0	266.5	0.12	214.2	0.015
SW-3	07/03/96	6.9	277.5	0.01	181.0	0.012
SW-3	08/07/96	7.3	272.0	0.13	201.0	0.012
SW-3	09/04/96	7.3	277.0	0.09	224.7	0.010
SW-3	03/05/97	6.9	295.5	0.12	210.5	0.004
SW-3	04/02/97	7.0	244.0	0.09	168.2	0.005
SW-3	05/08/97	6.9	262.0	0.15	158.0	0.008
SW-3	06/04/97	7.3	248.0	0.16	165.5	0.008
SW-3	07/02/97	7.2	261.0	0.08	160.2	0.008
SW-3	08/06/97	7.5	251.0	0.16	161.4	0.011
SW-3	03/04/98	6.9	283.0	0.08	170.2	0.006
SW-3	04/01/98	6.9	270.0	0.10	160.0	0.004
SW-3	05/06/98	7.0	245.5	0.11	143.6	0.002
SW-3	06/03/98	7.3	228.0	0.25	141.5	0.032
SW-3	07/01/98	7.0	248.5	0.24	165.8	0.043
SW-3	08/05/98	7.0	230.0	0.12	155.5	0.004
SW-3	09/02/98	7.3	267.5	0.10	159.0	0.004
SW-3	10/07/98	7.5	265.5	0.16	152.2	0.006
SW-3	01/06/99	7.8	268.0	0.12	168.2	0.000
SW-3	02/05/99	7.0	268.0	0.12	164.5	0.006
SW-3	03/03/99	7.0	288.5	0.14	133.8	0.010
SW-3	04/07/99	7.1	257.5	0.21	119.2	0.013
SW-3	05/05/99	7.1	215.0	0.10	129.2	0.004
SW-3	06/02/99	7.2	179.6	0.10	129.8	0.009
SW-3	07/07/99	7.5	189.6	0.12	134.0	0.003
SW-3	08/04/99	7.8	169.6	0.12	138.0	0.006
SW-3	09/01/99	7.5	179.4	0.12	135.8	0.009



METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

TABLE AII-4

FULTON COUNTY FIELD 10  
SHALLOW WELL #4 ANALYSES 1996 - 1999

Well	Date	pH	EC mS/m	NH <sub>3</sub> -N mg/L	NO <sub>3</sub> -N mg/L	NO <sub>2</sub> -N mg/L
SW-4	01/03/96	7.3	77.90	1.85	3.06	0.056
SW-4	02/07/96	7.3	77.30	0.64	2.53	0.038
SW-4	03/06/96	7.3	77.75	0.36	3.38	0.013
SW-4	04/03/96	7.5	69.30	0.36	3.74	0.002
SW-4	05/01/96	7.5	70.20	0.20	3.32	0.001
SW-4	06/05/96	7.0	58.90	0.10	1.40	0.002
SW-4	07/03/96	7.0	50.60	0.00	0.95	0.001
SW-4	08/07/96	7.1	51.80	0.11	0.78	0.001
SW-4	09/04/96	7.1	54.10	0.02	1.09	0.001
SW-4	10/02/96	7.2	59.65	0.17	2.04	0.001
SW-4	11/06/96	7.4	58.35	0.18	2.18	0.002
SW-4	12/03/96	7.5	62.70	0.16	2.32	0.002
SW-4	01/08/97	7.3	66.80	0.24	2.45	0.006
SW-4	02/05/97	7.4	64.90	0.13	2.57	0.002
SW-4	03/05/97	7.0	50.00	0.13	0.77	0.004
SW-4	04/02/97	7.0	43.80	0.05	0.47	0.003
SW-4	05/08/97	6.9	54.90	0.11	1.87	0.001
SW-4	06/04/97	7.2	53.70	0.10	1.52	0.001
SW-4	07/02/97	7.1	55.60	0.06	1.92	0.000
SW-4	08/06/97	7.3	54.50	0.10	2.58	0.001
SW-4	09/03/97	7.3	58.05	0.15	1.85	0.000
SW-4	11/05/97	7.5	62.70	0.07	6.25	0.000
SW-4	12/03/97	7.5	65.35	0.04	4.18	0.010
SW-4	01/06/98	7.5	65.55	0.12	1.91	0.001
SW-4	02/04/98	7.1	67.15	0.06	5.12	0.001
SW-4	03/04/98	6.9	50.95	0.08	1.49	0.004
SW-4	04/01/98	6.9	52.60	0.10	0.64	0.018
SW-4	05/06/98	7.0	46.05	0.10	0.43	0.009
SW-4	06/03/98	7.4	45.85	0.17	0.72	0.008
SW-4	07/01/98	7.0	52.40	0.16	0.86	0.004
SW-4	08/05/98	7.1	49.25	0.12	0.88	0.003

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

TABLE AII-4 (Continued)

FULTON COUNTY FIELD 10  
SHALLOW WELL #4 ANALYSES 1996 - 1999

Well	Date	pH	EC mS/m	NH <sub>3</sub> -N mg/L	NO <sub>3</sub> -N mg/L	NO <sub>2</sub> -N mg/L
SW-4	09/02/98	7.1	55.70	0.08	1.27	0.002
SW-4	10/07/98	7.1	57.25	0.13	1.61	0.000
SW-4	11/04/98	8.2	64.25	0.06	2.88	0.004
SW-4	12/02/98	7.4	63.40	0.12	2.37	0.000
SW-4	01/06/99	7.3	59.15	0.08	1.88	0.000
SW-4	02/05/99	7.1	57.30	0.10	0.98	0.005
SW-4	03/03/99	7.3	57.80	0.12	0.98	0.022

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

TABLE AII-5

FULTON COUNTY FIELD 10  
SHALLOW WELL #5 ANALYSES 1996 - 1999

Well	Date	pH	EC mS/m	NH <sub>3</sub> -N mg/L	NO <sub>3</sub> -N mg/L	NO <sub>2</sub> -N mg/L
SW-5	01/03/96	7.3	206.0	0.50	86.50	1.900
SW-5	02/07/96	7.3	214.5	0.11	113.0	0.500
SW-5	03/06/96	7.2	221.0	0.14	123.0	0.090
SW-5	04/03/96	7.3	195.5	0.42	120.2	0.078
SW-5	05/01/96	7.1	202.5	0.13	128.0	0.045
SW-5	06/05/96	7.0	187.0	0.15	141.0	0.009
SW-5	07/03/96	6.9	194.0	0.00	137.0	0.003
SW-5	08/07/96	6.8	194.5	0.07	161.5	0.018
SW-5	09/04/96	7.0	195.5	0.04	154.2	0.014
SW-5	10/02/96	7.0	218.0	0.13	142.5	0.022
SW-5	11/06/96	7.2	205.0	0.10	130.5	0.049
SW-5	12/03/96	7.2	211.5	0.06	130.8	0.061
SW-5	01/08/97	7.2	222.5	1.13	127.2	0.025
SW-5	02/05/97	7.1	213.5	0.15	128.0	0.017
SW-5	03/05/97	6.9	196.5	0.15	143.5	0.019
SW-5	04/02/97	6.9	173.0	0.04	135.5	0.014
SW-5	05/08/97	6.8	193.0	0.15	136.5	0.004
SW-5	06/04/97	7.0	183.5	0.10	139.5	0.003
SW-5	07/02/97	6.9	193.5	0.09	136.5	0.003
SW-5	08/06/97	7.0	191.0	0.12	117.2	0.004
SW-5	09/03/97	6.9	197.5	0.02	137.8	0.003
SW-5	11/05/97	7.1	208.5	0.06	131.8	0.005
SW-5	12/03/97	7.1	207.0	0.04	127.0	0.014
SW-5	01/06/98	7.1	206.0	0.09	134.8	0.041
SW-5	02/04/98	6.8	213.5	0.15	128.8	0.029
SW-5	03/04/98	6.8	203.0	0.06	130.8	0.022
SW-5	04/01/98	7.0	198.5	0.17	136.0	0.003
SW-5	05/06/98	7.1	188.0	0.18	131.4	0.005
SW-5	06/03/98	7.4	169.5	0.13	132.8	0.002
SW-5	07/01/98	7.1	181.0	0.18	138.5	0.002
SW-5	08/05/98	7.0	181.5	0.17	122.5	0.018

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

TABLE AII-5 (Continued)

FULTON COUNTY FIELD 10  
SHALLOW WELL #5 ANALYSES 1996 - 1999

Well	Date	pH	EC mS/m	NH <sub>3</sub> -N mg/L	NO <sub>3</sub> -N mg/L	NO <sub>2</sub> -N mg/L
SW-5	09/02/98	7.0	198.0	0.17	133.0	0.003
SW-5	10/07/98	7.0	199.5	0.15	127.8	0.005
SW-5	11/04/98	7.0	212.0	0.06	128.0	0.007
SW-5	12/02/98	7.1	204.5	0.24	115.8	0.004
SW-5	01/06/99	7.2	194.0	0.09	130.8	0.035
SW-5	02/05/99	7.1	191.0	0.14	126.2	0.012
SW-5	03/03/99	7.0	201.0	0.10	116.0	0.002
SW-5	04/07/99	7.0	194.5	0.18	107.2	0.006
SW-5	05/05/99	6.9	161.7	0.08	116.2	0.002
SW-5	06/02/99	7.0	141.0	0.08	117.8	0.006
SW-5	07/07/99	7.2	146.6	0.38	118.0	0.004
SW-5	08/04/99	7.3	132.3	0.14	120.6	0.001
SW-5	09/01/99	6.9	138.2	0.08	113.2	0.002
SW-5	10/06/99	6.9	121.2	0.10	120.8	0.001
SW-5	11/03/99	6.8	125.0	0.03	115.2	0.002
SW-5	12/01/99	6.7	84.4	0.08	115.5	0.002

METROPOLITAN WATER RECLAMATION DISTRICT OF GRATER CHICAGO

TABLE AII-6

FULTON COUNTY FIELD 10  
SHALLOW WELL #6 ANALYSES 1996 - 1999

Well	Date	pH	EC mS/m	NH <sub>3</sub> -N mg/L	NO <sub>3</sub> -N mg/L	NO <sub>2</sub> -N mg/L
SW-6	06/05/96	7.2	57.30	0.17	3.15	0.004
SW-6	07/03/96	6.9	41.55	0.00	0.80	0.001
SW-6	08/07/96	7.1	34.80	0.24	0.28	0.001
SW-6	09/04/96	7.4	35.70	0.26	0.27	0.004
SW-6	03/05/97	6.5	29.50	0.08	0.00	0.000
SW-6	04/02/97	6.9	28.65	0.08	0.94	0.000
SW-6	05/08/97	6.8	29.70	0.24	0.84	0.000
SW-6	06/04/97	7.2	29.50	0.18	1.52	0.000
SW-6	07/02/97	7.1	30.40	0.09	1.42	0.000
SW-6	08/06/97	7.4	32.40	0.15	0.66	0.005
SW-6	03/04/98	6.5	29.05	0.05	1.22	0.000
SW-6	04/01/98	6.6	30.25	0.06	0.73	0.000
SW-6	05/06/98	6.8	26.50	0.10	0.54	0.001
SW-6	06/03/98	7.0	24.60	0.15	0.66	0.001
SW-6	07/01/98	6.7	26.85	0.15	0.78	0.001
SW-6	08/05/98	7.0	32.00	0.10	0.76	0.003
SW-6	09/02/98	7.3	39.45	0.08	1.26	0.006
SW-6	10/07/98	7.5	41.30	0.11	1.24	0.000
SW-6	02/05/99	6.8	27.20	0.08	0.87	0.000
SW-6	03/03/99	6.9	29.50	0.10	0.75	0.001
SW-6	04/07/99	7.1	36.20	0.10	0.77	0.005
SW-6	05/05/99	6.9	27.51	0.06	0.77	0.000
SW-6	06/02/99	7.2	24.03	0.08	1.04	0.003
SW-6	07/07/99	7.5	24.40	0.08	0.91	0.001
SW-6	08/04/99	7.9	26.45	0.11	1.81	0.001

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

TABLE AII-7

FULTON COUNTY FIELD 10  
SHALLOW WELL #7 ANALYSES 1996 - 1999

Well	Date	pH	EC mS/m	NH <sub>3</sub> -N mg/L	NO <sub>3</sub> -N mg/L	NO <sub>2</sub> -N mg/L
SW-7	01/03/96	7.1	319.0	0.26	242.8	0.056
SW-7	02/07/96	7.0	347.5	0.98	245.0	0.010
SW-7	03/06/96	7.0	336.0	0.16	260.8	0.015
SW-7	04/03/96	7.1	310.5	0.28	248.8	0.019
SW-7	05/01/96	7.1	321.5	0.20	202.0	0.007
SW-7	06/05/96	7.2	302.0	0.08	250.6	0.024
SW-7	07/03/96	7.0	318.5	0.00	232.0	0.012
SW-7	08/07/96	7.0	326.5	0.08	275.0	0.018
SW-7	09/04/96	7.0	337.0	0.04	258.5	0.007
SW-7	10/02/96	7.0	356.5	0.10	248.8	0.003
SW-7	11/06/96	7.1	335.0	0.01	228.5	0.004
SW-7	12/03/96	7.3	347.0	0.10	243.2	0.006
SW-7	01/08/97	7.3	378.5	0.15	243.5	0.008
SW-7	02/05/97	7.2	358.0	0.13	245.0	0.012
SW-7	03/05/97	6.9	326.0	0.21	267.8	0.010
SW-7	04/02/97	7.0	293.5	0.06	233.8	0.010
SW-7	05/08/97	6.8	309.5	0.13	227.5	0.007
SW-7	06/04/97	7.1	326.0	0.08	229.0	0.005
SW-7	07/02/97	7.0	323.5	0.07	237.8	0.006
SW-7	08/06/97	7.1	310.5	0.22	207.5	0.003
SW-7	09/03/97	7.2	325.5	0.20	232.5	0.015
SW-7	11/05/97	7.6	415.0	0.40	221.5	0.004
SW-7	12/03/97	7.8	345.0	0.04	242.8	0.023
SW-7	02/04/98	7.6	373.0	0.06	273.5	0.048
SW-7	03/04/98	6.9	337.5	0.08	251.8	0.003
SW-7	04/01/98	7.0	334.0	0.06	241.2	0.005
SW-7	05/06/98	7.0	317.0	0.06	223.6	0.008
SW-7	06/03/98	7.4	283.5	0.18	224.8	0.017
SW-7	07/01/98	7.0	288.0	0.16	231.4	0.002
SW-7	08/05/98	6.9	291.5	0.09	203.2	0.002
SW-7	09/02/98	6.9	314.5	0.09	223.2	0.002

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

TABLE AII-7 (Continued)

FULTON COUNTY FIELD 10  
SHALLOW WELL #7 ANALYSES 1996 - 1999

Well	Date	pH	EC mS/m	NH <sub>3</sub> -N mg/L	NO <sub>3</sub> -N mg/L	NO <sub>2</sub> -N mg/L
SW-7	01/06/99	7.6	310.0	0.25	225.2	0.037
SW-7	02/05/99	7.2	321.5	0.14	215.5	0.001
SW-7	03/03/99	7.0	335.0	0.16	191.0	0.001
SW-7	04/07/99	7.0	325.5	0.22	200.2	0.006
SW-7	05/05/99	7.0	293.4	0.06	204.5	0.004
SW-7	06/02/99	7.2	235.5	0.10	193.2	0.005
SW-7	07/07/99	7.8	245.2	0.46	183.0	0.074

APPENDIX III

FULTON COUNTY FIELD 10 DEEP WELL ANALYSES 1996-1999



METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

TABLE AIII-1

FULTON COUNTY FIELD 10  
DEEP WELL #1 ANALYSES 1996 - 1999

Well	Date	pH	EC mS/m	NH <sub>3</sub> -N mg/L	NO <sub>3</sub> -N mg/L	NC <sub>2</sub> -N mg/L
DW-1	01/03/96	8.1	198.5	0.90	0.12	0.014
DW-1	02/07/96	8.1	287.5	0.06	0.11	0.009
DW-1	03/06/96	7.9	358.5	0.88	0.20	0.007
DW-1	04/03/96	8.1	325.5	0.66	0.00	0.003
DW-1	05/01/96	8.2	356.5	0.89	0.20	0.002
DW-1	06/05/96	8.1	343.5	0.85	0.34	0.005
DW-1	07/03/96	8.0	348.0	0.43	0.82	0.005
DW-1	08/07/96	8.0	370.0	0.82	0.00	0.012
DW-1	09/04/96	8.0	364.0	0.83	0.65	0.040
DW-1	10/02/96	8.1	406.0	0.83	0.70	0.029
DW-1	11/06/96	8.0	383.0	0.74	0.50	0.048
DW-1	12/03/96	8.2	397.0	0.59	2.03	0.038
DW-1	01/08/97	8.0	421.5	0.60	2.96	0.042
DW-1	02/05/97	8.0	396.5	0.57	3.01	0.087
DW-1	03/05/97	8.1	371.5	0.46	4.18	0.153
DW-1	04/02/97	8.1	359.5	0.40	6.02	0.147
DW-1	05/08/97	8.0	369.5	0.57	5.48	0.162
DW-1	06/04/97	8.1	388.5	0.32	6.28	0.101
DW-1	07/02/97	8.1	380.5	0.21	6.45	0.066
DW-1	08/06/97	8.1	364.5	0.32	6.39	0.120
DW-1	09/03/97	8.1	384.0	0.12	6.31	0.042
DW-1	11/05/97	8.1	425.5	0.30	6.81	0.280
DW-1	12/03/97	8.1	428.0	0.24	5.81	0.270
DW-1	01/06/98	8.2	425.5	0.37	6.37	0.375
DW-1	02/04/98	8.0	417.5	0.25	8.24	0.230
DW-1	03/04/98	8.0	414.5	0.44	8.33	0.260
DW-1	04/01/98	8.1	411.5	0.28	8.13	0.180
DW-1	05/06/98	8.0	400.0	0.25	6.84	0.140
DW-1	06/03/98	8.2	363.5	0.22	4.68	0.080
DW-1	07/01/98	7.9	377.0	0.28	3.18	0.078
DW-1	08/05/98	7.8	366.5	0.34	5.42	0.170

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

TABLE AIII-1 (Continued)

FULTON COUNTY FIELD 10  
DEEP WELL #1 ANALYSES 1996 - 1999

Well	Date	pH	EC mS/m	NH <sub>3</sub> -N mg/L	NO <sub>3</sub> -N mg/L	NO <sub>2</sub> -N mg/L
DW-1	09/02/98	8.0	389.5	0.26	3.09	0.085
DW-1	10/07/98	8.0	401.5	0.32	3.42	0.092
DW-1	11/04/98	8.1	444.0	0.67	3.87	0.080
DW-1	12/02/98	8.2	432.0	0.29	4.47	0.085
DW-1	01/06/99	8.2	401.5	0.36	5.48	0.139
DW-1	02/05/99	8.2	413.5	0.32	5.70	0.042
DW-1	03/03/99	7.8	434.0	0.12	4.02	0.026
DW-1	04/07/99	7.8	416.5	0.20	1.87	0.076
DW-1	05/05/99	7.9	385.5	0.31	0.94	0.081
DW-1	06/02/99	8.1	315.4	0.26	1.72	0.060
DW-1	07/07/99	8.2	325.6	0.26	1.38	0.081
DW-1	08/04/99	8.2	301.2	0.22	2.18	0.050
DW-1	09/01/99	8.0	313.1	0.24	3.55	0.059
DW-1	10/06/99	7.9	293.3	0.24	6.70	0.068
DW-1	11/03/99	8.1	297.2	0.24	4.95	0.080
DW-1	12/01/99	8.2	233.2	0.12	5.43	0.007

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

TABLE AIII-2

FULTON COUNTY FIELD 10  
DEEP WELL #2 ANALYSES 1996 - 1999

Well	Date	pH	EC mS/m	NH <sub>3</sub> -N mg/L	NO <sub>3</sub> -N mg/L	NO <sub>2</sub> -N mg/L
DW-2	01/03/96	7.8	381.0	0.04	0.76	0.159
DW-2	03/06/96	8.2	401.5	0.83	1.70	0.010
DW-2	02/07/96	7.8	419.0	0.22	0.34	0.010

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

TABLE AIII-3

FULTON COUNTY FIELD 10  
DEEP WELL #3 ANALYSES 1996 - 1999

Well	Date	pH	EC mS/m	NH <sub>3</sub> -N mg/L	NO <sub>3</sub> -N mg/L	NO <sub>2</sub> -N mg/L
DW-3	01/03/96	7.5	311.5	0.16	10.00	0.450
DW-3	02/07/96	7.6	289.0	0.58	7.90	0.172
DW-3	03/06/96	7.2	339.5	0.10	6.30	0.160
DW-3	04/03/96	7.4	284.0	0.24	5.29	0.097
DW-3	05/01/96	6.9	292.5	0.23	5.46	0.083
DW-3	06/05/96	7.5	268.5	0.11	34.10	0.026
DW-3	07/03/96	6.9	284.0	0.00	26.70	0.021
DW-3	08/07/96	7.4	285.0	0.13	25.20	0.124
DW-3	09/04/96	6.8	277.5	0.11	21.92	0.067
DW-3	10/02/96	7.7	312.5	0.15	16.50	0.080
DW-3	11/06/96	7.5	293.0	0.11	11.85	0.064
DW-3	12/03/96	7.5	314.5	0.14	9.70	0.033
DW-3	01/02/97	7.6	349.0	0.30	8.38	0.007
DW-3	01/15/97	7.5	325.0	0.17	9.04	0.004
DW-3	01/22/97	7.4	286.0	0.30	5.94	0.006
DW-3	01/29/97	7.0	373.5	0.22	5.79	0.004
DW-3	02/05/97	7.1	325.5	0.19	6.17	0.002
DW-3	02/11/97	7.4	321.0	0.08	4.67	0.006
DW-3	02/19/97	7.2	313.5	0.11	5.38	0.004
DW-3	02/26/97	7.0	349.0	0.09	5.13	0.004
DW-3	03/05/97	7.3	304.0	0.15	8.68	0.014
DW-3	03/12/97	7.2	314.5	0.11	21.95	0.011
DW-3	03/19/97	7.2	325.5	0.08	41.85	0.022
DW-3	03/26/97	6.9	310.0	0.06	44.40	0.022
DW-3	04/02/97	7.1	270.5	0.17	30.40	0.018
DW-3	04/09/97	7.1	318.0	0.08	28.05	0.013
DW-3	04/16/97	7.0	319.0	0.10	31.45	0.013
DW-3	04/23/97	7.1	311.5	0.08	35.10	0.024
DW-3	04/30/97	7.1	296.0	0.15	38.15	0.019
DW-3	05/08/97	7.3	265.5	0.15	32.00	0.018
DW-3	05/14/97	7.2	292.5	0.08	25.55	0.079

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

TABLE AIII-3 (Continued)

FULTON COUNTY FIELD 10  
DEEP WELL #3 ANALYSES 1996 - 1999

Well	Date	pH	EC mS/m	NH <sub>3</sub> -N mg/L	NO <sub>3</sub> -N mg/L	NO <sub>2</sub> -N mg/L
DW-3	05/21/97	7.3	294.5	0.07	29.60	0.034
DW-3	05/28/97	7.3	344.5	0.12	27.90	0.010
DW-3	06/04/97	7.3	306.0	0.12	22.00	0.024
DW-3	06/11/97	7.5	284.0	0.14	20.10	0.016
DW-3	06/18/97	7.5	311.5	0.08	23.00	0.034
DW-3	06/26/97	7.3	315.0	0.06	20.50	0.018
DW-3	07/02/97	7.5	298.0	0.09	19.00	0.010
DW-3	07/09/97	7.4	301.5	0.07	22.75	0.012
DW-3	07/16/97	7.3	337.0	0.12	15.15	0.013
DW-3	07/23/97	7.6	328.5	0.08	16.30	0.017
DW-3	07/30/97	7.3	320.5	0.06	17.65	0.010
DW-3	08/06/97	7.4	289.5	0.17	14.62	0.011
DW-3	08/13/97	7.4	293.0	0.08	12.46	0.016
DW-3	08/22/97	7.0	326.5	0.06	14.72	0.020
DW-3	08/27/97	7.0	308.5	0.11	11.60	0.017
DW-3	09/03/97	7.7	297.5	0.06	11.80	0.008
DW-3	09/10/97	7.2	286.0	0.11	12.27	0.013
DW-3	09/17/97	7.2	323.0	0.15	10.79	0.016
DW-3	09/24/97	6.9	346.0	0.04	9.55	0.015
DW-3	10/08/97	7.3	316.5	0.09	9.21	0.008
DW-3	10/15/97	7.6	285.0	0.07	7.98	0.018
DW-3	10/22/97	7.5	363.0	0.08	7.09	0.027
DW-3	10/29/97	7.5	368.5	0.09	7.47	0.020
DW-3	11/05/97	7.5	322.5	0.10	7.18	0.008
DW-3	11/12/97	7.3	353.0	0.07	5.96	0.010
DW-3	11/19/97	7.6	286.5	0.07	6.17	0.008
DW-3	11/25/97	7.0	364.0	0.08	5.45	0.005
DW-3	12/03/97	7.4	329.5	0.06	4.66	0.009
DW-3	12/10/97	7.4	353.5	0.08	5.97	0.000
DW-3	12/17/97	7.0	381.0	0.15	3.88	0.003
DW-3	12/24/97	7.2	336.5	0.14	4.42	0.018

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

TABLE AIII-3 (Continued)

FULTON COUNTY FIELD 10  
DEEP WELL #3 ANALYSES 1996 - 1999

Well	Date	pH	EC mS/m	NH <sub>3</sub> -N mg/L	NO <sub>3</sub> -N mg/L	NO <sub>2</sub> -N mg/L
DW-3	12/31/97	7.6	357.0	0.12	4.03	0.025
DW-3	01/06/98	7.5	330.5	0.16	3.84	0.006
DW-3	01/15/98	7.4	349.5	0.08	3.09	0.004
DW-3	01/21/98	7.6	294.0	0.09	2.81	0.004
DW-3	01/27/98	6.9	388.5	0.09	2.98	0.003
DW-3	02/04/98	7.4	329.5	0.09	2.61	0.003
DW-3	02/11/98	7.3	355.5	0.13	2.79	0.002
DW-3	02/18/98	7.1	365.5	0.12	1.89	0.004
DW-3	02/25/98	7.0	380.0	0.08	2.08	0.001
DW-3	03/04/98	7.2	324.0	0.13	3.98	0.008
DW-3	03/12/98	7.2	338.5	0.10	12.69	0.013
DW-3	03/18/98	7.1	354.0	0.10	23.52	0.007
DW-3	03/25/98	7.0	342.0	0.08	38.20	0.010
DW-3	04/01/98	7.0	280.5	0.06	37.50	0.013
DW-3	04/08/98	7.0	278.5	0.10	34.85	0.015
DW-3	04/15/98	7.0	282.0	0.09	35.70	0.013
DW-3	04/22/98	6.9	298.0	0.06	38.75	0.012
DW-3	04/29/98	6.9	303.0	0.10	31.55	0.026
DW-3	05/06/98	7.2	263.5	0.10	34.23	0.013
DW-3	05/13/98	7.0	298.0	0.17	34.15	0.017
DW-3	05/20/98	7.3	245.0	0.06	38.95	0.016
DW-3	05/27/98	7.1	280.5	0.06	37.50	0.012
DW-3	06/03/98	7.6	226.5	0.17	35.25	0.025
DW-3	06/10/98	7.4	304.0	0.16	36.90	0.015
DW-3	06/16/98	7.7	295.0	0.19	31.60	0.026
DW-3	06/24/98	7.4	NA	0.14	31.10	0.013
DW-3	07/01/98	7.5	250.5	0.16	35.82	0.017
DW-3	07/07/98	7.0	254.0	0.15	35.10	0.016
DW-3	07/14/98	7.0	292.5	0.12	33.40	0.016
DW-3	07/22/98	7.2	305.0	0.12	31.75	0.039
DW-3	07/28/98	7.1	321.5	0.16	31.60	0.031

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

TABLE AIII-3 (Continued)

FULTON COUNTY FIELD 10  
DEEP WELL #3 ANALYSES 1996 - 1999

Well	Date	pH	EC mS/m	NH <sub>3</sub> -N mg/L	NO <sub>3</sub> -N mg/L	NO <sub>2</sub> -N mg/L
DW-3	08/05/98	7.2	263.0	0.14	28.65	0.034
DW-3	08/12/98	7.5	307.5	0.20	24.65	0.054
DW-3	08/19/98	7.4	297.5	0.15	25.03	0.016
DW-3	08/26/98	7.2	319.5	0.18	22.98	0.016
DW-3	09/02/98	7.1	287.5	0.12	21.58	0.015
DW-3	09/09/98	7.2	314.5	0.13	20.74	0.079
DW-3	09/23/98	7.4	326.5	0.08	19.84	0.023
DW-3	09/29/98	7.3	319.0	0.07	18.25	0.022
DW-3	10/07/98	7.7	290.0	0.10	17.08	0.071
DW-3	10/14/98	7.5	285.0	0.10	16.40	0.014
DW-3	10/20/98	7.4	360.5	0.11	15.55	0.022
DW-3	10/28/98	7.3	347.5	0.00	13.46	0.009
DW-3	11/04/98	7.4	314.0	0.06	14.14	0.013
DW-3	11/10/98	7.4	301.5	0.12	13.04	0.027
DW-3	11/18/98	7.2	332.5	0.08	12.45	0.007
DW-3	11/25/98	7.3	313.0	0.10	11.62	0.011
DW-3	12/02/98	7.4	312.0	0.16	10.99	0.011
DW-3	12/09/98	7.4	265.0	0.12	11.32	0.009
DW-3	12/16/98	7.2	331.5	0.12	10.42	0.034
DW-3	12/23/98	7.2	341.0	0.11	11.05	0.002
DW-3	12/30/98	7.2	359.0	0.08	10.26	0.024
DW-3	01/06/99	7.3	296.0	0.10	9.60	0.014
DW-3	01/13/99	7.1	358.0	0.10	10.08	0.019
DW-3	01/19/99	7.2	348.0	0.18	9.73	0.023
DW-3	01/27/99	7.6	268.0	0.64	9.95	0.039
DW-3	02/05/99	7.2	277.0	0.27	16.01	0.003
DW-3	02/10/99	7.4	243.0	0.05	26.93	0.006
DW-3	02/17/99	7.0	316.5	0.12	27.75	0.008
DW-3	02/24/99	7.0	331.0	0.13	28.65	0.005
DW-3	03/03/99	7.1	288.0	0.04	26.20	0.006
DW-3	03/10/99	7.0	344.5	0.12	25.30	0.010

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

TABLE AIII-3 (Continued)

FULTON COUNTY FIELD 10  
DEEP WELL #3 ANALYSES 1996 - 1999

Well	Date	pH	EC mS/m	NH <sub>3</sub> -N mg/L	NO <sub>3</sub> -N mg/L	NO <sub>2</sub> -N mg/L
DW-3	03/16/99	7.0	350.0	0.10	24.63	0.008
DW-3	03/24/99	7.1	335.5	0.13	24.67	0.012
DW-3	03/30/99	7.5	306.0	0.10	28.60	0.008
DW-3	04/07/99	7.2	282.0	0.12	28.10	0.020
DW-3	04/14/99	7.1	306.0	0.12	27.36	0.022
DW-3	04/21/99	7.1	327.5	0.13	26.29	0.010
DW-3	04/27/99	6.9	314.0	0.08	26.76	0.012
DW-3	05/05/99	7.1	255.4	0.06	28.82	0.012
DW-3	05/12/99	6.9	238.0	0.15	25.90	0.027
DW-3	05/19/99	7.4	231.4	0.13	24.48	0.086
DW-3	05/26/99	7.3	206.0	0.07	23.78	0.033
DW-3	06/02/99	7.5	226.8	0.15	23.54	0.245
DW-3	06/10/99	7.2	227.8	0.09	23.47	0.117
DW-3	06/16/99	7.7	202.1	0.12	22.90	0.091
DW-3	06/23/99	7.3	204.0	0.16	22.30	0.216
DW-3	06/30/99	7.2	200.6	0.10	21.79	0.056
DW-3	07/07/99	7.6	229.5	0.12	19.85	0.055
DW-3	07/14/99	7.4	220.7	0.16	18.93	0.220
DW-3	07/21/99	7.5	224.3	0.28	18.83	0.245
DW-3	07/28/99	7.2	183.3	0.17	18.09	0.184
DW-3	08/04/99	7.7	204.2	0.14	17.50	0.012
DW-3	08/11/99	7.6	175.0	0.16	16.76	0.030
DW-3	08/18/99	7.5	178.1	<del>0.12</del>	15.21	0.042
DW-3	08/25/99	7.1	220.8	0.13	15.02	0.028
DW-3	09/01/99	7.2	227.6	0.08	13.70	0.054
DW-3	09/08/99	7.2	226.8	0.10	13.60	0.020
DW-3	09/15/99	7.2	199.0	0.10	12.95	0.016
DW-3	09/22/99	7.1	185.5	0.07	12.68	0.046
DW-3	09/29/99	7.1	183.8	0.10	11.82	0.011
DW-3	10/06/99	7.2	196.4	0.07	11.12	0.011
DW-3	10/13/99	7.1	195.3	0.10	10.23	0.049



METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

TABLE AIII-3 (Continued)

FULTON COUNTY FIELD 10  
DEEP WELL #3 ANALYSES 1996 - 1999

Well	Date	pH	EC mS/m	NH <sub>3</sub> -N mg/L	NO <sub>3</sub> -N mg/L	NO <sub>2</sub> -N mg/L
DW-3	10/20/99	7.1	184.4	0.10	10.03	0.011
DW-3	10/27/99	7.1	171.4	0.08	9.47	0.013
DW-3	11/03/99	7.1	184.2	0.12	8.64	0.012
DW-3	11/09/99	7.1	190.8	0.05	7.86	0.024
DW-3	11/17/99	7.3	169.2	0.10	8.01	0.011
DW-3	11/24/99	7.1	109.2	0.08	7.07	0.008
DW-3	12/01/99	7.2	109.6	0.04	7.08	0.008
DW-3	12/08/99	7.1	121.2	0.11	6.27	0.009
DW-3	12/15/99	7.3	122.2	0.16	6.79	0.015
DW-3	12/20/99	7.0	125.4	0.06	6.02	0.008

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

TABLE AIII-4

FULTON COUNTY FIELD 10  
DEEP WELL #4 ANALYSES 1996 - 1999

Well	Date	pH	EC mS/m	NH <sub>3</sub> -N mg/L	NO <sub>3</sub> -N mg/L	NO <sub>2</sub> -N mg/L
DW-4	06/05/96	7.0	269.5	0.06	16.83	0.067
DW-4	07/03/96	7.4	280.0	0.32	5.62	0.420
DW-4	08/07/96	7.1	271.5	0.50	3.35	0.090
DW-4	09/04/96	7.1	282.0	0.42	5.78	0.221
DW-4	10/02/96	7.5	296.0	0.37	5.55	0.072
DW-4	11/06/96	7.6	288.0	0.54	2.78	0.039
DW-4	12/03/96	7.8	299.5	0.58	2.44	0.062
DW-4	01/02/97	7.7	340.0	0.67	0.79	0.012
DW-4	01/08/97	7.5	317.5	0.53	3.36	0.016
DW-4	01/15/97	7.2	297.5	0.38	3.02	0.009
DW-4	01/22/97	7.2	286.0	0.32	3.41	0.010
DW-4	01/29/97	7.4	348.5	0.33	3.25	0.014
DW-4	02/05/97	7.3	312.5	0.40	2.47	0.007
DW-4	02/11/97	7.6	301.0	0.31	3.45	0.009
DW-4	02/19/97	7.8	306.0	0.49	2.42	0.002
DW-4	02/26/97	7.4	340.5	0.46	1.93	0.008
DW-4	03/05/97	7.6	301.0	0.38	2.30	0.005
DW-4	03/12/97	7.4	296.0	0.38	3.08	0.010
DW-4	03/19/97	7.6	331.5	0.55	2.48	0.002
DW-4	03/26/97	7.5	312.0	0.56	5.80	0.004
DW-4	04/02/97	7.4	273.5	0.36	5.55	0.002
DW-4	04/09/97	7.4	309.0	0.20	6.99	0.005
DW-4	04/16/97	7.2	316.0	0.39	10.58	0.007
DW-4	04/23/97	7.4	320.0	0.17	13.35	0.025
DW-4	04/30/97	7.4	314.0	0.23	9.65	0.003
DW-4	05/08/97	7.4	298.0	0.24	9.65	0.005
DW-4	05/14/97	7.8	302.5	0.38	8.12	0.003
DW-4	05/21/97	7.4	293.0	0.26	7.75	0.002
DW-4	05/28/97	7.2	331.5	0.23	10.95	0.004
DW-4	06/04/97	7.6	295.5	0.29	10.07	0.004
DW-4	06/11/97	7.5	275.0	0.19	12.30	0.004

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

TABLE AIII-4 (Continued)

FULTON COUNTY FIELD 10  
DEEP WELL #4 ANALYSES 1996 - 1999

Well	Date	pH	EC mS/m	NH <sub>3</sub> -N mg/L	NO <sub>3</sub> -N mg/L	NO <sub>2</sub> -N mg/L
DW-4	06/18/97	7.6	299.5	0.14	12.62	0.000
DW-4	06/26/97	7.1	305.5	0.12	13.11	0.004
DW-4	07/02/97	7.0	296.0	0.16	12.31	0.006
DW-4	07/09/97	7.6	289.0	0.21	12.27	0.004
DW-4	07/16/97	7.3	317.5	0.21	9.43	0.004
DW-4	07/23/97	7.3	313.5	0.16	9.64	0.009
DW-4	07/30/97	7.4	307.0	0.26	10.67	0.003
DW-4	08/06/97	7.2	308.5	0.22	7.70	0.002
DW-4	08/13/97	7.6	279.0	0.24	7.47	0.002
DW-4	08/22/97	7.4	321.0	0.20	7.88	0.004
DW-4	08/27/97	7.5	293.5	0.18	5.99	0.002
DW-4	09/03/97	7.8	285.0	0.22	6.50	0.001
DW-4	09/10/97	7.6	279.5	0.26	5.70	0.004
DW-4	09/17/97	7.6	301.0	0.33	6.17	0.000
DW-4	09/24/97	7.6	345.5	0.26	4.67	0.001
DW-4	10/08/97	7.2	294.0	0.16	5.30	0.011
DW-4	10/15/97	7.4	270.5	0.14	6.57	0.012
DW-4	10/22/97	7.5	335.5	0.16	6.34	0.009
DW-4	10/29/97	7.4	349.0	0.21	5.59	0.002
DW-4	11/05/97	7.5	305.5	0.20	4.91	0.001
DW-4	11/12/97	7.4	331.5	0.14	4.40	0.002
DW-4	11/19/97	7.6	270.5	0.14	4.86	0.001
DW-4	11/25/97	7.3	345.0	0.12	4.35	0.001
DW-4	12/03/97	7.4	301.0	0.13	3.80	0.002
DW-4	12/10/97	7.7	337.5	0.16	3.40	0.001
DW-4	12/17/97	7.3	351.5	0.22	2.67	0.002
DW-4	12/24/97	7.9	306.5	0.16	3.98	0.013
DW-4	12/31/97	7.5	330.5	0.30	2.52	0.018
DW-4	01/06/98	7.5	311.5	0.21	3.61	0.009
DW-4	01/15/98	7.5	305.0	0.18	2.91	0.010
DW-4	01/21/98	7.6	278.5	0.18	3.39	0.007

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

TABLE AIII-4 (Continued)

FULTON COUNTY FIELD 10  
DEEP WELL #4 ANALYSES 1996 - 1999

Well	Date	pH	EC mS/m	NH <sub>3</sub> -N mg/L	NO <sub>3</sub> -N mg/L	NO <sub>2</sub> -N mg/L
DW-4	01/27/98	7.3	361.0	0.21	2.81	0.003
DW-4	02/04/98	7.4	305.0	0.19	2.43	0.002
DW-4	02/11/98	7.4	332.5	0.25	1.88	0.002
DW-4	02/18/98	7.4	319.0	0.22	1.53	0.003
DW-4	02/25/98	7.2	323.5	0.20	1.41	0.001
DW-4	03/04/98	7.4	299.5	0.66	1.68	0.002
DW-4	03/12/98	7.4	310.0	0.24	1.97	0.004
DW-4	03/18/98	7.5	333.0	0.36	1.96	0.002
DW-4	03/25/98	7.3	336.0	0.24	1.94	0.003
DW-4	04/01/98	7.4	308.5	0.20	1.64	0.002
DW-4	04/08/98	7.5	294.5	0.25	3.52	0.003
DW-4	04/15/98	7.5	308.0	0.28	4.43	0.003
DW-4	04/22/98	7.5	323.0	0.18	7.11	0.004
DW-4	04/29/98	7.4	334.0	0.29	5.08	0.001
DW-4	05/06/98	7.6	307.0	0.28	6.20	0.005
DW-4	05/13/98	7.6	323.5	0.26	8.36	0.011
DW-4	05/20/98	7.6	272.5	0.15	9.53	0.009
DW-4	05/27/98	7.5	299.0	0.17	9.38	0.010
DW-4	06/03/98	7.7	280.0	0.23	8.33	0.016
DW-4	06/10/98	7.4	332.5	0.22	10.10	0.013
DW-4	06/16/98	7.5	329.0	0.36	8.99	0.008
DW-4	06/24/98	7.4	NA	0.24	9.11	0.010
DW-4	07/01/98	7.5	293.5	0.26	11.28	0.013
DW-4	07/07/98	7.4	280.0	0.29	9.04	0.006
DW-4	07/14/98	7.5	323.5	0.30	9.55	0.012
DW-4	07/22/98	7.5	315.5	0.24	9.36	0.011
DW-4	07/28/98	7.4	322.5	0.22	11.38	0.017
DW-4	08/05/98	7.4	286.5	0.23	10.54	0.016
DW-4	08/12/98	7.7	311.5	0.28	9.81	0.013
DW-4	08/19/98	7.5	303.5	0.20	9.84	0.008
DW-4	08/26/98	7.5	327.0	0.25	8.43	0.011

