

Lake Jesup Stormwater Sampling And Water Quality Analysis

Final Report

Prepared for
Seminole County, Florida

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Executive Summary

This report provides water quality and quantity data obtained through the monitoring of five tributaries of Lake Jesup, which is located in Seminole County, Florida. The monitoring is a continuation of the sampling and analysis program previously conducted for Seminole County by Camp Dresser & McKee, Inc. (CDM). Stormwater was monitored and sampled by Environmental Consulting and Technology, Inc. (ECT) at five tributary stations including Gee Creek, Howell Creek, Six Mile Creek, Solary Canal, and Solider Creek from August, 2004 through February, 2006.

To begin the sampling, the monitoring stations were re-established at the five previously sampled tributaries. The tributaries were monitored to estimate storm event flow rates and to collect composite and grab samples during storm events. Laboratory analysis was performed on each of the samples. The water quality constituents analyzed from the composites samples included Total Nitrogen (TN), Total Kjeldahl Nitrogen (TKN), Total Ammonia Nitrogen (NH₃), Nitrate-Nitrite (NO₂/NO₃), Total Phosphorus (TP), and Total Suspended Solids (TSS). Constituents analyzed from the grab samples included 5-day Biological Oxygen Demand (BOD₅) and Fecal Coliform. The water quality data obtained from the samples were used to estimate event mean concentrations for the monitored constituents.

A total of 24 storm events were monitored and sampled providing results for a minimum of twelve storm events for each sampling station. Three of the stations had results for more than twelve storm events. During each storm event, the sampling equipment collected volume-weighted composite samples. These samples were delivered to the Harbor Branch Environmental Laboratory in Sanford, Florida and analyzed for the listed constituents. The laboratory results are assumed to represent the event mean concentrations (EMCs) during the sampled storm events. The arithmetic average concentrations for the constituents were calculated from the results of the individual storm events at each of the five stations and are presented in Table ES-1. The average concentrations for the previous sampling periods conducted by CDM as well as typical

EMC values for various land uses reported previously by CDM are included for comparison purposes. For those sample results reported as Below Detection Limits (BDL), one-half of the analytical detection limit was used in the calculation of the average concentration.

From the data in Table ES-1, it can be seen that Howell Creek has the best water quality with the lowest average concentrations for TN, TP and TSS and the second lowest average concentration for fecal coliform. It did, however, have the highest concentration of BOD₅, all of the tributaries have low BOD₅ concentrations compared to the EMC values reported for the different land uses. Gee Creek had the next lowest constituents for TN, TP and TSS. It also had a high average concentration for BOD₅, and a moderate value for fecal coliform. Six Mile Creek had the second highest average concentrations of TN, TP and fecal coliform and average concentrations of TSS and BOD₅. Solary Canal had the highest concentration for TN and TP and the second highest level of TSS, although it had the lowest concentrations of BOD₅ and fecal coliform. Soldier Creek had the highest average concentration of TSS and Fecal Coliform and moderate concentrations of TN, TP, and BOD₅. Based on these values, it appears that, in general, Howell Creek and Gee Creek have the best water quality, followed by Six Mile Creek, Soldier Creek, and Solary Canal.

Table ES-1: Water Quality Summary - Average Concentrations

	Composite Sample Constituents						Grab Sample Constituents	
	Total N (mg/L)	TKN (mg/L)	NO ₂ /NO ₃ -N (mg/L)	NH ₃ -N (mg/L)	Total P (mg/L)	TSS (mg/L)	BOD ₅ (mg/L)	Fecal Coliform (CFU/100mL)
Gee Creek – ECT 2004/2005	1.5	1.3	0.216	0.051	0.20	36	2.4	1,267
Gee Creek – CDM 2003	1.6	1.6	0.060	0.110	0.25	81	2.3	2,461
Howell Creek – ECT 2004/2005	1.4	1.2	0.223	0.057	0.18	21	3.2	1,171
Howell Creek – CDM 2003	1.4	1.2	0.190	0.100	0.15	21	1.5	459
Howell Creek – CDM 2001	1.0	-	-	-	0.16	12	6.6	-
Six Mile Creek – ECT 2004/2005	2.4	2.2	0.155	0.066	0.32	62	2.2	1,505
Six Mile Creek – CDM 2003	2.1	2.0	0.130	0.120	0.31	79	2.7	1,526
Six Mile Creek – CDM 2001	1.1	-	-	-	0.17	7	7.0	-
Solary Canal – ECT 2004/2005	2.5	2.0	0.423	0.051	0.51	74	1.6	1,039
Solary Canal – CDM 2003	2.3	2.1	0.210	0.090	0.47	70	4.6	720
Solary Canal – CDM 2001	1.8	-	-	-	0.47	41	7.6	-
Soldier Creek – ECT 2004/2005	1.8	1.6	0.179	0.029	0.26	94	1.7	2,162
Soldier Creek – CDM 2003	2.3	2.1	0.200	0.080	0.40	107	4.1	2,557
Soldier Creek – CDM 2001	1.8	-	-	-	0.42	110	7.9	-
Forest/Open	1.2	0.9	0.28	-	0.36	50	13.2	-
Commercial	1.2	0.8	0.41	-	0.14	54	6.6	-
High Density Residential	2.6	2.3	0.30	-	0.51	45	17.6	-

Note:

One-half of the analytical detection limit was used in the calculation of the average concentration for results reported as Below Detection Limits. Analytical detection limits are provided at the beginning of Appendix A.

1.0 INTRODUCTION

On June 7, 2004, Seminole County authorized Environmental Consulting & Technology, Inc. to begin water quality monitoring work on five tributaries of Lake Jesup. The monitoring is a continuation of the Lake Jesup Stormwater Sampling and Water Quality Analysis Project previously conducted for Seminole County by Camp Dresser & McKee, Inc. (CDM). The objective of the project is to monitor and characterize the water quality of the five tributaries which include Gee Creek, Howell Creek, Six Mile Creek, Solary Canal, and Soldier Creek.