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

TABLE AIII-4 (Continued)

FULTON COUNTY FIELD 10  
DEEP WELL #4 ANALYSES 1996 - 1999

Well	Date	pH	EC mS/m	NH <sub>3</sub> -N mg/L	NO <sub>3</sub> -N mg/L	NO <sub>2</sub> -N mg/L
DW-4	09/02/98	7.3	315.5	0.18	7.63	0.007
DW-4	09/09/98	7.6	307.0	0.14	7.95	0.002
DW-4	09/23/98	7.6	325.5	0.14	7.61	0.000
DW-4	09/29/98	7.5	314.0	0.16	7.64	0.000
DW-4	10/07/98	7.6	285.5	0.18	7.21	0.005
DW-4	10/14/98	7.6	284.0	0.16	7.84	0.001
DW-4	10/20/98	7.5	342.5	0.20	7.34	0.002
DW-4	10/28/98	7.5	337.0	0.10	6.34	0.000
DW-4	11/04/98	7.5	308.5	0.12	6.52	0.007
DW-4	11/10/98	7.5	294.5	0.21	7.61	0.004
DW-4	11/18/98	7.5	310.0	0.14	7.13	0.000
DW-4	11/25/98	7.3	299.0	0.18	7.78	0.005
DW-4	12/02/98	7.5	301.5	0.20	6.92	0.000
DW-4	12/09/98	7.7	257.0	0.22	7.28	0.000
DW-4	12/16/98	7.5	317.5	0.20	6.13	0.000
DW-4	12/23/98	7.6	339.5	0.22	6.04	0.001
DW-4	12/30/98	7.6	348.5	0.20	6.43	0.002
DW-4	01/06/99	7.7	282.5	0.18	5.22	0.000
DW-4	01/13/99	7.4	346.0	0.21	5.68	0.008
DW-4	01/19/99	7.5	331.0	0.21	5.27	0.005
DW-4	01/27/99	7.7	280.5	0.16	4.98	0.002
DW-4	02/05/99	7.5	300.0	0.29	4.81	0.005
DW-4	02/10/99	7.7	259.0	0.20	4.14	0.002
DW-4	02/17/99	7.5	342.5	0.27	4.54	0.003
DW-4	02/24/99	7.4	358.0	0.33	4.94	0.002
DW-4	03/03/99	7.5	324.0	0.39	4.87	0.003
DW-4	03/10/99	7.6	365.0	0.28	5.22	0.004
DW-4	03/16/99	7.5	349.0	0.12	6.80	0.006
DW-4	03/24/99	7.6	351.0	0.30	6.61	0.007
DW-4	03/30/99	7.6	337.0	0.34	6.40	0.004
DW-4	04/07/99	7.7	301.5	0.26	6.19	0.007

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

TABLE AIII-4 (Continued)

FULTON COUNTY FIELD 10  
DEEP WELL #4 ANALYSES 1996 - 1999

Well	Date	pH	EC mS/m	NH <sub>3</sub> -N mg/L	NO <sub>3</sub> -N mg/L	NO <sub>2</sub> -N mg/L
DW-4	04/14/99	7.6	312.0	0.49	5.58	0.004
DW-4	04/21/99	7.6	327.0	0.22	6.53	0.008
DW-4	04/27/99	7.4	339.0	0.22	5.82	0.008
DW-4	05/05/99	7.6	287.0	0.20	5.64	0.005
DW-4	05/12/99	7.3	251.6	0.32	5.16	0.003
DW-4	05/19/99	7.8	240.0	0.26	6.32	0.002
DW-4	05/26/99	7.7	222.4	0.27	6.11	0.005
DW-4	06/02/99	7.8	242.7	0.24	6.33	0.005
DW-4	06/10/99	7.7	243.3	0.26	5.93	0.003
DW-4	06/16/99	7.9	219.0	0.28	5.93	0.004
DW-4	06/23/99	7.6	221.2	0.40	6.12	0.004
DW-4	06/30/99	7.5	218.8	0.30	6.14	0.011
DW-4	07/07/99	7.9	244.0	0.26	6.34	0.008
DW-4	07/14/99	7.7	230.6	0.26	7.42	0.007
DW-4	07/21/99	7.9	239.4	0.41	6.64	0.006
DW-4	07/28/99	7.6	199.8	0.26	5.86	0.006
DW-4	08/04/99	7.9	220.8	0.24	5.40	0.003
DW-4	08/11/99	7.9	194.4	0.35	5.00	0.003
DW-4	08/18/99	7.8	192.8	0.30	4.90	0.005
DW-4	08/25/99	7.5	231.2	0.22	4.69	0.004
DW-4	09/01/99	7.7	237.6	0.26	4.24	0.005
DW-4	09/08/99	7.6	237.6	0.28	4.49	0.008
DW-4	09/15/99	7.6	210.0	0.22	5.55	0.004
DW-4	09/22/99	7.5	196.0	0.20	4.94	0.005
DW-4	09/29/99	7.5	194.8	0.24	4.61	0.004
DW-4	10/06/99	7.5	207.8	0.26	4.32	0.006
DW-4	10/13/99	7.5	206.1	0.23	4.13	0.004
DW-4	10/20/99	7.5	200.4	0.27	3.35	0.004
DW-4	10/27/99	7.5	184.9	0.24	3.67	0.004
DW-4	11/03/99	7.5	193.5	0.21	3.67	0.005
DW-4	11/09/99	7.6	204.0	0.14	3.26	0.004

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

TABLE AIII-4 (Continued)

FULTON COUNTY FIELD 10  
DEEP WELL #4 ANALYSES 1996 - 1999

Well	Date	pH	EC mS/m	NH <sub>3</sub> -N mg/L	NO <sub>3</sub> -N mg/L	NO <sub>2</sub> -N mg/L
DW-4	11/17/99	7.5	178.4	0.21	4.33	0.006
DW-4	11/24/99	7.5	122.0	0.24	3.16	0.004
DW-4	12/01/99	7.4	127.9	0.18	3.12	0.005
DW-4	12/08/99	7.4	146.2	0.16	2.81	0.005
DW-4	12/15/99	7.5	148.0	0.24	3.09	0.006
DW-4	12/20/99	7.4	143.2	0.23	2.92	0.002

APPENDIX IV

FULTON COUNTY FIELD 10 SPRING ANALYSES 1994-1999



METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

TABLE AIV-1

FULTON COUNTY FIELD 10  
 SPRING #1 ANALYSES FOR 1994 - 1999

Date	Spring	NH <sub>3</sub> -N mg/L	NO <sub>3</sub> -N mg/L	NO <sub>2</sub> -N mg/L	Flow GPM
01/21/94	#1	N/A	12.30	0.096	N/A
02/09/94	#1	N/A	11.28	0.074	N/A
02/16/94	#1	N/A	10.48	0.070	N/A
03/17/94	#1	N/A	9.62	0.104	N/A
04/13/94	#1	N/A	10.15	0.121	N/A
05/11/94	#1	N/A	12.15	0.145	N/A
05/25/94	#1	<0.01	15.61	N/A	N/A
06/09/94	#1	N/A	20.39	0.118	N/A
06/29/94	#1	0.07	11.94	N/A	N/A
07/14/94	#1	N/A	18.48	0.094	N/A
08/10/94	#1	N/A	14.72	0.098	N/A
09/14/94	#1	N/A	10.85	0.106	N/A
10/12/94	#1	N/A	8.15	0.102	N/A
11/01/94	#1	<0.01	6.61	0.065	52.2
11/02/94	#1	N/A	6.24	0.095	52.2
11/04/94	#1	N/A	6.20	0.104	56.0
11/07/94	#1	N/A	3.43	0.101	60.0
11/09/94	#1	N/A	5.39	0.109	56.0
11/10/94	#1	N/A	5.36	0.104	56.0
11/14/94	#1	N/A	5.38	0.072	56.0
11/16/94	#1	N/A	5.20	0.071	56.0
11/18/94	#1	N/A	5.06	0.068	N/A
11/21/94	#1	N/A	4.58	0.066	56.0
11/23/94	#1	N/A	4.43	0.085	56.0
11/25/94	#1	N/A	4.34	0.054	56.0
11/28/94	#1	N/A	4.12	0.052	56.0
11/30/94	#1	N/A	3.88	0.044	56.0
12/14/94	#1	N/A	3.14	0.066	56.0
12/21/94	#1	N/A	3.10	0.065	56.0
12/28/94	#1	N/A	2.77	0.057	56.0
01/04/95	#1	N/A	2.67	0.050	56.0

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

TABLE AIV-1 (Continued)

FULTON COUNTY FIELD 10  
 SPRING #1 ANALYSES FOR 1994 - 1999

Date	Spring	NH <sub>3</sub> -N mg/L	NO <sub>3</sub> -N mg/L	NO <sub>2</sub> -N mg/L	Flow GPM
01/11/95	#1	N/A	2.74	0.050	56.0
01/18/95	#1	N/A	3.02	0.059	56.0
01/25/95	#1	N/A	3.08	0.058	56.0
02/01/95	#1	N/A	3.48	0.030	56.0
02/08/95	#1	N/A	3.55	0.064	56.0
02/15/95	#1	N/A	3.86	0.069	56.0
02/22/95	#1	N/A	4.50	0.074	56.0
03/01/95	#1	N/A	5.15	0.042	56.0
03/08/95	#1	N/A	5.51	0.046	56.0
03/15/95	#1	N/A	5.78	0.056	56.0
03/22/95	#1	N/A	6.02	0.143	56.0
03/29/95	#1	N/A	6.94	0.079	56.0
04/05/95	#1	N/A	7.12	0.083	56.0
04/10/95	#1	N/A	6.94	0.063	56.0
04/11/95	#1	N/A	7.16	0.145	72.9
04/12/95	#1	N/A	7.64	0.138	68.4
04/13/95	#1	N/A	7.81	0.150	92.5
04/14/95	#1	N/A	8.00	0.155	82.3
04/17/95	#1	N/A	8.42	0.158	127.3
04/18/95	#1	<0.01	8.38	0.149	115.0
04/19/95	#1	N/A	9.45	0.152	103.3
04/20/95	#1	N/A	9.50	0.111	64.1
04/21/95	#1	N/A	10.08	0.159	64.1
04/24/95	#1	N/A	11.92	0.158	64.1
04/25/95	#1	N/A	12.58	0.150	92.5
04/26/95	#1	N/A	12.88	0.160	72.9
04/27/95	#1	N/A	14.45	0.122	72.9
04/28/95	#1	N/A	15.22	0.155	115.0
05/01/95	#1	N/A	18.15	0.152	115.0
05/02/95	#1	N/A	18.85	0.154	115.0
05/03/95	#1	N/A	19.30	0.150	92.5

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

TABLE AIV-1 (Continued)

FULTON COUNTY FIELD 10  
 SPRING #1 ANALYSES FOR 1994 - 1999

Date	Spring	NH <sub>3</sub> -N mg/L	NO <sub>3</sub> -N mg/L	NO <sub>2</sub> -N mg/L	Flow GPM
05/04/95	#1	N/A	19.85	0.154	72.9
05/05/95	#1	N/A	20.40	0.155	115.0
05/08/95	#1	N/A	20.30	0.110	115.0
05/09/95	#1	N/A	21.12	0.124	115.0
05/10/95	#1	N/A	21.28	0.111	115.0
05/11/95	#1	N/A	21.60	0.132	115.0
05/12/95	#1	N/A	21.88	0.141	115.0
05/15/95	#1	N/A	23.02	0.127	127.3
05/16/95	#1	N/A	24.12	0.128	127.3
05/17/95	#1	N/A	24.55	0.115	127.3
05/18/95	#1	N/A	25.38	0.092	127.3
05/19/95	#1	N/A	26.35	0.103	127.3
05/22/95	#1	N/A	29.00	0.096	127.3
05/23/95	#1	N/A	30.42	0.082	127.3
05/24/95	#1	N/A	26.32	0.056	>127.3
05/25/95	#1	N/A	30.88	0.070	>127.3
05/26/95	#1	N/A	31.58	0.072	>127.3
05/30/95	#1	N/A	35.62	0.064	>127.3
05/31/95	#1	N/A	36.50	0.066	>127.3
06/01/95	#1	N/A	37.15	0.066	>127.3
06/02/95	#1	N/A	38.30	0.062	>127.3
06/05/95	#1	N/A	43.85	0.058	>127.3
06/06/95	#1	N/A	41.50	0.057	>127.3
06/07/95	#1	N/A	41.10	0.058	>127.3
06/08/95	#1	N/A	39.95	0.059	>127.3
06/09/95	#1	N/A	39.60	0.057	>127.3
06/14/95	#1	N/A	39.85	0.062	127.3
06/21/95	#1	N/A	37.10	0.061	127.3
06/26/95	#1	<0.01	35.50	0.053	N/A
06/28/95	#1	N/A	34.45	0.052	N/A
07/05/95	#1	N/A	31.55	0.067	N/A

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

TABLE AIV-1 (Continued)

FULTON COUNTY FIELD 10  
 SPRING #1 ANALYSES FOR 1994 - 1999

Date	Spring	NH <sub>3</sub> -N mg/L	NO <sub>3</sub> -N mg/L	NO <sub>2</sub> -N mg/L	Flow GPM
07/12/95	#1	N/A	31.70	0.075	48.5
07/19/95	#1	N/A	31.75	0.067	64.1
07/26/95	#1	N/A	30.00	0.074	52.2
08/02/95	#1	N/A	28.05	0.074	45.1
08/09/95	#1	N/A	26.20	0.076	48.5
08/16/95	#1	N/A	25.35	0.058	48.5
08/23/95	#1	N/A	23.80	0.080	48.5
08/30/95	#1	N/A	21.82	0.088	41.7
09/06/95	#1	N/A	21.28	0.091	41.7
09/13/95	#1	N/A	18.25	0.093	41.7
09/20/95	#1	N/A	17.00	0.100	41.7
09/27/95	#1	N/A	15.62	0.094	38.5
10/04/95	#1	N/A	14.35	0.106	N/A
10/11/95	#1	N/A	13.82	0.110	N/A
10/18/95	#1	N/A	12.82	0.110	N/A
10/25/95	#1	N/A	11.28	0.099	N/A
11/01/95	#1	<0.01	10.95	0.104	N/A
11/08/95	#1	N/A	10.25	0.090	N/A
11/15/95	#1	N/A	9.75	0.081	N/A
11/22/95	#1	N/A	8.82	0.080	N/A
11/29/95	#1	N/A	7.73	0.080	N/A
12/06/95	#1	N/A	7.54	0.081	N/A
12/13/95	#1	N/A	6.11	0.075	38.5
12/20/95	#1	N/A	6.21	0.078	38.5
12/27/95	#1	N/A	6.40	0.072	38.5
01/03/96	#1	N/A	6.35	0.075	35.5
01/10/96	#1	N/A	5.50	0.072	38.5
01/17/96	#1	N/A	5.18	0.073	35.5
01/24/96	#1	N/A	4.78	0.073	35.5
01/31/96	#1	N/A	4.44	0.066	35.5
02/07/96	#1	N/A	4.20	0.061	35.5

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

TABLE AIV-1 (Continued)

FULTON COUNTY FIELD 10  
 SPRING #1 ANALYSES FOR 1994 - 1999

Date	Spring	NH <sub>3</sub> -N mg/L	NO <sub>3</sub> -N mg/L	NO <sub>2</sub> -N mg/L	Flow GPM
02/14/96	#1	N/A	3.64	0.063	35.5
02/21/96	#1	N/A	3.38	0.061	35.5
02/28/96	#1	N/A	3.24	0.061	35.5
03/06/96	#1	N/A	3.13	0.054	35.5
03/13/96	#1	N/A	2.64	0.052	35.5
03/20/96	#1	N/A	2.56	0.049	35.5
03/27/96	#1	N/A	2.42	0.048	35.5
04/03/96	#1	N/A	2.12	0.052	35.5
04/10/96	#1	N/A	2.06	0.050	35.5
04/17/96	#1	N/A	1.96	0.051	35.5
04/24/96	#1	N/A	1.87	0.056	35.5
05/01/96	#1	N/A	1.82	0.054	35.5
05/08/96	#1	0.16	1.85	0.054	35.5
05/15/96	#1	N/A	1.76	0.056	38.5
05/22/96	#1	N/A	2.02	0.054	41.7
05/29/96	#1	N/A	2.34	0.063	48.5
06/05/96	#1	N/A	3.49	0.086	64.1
06/12/96	#1	N/A	6.80	0.125	68.4
06/19/96	#1	N/A	10.12	0.136	68.4
06/26/96	#1	N/A	15.05	0.120	64.1
07/03/96	#1	N/A	15.20	0.100	64.1
07/10/96	#1	N/A	16.25	0.095	64.1
07/15/96	#1	0.21	16.52	0.093	N/A
07/17/96	#1	N/A	16.25	0.095	56.0
07/24/96	#1	N/A	15.58	0.095	56.0
07/31/96	#1	N/A	14.90	0.096	38.5
08/07/96	#1	N/A	14.70	0.095	41.7
08/14/96	#1	N/A	14.23	0.098	41.7
08/21/96	#1	N/A	13.54	0.096	38.5
08/28/96	#1	N/A	12.73	0.096	41.7
09/04/96	#1	N/A	12.48	0.098	41.7

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

TABLE AIV-1 (Continued)

FULTON COUNTY FIELD 10  
 SPRING #1 ANALYSES FOR 1994 - 1999

Date	Spring	NH <sub>3</sub> -N mg/L	NO <sub>3</sub> -N mg/L	NO <sub>2</sub> -N mg/L	Flow GPM
09/11/96	#1	N/A	11.60	0.097	41.7
09/19/96	#1	N/A	10.46	0.098	41.7
09/25/96	#1	N/A	10.18	0.100	35.5
09/30/96	#1	0.30	9.77	0.104	N/A
10/02/96	#1	N/A	9.48	0.105	35.5
10/09/96	#1	N/A	9.08	0.102	35.5
10/16/96	#1	N/A	8.26	0.107	35.5
10/23/96	#1	N/A	8.01	0.102	35.5
10/30/96	#1	N/A	7.53	0.106	35.5
11/06/96	#1	N/A	6.82	0.089	35.5
11/13/96	#1	N/A	6.21	0.083	35.5
11/20/96	#1	N/A	6.35	0.081	35.5
11/27/96	#1	N/A	5.56	0.076	35.5
12/03/96	#1	N/A	5.03	0.076	29.9
12/11/96	#1	N/A	4.65	0.074	29.9
12/18/96	#1	N/A	4.16	0.070	32.6
12/26/96	#1	N/A	9.24	0.036	32.6
01/02/97	#1	N/A	3.32	0.062	29.9
01/08/97	#1	N/A	3.15	0.059	29.9
01/15/97	#1	N/A	2.75	0.051	29.9
01/22/97	#1	N/A	2.53	0.049	29.9
01/29/97	#1	N/A	2.21	0.042	29.9
02/05/97	#1	0.19	1.64	0.040	29.9
02/11/97	#1	0.18	1.73	0.038	29.9
02/19/97	#1	0.22	1.48	0.035	35.5
02/26/97	#1	0.21	1.41	0.034	35.5
03/05/97	#1	0.19	1.22	0.037	35.5
03/12/97	#1	0.28	2.53	0.055	48.5
03/19/97	#1	0.22	6.70	0.100	64.1
03/26/97	#1	0.10	11.81	0.140	72.9
04/02/97	#1	0.18	14.53	0.149	64.1

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

TABLE AIV-1 (Continued)

FULTON COUNTY FIELD 10  
 SPRING #1 ANALYSES FOR 1994 - 1999

Date	Spring	NH <sub>3</sub> -N mg/L	NO <sub>3</sub> -N mg/L	NO <sub>2</sub> -N mg/L	Flow GPM
04/09/97	#1	0.14	16.42	0.121	64.1
04/16/97	#1	0.09	16.85	0.135	72.9
04/23/97	#1	0.17	18.90	0.144	72.9
04/30/97	#1	0.27	21.75	0.142	72.9
05/08/97	#1	0.77	22.60	0.136	72.9
05/14/97	#1	0.42	22.75	0.140	64.1
05/21/97	#1	0.10	22.70	0.131	48.5
05/28/97	#1	0.15	22.10	0.118	64.1
06/04/97	#1	0.39	21.42	0.120	48.5
06/09/97	#1	0.12	20.50	0.115	N/A
06/11/97	#1	0.15	19.90	0.114	41.7
06/18/97	#1	0.12	19.05	0.119	41.7
06/26/97	#1	0.09	17.90	0.106	41.7
07/02/97	#1	0.13	17.00	0.105	41.7
07/09/97	#1	0.14	16.55	0.105	41.7
07/16/97	#1	0.16	15.20	0.104	41.7
07/23/97	#1	0.11	14.95	0.096	41.7
07/30/97	#1	0.14	13.70	0.093	41.7
08/06/97	#1	0.26	11.80	0.100	41.7
08/13/97	#1	0.16	10.57	0.098	38.5
08/22/97	#1	0.17	11.21	0.098	35.5
08/27/97	#1	0.14	9.48	0.101	35.5
08/28/97	#1	0.12	10.74	0.016	N/A
09/03/97	#1	0.25	10.07	0.095	35.5
09/10/97	#1	0.15	9.32	0.097	41.7
09/17/97	#1	0.14	8.65	0.096	41.7
09/22/97	#1	0.22	8.35	0.004	N/A
09/24/97	#1	0.12	8.04	0.096	41.7
10/01/97	#1	0.14	7.42	0.100	35.5
10/08/97	#1	0.19	6.90	0.093	35.5
10/15/97	#1	0.06	6.34	0.081	35.5

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

TABLE AIV-1 (Continued)

FULTON COUNTY FIELD 10  
 SPRING #1 ANALYSES FOR 1994 - 1999

Date	Spring	NH <sub>3</sub> -N mg/L	NO <sub>3</sub> -N mg/L	NO <sub>2</sub> -N mg/L	Flow GPM
10/22/97	#1	0.14	5.69	0.079	35.5
10/29/97	#1	0.16	5.29	0.076	35.5
11/05/97	#1	0.16	4.66	0.073	35.5
11/12/97	#1	0.14	4.15	0.072	35.5
11/19/97	#1	0.15	3.72	0.063	35.5
11/25/97	#1	0.12	3.40	0.061	35.5
12/03/97	#1	0.14	2.93	0.058	35.5
12/10/97	#1	0.16	2.57	0.052	29.9
12/17/97	#1	0.22	2.20	0.045	35.5
12/24/97	#1	0.18	1.91	0.043	29.9
12/31/97	#1	0.18	1.65	0.037	29.9
01/06/98	#1	0.17	1.35	0.035	29.9
01/15/98	#1	0.14	1.14	0.024	29.9
01/21/98	#1	0.14	0.95	0.020	29.9
01/27/98	#1	0.14	0.85	0.016	35.5
02/04/98	#1	0.16	0.68	0.011	35.5
02/11/98	#1	0.18	0.62	0.012	29.9
02/18/98	#1	0.32	0.49	0.008	32.6
02/25/98	#1	0.10	0.39	0.008	32.6
03/04/98	#1	0.18	0.43	0.008	38.5
03/12/98	#1	0.08	0.70	0.009	48.5
03/18/98	#1	0.38	1.46	0.010	64.1
03/25/98	#1	0.06	5.35	0.080	72.9
04/01/98	#1	0.14	13.31	0.135	77.5
04/08/98	#1	0.16	16.61	0.126	82.3
04/13/98	#1	0.16	18.25	0.143	77.5
04/15/98	#1	0.16	19.50	0.140	77.5
04/22/98	#1	0.17	22.35	0.139	72.9
04/29/98	#1	0.08	22.75	0.137	72.9
05/06/98	#1	0.11	22.00	0.123	72.9
05/13/98	#1	0.20	21.30	0.138	72.9



METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

TABLE AIV-1 (Continued)

FULTON COUNTY FIELD 10  
 SPRING #1 ANALYSES FOR 1994 - 1999

Date	Spring	NH <sub>3</sub> -N mg/L	NO <sub>3</sub> -N mg/L	NO <sub>2</sub> -N mg/L	Flow GPM
05/20/98	#1	0.19	22.50	0.122	77.5
05/27/98	#1	0.18	22.55	0.116	77.5
06/03/98	#1	0.56	23.30	0.117	72.9
06/10/98	#1	0.50	25.50	0.107	72.9
06/16/98	#1	0.31	24.90	0.110	72.9
06/24/98	#1	0.32	22.78	0.114	72.9
07/01/98	#1	0.32	24.28	0.118	72.9
07/07/98	#1	0.27	24.50	0.114	72.9
07/14/98	#1	0.36	24.55	0.103	72.9
07/22/98	#1	0.20	24.15	0.094	72.9
07/28/98	#1	0.28	23.15	0.101	72.9
08/05/98	#1	0.22	18.85	0.100	64.1
08/12/98	#1	0.28	20.80	0.094	64.1
08/19/98	#1	0.25	18.52	0.083	41.7
08/26/98	#1	0.22	17.28	0.091	41.7
09/02/98	#1	0.22	16.91	0.088	38.5
09/09/98	#1	0.34	15.57	0.083	38.5
09/15/98	#1	0.22	14.83	0.084	29.9
09/23/98	#1	0.22	14.46	0.083	29.9
09/29/98	#1	0.22	13.42	0.084	41.7
10/05/98	#1	0.24	12.90	0.064	52.2
10/07/98	#1	0.21	12.52	0.092	52.2
10/14/98	#1	0.15	11.62	0.087	35.5
10/20/98	#1	0.24	11.08	0.096	35.5
10/28/98	#1	0.35	10.18	0.094	35.5
11/04/98	#1	0.15	9.64	0.095	35.5
11/10/98	#1	0.22	9.15	0.090	35.5
11/18/98	#1	0.20	8.51	0.082	35.5
11/25/98	#1	0.27	7.93	0.087	35.5
12/02/98	#1	0.26	7.19	0.108	35.5
12/09/98	#1	0.16	7.13	0.106	35.5

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

TABLE AIV-1 (Continued)

FULTON COUNTY FIELD 10  
 SPRING #1 ANALYSES FOR 1994 - 1999

Date	Spring	NH <sub>3</sub> -N mg/L	NO <sub>3</sub> -N mg/L	NO <sub>2</sub> -N mg/L	Flow GPM
12/16/98	#1	0.26	6.50	0.096	35.5
12/23/98	#1	0.22	6.60	0.082	35.5
12/30/98	#1	0.16	6.12	0.078	35.5
01/06/99	#1	0.18	5.91	0.067	35.5
01/13/99	#1	0.23	5.75	0.074	35.5
01/19/99	#1	0.19	5.56	0.075	35.5
01/27/99	#1	0.21	5.26	0.076	35.5
02/05/99	#1	0.26	7.01	0.081	72.9
02/10/99	#1	0.06	10.15	0.103	72.9
02/17/99	#1	0.24	13.22	0.106	72.9
02/24/99	#1	0.28	15.62	0.104	72.9
03/03/99	#1	0.20	17.41	0.094	72.9
03/10/99	#1	0.21	17.73	0.088	64.1
03/16/99	#1	0.16	17.64	0.094	64.1
03/24/99	#1	0.22	17.09	0.104	68.4
03/30/99	#1	0.34	17.74	0.110	64.1
04/07/99	#1	0.20	18.34	0.113	64.1
04/14/99	#1	0.20	18.25	0.123	64.1
04/19/99	#1	0.13	17.24	0.130	72.9
04/21/99	#1	0.21	16.93	0.138	72.9
04/27/99	#1	0.11	17.29	0.142	72.9
05/05/99	#1	0.18	18.88	0.135	72.9
05/12/99	#1	0.18	18.98	0.111	64.1
05/19/99	#1	0.18	17.79	0.116	72.9
05/26/99	#1	0.21	16.84	0.116	72.9
06/02/99	#1	0.23	16.69	0.112	72.9
06/10/99	#1	0.20	16.07	0.094	64.1
06/16/99	#1	0.20	16.10	0.098	52.2
06/23/99	#1	0.28	15.79	0.103	56.0
06/30/99	#1	0.22	15.09	0.100	52.2
07/07/99	#1	0.22	14.39	0.095	35.5

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

TABLE AIV-1 (Continued)

FULTON COUNTY FIELD 10  
 SPRING #1 ANALYSES FOR 1994 - 1999

Date	Spring	NH <sub>3</sub> -N mg/L	NO <sub>3</sub> -N mg/L	NO <sub>2</sub> -N mg/L	Flow GPM
07/12/99	#1	0.21	14.10	0.094	N/A
07/14/99	#1	0.26	13.75	0.099	41.7
07/21/99	#1	0.23	12.99	0.089	48.5
07/28/99	#1	0.25	12.33	0.084	41.7
08/04/99	#1	0.24	11.90	0.087	35.5
08/11/99	#1	0.34	11.21	0.088	35.5
08/18/99	#1	0.23	10.66	0.087	35.5
08/25/99	#1	0.19	9.62	0.087	35.5
09/01/99	#1	0.19	9.04	0.088	35.5
09/08/99	#1	0.20	8.55	0.087	35.5
09/15/99	#1	0.19	8.32	0.088	35.5
09/22/99	#1	0.16	7.45	0.089	35.5
09/29/99	#1	0.18	7.25	0.090	35.5
10/06/99	#1	0.15	6.59	0.084	35.5
10/13/99	#1	0.18	6.12	0.087	35.5
10/20/99	#1	0.20	5.85	0.082	35.5
10/27/99	#1	0.18	5.41	0.074	35.5
11/03/99	#1	0.00	4.85	0.082	35.5
11/09/99	#1	0.04	4.49	0.086	35.5
11/17/99	#1	0.19	4.35	0.078	35.5
11/24/99	#1	0.16	3.70	0.078	35.5
12/01/99	#1	0.13	3.62	0.068	35.5
12/06/99	#1	0.19	3.62	0.069	35.5
12/08/99	#1	0.11	3.80	0.068	35.5
12/15/99	#1	0.22	2.98	0.064	35.5
12/20/99	#1	0.18	3.53	0.054	35.5

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

TABLE AIV-2

FULTON COUNTY FIELD 10  
 SPRING #2 ANALYSES FOR 1994 - 1999

Date	Spring	NH <sub>3</sub> -N mg/L	NO <sub>3</sub> -N mg/L	NO <sub>2</sub> -N mg/L	Flow GPM
01/21/94	#2	N/A	15.18	0.009	N/A
02/09/94	#2	N/A	15.64	0.026	N/A
02/16/94	#2	N/A	14.51	0.026	N/A
03/17/94	#2	N/A	14.61	0.035	N/A
04/13/94	#2	N/A	12.01	0.036	N/A
05/11/94	#2	N/A	18.35	0.044	N/A
06/09/94	#2	N/A	21.06	0.030	N/A
07/14/94	#2	N/A	18.70	0.027	N/A
08/10/94	#2	N/A	18.50	0.025	N/A
09/14/94	#2	N/A	13.88	0.022	N/A
10/12/94	#2	N/A	12.50	0.047	N/A
11/01/94	#2	N/A	0.96	0.075	<0.1
11/07/94	#2	N/A	0.80	0.030	<0.1
11/09/94	#2	N/A	3.12	0.140	<0.1
12/14/94	#2	N/A	1.28	0.020	<0.1
12/28/94	#2	N/A	18.85	0.028	<0.1
01/04/95	#2	N/A	21.24	0.026	<0.1
01/11/95	#2	N/A	22.36	0.019	0.2
01/18/95	#2	N/A	19.88	0.022	0.2
01/25/95	#2	N/A	23.35	0.027	0.2
02/01/95	#2	N/A	25.48	0.024	0.2
02/08/95	#2	N/A	27.39	0.022	0.2
02/15/95	#2	N/A	28.22	0.019	0.2
02/22/95	#2	N/A	27.99	0.022	0.2
03/01/95	#2	N/A	25.24	0.019	<0.1
03/08/95	#2	N/A	24.19	0.021	<0.1
03/15/95	#2	N/A	20.11	0.014	<0.1
03/22/95	#2	N/A	21.55	0.018	<0.1
03/29/95	#2	N/A	26.75	0.025	<0.1
04/05/95	#2	N/A	27.06	0.020	<0.1
04/10/95	#2	N/A	4.65	0.027	<0.1

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

TABLE AIV-2 (Continued)

FULTON COUNTY FIELD 10  
 SPRING #2 ANALYSES FOR 1994 - 1999

Date	Spring	NH <sub>3</sub> -N mg/L	NO <sub>3</sub> -N mg/L	NO <sub>2</sub> -N mg/L	Flow GPM
04/11/95	#2	N/A	5.68	0.022	0.2
04/12/95	#2	N/A	6.10	0.023	0.2
04/13/95	#2	N/A	20.05	0.023	0.6
04/14/95	#2	N/A	23.05	0.031	0.6
04/17/95	#2	N/A	31.72	0.040	24.8
04/18/95	#2	N/A	33.30	0.038	9.9
04/19/95	#2	N/A	36.65	0.039	56.0
04/20/95	#2	N/A	39.45	0.038	56.0
04/21/95	#2	N/A	40.90	0.040	56.0
04/24/95	#2	N/A	47.20	0.042	56.0
04/25/95	#2	N/A	47.50	0.042	52.2
04/26/95	#2	N/A	49.20	0.043	48.5
04/27/95	#2	N/A	48.80	0.046	56.0
04/28/95	#2	N/A	48.95	0.044	64.1
05/01/95	#2	N/A	50.40	0.040	56.0
05/02/95	#2	N/A	50.80	0.042	56.0
05/03/95	#2	N/A	48.80	0.040	52.2
05/04/95	#2	N/A	48.50	0.038	52.2
05/05/95	#2	N/A	47.00	0.038	52.2
05/08/95	#2	N/A	41.80	0.035	72.9
05/09/95	#2	N/A	40.55	0.044	52.2
05/10/95	#2	N/A	41.30	0.045	72.9
05/11/95	#2	N/A	43.35	0.040	72.9
05/12/95	#2	N/A	44.40	0.046	72.9
05/15/95	#2	N/A	50.35	0.043	92.5
05/16/95	#2	N/A	52.70	0.044	92.5
05/17/95	#2	N/A	52.80	0.043	>92.5
05/18/95	#2	N/A	53.35	0.040	>92.5
05/19/95	#2	N/A	53.32	0.040	>92.5
05/22/95	#2	N/A	52.35	0.032	>92.5
05/23/95	#2	N/A	53.55	0.030	>92.5

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

TABLE AIV-2 (Continued)

FULTON COUNTY FIELD 10  
 SPRING #2 ANALYSES FOR 1994 - 1999

Date	Spring	NH <sub>3</sub> -N mg/L	NO <sub>3</sub> -N mg/L	NO <sub>2</sub> -N mg/L	Flow GPM
05/24/95	#2	N/A	50.80	0.028	>92.5
05/25/95	#2	N/A	48.40	0.024	>92.5
05/26/95	#2	N/A	47.65	0.024	>92.5
05/30/95	#2	N/A	46.10	0.017	>92.5
05/31/95	#2	N/A	44.70	0.016	>92.5
06/01/95	#2	N/A	43.75	0.016	>92.5
06/02/95	#2	N/A	44.10	0.015	>92.5
06/05/95	#2	N/A	46.60	0.014	>92.5
06/06/95	#2	N/A	45.15	0.014	>92.5
06/07/95	#2	N/A	44.35	0.014	>92.5
06/08/95	#2	N/A	44.05	0.014	>92.5
06/09/95	#2	N/A	42.65	0.013	>92.5
06/14/95	#2	N/A	39.90	0.012	>92.5
06/21/95	#2	N/A	34.00	0.010	92.5
06/28/95	#2	N/A	29.15	0.009	N/A
07/05/95	#2	N/A	25.85	0.009	92.5
07/12/95	#2	N/A	26.70	0.011	>92.5
07/19/95	#2	N/A	26.10	0.009	>92.5
07/26/95	#2	N/A	23.70	0.010	92.5
08/02/95	#2	N/A	23.10	0.010	92.5
08/09/95	#2	N/A	21.55	0.012	72.9
08/16/95	#2	N/A	21.30	0.013	64.1
08/23/95	#2	N/A	20.75	0.013	72.9
08/30/95	#2	N/A	19.92	0.016	64.1
09/06/95	#2	N/A	19.20	0.018	48.5
09/13/95	#2	N/A	16.95	0.019	35.5
09/20/95	#2	N/A	15.62	0.020	41.7
09/27/95	#2	N/A	16.85	0.020	3.6
10/04/95	#2	N/A	16.62	0.024	N/A
10/11/95	#2	N/A	16.98	0.025	N/A
10/18/95	#2	N/A	16.98	0.025	N/A

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

TABLE AIV-2 (Continued)

FULTON COUNTY FIELD 10  
 SPRING #2 ANALYSES FOR 1994 - 1999

Date	Spring	NH <sub>3</sub> -N mg/L	NO <sub>3</sub> -N mg/L	NO <sub>2</sub> -N mg/L	Flow GPM
10/25/95	#2	N/A	16.32	0.026	N/A
11/01/95	#2	N/A	15.78	0.026	N/A
11/08/95	#2	N/A	14.50	0.024	N/A
11/15/95	#2	N/A	14.40	0.027	N/A
11/22/95	#2	N/A	13.70	0.024	N/A
11/29/95	#2	N/A	13.32	0.022	N/A
12/06/95	#2	N/A	13.22	0.021	N/A
12/13/95	#2	N/A	9.78	0.016	3.6
12/20/95	#2	N/A	9.95	0.016	2.9
12/27/95	#2	N/A	13.64	0.013	2.3
01/03/96	#2	N/A	12.75	0.011	0.6
01/10/96	#2	N/A	11.95	0.008	<0.1
01/17/96	#2	N/A	11.65	0.008	<0.1
01/24/96	#2	N/A	11.72	0.008	<0.1
01/31/96	#2	N/A	11.62	0.011	<0.1
02/07/96	#2	N/A	11.70	0.018	<0.1
05/29/96	#2	N/A	19.30	0.040	0.6
06/05/96	#2	N/A	26.33	0.048	41.7
06/12/96	#2	N/A	23.78	0.048	48.5
06/19/96	#2	N/A	24.76	0.039	48.5
06/26/96	#2	N/A	34.40	0.034	38.5
07/03/96	#2	N/A	29.90	0.036	29.9
07/10/96	#2	N/A	27.35	0.034	22.5
07/17/96	#2	N/A	26.80	0.031	16.3
07/24/96	#2	N/A	24.85	0.032	12.9
07/31/96	#2	N/A	25.00	0.027	9.9
08/07/96	#2	N/A	25.80	0.027	9.9
08/14/96	#2	N/A	24.55	0.026	2.3
08/21/96	#2	N/A	23.52	0.024	3.6
08/28/96	#2	N/A	22.10	0.022	1.3
09/04/96	#2	N/A	21.27	0.017	1.3

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

TABLE AIV-2 (Continued)

FULTON COUNTY FIELD 10  
 SPRING #2 ANALYSES FOR 1994 - 1999

Date	Spring	NH <sub>3</sub> -N mg/L	NO <sub>3</sub> -N mg/L	NO <sub>2</sub> -N mg/L	Flow GPM
09/11/96	#2	N/A	21.40	0.030	0.6
09/19/96	#2	N/A	20.01	0.011	<0.1
09/25/96	#2	N/A	18.88	0.148	<0.1
10/02/96	#2	0.19	14.09	0.780	<0.1
10/09/96	#2	N/A	4.92	0.275	<0.1
10/16/96	#2	N/A	2.24	0.235	<0.1
03/12/97	#2	0.13	27.45	0.030	24.8
03/19/97	#2	0.10	39.95	0.050	41.7
03/26/97	#2	0.32	40.35	0.050	41.7
04/02/97	#2	0.13	35.20	0.044	35.5
04/09/97	#2	0.20	35.20	0.039	29.9
04/16/97	#2	0.22	32.60	0.047	41.7
04/23/97	#2	0.10	38.85	0.050	48.5
04/30/97	#2	0.15	39.30	0.045	48.5
05/08/97	#2	0.14	40.35	0.038	35.5
05/14/97	#2	0.13	34.05	0.040	24.8
05/21/97	#2	0.08	31.35	0.036	16.3
05/28/97	#2	0.10	29.35	0.036	16.3
06/04/97	#2	0.20	29.02	0.036	12.9
06/11/97	#2	0.16	28.05	0.034	9.9
06/18/97	#2	0.12	26.20	0.033	11.3
06/26/97	#2	0.08	25.80	0.030	9.9
07/02/97	#2	0.08	24.45	0.032	8.6
07/09/97	#2	0.10	23.55	0.028	7.4
07/16/97	#2	0.09	21.15	0.028	3.6
07/23/97	#2	0.06	21.40	0.025	3.6
07/30/97	#2	0.09	20.25	0.021	3.6
08/06/97	#2	0.14	16.52	0.020	2.3
08/13/97	#2	0.10	14.61	0.015	<0.1
08/22/97	#2	0.10	16.64	0.012	<0.1
08/27/97	#2	0.08	14.34	0.030	<0.1



METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

TABLE AIV-2 (Continued)

FULTON COUNTY FIELD 10  
 SPRING #2 ANALYSES FOR 1994 - 1999

Date	Spring	NH <sub>3</sub> -N mg/L	NO <sub>3</sub> -N mg/L	NO <sub>2</sub> -N mg/L	Flow GPM
03/18/98	#2	0.10	5.20	0.008	3.6
03/25/98	#2	0.06	33.30	0.051	41.7
04/01/98	#2	0.07	32.20	0.048	52.2
04/08/98	#2	0.12	33.75	0.047	52.2
04/15/98	#2	0.08	31.30	0.045	45.1
04/22/98	#2	0.18	30.65	0.039	64.1
04/29/98	#2	0.13	28.55	0.031	48.5
05/06/98	#2	0.11	25.60	0.034	52.2
05/13/98	#2	0.16	27.10	0.041	72.9
05/20/98	#2	0.06	27.25	0.040	72.9
05/27/98	#2	0.06	23.90	0.034	72.9
06/03/98	#2	0.23	20.50	0.034	72.9
06/10/98	#2	0.20	23.80	0.027	72.9
06/16/98	#2	0.21	20.05	0.028	72.9
06/24/98	#2	0.12	21.08	0.028	72.9
07/01/98	#2	0.16	30.25	0.031	52.2
07/07/98	#2	0.21	27.95	0.027	72.9
07/14/98	#2	0.14	26.20	0.019	72.9
07/22/98	#2	0.11	24.25	0.018	52.2
07/28/98	#2	0.16	22.25	0.024	52.2
08/05/98	#2	0.14	18.60	0.024	35.5
08/12/98	#2	0.17	20.50	0.025	35.5
08/19/98	#2	0.12	19.73	0.020	35.5
08/26/98	#2	0.14	20.10	0.028	35.5
09/02/98	#2	0.13	20.33	0.027	24.8
09/09/98	#2	0.16	19.25	0.023	22.5
09/15/98	#2	0.22	18.67	0.024	12.9
09/23/98	#2	0.11	19.47	0.025	12.9
09/29/98	#2	0.10	18.72	0.022	9.9
10/07/98	#2	0.14	18.83	0.028	12.9
10/14/98	#2	0.10	18.39	0.023	2.9

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

TABLE AIV-2 (Continued)

FULTON COUNTY FIELD 10  
 SPRING #2 ANALYSES FOR 1994 - 1999

Date	Spring	NH <sub>3</sub> -N mg/L	NO <sub>3</sub> -N mg/L	NO <sub>2</sub> -N mg/L	Flow GPM
10/20/98	#2	0.12	18.87	0.028	2.9
10/28/98	#2	0.06	18.04	0.018	3.6
11/04/98	#2	0.08	17.44	0.029	2.3
11/10/98	#2	0.15	16.76	0.027	3.6
11/18/98	#2	0.13	16.91	0.022	3.6
11/25/98	#2	0.16	16.46	0.026	3.6
12/02/98	#2	0.15	15.93	0.026	3.6
12/09/98	#2	0.22	15.60	0.026	2.3
12/16/98	#2	0.14	14.57	0.030	3.6
12/23/98	#2	0.13	14.90	0.027	2.3
12/30/98	#2	0.10	15.32	0.032	3.6
01/06/99	#2	0.11	15.19	0.024	2.3
01/13/99	#2	0.10	15.22	0.021	2.3
01/19/99	#2	0.13	15.11	0.021	0.4
01/27/99	#2	0.16	15.88	0.036	12.9
02/05/99	#2	0.18	32.45	0.043	72.9
02/10/99	#2	0.06	30.90	0.044	72.9
02/17/99	#2	0.14	28.10	0.042	72.9
02/24/99	#2	0.16	27.25	0.041	72.9
03/03/99	#2	0.14	20.50	0.034	72.9
03/10/99	#2	0.13	22.15	0.027	64.1
03/16/99	#2	0.14	22.27	0.025	64.1
03/24/99	#2	0.18	22.76	0.024	64.1
03/30/99	#2	0.06	23.21	0.020	64.1
04/07/99	#2	0.18	22.35	0.027	35.5
04/14/99	#2	0.16	21.68	0.026	41.7
04/21/99	#2	0.14	21.26	0.036	64.1
04/27/99	#2	0.13	24.78	0.038	72.9
05/05/99	#2	0.10	24.30	0.038	68.4
05/12/99	#2	0.13	22.94	0.026	52.2
05/19/99	#2	0.15	20.77	0.028	64.1

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

TABLE AIV-2 (Continued)

FULTON COUNTY FIELD 10  
 SPRING #2 ANALYSES FOR 1994 - 1999

Date	Spring	NH <sub>3</sub> -N mg/L	NO <sub>3</sub> -N mg/L	NO <sub>2</sub> -N mg/L	Flow GPM
05/26/99	#2	0.14	20.53	0.030	64.1
06/02/99	#2	0.14	19.75	0.029	52.2
06/10/99	#2	0.09	19.01	0.026	52.2
06/16/99	#2	0.18	18.52	0.030	35.5
06/23/99	#2	0.20	18.06	0.028	35.5
06/30/99	#2	0.14	17.14	0.027	32.6
07/07/99	#2	0.24	16.40	0.028	41.7
07/14/99	#2	0.20	14.92	0.028	16.3
07/21/99	#2	0.30	14.64	0.029	12.9
07/28/99	#2	0.18	15.12	0.029	12.9
08/04/99	#2	0.15	15.47	0.028	12.9
08/11/99	#2	0.18	15.72	0.026	9.9
08/18/99	#2	0.10	15.05	0.029	9.9
08/25/99	#2	0.22	14.31	0.028	2.9
09/01/99	#2	0.11	13.93	0.027	3.6
09/08/99	#2	0.11	13.98	0.020	2.3
09/15/99	#2	0.13	13.59	0.018	3.6
09/22/99	#2	0.04	12.92	0.012	1.3
09/29/99	#2	0.08	12.86	0.014	0.4
10/06/99	#2	0.10	11.72	0.018	0.2

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

TABLE AIV-3

FULTON COUNTY FIELD 10  
 SPRING #4 ANALYSES FOR 1994 - 1999

Date	Spring	NH <sub>3</sub> -N mg/L	NO <sub>3</sub> -N mg/L	NO <sub>2</sub> -N mg/L	Flow GPM
03/17/94	#4	N/A	14.35	0.024	N/A
04/13/94	#4	N/A	12.00	0.014	N/A
05/11/94	#4	N/A	16.90	0.039	N/A
06/09/94	#4	N/A	20.52	0.017	N/A
07/14/94	#4	N/A	18.12	0.012	N/A
08/10/94	#4	N/A	18.59	0.010	N/A
09/14/94	#4	N/A	12.40	0.006	N/A
10/12/94	#4	N/A	11.15	0.012	N/A
11/01/94	#4	N/A	9.39	0.009	8.6
11/09/94	#4	N/A	13.88	0.010	7.4
12/14/94	#4	N/A	10.22	0.007	8.6
12/28/94	#4	N/A	19.00	0.011	8.6
01/04/95	#4	N/A	21.48	0.009	8.6
01/11/95	#4	N/A	22.45	0.010	8.6
01/18/95	#4	N/A	22.76	0.011	8.6
01/25/95	#4	N/A	21.96	0.009	8.6
02/01/95	#4	N/A	25.09	0.010	9.9
02/08/95	#4	N/A	27.22	0.012	9.9
02/15/95	#4	N/A	27.85	0.011	7.4
02/22/95	#4	N/A	27.59	0.011	9.9
03/01/95	#4	N/A	27.59	0.012	9.9
03/08/95	#4	N/A	27.24	0.012	9.9
03/15/95	#4	N/A	26.70	0.013	9.9
03/22/95	#4	N/A	26.42	0.016	9.9
03/29/95	#4	N/A	26.88	0.017	9.9
04/05/95	#4	N/A	27.00	0.018	9.9
04/10/95	#4	N/A	25.55	0.012	9.9
04/11/95	#4	N/A	25.25	0.016	9.9
04/12/95	#4	N/A	25.68	0.017	9.9
04/13/95	#4	N/A	25.50	0.016	9.9
04/14/95	#4	N/A	25.00	0.017	12.9

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

TABLE AIV-3 (Continued)

FULTON COUNTY FIELD 10  
 SPRING #4 ANALYSES FOR 1994 - 1999

Date	Spring	NH <sub>3</sub> -N mg/L	NO <sub>3</sub> -N mg/L	NO <sub>2</sub> -N mg/L	Flow GPM
04/17/95	#4	N/A	26.70	0.024	12.9
04/18/95	#4	N/A	28.05	0.038	9.9
04/19/95	#4	N/A	31.00	0.028	9.9
04/20/95	#4	N/A	33.45	0.026	9.9
04/21/95	#4	N/A	34.10	0.026	9.9
04/24/95	#4	N/A	39.75	0.026	9.9
04/25/95	#4	N/A	42.00	0.025	9.9
04/26/95	#4	N/A	43.40	0.026	9.9
04/27/95	#4	N/A	44.55	0.028	9.9
04/28/95	#4	N/A	45.60	0.029	9.9
05/01/95	#4	N/A	48.80	0.028	9.9
05/02/95	#4	N/A	49.10	0.029	9.9
05/03/95	#4	N/A	48.40	0.029	8.6
05/04/95	#4	N/A	48.10	0.029	8.6
05/05/95	#4	N/A	47.40	0.030	9.9
05/08/95	#4	N/A	42.55	0.020	9.9
05/09/95	#4	N/A	42.30	0.024	9.9
05/10/95	#4	N/A	43.30	0.025	9.9
05/11/95	#4	N/A	41.00	0.023	9.9
05/12/95	#4	N/A	40.40	0.027	9.9
05/15/95	#4	N/A	44.60	0.025	9.9
05/16/95	#4	N/A	43.70	0.024	9.9
05/17/95	#4	N/A	44.05	0.023	9.9
05/18/95	#4	N/A	45.70	0.024	9.9
05/19/95	#4	N/A	45.20	0.024	9.9
05/22/95	#4	N/A	48.70	0.026	9.9
05/23/95	#4	N/A	48.05	0.027	9.9
05/24/95	#4	N/A	45.30	0.027	9.9
05/25/95	#4	N/A	44.40	0.022	9.9
05/26/95	#4	N/A	44.20	0.024	9.9
05/30/95	#4	N/A	42.65	0.025	9.9

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

TABLE AIV-3 (Continued)

FULTON COUNTY FIELD 10  
 SPRING #4 ANALYSES FOR 1994 - 1999

Date	Spring	NH <sub>3</sub> -N mg/L	NO <sub>3</sub> -N mg/L	NO <sub>2</sub> -N mg/L	Flow GPM
05/31/95	#4	N/A	42.65	0.025	9.9
06/01/95	#4	N/A	41.90	0.024	9.9
06/02/95	#4	N/A	41.25	0.022	9.9
06/05/95	#4	N/A	43.45	0.025	9.9
06/06/95	#4	N/A	43.15	0.025	9.9
06/07/95	#4	N/A	42.90	0.025	9.9
06/08/95	#4	N/A	43.45	0.026	9.9
06/09/95	#4	N/A	42.15	0.025	9.9
06/14/95	#4	N/A	41.20	0.023	9.9
06/21/95	#4	N/A	35.60	0.023	9.9
06/28/95	#4	N/A	29.65	0.020	N/A
07/05/95	#4	N/A	26.75	0.019	9.9
07/12/95	#4	N/A	26.45	0.021	9.9
07/19/95	#4	N/A	26.20	0.019	9.9
07/26/95	#4	N/A	23.20	0.019	9.9
08/02/95	#4	N/A	22.30	0.017	9.9
08/09/95	#4	N/A	20.60	0.016	9.9
08/16/95	#4	N/A	21.30	0.016	9.9
08/23/95	#4	N/A	19.10	0.012	9.9
08/30/95	#4	N/A	18.10	0.012	9.9
09/06/95	#4	N/A	17.75	0.011	9.9
09/13/95	#4	N/A	15.10	0.009	9.9
09/20/95	#4	N/A	15.08	0.010	8.6
09/27/95	#4	N/A	15.38	0.007	7.4
10/04/95	#4	N/A	15.25	0.010	N/A
10/11/95	#4	N/A	15.40	0.011	N/A
10/18/95	#4	N/A	15.22	0.008	N/A
10/25/95	#4	N/A	15.18	0.011	N/A
11/01/95	#4	N/A	14.40	0.005	N/A
11/08/95	#4	N/A	13.52	0.005	N/A
11/15/95	#4	N/A	12.90	0.008	N/A

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

TABLE AIV-3 (Continued)

FULTON COUNTY FIELD 10  
 SPRING #4 ANALYSES FOR 1994 - 1999

Date	Spring	NH <sub>3</sub> -N mg/L	NO <sub>3</sub> -N mg/L	NO <sub>2</sub> -N mg/L	Flow GPM
11/22/95	#4	N/A	12.50	0.003	N/A
11/29/95	#4	N/A	12.22	0.004	N/A
12/06/95	#4	N/A	12.12	0.004	N/A
12/13/95	#4	N/A	11.25	0.002	7.4
12/20/95	#4	N/A	11.70	0.002	8.6
12/27/95	#4	N/A	12.92	0.002	8.6
01/03/96	#4	N/A	11.95	0.002	9.9
01/10/96	#4	N/A	11.62	0.002	8.6
01/17/96	#4	N/A	11.18	0.002	9.9
01/24/96	#4	N/A	10.80	0.002	9.9
01/31/96	#4	N/A	9.02	0.002	9.9
02/07/96	#4	N/A	10.15	0.001	7.4
02/14/96	#4	N/A	9.10	0.005	7.4
02/21/96	#4	N/A	9.40	0.003	7.4
02/28/96	#4	N/A	9.54	0.005	7.4
03/06/96	#4	N/A	9.46	0.003	7.4
03/13/96	#4	N/A	8.88	0.004	7.4
03/20/96	#4	N/A	9.12	0.002	7.4
03/27/96	#4	N/A	9.45	0.004	7.4
04/03/96	#4	N/A	9.29	0.004	7.4
04/10/96	#4	N/A	9.42	0.005	7.4
04/17/96	#4	N/A	9.82	0.004	7.4
04/24/96	#4	N/A	9.76	0.006	7.4
05/01/96	#4	N/A	9.73	0.005	7.4
05/08/96	#4	N/A	9.56	0.006	9.9
05/15/96	#4	N/A	9.34	0.010	7.4
05/22/96	#4	N/A	13.60	0.006	7.4
05/29/96	#4	N/A	21.86	0.013	9.9
06/05/96	#4	N/A	28.38	0.023	9.9
06/12/96	#4	N/A	27.37	0.028	9.9
06/19/96	#4	N/A	26.04	0.021	9.9

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

TABLE AIV-3 (Continued)

FULTON COUNTY FIELD 10  
 SPRING #4 ANALYSES FOR 1994 - 1999

Date	Spring	NH <sub>3</sub> -N mg/L	NO <sub>3</sub> -N mg/L	NO <sub>2</sub> -N mg/L	Flow GPM
06/26/96	#4	N/A	33.60	0.016	9.9
07/03/96	#4	N/A	29.40	0.014	9.9
07/10/96	#4	N/A	27.60	0.009	9.9
07/17/96	#4	N/A	25.70	0.008	7.4
07/24/96	#4	N/A	23.25	0.008	11.3
07/31/96	#4	N/A	24.10	0.008	8.6
08/07/96	#4	N/A	24.70	0.008	9.9
08/14/96	#4	N/A	23.59	0.008	7.4
08/21/96	#4	N/A	22.54	0.008	7.4
08/28/96	#4	N/A	21.14	0.007	7.4
09/04/96	#4	N/A	20.58	0.007	7.4
09/11/96	#4	N/A	19.63	0.008	7.4
09/19/96	#4	N/A	17.06	0.006	7.4
09/25/96	#4	N/A	16.69	0.005	7.4
10/02/96	#4	N/A	16.28	0.005	7.4
10/09/96	#4	N/A	14.57	0.004	7.4
10/16/96	#4	N/A	13.25	0.005	5.3
10/23/96	#4	N/A	13.02	0.006	2.3
10/30/96	#4	N/A	12.91	0.004	3.6
11/06/96	#4	N/A	12.09	0.004	3.6
11/13/96	#4	N/A	11.86	0.004	5.3
11/20/96	#4	N/A	11.40	0.003	6.3
11/27/96	#4	N/A	10.86	0.003	7.4
12/03/96	#4	N/A	10.32	0.003	5.3
12/11/96	#4	N/A	9.84	0.002	5.3
12/18/96	#4	N/A	9.46	0.002	3.6
12/26/96	#4	N/A	9.24	0.002	3.6
01/02/97	#4	N/A	8.52	0.001	2.3
01/08/97	#4	N/A	8.32	0.001	4.4
01/15/97	#4	N/A	7.84	0.001	3.6
01/22/97	#4	N/A	7.28	0.002	3.6



METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

TABLE AIV-3 (Continued)

FULTON COUNTY FIELD 10  
 SPRING #4 ANALYSES FOR 1994 - 1999

Date	Spring	NH <sub>3</sub> -N mg/L	NO <sub>3</sub> -N mg/L	NO <sub>2</sub> -N mg/L	Flow GPM
01/29/97	#4	N/A	6.86	0.001	3.6
02/05/97	#4	0.13	6.39	0.000	3.6
02/11/97	#4	0.15	6.23	0.001	3.6
02/19/97	#4	0.11	5.75	0.000	2.3
02/26/97	#4	0.13	5.38	0.001	2.3
03/05/97	#4	0.11	11.20	0.004	2.5
03/12/97	#4	0.43	36.60	0.010	7.4
03/19/97	#4	0.10	39.10	0.020	7.4
03/26/97	#4	0.03	39.30	0.020	8.6
04/02/97	#4	0.28	35.65	0.020	8.6
04/09/97	#4	0.06	37.10	0.017	8.6
04/16/97	#4	0.00	31.10	0.013	8.6
04/23/97	#4	0.07	36.30	0.026	8.6
04/30/97	#4	0.12	37.95	0.024	9.9
05/08/97	#4	0.11	36.75	0.017	9.9
05/14/97	#4	0.08	33.15	0.018	9.9
05/21/97	#4	0.06	31.20	0.017	8.6
05/28/97	#4	0.14	28.20	0.018	7.4
06/04/97	#4	0.14	27.70	0.018	5.3
06/11/97	#4	0.14	27.00	0.017	5.3
06/18/97	#4	0.07	25.85	0.014	9.9
06/26/97	#4	0.06	25.40	0.009	9.9
07/02/97	#4	0.07	24.55	0.014	8.6
07/09/97	#4	0.06	22.65	0.014	5.3
07/16/97	#4	0.18	21.05	0.014	7.4
07/23/97	#4	0.07	20.40	0.011	7.4
07/30/97	#4	0.12	19.65	0.010	7.4
08/06/97	#4	0.15	16.62	0.011	7.4
08/13/97	#4	0.09	14.35	0.010	7.4
08/22/97	#4	0.06	15.28	0.010	7.4
08/27/97	#4	0.05	12.97	0.008	7.4

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

TABLE AIV-3 (Continued)

FULTON COUNTY FIELD 10  
 SPRING #4 ANALYSES FOR 1994 - 1999

Date	Spring	NH <sub>3</sub> -N mg/L	NO <sub>3</sub> -N mg/L	NO <sub>2</sub> -N mg/L	Flow GPM
09/03/97	#4	0.07	13.76	0.005	6.3
09/10/97	#4	0.08	12.70	0.005	6.3
09/17/97	#4	0.06	11.83	0.006	6.3
09/24/97	#4	0.08	11.18	0.005	6.3
10/01/97	#4	0.07	10.98	0.006	6.3
10/08/97	#4	0.08	10.29	0.004	6.3
10/15/97	#4	0.06	9.79	0.004	6.3
10/22/97	#4	0.08	8.86	0.004	6.3
10/29/97	#4	0.06	8.37	0.003	6.3
11/05/97	#4	0.06	7.82	0.002	6.3
11/12/97	#4	0.07	7.35	0.002	6.3
11/19/97	#4	0.07	6.82	0.001	5.3
11/25/97	#4	0.06	6.43	0.001	5.3
12/03/97	#4	0.06	6.17	<0.001	3.6
12/10/97	#4	0.08	5.60	0.001	3.6
12/17/97	#4	0.27	5.05	<0.001	3.6
12/24/97	#4	0.17	4.57	0.001	2.3
12/31/97	#4	0.12	4.26	<0.001	2.3
01/06/98	#4	0.14	3.95	<0.001	0.6
01/15/98	#4	0.10	3.62	0.001	1.3
01/21/98	#4	0.10	3.41	<0.001	1.3
01/27/98	#4	0.08	3.26	<0.001	2.3
02/04/98	#4	0.08	3.00	<0.001	2.3
02/11/98	#4	0.10	2.38	0.002	3.6
02/18/98	#4	0.09	2.61	<0.001	3.6
02/25/98	#4	0.06	2.46	0.002	3.6
03/04/98	#4	0.15	4.33	0.003	5.3
03/12/98	#4	0.09	8.14	0.006	3.6
03/18/98	#4	0.10	14.80	0.007	6.3
03/25/98	#4	0.11	27.00	0.014	7.4
04/01/98	#4	0.09	34.18	0.025	6.3

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

TABLE AIV-3 (Continued)

FULTON COUNTY FIELD 10  
 SPRING #4 ANALYSES FOR 1994 - 1999

Date	Spring	NH <sub>3</sub> -N mg/L	NO <sub>3</sub> -N mg/L	NO <sub>2</sub> -N mg/L	Flow GPM
04/08/98	#4	0.08	33.75	0.021	6.3
04/15/98	#4	0.05	28.35	0.019	6.3
04/22/98	#4	0.13	30.00	0.019	6.3
04/29/98	#4	0.14	28.65	0.018	4.4
05/06/98	#4	0.09	25.88	0.020	6.3
05/13/98	#4	0.15	24.85	0.023	6.3
05/20/98	#4	0.07	26.95	0.026	6.3
05/27/98	#4	0.05	24.00	0.021	6.3
06/03/98	#4	0.21	23.35	0.028	6.3
06/10/98	#4	0.16	23.95	0.023	6.3
06/16/98	#4	0.23	22.05	0.022	6.3
06/24/98	#4	0.17	19.80	0.018	6.3
07/01/98	#4	0.20	26.60	0.022	6.3
07/07/98	#4	0.17	27.25	0.025	6.3
07/14/98	#4	0.15	25.70	0.020	6.3
07/22/98	#4	0.14	23.95	0.016	6.3
07/28/98	#4	0.15	21.40	0.020	6.3
08/05/98	#4	0.14	18.80	0.018	6.3
08/12/98	#4	0.17	19.75	0.016	6.3
08/19/98	#4	0.10	18.82	0.008	6.3
08/26/98	#4	0.24	19.42	0.019	3.6
09/02/98	#4	0.11	19.52	0.014	3.6
09/09/98	#4	0.15	18.49	0.008	5.3
09/15/98	#4	0.06	18.26	0.006	5.3
09/23/98	#4	0.07	18.28	0.006	5.3
09/29/98	#4	0.10	17.97	0.004	5.3
10/07/98	#4	0.12	18.31	0.010	3.6
10/14/98	#4	0.10	17.76	0.006	7.4
10/20/98	#4	0.11	17.69	0.012	7.4
10/28/98	#4	0.01	17.23	0.005	3.6
11/04/98	#4	0.08	16.93	0.014	3.6

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

TABLE AIV-3 (Continued)

FULTON COUNTY FIELD 10  
 SPRING #4 ANALYSES FOR 1994 - 1999

Date	Spring	NH <sub>3</sub> -N mg/L	NO <sub>3</sub> -N mg/L	NO <sub>2</sub> -N mg/L	Flow GPM
11/10/98	#4	0.12	16.13	0.012	3.6
11/18/98	#4	0.08	16.25	0.004	3.6
11/25/98	#4	0.28	16.06	0.003	3.6
12/02/98	#4	0.09	15.71	0.006	3.6
12/09/98	#4	0.16	15.20	0.006	3.6
12/16/98	#4	0.12	14.24	0.006	3.6
12/23/98	#4	0.08	14.22	0.006	3.6
12/30/98	#4	0.06	13.86	0.008	3.6
01/06/99	#4	0.07	14.66	<0.001	3.6
01/13/99	#4	0.07	14.72	0.009	3.6
01/19/99	#4	0.10	14.68	0.011	3.6
01/27/99	#4	0.09	14.09	0.006	3.6
02/05/99	#4	0.14	27.05	0.011	6.3
02/10/99	#4	0.14	30.15	0.014	6.3
02/17/99	#4	0.20	27.30	0.012	6.3
02/24/99	#4	0.19	26.80	0.016	6.3
03/03/99	#4	0.12	22.00	0.016	3.6
03/10/99	#4	0.13	22.46	0.012	3.6
03/16/99	#4	0.23	19.52	0.011	3.6
03/24/99	#4	0.11	21.54	0.011	3.6
03/30/99	#4	0.07	22.42	0.010	3.6
04/07/99	#4	0.17	20.36	0.017	3.6
04/14/99	#4	0.10	21.57	0.014	3.6
04/21/99	#4	0.13	20.01	0.013	3.6
04/27/99	#4	0.08	22.92	0.017	3.6
05/05/99	#4	0.09	24.05	0.020	3.6
05/12/99	#4	0.14	22.77	0.018	5.3
05/19/99	#4	0.12	21.33	0.018	6.3
05/26/99	#4	0.09	20.19	0.022	6.3
06/02/99	#4	0.09	19.72	0.025	6.3
06/10/99	#4	0.08	18.73	0.020	6.3

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

TABLE AIV-3 (Continued)

FULTON COUNTY FIELD 10  
 SPRING #4 ANALYSES FOR 1994 - 1999

Date	Spring	NH <sub>3</sub> -N mg/L	NO <sub>3</sub> -N mg/L	NO <sub>2</sub> -N mg/L	Flow GPM
06/16/99	#4	0.11	18.21	0.019	5.3
06/23/99	#4	0.13	18.15	0.017	3.6
06/30/99	#4	0.08	16.70	0.014	6.3
07/07/99	#4	0.26	15.73	0.014	6.3
07/14/99	#4	0.19	14.83	0.013	6.3
07/21/99	#4	0.29	14.37	0.013	6.3
07/28/99	#4	0.13	14.64	0.013	6.3
08/04/99	#4	0.09	15.18	0.012	3.6
08/11/99	#4	0.18	15.27	0.011	3.6
08/18/99	#4	0.11	14.81	0.012	3.6
08/25/99	#4	0.20	14.19	0.012	3.6
09/01/99	#4	0.10	13.82	0.013	5.3
09/08/99	#4	0.10	13.60	0.013	3.6
09/15/99	#4	0.14	13.35	0.013	3.6
09/22/99	#4	0.05	12.38	0.011	5.3
09/29/99	#4	0.10	12.08	0.011	3.6
10/06/99	#4	0.10	11.34	0.009	5.3
10/13/99	#4	0.10	10.76	0.010	3.6
10/20/99	#4	0.14	10.08	0.009	3.6
10/27/99	#4	0.10	9.32	0.008	3.6
11/03/99	#4	0.00	8.58	0.010	3.6
11/09/99	#4	0.08	8.04	0.011	3.6
11/17/99	#4	0.12	7.93	0.010	3.6
11/24/99	#4	0.10	7.36	0.008	3.6
12/01/99	#4	0.09	7.17	0.008	3.6
12/08/99	#4	0.07	6.24	0.008	3.6
12/15/99	#4	0.16	6.26	0.009	3.6
12/20/99	#4	0.06	6.15	0.006	3.6

APPENDIX V

FULTON COUNTY CLIMATOLOGICAL OBSERVATIONS FOR 1994-1999

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

TABLE AV-1

RECORD OF CLIMATOLOGICAL OBSERVATIONS FOR 1994-1999  
 FULTON COUNTY, ILLINOIS, STATION SWQ SEC. 21, R4E, T6N

January 1994 Date	Temperature °C			Precipitation		Wind		
	Max	Min	6 PM	rain, melted snow	snow, sleet, hail	m/S	m/S	
				(inches & hund' th)	(inches & tenths)	Avg	Max	Dir
1	2.2	1.1	1.7			N/A	N/A	N/A
2	1.1	-1.1	0.6	0.04	0.1	2.4	8.1	W
3	-0.6	-2.2	-1.7	0.15	0.4	N/A	N/A	N/A
4	-2.1	-6.6	-6.0			3.1	7.2	S
5	-0.5	-7.5	-0.5			2.6	7.6	N
6	0.8	-9.7	-9.7	0.05	1.0	2.1	6.9	SE
7	-9.9	-20.2	-16.8			3.7	8.4	E
8	-10.6	-19.6	-16.3			1.8	6.1	N
9	-2.9	-16.3	-3.4			1.6	4.7	N
10	1.0	-3.7	1.0	0.24	3.0	3.2	9	SW
11	1.3	-1.1	-0.5			1.3	3.9	E
12	0.5	-2.8	-2.4			1.9	6.5	W
13	-2.3	-15.7	-15.7	0.01	0.6	2.2	7.6	SE
14	-15.8	-21.5	-21.5			3.7	8.7	E
15	-21.6	-27.7	-27.1			2.6	7.8	E
16	-11.7	-27.2	-11.7	0.05	1.2	2.8	7.8	SW
17	-10.3	-23.2	-23.2			4.3	10.9	SE
18	-23.2	-29.1	-29.1			3	8.9	SE
19	-13.3	-30.2	-15.0			2	7.1	NW
20	-11.7	-22.6	-22.6			0.9	4.3	S
21	-1.6	-23.9	-6.5			1.4	7.7	SW
22	3.9	-9.7	1.1			1.2	3.7	N
23	5.0	-1.7	3.9			3	6.5	SW
24	6.7	2.9	3.4			1.5	3.8	W
25	3.6	0.3	0.3	0.02		2.1	5	NE
26	0.3	-3.7	-3.7	0.02		3.9	8.7	W
27	2.7	-3.9	1.7	0.28		1.1	6.3	E
28	1.7	-5.4	-4.5			3.9	10.5	SE
29	-0.4	-4.8	-4.5	0.02	0.7	1.7	4.8	N
30	-4.5	-10.8	-10.6	0.01	1.8	2.7	6.2	NE
31	-10.6	-20.0	-19.7			2.1	6	SW
Sum	-122.7	-367.6	-259.0	0.89	8.8	Observer: D. Bergstrom		
Avg	-4.0	-11.9	-8.4			Station: St. David		
Extreme	6.7	-30.2		0.28	3.0			

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

TABLE AV-1 (Continued)

RECORD OF CLIMATOLOGICAL OBSERVATIONS FOR 1994-1999  
 FULTON COUNTY, ILLINOIS, STATION SWQ SEC. 21, R4E, T6N

February 1994 Date	Temperature °C			Precipitation		Wind		
	Max	Min	6 PM	rain, melted snow	snow, sleet, hail	m/S	m/S	
				(inches & hund'ths)	(inches & tenths)	Avg	Max	Dir
1	-7.0	-21.1	-9.3			1.2	4.4	NW
2	-1.0	-9.9	-9.9			3.2	10.0	SE
3	-1.3	-15.8	-5.6			2.4	7.7	N
4	-3.5	-10.4	-9.8		0.2	1.6	5.8	NE
5	1.1	-11.5	-6.1			1.6	7.9	N
6	6.1	-6.4	-5.4			2.6	6.8	NE
7	-5.5	-10.9	-10.3			3.4	7.4	NE
8	-8.7	-11.0	-10.0		1.0	2.6	6.5	S
9	-9.4	-15.8	-15.5			2.5	6.2	NE
10	-3.8	-18.2	-10.6			1.3	6.4	NW
11	-0.3	-13.3	-5.3			1.9	5.4	W
12	1.1	-5.8	-5.6			3.1	7.7	SE
13	5.7	-7.8	-2.5			2.6	5.9	SW
14	14.1	-3.7	7.5			3.7	10.5	SW
15	7.3	-2.2	-2.0			2.2	5.8	N
16	10.1	-6.3	4.4			2.0	6.1	N
17	16.8	2.6	7.1			2.9	8.4	S
18	17.0	3.7	11.6			4.0	11.4	S
19	16.9	11.0	12.4	0.84		4.6	9.8	N
20	13.9	-0.9	-0.6	0.08		2.5	9.9	W
21	4.8	-3.3	0.2			1.5	4.7	NE
22	0.2	-2.9	-2.8	0.36	2.5	4.1	14.5	NW
23	-2.7	-8.4	-8.4	0.18	2.6	3.0	7.5	E
24	-5.8	-13.8	-6.3	0.06	0.6	2.1	5.2	NW
25	-1.6	-12.2	-11.8	0.25	5.7	4.5	14.8	SE
26	-6.1	-15.6	-15.6			1.7	4.6	N
27	-4.6	-17.7	-5.9			1.2	4.5	W
28	0.0	-6.2	-1.4			2.0	4.5	W
29								
30								
31								
Sum	53.8	-233.8	-117.5	1.77	12.6	Observer: D. Bergstrom		
Avg	1.9	-8.4	-4.2			Station: St. David		
Extreme	17.0	-21.1		0.84	5.7			



METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

TABLE AV-1 (Continued)

RECORD OF CLIMATOLOGICAL OBSERVATIONS FOR 1994-1999  
 FULTON COUNTY, ILLINOIS, STATION SWQ SEC. 21, R4E, T6N

March 1994 Date	Temperature °C			Precipitation		Wind		
	Max	Min	6 PM	rain, melted snow	snow, sleet, hail	m/S	m/S	Dir
				(inches & hund'ths)	(inches & tenths)	Avg	Max	
1	2.8	-2.2	-1.7			1.7	1.8	E
2	2.3	-3.4	-3.4			2.4	5.7	NE
3	1.0	-7.5	-3.1			2.3	6.0	SE
4	9.3	-7.6	5.5			1.8	5.0	E
5	11.2	2.1	2.3			2.4	7.3	SE
6	15.9	-3.3	9.3			1.7	5.6	S
7	16.6	5.8	5.8	0.05		2.1	5.0	NE
8	8.3	0.9	0.9	0.04		2.5	8.2	SE
9	2.7	-4.0	-1.4			1.9	7.9	S
10	4.3	-2.7	-2.6			1.9	7.8	SE
11	6.8	-7.1	-3.4			1.5	6.9	SE
12	8.1	-7.8	3.4			1.1	5.3	NW
13	17.4	0.9	7.2			2.7	7.8	S
14	11.9	0.0	0.0	0.02		2.2	8.3	SE
15	16.5	-3.8	10.4			2.4	7.9	SE
16	11.5	0.3	0.3			4.0	16.4	SE
17	5.9	-4.4	-2.7			1.3	7.2	W
18	9.5	-2.9	4.8			3.4	10.6	N
19	13.8	1.1	1.1			4.2	11.4	S
20	13.3	-2.2	8.3			2.2	5.7	W
21	18.1	6.3	13.4			2.6	6.9	N
22	14.0	3.1	3.8	0.01		3.6	10.7	S
23	24.9	2.0	12.3			3.9	10.6	N
24	27.5	7.8	14.4			4.3	11.1	E
25	14.3	-0.5	-0.5			4.2	10.0	SE
26	9.6	-2.1	5.2			1.3	4.4	NW
27	5.5	4.0	5.0	0.50		1.6	5.3	N
28	8.7	2.8	5.3	0.02		1.8	5.7	S
29	5.8	0.4	1.4			2.4	6.6	E
30	7.2	-1.7	0.0			1.8	5.6	E
31	5.1	-3.4	-2.4			1.4	5.5	SW
Sum	329.8	-29.1	98.9	0.64	0.0	Observer: D. Bergstrom		
Avg	10.6	-0.9	3.2			Station: St. David		
Extreme	27.5	-7.8		0.50	0.0			

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

TABLE AV-1 (Continued)

RECORD OF CLIMATOLOGICAL OBSERVATIONS FOR 1994-1999  
 FULTON COUNTY, ILLINOIS, STATION SWQ SEC. 21, R4E, T6N

April 1994 Date	Temperature °C			Precipitation		Wind		
	Max	Min	6 PM	rain, melted snow	snow, sleet, hail	m/S	m/S	
				(inches & hund' th)	(inches & tenths)	Avg	Max	Dir
1	21.8	1.1	9.5			1.9	7.8	N/A
2	20.8	3.6	3.6	0.24		2.0	6.5	N/A
3	10.5	-0.2	2.2			2.1	5.4	N/A
4	16.3	0.0	9.7			4.2	10.5	N/A
5	9.7	0.5	0.9			3.5	8.6	N/A
6	7.3	-2.6	-2.0			3.0	9.2	N/A
7	10.9	-6.2	4.5			1.4	5.0	N/A
8	18.2	2.3	9.6			4.1	11.4	N/A
9	15.9	7.3	7.9	0.48		4.9	17.6	N/A
10	16.1	6.8	7.2	0.20		4.9	14.1	N/A
11	7.9	5.5	5.6	1.19		1.4	6.0	N/A
12	14.1	5.6	7.2	0.68		0.7	6.0	N/A
13	12.0	5.1	7.9	0.14		N/A	N/A	N/A
14	25.4	5.5	21.0			2.3	10.6	N/A
15	21.0	9.2	9.3	0.80		4.8	11.8	N/A
16	21.0	6.6	10.9			3.6	9.5	N/A
17	22.1	7.8	14.7			2.2	6.8	N/A
18	28.0	12.7	19.3			4.2	10.7	N/A
19	21.5	12.1	12.1			2.5	6.6	N/A
20	19.4	6.0	9.1	0.03		1.3	4.9	N/A
21	14.0	6.8	7.5	0.09		0.9	5.0	N/A
22	17.4	3.4	5.7			1.4	5.5	N/A
23	21.7	5.6	21.1			N/A	N/A	N/A
24	28.9	10.0	28.9			N/A	N/A	N/A
25	28.9	17.2	27.2			N/A	N/A	N/A
26	30.0	19.4	28.3	0.50		5.0	5.0	N/A
27	28.7	7.4	17.2			4.0	13.0	N/A
28	16.4	4.6	12.8	0.57		2.5	8.3	N/A
29	15.3	4.1	11.1	0.31		2.7	8.8	N/A
30	10.5	3.7	4.5	0.73		1.8	6.7	N/A
31								
Sum	551.6	170.9	334.6	5.96	0.0	Observer: D. Bergstrom		
Avg	18.4	5.7	11.2			Station: St. David		
Extreme	30.0	-6.2		1.19	0.0			

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

TABLE AV-1 (Continued)

RECORD OF CLIMATOLOGICAL OBSERVATIONS FOR 1994-1999  
 FULTON COUNTY, ILLINOIS, STATION SWQ SEC. 21, R4E, T6N

May 1994 Date	Temperature °C			Precipitation		Wind		
	Max	Min	6 PM	rain, melted snow	snow, sleet, hail	m/S	m/S	
				(inches & hund' th)	(inches & tenths)	Avg	Max	Dir
1	11.7	2.8	11.7			N/A	N/A	N/A
2	16.1	2.8	15.0			N/A	N/A	N/A
3	17.8	8.3	17.8			N/A	N/A	N/A
4	20.0	7.8	17.8			N/A	N/A	N/A
5	23.9	10.0	22.8			N/A	N/A	N/A
6	11.1	8.3	10.0	0.40		N/A	N/A	N/A
7	13.9	6.7	12.8	0.48		N/A	N/A	N/A
8	19.4	5.0	17.8			N/A	N/A	N/A
9	22.2	11.1	21.7			N/A	N/A	N/A
10	23.9	8.3	23.9			N/A	N/A	N/A
11	26.7	13.9	23.3	0.07		N/A	N/A	N/A
12	22.5	9.1	15.7			1.1	6	N
13	23.1	11.4	16.6			2.3	6.9	N
14	17.7	11.9	16.4	0.43		1.4	4.5	E
15	24.2	13.1	13.1			2.3	7.3	E
16	23.4	8.8	12.6			1	4	W
17	22.3	5.2	12.3			1.1	4.3	W
18	24.2	4.7	11.9			1.3	5.7	NE
19	23.9	5.7	14.5			1	4.4	NW
20	27.1	8.7	13.2			0.5	3.1	NE
21	28.3	10.1	14.8			0.7	4.2	E
22	29.4	12.7	20.2			0.8	4.1	SE
23	29.9	15.8	17.2			1.4	5.9	SW
24	28	13.7	16.8	1.96		1.5	8.1	SW
25	26.3	13.8	15	0.17		1.4	6.7	W
26	18.8	9.6	9.6	0.01		2.2	6.1	NW
27	19.8	5.2	11.1			0.8	5.8	NE
28	24.2	8.2	15.7			1.8	6.9	NW
29	26.5	14.1	18.2			2.2	7.1	NE
30	29.8	16.2	21.3			1.4	6.5	N
31	28.4	15	15.4			1.8	5.4	S
Sum	704.5	298.0	496.1	3.52	0.0	Observer: D. Bergstrom		
Avg	22.7	9.6	16.0			Station: St. David		
Extreme	29.9	2.8		1.96	0.0			