Lake Jesup is a large lake located in central Seminole County with a surface area of 8,120 acres according to the Seminole County Watershed Atlas. The Lake has a connection to the St. Johns River at the northern end by the Geneva Bridge. According to the Watershed Atlas, Lake Jesup is impaired per the Florida Impaired Waters Rule. The lake is listed as impaired due to problematic concentrations of nutrients (TSI) and unionized ammonia. While point source pollutant loads to the lake, mainly wastewater effluent, have been reduced, the lake still receives non-point source pollutants from tributaries flowing through surrounding developed and undeveloped areas. The water quality data collected in this program will be used to assist in establishment of Total Maximum Daily Loads (TMDLs) for the lake and to evaluate the effectiveness of potential water quality retrofit projects.

In August 2001, CDM completed a 12 month sampling and analysis program for four tributaries of Lake Jesup including Soldier Creek, Howell Creek, Solary Canal and Six Mile Creek (CDM, 2001). Stormwater was monitored and sampled at the four tributary stations to characterize the relative water quality of the stations and the phases of the storm event (first flush, post-peak flow, and post- storm base flow).

In July 2002, Seminole County contracted with CDM to continue the stormwater sampling program to better quantify flows and water quality of runoff conveyed by tributaries to Lake Jesup. The continued sampling included the four tributaries

previously monitored as well as a fifth tributary, Gee Creek. The locations of the five stations are shown in Figure 1.1. Additional sampling was performed by CDM from February 2003 through August 2003 for the five tributaries.

Composite and grab sampling of stormwater runoff was conducted by ECT over an 18-month period beginning in August 2004 at the five stations. This report summarizes the collection and analysis of the samples by station and rainfall event. Water quantity data are also summarized by rainfall depth, duration, flow and total runoff volume.

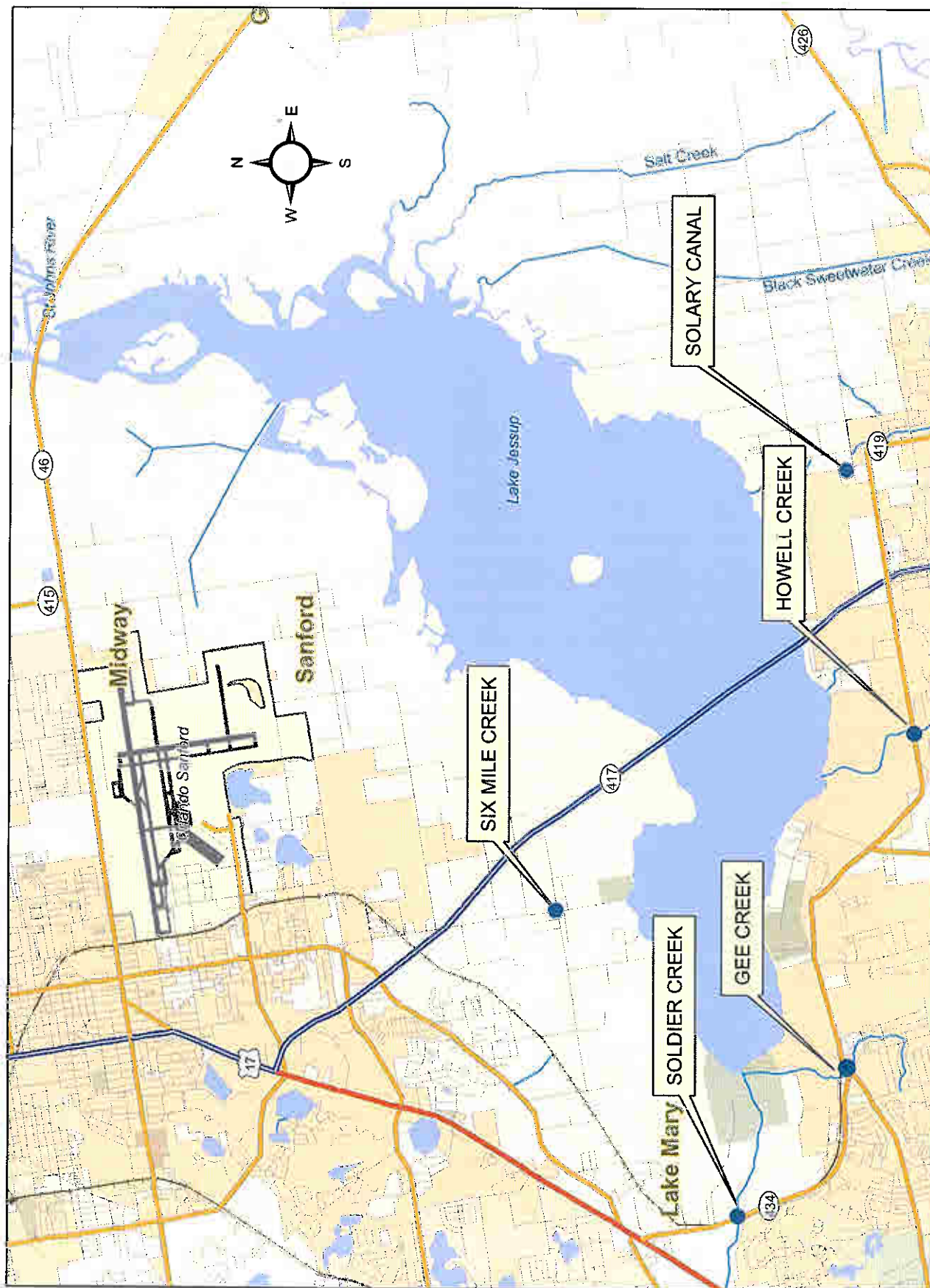


Figure 1-1
Lake Jessup Stormwater Sampling and Water Quality Analysis
● Stormwater Sampling Station Locations

2.0 DATA COLLECTION METHODOLOGY

Composite stormwater samples were collected for this project using automated sampling equipment acquired by Seminole County to collect data for the US EPA 1995/1996 National Pollutant Discharge Elimination System (NPDES) permit and with additional equipment purchased for the sampling and analysis conducted by CDM. Basic equipment at each station consisted of an ISCO flow meter and sampler, rain gauge, battery(ies), velocity probe, and sample tube and strainer. Solar panels were used at the stations to recharge batteries. Some of the stations were also equipped with a cellular transceiver and antenna. The automated samplers were equipped with a 10,000 mL sample bottle to collect the composite stormwater samples.