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

TABLE AV-1 (Continued)

RECORD OF CLIMATOLOGICAL OBSERVATIONS FOR 1994-1999  
 FULTON COUNTY, ILLINOIS, STATION SWQ SEC. 21, R4E, T6N

June 1994 Date	Temperature °C			Precipitation		Wind		
	Max	Min	6 PM	rain, melted snow	snow, sleet, hail	m/S	m/S	Dir
				(inches & hund'ths)	(inches & tenths)	Avg	Max	
1	25.3	12.5	13.7	0.06		0.8	5.8	NE
2	15.3	9.0	14.9	0.83		0.9	4.9	W
3	23.4	12.6	14.3			0.6	4.8	SW
4	27.5	8.8	15.5			0.4	2.6	N
5	26.7	14.8	21.5			2.0	11.3	SW
6	31.7	20.2	20.3			1.1	4.3	N
7	32.5	16.1	18.4			1.0	5.9	NE
8	18.4	13.8	14.5	0.34		2.6	6.0	W
9	24.8	12.5	13.8			1.2	4.5	NE
10	26.1	10.0	17.9			0.5	4.5	SE
11	27.9	14.0	21.4			1.5	6.3	SW
12	28.1	17.7	19.7	0.40		1.0	6.2	N
13	32.0	19.4	26.0			3.1	9.3	N
14	33.2	23.2	27.1			3.4	9.8	S
15	33.5	23.5	25.7			3.0	8.0	N
16	33.1	20.8	21.5	0.24		1.0	5.5	S
17	33.6	19.8	24.0			0.4	3.2	S
18	34.5	21.2	24.1			0.3	2.5	S
19	34.9	22.6	25.0			0.7	4.5	NE
20	33.5	22.8	23.1			0.9	5.7	SE
21	32.3	20.7	23.0			1.0	4.1	E
22	32.0	20.2	23.6			0.4	3.0	SE
23	28.1	20.2	21.3	0.32		1.2	5.1	W
24	25.6	16.5	16.9	0.06		3.0	8.9	SW
25	29.6	14.9	20.3	0.09		1.3	7.0	N
26	26.7	15.4	15.7	0.10		1.1	8.7	E
27	27.1	14.3	20.6			0.7	5.0	SW
28	30.8	17.9	23.2			2.0	7.7	SW
29	26.2	19.1	19.8			2.6	7.8	SE
30	29.8	16.3	17.8			0.7	4.1	N
31								
Sum	864.2	510.8	604.6	2.44	0.0	Observer: D. Bergstrom Station: St. David		
Avg	28.8	17.0	20.2					
Extreme	34.9	8.8		0.83	0.0			

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

TABLE AV-1 (Continued)

RECORD OF CLIMATOLOGICAL OBSERVATIONS FOR 1994-1999  
 FULTON COUNTY, ILLINOIS, STATION SWQ SEC. 21, R4E, T6N

July 1994 Date	Temperature °C			Precipitation		Wind		
	Max	Min	6 PM	rain, melted snow	snow, sleet, hail	m/S	m/S	
				(inches & hund'ths)	(inches & tenths)	Avg	Max	Dir
1	32.2	16.2	22.0			1.1	6.0	NE
2	24.2	15.6	15.6	0.83		2.3	12.3	NE
3	28.4	15.3	23.1			0.8	3.6	E
4	33.0	23.2	26.2	0.02		2.4	8.4	N
5	33.8	24.9	26.0			1.8	5.0	N
6	33.1	22.2	23.7	0.18		0.9	4.9	N
7	32.3	22.1	22.1			1.5	6.3	E
8	26.0	16.2	17.3	0.03		2.1	5.7	SW
9	25.4	15.8	16.5			2.2	7.0	S
10	27.0	13.4	17.1			0.7	4.0	S
11	29.9	14.5	21.4			1.5	5.7	N
12	31.8	19.4	22.1			1.1	4.1	W
13	29.9	17.9	22.0	0.70		0.6	4.6	N
14	28.2	19.2	19.2			1.6	5.4	SE
15	28.2	16.0	18.8			0.7	3.7	N
16	26.6	18.0	20.2	0.17		0.6	4.2	SW
17	27.8	18.5	18.6			0.7	4.0	N
18	29.7	15.0	23.3			1.1	4.7	N
19	30.9	18.2	25.5	0.95		2.4	9.9	N
20	32.1	19.8	20.9	0.82		1.8	8.7	SW
21	29.2	19.5	19.5	0.04		1.6	6.3	E
22	27.3	18.1	19.0			1.4	5.8	SW
23	29.5	18.0	19.4			0.8	3.6	W
24	27.9	17.3	17.7			0.7	4.0	SE
25	27.8	14.2	17.6	0.02		0.9	6.3	SE
26	24.6	15.5	16.4			1.2	4.7	E
27	22.4	14.5	14.8			0.9	4.6	SE
28	26.4	12.3	14.7			0.7	4.1	S
29	26.0	11.9	14.7			0.3	3.9	S
30	27.6	12.6	19.4			0.4	3.8	NW
31	29.1	16.1	20.9			1.7	6.9	NW
Sum	888.3	531.4	615.7	3.76	0.0	Observer: D. Bergstrom Station: St. David		
Avg	28.7	17.1	19.9					
Extreme	33.8	11.9		0.95	0.0			

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

TABLE AV-1 (Continued)

RECORD OF CLIMATOLOGICAL OBSERVATIONS FOR 1994-1999  
 FULTON COUNTY, ILLINOIS, STATION SWQ SEC. 21, R4E, T6N

August 1994 Date	Temperature °C			Precipitation		Wind		
	Max	Min	6 PM	rain, melted snow	snow, sleet, hail	m/S	m/S	
				(inches & hund'th)	(inches & tenths)	Avg	Max	Dir
1	29.5	17.9	20.6			1.0	5.1	E
2	30.4	17.6	21.9			0.4	2.8	NW
3	30.4	18.7	21.1			1.2	5.4	NW
4	27.3	19.2	19.2	0.83		1.4	6.8	E
5	21.0	11.4	11.8			1.6	6.1	NW
6	23.0	8.8	14.3			0.5	4.2	NE
7	27.4	12.0	21.0			1.0	4.7	S
8	31.4	19.2	21.2			1.4	4.6	NE
9	24.7	16.8	16.8			0.8	4.2	W
10	25.4	14.4	22.5			0.8	4.9	S
11	23.7	17.9	18.8			1.4	6.0	NE
12	26.4	18.5	25.1			0.7	4.2	SW
13	31.8	21.9	22.6			1.8	8.4	S
14	22.7	12.5	12.6			2.0	7.6	SE
15	25.2	10.7	13.9			0.4	4.1	NE
16	27.0	11.5	17.3			0.7	4.6	SW
17	29.2	13.8	20.2			0.5	3.7	E
18	30.6	18.5	21.7			0.8	4.2	N
19	30.9	17.6	23.9			2.1	7.8	SW
20	26.5	16.8	16.8			2.1	5.8	SE
21	25.5	13.9	15.5			1.1	5.1	N
22	26.9	12.7	17.0			0.4	3.6	SW
23	28.5	14.7	20.4			1.1	4.9	S
24	30.8	19.1	21.7			2.0	7.1	N
25	32.3	18.3	22.8			0.8	5.7	S
26	29.1	20.0	20.4			0.7	3.9	SW
27	32.5	17.7	25.2			2.0	8.0	S
28	27.7	14.5	14.5	0.13		1.7	6.7	S
29	25.6	10.7	15.6			0.5	3.2	NW
30	25.4	14.5	20.5	1.06		1.8	7.7	N
31	20.7	13.7	13.7			1.6	5.3	NE
Sum	849.5	485.5	590.6	2.02	0.0	Observer: D. Bergstrom		
Avg	27.4	15.7	19.1			Station: St. David		
Extreme	32.5	8.8		1.06	0.0			

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

TABLE AV-1 (Continued)

RECORD OF CLIMATOLOGICAL OBSERVATIONS FOR 1994-1999  
 FULTON COUNTY, ILLINOIS, STATION SWQ SEC. 21, R4E, T6N

September 1994 Date	Temperature °C			Precipitation		Wind		
	Max	Min	6 PM	rain, melted snow	snow, sleet, hail	m/S	m/S	
				(inches & hund'ths)	(inches & tenths)	Avg	Max	Dir
1	20.6	10.5	11.4			1.1	4.8	NE
2	22.8	8.5	15.1			0.4	3.5	SE
3	23.4	13.1	15.5			0.6	5.5	SE
4	17.9	13.7	15.4	0.29		1.0	5.9	S
5	21.4	14.5	14.5	0.04		0.4	2.3	S
6	24.8	13.4	13.9			1.2	5.2	NE
7	25.5	10.4	12.8			0.5	3.7	W
8	27.3	11.4	17.0			0.9	4.5	SW
9	29.2	14.1	17.0			1.0	4.7	SW
10	30.7	14.9	18.1			0.6	3.2	S
11	29.8	14.3	16.8			0.6	3.5	N
12	30.0	14.3	18.5			1.1	5.4	SW
13	31.1	15.7	21.5			1.8	6.4	SW
14	32.5	19.4	22.4			1.9	8.3	S
15	31.8	18.4	24.0			2.3	8.3	S
16	27.7	15.9	17.5			2.4	7.7	SE
17	23.0	13.0	14.7			1.3	5.5	NE
18	27.2	11.6	13.1			0.9	5.7	S
19	30.7	10.2	15.8			0.5	2.9	W
20	28.8	11.4	14.2			0.7	4.6	NE
21	27.5	12.9	19.1			1.2	6.6	S
22	19.5	10.6	10.6	0.24		2.1	6.9	N
23	17.8	7.1	7.1	0.23		0.6	4.3	E
24	21.2	5.9	11.9			1.1	4.8	SW
25	19.3	9.1	10.9	0.14		0.4	3.9	W
26	16.1	10.2	11.1	0.53		1.1	5.1	W
27	15.3	9.9	11.5			1.5	5.2	SW
28	21.2	8.6	8.6			1.6	7.8	SW
29	24.6	5.7	13.1			0.3	2.8	SE
30	32.1	11.3	18.7			1.6	6.5	S
31								
Sum	750.8	360.0	451.8	1.47	0.0	Observer: D. Bergstrom		
Avg	25.0	12.0	15.1			Station: St. David		
Extreme	32.5	5.7		0.53	0.0			

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

TABLE AV-1 (Continued)

RECORD OF CLIMATOLOGICAL OBSERVATIONS FOR 1994-1999  
 FULTON COUNTY, ILLINOIS, STATION SWQ SEC. 21, R4E, T6N

October 1994 Date	Temperature °C			Precipitation		Wind		
	Max	Min	6 PM	rain, melted snow	snow, sleet, hail	m/S	m/S	
				(inches & hund'ths)	(inches & tenths)	Avg	Max	Dir
1	29.5	13.6	13.6			1.9	5.8	E
2	22.9	12.1	12.9			2.0	6.1	NE
3	20.8	11.0	12.9			1.4	4.6	NE
4	20.0	9.3	9.6			0.8	4.3	NE
5	21.3	8.2	13.7			0.7	4.7	NW
6	26.0	12.8	19.1			2.1	8.3	N
7	25.2	13.8	13.8			3.3	8.9	S
8	13.6	8.9	8.9			1.0	4.8	SE
9	16.7	4.9	6.1			1.6	6.8	S
10	16.9	2.1	6.5			0.7	4.1	E
11	18.5	2.2	9.2			0.6	4.5	NE
12	21.1	3.5	10.9			0.4	4.3	NE
13	21.2	6.9	11.1			0.4	3.5	NE
14	17.1	11.1	15.2			0.7	4.4	NW
15	20.2	14.6	16.8			0.6	3.9	S
16	23.9	12.8	18.2			1.2	5.0	S
17	25.6	16.0	16.9			2.7	8.5	S
18	20.7	16.6	16.7	0.02		2.6	5.7	N
19	23.2	12.4	12.4			1.7	7.8	W
20	20.5	5.9	5.9			1.0	5.1	NE
21	24.0	4.6	14.6			0.7	6.2	NW
22	23.6	9.6	11.0	0.13		1.3	6.9	E
23	16.7	6.4	11.3			1.7	6.5	E
24	14.5	4.4	4.4			2.2	8.3	E
25	8.8	0.9	3.8			1.9	7.0	SE
26	10.0	0.3	0.9			0.6	3.5	SW
27	16.3	-0.7	6.5			1.7	6.7	NW
28	17.1	3.6	12.3			3.2	8.0	SW
29	18.9	9.0	13.2			2.1	6.8	NE
30	13.1	9.0	9.0			1.1	4.6	S
31	12.8	0.5	6.1	1.93		2.6	9.7	N
Sum	600.7	246.3	343.5	2.08	0.0	Observer: D. Bergstrom		
Avg	19.4	7.9	11.1			Station: St. David		
Extreme	29.5	-0.7		1.93	0.0			



METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

TABLE AV-1 (Continued)

RECORD OF CLIMATOLOGICAL OBSERVATIONS FOR 1994-1999  
 FULTON COUNTY, ILLINOIS, STATION SWQ SEC. 21, R4E, T6N

November 1994 Date	Temperature °C			Precipitation		Wind		
	Max	Min	6 PM	rain, melted snow	snow, sleet, hail	m/S	m/S	
				(inches & hund'th)	(inches & tenths)	Avg	Max	Dir
1	12.2	5.6	7.8			N/A	N/A	N/A
2	17.8	6.1	14.4			N/A	N/A	N/A
3	22.4	13.2	17.5	0.11		2.9	6.7	N
4	17.5	11.2	11.7	0.61		1.4	5.1	NW
5	14.9	9.1	9.1	2.25		2.6	9.3	E
6	13.9	2.1	2.2			2.4	8.8	NE
7	15.5	1.8	8.8			2.5	9	N
8	16.2	8	13.4			1.4	5.7	SE
9	13.4	2.4	2.4	0.18		3.5	10.5	N
10	11.5	0.9	3.8			1.7	6.9	E
11	12.8	0.9	5.5			1.7	6.3	S
12	12	3.3	10.2			2.1	7	NW
13	18.4	9.9	15	0.12		3.1	7	S
14	15.7	2.8	3			2	6.6	SE
15	9.4	-0.3	0.5			1	4.4	SE
16	12.3	-2.9	3.8			0.7	3.5	NW
17	9.9	0.7	8.7			3.5	10.6	SW
18	12.4	-0.3	-0.3			2.2	8.2	SW
19	7.8	-2.7	7.7			0.7	3.5	W
20	14.2	5.6	9.7	0.87		2.1	7.4	S
21	10.6	0.6	0.6	0.08		4.5	11.6	SW
22	2.9	-2.9	-2.1			2.1	5.6	W
23	8.6	-2.3	-1.3			2	8.2	S
24	12.2	-1.7	4.3			2.8	9.2	SE
25	10.1	-3.8	0.8			0.3	2.8	N
26	9.8	-0.8	4.6			2.7	8.2	W
27	20.1	2.8	2.8	0.98		5.2	12	W
28	7.3	0.3	0.8			4.9	11.7	W
29	5.4	-2.3	-2.1			1.9	6.7	E
30	5.4	-7.2	-0.5			1.6	5	N
31						3.2	9.2	S
Sum	372.6	60.1	162.8	5.20	0.0	Observer: D. Bergstrom		
Avg	12.4	2.0	5.4			Station: St. David		
Extreme	22.4	-7.2		2.25	0.0			

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

TABLE AV-1 (Continued)

RECORD OF CLIMATOLOGICAL OBSERVATIONS FOR 1994-1999  
 FULTON COUNTY, ILLINOIS, STATION SWQ SEC. 21, R4E, T6N

December 1994 Date	Temperature °C			Precipitation		Wind		
	Max	Min	6 PM	rain, melted snow	snow, sleet, hail	m/S	m/S	Dir
				(inches & hund'ths)	(inches & tenths)	Avg	Max	
1	14.4	-1.1	3.4	0.00		3.2	9.2	S
2	15.2	1.5	8.3	0.02		3.0	7.1	N
3	10.8	4.0	4.2	0.00		2.0	5.8	NW
4	13.4	3.8	10.0	0.00		0.3	2.1	SW
5	9.8	0.2	0.2	0.00		1.8	7.2	S
6	3.2	-0.1	3.2	1.83		1.9	7.0	E
7	3.6	-0.1	0.1	0.00		2.2	6.2	NE
8	1.3	-1.0	1.2	0.18		1.8	5.5	NE
9	1.2	-2.4	-2.4	0.08		1.7	6.1	SE
10	-1.0	-10.1	-10.1	0.00		2.9	10.1	SE
11	-4.6	-13.2	-7.6	0.00		1.5	8.1	NW
12	-0.4	-8.8	-8.8	0.00		1.2	4.3	NE
13	0.0	-9.7	-5.0	0.00		0.4	3.0	NE
14	-0.3	-8.0	-0.3	0.00		1.5	3.9	W
15	4.2	-1.7	-1.7	0.00		1.0	5.1	W
16	4.4	-2.0	1.4	0.24		1.6	6.0	W
17	9.0	-1.0	0.3	0.00		2.8	9.4	E
18	0.6	-5.9	-4.3	0.00		2.2	8.4	S
19	5.3	-5.3	3.0	0.00		2.5	9.1	N
20	6.9	2.8	4.3	0.01		2.3	6.2	NW
21	9.6	0.0	0.0	0.00		0.7	3.4	S
22	11.1	-1.3	0.4	0.00		1.3	6.6	SE
23	3.5	0.4	3.2	0.00		2.2	5.8	N
24	3.3	-5.1	-5.1	0.00		1.1	4.4	NE
25	9.7	-6.7	-2.4	0.00		0.5	3.1	SE
26	9.4	-6.4	-1.8	0.00		0.6	4.1	S
27	13.9	-3.7	7.5	0.00		1.7	6.4	W
28	7.3	-0.7	2.0	0.00		1.6	5.3	N
29	2.0	-3.1	-1.7	0.00		1.9	5.2	W
30	4.7	-4.9	-0.4	0.00		0.7	3.3	NE
31	1.6	-3.6	-3.6	0.00		1.8	5.6	S
Sum	173.1	-93.2	-2.5	2.36	0.0	Observer: D. Bergstrom		
Avg	5.6	-3.0	-0.1			Station: St. David		
Extreme	15.2	-13.2		1.83	0.0			

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

TABLE AV-1 (Continued)

RECORD OF CLIMATOLOGICAL OBSERVATIONS FOR 1994-1999  
 FULTON COUNTY, ILLINOIS, STATION SWQ SEC. 21, R4E, T6N

January 1995 Date	Temperature °C			Precipitation		Wind		
	Max	Min	6 PM	rain, melted snow	snow, sleet, hail	m/S	m/S	
				(inches & hund'ds)	(inches & tenths)	Avg	Max	Dir
1	-6.1	-9.4	-9.4	0.00		N/A	N/A	N/A
2	-3.6	-13.8	-9.8	0.00		2.5	7.8	SE
3	-7.3	-15.9	-15.9	0.00		2.7	8.4	SE
4	-12.9	-19.3	-19.3	0.00		2.2	7.2	SW
5	-4.5	-20.1	-6.1	0.00		3.2	8.6	S
6	-2.3	-6.1	-5.3	0.06	1.6	2.1	7.9	S
7	-4.1	-14.9	-13.4	0.00	0.1	1.9	5.4	SW
8	-5.2	-14.3	-8.9	0.00		1.0	3.2	S
9	-4.5	-12.9	-6.3	0.00		1.3	4.5	NW
10	-1.0	-6.3	-1.1	0.00		1.3	3.9	NE
11	6.0	-1.4	6.0	0.00		0.6	2.7	W
12	8.6	1.6	2.8	0.00		1.7	6.1	SE
13	2.8	-0.1	1.7	1.10		2.3	7.2	N
14	2.8	-0.8	-0.8	0.34		3.4	8.2	SE
15	-0.8	-2.9	-1.6	0.00		1.3	4.7	E
16	0.1	-1.8	0.0	0.00		2.3	7.2	SW
17	8.6	-0.4	-0.4	0.00		2.4	8.0	E
18	2.8	-5.0	-1.3	0.01	0.7	1.6	5.8	NE
19	-0.2	-2.6	-2.6	0.37	0.8	3.8	10.1	SE
20	-2.5	-8.1	-7.7	0.00		2.9	5.8	E
21	-5.6	-9.6	-8.0	0.00		3.7	7.1	W
22	-6.2	-10.3	-7.7	0.00		3.0	8.0	S
23	-5.5	-13.2	-13.2	0.00		2.3	5.9	W
24	-2.9	-15.7	-11.7	0.00		0.6	3.9	NE
25	-2.6	-13.6	-12.6	0.00		1.0	4.3	N
26	-0.2	-15.4	-3.5	0.00		0.7	2.9	NW
27	0.6	-4.1	0.4	0.31		2.4	5.5	NE
28	0.7	-5.7	-5.7	0.01		3.5	7.6	S
29	-2.2	-11.0	-8.3	0.00		1.3	5.7	SE
30	-1.8	-10.3	-3.1	0.00		1.9	6.3	SW
31	5.4	-5.1	1.7	0.00		2.5	6.5	SW
Sum	-43.6	-268.5	-171.1	2.20	3.2	Observer: Dan Bergstrom Station: St.David		
Avg	-1.4	-8.7	-5.5					
Extreme	8.6	-20.1		1.10	1.6			

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

TABLE AV-1 (Continued)

RECORD OF CLIMATOLOGICAL OBSERVATIONS FOR 1994-1999  
 FULTON COUNTY, ILLINOIS, STATION SWQ SEC. 21, R4E, T6N

February 1995 Date	Temperature °C			Precipitation		Wind		
	Max	Min	6 PM	rain, melted snow	snow, sleet, hail	m/S	m/S	
				(inches & hund'th)	(inches & tenths)	Avg	Max	Dir
1	4.6	0.3	0.4	0.00		1.2	4.3	NE
2	4.8	0.0	0.4	0.00		1.1	4.3	NW
3	1.3	-3.3	-3.3	0.26	1.2	3.0	9.4	E
4	-3.5	-8.3	-8.3	0.00		3.8	10.2	SE
5	-8.3	-16.1	-16.1	0.00		2.0	6.6	SE
6	-7.3	-19.1	-9.0	0.00		1.1	3.8	SW
7	-6.2	-14.8	-14.8	0.02	1.0	2.8	9.0	SE
8	-8.1	-16.7	-11.2	0.00		2.4	4.8	N
9	4.8	-11.3	-0.4	0.00		3.1	6.8	S
10	2.3	-9.2	-9.2	0.00		4.0	10.3	SW
11	-9.2	-18.5	-18.5	0.00		3.6	11.5	SW
12	-7.2	-20.1	-10.1	0.00		1.2	5.2	SW
13	-2.4	-12.3	-7.5	0.00		0.9	5.3	NE
14	-0.2	-8.4	-2.0	0.03	0.6	2.6	6.8	N
15	3.0	-7.7	-7.7	0.00		3.5	8.4	SE
16	-0.5	-12.5	-7.3	0.00		1.1	3.9	SW
17	8.0	-9.6	-0.4	0.00		1.5	5.1	N
18	13.1	-2.5	1.8	0.00		2.3	7.8	N
19	9.1	-1.6	-0.9	0.00		1.4	5.2	SE
20	12.9	-1.3	-0.5	0.00		3.9	13.3	SE
21	1.7	-4.8	-0.7	0.00		1.8	6.9	N
22	16.4	-1.3	0.8	0.00		2.0	5.0	SE
23	11.4	-0.3	0.2	0.00		3.4	11.8	SE
24	5.0	-3.5	0.9	0.00		2.2	6.4	S
25	19.2	-0.3	2.9	0.00		2.7	7.2	NE
26	3.4	0.9	1.8	0.21		2.3	6.2	NE
27	1.8	-1.1	-1.0	0.03		2.3	6.6	N
28	0.8	-7.2	-7.2	0.00		2.7	6.4	SE
29								
30								
31								
Sum	70.7	-210.6	-126.9	0.55	2.8	Observer: Dan Bergstrom Station: St. David		
Avg	2.5	-7.5	-4.5					
Extreme	19.2	-20.1		0.26	1.2			

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

TABLE AV-1 (Continued)

RECORD OF CLIMATOLOGICAL OBSERVATIONS FOR 1994-1999  
 FULTON COUNTY, ILLINOIS, STATION SWQ SEC. 21, R4E, T6N

March 1995 Date	Temperature			Precipitation		Wind		
	°C			rain, melted snow	snow, sleet, hail	m/S	m/S	
	Max	Min	6 PM	(inches & hund'ths)	(inches & tenths)	Avg	Max	Dir
1	-4.8	-10.9	-8.4	0.00		3.2	8.6	N
2	-2.9	-10.7	-10.6	0.00		1.2	4.2	S
3	1.7	-12.5	-5.3	0.00		0.7	4.1	NE
4	6.1	-7.8	1.3	0.11		1.7	6.3	W
5	4.3	1.0	1.1	0.30		1.6	6.2	NE
6	2.5	0.5	1.1	0.14		1.3	4.4	NE
7	1.1	-8.8	-8.8	0.30		3.8	8.1	E
8	-4.1	-13.4	-10.0	0.00		3.0	9.1	SE
9	0.6	-13.1	-0.8	0.02		2.0	5.4	N
10	14.8	-1.4	4.3	0.00		4.2	10.3	S
11	18.6	2.5	7.7	0.00		3.6	8.4	NW
12	22.0	5.9	13.6	0.00		3.5	12.0	N
13	22.6	9.6	13.4	0.00		2.8	8.4	NW
14	23.7	6.9	8.3	0.00		0.8	4.7	SE
15	24.1	5.5	9.4	0.00		0.6	3.3	NE
16	23.6	6.7	9.8	0.00		0.8	3.9	SW
17	23.6	5.9	11.0	0.00		0.5	3.9	E
18	24.5	4.8	13.4	0.00		2.2	7.2	SW
19	17.6	5.8	14.0	0.00		1.9	5.1	NW
20	15.7	3.4	3.4	0.21		4.4	9.7	SE
21	13.7	-0.1	4.6	0.00		2.0	6.8	NE
22	13.0	1.4	5.3	0.15		2.0	8.2	NE
23	9.6	2.6	4.2	0.00		2.4	6.5	NE
24	13.0	-1.3	3.8	0.00		1.7	5.9	W
25	17.7	0.9	9.6	0.00		2.6	7.3	NW
26	16.0	5.9	8.3	0.08		3.1	6.8	W
27	8.8	4.8	6.1	0.21		2.8	7.8	W
28	7.5	4.3	4.3	0.00		2.9	6.9	SE
29	8.0	2.8	2.8	0.00		2.1	7.2	E
30	7.2	1.2	1.7	0.00		2.9	7.1	SE
31	3.5	-1.6	-1.6	0.00		2.0	7.2	E
Sum	353.3	0.8	117.0	1.52	0.0	Observer: Dan Bergstrom		
Avg	11.4	0.0	3.8			Station: St. David		
Extreme	24.5	-13.4		0.30	0.0			

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

TABLE AV-1 (Continued)

RECORD OF CLIMATOLOGICAL OBSERVATIONS FOR 1994-1999  
 FULTON COUNTY, ILLINOIS, STATION SWQ SEC. 21, R4E, T6N

April 1995 Date	Temperature °C			Precipitation		Wind		
	Max	Min	6 PM	rain, melted snow	snow, sleet, hail	m/S	m/S	
				(inches & hund'th)	(inches & tenths)	Avg	Max	Dir
1	9.0	-3.3	3.3	0.00		1.7	5.8	SE
2	18.5	-0.6	13.0	0.00		2.3	7.6	N
3	15.6	3.9	3.9	0.12		2.9	9.5	SE
4	3.5	-5.5	-1.8	0.00		3.0	8.4	NE
5	13.5	-4.7	9.7	0.00		3.9	10.2	S
6	21.3	9.4	9.8	0.00		2.4	6.8	W
7	22.3	5.9	13.9	0.68		2.1	12.8	W
8	17.3	7.5	7.5	1.97		2.4	7.2	E
9	7.4	0.8	0.8	2.14		4.5	11.9	NW
10	5.4	0.8	4.5	0.93		3.5	9.6	W
11	16.5	2.1	2.1	0.46		3.0	8.7	N
12	5.3	2.0	4.6	0.00		5.2	11.4	SE
13	16.6	2.2	7.9	0.00		3.1	9.4	S
14	17.2	3.4	11.4	0.00		2.6	7.7	W
15	23.1	9.7	13.7	0.01		2.3	6.4	SE
16	21.6	8.3	14.5	0.14		1.0	6.2	N
17	18.8	10.4	13.1	0.34		1.5	4.7	S
18	23.2	8.4	8.4	0.30		6.9	16.9	W
19	13.6	4.5	9.2	0.00		2.9	9.6	W
20	13.8	5.0	11.7	0.20		2.6	7.8	SW
21	12.0	6.7	6.7	0.00		3.0	7.7	SE
22	15.7	4.0	4.7	0.00		1.6	7.1	NE
23	12.3	3.9	4.2	0.00		0.9	4.1	SE
24	17.1	0.7	4.0	0.00		1.8	8.8	S
25	18.1	0.1	10.5	0.00		2.2	7.1	N
26	15.4	9.9	11.8	0.82		1.9	5.5	E
27	12.1	4.0	4.4	0.06		3.9	10.0	SW
28	17.8	3.2	9.8	0.00		1.4	5.5	N
29	15.9	7.8	7.8	0.09		1.3	5.8	NE
30	12.6	6.1	7.5	0.00		2.9	6.6	NE
31								
Sum	452.5	116.6	232.6	8.26	0.0	Observer: Dan Bergstrom		
Avg	15.1	3.9	7.8			Station: St. David		
Extreme	23.2	-5.5		2.14	0.0			

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

TABLE AV-1 (Continued)

RECORD OF CLIMATOLOGICAL OBSERVATIONS FOR 1994-1999  
 FULTON COUNTY, ILLINOIS, STATION SWQ SEC. 21, R4E, T6N

May 1995 Date	Temperature			Precipitation		Wind		
	°C			rain, melted snow	snow, sleet, hail	m/S	m/S	
	Max	Min	6 PM	(inches & hund'th)	(inches & tenths)	Avg	Max	Dir
1	10.7	6.0	6.0	0.00		2.6	7.7	SE
2	16.3	4.4	6.9	0.00		1.2	4.4	NE
3	15.0	5.4	8.3	0.05		0.7	3.9	SW
4	13.7	7.7	7.7	0.03		1.2	4.0	SE
5	20.7	6.8	10.4	0.00		1.7	5.3	SE
6	22.2	8.6	12.1	0.00		1.4	6.2	NW
7	24.9	11.9	16.1	0.80		2.1	7.1	N
8	23.8	13.1	17.0	3.08		3.3	7.8	S
9	23.7	13.7	13.7	1.02		2.0	8.5	SE
10	16.5	11.6	11.6	0.01		1.9	7.8	S
11	15.4	9.3	9.5	0.00		0.6	3.3	SW
12	19.5	6.5	13.6	0.18		1.8	6.2	NW
13	23.7	13.5	20.4	1.64		3.2	9.4	SW
14	21.3	13.2	13.4	0.00		2.9	8.6	S
15	23.4	7.8	15.9	0.00		0.6	3.1	NW
16	24.7	15.8	17.4	1.09		2.2	8.4	SW
17	17.6	7.9	7.9	0.82		1.7	5.7	NE
18	11.3	5.8	5.8	0.49		2.5	9.7	SE
19	22.8	5.6	12.8	0.00		1.6	5.7	SW
20	22.6	10.7	14.6	0.00		1.8	7.0	E
21	22.8	10.6	11.3	0.00		1.0	5.2	S
22	24.0	11.0	19.4	0.00		1.9	6.9	S
23	21.3	11.9	12.0	1.29		2.2	10.5	SE
24	12.2	10.6	10.6	1.79		2.0	6.3	NE
25	16.7	9.1	9.1	0.00		1.7	5.6	NE
26	19.3	7.4	15.6	0.00		1.2	4.6	W
27	21.8	14.4	18.2	1.35		1.5	5.1	N
28	19.9	13.2	13.3	0.00		4.1	10.9	SW
29	21.7	11.1	13.2	0.00		1.9	7.3	SE
30	26.9	11.9	13.8	0.00		0.5	3.9	S
31	25.9	12.9	17.8	0.00		0.3	3.2	SE
Sum	622.3	309.4	395.4	13.64	0.0	Observer: Dan Bergstrom Station: St. David		
Avg	20.1	10.0	12.8					
Extreme	26.9	4.4		3.08	0.0			

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

TABLE AV-1 (Continued)

RECORD OF CLIMATOLOGICAL OBSERVATIONS FOR 1994-1999  
 FULTON COUNTY, ILLINOIS, STATION SWQ SEC. 21, R4E, T6N

June 1995 Date	Temperature °C			Precipitation		Wind		
	Max	Min	6 PM	min, melted snow	snow, sleet, hail	m/S	m/S	
				(inches & hund'th)	(inches & tenths)	Avg	Max	Dir
1	24.3	16.1	18.0	0.00		0.5	3.3	W
2	23.6	14.7	14.8	0.00		1.0	4.6	N
3	27.0	13.7	17.8	0.00		0.5	3.7	S
4	28.3	14.0	18.9	0.00		0.5	3.2	W
5	29.0	16.7	20.4	0.00		0.6	4.2	N
6	28.0	18.9	21.0	0.00		1.8	6.6	SW
7	30.5	18.9	24.1	0.00		1.2	6.5	SW
8	23.9	12.9	13.3	0.40		2.0	6.3	SE
9	25.1	12.3	20.8	0.17		1.0	5.3	W
10	26.4	15.3	15.4	0.00		1.9	5.5	SE
11	20.3	10.6	10.6	0.00		1.3	6.8	N
12	23.5	10.0	13.5	0.00		1.2	8.3	S
13	27.1	9.8	16.7	0.00		0.7	3.6	E
14	27.0	12.8	14.7	0.00		1.0	4.5	NE
15	30.7	16.3	29.9	0.00		N/A	8.5	S
16	31.2	19.7	30.4	0.00		N/A	8.5	S
17	31.4	19.5	29.9	0.00		N/A	6.7	S
18	34.4	20.2	33.6	0.00		N/A	6.3	S
19	35.8	19.9	35.4	0.00		N/A	3.6	S
20	37.6	20.9	37.6	0.75		N/A	9.8	N
21	34.6	20.7	33.6	0.13		N/A	10.3	S
22	35.0	19.5	34.6	0.00		N/A	7.2	NE
23	32.9	22.6	33.0	0.00		N/A	4.5	N
24	33.7	21.8	32.1	0.00		N/A	5.4	SW
25	32.2	21.2	25.8	0.00		N/A	6.7	SE
26	29.7	20.3	23.4	0.61		N/A	9.4	NE
27	26.1	17.8	22.4	0.41		N/A	4.9	W
28	28.9	19.1	21.4	0.44		N/A	9.8	S
29	28.2	17.4	20.5	0.01		1.1	5.7	E
30	24.5	15.9	15.9	0.00		1.8	7.3	SE
31								
Sum	870.9	509.5	699.5	2.92	0.0	Observer: Dan Bergstrom		
Avg	29.0	17.0	23.3			Station: St. David		
Extreme	37.6	9.8		0.75	0.0			



METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

TABLE AV-1 (Continued)

RECORD OF CLIMATOLOGICAL OBSERVATIONS FOR 1994-1999  
 FULTON COUNTY, ILLINOIS, STATION SWQ SEC. 21, R4E, T6N

July 1995 Date	Temperature °C			Precipitation		Wind		
	Max	Min	6 PM	rain, melted snow	snow, sleet, hail	m/S	m/S	Dir
				(inches & hund'th)	(inches & tenths)	Avg	Max	
1	23.1	11.7	13.5	0.00		1.2	6.1	SE
2	25.2	10.4	17.1	0.00		0.7	5.7	NW
3	26.1	14.6	21.1	0.00		2.2	10.5	NW
4	28.4	19.1	19.1	0.69		2.5	14.2	E
5	28.2	17.6	19.5	0.47		3.1	9.0	SW
6	26.1	18.4	20.1	0.00		2.1	7.9	SW
7	26.7	14.6	16.7	0.00		1.3	6.5	NE
8	28.2	14.1	19.6	0.00		0.8	5.7	NE
9	30.1	16.8	21.0	0.00		1.1	7.2	S
10	30.8	16.1	21.1	0.00		0.7	4.4	N
11	32.6	18.9	24.8	0.00		0.6	4.0	N
12	35.9	22.0	27.1	0.00		1.0	5.7	S
13	37.2	25.4	27.0	0.00		1.5	4.7	SW
14	35.8	25.3	27.1	0.00		1.3	5.3	W
15	34.6	23.2	26.5	0.00		1.0	5.2	NE
16	32.5	22.3	23.4	0.21		1.1	16.8	SW
17	28.6	19.8	20.6	0.00		1.4	7.8	SE
18	28.8	17.7	18.0	0.00		1.3	6.4	SE
19	30.5	14.8	24.6	0.00		1.2	5.7	SW
20	25.4	20.1	20.1	0.17		0.8	5.7	SW
21	29.4	17.7	21.8	0.01		0.5	4.7	N
22	28.6	20.3	22.5	0.64		1.2	7.1	SW
23	29.9	19.9	20.1	0.62		0.9	8.1	SW
24	28.8	17.7	20.7	0.01		0.7	11.2	S
25	30.5	19.4	22.5	0.02		1.0	5.0	S
26	30.6	19.1	21.4	0.14		1.1	4.9	N
27	31.9	19.4	25.8	0.04		1.8	8.0	W
28	31.0	20.3	20.9	0.00		1.0	6.0	NW
29	32.1	18.8	23.7	0.00		0.6	4.3	SW
30	32.2	21.3	24.8	0.00		0.7	4.8	N
31	32.5	22.1	23.4	0.03		1.1	10.7	SE
Sum	932.3	578.9	675.6	3.05	0.0	Observer: Dan Bergstrom		
Avg	30.1	18.7	21.8			Station: St. David		
Extreme	37.2	10.4		0.69	0.0			

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

TABLE AV-1 (Continued)

RECORD OF CLIMATOLOGICAL OBSERVATIONS FOR 1994-1999  
 FULTON COUNTY, ILLINOIS, STATION SWQ SEC. 21, R4E, T6N

August 1995 Date	Temperature °C			Precipitation		Wind		
	Max	Min	6 PM	rain, melted snow	snow, sleet, hail	m/S	m/S	Dir
				(inches & hund'ths)	(inches & tenths)	Avg	Max	
1	30.0	20.5	22.0	0.17		0.8	5.2	SW
2	25.9	21.6	22.9	0.19		0.3	3.4	W
3	26.4	21.7	23.1	0.80		0.5	3.3	SE
4	26.2	22.3	22.3	0.03		0.1	2.1	SE
5	29.7	21.5	21.5	0.00		0.9	5.3	S
6	30.6	20.0	24.0	0.00		0.4	4.6	NW
7	30.3	21.2	22.5	0.00		0.3	2.6	N
8	29.0	20.1	20.2	0.81		1.0	9.0	NE
9	33.8	20.1	22.8	0.22		1.6	11.9	SW
10	29.7	21.5	23.6	0.08		1.2	7.5	SW
11	32.7	22.3	24.8	0.00		0.9	5.3	N
12	34.1	22.9	26.7	0.00		1.5	4.7	N
13	33.3	24.2	26.9	0.00		1.8	7.0	S
14	34.1	23.6	25.0	0.00		1.8	7.5	E
15	33.3	21.3	22.9	0.91		0.8	10.3	E
16	32.0	22.0	23.2	0.00		0.9	5.0	S
17	33.6	22.9	25.8	0.00		1.2	4.9	SW
18	34.2	23.1	25.0	0.00		0.4	3.1	SE
19	32.5	23.9	24.8	0.00		1.4	5.9	S
20	29.8	19.9	19.9	0.00		1.4	5.2	SE
21	29.6	17.3	18.1	0.00		0.7	4.5	NE
22	31.1	16.1	22.3	0.00		0.5	3.8	N
23	30.6	16.1	18.6	0.00		0.6	4.0	W
24	30.7	15.9	21.4	0.00		0.5	3.6	W
25	30.8	16.9	21.7	0.00		0.6	5.3	NE
26	31.9	18.2	21.5	0.00		0.4	3.3	NE
27	32.5	19.7	22.6	0.00		0.3	3.8	W
28	32.4	20.8	23.4	0.00		0.7	4.5	SW
29	32.4	21.8	22.2	0.00		0.6	4.9	W
30	32.9	20.9	23.4	0.00		1.6	7.6	S
31	30.2	19.7	19.8	0.00		1.3	5.1	NE
Sum	966.3	640.0	704.9	3.21	0.0	Observer: Dan Bergstrom Station: St. David		
Avg	31.2	20.6	22.7					
Extreme	34.2	15.9		0.91	0.0			

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

TABLE AV-1 (Continued)

RECORD OF CLIMATOLOGICAL OBSERVATIONS FOR 1994-1999  
 FULTON COUNTY, ILLINOIS, STATION SWQ SEC. 21, R4E, T6N

September 1995 Date	Temperature °C			Precipitation		Wind		
	Max	Min	6 PM	rain, melted snow	snow, sleet, hail	m/S	m/S	Dir
				(inches & hund'ths)	(inches & tenths)	Avg	Max	
1	27.1	13.7	13.7	0.00		1.4	6.8	NE
2	26.7	11.0	14.9	0.00		0.9	5.5	S
3	29.9	12.1	20.9	0.00		0.6	5.3	NW
4	30.7	16.8	18.3	0.00		0.8	6.0	NE
5	30.2	16.2	21.4	0.00		1.0	8.4	S
6	28.9	17.9	18.1	1.43		1.8	8.5	SW
7	21.7	12.0	12.0	0.09		1.7	9.3	NE
8	17.7	11.3	14.1	0.02		1.9	6.6	NE
9	20.8	8.7	10.9	0.00		1.0	5.9	NE
10	22.0	8.9	11.1	0.00		1.2	6.9	E
11	24.1	8.8	16.0	0.00		0.4	4.9	N
12	22.2	13.4	17.3	0.03		0.6	4.3	SW
13	28.5	13.7	20.7	0.00		1.0	7.5	E
14	26.2	13.5	13.6	0.00		1.1	5.6	N
15	27.7	12.7	18.8	0.00		0.7	5.0	S
16	23.2	17.1	19.9	0.00		1.2	5.1	W
17	21.2	10.5	10.8	0.00		1.9	6.5	SW
18	23.1	7.8	12.4	0.00		0.5	5.1	N
19	20.5	11.9	14.6	0.30		1.4	5.9	SE
20	14.7	10.9	10.9	0.00		2.0	5.9	NE
21	10.9	3.3	3.4	0.18		1.9	7.1	SW
22	11.0	0.7	0.7	0.00		1.5	7.5	NE
23	15.4	-1.0	3.8	0.00		0.4	4.8	N
24	17.6	1.0	10.5	0.00		0.5	5.0	NW
25	21.2	7.2	7.2	0.00		1.1	6.2	NE
26	24.5	4.7	12.0	0.00		1.3	8.2	SW
27	26.0	8.6	10.6	0.00		1.3	7.4	S
28	26.4	8.0	15.0	0.00		1.1	6.5	NW
29	27.2	11.2	21.0	0.00		1.6	8.3	NW
30	29.0	18.3	19.4	0.33		3.9	10.6	SW
31								
Sum	696.3	310.9	414.0	2.38	0.0	Observer: Dan Bergstrom		
Avg	23.2	10.4	13.8			Station: St. David		
Extreme	30.7	-1.0		1.43	0.0			

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

TABLE AV-1 (Continued)

RECORD OF CLIMATOLOGICAL OBSERVATIONS FOR 1994-1999  
 FULTON COUNTY, ILLINOIS, STATION SWQ SEC. 21, R4E, T6N

October 1995 Date	Temperature °C			Precipitation		Wind		
				rain, melted snow (inches & hund'ths)	snow, sleet, hail (inches & tenths)	m/S Avg	m/S Max	Dir
	Max	Min	6 PM					
1	19.4	19.4	19.4	0.00		3.7	3.7	N
2	23.4	11.0	11.0	0.00		2.5	9.6	N
3	26.6	7.9	19.3	0.00		0.6	5.9	SW
4	21.6	9.4	9.9	0.00		0.8	7.6	N
5	23.9	5.7	13.9	0.00		0.6	6.1	NE
6	16.7	11.3	13.1	0.00		1.2	6.0	SW
7	15.7	10.3	11.2	0.02		2.0	8.4	SW
8	12.3	3.7	3.7	0.00		1.6	7.1	W
9	19.6	1.3	12.6	0.00		0.7	4.7	S
10	23.3	8.3	10.1	0.00		0.9	5.9	S
11	24.7	3.9	7.8	0.00		0.4	4.1	N
12	27.6	5.1	14.8	0.00		1.0	6.4	S
13	28.2	10.1	14.4	0.00		1.7	10.2	S
14	28.8	10.2	10.5	0.20		2.5	9.8	SW
15	14.6	5.3	5.5	0.00		2.9	11.4	W
16	16.7	0.8	6.1	0.00		1.6	8.3	SE
17	17.8	-0.5	10.5	0.00		0.4	3.0	N
18	26.0	9.8	15.1	0.00		2.6	10.3	SW
19	24.7	7.4	16.8	0.00		0.6	4.3	S
20	26.9	8.9	8.9	0.83		2.7	10.0	SW
21	9.2	3.8	3.8	0.02		3.1	11.1	SE
22	9.5	2.0	3.5	0.00		2.4	9.9	SW
23	20.2	-1.6	11.5	0.00		0.8	5.5	W
24	21.9	7.5	7.6	0.12		4.4	15.3	W
25	12.1	2.3	3.6	0.00		3.4	14.1	SW
26	18.2	0.6	8.7	0.00		1.9	10.0	S
27	19.9	7.3	12.4	0.43		2.0	8.1	N
28	14.2	8.6	8.6	0.02		3.1	8.9	W
29	8.7	3.9	4.8	0.01		3.1	9.4	E
30	14.4	0.3	8.2	0.00		1.2	5.5	W
31	8.2	5.4	6.0	0.73		2.3	6.9	W
Sum	595.0	189.4	313.3	2.38	0.0	Observer: Dan Bergstrom Station: St. David		
Avg	19.2	6.1	10.1					
Extreme	28.8	-1.6		0.83	0.0			

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

TABLE AV-1 (Continued)

RECORD OF CLIMATOLOGICAL OBSERVATIONS FOR 1994-1999  
 FULTON COUNTY, ILLINOIS, STATION SWQ SEC. 21, R4E, T6N

November 1995 Date	Temperature °C			Precipitation		Wind		
	Max	Min	6 PM	rain, melted snow	snow, sleet, hail	m/S	m/S	
				(inches & hund'ths)	(inches & tenths)	Avg	Max	Dir
1	16.2	6.0	13.2	0.66		1.4	6.5	SE
2	13.2	-1.7	-1.7	0.36		3.0	8.4	E
3	2.0	-4.3	-1.8	0.00		2.5	8.9	SE
4	1.0	-7.8	-5.7	0.00		2.0	7.4	S
5	2.3	-6.0	0.5	0.00		2.1	6.9	S
6	7.4	-0.3	7.1	0.00		2.4	6.8	SE
7	7.2	-0.9	-0.9	0.01		3.5	10.3	SE
8	1.0	-5.7	-2.6	0.00		2.4	8.7	NW
9	12.7	-2.6	8.3	0.00		4.0	13.7	N
10	16.4	0.7	0.7	1.21		4.5	14.7	N
11	0.7	-9.5	-9.5	0.03	0.3	4.8	14.9	SW
12	1.6	-10.8	-0.7	0.06		2.1	9.1	SE
13	0.3	-4.3	-3.5	0.00		1.7	6.9	SE
14	3.0	-6.3	-4.0	0.00		0.7	3.5	NE
15	3.0	-8.0	1.1	0.00		1.1	6.1	E
16	4.7	1.1	2.9	0.00		1.5	5.4	NW
17	13.1	1.9	4.6	0.00		2.2	7.6	SE
18	6.5	-1.1	-0.5	0.00		1.5	5.5	NW
19	13.8	-1.3	4.2	0.00		2.5	9.7	S
20	13.0	0.2	4.6	0.00		2.8	10.6	E
21	4.6	-4.3	-4.3	0.00		3.8	10.3	SE
22	6.1	-8.6	4.4	0.00		2.2	8.0	E
23	4.4	-6.0	-6.0	0.00		2.4	7.9	SE
24	2.7	-9.9	-0.4	0.00		1.7	7.1	N
25	11.4	-0.5	4.0	0.00		1.5	5.4	S
26	19.4	2.5	12.7	0.00		2.0	7.1	NW
27	13.6	-2.4	-2.4	0.01		2.8	10.7	SE
28	-2.1	-9.4	-9.1	0.00		1.5	7.9	S
29	1.4	-10.0	-2.9	0.00		0.6	5.1	N
30	14.8	-3.7	13.4	0.00		3.3	12.5	SW
31								
Sum	215.4	-113.0	25.7	2.34	0.3	Observer: Dan Bergstrom		
Avg	7.2	-3.8	0.9			Station: St. David		
Extreme	19.4	-10.8		1.21	0.3			

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

TABLE AV-1 (Continued)

RECORD OF CLIMATOLOGICAL OBSERVATIONS FOR 1994-1999  
 FULTON COUNTY, ILLINOIS, STATION SWQ SEC. 21, R4E, T6N

December 1995	Temperature °C			Precipitation		Wind		
	Max	Min	6 PM	rain, melted snow	snow, sleet, hail	m/S	m/S	Dir
				(inches & hund'ths)	(inches & tenths)	Avg	Max	
1	14.9	2.6	14.9	0.00		2.1	9.2	NE
2	17.3	-1.0	15.4	0.00		2.4	8.3	SW
3	15.4	3.3	3.5	0.00		2.2	7.0	SE
4	6.6	-5.2	5.6	0.00		2.0	8.8	S
5	7.6	-2.2	-2.1	0.03		3.8	13.0	E
6	-0.2	-7.2	-6.2	0.00		0.8	5.9	E
7	1.8	-7.9	-4.8	0.00		1.0	6.6	NE
8	-3.2	-17.7	-17.7	0.15	2.1	2.3	12.9	E
9	-13.3	-19.5	-16.3	0.00		4.1	10.9	E
10	-7.0	-17.7	-7.1	0.00		2.7	7.7	E
11	-7.1	-11.8	-10.3	0.00	0.5	1.9	5.6	W
12	-3.8	-12.0	-5.0	0.00		2.4	5.8	E
13	8.8	-5.2	8.2	0.00		2.4	6.1	S
14	11.3	-0.9	0.6	0.00		1.9	8.4	SE
15	4.8	-4.5	-4.5	0.00		1.0	4.6	S
16	6.4	-7.1	-1.4	0.00		0.5	3.4	NW
17	5.4	-2.3	1.1	0.00		2.4	7.3	E
18	2.4	-0.5	1.2	0.09		3.9	10.4	W
19	1.3	-5.7	-5.7	0.00		4.7	13.8	SE
20	0.6	-9.2	-5.6	0.00		1.9	7.7	E
21	-3.5	-8.8	-4.2	0.00		1.8	4.8	SE
22	-3.2	-6.7	-6.7	0.00		1.2	4.5	W
23	-2.6	-7.2	-3.3	0.00		1.3	5.0	W
24	-1.2	-4.9	-2.4	0.00		2.9	8.5	SE
25	-0.1	-6.0	-5.8	0.00		3.1	8.5	E
26	4.3	-6.6	-1.0	0.00		2.8	10.4	S
27	-1.0	-8.3	-8.2	0.00		2.1	8.5	N
28	-0.7	-13.6	-8.8	0.00		0.7	4.6	S
29	1.7	-11.8	-5.6	0.00		1.8	7.0	N
30	0.6	-7.6	0.4	0.06	0.8	1.8	5.9	SW
31	1.3	0.3	0.7	0.00		0.8	3.0	NE
Sum	65.6	-212.9	-81.1	0.33	3.4	Observer: Dan Bergstrom Station: St. David		
Avg	2.1	-6.9	-2.6					
Extreme	17.3	-19.5		0.15	2.1			

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

TABLE AV-1 (Continued)

RECORD OF CLIMATOLOGICAL OBSERVATIONS FOR 1994-1999  
 FULTON COUNTY, ILLINOIS, STATION SWQ, SEC. 21, R4E, T6N

January 1996 Date	Temperature °C			Precipitation		Wind		
	Max	Min	6 PM	rain, melted snow	snow, sleet, hail	m/S	m/S	Dir
				(inches & hund'ths)	(inches & tenths)	Avg	Max	
1	2.2	0.0	1.1	0.00		N/A	N/A	N/A
2	2.1	-8.1	-8.1	0.00		3.3	11.9	N
3	-2.7	-12.9	-8.8	0.00		1.5	7.5	N
4	-4.6	-8.8	-7.5	0.07	1.6	1.8	4.7	NE
5	-7.1	-13.9	-13.5	0.00		1.9	5.0	S
6	-10.3	-16.3	-13.7	0.00		2.2	5.3	SE
7	-7.4	-15.2	-15.2	0.00		2.6	8.7	SE
8	-2.9	-21.1	-2.9	0.00		2.3	8.2	SW
9	2.8	-4.0	-2.2	0.02		3.2	9.2	SE
10	-2.1	-9.7	-3.4	0.00		1.3	5.6	W
11	-0.8	-3.4	-2.2	0.13	2.2	2.1	6.9	SE
12	2.3	-4.2	-1.8	0.00		1.8	6.6	SW
13	9.5	-2.0	2.1	0.00		1.3	4.7	N
14	10.7	-0.8	-0.1	0.00		1.7	8.4	NE
15	0.7	-3.8	-3.8	0.00		2.1	6.5	S
16	6.4	-3.9	4.3	0.00		2.4	7.0	S
17	15.0	0.6	14.2	0.13		3.2	11.7	S
18	15.6	-17.6	-17.6	0.71	0.3	4.9	14.0	SW
19	-13.1	-20.1	-13.5	0.01		2.8	9.3	SW
20	-5.9	-14.2	-7.0	0.00		1.1	4.3	S
21	2.1	-9.2	-1.6	0.00		2.4	8.4	N
22	5.5	-2.3	1.8	0.00		2.6	7.8	W
23	3.3	-5.3	-5.3	0.05		1.7	7.5	SW
24	-4.8	-13.3	-13.2	0.00		3.3	10.1	SW
25	4.2	-14.6	0.7	0.00		2.5	11.4	N
26	4.2	-8.7	-8.7	0.27		4.2	17.4	SW
27	-5.6	-12.6	-11.6	0.00		4.2	12.4	NE
28	0.9	-13.5	0.4	0.00		2.7	10.0	S
29	3.2	-15.0	-15.0	0.00		4.3	13.0	SE
30	-14.3	-21.3	-21.3	0.00		3.1	7.6	S
31	-15.0	-24.9	-17.9	0.00		1.7	6.8	N
Sum	-8.1	-320.1	-192.4	1.39	4.1	Observer: Dan Bergstrom		
Avg	-0.3	-10.7	-6.4			Station: St. David		
Extreme	15.6	-24.9		0.71	2.2			

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

TABLE AV-1 (Continued)

RECORD OF CLIMATOLOGICAL OBSERVATIONS FOR 1994-1999  
 FULTON COUNTY, ILLINOIS, STATION SWQ, SEC. 21, R4E, T6N

February 1996 Date	Temperature °C			Precipitation		Wind		
	Max	Min	6 PM	rain, melted snow	snow, sleet, hail	m/S	m/S	
				(inches & hund'ths)	(inches & tenths)	Avg	Max	Dir
1	-11.5	-20.4	-20.4	0.00		2.5	7.3	SE
2	-20.4	-27.9	-27.9	0.00		3.0	8.0	S
3	-20.3	-28.4	-25.1	0.00		2.6	7.0	SE
4	-13.0	-25.6	-16.6	0.00		2.1	5.5	SW
5	-1.1	-16.6	-11.4	0.00		2.4	7.1	SW
6	4.1	-15.0	0.3	0.00		2.4	8.5	N
7	10.5	0.4	2.8	0.00		3.2	8.3	S
8	10.4	2.9	3.2	0.03		2.9	11.3	SW
9	13.0	-1.6	3.8	0.00		1.8	5.2	N
10	13.2	3.2	4.1	0.00		4.1	12.7	SW
11	4.3	-1.0	-1.0	0.00		5.5	15.3	SE
12	-1.0	-4.2	-4.2	0.00		3.2	10.5	N
13	6.7	-7.2	2.3	0.00		2.8	8.1	SE
14	3.0	-2.0	-2.0	0.00		2.6	7.3	SE
15	-0.5	-6.4	-5.4	0.00		2.6	9.4	SE
16	-2.9	-10.3	-5.9	0.00		2.6	8.1	S
17	2.9	-6.6	-6.6	0.00		3.5	9.9	SE
18	-0.1	-12.0	-1.2	0.00	0.2	1.5	6.8	NW
19	11.6	-5.4	2.5	0.00		1.3	5.1	N
20	20.0	1.6	3.8	0.00		2.8	9.8	S
21	4.1	1.4	1.8	0.01		2.0	9.3	SW
22	9.4	1.0	6.5	0.00		2.6	7.2	NW
23	17.1	5.0	5.2	0.00		3.4	13.1	SW
24	18.1	-2.3	4.4	0.00		2.4	8.4	NW
25	20.7	3.8	12.6	0.00		1.9	7.5	SW
26	22.4	8.8	13.5	0.29		1.4	7.8	S
27	14.9	-5.1	-5.1	0.55		3.4	12.7	SW
28	-5.1	-11.6	-7.4	0.00		5.1	11.5	SE
29	-3.8	-14.2	-8.5	0.00		2.4	7.0	SW
30								
31								
Sum	126.7	-195.7	-81.9	0.88	0.2	Observer: Dan Bergstrom		
Avg	4.4	-6.7	-2.8			Station: St. David		
Extreme	22.4	-28.4		0.55	0.2			



METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

TABLE AV-1 (Continued)

RECORD OF CLIMATOLOGICAL OBSERVATIONS FOR 1994-1999  
 FULTON COUNTY, ILLINOIS, STATION SWQ, SEC. 21, R4E, T6N

March 1996 Date	Temperature °C			Precipitation		Wind		
	Max	Min	6 PM	rain, melted snow	snow, sleet, hail	m/S	m/S	
				(inches & hund' th)	(inches & tenths)	Avg	Max	Dir
1	-3.9	-12.8	-7.8	0.00		N/A	N/A	N/A
2	5.0	-11.2	-11.2	0.00		3.7	13.3	S
3	-2.2	-15.0	-7.5	0.00		1.9	6.6	SW
4	9.5	-9.5	9.5	0.00		2.2	8.0	SW
5	9.9	-0.6	-0.6	1.12		3.2	8.8	NE
6	-0.6	-10.7	-10.7	0.03	0.5	3.8	9.0	N
7	-9.7	-14.2	-13.8	0.00		3.9	10.0	S
8	-9.5	-18.0	-9.5	0.00		3.9	10.4	W
9	-1.5	-12.3	-6.2	0.00		1.4	5.4	NW
10	5.8	-6.9	0.6	0.00		2.4	7.8	NW
11	9.4	-2.2	3.5	0.00		2.8	7.3	NW
12	13.0	0.5	5.5	0.00		2.3	7.7	NW
13	18.2	0.7	5.3	0.00		1.1	4.3	N
14	18.6	2.6	7.6	0.00		1.3	6.3	SE
15	13.9	-0.5	0.2	0.00		1.9	7.6	SE
16	12.3	-0.9	3.3	0.00		1.6	6.5	NW
17	11.6	-1.3	-1.3	0.00		2.3	10.7	SE
18	10.0	-3.2	0.4	0.00		1.6	8.0	SE
19	1.0	-2.6	-0.4	0.00		4.4	13.6	S
20	5.8	-2.0	-1.9	0.04	0.5	4.1	11.3	N
21	5.4	-5.4	-1.6	0.00		2.3	9.0	SE
22	8.8	-4.8	-3.1	0.00		1.6	8.6	NW
23	10.1	-4.9	4.4	0.01		2.4	9.7	NW
24	17.8	3.9	13.7	0.30		4.4	11.3	N
25	13.8	-8.2	-8.1	0.00		6.3	16.4	SE
26	-0.1	-9.3	-6.0	0.00		2.2	8.4	W
27	5.3	-8.6	2.1	0.00		1.9	5.6	W
28	6.9	1.0	2.1	0.16		1.9	5.8	NE
29	13.4	1.5	8.4	0.00		1.7	5.5	NW
30	12.2	5.5	9.8	0.00		1.9	6.6	S
31	9.7	2.1	2.1	0.02		3.6	9.7	N
Sum	219.9	-147.3	-11.2	1.68	1.0	Observer: Dan Bergstrom Station: St. David		
Avg	7.1	-4.8	-0.4					
Extreme	18.6	-18.0		1.12	0.5			

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

TABLE AV-1 (Continued)

RECORD OF CLIMATOLOGICAL OBSERVATIONS FOR 1994-1999  
 FULTON COUNTY, ILLINOIS, STATION SWQ, SEC. 21, R4E, T6N

April 1996 Date	Temperature °C			Precipitation		Wind		
	Max	Min	6 PM	rain, melted snow	snow, sleet, hail	m/S	m/S	
				(inches & hund' th)	(inches & tenths)	Avg	Max	Dir
1	11.2	-1.8	4.5	0.00		1.7	7.5	N
2	21.5	2.8	9.5	0.00		4.0	12.9	S
3	26.1	6.0	12.3	0.00		4.0	11.9	SW
4	12.3	-0.7	-0.7	0.02		3.9	9.8	N
5	7.9	-4.4	3.1	0.00		1.5	7.0	SE
6	8.4	-2.7	-1.6	0.00		1.3	7.3	NE
7	8.3	-3.1	1.4	0.00		1.6	6.3	NW
8	9.2	-5.2	-0.8	0.00		1.3	6.4	SW
9	12.6	-6.1	0.2	0.00		1.4	8.3	SE
10	18.8	-3.2	9.2	0.00		1.6	8.6	N
11	27.4	5.9	19.8	0.00		4.3	14.2	S
12	25.3	7.8	7.8	0.00		5.2	13.4	SE
13	9.4	2.3	2.3	0.00		2.8	8.1	W
14	15.1	-1.5	8.9	0.44		3.1	10.1	W
15	8.9	0.5	4.4	0.57	0.3	3.2	10.5	SW
16	12.6	1.9	2.0	0.00		2.9	9.4	SW
17	23.8	1.4	15.6	0.00		3.3	9.6	N
18	23.5	9.8	10.2	0.12		4.2	15.7	SW
19	24.9	8.1	14.1	0.08		2.7	11.5	S
20	14.5	3.3	4.4	0.00		3.7	12.6	NE
21	19.9	2.6	12.4	0.14		1.6	7.5	NW
22	15.1	8.5	8.5	0.13		2.1	7.0	SE
23	15.5	5.0	6.0	0.00		2.4	7.9	S
24	19.2	5.6	15.5	0.00		3.3	11.5	N
25	21.2	13.8	13.8	0.01		4.3	11.4	W
26	13.8	3.7	5.1	0.00		4.2	12.0	SE
27	16.4	0.0	9.5	0.00		1.4	5.7	NE
28	11.0	9.1	9.1	0.25		2.6	9.5	NE
29	9.1	2.9	3.3	0.45		3.0	8.7	SE
30	16.2	1.6	8.2	0.00		3.8	10.6	SW
31								
Sum	479.1	73.9	218.0	2.21	0.3	Observer: Dan Bergstrom Station: St. David		
Avg	16.0	2.5	7.3					
Extreme	27.4	-6.1		0.57	0.3			

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

TABLE AV-1 (Continued)

RECORD OF CLIMATOLOGICAL OBSERVATIONS FOR 1994-1999  
 FULTON COUNTY, ILLINOIS, STATION SWQ, SEC. 21, R4E, T6N

May 1996 Date	Temperature °C			Precipitation		Wind		
	Max	Min	6 PM	rain, melted snow	snow, sleet, hail	m/S	m/S	
				(inches & hund'th)	(inches & tenths)	Avg	Max	Dir
1	14.4	3.9	8.9	0.00		N/A	N/A	N/A
2	18.2	2.4	11.8	0.00		1.5	8.3	NW
3	20.1	5.4	11.5	0.14		1.5	8.9	W
4	18.8	9.3	11.0	0.15		2.1	6.3	NE
5	15.7	7.1	7.3	0.18		1.8	6.3	W
6	15.1	6.2	12.3	0.11		2.2	6.9	NW
7	16.2	11.2	14.4	0.09		1.4	5.3	NE
8	22.6	14.2	18.1	0.98		1.5	8.7	NW
9	27.5	17.6	22.2	0.00		2.1	10.1	S
10	23.0	9.4	9.4	1.50		2.6	8.3	NE
11	14.3	8.8	10.5	0.00		2.1	6.7	SE
12	13.4	4.7	8.4	0.00		1.5	6.3	SE
13	13.8	6.6	7.6	0.00		0.9	4.4	S
14	15.5	3.7	11.4	0.03		2.3	11.9	NW
15	22.6	10.8	17.7	0.06		1.0	4.9	SW
16	29.1	18.8	25.5	0.06		1.9	8.3	SW
17	32.5	22.5	26.2	0.00		4.7	10.2	W
18	31.6	21.5	26.7	0.00		4.0	10.4	S
19	32.8	20.7	27.0	0.00		4.5	15.1	SW
20	27.6	12.4	23.8	0.27		1.9	8.7	SE
21	25.6	10.4	19.8	0.00		1.2	6.3	N
22	27.7	15.1	22.1	0.32		1.1	6.6	NW
23	21.3	13.6	17.6	0.00		2.2	7.0	NE
24	16.6	10.5	15.0	0.87		2.7	8.8	W
25	19.0	11.1	14.2	0.15		2.0	6.0	SW
26	15.1	10.2	14.5	2.10		2.5	8.7	NE
27	17.6	11.7	11.7	0.02		2.0	7.3	W
28	20.0	11.1	17.6	0.00		2.3	8.0	NE
29	21.4	5.2	16.3	0.00		1.8	8.8	W
30	21.1	6.9	14.7	0.00		0.6	4.7	N
31	24.4	15.7	18.2	0.01		1.1	7.4	N
Sum	654.6	338.7	493.4	7.04	0.0	Observer: Dan Bergstrom Station: St. David		
Avg	21.1	10.9	15.9					
Extreme	32.8	2.4		2.10	0.0			

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

TABLE AV-1 (Continued)

RECORD OF CLIMATOLOGICAL OBSERVATIONS FOR 1994-1999  
 FULTON COUNTY, ILLINOIS, STATION SWQ, SEC. 21, R4E, T6N

June 1996 Date	Temperature °C			Precipitation		Wind		
	Max	Min	6 PM	rain, melted snow	snow, sleet, hail	m/S	m/S	
				(inches & hund'th)	(inches & tenths)	Avg	Max	Dir
1	20.7	14.0	20.7	1.11		1.4	6.4	N/A
2	26.6	13.8	15.5	0.15		1.8	6.5	N/A
3	26.7	13.9	15.0	0.00		N/A	N/A	N/A
4	17.1	10.0	10.5	0.00		1.5	7.3	N/A
5	25.6	9.1	19.4	0.09		1.9	8.2	N/A
6	25.9	15.8	15.8	0.37		1.9	8.1	N/A
7	21.3	13.4	15.1	0.00		2.0	6.3	N/A
8	16.3	13.5	13.6	0.00		1.3	4.2	N/A
9	17.8	13.5	16.5	0.00		2.1	6.2	N/A
10	23.6	15.4	15.6	0.19		1.1	5.4	N/A
11	24.6	13.4	16.1	0.00		0.8	4.0	N/A
12	28.8	13.6	18.6	0.00		0.5	3.3	N/A
13	32.3	15.8	18.7	0.07		1.4	10.2	N/A
14	32.1	18.2	19.4	0.00		0.8	4.3	N/A
15	31.8	18.3	22.6	0.00		0.5	4.0	N/A
16	31.8	19.9	25.6	0.00		1.2	6.4	N/A
17	31.4	21.9	21.9	0.19		2.5	9.8	N/A
18	24.1	17.5	17.7	0.00		1.6	6.0	N/A
19	28.4	16.7	18.7	0.00		0.9	4.8	N/A
20	32.6	17.2	23.1	0.00		0.7	5.9	N/A
21	31.5	21.1	24.0	0.00		2.2	9.3	N/A
22	26.2	20.3	21.0	0.00		0.9	6.6	N/A
23	33.8	18.9	19.9	0.62		1.7	15.3	N/A
24	27.8	17.8	18.6	0.04		1.7	6.4	N/A
25	26.3	14.2	17.0	0.00		0.5	4.6	N/A
26	29.3	13.6	18.8	0.00		0.6	6.3	N/A
27	30.9	15.4	20.6	0.00		0.8	5.0	N/A
28	33.1	17.0	21.7	0.00		1.4	6.2	N/A
29	33.5	19.1	25.1	0.00		2.6	9.8	N/A
30	33.8	23.2	25.3	0.00		1.1	4.5	N/A
31								
Sum	825.7	485.5	572.1	2.83	0.0	Observer: Dan Bergstrom Station: St. David		
Avg	27.5	16.2	19.1					
Extreme	33.8	9.1		1.11	0.0			

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

TABLE AV-1 (Continued)

RECORD OF CLIMATOLOGICAL OBSERVATIONS FOR 1994-1999  
 FULTON COUNTY, ILLINOIS, STATION SWQ, SEC. 21, R4E, T6N

July 1996 Date	Temperature °C			Precipitation		Wind		
	Max	Min	6 PM	rain, melted snow	snow, sleet, hail	m/S	m/S	Dir
				(inches & hund' th)	(inches & tenths)	Avg	Max	
1	30.7	18.5	18.5	0.00		1.3	5.9	SW
2	31.6	16.7	18.6	0.00		2.0	7.4	SE
3	26.8	15.0	15.0	0.00		1.4	7.5	NE
4	27.1	11.6	14.9	0.00		0.5	5.1	SE
5	29.3	12.1	17.7	0.00		0.8	6.8	NE
6	31.6	15.4	24.3	0.00		0.8	4.8	S
7	31.6	18.8	18.8	0.00		1.1	5.9	N
8	30.5	13.3	18.5	0.00		1.8	11.0	SE
9	24.8	13.2	13.2	0.00		1.8	7.8	SE
10	25.8	11.4	13.2	0.00		0.8	4.6	S
11	27.8	11.4	16.5	0.00		1.0	6.4	N
12	28.1	15.3	19.8	0.61		1.2	7.4	SW
13	28.7	18.5	20.0	0.01		1.1	5.5	SE
14	21.3	16.8	16.8	0.62		0.9	4.2	W
15	28.4	15.4	23.1	0.08		1.4	7.1	SW
16	29.0	20.4	22.5	0.04		1.3	6.2	NE
17	31.7	21.9	28.7	0.00		2.2	7.5	S
18	34.8	26.1	28.5	0.00		4.1	9.2	SW
19	32.0	20.8	20.8	0.00		1.9	6.4	NE
20	23.7	16.1	19.6	0.51		0.8	4.4	NE
21	19.5	16.3	16.3	1.37		1.9	8.7	N
22	24.9	15.2	17.6	0.21		0.9	6.7	SW
23	27.5	16.3	19.9	0.01		1.2	7.2	NE
24	27.6	17.0	17.0	0.81		1.9	12.2	SW
25	24.5	14.3	16.2	0.00		1.1	5.8	SE
26	27.3	13.9	20.7	0.00		0.5	4.0	SW
27	26.1	17.1	19.2	0.00		0.7	5.1	S
28	27.9	16.9	18.9	0.00		1.0	5.5	SW
29	28.3	17.3	21.5	0.00		0.9	5.7	S
30	24.1	16.8	17.0	0.47		1.4	6.7	SW
31	26.1	15.5	16.6	0.00		1.1	5.8	N
Sum	859.1	505.3	589.9	4.74	0.0	Observer: Dan Bergstrom Station: St. David		
Avg	27.7	16.3	19.0					
Extreme	34.8	11.4		1.37	0.0			

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

TABLE AV-1 (Continued)

RECORD OF CLIMATOLOGICAL OBSERVATIONS FOR 1994-1999  
 FULTON COUNTY, ILLINOIS, STATION SWQ, SEC. 21, R4E, T6N

August 1996 Date	Temperature °C			Precipitation		Wind		
	Max	Min	6 PM	rain, melted snow	snow, sleet, hail	m/S	m/S	
				(inches & hund'ths)	(inches & tenths)	Avg	Max	Dir
1	25.7	13.6	16.3	0.00		0.5	4.1	N
2	27.5	13.9	17.9	0.00		0.3	4.0	NE
3	27.9	16.0	19.6	0.00		0.3	4.3	SE
4	27.4	18.9	23.0	0.00		1.1	4.9	N
5	32.5	22.4	26.3	0.00		2.6	7.5	N
6	32.8	23.4	25.6	0.00		1.8	6.7	S
7	33.8	22.0	22.5	0.04		1.6	9.3	SW
8	29.1	17.2	17.2	0.00		1.5	7.1	SE
9	27.9	14.7	17.8	0.00		0.7	4.2	N
10	28.0	14.9	20.8	0.00		0.3	3.1	SW
11	26.6	16.6	17.1	0.00		0.8	5.0	N
12	27.6	14.5	17.9	0.00		1.0	6.2	S
13	28.5	16.8	18.2	0.00		0.8	4.6	SW
14	30.2	15.6	22.4	0.00		1.9	8.4	SW
15	26.2	16.2	16.7	0.00		1.0	4.9	N
16	27.5	12.3	20.4	0.00		0.6	3.8	SW
17	22.2	18.0	19.6	0.00		0.5	3.6	NW
18	26.6	19.5	21.4	0.00		0.5	4.2	N
19	30.0	20.4	24.1	0.00		1.7	7.1	SW
20	30.3	19.8	22.2	0.00		0.8	4.2	NE
21	31.4	21.5	23.9	0.00		1.0	5.3	N
22	31.1	21.1	22.0	0.00		1.6	6.5	W
23	26.2	17.9	17.9	0.07		0.8	6.6	S
24	27.3	12.7	16.1	0.00		0.6	5.0	S
25	28.4	14.3	18.7	0.00		0.4	3.3	NW
26	29.7	17.0	19.9	0.00		0.4	3.6	S
27	27.3	18.0	18.9	0.00		1.2	4.6	N
28	28.5	15.3	18.4	0.00		0.3	3.2	NE
29	27.3	15.8	17.3	0.00		0.7	4.6	NE
30	26.8	13.2	18.2	0.00		0.7	5.1	NE
31	28.1	14.5	16.7	0.00		0.5	4.1	N
Sum	880.4	528.0	615.0	0.11	0.0	Observer: Dan Bergstrom Station: St. David		
Avg	28.4	17.0	19.8					
Extreme	33.8	12.3		0.07	0.0			

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

TABLE AV-1 (Continued)

RECORD OF CLIMATOLOGICAL OBSERVATIONS FOR 1994-1999  
 FULTON COUNTY, ILLINOIS, STATION SWQ, SEC. 21, R4E, T6N

September 1996 Date	Temperature °C			Precipitation		Wind		
	Max	Min	6 PM	rain, melted snow	snow, sleet, hail	m/S	m/S	Dir
				(inches & hund'th)	(inches & tenths)	Avg	Max	
1	29.2	15.6	16.8	0.00		0.3	4.8	N
2	29.6	14.3	17.0	0.00		0.3	3.5	N
3	29.8	15.1	18.1	0.00		0.4	6.2	SE
4	30.5	15.9	18.9	0.00		0.2	5.2	N
5	30.0	16.2	19.2	0.00		0.6	5.2	NE
6	30.0	18.2	19.5	0.00		1.0	4.6	S
7	29.7	17.2	19.0	0.00		0.5	4.1	S
8	24.8	16.8	20.1	0.08		0.2	3.0	SW
9	24.6	16.6	17.1	0.01		1.0	5.0	SE
10	29.1	13.6	16.1	0.00		0.5	3.4	NE
11	27.8	13.7	14.3	0.00		1.5	8.3	S
12	20.5	8.7	13.7	0.00		1.7	9.0	S
13	17.6	7.6	7.6	0.00		1.6	7.4	S
14	19.2	4.8	9.1	0.00		1.0	6.3	SE
15	20.9	5.3	14.4	0.00		0.5	4.4	NE
16	22.4	12.5	12.5	0.00		2.5	9.5	N
17	22.8	10.4	12.5	0.00		1.7	7.3	NE
18	23.3	9.1	13.3	0.00		0.7	4.7	NE
19	24.7	7.0	17.2	0.00		0.5	4.2	NW
20	22.5	10.5	10.9	0.00		1.2	7.6	NE
21	25.0	10.1	13.6	0.00		0.9	7.0	SW
22	26.1	8.1	14.6	0.00		1.1	6.4	NE
23	17.3	12.2	14.6	0.32		0.4	5.2	SE
24	21.0	6.8	6.8	0.00		1.5	6.3	N
25	20.3	6.2	15.4	0.01		0.5	5.7	NW
26	19.5	11.7	14.2	1.88		1.8	6.7	W
27	15.4	8.7	9.0	0.01		2.0	6.2	SW
28	19.2	6.6	7.5	0.00		1.8	8.8	S
29	24.8	5.7	12.4	0.00		1.1	5.6	NE
30	25.7	8.8	13.9	0.00		1.2	5.8	N
31								
Sum	723.3	334.0	429.3	2.31	0.0	Observer: Dan Bergstrom Station: St. David		
Avg	24.1	11.1	14.3					
Extreme	30.5	4.8		1.88	0.0			

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

TABLE AV-1 (Continued)

RECORD OF CLIMATOLOGICAL OBSERVATIONS FOR 1994-1999  
 FULTON COUNTY, ILLINOIS, STATION SWQ, SEC. 21, R4E, T6N

October 1996 Date	Temperature °C			Precipitation		Wind		
	Max	Min	6 PM	rain, melted snow	snow, sleet, hail	m/S	m/S	
				(inches & hundredths)	(inches & tenths)	Avg	Max	Dir
1	25.0	14.2	20.6	0.00		3.8	6.0	S
2	24.7	12.8	19.0	0.00		2.0	7.4	SE
3	19.3	3.9	11.7	0.00		2.4	7.0	NW
4	15.0	3.8	13.8	0.00		0.8	4.7	NE
5	18.1	7.6	17.4	0.00		0.6	4.5	S
6	23.3	11.4	21.3	0.00		1.3	7.7	SW
7	24.6	12.2	15.2	0.00		1.4	6.0	NE
8	15.4	7.1	9.0	0.14		2.4	7.4	N
9	14.1	1.1	12.3	0.00		0.8	5.7	SW
10	15.3	4.5	7.9	0.00		1.3	6.2	N
11	11.2	-0.9	11.2	0.00		1.0	6.5	SW
12	18.2	8.0	18.2	0.00		2.8	8.5	N
13	24.1	13.8	22.3	0.00		3.0	8.1	W
14	27.1	11.3	21.5	0.00		1.3	8.0	N
15	27.3	10.0	22.2	0.00		0.7	4.7	N
16	26.0	13.4	20.6	0.00		1.4	6.6	W
17	26.8	15.8	22.2	0.03		3.1	8.8	SW
18	24.0	5.3	10.2	0.43		3.2	9.7	SW
19	12.9	-2.2	11.7	0.00		1.4	10.4	S
20	16.2	2.5	13.4	0.00		0.9	5.2	NW
21	19.3	8.6	13.8	0.00		1.5	7.3	NE
22	16.7	10.5	16.2	0.14		1.0	5.3	NW
23	16.9	2.3	3.8	0.90		3.4	12.6	SW
24	12.9	2.5	12.7	0.00		1.9	6.8	W
25	18.7	5.3	17.1	0.00		1.7	6.2	NW
26	20.9	14.1	16.5	0.01		3.3	10.8	NW
27	22.4	14.9	15.9	0.00		2.5	7.6	SE
28	16.0	5.4	11.3	0.00		1.7	5.5	SE
29	15.4	9.6	15.4	0.00		1.2	5.8	N
30	23.3	6.1	7.8	0.19		6.1	17.7	SW
31	8.6	-3.7	5.1	0.00		2.8	9.9	SE
Sum	599.7	231.2	457.3	1.84	0.0	Observer: Dan Bergstrom		
Avg	19.3	7.5	14.8			Station: St. David		
Extreme	27.3	-3.7		0.90	0.0			



METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

TABLE AV-1 (Continued)

RECORD OF CLIMATOLOGICAL OBSERVATIONS FOR 1994-1999  
 FULTON COUNTY, ILLINOIS, STATION SWQ, SEC. 21, R4E, T6N

November 1996 Date	Temperature °C			Precipitation		Wind		
	Max	Min	6 PM	rain, melted snow	snow, sleet, hail	m/S	m/S	Dir
				(inches & hund' th)	(inches & tenths)	Avg	Max	
1	7.2	-3.9	-1.7	0.00		N/A	N/A	SE
2	2.9	-6.1	-4.5	0.00		1.8	8.1	SW
3	10.7	-6.4	2.5	0.00		2.1	7.2	N
4	10.9	1.4	6.9	0.05		2.3	8.1	NW
5	15.2	6.9	10.8	0.00		0.4	3.1	NW
6	19.6	6.6	6.6	1.00		3.0	8.0	N
7	8.8	-0.3	2.0	0.00		1.1	6.3	SW
8	5.0	-0.7	1.3	0.00		2.7	9.5	SE
9	3.7	-2.3	-1.7	0.00		2.7	7.9	SW
10	-0.2	-4.5	-3.3	0.00		2.5	7.1	SE
11	0.1	-6.7	-3.5	0.00		1.6	5.3	SE
12	-1.0	-9.5	-2.5	0.00		0.6	4.0	N
13	-1.0	-5.5	-5.5	0.00		1.1	5.2	N
14	2.7	-9.5	-0.5	0.00		1.9	7.4	N
15	7.2	-1.6	4.0	0.01		3.2	9.3	NW
16	13.7	4.1	9.8	0.04		4.9	13.2	S
17	11.1	-2.8	-1.4	0.24		3.0	8.9	SE
18	3.4	-2.3	-1.3	0.00		0.5	4.2	N
19	0.6	-2.5	-2.2	0.00		1.3	4.9	NE
20	4.8	-3.5	0.2	0.00		2.1	6.5	W
21	2.2	-2.3	-2.0	0.06		1.4	5.0	SE
22	3.7	-4.8	2.0	0.00		1.3	6.3	N
23	2.6	0.3	2.5	0.00		1.9	6.8	NE
24	2.5	-1.6	-1.6	0.08		2.5	7.3	S
25	-1.1	-7.0	-7.0	0.00		3.3	9.4	N
26	-1.9	-11.1	-8.6	0.00		2.5	7.0	SE
27	-2.6	-11.3	-3.7	0.00		0.8	3.5	N
28	5.6	-7.3	-1.9	0.00		1.6	5.8	NW
29	6.9	-2.2	6.9	0.41		2.3	6.8	N
30	8.2	0.1	0.1	0.01		2.0	6.0	S
31								
Sum	151.5	-96.3	2.7	1.90	0.0	Observer: Dan Bergstrom Station: St. David		
Avg	5.1	-3.2	0.1					
Extreme	19.6	-11.3		1.00	0.0			