Prior to the first sampling event, the stormwater sampling equipment was inspected, repaired, as necessary, and tested. The automated samplers were programmed to begin collecting composite samples after receiving more than 0.2 inches of rainfall within a four hour period. Composite samples were collected throughout the storm event flow duration until the sample bottle was filled or until samples were collected. At the completion of each sampling event, the sample bottles were collected and grab samples were taken. All composite and grab samples were then delivered to the Harbor Branch Environmental Laboratory in Sanford, Florida for analysis.

Each of the composite samples were analyzed for the following constituents:

- Total Nitrogen (TN);
- Total Kjeldahl Nitrogen (TKN);
- Total Ammonia Nitrogen as N (NH₃-N);
- Nitrates and Nitrites as N (NO₂/NO₃);
- Total Phosphorus (TP);
- Total Suspended Solids (TSS).

The grab samples were analyzed for the following constituents:

- 5-Day Biological Oxygen Demand (BOD₅); and
- Fecal Coliform.

The water quality analysis results provided by the laboratory are provided in Section 4.0 of this report. The sampling event data collected by the ISCO units were downloaded and

analyzed by ECT to determine the storm duration, sampling duration, rainfall amount and water quantity information also provided in Section 5.0.

3.0 SITE INFORMATION

The following sections describe watershed characteristics as identified in the Seminole County Watershed Atlas and sampling station information for the five tributaries. Photographs of the sites are provided in Figures 3.1 through 3.5 at the end of this section.

3.1 GEE CREEK

Gee Creek originates at Lake Kathryn in Casselberry, flows north through Winter Springs and unites with Soldier Creek at the western tip of Lake Jesup. The Gee Creek watershed encompasses 12.2 square miles in Seminole County that includes most of Casselberry and portions of Longwood and Winter Springs. The basin is heavily developed, predominately with single family residential homes.

The sample station is located where Gee Creek flows under State Road 434 just west of State Road 419. The creek flows under the road through three 10-foot by 10-foot concrete box culverts. The station is located at the downstream end of the box culverts near the existing USGS stream gauge #02234400 (Figure 3.1). The flow meter and sampler are housed within a fiberglass enclosure. All of the equipment is located within a chain-link fence enclosure. The velocity and level sensor are mounted on a steel plate above the bottom of one of the culverts. The sensor cable and sample tubing are connected to the flow meter and sampler inside the fiberglass enclosure.

The flow meter at this station was programmed to use a USGS rating curve to calculate flow for the first 10 storm events. The flow meter was re-programmed to use an area-velocity calculation with a 30 foot wide rectangular configuration for flow calculation for the remainder of the sampling events.

3.2 HOWELL CREEK

Howell Creek originates in a series of small lakes near downtown Orlando, flows through Lake Howell in Casselberry, through the Winter Springs/Tusawilla area, and into the southwestern corner of Lake Jesup, east of Gee Creek. The Howell Creek watershed encompasses 52 square miles of which 32 square miles are in Seminole County. Land use in the basin is mostly urban, especially in the extensively developed upper reaches of the stream.

The sample station is located at the crossing of Howell Creek at State Road 434. The creek flows under the road through four 8-foot by 10-foot box culverts. The sample station is located at the upstream end of the culverts near the existing USGS stream gauge #02234344 (Figure 3.2). The flow meter and sampler are housed within a fiberglass enclosure. All of the equipment is located within a chain-link fence enclosure. The velocity and level sensor are mounted on a steel plate above the bottom of one of the box culverts. The sensor cable and sample tubing are connected to the flow meter and sampler inside the fiberglass enclosure.

The flow meter at this station is programmed to use an area-velocity calculation with an 8 foot wide rectangular configuration for flow calculation. Since flow is being measured through only one of the culverts, the reported flows and volumes in following sections have been adjusted by a factor of 4.

3.3 SIX MILE CREEK

Six Mile Creek originates south of Airport Boulevard in Roseburg near Lake Mary, Florida. It flows for five miles to the south and east past Lake Mary Boulevard and Sanford Avenue and into Lake Jesup on the northwest shore of the lake. The Six Mile Creek watershed encompasses 4.8 square miles. Land use in the basin is mixed with portions being recently developed with single family residences.

The sample station is located at the crossing of Six Mile Creek at Myrtle Avenue. The creek flows under the road through a single 20-foot by 6-foot concrete arch culvert. The

sample station is located at the upstream end of the culvert (Figure 3.3). The flow meter and sampler are housed within a fiberglass enclosure and all of the equipment is located within a chain-link fence enclosure. The velocity and level sensor are mounted on a steel plate above the bottom of the arch culvert. The sensor cable and sample tubing are connected to the flow meter and sampler inside the fiberglass enclosure.

The flow meter at this station is programmed to use an area-velocity method for flow calculation. Due to the size and shape of the arch culvert, the corresponding flow area is approximated as a 20-foot rectangular culvert.

3.4 SOLARY CANAL (AKA SWEETWATER CREEK)

Solary Canal originates as Sweetwater Creek near downtown Oveido, flows through residential and wetland areas before reaching Black Hammock where it turns into a roadside ditch, and drains north into the southeast corner of Lake Jesup. The 2.5 square mile basin drains a mix of urban development, agriculture, upland forests and wetlands.

The sample station is located at the crossing of Solary Canal at Deleon Street. The crossing consists of a single 96-inch corrugated metal pipe (CMP). The sample station is located at the upstream end of the pipe (Figure 3.4). The flow meter and sampler are housed within a fiberglass enclosure and all of the equipment is located within a chain-link fence enclosure. The velocity and level sensor are mounted on a steel plate along the side of the pipe. The sensor cable and sample tubing are connected to the flow meter and sampler inside the fiberglass enclosure.