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

TABLE AV-1 (Continued)

RECORD OF CLIMATOLOGICAL OBSERVATIONS FOR 1994-1999  
 FULTON COUNTY, ILLINOIS, STATION SWQ, SEC. 21, R4E, T6N

December 1996 Date	Temperature °C			Precipitation		Wind		
	Max	Min	6 PM	rain, melted snow	snow, sleet, hail	m/S	m/S	
				(inches & hund'th)	(inches & tenths)	Avg	Max	Dir
1	7.2	-2.8	-2.8	0.06	1.0	N/A	N/A	N/A
2	-1.7	-7.8	-6.7			N/A	N/A	N/A
3	5.0	-6.7	-1.7			N/A	N/A	N/A
4	-1.1	-10.0	-9.4			N/A	N/A	N/A
5	1.1	-9.4	0.6	0.08	0.8	N/A	N/A	N/A
6	1.7	0.0	1.7			N/A	N/A	N/A
7	1.7	4.4	1.7			N/A	N/A	N/A
8	8.9	-3.3	-3.3			N/A	N/A	N/A
9	-1.7	-4.4	-4.4			N/A	N/A	N/A
10	1.1	-4.4	1.1			N/A	N/A	N/A
11	12.8	1.1	3.9	0.21		N/A	N/A	N/A
12	3.9	2.8	2.8	0.03		N/A	N/A	N/A
13	4.4	-4.4	-2.8			N/A	N/A	N/A
14	6.7	-2.8	3.3			N/A	N/A	N/A
15	7.8	3.3	3.3	0.08		N/A	N/A	N/A
16	3.3	-3.3	-3.3			N/A	N/A	N/A
17	0.6	-5.6	-5.6			N/A	N/A	N/A
18	-5.0	-12.8	-12.8			N/A	N/A	N/A
19	-10.0	-16.1	-15.6			N/A	N/A	N/A
20	-11.1	-17.2	-16.7			N/A	N/A	N/A
21	-3.3	-16.7	-3.3			N/A	N/A	N/A
22	4.4	-3.3	2.2			N/A	N/A	N/A
23	7.2	2.2	6.1	0.05		N/A	N/A	N/A
24	12.2	-13.3	-12.8	0.12		N/A	N/A	N/A
25	-7.8	-15.6	-15.6			N/A	N/A	N/A
26	-8.3	-15.6	-8.3			N/A	N/A	N/A
27	-3.3	-8.3	-3.3			N/A	N/A	N/A
28	2.8	-3.3	2.2	0.10		N/A	N/A	N/A
29	6.7	-1.7	-1.7			N/A	N/A	N/A
30	-1.7	-6.7	-4.4			N/A	N/A	N/A
31	1.1	-4.4	-1.7			N/A	N/A	N/A
Sum	45.6	-186.1	-107.2	0.73	1.8	Observer: Dan Bergstrom Station: St. David		
Avg	1.5	-6.0	-3.5					
Extreme	12.8	-17.2		0.21	1.0			

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

TABLE AV-1 (Continued)

RECORD OF CLIMATOLOGICAL OBSERVATIONS FOR 1994-1999  
 FULTON COUNTY, ILLINOIS, STATION SWQ, SEC. 21, R4E, T6N

January 1997 Date	Temperature °C			Precipitation		Wind		
	Max	Min	6 PM	rain, melted snow	snow, sleet, hail	m/S	m/S	
				(inches & hundredths)	(inches & tenths)	Avg	Max	Dir
1	8.9	0.6	7.2	0.02		N/A	N/A	N/A
2	14.4	6.1	10.6	0.02		N/A	N/A	N/A
3	11.7	1.1	8.9	0.00		N/A	N/A	N/A
4	18.3	4.4	4.4	0.00		N/A	N/A	N/A
5	-2.2	-6.1	-5.6	0.00		N/A	N/A	N/A
6	-3.9	-12.8	-7.2	0.00		N/A	N/A	N/A
7	-1.7	-12.8	-7.8	0.00		N/A	N/A	N/A
8	-1.7	-8.3	-3.3	0.00		N/A	N/A	N/A
9	-2.8	-8.9	-5.0	0.17	2.5	N/A	N/A	N/A
10	-14.4	-17.2	-16.7	0.24	3.5	N/A	N/A	N/A
11	-16.1	-20.0	-18.3	0.00		N/A	N/A	N/A
12	-17.8	-22.2	-18.9	0.00		N/A	N/A	N/A
13	-12.2	-18.9	-15.0	0.00		N/A	N/A	N/A
14	-8.9	-19.4	-10.0	0.00		N/A	N/A	N/A
15	-3.3	-8.9	-3.3	0.10	2.0	N/A	N/A	N/A
16	-14.4	-17.8	-16.7	0.25	3.8	N/A	N/A	N/A
17	-13.3	-22.8	-15.6	0.00		N/A	N/A	N/A
18	-11.7	-20.0	-12.2	0.00		N/A	N/A	N/A
19	0.0	-8.9	-2.8	0.00		N/A	N/A	N/A
20	0.0	-7.8	-3.3	0.00		N/A	N/A	N/A
21	7.8	-3.3	1.7	0.00		N/A	N/A	N/A
22	8.3	1.7	5.0	0.15		N/A	N/A	N/A
23	5.6	-9.4	-9.4	0.00		N/A	N/A	N/A
24	-1.1	-9.4	-1.1	0.00		N/A	N/A	N/A
25	0.0	-16.7	-16.7	0.40	2.0	N/A	N/A	N/A
26	-13.9	-16.7	-15.0	0.00		N/A	N/A	N/A
27	-3.9	-15.0	-3.9	0.08	3.0	N/A	N/A	N/A
28	-3.9	-22.8	-22.8	0.21	4.2	N/A	N/A	N/A
29	-13.3	-22.8	-16.7	0.00		N/A	N/A	N/A
30	-6.7	-14.4	-11.7	0.00		N/A	N/A	N/A
31	2.2	-11.7	2.2	0.00		N/A	N/A	N/A
Sum	-98.9	-361.7	-226.1	1.64	21.0	Observer: Dan Bergstrom Station: St. David		
Avg	-3.3	-12.1	-7.5					
Extreme	18.3	-22.8		0.40	4.2			

\*N/A=Not available

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

TABLE AV-1 (Continued)

RECORD OF CLIMATOLOGICAL OBSERVATIONS FOR 1994-1999  
 FULTON COUNTY, ILLINOIS, STATION SWQ, SEC. 21, R4E, T6N

February 1997 Date	Temperature °C			Precipitation		Wind		
	Max	Min	6 PM	rain, melted snow	snow, sleet, hail	m/S	m/S	
				(inches & hundredths)	(inches & tenths)	Avg	Max	Dir
1	8.3	-0.6	-0.6			N/A	N/A	N/A
2	3.3	-1.1	1.1			N/A	N/A	N/A
3	3.3	-2.8	-1.1			N/A	N/A	N/A
4	1.1	-1.1	1.1	0.10		N/A	N/A	N/A
5	1.7	-2.8	-2.8			N/A	N/A	N/A
6	1.1	-2.8	-2.8			N/A	N/A	N/A
7	-2.8	-5.0	-5.0			N/A	N/A	N/A
8	-2.2	-5.0	-2.2			N/A	N/A	N/A
9	1.1	-2.8	-2.2			N/A	N/A	N/A
10	0.6	-2.8	-2.2			N/A	N/A	N/A
11	-1.1	-4.4	-4.4			N/A	N/A	N/A
12	-2.8	-6.7	-6.7			N/A	N/A	N/A
13	-2.8	-7.2	-7.8			N/A	N/A	N/A
14	-0.6	-5.6	-3.9			N/A	N/A	N/A
15	2.8	-10.0	-10.0			N/A	N/A	N/A
16	0.0	-10.0	-3.9	0.10	1.0	N/A	N/A	N/A
17	-2.8	-5.6	-2.8			N/A	N/A	N/A
18	9.4	-2.8	7.2			N/A	N/A	N/A
19	16.7	2.2	2.2	0.06		N/A	N/A	N/A
20	7.8	-1.1	3.9			N/A	N/A	N/A
21	11.1	3.9	4.4	3.21		N/A	N/A	N/A
22	4.4	-3.3	-2.8	0.45	0.1	N/A	N/A	N/A
23	2.8	-2.2	0.0			N/A	N/A	N/A
24	2.2	-5.6	-5.0			N/A	N/A	N/A
25	-1.1	-8.9	-7.2			N/A	N/A	N/A
26	4.4	-4.4	2.8	0.28		N/A	N/A	N/A
27	3.9	0.0	0.0	1.34		N/A	N/A	N/A
28	2.8	0.0	1.7			N/A	N/A	N/A
29								
30								
31								
Sum	72.8	-98.3	-48.9	5.54	1.1	Observer: Dan Bergstrom Station: St. David		
Avg	2.6	-3.5	-1.7					
Extreme	16.7	-10.0		3.21	1.0			

\*N/A=Not available

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

TABLE AV-1 (Continued)

RECORD OF CLIMATOLOGICAL OBSERVATIONS FOR 1994-1999  
 FULTON COUNTY, ILLINOIS, STATION SWQ, SEC. 21, R4E, T6N

March 1997 Date	Temperature °C			Precipitation		Wind		
	Max	Min	6 PM	rain, melted snow	snow, sleet, hail	m/S	m/S	
				(inches & hundredths)	(inches & tenths)	Avg	Max	Dir
1	10.6	1.7	10.6	0.09		N/A*	N/A	N/A
2	15.0	-2.2	-1.1	0.00		N/A	N/A	N/A
3	6.1	-1.7	-0.6	0.00		N/A	N/A	N/A
4	7.2	-0.6	4.4	0.00		N/A	N/A	N/A
5	7.2	-1.1	-1.1	0.00		N/A	N/A	N/A
6	2.2	-3.3	-2.8	0.00		N/A	N/A	N/A
7	0.6	-5.0	-2.8	0.00		N/A	N/A	N/A
8	13.9	-0.6	1.7	0.00		N/A	N/A	N/A
9	12.2	1.7	7.2	0.65		N/A	N/A	N/A
10	9.4	-2.2	1.7	0.29		N/A	N/A	N/A
11	13.9	1.7	5.6	0.00		N/A	N/A	N/A
12	10.6	-1.1	2.8	0.00		N/A	N/A	N/A
13	10.0	2.2	-2.2	0.00		N/A	N/A	N/A
14	8.3	-2.2	-2.2	0.28		N/A	N/A	N/A
15	-2.2	-10.6	-9.4	0.00		N/A	N/A	N/A
16	-2.2	-9.4	-4.4	0.00		N/A	N/A	N/A
17	7.2	-4.4	7.2	0.00		N/A	N/A	N/A
18	13.3	2.2	2.2	0.08		N/A	N/A	N/A
19	3.3	-3.3	0.0	0.03		N/A	N/A	N/A
20	10.6	0.0	6.1	0.00		N/A	N/A	N/A
21	15.6	5.6	11.1	0.00		N/A	N/A	N/A
22	23.3	4.4	4.4	0.00		N/A	N/A	N/A
23	8.9	3.3	3.9	0.00		N/A	N/A	N/A
24	10.0	0.0	2.2	0.00		N/A	N/A	N/A
25	10.6	2.2	4.4	0.56		N/A	N/A	N/A
26	6.7	-1.7	2.2	0.00		N/A	N/A	N/A
27	16.7	3.3	10.0	0.00		N/A	N/A	N/A
28	22.2	11.1	12.8	0.03		N/A	N/A	N/A
29	20.6	6.1	6.1	0.00		N/A	N/A	N/A
30	11.1	5.6	5.6	0.10		N/A	N/A	N/A
31	12.8	-0.6	3.3	0.03		N/A	N/A	N/A
Sum	315.6	1.1	88.9	2.14	0.0	Observer: Dan Bergstrom Station: St. David		
Avg	10.2	0.0	2.9					
Extreme	23.3	-10.6		0.65	0.0			

\*N/A=Not available

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

TABLE AV-1 (Continued)

RECORD OF CLIMATOLOGICAL OBSERVATIONS FOR 1994-1999  
 FULTON COUNTY, ILLINOIS, STATION SWQ, SEC. 21, R4E, T6N

April 1997 Date	Temperature °C			Precipitation		Wind		
	Max	Min	6 PM	rain, melted snow	snow, sleet, hail	m/S	m/S	
				(inches & hundredths)	(inches & tenths)	Avg	Max	Dir
1	18.3	1.7	N/A*			N/A*	N/A	N/A
2	20.6	5.6	N/A			N/A	N/A	N/A
3	22.8	10.6	N/A			N/A	N/A	N/A
4	21.7	10.0	N/A			N/A	N/A	N/A
5	20.0	13.3	N/A	0.28		N/A	N/A	N/A
6	13.9	0.6	N/A	0.15		N/A	N/A	N/A
7	7.2	-2.8	N/A			N/A	N/A	N/A
8	3.3	-5.6	N/A			N/A	N/A	N/A
9	5.6	-7.2	N/A			N/A	N/A	N/A
10	5.0	-0.6	N/A			N/A	N/A	N/A
11	2.2	0.0	N/A	0.42	4.3	N/A	N/A	N/A
12	2.2	0.0	N/A	1.85		N/A	N/A	N/A
13	6.7	-2.2	N/A			N/A	N/A	N/A
14	12.2	-3.9	N/A			N/A	N/A	N/A
15	20.6	1.7	N/A			N/A	N/A	N/A
16	8.9	2.2	N/A			N/A	N/A	N/A
17	11.7	-1.1	N/A			N/A	N/A	N/A
18	16.7	1.7	N/A	0.16		N/A	N/A	N/A
19	16.1	7.2	N/A	0.21		N/A	N/A	N/A
20	16.1	5.0	N/A			N/A	N/A	N/A
21	17.8	6.1	N/A			N/A	N/A	N/A
22	15.6	3.3	N/A			N/A	N/A	N/A
23	13.9	2.8	N/A			N/A	N/A	N/A
24	16.1	4.4	N/A			N/A	N/A	N/A
25	18.9	1.7	N/A			N/A	N/A	N/A
26	19.4	8.3	N/A			N/A	N/A	N/A
27	12.8	4.4	N/A			N/A	N/A	N/A
28	18.3	1.7	N/A			N/A	N/A	N/A
29	22.8	7.2	N/A			N/A	N/A	N/A
30	20.0	3.9	N/A	0.28		N/A	N/A	N/A
31								
Sum	427.2	80.0		3.35	4.3	Observer: Dan Bergstrom Station: St. David		
Avg	14.2	2.7						
Extreme	22.8	-7.2		1.85	4.3			

\*N/A=Not available

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

TABLE AV-1 (Continued)

RECORD OF CLIMATOLOGICAL OBSERVATIONS FOR 1994-1999  
 FULTON COUNTY, ILLINOIS, STATION SWQ, SEC. 21, R4E, T6N

May 1997 Date	Temperature °C			Precipitation		Wind		
	Max	Min	6 PM	rain, melted snow	snow, sleet, hail	m/S	m/S	
				(inches & hundredths)	(inches & tenths)	Avg	Max	Dir
1	19.4	4.4	5.0	0.28		N/A*	N/A	N/A
2	16.1	5.0	11.7			N/A	N/A	N/A
3	15.6	7.2	7.2			N/A	N/A	N/A
4	14.4	6.7	8.9			N/A	N/A	N/A
5	19.4	8.9	13.9			N/A	N/A	N/A
6	23.3	6.7	11.7			N/A	N/A	N/A
7	4.4	11.7	13.3			N/A	N/A	N/A
8	19.4	13.3	15.0	0.35		N/A	N/A	N/A
9	22.2	8.3	8.3			N/A	N/A	N/A
10	16.7	4.4	10.6			N/A	N/A	N/A
11	19.4	9.4	12.8			N/A	N/A	N/A
12	20.6	6.1	8.3			N/A	N/A	N/A
13	17.2	6.1	7.2	0.07		N/A	N/A	N/A
14	15.0	7.2	11.7	0.03		N/A	N/A	N/A
15	15.0	3.3	7.2			N/A	N/A	N/A
16	13.9	1.1	6.7			N/A	N/A	N/A
17	20.6	6.7	16.7			N/A	N/A	N/A
18	29.4	10.6	15.6			N/A	N/A	N/A
19	30.0	14.4	14.4	0.32		N/A	N/A	N/A
20	17.8	5.0	11.1			N/A	N/A	N/A
21	17.8	5.0	10.0			N/A	N/A	N/A
22	17.8	7.8	11.7			N/A	N/A	N/A
23	20.6	11.1	14.4			N/A	N/A	N/A
24	24.4	14.4	17.8			N/A	N/A	N/A
25	28.3	17.8	19.4	0.33		N/A	N/A	N/A
26	19.4	10.0	10.0	0.03		N/A	N/A	N/A
27	12.2	8.9	10.6	1.10		N/A	N/A	N/A
28	19.4	10.6	12.8	0.53		N/A	N/A	N/A
29	17.2	12.2	13.3	0.05		N/A	N/A	N/A
30	16.7	10.6	13.9			N/A	N/A	N/A
31	18.9	13.3	15.6	0.02		N/A	N/A	N/A
Sum	582.8	268.3	366.7	3.11	0.0	Observer: Dan Bergstrom Station: St. David		
Avg	18.8	8.7	11.8					
Extreme	30.0	1.1		1.10	0.0			

\*N/A=Not available

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

TABLE AV-1 (Continued)

RECORD OF CLIMATOLOGICAL OBSERVATIONS FOR 1994-1999  
 FULTON COUNTY, ILLINOIS, STATION SWQ, SEC. 21, R4E, T6N

June 1997 Date	Temperature °C			Precipitation		Wind		
				rain, melted snow (inches & hundredths)	snow, sleet, hail (inches & tenths)	m/S Avg	m/S Max	Dir
	Max	Min	6 PM					
1	23.9	11.7	14.4	0.00		N/A*	N/A	N/A
2	23.3	13.9	13.9	0.06		N/A	N/A	N/A
3	18.9	13.9	16.1	0.00		N/A	N/A	N/A
4	18.9	11.1	13.9	0.00		N/A	N/A	N/A
5	23.3	10.0	15.0	0.00		N/A	N/A	N/A
6	23.3	14.4	14.4	0.54		N/A	N/A	N/A
7	21.7	15.6	15.6	0.48		N/A	N/A	N/A
8	21.1	14.4	14.4	0.60		N/A	N/A	N/A
9	17.8	11.7	15.6	0.00		N/A	N/A	N/A
10	25.0	12.8	17.8	0.00		N/A	N/A	N/A
11	24.4	16.7	18.9	0.10		N/A	N/A	N/A
12	25.0	16.7	19.4	0.00		N/A	N/A	N/A
13	23.9	13.9	17.2	0.96		N/A	N/A	N/A
14	26.1	15.6	16.1	0.00		N/A	N/A	N/A
15	25.0	12.8	16.7	0.00		N/A	N/A	N/A
16	28.3	16.7	20.0	0.10		N/A	N/A	N/A
17	27.8	14.4	16.7	0.00		N/A	N/A	N/A
18	26.1	14.4	18.9	0.00		N/A	N/A	N/A
19	32.0	14.5	25.0	0.00		2.4	3.5	N
20	31.9	23.1	25.3	0.00		2.7	4.5	N
21	28.6	19.9	20.3	0.00		2.6	3.4	S
22	30.3	18.2	23.3	0.00		3.6	19.2	N
23	32.9	19.9	25.3	0.00		5.4	19.4	N
24	32.9	21.8	26.1	0.00		2.6	8.5	N
25	28.2	19.9	19.9	0.00		1.4	1.9	N
26	29.5	16.8	18.6	0.00		4.0	19.4	N
27	30.2	15.3	19.5	0.00		6.3	19.4	N
28	31.2	17.0	24.4	0.00		6.3	19.6	N
29	30.4	19.8	23.6	0.00		1.8	4.3	S
30	29.5	20.5	20.6	0.00		0.1	0.3	S
31								
Sum	791.5	477.3	566.9	2.84	0.0	Observer: Dan Bergstrom		
Avg	26.4	15.9	18.9			Station: St. David		
Extreme	32.9	10.0		0.96	0.0			

\*N/A=Not available



METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

TABLE AV-1 (Continued)

RECORD OF CLIMATOLOGICAL OBSERVATIONS FOR 1994-1999  
 FULTON COUNTY, ILLINOIS, STATION SWQ, SEC. 21, R4E, T6N

July 1997 Date	Temperature °C			Precipitation		Wind		
	Max	Min	6 PM	rain, melted snow	snow, sleet, hail	m/S	m/S	Dir
				(inches & hundredths)	(inches & tenths)	Avg	Max	
1	31.5	18.7	26.1	0.00		0.2	0.4	N
2	30.5	20.0	20.0	0.00		2.4	19.2	N
3	19.9	15.5	16.2	0.00		0.4	0.5	N
4	20.3	12.8	13.5	0.00		0.3	0.5	N
5	24.7	9.9	14.4	0.00		0.4	2.2	N
6	26.6	13.5	17.9	0.00		1.6	8.8	N
7	28.5	13.0	22.2	0.00		1.3	18.5	N
8	30.1	20.1	22.1	0.00		0.8	2.1	N
9	23.1	14.0	14.0	0.00		1.6	3.1	N
10	26.4	12.8	15.2	0.00		0.9	2.5	N
11	29.2	13.1	21.3	0.00		3.1	18.9	N
12	31.4	17.9	24.6	0.00		1.4	5.0	N
13	34.6	22.0	25.6	0.00		1.8	9.4	N
14	31.1	18.6	18.6	0.00		0.7	1.3	N
15	32.6	17.0	21.1	0.00		3.4	19.7	S
16	33.0	16.2	20.2	0.00		0.4	1.9	N
17	32.7	17.3	22.5	0.00		0.6	1.6	S
18	34.7	19.7	22.4	0.00		2.8	19.5	N
19	33.7	20.8	21.3	1.75		1.1	19.5	S
20	32.4	20.7	24.7	0.00		0.2	0.5	S
21	29.0	21.4	22.7	0.29		0.2	0.6	N
22	25.0	21.4	22.2	0.00		0.2	0.4	S
23	27.2	20.4	20.4	0.00		0.0	0.7	S
24	28.8	16.9	22.1	0.00		0.0	0.4	S
25	33.4	20.8	27.5	0.00		0.2	0.4	S
26	35.4	24.7	26.6	0.00		0.2	0.4	S
27	34.7	23.0	23.1	0.20		0.2	0.5	S
28	27.6	21.0	22.3	0.00		0.2	0.4	S
29	24.4	15.9	16.1	0.00		0.1	0.4	S
30	26.0	13.2	14.7	0.00		0.0	0.4	S
31	28.3	12.5	14.7	0.00		0.0	0.2	S
Sum	906.8	544.8	636.3	2.24	0.0	Observer: Dan Bergstrom Station: St. David		
Avg	29.3	17.6	20.5					
Extreme	35.4	9.9		1.75	0.0			

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

TABLE AV-1 (Continued)

RECORD OF CLIMATOLOGICAL OBSERVATIONS FOR 1994-1999  
 FULTON COUNTY, ILLINOIS, STATION SWQ, SEC. 21, R4E, T6N

August 1997 Date	Temperature °C			Precipitation		Wind		
	Max	Min	6 PM	rain, melted snow	snow, sleet, hail	m/S	m/S	Dir
				(inches & hundredths)	(inches & tenths)	Avg	Max	
1	28.9	13.9	18.9	0.00		N/A	N/A	N/A
2	29.4	18.9	23.9	0.00		N/A	N/A	N/A
3	32.8	17.2	23.9	0.00		N/A	N/A	N/A
4	33.9	19.4	21.1	1.56		N/A	N/A	N/A
5	30.6	15.0	16.7	0.00		N/A	N/A	N/A
6	25.0	10.0	16.1	0.00		N/A	N/A	N/A
7	25.6	12.2	17.8	0.00		N/A	N/A	N/A
8	27.2	14.4	18.9	0.00		N/A	N/A	N/A
9	28.9	18.9	20.0	0.20		N/A	N/A	N/A
10	25.0	20.0	21.1	0.02		N/A	N/A	N/A
11	27.8	18.3	18.3	0.21		N/A	N/A	N/A
12	28.2	19.3	28.0	0.00		1.7	5.1	W
13	28.3	18.7	22.9	0.08		1.5	5.2	N
14	24.6	13.8	24.5	0.00		0.6	6.2	S
15	31.4	19.2	31.4	0.11		2.7	10.1	W
16	32.9	24.5	32.9	0.00		2.6	6.3	S
17	33.1	19.2	24.8	1.53		1.5	9.3	W
18	25.9	17.3	20.0	0.00		1.3	4.4	NE
19	21.4	15.8	17.4	0.19		0.2	3.2	W
20	23.3	16.5	23.3	0.03		0.6	4.2	NE
21	24.9	13.4	21.9	0.00		1.7	5.2	SE
22	23.6	13.2	21.8	0.09		1.0	6.8	N
23	24.1	10.6	23.8	0.00		0.5	3.5	SE
24	29.0	16.8	28.9	0.00		2.0	6.2	SW
25	29.5	18.0	26.0	0.52		0.6	3.7	NW
26	28.1	17.6	28.1	0.00		0.6	5.6	N
27	29.7	21.2	25.7	0.00		1.0	5.6	W
28	29.4	17.4	29.2	0.00		0.3	2.7	NE
29	30.3	15.7	26.4	0.00		0.4	3.7	NW
30	26.8	17.7	21.2	0.57		0.2	4.4	SW
31	27.0	17.8	26.8	0.00		0.6	4.7	S
Sum	866.5	522.0	721.7	5.11	0.0	Observer: Dan Bergstrom Station: St. David		
Avg	28.0	16.8	23.3					
Extreme	33.9	10.0		1.56	0.0			

\*N/A=Not available

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

TABLE AV-1 (Continued)

RECORD OF CLIMATOLOGICAL OBSERVATIONS FOR 1994-1999  
 FULTON COUNTY, ILLINOIS, STATION SWQ, SEC. 21, R4E, T6N

September 1997 Date	Temperature °C			Precipitation		Wind		
	Max	Min	6 PM	rain, melted snow	snow, sleet, hail	m/S	m/S	Dir
				(inches & hundredths)	(inches & tenths)	Avg	Max	
1	30.1	17.3	29.7	0.00		0.2	3.2	N
2	30.4	20.2	21.5	1.16		0.3	6.7	NE
3	25.3	12.3	19.8	0.00		2.7	6.7	SW
4	20.9	7.8	20.5	0.00		0.8	5.6	NW
5	22.4	8.6	22.3	0.00		1.0	5.8	SW
6	29.0	13.3	28.8	0.00		1.4	5.5	SW
7	29.4	16.5	28.8	0.00		0.4	5.0	W
8	28.8	17.8	22.1	0.02		0.2	3.5	NE
9	23.5	18.2	23.2	0.43		0.6	4.0	W
10	24.6	13.7	20.5	0.36		1.3	5.2	S
11	22.5	10.3	21.3	0.00		0.5	5.1	S
12	23.7	8.9	23.4	0.00		0.3	3.8	S
13	24.9	12.0	22.4	0.00		0.2	2.7	N
14	26.3	16.7	26.1	0.00		0.1	2.1	W
15	28.6	17.6	28.4	0.00		0.2	3.4	NW
16	30.9	17.8	30.9	0.00		0.5	5.0	NW
17	31.7	18.8	27.2	0.35		1.9	9.6	S
18	28.8	12.9	27.8	0.00		0.9	8.9	NW
19	30.3	22.0	28.8	0.00		2.8	7.4	W
20	29.6	15.3	19.5	0.00		1.9	5.2	SE
21	20.7	7.6	18.2	0.00		0.7	6.5	SE
22	20.8	9.9	20.7	0.00		0.4	2.7	N
23	21.9	12.9	15.6	0.32		0.7	3.4	NE
24	21.6	8.0	21.5	0.00		1.0	4.3	W
25	25.5	7.9	25.5	0.00		0.9	4.7	W
26	26.2	10.5	25.3	0.00		0.4	4.7	N
27	26.1	9.6	26.1	0.00		0.4	4.3	S
28	26.4	13.5	20.0	0.00		0.7	4.5	S
29	27.0	9.8	27.0	0.00		2.3	8.5	SE
30	27.2	13.2	22.0	0.00		1.1	10.4	S
31								N
Sum	785.1	400.9	714.9	2.64	0.0	Observer: Dan Bergstrom Station: St. David		
Avg	26.2	13.4	23.8					
Extreme	31.7	7.6		1.16	0.0			

\*N/A=Not available

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

TABLE AV-1 (Continued)

RECORD OF CLIMATOLOGICAL OBSERVATIONS FOR 1994-1999  
 FULTON COUNTY, ILLINOIS, STATION SWQ, SEC. 21, R4E, T6N

October 1997 Date	Temperature °C			Precipitation		Wind		
	Max	Min	6 PM	rain, melted snow	snow, sleet, hail	m/S	m/S	Dir
				(inches & hundredths)	(inches & tenths)	Avg	Max	
1	22.3	6.3	19.7	0.00		0.9	7.1	W
2	27.5	9.5	27.5	0.00		0.9	6.7	N
3	30.8	15.0	30.8	0.00		1.6	6.3	SW
4	31.3	19.9	24.8	0.02		2.5	6.4	SE
5	30.2	14.6	29.9	0.00		1.1	7.3	W
6	29.9	13.7	28.8	0.00		1.4	7.7	SW
7	29.4	15.1	28.8	0.00		0.9	6.2	N
8	29.1	19.1	27.7	0.00		1.4	8.9	SW
9	27.9	17.5	20.7	0.08		2.8	7.4	W
10	23.6	5.7	23.5	0.00		0.4	4.9	NW
11	26.2	12.0	25.0	0.00		0.5	4.9	SW
12	26.4	18.9	24.7	0.00		1.8	13.1	N
13	25.1	9.9	11.0	0.38		4.1	9.3	SE
14	12.2	1.8	11.7	0.00		1.2	5.9	SE
15	15.5	-0.3	15.5	0.00		0.4	4.1	SW
16	15.3	7.3	14.7	0.00		0.5	5.7	NE
17	15.1	2.2	14.1	0.00		0.6	4.6	SW
18	14.8	-0.6	14.4	0.00		0.4	3.6	SW
19	19.3	0.1	18.6	0.00		0.8	5.3	SW
20	18.5	2.5	12.0	0.00		1.5	5.3	SE
21	12.6	3.7	8.0	0.00		1.3	6.2	S
22	9.2	-3.4	8.1	0.00		0.6	5.7	SW
23	14.8	4.0	14.8	0.00		1.5	8.8	SW
24	15.0	7.4	11.3	0.12		1.2	8.1	SW
25	13.2	7.7	11.9	0.22		2.2	5.7	W
26	11.7	4.7	5.4	0.35		3.6	9.8	NE
27	5.6	-2.1	5.1	0.36	Trace	3.0	9.4	SE
28	12.3	-3.4	12.3	0.00		1.2	6.2	SW
29	15.0	-0.8	15.0	0.00		0.9	7.3	SW
30	17.0	5.9	16.9	0.00		1.2	6.9	SW
31	20.1	12.6	19.7	0.00		2.6	6.0	N
Sum	616.9	226.5	552.4	1.53	0.0	Observer: Dan Bergstrom Station: St. David		
Avg	19.9	7.3	17.8					
Extreme	31.3	-3.4		0.38	0.0			

\*N/A=Not available

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

TABLE AV-1 (Continued)

RECORD OF CLIMATOLOGICAL OBSERVATIONS FOR 1994-1999  
 FULTON COUNTY, ILLINOIS, STATION SWQ, SEC. 21, R4E, T6N

November 1997 Date	Temperature °C			Precipitation		Wind		
	Max	Min	6 PM	rain, melted snow	snow, sleet, hail	m/S	m/S	Dir
				(inches & hundredths)	(inches & tenths)	Avg	Max	
1	19.7	7.7	8.1	0.23		2.7	9.3	SW
2	8.1	0.8	0.9	0.02		2.1	9.9	SE
3	2.9	-0.7	2.2	0.05	Trace	2.6	7.8	SE
4	2.7	0.1	2.7	0.00		1.6	5.9	S
5	4.6	0.6	4.6	0.44		1.0	5.5	SW
6	7.9	4.7	7.8	0.77		2.6	6.4	NE
7	8.5	4.1	8.3	0.00		1.7	5.4	NE
8	8.4	0.7	7.7	0.00		0.6	3.5	SE
9	7.8	4.4	6.8	0.00		0.5	3.3	S
10	7.0	2.7	4.4	0.00		2.0	5.4	S
11	4.7	-1.1	1.4	0.00		1.6	5.4	SW
12	2.2	-7.9	2.0	0.00		0.7	6.0	W
13	2.5	-2.5	1.9	0.00		1.3	5.4	W
14	4.8	-1.3	3.6	0.00		1.3	4.3	W
15	3.7	-5.3	0.2	0.00		1.3	6.3	S
16	0.2	-6.3	-3.0	0.00		3.3	6.9	SW
17	5.8	-9.8	5.6	0.00		1.8	7.5	S
18	9.0	-4.0	9.0	0.00		2.1	7.4	SW
19	9.3	-3.9	6.5	0.00		1.0	4.7	SW
20	13.4	-1.2	12.8	0.00		0.8	5.4	SW
21	13.2	1.3	5.8	0.00		1.7	4.7	NE
22	6.5	-4.7	2.8	0.00		1.2	4.8	W
23	4.9	-7.5	3.9	0.00		1.9	6.9	W
24	5.2	-7.5	4.4	0.00		1.1	5.7	NW
25	15.9	2.1	15.8	0.00		3.3	7.7	S
26	15.9	5.5	11.1	0.00		3.5	8.7	SE
27	11.7	-2.9	6.8	0.02		1.8	8.6	S
28	15.4	5.9	15.4	0.59		2.4	6.2	NW
29	16.0	12.5	14.6	0.20		0.6	3.1	NW
30	14.6	5.1	5.1	1.32		3.0	11.2	NE
31								
Sum	252.5	-8.4	179.2	3.64	0.0	Observer: Emil Boucek		
Avg	8.4	-0.3	6.0			Station: St. David		
Extreme	19.7	-9.8		1.32	0.0			

\*N/A=Not available

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

TABLE AV-1 (Continued)

RECORD OF CLIMATOLOGICAL OBSERVATIONS FOR 1994-1999  
 FULTON COUNTY, ILLINOIS, STATION SWQ, SEC. 21, R4E, T6N

December 1997 Date	Temperature °C			Precipitation		Wind		
	Max	Min	6 PM	rain, melted snow	snow, sleet, hail	m/S	m/S	
				(inches & hundredths)	(inches & tenths)	Avg	Max	Dir
1	4.9	2.3	4.7	0.00		2.9	8.1	NW
2	6.1	0.6	5.9	0.00		0.9	3.4	SW
3	6.5	2.4	4.1	0.13		1.0	4.3	SW
4	4.2	-2.3	-1.1	0.00		2.8	7.6	SE
5	-1.1	-6.2	-5.8	0.02	Trace	3.4	8.8	SE
6	-2.6	-6.3	-2.6	0.00		3.7	8.6	S
7	-2.0	-2.8	-2.3	0.00		2.5	6.5	SW
8	-0.8	-3.4	-0.8	0.00		1.6	5.1	W
9	0.6	-1.7	0.5	0.03	Trace	1.1	3.5	W
10	1.5	-0.6	1.4	0.38	3.5	2.0	6.1	N
11	1.5	0.0	1.3	0.00		2.0	5.5	S
12	1.4	-1.8	0.3	0.00		1.5	4.6	W
13	0.8	-5.9	0.5	0.00		2.7	6.3	SE
14	4.5	-8.3	4.3	0.00		0.5	3.8	S
15	8.1	-5.4	8.1	0.00		0.9	5.6	S
16	8.3	-0.7	8.3	0.00		1.7	5.1	W
17	8.8	-5.8	7.0	0.00		0.8	2.8	S
18	10.6	-0.5	10.6	0.00		1.6	4.8	W
19	12.7	-1.8	12.4	0.00		0.3	4.6	NW
20	12.6	-0.3	0.2	0.00		1.9	5.0	W
21	1.5	-1.2	1.0	0.00		1.8	6.0	NW
22	1.2	0.2	0.9	0.17		2.8	8.6	SE
23	4.3	0.5	4.1	0.00		1.5	4.4	SW
24	5.3	0.1	0.3	0.56	3.0	2.2	12.1	NE
25	0.4	-3.0	-3.0	0.07	0.5	2.5	5.4	SW
26	1.4	-3.2	1.4	0.00		2.5	5.8	W
27	1.3	-8.6	-2.9	0.00		2.1	4.5	SE
28	1.3	-8.2	1.3	0.00		1.8	6.2	N
29	1.4	-2.1	-1.8	0.08	0.5	1.8	6.9	SE
30	-1.9	-10.6	-4.8	0.08	2.5	2.1	6.5	W
31	-3.9	-11.5	-7.6	0.01	Trace	2.5	7.5	SE
Sum	98.9	-96.1	45.9	1.53	10.0	Observer: Emil Boucek Station: St. David		
Avg	3.2	-3.1	1.5					
Extreme	12.7	-11.5		0.56	3.5			

\*N/A=Not available

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

TABLE AV-1 (Continued)

RECORD OF CLIMATOLOGICAL OBSERVATIONS FOR 1994-1999  
 FULTON COUNTY, ILLINOIS, STATION SWQ, SEC. 21, R4E, T6N

January 1998 Date	Temperature °C			Precipitation		Wind		
	Max	Min	6 PM	rain, melted snow	snow, sleet, hail	m/S	m/S	
				(inches & hundredths)	(inches & tenths)	Avg	Max	Dir
1	6.8	-13.6	6.8	0.00		3.2	9.2	SW
2	10.0	2.2	9.9	0.00		2.9	8.9	S
3	16.6	9.2	16.5	0.00		5.5	10.5	S
4	16.7	5.9	11.3	0.22		1.7	6.3	N
5	13.2	7.1	10.7	0.26		2.0	6.8	W
6	11.5	7.7	9.7	0.06		0.6	4.3	S
7	9.5	2.8	3.6	0.45		3.6	9.2	NE
8	0.6	0.6	0.6	0.40	4.0	2.8	2.8	NE
9	0.6	-1.4	-0.1	0.30	1.2	3.1	7.9	SW
10	-0.1	-12.5	-8.3	0.00		3.4	8.4	SW
11	-6.9	-13.4	-7.9	0.00		1.2	4.7	NE
12	-2.7	-7.7	-3.2	0.01	Trace	0.9	3.6	SE
13	-3.2	-17.0	-14.2	0.00	Trace	2.9	6.7	SE
14	-5.4	-15.0	-5.4	0.09		2.0	7.1	W
15	-3.5	-12.8	-8.0	0.19		1.9	5.8	SE
16	-2.3	-8.8	-2.5	0.00		0.9	3.8	S
17	-2.5	-5.9	-3.0	0.02	0.3	1.4	5.5	SE
18	-1.0	-13.0	-8.1	0.00		1.7	4.8	S
19	-4.6	-12.9	-4.6	0.00		1.2	5.3	SW
20	-3.3	-11.0	-4.5	0.00		0.8	5.1	NW
21	2.7	-4.5	2.5	0.02	1.0	2.9	6.9	N
22	2.8	-0.1	0.6	0.00		0.7	4.2	SE
23	1.0	-0.8	-0.4	0.00		1.4	4.1	SE
24	0.5	-5.6	-3.5	0.01	0.5	1.6	5.0	S
25	-0.1	-6.7	-0.1	0.00		2.0	7.3	N
26	3.9	-5.4	3.9	0.00		1.1	5.8	SW
27	5.7	-4.3	-0.4	0.00		0.5	2.9	SE
28	5.3	-5.1	5.3	0.00		0.7	3.7	S
29	10.2	0.3	1.3	0.00		2.7	8.1	SW
30	3.8	-3.6	-0.5	0.00		0.9	5.9	SW
31	1.7	-2.3	1.5	0.00		1.2	3.7	N
Sum	87.5	-147.6	9.5	2.03	7.0	Observer: Emil Boucek		
Avg	2.8	-4.8	0.3			Observer: St. David		
Extreme	16.7	-17.0		0.45	4.0			

\*N/A=Not available

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

TABLE AV-1 (Continued)

RECORD OF CLIMATOLOGICAL OBSERVATIONS FOR 1994-1999  
 FULTON COUNTY, ILLINOIS, STATION SWQ, SEC. 21, R4E, T6N

February 1998 Date	Temperature °C			Precipitation		Wind		
	Max	Min	6 PM	rain, melted snow	snow, sleet, hail	m/S	m/S	Dir
				(inches & hundredths)	(inches & tenths)	Avg	Max	
1	8.7	1.6	3.3	0.08		2.3	4.6	N
2	7.8	-1.4	2.5	0.08		2.8	8.1	NW
3	4.7	-3.8	3.7	0.00		0.8	5.6	NE
4	5.5	-1.5	0.0	0.00		2.4	7.9	N
5	0.3	-3.0	0.3	0.00		3.2	8.2	N
6	1.4	-1.9	1.4	0.00		2.5	5.7	SW
7	5.0	-4.3	5.0	0.00		1.0	4.8	SE
8	7.6	-2.8	-0.6	0.00		0.9	4.7	N
9	0.5	-2.9	-0.7	0.00		0.8	2.8	NW
10	6.2	-0.5	5.5	0.00		1.2	4.7	NW
11	7.0	5.6	6.9	1.42		2.4	6.8	NE
12	7.2	-1.1	-0.8	0.09		3.3	7.6	SW
13	3.7	-2.5	3.7	0.00		1.3	4.0	NW
14	5.7	-5.0	2.3	0.00		0.6	3.3	NW
15	8.9	1.3	8.9	0.00		1.7	4.5	N
16	9.5	4.2	5.0	0.04		2.3	6.5	SW
17	8.9	4.6	7.6	0.13		2.8	8.0	NE
18	7.6	2.9	4.0	0.13		3.2	8.8	SE
19	6.0	2.5	5.9	0.00		0.8	4.9	SE
20	6.9	2.9	6.9	0.25		0.9	4.0	S
21	7.3	3.8	6.4	0.00		1.0	4.4	SW
22	10.2	0.7	10.2	0.00		1.2	5.6	W
23	11.0	0.8	7.6	0.00		0.9	4.2	W
24	13.5	5.6	13.4	0.03		1.7	6.8	SE
25	15.8	5.4	13.1	0.00		2.0	7.1	NW
26	16.4	9.4	14.4	0.00		3.4	9.2	NW
27	15.1	4.6	7.5	1.06		3.6	10.2	SW
28	8.8	-1.3	6.3	0.00		1.6	8.8	W
29								
30								
31								
Sum	217.2	23.9	149.7	3.31	0.0	Observer: Emil Boucek Station: St. David		
Avg	7.8	0.9	5.3					
Extreme	16.4	-5.0		1.42	0.0			

\*N/A=Not available



METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

TABLE AV-1 (Continued)

RECORD OF CLIMATOLOGICAL OBSERVATIONS FOR 1994-1999  
 FULTON COUNTY, ILLINOIS, STATION SWQ, SEC. 21, R4E, T6N

March 1998 Date	Temperature °C			Precipitation		Wind		
	Max	Min	0.8	rain, melted snow	snow, sleet, hail	m/S	m/S	
				(inches & hundredths)	(inches & tenths)	Avg	Max	Dir
1	6.3	-1.7	1.0	0.00	Trace	2.4	7.3	SW
2	1.9	-1.4	1.2	0.00		1.1	5.5	SE
3	2.6	0.0	0.3	0.02	Trace	3.1	7.5	SE
4	2.0	-2.3	1.9	0.00	Trace	1.9	5.4	S
5	3.3	-0.3	2.7	0.00		1.3	5.0	SW
6	4.6	-2.6	4.6	0.00		0.7	4.0	SE
7	6.8	1.9	5.9	0.00		2.0	7.7	NE
8	6.9	3.1	3.7	1.14		4.0	8.7	NE
9	4.2	-3.0	-2.9	0.74	2.3	5.3	12.5	SW
10	-2.5	-11.2	-6.9	0.00	Trace	4.2	12.0	SW
11	-5.8	-10.0	-7.2	0.00	Trace	2.9	7.3	S
12	-6.5	-16.3	-7.5	0.00		2.5	8.0	S
13	2.6	-7.4	2.5	0.00		3.0	8.8	SW
14	6.3	-7.0	-1.7	0.00		4.3	8.8	SE
15	0.7	-4.8	0.5	0.00		1.6	5.5	NW
16	4.7	-2.2	4.5	0.00	Trace	2.8	5.7	NW
17	5.5	1.4	4.6	0.91		3.2	8.0	NW
18	10.6	4.7	9.6	0.49		2.1	4.6	SW
19	10.1	2.5	3.8	0.00		2.2	6.1	NE
20	4.3	-0.8	0.3	0.19	Trace	4.3	10.7	NE
21	6.6	-1.6	6.6	0.00		3.8	8.9	NE
22	8.6	-0.4	8.0	0.00		1.8	6.8	S
23	9.5	-0.2	7.7	0.00		1.3	5.4	SW
24	9.3	-3.0	9.2	0.00		1.2	7.2	NW
25	15.1	5.2	15.1	0.01		3.0	9.0	NW
26	24.2	12.9	24.1	0.00		4.5	11.8	S
27	25.5	14.6	24.6	0.00		5.5	16.2	S
28	25.1	11.8	17.1	0.18		5.0	12.6	SW
29	25.2	9.4	25.2	0.00		2.1	9.1	S
30	26.4	17.2	25.6	0.00		5.1	11.8	S
31	26.5	13.6	13.9	0.33		4.5	12.1	N
Sum	270.6	22.1	198.0	4.01	2.3	Observer: Emil Boucek		
Avg	8.7	0.7	6.4			Station: St. David		
Extreme	26.5	-16.3		1.14	2.3			

\*N/A=Not available

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

TABLE AV-1 (Continued)

RECORD OF CLIMATOLOGICAL OBSERVATIONS FOR 1994-1999  
 FULTON COUNTY, ILLINOIS, STATION SWQ, SEC. 21, R4E, T6N

April 1998 Date	Temperature °C			Precipitation		Wind		
	Max	Min	6 PM	rain, melted snow	snow, sleet, hail	m/S	m/S	Dir
				(inches & hundredths)	(inches & tenths)	Avg	Max	
1	15.4	2.9	6.1	0.14		5.9	12.3	W
2	8.2	4.3	8.0	0.00		2.7	10.6	W
3	11.0	3.5	7.0	0.00		1.6	6.6	NE
4	9.6	4.4	9.6	0.15		3.4	9.2	N
5	12.8	-1.2	12.3	0.00		0.9	7.8	SW
6	17.7	6.0	17.5	0.00		1.3	5.6	NW
7	17.8	10.6	11.7	2.15		N/A	N/A	N/A
8	13.3	8.9	8.9	0.82		N/A	N/A	N/A
9	8.9	5.6	6.7	0.00		N/A	N/A	N/A
10	14.4	3.9	4.4	0.00		N/A	N/A	N/A
11	17.6	1.6	17.6	0.00		1.3	5.1	S
12	21.0	10.7	21.0	0.00		3.4	8.4	N
13	22.9	14.5	15.7	0.41		5.7	17.4	S
14	17.2	10.2	17.2	0.61		3.0	8.9	SE
15	19.7	9.7	18.6	0.50		2.2	7.5	SW
16	20.6	9.0	9.1	0.12		2.6	8.4	SE
17	11.4	1.6	11.4	0.00		2.0	6.5	SE
18	13.7	1.3	13.4	0.00		1.1	5.4	NW
19	15.2	1.8	15.1	0.00		0.6	3.2	NW
20	17.5	6.0	9.9	0.08		1.0	5.1	W
21	16.6	6.4	9.3	0.00		1.9	7.4	SE
22	14.7	7.2	14.3	0.01		2.2	4.9	S
23	19.7	7.3	19.7	0.05		1.7	6.8	SE
24	22.7	9.3	22.7	0.00		1.5	5.9	SW
25	24.7	12.0	14.2	0.17		1.6	5.7	W
26	23.1	14.7	21.0	0.12		3.2	9.3	SW
27	22.3	6.3	11.6	0.00		3.9	10.4	SW
28	14.2	5.8	13.2	0.00		3.4	10.0	NW
29	15.3	8.3	14.0	0.67		1.8	5.7	W
30	20.0	13.3	15.5	0.26		1.1	4.1	SW
31								
Sum	499.2	205.9	396.7	6.26	0.0	Observer: Emil Boucek		
Avg	16.6	6.9	13.2			Station: St. David		
Extreme	24.7	-1.2		2.15	0.0			

\*N/A=Not available

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

TABLE AV-1 (Continued)

RECORD OF CLIMATOLOGICAL OBSERVATIONS FOR 1994-1999  
 FULTON COUNTY, ILLINOIS, STATION SWQ, SEC. 21, R4E, T6N

May 1998	Temperature			Precipitation		Wind		
	°C			rain, melted snow	snow, sleet, hail	m/S	m/S	
	Max	Min	6 PM	(inches & hundredths)	(inches & tenths)	Avg	Max	Dir
1	20.7	8.9	13.3	0.46		N/A	N/A	N/A
2	19.4	8.4	10.5	0.08		1.4	6.5	SE
3	14.6	9.2	12.1	0.00		2.1	5.7	S
4	23.0	11.8	13.2	0.00		1.4	4.3	S
5	26.3	11.5	14.9	0.90		2.0	7.0	NE
6	18.8	13.8	16.5	0.43		1.0	4.2	W
7	21.8	15.0	15.2	1.34		1.0	4.7	SE
8	24.0	14.7	16.4	0.01		2.4	6.3	W
9	22.1	12.7	15.7	0.00		2.0	5.8	NE
10	23.0	10.8	13.0	0.00		1.9	5.5	NE
11	23.8	7.3	15.1	0.00		0.5	3.3	SW
12	27.5	11.8	18.9	0.87		1.8	6.3	SW
13	25.9	14.9	17.1	0.00		1.1	4.2	W
14	30.9	16.5	23.2	0.00		1.7	7.3	N
15	27.5	19.2	20.5	0.27		2.2	8.2	SW
16	28.1	14.4	14.4	0.00		2.0	7.6	S
17	29.9	12.3	20.1	0.00		1.4	5.9	N
18	30.4	14.6	21.3	0.00		2.3	7.8	NW
19	31.2	18.7	19.7	1.15		1.3	6.4	SE
20	23.1	15.9	16.1	0.35		1.4	8.7	S
21	24.7	14.7	19.0	0.00		0.6	3.2	NW
22	20.5	11.4	16.0	0.76		2.0	6.6	SW
23	18.2	13.8	17.6	0.08		1.9	5.4	SW
24	21.2	13.4	13.7	0.46		1.8	6.7	NW
25	20.8	12.7	16.1	0.11		0.8	4.9	NE
26	24.1	13.6	16.2	0.00		0.6	3.5	NE
27	26.0	14.0	18.7	0.00		1.1	4.3	SW
28	30.3	17.0	22.2	0.00		2.0	7.7	S
29	28.4	18.6	20.0	0.00		1.1	5.4	N
30	31.0	17.1	24.9	0.00		2.3	7.2	N
31	28.2	18.2	18.2	0.00		3.2	9.7	SE
Sum	765.4	426.9	529.8	7.27	0.0	Observer: Emil Boucek		
Avg	24.7	13.8	17.1			Station: St. David		
Extreme	31.2	7.3		1.34	0.0			

\*N/A=Not available

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

TABLE AV-1 (Continued)

RECORD OF CLIMATOLOGICAL OBSERVATIONS FOR 1994-1999  
 FULTON COUNTY, ILLINOIS, STATION SWQ, SEC. 21, R4E, T6N

June 1998 Date	Temperature °C			Precipitation		Wind		
	Max	Min	6 PM	rain, melted snow	snow, sleet, hail	m/S	m/S	
				inches & hundredths	(inches & tenths)	Avg	Max	Dir
1	23.0	9.7	18.5	0.0		1.1	4.9	N
2	27.0	16.8	16.8	0.0		2.6	8.3	N
3	16.5	11.1	11.6	0.2		1.0	4.9	SE
4	17.7	11.1	14.9	0.0		1.7	5.2	W
5	15.7	9.3	10.7	0.3		2.0	7.2	N
6	19.6	9.1	9.2	0.0		1.0	4.8	N
7	22.4	8.7	16.6	0.0		0.5	3.3	NE
8	16.6	12.9	13.9	1.1		1.1	5.8	NW
9	25.4	13.9	16.9	0.0		1.2	5.1	W
10	25.9	12.2	22.4	0.0		0.6	4.0	W
11	27.5	20.6	20.7	1.0		2.9	9.4	SW
12	28.8	18.7	20.1	0.0		1.8	6.3	SE
13	26.3	16.3	19.0	0.0		1.6	5.8	W
14	22.7	17.5	18.5	0.9		1.0	5.8	SW
15	24.9	17.6	17.9	0.0		1.5	5.3	SW
16	25.9	17.0	18.2	0.1		1.5	7.3	S
17	26.7	15.6	24.0	0.0		1.2	4.9	NW
18	30.9	18.2	18.5	0.4		2.4	15.3	SW
19	29.6	17.3	20.1	0.0		2.1	8.8	N
20	27.4	19.1	21.8	0.0		1.2	7.0	S
21	28.0	18.9	20.2	1.3		1.1	7.7	SE
22	25.6	18.0	19.6	0.5		0.8	7.5	W
23	28.7	17.8	24.0	0.0		1.1	4.8	W
24	32.2	22.6	26.0	0.0		2.7	9.2	N
25	32.9	23.8	26.5	0.0		3.2	7.3	N
26	33.6	24.7	26.5	0.0		2.7	7.0	NW
27	32.9	23.9	26.8	0.0		3.0	6.4	S
28	33.4	21.9	22.9	0.0		1.5	5.4	W
29	30.3	18.3	19.0	0.7		2.2	14.8	W
30	27.1	18.9	25.5	0.0		2.2	7.1	SE
31								N
Sum	785.2	501.5	587.3	6.46	0.0	Observer: Emil Boucek		
Avg	26.2	16.7	19.6			Station: St. David		
Extreme	33.6	8.7		1.28	0.0			

\*N/A=Not available

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

TABLE AV-1 (Continued)

RECORD OF CLIMATOLOGICAL OBSERVATIONS FOR 1994-1999  
 FULTON COUNTY, ILLINOIS, STATION SWQ, SEC. 21, R4E, T6N

July 1998	Temperature °C			Precipitation		Wind		
				rain, melted snow	snow, sleet, hail	m/S	m/S	
Date	Max	Min	6 PM	inches & hundredths	(inches & tenths)	Avg	Max	Dir
1	27.8	18.0	18.20	0.00		0.7	3.1	SE
2	29.1	15.0	21.00	0.00		0.5	3.6	NE
3	30.2	19.9	24.40	0.49		1.2	6.3	N
4	27.8	19.0	19.00	0.00		1.3	5.4	NE
5	27.4	16.0	22.40	0.01		0.5	3.8	SW
6	31.4	21.8	25.80	0.07		1.0	3.3	N
7	29.3	22.6	23.10	0.62		0.5	3.8	S
8	29.7	21.2	21.20	0.00		0.9	5.1	SE
9	30.8	19.4	22.00	0.61		0.7	5.0	SE
10	28.1	20.7	21.10	0.00		0.4	2.8	NE
11	28.8	18.1	19.80	0.00		0.8	3.8	N
12	27.9	15.5	19.70	0.00		0.4	4.3	NE
13	29.9	17.9	20.40	0.00		0.3	2.3	NE
14	29.2	18.2	20.70	0.00		0.7	5.5	W
15	29.0	17.9	22.10	0.00		0.6	4.9	NW
16	31.0	20.6	20.90	0.00		1.0	4.0	W
17	28.6	18.4	22.20	0.00		0.9	3.3	N
18	31.0	20.9	23.50	0.00		0.4	3.3	N
19	33.4	22.9	25.40	0.01		1.4	6.8	N
20	34.0	23.4	27.70	0.00		1.6	5.9	N
21	34.2	25.5	25.90	0.00		2.3	6.3	N
22	26.7	21.8	22.20	0.37		0.8	6.2	SW
23	26.8	18.1	18.10	0.00		1.2	5.6	SW
24	26.0	16.1	16.50	0.00		0.8	4.0	W
25	26.9	14.2	18.80	0.00		0.3	2.7	NE
26	26.3	16.3	16.70	0.00		1.0	4.7	NW
27	27.5	13.9	19.40	0.00		0.8	3.1	N
28	30.2	17.8	21.80	0.00		1.8	6.8	S
29	29.5	19.7	19.70	0.00		1.3	4.1	NE
30	25.5	18.1	18.90	0.00		0.5	2.5	NE
31	27.0	14.7	18.00	0.00		1.2	6.4	NE
Sum	901.0	583.6	656.6	2.18	0.0	Observer: Emil Boucek Station: St. David		
Avg	29.1	18.8	21.2					
Extreme	34.2	13.9		0.62	0.0			

\*N/A=Not available

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

TABLE AV-1 (Continued)

RECORD OF CLIMATOLOGICAL OBSERVATIONS FOR 1994-1999  
 FULTON COUNTY, ILLINOIS, STATION SWQ, SEC. 21, R4E, T6N

August 1998 Date	Temperature °C			Precipitation		Wind		
				rain, melted snow	snow, sleet, hail	m/S	m/S	Dir
	Max	Min	6 PM	inches & hundredths	(inches & tenths)	Avg	Max	Dir
1	28.4	13.3	18.3	0.00		0.8	3.5	NE
2	27.6	14.4	21.2	0.00		0.5	5.3	W
3	28.4	19.2	20.4	0.08		1.0	7.4	N
4	28.6	20.2	20.7	1.18		0.9	5.9	N
5	29.7	20.2	21.2	0.25		1.1	4.0	S
6	27.9	20.0	20.0	0.11		1.5	5.1	SW
7	26.7	19.2	21.1	0.17		0.8	5.5	SW
8	27.7	20.4	21.4	0.00		1.2	4.2	NW
9	30.3	18.8	22.2	0.00		0.6	3.7	NE
10	29.8	20.7	23.9	0.09		0.9	3.4	N
11	28.7	19.7	20.9	0.00		1.1	4.6	NE
12	26.9	17.2	18.2	0.00		0.9	4.5	N
13	27.8	17.2	19.4	0.00		0.3	3.0	NE
14	28.4	16.6	20.3	0.00		0.6	3.9	W
15	30.2	18.2	20.5	0.00		0.7	3.6	N
16	30.9	19.5	21.7	0.00		0.5	3.5	N
17	27.4	19.2	22.7	0.09		1.4	6.4	N
18	28.2	20.9	20.9	1.13		1.0	6.8	NE
19	29.1	17.7	20.4	1.32		0.6	2.9	SW
20	29.7	16.7	19.4	0.00		0.7	3.8	NE
21	30.5	17.2	22.9	0.02		0.7	3.2	N
22	30.5	19.8	22.6	0.00		1.2	4.8	NW
23	32.2	20.4	25.5	0.00		2.3	6.8	N
24	33.2	23.0	25.7	0.00		2.0	5.9	N
25	29.2	19.1	19.1	0.00		1.6	5.2	SW
26	29.5	15.9	20.7	0.00		0.4	3.5	NE
27	26.4	19.9	23.0	0.00		0.9	6.1	NW
28	26.1	19.7	19.7	0.32		0.7	5.6	W
29	29.7	17.9	21.4	0.00		0.9	3.8	N
30	30.5	17.7	18.8	0.00		0.6	3.3	N
31	27.5	16.1	17.7	0.00		0.4	3.7	NE
Sum	897.7	576.0	651.9	4.76	0.0	Observer: Emil Boucek Station: St. David		
Avg	29.0	18.6	21.0					
Extreme	33.2	13.3		1.32	0.0			

\*N/A=Not available

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

TABLE AV-1 (Continued)

RECORD OF CLIMATOLOGICAL OBSERVATIONS FOR 1994-1999  
 FULTON COUNTY, ILLINOIS, STATION SWQ, SEC. 21, R4E, T6N

September 1998 Date	Temperature °C			Precipitation		Wind		
	Max	Min	6 PM	rain, melted snow	snow, sleet, hail	m/S	m/S	
				inches & hundredths	(inches & tenths)	Avg	Max	Dir
1	26.8	16.3	18.4	0.12		0.8	4.1	S
2	26.4	15.5	16.9	0.00		0.8	4.1	N
3	31.6	15.8	21.6	0.00		1.4	6.0	SW
4	29.9	17.6	17.9	0.00		1.2	4.9	W
5	33.9	15.8	22.6	0.00		0.6	3.5	NW
6	34.0	19.0	24.6	0.00		1.2	5.4	NW
7	27.8	15.0	15.0	0.00		1.3	5.9	SE
8	22.5	11.1	11.3	0.00		2.0	7.3	NE
9	23.9	7.6	11.5	0.00		0.5	3.3	N
10	26.5	9.4	13.0	0.00		0.9	5.4	SW
11	29.2	10.2	16.1	0.00		1.0	4.9	SW
12	32.6	12.1	19.4	0.00		0.6	4.0	SW
13	31.4	15.8	20.4	0.24		0.9	4.5	NW
14	22.7	19.6	21.7	1.15		2.0	7.1	SW
15	24.7	17.5	18.1	0.00		1.4	5.0	N
16	27.3	18.3	19.9	0.00		0.7	3.8	NE
17	27.2	18.3	19.6	0.01		0.5	2.9	SE
18	29.1	16.8	18.5	0.00		0.3	2.3	N
19	29.8	16.0	20.3	0.00		0.7	4.4	N
20	27.5	18.1	18.3	0.03		0.9	5.0	NE
21	20.0	16.0	16.0	0.09		1.6	8.1	NE
22	21.7	11.2	11.2	0.00		1.7	4.7	NE
23	21.9	5.7	10.5	0.00		0.5	3.7	NW
24	18.9	11.0	18.3	0.72		1.1	3.6	SW
25	27.4	16.7	22.0	0.00		1.9	7.3	N
26	31.7	20.9	23.5	0.00		3.8	9.9	SW
27	30.5	18.4	18.6	0.00		2.1	5.7	NE
28	27.9	15.0	16.0	0.00		0.5	3.8	NE
29	28.0	15.4	16.3	0.32		1.1	5.9	S
30	25.7	12.9	13.5	0.08		1.7	6.8	SE
31								
Sum	818.5	449.0	531.0	2.76	0.0	Observer: Emil Boucek Station: St. David		
Avg	27.3	15.0	17.7					
Extreme	34.0	5.7		1.15	0.0			

\*N/A=Not available

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

TABLE AV-1 (Continued)

RECORD OF CLIMATOLOGICAL OBSERVATIONS FOR 1994-1999  
 FULTON COUNTY, ILLINOIS, STATION SWQ, SEC. 21, R4E, T6N

October 1998 Date	Temperature °C			Precipitation		Wind		
	Max	Min	6 PM	rain, melted snow	snow, sleet, hail	m/S	m/S	
				inches & hundredths	(inches & tenths)	Avg	Max	Dir
1	16.9	6.7	7.8	0.00		1.5	5.3	NE
2	12.7	7.1	10.8	0.21		1.6	7.0	NE
3	12.6	9.6	10.4	0.14		1.7	5.6	SW
4	15.6	10.2	15.1	0.00		1.3	8.2	W
5	21.9	15.1	17.6	0.88		1.1	5.3	W
6	18.8	10.9	10.9	0.28		1.9	5.7	NW
7	16.2	6.3	10.5	0.00		1.2	5.9	NE
8	16.1	5.8	5.9	0.00		0.8	4.0	W
9	17.9	3.9	7.5	0.00		0.3	3.4	N
10	19.8	3.9	9.9	0.00		0.3	4.1	SW
11	21.7	5.9	10.3	0.00		0.6	4.2	NE
12	19.0	7.6	7.6	0.00		1.1	7.4	NW
13	18.0	3.9	4.2	0.00		1.2	7.7	N
14	18.5	1.9	13.5	0.00		0.4	3.8	N
15	21.6	9.4	15.0	0.11		1.2	5.8	NW
16	25.9	12.3	18.1	0.01		2.2	8.2	NW
17	22.0	18.1	19.1	0.84		4.3	9.3	N
18	19.5	4.2	4.2	0.85		2.2	8.7	NW
19	19.6	3.4	7.0	0.00		0.9	5.3	SW
20	17.2	3.4	9.7	0.00		0.9	3.9	S
21	15.0	2.1	2.1	0.00		1.8	9.9	SW
22	14.4	-0.8	2.9	0.00		0.6	3.5	N
23	16.5	0.3	5.1	0.00		1.2	5.1	NW
24	18.7	1.6	10.4	0.00		1.2	5.9	W
25	21.3	6.7	12.7	0.00		1.4	6.3	W
26	23.6	9.1	13.9	0.00		0.7	4.0	NW
27	24.7	11.5	15.1	0.00		1.8	8.4	W
28	20.0	13.0	13.7	0.00		0.9	2.8	NE
29	21.9	12.9	14.6	0.00		1.4	6.2	N
30	18.1	10.5	10.5	0.00		2.5	7.7	W
31	13.9	8.4	10.7	0.00		1.4	3.5	N
Sum	579.6	224.9	326.8	3.32	0.0	Observer: Emil Boucek		
Avg	18.7	7.3	10.5			Station: St. David		
Extreme	25.9	-0.8		0.88	0.0			

\*N/A=Not available



METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

TABLE AV-1 (Continued)

RECORD OF CLIMATOLOGICAL OBSERVATIONS FOR 1994-1999  
 FULTON COUNTY, ILLINOIS, STATION SWQ, SEC. 21, R4E, T6N

November 1998	Temperature			Precipitation		Wind		
	°C			rain, melted snow	snow, sleet, hail	m/S	m/S	
Date	Max	Min	6 PM	inches & hundredths	(inches & tenths)	Avg	Max	Dir
1	12.8	10.6	12.2			N/A	N/A	N/A
2	10.0	8.3	8.3	0.24		N/A	N/A	N/A
3	11.1	4.4	6.1			N/A	N/A	N/A
4	8.9	3.9	5.0			N/A	N/A	N/A
5	7.2	2.2	3.9			N/A	N/A	N/A
6	10.6	7.2	7.8			N/A	N/A	N/A
7	8.3	6.7	5.0			N/A	N/A	N/A
8	7.2	0.6	5.6			N/A	N/A	N/A
9	12.2	4.4	13.3	0.20		N/A	N/A	N/A
10	17.8	4.4	1.7	1.82		N/A	N/A	N/A
11	8.3	0.6	4.4			N/A	N/A	N/A
12	11.7	0.6	5.6			N/A	N/A	N/A
13	13.3	4.4	5.0			N/A	N/A	N/A
14	17.2	2.8	3.3			N/A	N/A	N/A
15	9.4	2.2	5.6			N/A	N/A	N/A
16	10.6	2.8	3.9			N/A	N/A	N/A
17	10.0	3.9	6.1			N/A	N/A	N/A
18	16.7	4.4	2.2			N/A	N/A	N/A
19	6.7	3.3	2.2			N/A	N/A	N/A
20	5.6	-3.3	-4.4			N/A	N/A	N/A
21	8.3	-5.6	-4.4			N/A	N/A	N/A
22	16.1	3.3	9.4			N/A	N/A	N/A
23	16.1	5.6	7.8			N/A	N/A	N/A
24	11.7	-1.1	0.6			N/A	N/A	N/A
25	13.9	5.6	11.1			N/A	N/A	N/A
26	17.8	2.2	4.4			N/A	N/A	N/A
27	18.3	1.1	2.8			N/A	N/A	N/A
28	18.3	5.6	7.8			N/A	N/A	N/A
29	16.1	12.8	15.6			N/A	N/A	N/A
30	16.7	3.3	15.0			N/A	N/A	N/A
31								
Sum	368.9	107.2	172.9	2.26	0.0	Observer: Emil Boucek		
Avg	12.3	3.6	5.8			Station: St. David		
Extreme	18.3	-5.6		1.82	0.0			

\*N/A=Not available

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

TABLE AV-1 (Continued)

RECORD OF CLIMATOLOGICAL OBSERVATIONS FOR 1994-1999  
 FULTON COUNTY, ILLINOIS, STATION SWQ, SEC. 21, R4E, T6N

December 1998 Date	Temperature °C			Precipitation		Wind		
	Max	Min	6 PM	rain, melted snow	snow, sleet, hail	m/S	m/S	Dir
				inches & hundredths	(inches & tenths)	Avg	Max	
1	14.4	0.4	8.8	0.00		2.3	7.4	N
2	17.3	7.6	14.2	0.00		3.3	6.7	N
3	18.5	13.8	17.3	0.00		2.0	5.9	N
4	21.4	14.3	15.8	0.03		1.8	5.9	NW
5	15.8	10.3	11.7	0.00		1.1	7.0	N
6	12.5	2.6	2.6	1.31		1.9	8.8	NE
7	3.0	-0.5	1.6	0.00		1.0	5.0	SW
8	6.4	-2.2	0.2	0.00		0.9	4.2	N
9	8.5	-3.0	-0.7	0.00		0.9	6.3	N
10	4.8	-3.0	-2.4	0.00		0.8	5.5	S
11	8.5	-5.6	-1.1	0.00		0.7	4.2	NW
12	9.7	-5.9	-2.1	0.00		0.3	2.7	NW
13	9.5	-4.9	0.5	0.00		0.7	5.0	SW
14	9.7	-5.3	0.7	0.00		0.7	4.0	N
15	13.3	-2.9	2.5	0.00		1.3	6.1	W
16	4.0	0.4	0.4	0.00		1.6	4.6	SW
17	4.5	-1.9	1.7	0.00		1.9	4.9	NW
18	13.5	0.5	2.9	0.07		4.3	11.7	N
19	2.8	-3.3	-2.7	0.38		1.3	5.2	SW
20	0.4	-2.7	-1.1	0.05		0.4	3.9	W
21	-1.2	-13.0	-12.9	0.00		3.3	8.7	SW
22	-9.4	-15.2	-12.6	0.24		2.3	9.7	N
23	-5.4	-13.7	-9.8	0.05		0.9	5.1	SW
24	-2.1	-14.2	-8.1	0.01		0.9	5.7	NW
25	1.0	-10.7	-3.5	0.00		3.2	8.5	S
26	-0.7	-7.2	-0.9	0.00		1.6	5.1	NW
27	8.1	-2.1	-1.8	0.00		2.5	7.2	SW
28	3.5	-8.8	2.0	0.00		1.7	6.5	NW
29	3.7	-14.5	-14.5	0.03		4.5	11.9	SW
30	-12.2	-18.3	-12.3	0.10		1.1	4.2	NE
31	-11.6	-19.7	-18.5	0.00		0.9	4.1	W
Sum	172.2	-128.7	-22.1	2.27	0.0	Observer: Emil Boucek Station: St. David		
Avg	5.6	-4.2	-0.7					
Extreme	21.4	-19.7		1.31	0.0			

\*N/A=Not available

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

TABLE AV-1 (Continued)

RECORD OF CLIMATOLOGICAL OBSERVATIONS FOR 1994-1999  
 FULTON COUNTY, ILLINOIS, STATION SWQ, SEC. 21, R4E, T6N

January 1999 Date	Temperature °C			Precipitation		Wind		
	Max	Min	6 PM	rain, melted snow	snow, sleet, hail	m/S	m/S	Dir
				(inches & hundredths)	(inches & tenths)	Avg	Max	
1	-8.3	-19.2	-8.5	0.00		2.3	9.4	SW
2	-6.9	-8.9	-7.2	0.70	8.0	3.2	9.1	W
3	-7.2	-17.7	-17.7	0.90	12.0	4.5	12.5	SW
4	-17.8	-27.1	-25.1	0.03		2.5	6.8	SW
5	-5.6	-6.7	-5.4	0.00		4.2	4.2	S
6	1.3	-14.6	-14.6	0.00	Trace	3.1	8.5	SW
7	-13.7	-19.7	-13.7	0.03		1.5	5.6	SW
8	-9.2	-13.6	-12.7	0.00		2.4	7.1	W
9	-12.9	-21.8	-16.6	0.05		2.2	6.0	NW
10	-9.0	-16.4	-14.6	0.10		3.7	8.9	W
11	3.9	-15.0	3.7	0.00		2.3	9.3	S
12	3.7	-8.1	-8.1	0.00		2.4	6.5	NE
13	-3.9	-8.7	-7.9	0.00		3.2	6.6	NE
14	-6.6	-9.4	-6.6	0.00		1.2	4.3	N
15	0.2	-6.5	0.2	0.00		3.3	7.3	NW
16	6.8	-3.2	-3.2	0.00		1.6	5.1	SW
17	3.7	-4.9	2.0	0.00		2.1	6.2	S
18	2.3	-2.4	-2.4	0.20	2.0	4.4	11.8	S
19	0.2	-8.1	-3.6	0.00		1.4	5.8	NE
20	0.7	-8.0	0.1	0.00		0.9	6.4	N
21	5.8	0.1	3.1	0.00		2.5	8.1	NE
22	4.6	1.5	1.6	0.40		0.9	4.8	SW
23	1.7	0.1	0.5	0.00		3.0	7.4	SW
24	2.3	0.3	1.4	0.00		2.0	5.0	SW
25	1.4	-5.6	-5.5	0.00		2.5	6.6	NE
26	6.2	-6.4	5.5	0.00		1.8	6.4	NW
27	11.8	0.3	0.5	0.00		2.9	7.8	W
28	2.0	-3.9	-3.2	0.00		2.3	6.5	N
29	2.9	-4.4	-1.9	0.00		1.1	3.6	NE
30	8.4	-3.8	3.7	0.00		2.8	8.0	SW
31	3.6	0.0	3.5	0.31		3.1	8.0	NE
Sum	-27.6	-261.8	-152.7	2.72	22.0	Observer: Emil Boucek		
Avg	-0.9	-8.4	-4.9			Station: St. David		
Extreme	11.8	-27.1		0.90	12.0			

\*N/A=Not available

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

TABLE AV-1 (Continued)

RECORD OF CLIMATOLOGICAL OBSERVATIONS FOR 1994-1999  
 FULTON COUNTY, ILLINOIS, STATION SWQ, SEC. 21, R4E, T6N

February 1999 Date	Temperature °C			Precipitation		Wind		
	Max	Min	6 PM	rain, melted snow	snow, sleet, hail	m/S	m/S	
				(inches & hundredths)	(inches & tenths)	Avg	Max	Dir
1	7.3	3.5	4.8	0.00		1.6	5.5	NW
2	7.2	1.1	1.3	0.00		2.8	8.9	N
3	10.6	0.5	5.8	0.00		4.2	11.9	SW
4	5.7	-5.4	-4.4	0.00		3.7	10.8	NW
5	8.6	-4.8	7.5	0.00		3.4	10.5	NW
6	11.4	0.4	5.0	0.00		1.8	5.7	NE
7	6.7	0.1	1.3	0.00		1.8	7.0	NW
8	11.2	1.4	6.3	0.00		3.0	8.2	N
9	13.8	1.9	4.7	0.00		1.1	4.5	N
10	15.7	1.1	14.4	0.00		2.4	8.0	NW
11	20.7	-2.4	-2.4	0.00		6.1	15.2	SW
12	0.0	-7.8	-7.8	0.00		5.0	13.6	W
13	2.0	-8.6	-4.6	0.03		2.2	10.0	NW
14	10.3	-4.7	2.5	0.00		3.6	9.7	N
15	15.6	0.1	5.9	0.00		3.6	10.1	N
16	6.2	-0.1	-0.1	0.00		2.5	7.3	SW
17	2.3	-4.2	-4.0	0.00		1.9	6.5	SW
18	3.1	-4.3	0.0	0.00		1.2	3.7	NE
19	1.5	-1.8	-1.5	0.00		1.6	5.5	SW
20	0.7	-2.8	-2.7	0.00		1.9	6.4	N
21	2.3	-7.1	-5.0	0.00		1.8	6.1	SW
22	0.6	-8.6	-1.2	0.00		1.7	6.5	W
23	-0.6	-5.9	-5.9	0.00		2.5	8.3	SW
24	1.1	-5.9	-3.4	0.20	2.0	1.5	7.5	NE
25	0.7	-7.5	-1.0	0.00		0.7	3.9	SW
26	8.4	-2.0	8.2	0.00		2.6	6.9	NW
27	12.5	4.1	4.1	0.00		2.7	7.6	SW
28	4.1	2.0	2.1	0.00		5.0	13.2	W
29								
30								
31								
Sum	189.7	-67.7	29.9	0.23	2.0	Observer: Emil Boucek		
Avg	6.8	-2.4	1.1			Station: St. David		
Extreme	20.7	-8.6		0.20	2.0			

\*N/A=Not available

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

TABLE AV-1 (Continued)

RECORD OF CLIMATOLOGICAL OBSERVATIONS FOR 1994-1999  
 FULTON COUNTY, ILLINOIS, STATION SWQ, SEC. 21, R4E, T6N

March 1999 Date	Temperature °C			Precipitation		Wind		
	Max	Min	6 PM	rain, melted snow	snow, sleet, hail	m/S	m/S	
				(inches & hundredths)	(inches & tenths)	Avg	Max	Dir
1	12.5	-1.7	5.2	0.00		1.5	4.4	W
2	8.1	0.9	0.9	0.00		2.4	10.0	W
3	1.7	-4.1	-4.1	0.00		3.6	9.6	SW
4	5.9	-7.8	4.1	0.56		1.8	6.8	NW
5	6.7	0.4	0.4	0.00		2.5	8.1	N
6	0.4	-7.0	-7.0	0.00		3.5	9.5	NE
7	0.4	-10.3	-3.5	0.00		2.0	6.7	W
8	-0.3	-4.2	-0.9	0.70	7.0	4.1	9.5	SW
9	-0.1	-1.5	-1.3	0.00		2.3	6.8	N
10	1.6	-5.3	-2.4	0.00		1.9	5.9	NE
11	1.9	-5.2	-3.9	0.00		1.4	5.6	NE
12	3.2	-7.6	-0.8	0.00		1.3	5.0	NE
13	3.2	-1.6	-0.4	0.00		3.0	7.4	NE
14	4.3	-3.6	-2.5	0.00		3.2	7.5	N
15	8.3	-6.5	2.5	0.00		1.4	5.1	NW
16	19.4	0.2	11.2	0.00		3.2	6.7	N
17	4.5	4.5	4.5	0.00		2.0	2.0	W
18	10.5	0.8	1.2	0.00		3.4	9.0	N
19	10.4	-2.8	1.6	0.00		0.9	5.7	NE
20	14.0	-1.4	6.6	0.00		1.2	4.6	W
21	10.7	0.4	2.1	0.00		3.2	8.8	SW
22	7.7	-3.8	2.5	0.00		0.7	3.6	SW
23	13.0	-3.3	3.3	0.00		0.7	4.1	S
24	9.8	-0.8	-0.8	0.00		1.8	6.8	W
25	9.4	-3.3	1.1	0.00		NA	NA	NA
26	9.7	-5.1	-0.3	0.00		0.6	4.0	NE
27	14.3	-3.6	5.7	0.00		1.7	6.9	NW
28	12.7	4.0	4.4	0.20		2.5	6.9	NE
29	17.7	-0.5	9.3	0.00		1.1	5.4	N
30	21.4	4.7	10.6	0.00		3.7	10.5	NW
31	20.6	8.9	9.4	0.00		NA	NA	NA
Sum	263.6	-66.2	58.7	1.46	7.0	Observer: I Emil Boucek Station: St. David		
Avg	8.5	-2.1	1.9					
Extreme	21.4	-10.3		0.70	7.0			

\*N/A=Not available

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

TABLE AV-1 (Continued)

RECORD OF CLIMATOLOGICAL OBSERVATIONS FOR 1994-1999  
 FULTON COUNTY, ILLINOIS, STATION SWQ, SEC. 21, R4E, T6N

April 1999 Date	Temperature °C			Precipitation		Wind		
	Max	Min	6 PM	rain, melted snow	snow, sleet, hail	m/S	m/S	
				(inches & hundredths)	(inches & tenths)	Avg	Max	Dir
1	19.4	12.2	12.2	0.00		N/A	N/A	N/A
2	25.0	13.3	13.3	0.00		N/A	N/A	N/A
3	19.4	11.7	11.7	0.15		N/A	N/A	N/A
4	18.9	4.4	4.4	0.00		N/A	N/A	N/A
5	20.0	3.3	3.3	0.05		N/A	N/A	N/A
6	16.1	6.7	6.7	0.00		N/A	N/A	SW
7	16.2	4.2	7.9	0.00		2.4	11.8	NW
8	27.1	8.5	14.4	0.00		3.1	13.6	SW
9	15.6	8.3	12.2	0.00		N/A	N/A	N/A
10	17.2	7.2	7.2	0.00		N/A	N/A	N/A
11	11.7	6.1	8.9	0.00		N/A	N/A	N/A
12	13.3	3.9	5.6	0.00		N/A	N/A	N/A
13	16.1	2.8	6.7	0.00		N/A	N/A	N/A
14	17.2	7.2	10.0	0.00		N/A	N/A	N/A
15	11.7	5.6	8.3	1.60		N/A	N/A	N/A
16	6.7	5.0	6.1	2.05		N/A	N/A	N/A
17	6.2	3.2	3.4	0.77		3.8	8.4	SW
18	11.5	3.4	7.8	0.00		2.5	6.0	SW
19	12.6	3.8	3.8	0.00		1.9	6.7	NE
20	16.2	0.8	7.4	0.00		0.7	3.4	NE
21	13.5	3.8	11.8	0.03		1.7	8.1	SW
22	21.9	8.7	18.3	0.00		1.1	4.7	NW
23	24.3	16.0	18.0	0.49		3.1	7.0	N
24	18.3	8.2	8.3	0.00		3.3	8.2	SW
25	16.2	5.8	6.9	0.00		1.7	5.9	NE
26	17.8	3.6	12.4	0.00		1.4	5.1	NW
27	17.0	9.0	15.6	0.00		2.0	5.8	SW
28	20.8	12.3	12.3	0.21		2.0	6.0	SW
29	12.7	8.1	11.7	0.27		3.4	9.0	SW
30	19.3	9.0	9.1	0.00		3.0	8.2	NE
31						N/A	N/A	N/A
Sum	499.9	206.2	285.8	5.62	0.0	Observer: Emil Boucek		
Avg	16.7	6.9	9.5			Station: St. David		
Extreme	27.1	0.8		2.05	0.0			