The flow meter at this station is programmed to use an area-velocity calculation with a 96 inch round pipe configuration for flow calculation.

3.5 SOLDIER CREEK (AKA SOLDIER'S CREEK)

Soldier Creek originates south of Lake Mary Boulevard, flows through portions of Lake Mary and Longwood and enters Lake Jesup at its far western edge where it joins Gee Creek. Residential development accounts for over half of the 21.2 square mile basin.

Fairly extensive wetlands are present in the watershed especially in the downstream section within Soldier Creek Park.

The sample station is located at the crossing of Soldier Creek at State Road 419. The creek flows under the road through three 8-foot by 10-foot concrete box culverts. The sample station is located at the downstream end of the culverts near the existing USGS stream gauge #02234384 (Figure 3.5). The flow meter and sampler are housed within a fiberglass enclosure and all of the equipment is located within a chain-link fence enclosure. The velocity and level sensor are mounted on a steel plate above the bottom of the one of the box culverts. The sensor cable and sample tubing are connected to the flow meter and sampler inside the fiberglass enclosure.

The flow meter at this station is programmed to use an area-velocity calculation with a 10 foot wide rectangular configuration for flow calculation. Since flow is being measured through only one of the culverts, the reported flows and volumes in following sections have been adjusted by a factor of 3.

3.6 ROUTINE MAINTENANCE OF SITE EQUIPMENT

Each site was visited at least once a month to collect samples and/or perform inspection and routine maintenance. Regular maintenance was conducted, as necessary, to maintain battery power, keep the equipment clear of sediment and debris, clean, repair and/or replace equipment and download stored data.

During the sampling period, numerous problems were encountered with the equipment, some of which is old and may need to be refurbished or replaced soon. These included problems with battery charging, remote communications, and recording of data for later analysis. Consideration should be given to establishing a replacement program whereas the oldest and/or least reliable units are replaced first and the remainder replaced periodically over time. In addition, the latest standard operating procedures (SOP's) issued by the Florida Department of Environmental Protection (FDEP) for water sampling should be reviewed to determine if refrigerated units are now required for the

constituents being sampled. If new units are installed, consideration should be given to switching from cellular communications to IP address based communication equipment to eliminate communications problems being experienced.

Figure 3.1: Gee Creek Sampling Station



Figure 3.2: Howell Creek Sampling Station



Figure 3.3: Six Mile Creek Sampling Station



Figure 3.4: Solary Canal Sampling Station



Figure 3.5: Soldier Creek Sampling Station



4.0 WATER QUALITY RESULTS

A total of 24 storm events were monitored and sampled providing results for a minimum of twelve storm events for each sampling station. Three of the stations had results for more than twelve storm events. This section summarizes the water quality results by storm event at each station.

Tables 4.1 through 4.5 at the end of this section provide the water quality results by storm event for the five sites. The data presented in these tables are averaged for each of the constituents analyzed. One-half of the analytical detection limit was used in the calculation of the average concentration for results reported as Below Detection Limits.

Analytical detection limits are provided at the beginning of Appendix A. The raw analytical results provided by the Harbor Branch Environmental Laboratory and summarized in the results tables are provided in Appendix A as well. Individual site results are discussed below.

4.1 GEE CREEK

Composite and grab samples were collected from a total of 14 storm events at the Gee Creek station. Water quality results for these samples are summarized by storm event and averaged for each constituent in Table 4.1. From this it can be seen that, TN ranged from 1.0 to 2.4 mg/L, with an average concentration of 1.5 mg/L; TP ranged from 0.12 to 0.34 mg/L, with an average concentration of 0.20 mg/L; TSS ranged from 4 to 110 mg/L, with an average concentration of 36 mg/L; BOD₅ ranged from Below Detection Limit (BDL) to 16.0 mg/L with an average concentration of 7.4 mg/L; and fecal coliform ranged from 60 to 7,400 CFU/100 mL, with an average concentration of 1,267 CFU/100 mL.

4.2 HOWELL CREEK

Composite and grab samples were collected from a total of 12 storm events at the Howell Creek station. Water quality results for these samples are summarized by storm event

and averaged for each constituent in Table 4.2. From this it can be seen that, TN ranged from 1.0 to 2.0 mg/L, with an average concentration of 1.4 mg/L; TP ranged from 0.10 to 0.43 mg/L, with an average concentration of 0.18 mg/L; TSS ranged from 9 to 36 mg/L, with an average concentration of 21 mg/L; BOD₅ ranged from BDL to 9.8 mg/L with an average concentration of 5.4 mg/L; and fecal coliform ranged from 120 to 5,700 CFU/100 mL, with an average concentration of 1,171 CFU/100 mL.

4.3 SIX MILE CREEK

Composite and grab samples were collected from a total of 13 storm events at the Six Mile Creek station. Water quality results for these samples are summarized by storm event and averaged for each constituent in Table 4.3. From this it can be seen that, TN ranged from 1.3 to 6.2 mg/L, with an average concentration of 2.4 mg/L; TP ranged from 0.11 to 0.75 mg/L, with an average concentration of 0.32 mg/L; TSS ranged from 10 to 220 mg/L, with an average concentration of 62 mg/L; BOD₅ ranged from BDL to 9.5 mg/L with an average concentration of 5.0 mg/L; and fecal coliform ranged from 100 to 6,400 CFU/100 mL, with an average concentration of 1,505 CFU/100 mL.