\*N/A=Not available

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

TABLE AV-1 (Continued)

RECORD OF CLIMATOLOGICAL OBSERVATIONS FOR 1994-1999  
 FULTON COUNTY, ILLINOIS, STATION SWQ, SEC. 21, R4E, T6N

May 1999 Date	Temperature °C			Precipitation		Wind		
	Max	Min	6 PM	rain, melted snow	snow, sleet, hail	m/S	m/S	
				(inches & hundredths)	(inches & tenths)	Avg	Max	Dir
1	20.5	4.7	12.0	0.00		1.2	6.5	NE
2	22.9	5.3	13.8	0.00		0.7	5.5	NE
3	24.4	5.8	16.7	0.00		1.2	6.0	W
4	25.2	14.3	17.9	0.00		2.6	7.8	NW
5	25.6	14.9	16.2	0.54		3.2	12.7	NW
6	25.6	15.8	16.8	0.02		4.5	12.0	SW
7	16.4	10.4	13.3	0.03		4.0	10.9	N
8	14.5	10.6	12.4	0.02		4.3	9.0	SW
9	14.4	9.4	9.9	0.00		2.2	6.4	W
10	20.0	9.9	11.9	0.00		0.4	2.9	N
11	28.1	10.5	20.8	0.00		1.5	5.6	NW
12	26.1	16.8	17.0	0.20		1.0	6.9	NE
13	25.0	15.9	15.9	0.98		1.1	7.6	N
14	16.1	11.4	11.5	0.75		1.9	6.7	NE
15	21.3	8.5	15.1	0.00		1.0	4.0	W
16	20.7	13.2	16.3	0.01		1.2	5.5	W
17	29.3	16.2	22.7	0.00		3.0	10.5	N
18	23.3	16.3	16.6	1.63		3.1	9.3	SW
19	21.1	10.4	10.4	0.00		2.1	9.0	N
20	23.8	7.7	12.8	0.00		0.3	2.6	SW
21	25.5	10.9	18.0	0.00		1.8	7.5	NW
22	22.6	14.8	17.1	0.54		2.1	6.7	SW
23	26.1	15.5	15.5	0.00		1.5	5.4	NW
24	22.4	12.3	12.3	0.14		2.1	11.2	W
25	19.2	8.4	8.4	0.00		3.0	8.9	SW
26	21.9	7.7	21.9	0.00		0.9	7.4	SW
27	26.0	8.3	25.9	0.00		0.9	5.4	SW
28	28.0	11.4	28.0	0.00		1.3	6.4	SW
29	28.8	12.6	28.4	0.00		0.7	6.1	NE
30	28.4	13.2	26.6	0.00		0.9	4.8	N
31	27.2	19.3	25.3	0.00		2.7	6.5	SW
Sum	720.4	362.4	527.4	4.86	0.0	Observer: Emil Boucek Station: St. David		
Avg	23.2	11.7	17.0					
Extreme	29.3	4.7		1.63	0.0			

\*N/A=Not available

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

TABLE AV-1 (Continued)

RECORD OF CLIMATOLOGICAL OBSERVATIONS FOR 1994-1999  
 FULTON COUNTY, ILLINOIS, STATION SWQ, SEC. 21, R4E, T6N

June 1999 Date	Temperature °C			Precipitation		Wind		
	Max	Min	6 PM	rain, melted snow	snow, sleet, hail	m/S	m/S	
				(inches & hundredths)	(inches & tenths)	Avg	Max	Dir
1	28.9	13.9	19.4			N/A	N/A	N/A
2	19.6	13.9	14.3	0.00		1.2	5.4	S
3	24.8	12.1	18.3	0.00		0.2	2.2	NE
4	29.0	15.3	17.9	0.61		1.2	10.0	NW
5	30.9	17.5	25.5	0.00		2.8	8.0	NW
6	32.1	21.7	26.5	0.00		2.7	7.3	N
7	32.6	20.7	21.1	0.00		2.2	6.0	S
8	33.1	19.1	20.2	0.55		0.6	6.1	SW
9	31.5	19.5	23.6	0.00		0.8	4.7	NW
10	31.8	20.7	20.7	0.17		1.3	8.6	NW
11	31.7	20.0	24.4	1.20		N/A	N/A	N/A
12	26.4	20.4	26.2	0.26		0.2	2.9	NE
13	26.8	19.5	24.4	1.20		1.0	5.8	NE
14	24.8	16.8	22.7	0.00		1.9	6.9	W
15	22.9	10.9	19.8	0.00		1.2	6.6	NE
16	20.0	11.9	18.5	0.00		0.7	4.7	NE
17	20.3	10.9	20.2	0.00		1.3	5.3	N
18	23.2	8.3	22.9	0.00		0.4	3.5	NW
19	24.8	13.6	24.3	0.00		0.4	3.4	NW
20	27.0	12.9	26.8	0.00		0.4	3.1	N
21	29.4	17.3	28.7	0.00		0.4	5.1	NW
22	29.5	18.3	28.0	0.00		1.1	6.3	N
23	29.1	21.4	26.0	0.00		1.5	7.3	NW
24	30.0	21.1	29.6	0.06		1.2	5.8	SE
25	32.2	17.8	30.7	0.00		0.5	3.5	NE
26	30.7	20.0	27.3	0.00		0.2	4.4	N
27	29.9	20.0	29.2	0.00		0.6	5.8	N
28	30.1	20.4	25.5	2.02		1.0	6.8	SW
29	27.3	13.9	22.2	0.07		1.7	5.8	SE
30	27.3	13.4	25.7	0.00		0.7	5.1	N
31	N/A	N/A	N/A	N/A		N/A	N/A	N/A
Sum	837.7	503.2	710.6	6.14	0.0	Observer: Emil Boucek		
Avg	27.9	16.8	23.7			Station: St. David		
Extreme	33.1	8.3		2.02	0.0			

\*N/A=Not available



METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

TABLE AV-1 (Continued)

RECORD OF CLIMATOLOGICAL OBSERVATIONS FOR 1994-1999  
 FULTON COUNTY, ILLINOIS, STATION SWQ, SEC. 21, R4E, T6N

July 1999 Date	Temperature °C			Precipitation		Wind		
	Max	Min	6 PM	rain, melted snow	snow, sleet, hail	m/S	m/S	Dir
				(inches & hundredths)	(inches & tenths)	Avg	Max	
1	26.2	18.2	25.9	0.99		1.0	5.4	N
2	30.0	18.7	29.1	0.00		0.5	3.7	SW
3	32.2	24.1	32.2	0.00		2.9	8.3	S
4	32.6	23.2	32.6	0.00		3.1	7.4	S
5	32.6	23.5	32.0	0.00		2.2	8.1	SW
6	32.1	24.4	28.8	0.00		1.6	5.8	NE
7	29.2	14.7	29.1	0.00		0.4	3.7	SE
8	30.2	16.2	30.0	0.00		1.1	5.6	S
9	30.2	22.9	26.4	0.00		2.0	6.0	SE
10	27.8	16.1	24.0	0.00		1.6	6.5	NE
11	26.3	11.2	25.8	0.00		0.6	4.7	NW
12	26.9	12.0	26.8	0.00		0.4	3.5	NE
13	27.4	13.6	26.7	0.00		0.7	5.0	S
14	28.4	15.0	28.2	0.00		1.6	8.4	S
15	30.7	17.1	30.5	0.00		2.0	6.7	NW
16	32.1	20.5	31.8	0.00		1.7	6.5	S
17	31.9	21.5	26.3	0.05		1.9	5.8	SE
18	32.0	16.6	31.6	0.00		0.6	3.7	NW
19	32.5	21.8	31.9	0.00		0.9	4.5	W
20	33.4	21.0	24.2	2.02		0.9	7.3	SE
21	33.4	23.1	33.2	0.01		1.1	6.0	SW
22	34.1	23.7	33.5	0.00		0.8	3.8	SW
23	34.0	23.5	33.9	0.00		0.9	4.0	S
24	34.0	21.0	33.4	0.25		0.6	10.4	SE
25	34.3	20.7	34.2	0.00		0.3	3.3	N
26	34.2	23.2	32.3	0.00		0.8	6.5	NW
27	33.0	21.3	32.0	0.13		0.6	5.7	S
28	32.7	20.7	31.3	0.54		1.4	9.5	S
29	35.3	22.0	35.3	0.00		1.1	4.6	SW
30	35.3	24.7	34.7	0.00		1.1	5.2	N
31	34.9	24.5	27.0	0.07		1.0	5.3	SW
Sum	979.9	620.7	934.7	4.06	0.0	Observer: Emil Boucek		
Avg	31.6	20.0	30.2			Station: St. David		
Extreme	35.3	11.2		2.02	0.0			

\*N/A=Not available

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

TABLE AV-1 (Continued)

RECORD OF CLIMATOLOGICAL OBSERVATIONS FOR 1994-1999  
 FULTON COUNTY, ILLINOIS, STATION SWQ, SEC. 21, R4E, T6N

August 1999 Date	Temperature °C			Precipitation		Wind		
	Max	Min	6 PM	rain, melted snow	snow, sleet, hail	m/S	m/S	Dir
				(inches & hundredths)	(inches & tenths)	Avg	Max	
1	27.7	19.0	26.9	0.00		1.0	4.9	NE
2	27.4	16.8	24.7	0.00		0.7	4.3	N
3	26.9	17.5	26.3	0.00		0.5	3.6	SW
4	28.1	17.6	27.6	0.00		0.7	5.1	SE
5	27.9	15.6	27.1	0.00		0.7	4.7	W
6	29.5	15.5	29.2	0.00		0.2	2.9	N
7	29.4	19.7	26.9	0.25		1.1	6.8	SW
8	27.5	19.5	24.0	0.10		1.1	4.6	NE
9	25.2	12.3	25.0	0.00		0.5	3.1	NE
10	30.3	17.1	29.3	0.00		1.2	5.1	N
11	29.7	18.1	26.7	0.00		0.4	3.3	NW
12	30.1	19.7	29.9	0.90		0.8	5.4	SW
13	30.8	18.4	19.3	0.02		2.0	8.5	W
14	23.3	14.3	22.8	0.00		1.7	5.7	NE
15	25.4	11.4	25.3	0.00		0.5	4.5	NW
16	29.7	14.6	29.4	0.00		1.4	5.9	NW
17	30.4	19.6	30.2	0.00		1.1	4.6	SW
18	30.4	16.5	23.3	0.00		0.2	3.6	NE
19	24.1	17.8	23.0	0.00		1.0	5.5	N
20	25.5	14.6	24.9	0.00		0.9	5.2	NE
21	26.0	11.8	24.4	0.00		0.3	4.4	NE
22	28.3	14.0	27.2	0.00		0.4	3.9	NW
23	29.7	18.1	28.7	0.68		0.7	6.6	N
24	29.2	14.0	23.5	0.00		1.1	6.4	SW
25	25.8	18.3	25.4	0.00		1.2	4.7	SE
26	28.7	16.3	27.9	0.00		0.5	3.3	SW
27	30.0	16.4	29.9	0.00		0.3	2.9	W
28	31.6	17.8	31.3	0.00		0.4	2.7	SW
29	31.9	19.5	26.9	0.00		0.9	5.8	N
30	26.7	12.6	22.6	0.00		0.9	4.8	SW
31	26.0	12.7	25.2	0.00		0.4	3.5	W
Sum	873.2	507.1	814.8	1.95	0.0	Observer: Emil Boucek		
Avg	28.2	16.4	26.3			Station: St. David		
Extreme	31.9	11.4		0.90	0.0			

\*N/A=Not available

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

TABLE AV-1 (Continued)

RECORD OF CLIMATOLOGICAL OBSERVATIONS FOR 1994-1999  
 FULTON COUNTY, ILLINOIS, STATION SWQ, SEC. 21, R4E, T6N

September 1999 Date	Temperature °C			Precipitation		Wind		
	Max	Min	6 PM	rain, melted snow	snow, sleet, hail	m/S	m/S	Dir
				(inches & hundredths)	(inches & tenths)	Avg	Max	
1	33.2	16.6	N/A	0.00		N/A	N/A	N/A
2	32.7	16.1	23.0	0.00		0.3	5.2	W
3	32.9	19.6	20.5	0.00		0.2	3.5	NE
4	33.4	16.7	18.9	0.00		0.2	3.3	SE
5	27.5	17.4	18.9	0.00		0.7	3.2	SE
6	25.5	13.4	13.5	0.00		1.1	4.4	N
7	29.7	11.5	18.8	0.00		0.4	4.6	NW
8	27.0	15.1	16.3	0.15		1.4	6.8	W
9	22.7	8.8	9.0	0.00		1.3	8.1	SE
10	26.2	6.3	12.0	0.00		0.9	5.2	SE
11	29.9	9.5	18.4	0.00		0.8	6.4	S
12	23.1	14.5	14.6	0.32		0.9	5.3	W
13	20.1	8.6	9.5	0.01		1.2	7.1	N
14	25.0	9.9	N/A	0.00		N/A	N/A	N/A
15	21.0	8.2	8.2	0.00		0.8	4.3	SE
16	21.4	7.0	9.4	0.00		0.9	6.4	SE
17	22.7	6.1	10.2	0.00		0.3	3.1	N
18	25.7	7.7	14.6	0.00		0.7	4.9	N
19	20.9	12.5	16.3	0.28		0.7	5.1	N
20	18.0	7.3	7.3	0.00		1.2	4.9	SE
21	17.9	5.2	6.2	0.00		1.3	6.0	N
22	22.4	3.5	9.6	0.00		0.7	5.0	S
23	26.8	6.1	17.8	0.00		2.3	8.9	SW
24	23.0	12.3	12.8	0.00		0.9	6.6	SW
25	30.7	9.5	19.6	0.00		0.9	5.5	N
26	29.7	14.5	22.7	0.00		2.9	9.2	N
27	23.0	13.6	13.6	0.29		1.6	4.7	NE
28	15.5	11.7	11.9	1.41		1.9	6.6	N
29	18.2	6.1	6.1	0.01		1.7	7.9	N
30	22.0	2.7	11.2	0.00		1.8	7.8	SW
31	N/A	N/A	N/A	N/A		N/A	N/A	N/A
Sum	747.8	318.0	390.9	2.47	0.0	Observer: Emil Boucek		
Avg	24.9	10.6	14.0			Station: St. David		
Extreme	33.4	2.7		1.41	0.0			

\*N/A=Not available

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

TABLE AV-1 (Continued)

RECORD OF CLIMATOLOGICAL OBSERVATIONS FOR 1994-1999  
 FULTON COUNTY, ILLINOIS, STATION SWQ, SEC. 21, R4E, T6N

October 1999 Date	Temperature °C			Precipitation		Wind		
	Max	Min	6 PM	rain, melted snow	snow, sleet, hail	m/S	m/S	
				(inches & hundredths)	(inches & tenths)	Avg	Max	Dir
1	20.5	5.8	11.6	0.00		0.3	3.8	NE
2	12.6	4.9	5.4	0.14		1.0	4.6	NE
3	7.2	5.5	6.1	0.97		1.9	6.9	SE
4	13.6	2.6	3.3	0.01		1.2	7.0	W
5	20.5	0.6	6.2	0.00		1.6	8.7	SE
6	21.3	5.2	11.7	0.00		0.3	3.2	W
7	24.4	8.3	13.3	0.00		1.5	9.3	NW
8	23.6	11.3	14.6	0.06		1.4	5.1	SW
9	19.4	14.7	16.9	0.05		0.2	3.1	NE
10	28.2	13.5	13.5	0.00		0.8	4.7	N
11	22.1	7.8	9.7	0.00		0.6	3.8	NE
12	25.8	7.6	18.1	0.00		2.6	9.5	N
13	18.6	3.3	3.4	0.00		2.7	10.3	SE
14	17.7	0.4	10.3	0.00		1.0	5.5	NW
15	28.8	9.2	21.3	0.00		3.1	8.7	N
16	21.4	11.8	11.8	0.26		2.0	7.3	SE
17	11.9	1.0	1.0	0.00		2.1	6.6	NE
18	12.6	-2.0	2.9	0.00		0.4	4.0	S
19	16.0	1.4	4.8	0.00		0.8	4.8	SW
20	13.6	-2.3	4.4	0.00		0.8	5.6	N
21	23.6	3.0	17.3	0.00		2.2	7.4	SW
22	17.1	4.2	4.2	0.00		4.4	13.0	SE
23	9.6	0.0	0.9	0.00		2.0	6.3	SE
24	12.3	-3.6	2.1	0.00		0.4	4.3	S
25	21.0	-0.1	6.7	0.00		1.6	7.8	N
26	20.2	1.7	6.9	0.00		0.4	4.5	NE
27	23.7	4.5	12.2	0.00		0.8	4.9	SW
28	26.6	9.8	15.9	0.00		1.6	6.8	NW
29	25.4	13.3	16.5	0.00		2.8	8.4	NW
30	24.6	13.5	14.5	0.00		3.1	10.4	SE
31	22.3	12.4	12.6	0.00		0.4	2.9	NE
Sum	606.2	169.3	300.1	1.49	0.0	Observer: Emil Boucek		
Avg	19.6	5.5	9.7			Station: St. David		
Extreme	28.8	-3.6		0.97	0.0			

\*N/A=Not available

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

TABLE AV-1 (Continued)

RECORD OF CLIMATOLOGICAL OBSERVATIONS FOR 1994-1999  
 FULTON COUNTY, ILLINOIS, STATION SWQ, SEC. 21, R4E, T6N

November 1999 Date	Temperature °C			Precipitation		Wind		
	Max	Min	6 PM	rain, melted snow	snow, sleet, hail	m/S	m/S	
				(inches & hundredths)	(inches & tenths)	Avg	Max	Dir
1	23.2	7.5	7.5	0.00		2.1	10.8	SW
2	7.4	-0.5	-0.5	0.00		3.1	9.9	SW
3	13.2	-3.2	3.2	0.00		1.1	5.5	N
4	18.8	-0.2	7.4	0.00		2.0	6.5	N
5	21.3	6.4	7.9	0.00		2.0	7.2	SE
6	18.0	4.8	12.3	0.00		0.9	4.5	W
7	18.4	7.7	8.1	0.00		1.0	5.6	W
8	26.1	6.0	13.6	0.00		1.4	8.3	SW
9	23.6	10.3	16.7	0.00		2.8	9.7	SW
10	20.2	10.3	10.4	0.00		3.3	8.6	SE
11	10.2	3.2	3.7	0.00		0.9	5.9	SW
12	19.7	0.3	7.5	0.00		0.7	4.5	NE
13	24.6	3.2	18.9	0.00		1.7	6.3	SW
14	18.8	2.6	2.6	0.00		2.1	7.8	SE
15	11.7	-2.1	1.9	0.00		0.6	5.4	W
16	11.6	-2.4	0.5	0.00		0.7	5.0	SW
17	12.5	-2.3	8.8	0.00		1.7	6.1	N
18	22.3	6.3	15.6	0.00		4.4	12.5	N
19	15.7	3.8	3.8	0.00		4.2	9.6	W
20	11.5	0.4	3.2	0.00		0.8	5.6	NW
21	12.9	0.1	9.0	0.00		1.5	7.8	N
22	16.4	3.9	14.8	0.00		0.6	4.7	NW
23	16.9	4.7	4.7	0.24		4.3	11.8	SW
24	8.9	-2.9	-2.5	0.00		1.0	5.9	N
25	8.9	-4.0	-2.2	0.00		0.1	3.1	SE
26	10.6	-4.1	6.0	0.00		1.6	8.1	N
27	11.5	1.2	1.9	0.00		0.7	5.5	SE
28	9.0	-2.8	1.2	0.00		0.4	3.3	SE
29	5.8	-6.2	-5.2	0.00		1.0	6.9	N
30	4.3	-8.9	-1.6	0.00		0.8	4.9	N
31	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Sum	454.0	43.1	179.2	0.24	0.0	Observer: Emil Boucek		
Avg	15.1	1.4	6.0			Station: St. David		
Extreme	26.1	-8.9		0.24	0.0			

\*N/A=Not available

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

TABLE AV-1 (Continued)

RECORD OF CLIMATOLOGICAL OBSERVATIONS FOR 1994-1999  
 FULTON COUNTY, ILLINOIS, STATION SWQ, SEC. 21, R4E, T6N

December 1999 Date	Temperature °C			Precipitation		Wind		
	Max	Min	6 PM	rain, melted snow	snow, sleet, hail	m/S	m/S	
				(inches & hundredths)	(inches & tenths)	Avg	Max	Dir
1	8.8	-2.6	5.5			3.4	7.9	S
2	16.6	3.9	14.5			3.4	8.4	SW
3	15.5	7.9	7.9	0.17		3.1	9.8	S
4	13.1	2.8	8.4	1.25		0.8	5.5	N
5	8.4	-1.2	-1.1	0.59		2.7	8.1	SE
6	2.7	-5.3	-1.6	0.02		0.5	4.7	NW
7	6.5	-1.7	2.5			2.0	5.9	N
8	10.2	-0.3	7.4			0.6	4.8	NW
9	8.1	4.6	4.6	0.04		1.1	6.8	N
10	5.7	-2.7	-1.7			1.4	5.8	W
11	5.0	-3.9	3.0	0.02		0.6	3.7	NW
12	5.5	-1.7	-1.7	0.01		0.0	1.7	SE
13	7.0	-5.3	0.4			0.7	4.5	N
14	5.0	-1.0	2.3			0.9	5.8	W
15	2.9	-1.0	-0.9	0.25		2.2	10.4	SW
16	-1.0	-7.4	-2.6	0.04		1.7	6.4	NE
17	-1.0	-3.9	-3.9			1.2	4.5	NE
18	-0.7	-5.3	-5.1			0.2	2.7	NE
19	5.3	-5.2	2.3			0.7	4.6	W
20	1.9	-12.9	-12.9			3.7	8.7	SE
21	-7.5	-16.9	-12.7			0.8	3.9	W
22	-6.0	-13.0	-12.7	0.03		0.8	4.7	SW
23	-3.6	-13.6	-3.8	0.04		1.8	5.9	NW
24	-3.7	-14.3	-9.5			1.7	5.1	S
25	3.4	-14.5	2.4			2.1	6.7	SW
26	2.6	-4.7	-2.9			4.2	10.0	SW
27	-2.8	-11.4	-11.2	0.02		2.1	7.2	SW
28	4.0	-12.6	1.6			3.2	8.0	W
29	12.8	-3.2	6.5			2.6	9.0	SW
30	8.3	-3.8	-3.1			0.8	3.5	SE
31	8.5	-4.4	1.3			0.9	3.5	NW
Sum	141.5	-154.6	-16.8	2.48	0.0	Observer: Emil Boucek		
Avg	4.6	-5.0	-0.5			Station: St. David		
Extreme	16.6	-16.9		1.25	0.0			

\*N/A=Not available

APPENDIX VI

SAMPLING LOCATIONS DOWNSTREAM OF FIELD 10  
ANALYSES FOR JULY 1999-JUNE 2000

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

TABLE AVI-1

SAMPLING LOCATIONS DOWNSTREAM OF FIELD 10  
ANALYSES FOR THE MONTH OF JULY 1999

Date	Sample Site	NH <sub>3</sub> -N mg/L	NO <sub>3</sub> -N mg/L	NO <sub>2</sub> -N mg/L
07/07/99	A	0.24	15.36	0.012
07/07/99	Spring #2	0.24	16.40	0.028
07/07/99	B	0.16	14.45	0.011
07/07/99	Spring #4	0.26	15.73	0.014
07/07/99	C	0.16	14.25	0.010
07/07/99	Spring #6	0.33	0.06	0.002
07/07/99	D	0.2	4.04	0.009
07/07/99	T1	DRY	DRY	DRY
07/07/99	Spring #5	0.25	<0.01	0.001
07/07/99	E	0.18	2.94	0.011
07/07/99	Spring #1	0.22	14.39	0.095
07/07/99	F	0.16	5.97	0.018
07/07/99	T2	0.16	0.14	0.002
07/07/99	G	0.24	5.69	0.017
07/07/99	T3	0.16	0.26	0.004
07/07/99	H (SP-14)	0.22	5.28	0.016
07/07/99	T4	0.16	0.08	0.002
07/07/99	I	0.18	5.07	0.016
07/07/99	velyn Branch	0.34	0.74	0.034
07/07/99	J	0.29	1.79	0.030
07/07/99	Big Creek	0.26	2.16	0.047
07/07/99	K	0.26	1.87	0.038



METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

TABLE AVI-2

SAMPLING LOCATIONS DOWNSTREAM OF FIELD 10  
ANALYSES FOR THE MONTH OF AUGUST 1999

Date	Sample Site	NH <sub>3</sub> -N mg/L	NO <sub>3</sub> -N mg/L	NO <sub>2</sub> -N mg/L
08/04/99	A	0.11	14.96	0.008
08/04/99	Spring #2	0.15	15.47	0.028
08/04/99	B	0.12	14.69	0.009
08/04/99	Spring #4	0.09	15.18	0.012
08/04/99	C	0.18	14.20	0.008
08/04/99	Spring #6	0.34	0.06	0.001
08/04/99	D	0.20	3.80	0.008
08/04/99	T1	DRY	DRY	DRY
08/04/99	Spring #5	0.14	0.29	0.004
08/04/99	E	0.14	2.80	0.008
08/04/99	Spring #1	0.24	11.90	0.087
08/04/99	F	0.14	5.60	0.014
08/04/99	T2	0.16	0.12	0.001
08/04/99	G	0.14	5.60	0.014
08/04/99	T3	0.17	0.03	0.003
08/04/99	H (SP-14)	0.20	5.16	0.013
08/04/99	T4	0.16	0.11	0.001
08/04/99	I	0.20	5.13	0.014
08/04/99	velyn Branch	0.39	0.96	0.091
08/04/99	J	0.36	1.58	0.079
08/04/99	Big Creek	0.23	1.82	0.047
08/04/99	K	0.28	1.88	0.048

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

TABLE AVI-3

SAMPLING LOCATIONS DOWNSTREAM OF FIELD 10  
ANALYSES FOR THE MONTH OF SEPTEMBER 1999

Date	Sample Site	NH <sub>3</sub> -N mg/L	NO <sub>3</sub> -N mg/L	NO <sub>2</sub> -N mg/L
09/01/99	A	0.15	13.36	0.005
09/01/99	Spring #2	0.11	13.93	0.027
09/01/99	B	0.12	13.03	0.007
09/01/99	Spring #4	0.10	13.82	0.013
09/01/99	C	0.10	12.89	0.007
09/01/99	Spring #6	0.22	0.09	0.002
09/01/99	D	0.12	3.24	0.006
09/01/99	T1	DRY	DRY	DRY
09/01/99	Spring #5	0.12	0.17	0.004
09/01/99	E	0.13	2.41	0.006
09/01/99	Spring #1	0.19	9.04	0.088
09/01/99	F	0.09	5.05	0.013
09/01/99	T2	0.10	0.18	0.001
09/01/99	G	0.11	5.01	0.012
09/01/99	T3	0.08	2.61	0.007
09/01/99	H (SP-14)	0.12	4.76	0.011
09/01/99	T4	0.10	0.10	0.002
09/01/99	I	0.18	4.57	0.001
09/01/99	velyn Branch	0.24	1.17	0.025
09/01/99	J	0.18	1.74	0.022
09/01/99	Big Creek	0.15	1.12	0.014
09/01/99	K	0.15	1.25	0.013

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

TABLE AVI-4

SAMPLING LOCATIONS DOWNSTREAM OF FIELD 10  
ANALYSES FOR THE MONTH OF OCTOBER 1999

Date	Sample Site	NH <sub>3</sub> -N mg/L	NO <sub>3</sub> -N mg/L	NO <sub>2</sub> -N mg/L
10/6/99	A	0.16	5.84	0.005
10/6/99	Spring #2	0.10	11.72	0.018
10/6/99	B	0.12	5.23	0.012
10/6/99	Spring #4	0.10	11.34	0.009
10/6/99	C	0.08	10.10	0.009
10/6/99	Spring #6	0.24	0.35	0.004
10/6/99	D	0.16	0.16	0.004
10/6/99	T1	DRY	DRY	DRY
10/6/99	Spring #5	0.06	0.16	0.005
10/6/99	E	0.06	1.64	0.006
10/6/99	Spring #1	0.15	6.59	0.084
10/6/99	F	0.10	4.07	0.011
10/6/99	T2	0.11	0.10	0.002
10/6/99	G	0.10	3.91	0.013
10/6/99	T3	0.07	2.05	0.008
10/6/99	H (SP-14)	0.08	3.62	0.011
10/6/99	T4	0.08	<0.01	0.002
10/6/99	I	0.16	3.52	0.012
10/6/99	velyn Branch	0.34	0.62	0.015
10/6/99	J	0.30	0.85	0.013
10/6/99	Big Creek	0.27	1.25	0.055
10/6/99	K	0.30	1.18	0.046

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

TABLE AVI-5

SAMPLING LOCATIONS DOWNSTREAM OF FIELD 10  
ANALYSES FOR THE MONTH OF NOVEMBER 1999

Date	Sample Site	NH <sub>3</sub> -N mg/L	NO <sub>3</sub> -N mg/L	NO <sub>2</sub> -N mg/L
11/3/99	A	DRY	DRY	DRY
11/3/99	Spring #2	DRY	DRY	DRY
11/3/99	B	DRY	DRY	DRY
11/3/99	Spring #4	<0.01	8.58	0.010
11/3/99	C	<0.01	7.80	0.005
11/3/99	Spring #6	<0.01	0.43	0.002
11/3/99	D	<0.01	0.10	0.002
11/3/99	T1	DRY	DRY	DRY
11/3/99	Spring #5	0.04	<0.01	0.001
11/3/99	E	<0.01	1.78	0.003
11/3/99	Spring #1	<0.01	4.85	0.082
11/3/99	F	<0.01	3.59	0.012
11/3/99	T2	<0.01	0.36	0.001
11/3/99	G	<0.01	3.54	0.011
11/3/99	T3	<0.01	1.34	0.006
11/3/99	H (SP-14)	<0.01	3.11	0.010
11/3/99	T4	<0.01	<0.01	0.002
11/3/99	I	<0.01	2.98	0.009
11/3/99	velyn Branch	<0.01	0.37	0.026
11/3/99	J	0.18	0.45	0.025
11/3/99	Big Creek	0.22	1.45	0.023
11/3/99	K	0.04	1.19	0.020

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

TABLE AVI-6

SAMPLING LOCATIONS DOWNSTREAM OF FIELD 10  
ANALYSES FOR THE MONTH OF DECEMBER 1999

Date	Sample Site	NH <sub>3</sub> -N mg/L	NO <sub>3</sub> -N mg/L	NO <sub>2</sub> -N mg/L
12/01/99	A	DRY	DRY	DRY
12/01/99	Spring #2	DRY	DRY	DRY
12/01/99	B	DRY	DRY	DRY
12/01/99	Spring #4	0.09	7.17	0.008
12/01/99	C	0.11	6.36	0.003
12/01/99	Spring #6	0.16	<0.01	0.004
12/01/99	D	0.04	2.42	0.002
12/01/99	T1	DRY	DRY	DRY
12/01/99	Spring #5	0.14	0.27	0.004
12/01/99	E	0.11	1.84	0.003
12/01/99	Spring #1	0.13	3.62	0.068
12/01/99	F	0.05	2.70	0.006
12/01/99	T2	0.08	0.11	0.001
12/01/99	G	0.13	2.34	0.006
12/01/99	T3	0.04	1.21	0.004
12/01/99	H (SP-14)	0.02	2.21	0.005
12/01/99	T4	0.02	<0.01	0.003
12/01/99	I	0.10	2.03	0.004
12/01/99	velyn Branch	0.15	0.72	0.020
12/01/99	J	0.21	0.49	0.020
12/01/99	Big Creek	0.18	2.27	0.020
12/01/99	K	0.14	1.73	0.016

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

TABLE AVI-7

SAMPLING LOCATIONS DOWNSTREAM OF FIELD 10  
ANALYSES FOR THE MONTH OF JANUARY 2000

Date	Sample Site	NH <sub>3</sub> -N mg/L	NO <sub>3</sub> -N mg/L	NO <sub>2</sub> -N mg/L
01/05/00	A	DRY	DRY	DRY
01/05/00	Spring #2	DRY	DRY	DRY
01/05/00	B	DRY	DRY	DRY
01/05/00	Spring #4	0.17	5.13	0.003
01/05/00	C	0.20	4.61	0.002
01/05/00	Spring #6	0.22	<0.01	0.002
01/05/00	D	0.16	2.08	0.005
01/05/00	T1	DRY	DRY	DRY
01/05/00	Spring #5	0.22	<0.01	0.004
01/05/00	E	0.14	1.39	0.002
01/05/00	Spring #1	0.24	2.00	0.042
01/05/00	F	0.14	1.73	0.004
01/05/00	T2	0.18	0.01	0.005
01/05/00	G	0.13	1.62	0.004
01/05/00	T3	0.16	0.89	0.004
01/05/00	H (SP-14)	0.14	1.52	0.003
01/05/00	T4	0.15	<0.01	0.006
01/05/00	I	0.16	1.20	0.003
01/05/00	velyn Branch	0.26	0.21	0.008
01/05/00	J	0.18	0.22	0.007
01/05/00	Big Creek	0.42	2.99	0.042
01/05/00	K	0.46	2.47	0.033

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

TABLE AVI-8

SAMPLING LOCATIONS DOWNSTREAM OF FIELD 10  
ANALYSES FOR THE MONTH OF FEBRUARY 2000

Date	Sample Site	NH <sub>3</sub> -N mg/L	NO <sub>3</sub> -N mg/L	NO <sub>2</sub> -N mg/L
02/02/00	A	DRY	DRY	DRY
02/02/00	Spring #2	DRY	DRY	DRY
02/02/00	B	DRY	DRY	DRY
02/02/00	Spring #4	0.06	3.95	0.001
02/02/00	C	0.16	3.39	0.002
02/02/00	Spring #6	0.16	0.10	0.002
02/02/00	D	0.10	1.53	0.004
02/02/00	T1	DRY	DRY	DRY
02/02/00	Spring #5	0.18	0.07	0.002
02/02/00	E	0.14	1.04	0.004
02/02/00	Spring #1	0.15	1.22	0.024
02/02/00	F	0.10	0.98	0.003
02/02/00	T2	0.14	0.14	0.005
02/02/00	G	0.10	1.03	0.002
02/02/00	T3	0.16	0.10	0.005
02/02/00	H (SP-14)	0.09	1.52	0.004
02/02/00	T4	0.10	0.14	0.004
02/02/00	I	0.10	0.90	0.002
02/02/00	velyn Branch	0.25	0.22	0.004
02/02/00	J	0.21	0.29	0.003
02/02/00	Big Creek	2.02	3.52	0.033
02/02/00	K	1.88	2.55	0.025

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

TABLE AVI-9

SAMPLING LOCATIONS DOWNSTREAM OF FIELD 10  
ANALYSES FOR THE MONTH OF MARCH 2000

Date	Sample Site	NH <sub>3</sub> -N mg/L	NO <sub>3</sub> -N mg/L	NO <sub>2</sub> -N mg/L
03/01/00	A	0.30	0.44	0.006
03/01/00	Spring #2	DRY	DRY	DRY
03/01/00	B	0.20	0.38	0.006
03/01/00	Spring #4	0.13	2.78	0.001
03/01/00	C	0.19	0.54	0.005
03/01/00	Spring #6	0.33	0.39	0.003
03/01/00	D	0.12	0.58	0.005
03/01/00	T1	0.24	1.70	0.006
03/01/00	Spring #5	0.18	0.56	0.004
03/01/00	E	0.11	0.44	0.008
03/01/00	Spring #1	0.31	0.87	0.014
03/01/00	F	0.11	0.54	0.008
03/01/00	T2	0.19	0.24	0.002
03/01/00	G	0.12	0.42	0.006
03/01/00	T3	0.17	0.76	0.023
03/01/00	H (SP-14)	0.12	0.52	0.010
03/01/00	T4	0.16	0.16	0.002
03/01/00	I	0.27	0.52	0.010
03/01/00	velyn Branch	0.28	0.46	0.007
03/01/00	J	0.35	0.48	0.013
03/01/00	Big Creek	0.38	2.31	0.033
03/01/00	K	0.40	2.27	0.029



METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

TABLE AVI-10

SAMPLING LOCATIONS DOWNSTREAM OF FIELD 10  
ANALYSES FOR THE MONTH OF APRIL 2000

Date	Sample Site	NH <sub>3</sub> -N mg/L	NO <sub>3</sub> -N mg/L	NO <sub>2</sub> -N mg/L
04/05/00	A	DRY	DRY	DRY
04/05/00	Spring #2	DRY	DRY	DRY
04/05/00	B	DRY	DRY	DRY
04/05/00	Spring #4	0.20	2.12	0.002
04/05/00	C	0.12	1.37	0.003
04/05/00	Spring #6	0.22	0.13	0.002
04/05/00	D	0.09	0.36	0.002
04/05/00	T1	DRY	DRY	DRY
04/05/00	Spring #5	0.11	0.04	0.002
04/05/00	E	0.14	0.19	0.002
04/05/00	Spring #1	0.25	0.29	0.004
04/05/00	F	0.08	0.12	0.001
04/05/00	T2	0.14	0.07	0.001
04/05/00	G	0.06	0.12	0.001
04/05/00	T3	0.18	0.13	0.002
04/05/00	H (SP-14)	0.07	0.10	0.002
04/05/00	T4	0.12	0.06	0.002
04/05/00	I	0.12	0.02	0.001
04/05/00	velyn Branch	0.18	0.14	0.004
04/05/00	J	0.17	0.16	0.006
04/05/00	Big Creek	0.28	1.88	0.072
04/05/00	K	0.30	1.37	0.049

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

TABLE AVI-11

SAMPLING LOCATIONS DOWNSTREAM OF FIELD 10  
ANALYSES FOR THE MONTH OF MAY 2000

Date	Sample Site	NH <sub>3</sub> -N mg/L	NO <sub>3</sub> -N mg/L	NO <sub>2</sub> -N mg/L
05/02/00	A	0.16	0.16	0.004
05/02/00	Spring #2	DRY	DRY	DRY
05/02/00	B	0.18	0.19	0.002
05/02/00	Spring #4	0.14	1.66	<0.001
05/02/00	C	0.14	0.74	0.003
05/02/00	Spring #6	0.28	0.24	0.002
05/02/00	D	0.10	0.24	0.002
05/02/00	T1	DRY	DRY	DRY
05/02/00	Spring #5	0.12	0.11	<0.001
05/02/00	E	0.09	0.14	0.002
05/02/00	Spring #1	0.20	0.18	0.003
05/02/00	F	0.11	0.11	0.001
05/02/00	T2	0.15	0.11	<0.001
05/02/00	G	0.16	0.09	<0.001
05/02/00	T3	0.22	0.13	<0.001
05/02/00	H (SP-14)	0.18	0.06	<0.001
05/02/00	T4	0.13	0.14	0.002
05/02/00	I	0.24	0.15	<0.001
05/02/00	velyn Branch	0.34	0.25	0.014
05/02/00	J	0.20	0.29	0.014
05/02/00	Big Creek	1.35	2.41	0.245
05/02/00	K	0.96	1.65	0.162

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

TABLE AVI-12

SAMPLING LOCATIONS DOWNSTREAM OF FIELD 10  
ANALYSES FOR THE MONTH OF JUNE 2000

Date	Sample Site	NH <sub>3</sub> -N mg/L	NO <sub>3</sub> -N mg/L	NO <sub>2</sub> -N mg/L
06/07/00	A	DRY	DRY	DRY
06/07/00	Spring #2	DRY	DRY	DRY
06/07/00	B	DRY	DRY	DRY
06/07/00	Spring #4	0.12	0.00	1.420
06/07/00	C	0.18	0.90	0.010
06/07/00	Spring #6	0.44	0.16	0.003
06/07/00	D	0.16	0.50	0.032
06/07/00	T1	DRY	DRY	DRY
06/07/00	Spring #5	0.17	0.41	0.003
06/07/00	E	0.18	0.52	0.024
06/07/00	Spring #1	0.14	0.00	0.170
06/07/00	F	0.12	0.24	0.008
06/07/00	T2	0.12	0.08	0.002
06/07/00	G	0.11	0.24	0.008
06/07/00	T3	0.25	0.23	0.009
06/07/00	H (SP-14)	0.11	0.32	0.007
06/07/00	T4	0.13	0.09	0.003
06/07/00	I	0.18	0.28	0.006
06/07/00	velyn Branch	0.28	0.24	0.014
06/07/00	J	0.26	0.26	0.014
06/07/00	Big Creek	0.43	3.16	0.093
06/07/00	K	0.26	1.06	0.040