4.4 SOLARY CANAL

Composite and grab samples were collected from a total of 12 storm events at the Solary Canal Creek station. Water quality results for these samples are summarized by storm event and averaged for each constituent in Table 4.4. From this it can be seen that, TN ranged from 1.8 to 4.2 mg/L, with an average concentration of 2.5 mg/L; TP ranged from 0.32 to 0.98 mg/L, with an average concentration of 0.51 mg/L; TSS ranged from 15 to 270 mg/L, with an average concentration of 74 mg/L; BOD₅ ranged from BDL to 2.8 mg/L with an average concentration of 2.4 mg/L; and fecal coliform ranged from 200 to 2,400 CFU/100 mL, with an average concentration of 1,039 CFU/100 mL.

4.5 SOLDIER CREEK

Composite and grab samples were collected from a total of 14 storm events at the Soldier Creek station. Water quality results for these samples are summarized by storm event and averaged for each constituent in Table 4.5. From this it can be seen that, TN ranged from 1.1 to 2.9 mg/L, with an average concentration of 1.8 mg/L; TP ranged from 0.12 to 0.54 mg/L, with an average concentration of 0.26 mg/L; TSS ranged from 10 to 490 mg/L, with an average concentration of 94 mg/L; BOD₅ ranged from BDL to 5.5 mg/L with an average concentration of 3.4 mg/L; and fecal coliform ranged from 120 to 18,000 CFU/100 mL, with an average concentration of 2,162 CFU/100 mL.

4.6 SUMMARY OF WATER QUALITY RESULTS

Table 4.6 provides a summary of water quality results for all sites for this sampling period as well as others previously conducted by CDM. From the table, it can be seen that Howell Creek has the best water quality with the lowest average concentrations for TN, TP and TSS and the second lowest average concentration for fecal coliform. It did, however, have the highest concentration of BOD₅, all of the tributaries have low BOD₅ concentrations compared to the EMC values reported for the different land uses. Gee Creek had the next lowest constituents for TN, TP and TSS. It also had a high average concentration for BOD₅, and a moderate value for fecal coliform. Six Mile Creek had the second highest average concentrations of TN, TP and fecal coliform and average concentrations of TSS and BOD₅. Solary Canal had the highest concentration for TN and TP and the second highest level of TSS, although it had the lowest concentrations of BOD₅ and fecal coliform. Soldier Creek had the highest average concentration of TSS and Fecal Coliform and moderate concentrations of TN, TP, and BOD₅. Based on these values, it appears that, in general, Howell Creek and Gee Creek have the best water quality, followed by Six Mile Creek, Soldier Creek, and Solary Canal.

Table 4.1: Gee Creek Sampling Station Water Quality Results

Sample Event No.	Storm Event Date	Rainfall Amount (in)	Composite Sample Parameters						Grab Sample Parameters	
			Total N (mg/L)	TKN (mg/L)	NO ₂ /NO ₃ -N (mg/L)	NH ₃ -N (mg/L)	Total P (mg/L)	TSS (mg/L)	BOD ₅ (mg/L)	Fecal Coliform (CFU/100mL)
1	08/13/04	2.66 (e)	2.2	2.1	0.150	BDL	0.34	88	16.0	1,300
2	11/25/04	0.35 (e)	1.2	1.0	0.200	0.058	0.15	9	BDL	290
3	12/25/04	NS								
4	01/14/05	1.00	1.5	1.2	0.230	0.049	0.21	25	4.0	7,400
5	02/23/04	NS								
6	02/27/05	1.85	1.1	0.9	0.260	0.026	0.17	9	BDL	740
7	03/09/05	0.47	1.0	0.8	0.180	0.055	0.12	4	BDL	350
8	03/16/05	0.67	1.7	1.4	0.250	0.047	0.23	28	BDL	830
9	04/07/05	0.26	1.3	1.0	0.260	0.057	0.14	10	BDL	430
10	04/30/05	NS								
11	05/04/05	0.45	1.7	1.4	0.260	0.087	0.25	46	BDL	830
12	06/01/05	0.66	1.2	1.1	0.099	0.028	0.14	16	BDL	980
13	06/29/05	0.45 (e)	1.6	1.5	0.072	0.059	0.22	62	2.2	60
14	08/18/05	0.44	2.4	1.9	0.510	0.049	0.32	110	BDL	440
15	08/24/05	NS								
16	08/30/05	NS								
17	09/02/05	1.43	1.6	1.4	0.220	0.080	0.19	46	BDL	310
18	09/21/05	0.36	NL	NL	0.240	0.012	0.22	35	BDL	3,300
19	10/05/05	0.47	1.3	1.2	0.092	0.075	0.16	17	BDL	480
20	10/23/05	NS								
21	11/01/05	NS								
22	11/28/05	NS								
23	12/08/05	NS								
24	02/03/06	NS								
Average Concentration			1.5	1.3	0.216	0.051	0.20	36	2.4	1,267
Minimum Concentration			1.0	0.8	0.072	BDL	0.12	4	BDL	60
Maximum Concentration			2.4	2.1	0.510	0.087	0.34	110	16.0	7400

Notes:

(e) = Estimated from Sanford Airport rainfall data or average of other stations

BDL = Not Detected, One-half the detection limit used in the calculation of Average Concentration

NL = Constituent not analyzed or reported by laboratory

NS = No sample taken

Table 4.2: Howell Creek Sampling Station Water Quality Results

Sample Event No.	Storm Event Date	Rainfall Amount (in)	Composite Sample Parameters						Grab Sample Parameters	
			Total N (mg/L)	TKN (mg/L)	NO ₂ /NO ₃ -N (mg/L)	NH ₃ -N (mg/L)	Total P (mg/L)	TSS (mg/L)	BOD ₅ (mg/L)	Fecal Coliform (CFU/100mL)
1	08/13/04	2.66 (e)	1.5	1.40	0.120	BDL	0.21	36	7.6	1,000
2	11/25/04	NS								
3	12/25/04	NS								
4	01/14/05	0.24	1.5	1.30	0.260	0.030	0.22	21	2.7	900
5	02/23/04	0.47	1.4	1.00	0.330	0.052	0.17	15	2.0	1,600
6	02/27/05	NS								
7	03/09/05	NS								
8	03/16/05	0.51	2.0	1.60	0.370	0.210	0.43	20	7.7	1,100
9	04/07/05	0.4	1.1	1.10	BDL	0.059	0.12	12	BDL	120
10	04/30/05	0.45	1.0	0.76	0.280	0.059	0.12	9.9	BDL	420
11	05/04/05	NS								
12	06/01/05	0.43	1.2	1.10	0.150	0.018	0.17	21	BDL	440
13	06/29/05	0.45 (e)	1.6	1.5	0.096	0.049	0.17	14	9.8	210
14	08/18/05	0.67	1.5	1.2	0.250	0.037	0.18	36	BDL	1,500
15	08/24/05	NS								
16	08/30/05	NS								
17	09/02/05	1.48	1.4	1.2	0.260	0.038	0.19	29	BDL	160
18	09/21/05	0.56	NL	NL	0.250	0.012	0.10	8.8	2.4	5,700
19	10/05/05	NS								
20	10/23/05	NS								
21	11/01/05	NS								
22	11/28/05	NS								
23	12/08/05	1.00	1.1	0.82	0.310	0.089	0.1	30	BDL	900
24	02/03/06	NS								
Average Concentration			1.4	1.2	0.223	0.057	0.18	21	3.2	1,171
Minimum Concentration			1.0	0.8	BDL	BDL	0.10	9	BDL	120
Maximum Concentration			2.0	1.6	0.370	0.210	0.43	36	9.8	5,700

Notes:

(e) = Estimated from Sanford Airport rainfall data or average of other stations

BDL = Not Detected, One-half the detection limit used in the calculation of Average Concentration

NL = Constituent not analyzed or reported by laboratory

NS = No sample taken

Table 4.3: Six Mile Creek Sampling Station Water Quality Results

Sample Event No.	Storm Event Date	Rainfall Amount (in)	Composite Sample Parameters						Grab Sample Parameters	
			Total N (mg/L)	TKN (mg/L)	NO ₂ /NO ₃ -N (mg/L)	NH ₃ -N (mg/L)	Total P (mg/L)	TSS (mg/L)	BOD ₅ (mg/L)	Fecal Coliform (CFU/100mL)
1	08/13/04	2.66 (e)	3.1	3.0	0.079	BDL	0.47	160	9.5	3,800
2	11/25/04	NS								
3	12/25/04	NS								
4	01/14/05	NS								
5	02/23/04	NS								
6	02/27/05	1.39	1.8	1.6	0.200	0.017	0.26	26	2.1	1,300
7	03/09/05	0.39	1.3	1.1	0.160	0.019	0.11	10	BDL	590
8	03/16/05	NS								
9	04/07/05	0.61	2.5	2.3	0.220	0.120	0.32	59	2.3	760
10	04/30/05	NS								
11	05/04/05	NS								
12	06/01/05	0.51	1.4	1.3	0.059	0.100	0.14	16	BDL	590
13	06/29/05	0.45 (e)	6.2	6.2	BDL	0.23	0.75	220	BDL	1,000
14	08/18/05	NS								
15	08/24/05	0.49	1.9	1.6	0.250	0.049	0.27	34	BDL	150
16	08/30/05	NS								
17	09/02/05	0.36	2.0	1.8	0.220	0.099	0.28	37	BDL	390
18	09/21/05	0.56	NL	NL	0.200	0.015	0.13	23	BDL	560
19	10/05/05	1.94 (e)	2.4	2.3	0.130	0.027	0.54	63	BDL	3,500
20	10/23/05	0.46 (e)	2.4	2.3	0.140	0.029	0.39	97	BDL	430
21	11/01/05	0.32	1.6	1.5	0.120	0.055	0.16	21	BDL	100
22	11/28/05	NS								
23	12/08/05	NS								
24	02/03/06	0.85 (e)	2.0	1.8	0.23	0.079	0.29	44	5.9	6,400
Average Concentration			2.4	2.2	0.155	0.066	0.32	62	2.2	1,505
Minimum Concentration			1.3	1.1	BDL	BDL	0.11	10	BDL	100
Maximum Concentration			6.2	6.2	0.250	0.230	0.75	220	9.5	6,400

Notes:

(e) = Estimated from Sanford Airport rainfall data or average of other stations

BDL = Not Detected, One-half the detection limit used in the calculation of Average Concentration

NL = Constituent not analyzed or reported by laboratory

NS = No sample taken

Table 4.4: Solary Canal Sampling Station Water Quality Results

Sample Event No.	Storm Event Date	Rainfall Amount (in)	Composite Sample Parameters						Grab Sample Parameters	
			Total N (mg/L)	TKN (mg/L)	NO ₂ /NO ₃ -N (mg/L)	NH ₃ -N (mg/L)	Total P (mg/L)	TSS (mg/L)	BOD ₅ (mg/L)	Fecal Coliform (CFU/100mL)
1	08/13/04	NS								
2	11/25/04	NS								
3	12/25/04	NS								
4	01/14/05	0.43 (e)	2.3	2.0	0.31	0.044	0.60	61	2.8	2,400
5	02/23/04	NS								
6	02/27/05	1.50	2.0	1.7	0.36	0.059	0.51	50	2.8	1,200
7	03/09/05	0.45	2.3	1.7	0.54	0.13	0.48	42	BDL	780
8	03/16/05	1.27 (e)	2.6	2.1	0.49	0.016	0.67	130	2.1	1,000
9	04/07/05	NA	2.2	1.8	0.34	0.035	0.32	47	BDL	780
10	04/30/05	0.7	3.8	3.4	0.38	0.068	0.78	190	BDL	330
11	05/04/05	NS								
12	06/01/05	NS								
13	06/29/05	0.45 (e)	2.2	1.9	0.34	0.049	0.36	23	2.0	200
14	08/18/05	0.09 (e)	4.2	3.7	0.48	0.049	0.98	270	BDL	1,200
15	08/24/05	NS								
16	08/30/05	NS								
17	09/02/05	NS								
18	09/21/05	0.56	NL	NL	0.34	BDL	0.37	22	2.5	2,200
19	10/05/05	NS								
20	10/23/05	NS								
21	11/01/05	0.54 (e)	2.0	1.4	0.55	0.039	0.33	16	BDL	260
22	11/28/05	0.49 (e)	1.9	1.3	0.53	0.067	0.35	24	BDL	620
23	12/08/05	0.81	1.8	1.4	0.42	0.057	0.41	15	BDL	1,500
24	02/03/06	NS								
Average Concentration			2.5	2.0	0.423	0.051	0.51	74	1.6	1,039
Minimum Concentration			1.8	1.3	0.310	BDL	0.32	15	BDL	200
Maximum Concentration			4.2	3.7	0.550	0.130	0.98	270	2.8	2,400

Notes:

(e) = Estimated from Sanford Airport rainfall data or average of other stations

BDL = Not Detected, One-half the detection limit used in the calculation of Average Concentration

NL = Constituent not analyzed or reported by laboratory

NS = No sample taken

Table 4.5: Soldier Creek Sampling Station Water Quality Results

Sample Event No.	Storm Event Date	Rainfall Amount (in)	Composite Sample Parameters						Grab Sample Parameters	
			Total N (mg/L)	TKN (mg/L)	NO ₂ /NO ₃ -N (mg/L)	NH ₃ -N (mg/L)	Total P (mg/L)	TSS (mg/L)	BOD ₅ (mg/L)	Fecal Coliform (CFU/100mL)
1	08/13/04	2.66 (e)	2.9	2.7	0.110	BDL	0.38	340	5.5	240
2	11/25/04	0.35 (e)	1.7	1.4	0.230	0.012	0.19	21	BDL	120
3	12/25/04	1.05 (e)	1.3	1.2	0.076	0.015	0.12	14	2.3	360
4	01/14/05	0.43 (e)	1.4	1.3	0.093	0.018	0.16	15	BDL	500
5	02/23/04	NS								
6	02/27/05	NS								
7	03/09/05	NS								
8	03/16/05	1.03	1.6	1.4	0.190	0.060	0.32	65	2.6	4,000
9	04/07/05	0.74	1.9	1.7	0.210	BDL	0.33	55	BDL	400
10	04/30/05	NS								
11	05/04/05	1.48 (e)	2.7	2.4	0.280	0.046	0.54	120	BDL	850
12	06/01/05	0.85	1.5	1.4	0.110	0.019	0.25	76	BDL	1,800
13	06/29/05	NS								
14	08/18/05	NS								
15	08/24/05	NS								
16	08/30/05	0.27	NL	1.3	0.140	0.013	0.21	15	3.0	18,000
17	09/02/05	1.22	1.4	1.3	0.130	0.022	0.23	38	BDL	290
18	09/20/05	0.56	NL	NL	0.280	0.015	0.25	30	BDL	2,000
19	10/05/05	NS								
20	10/23/05	0.46 (e)	2.8	2.4	0.320	0.029	0.36	490	BDL	1,100
21	11/01/05	0.56	1.4	1.2	0.190	0.051	0.16	25	BDL	290
22	11/28/05	0.31	1.1	0.99	0.140	0.071	0.14	9.7	BDL	320
23	12/08/05	NS								
24	02/03/06	NS								
Average Concentration			1.8	1.6	0.179	0.029	0.26	94	1.7	2,162
Minimum Concentration			1.1	1.0	0.076	BDL	0.12	10	BDL	120
Maximum Concentration			2.9	2.7	0.320	0.071	0.54	490	5.5	18,000

Notes:

(e) = Estimated from Sanford Airport rainfall data or average of other stations

BDL = Not Detected, One-half the detection limit used in the calculation of Average Concentration

NL = Constituent not analyzed or reported by laboratory

NS = No sample taken

Table 4.6: Water Quality Summary - Average Concentrations

	Composite Sample Constituents						Grab Sample Constituents	
	Total N (mg/L)	TKN (mg/L)	NO ₂ /NO ₃ -N (mg/L)	NH ₃ -N (mg/L)	Total P (mg/L)	TSS (mg/L)	BOD ₅ (mg/L)	Fecal Coliform (CFU/100mL)
Gee Creek – ECT 2004/2005	1.5	1.3	0.216	0.051	0.20	36	2.4	1,267
Gee Creek – CDM 2003	1.6	1.6	0.060	0.110	0.25	81	2.3	2,461
Howell Creek – ECT 2004/2005	1.4	1.2	0.223	0.057	0.18	21	3.2	1,171
Howell Creek – CDM 2003	1.4	1.2	0.190	0.100	0.15	21	1.5	459
Howell Creek – CDM 2001	1.0	-	-	-	0.16	12	6.6	-
Six Mile Creek – ECT 2004/2005	2.4	2.2	0.155	0.066	0.32	62	2.2	1,505
Six Mile Creek – CDM 2003	2.1	2.0	0.130	0.120	0.31	79	2.7	1,526
Six Mile Creek – CDM 2001	1.1	-	-	-	0.17	7	7.0	-
Solary Canal – ECT 2004/2005	2.5	2.0	0.423	0.051	0.51	74	1.6	1,039
Solary Canal – CDM 2003	2.3	2.1	0.210	0.090	0.47	70	4.6	720
Solary Canal – CDM 2001	1.8	-	-	-	0.47	41	7.6	-
Soldier Creek – ECT 2004/2005	1.8	1.6	0.179	0.029	0.26	94	1.7	2,162
Soldier Creek – CDM 2003	2.3	2.1	0.200	0.080	0.40	107	4.1	2,557
Soldier Creek – CDM 2001	1.8	-	-	-	0.42	110	7.9	-
Forest/Open	1.2	0.9	0.28	-	0.36	50	13.2	-
Commercial	1.2	0.8	0.41	-	0.14	54	6.6	-
High Density Residential	2.6	2.3	0.30	-	0.51	45	17.6	-

Note:

One-half of the analytical detection limit was used in the calculation of the average concentration for results reported as Below Detection Limits. Analytical detection limits are provided at the beginning of Appendix A.

5.0 WATER QUANTITY RESULTS

The sampling event data recorded by the ISCO units were downloaded periodically and analyzed by ECT to determine the rainfall amount, storm duration, sampling duration, average water level, velocity, and water quantity information for each monitored storm event. Flowlink software developed by ISCO was used to generate the water quantity data provided in Tables 5.1 through 5.5 at the end of this section and to create the graphical results provided in Appendix B.

When the rainfall amount was not available from the ISCO data, the value recorded at the Sanford Airport or the arithmetic average of the other stations was used as an estimate, as noted in the tables. The hydrograph duration was estimated from the graphical results provided by the Flowlink software. The average water level, average velocity, and total volume were taken from the ISCO data as reported where available. Total runoff volume was estimated to be the total flow occurring from the beginning of the storm event until either the flow approached approximately 10% of its base flow prior to the storm event, or until the onset of another storm event. The total flow volumes reported do not necessarily reflect the volume over which the composite samples were collected, however. In some cases, sampling was completed prior to the completion of the storm flows. Some of the volumes reported in the tables are noted as partial flow volumes. During these events, monitoring equipment malfunctions prevented collection of a portion of the data.

The average flow data reported in the tables was calculated by dividing the total volume by the hydrograph duration. At those locations where the flow volume was measured in only one of the multiple culverts present, a factor was applied to obtain adjusted flow for the entire stream as described in section 3.0. Water quantity results for each of the five stations are discussed below.

5.1 GEE CREEK

A total of 14 storm events were sampled at this station during the sampling period. Water quantity results for these events are summarized in Table 5.1. Of the 14 sampled storm events, 12 events have flow information available. Total rainfall depths for the sampled events ranged from 0.26 inches to 2.66 (estimated) inches and the hydrograph durations ranged from 9 to 120 hours. The average flow ranged from 1.1 cfs to 70.2 cfs and the total volume ranged from 106,688 to 4,528,585 cubic feet.

5.2 HOWELL CREEK

A total of 12 storm events were sampled at this station during the sampling period. Water quantity results for these events are summarized in Table 5.2. Of the 12 sampled storm events, 8 events have flow information available. Total rainfall depths for the sampled events ranged from 0.24 inches to 2.66 (estimated) inches and the hydrograph durations ranged from 14 to 68 hours. The average (adjusted) flow ranged from 17.5 cfs to 127.9 cfs and the total (adjusted) volume ranged from 1,813,848 to 16,581,204 cubic feet.

5.3 SIX MILE CREEK

A total of 13 storm events were sampled at this station during the sampling period. Water quantity results for these events are summarized in Table 5.3. Of the 13 sampled storm events, 7 events have flow information available. Total rainfall depths for the sampled events ranged from 0.32 inches to 2.66 (estimated) inches and the hydrograph durations ranged from 12 to 120 hours. The average flow ranged from 9.6 cfs to 115.3 cfs and the total volume ranged from 1,248,935 to 49,803,030 cubic feet.

5.4 SOLARY CANAL

A total of 12 storm events were sampled at this station during the sampling period. Water quantity results for these events are summarized in Table 5.4. Of the 12 sampled storm events, only 4 events have flow information available, two of which are partial flows. Total rainfall depths for the sampled events ranged from 0.55 (estimated) inches to 2.27

(estimated) inches and the hydrograph durations ranged from 36 to 55 hours. The average flow ranged from 0.5 cfs to 1.6 cfs and the total volume ranged from 62,366 to 323,777 cubic feet.

5.5 SOLDIER CREEK

A total of 14 storm events were sampled at this station during the sampling period. Water quantity results for these events are summarized in Table 5.5. Of the 14 sampled storm events, 7 events have flow information available. Total rainfall depths for the sampled events ranged from 0.27 inches to 2.66 (estimated) inches and the hydrograph durations ranged from 14 to 72 hours. The average (adjusted) flow ranged from 0.9 cfs to 57.3 cfs and the total (adjusted) volume ranged from 159,756 to 14,860,536 cubic feet.

Table 5.1: Gee Creek Sampling Station Water Quantity Results

Sample Event No.	Storm Event Date	Rainfall Amount (in)	Hydrograph Duration (hrs)	Average Level (ft)	Average Velocity (fps)	Average Flow (cfs)	Adjusted Flow (cfs)	Reported Volume (cf)	Adjusted Volume (cf)
1	08/13/04	2.66 (e)	NA	NA	NA	NA	NA	NA	NA
2	11/25/04	0.35 (e)	78	7.836	0.09	7.7	7.7	2,153,527	2,153,527
3	12/25/04	NS							
4	01/14/05	1.00	36	8.783	0.26	23.3	23.3	3,021,688	3,021,688
5	02/23/04	NS							
6	02/27/05	1.85	54	8.748	0.22	23.3	23.3	4,528,585	4,528,585
7	03/09/05	0.47	120	7.611	0.04	5.4	5.4	2,350,590	2,350,590
8	03/16/05	0.67	16	8.505	0.26	18.4	18.4	1,061,808	1,061,808
9	04/07/05	0.26	55	7.981	0.25	9.4	9.4	1,860,460	1,860,460
10	04/30/05	NS							
11	05/04/05	0.45	72	0.537	0.05	1.1	1.1	282,815	282,815
12	06/01/05	0.66	24	2.214	0.36	23.9	23.9	2,064,056	2,064,056
13	06/29/05	0.45 (e)	NA	NA	NA	NA	NA	NA	NA
14	08/18/05	0.44	9	0.429	0.42	7.8	7.8	253,826	253,826
15	08/24/05	NS							
16	08/30/05	NS							
17	09/02/05	1.43	41	0.803	1.15	28.4	28.4	4,195,909	4,195,909
18	09/21/05	0.36	14	0.177	0.26	2.1	2.1	106,688	106,688
19	10/05/05	0.47	12	3.168	0.75	70.2	70.2	3,031,015	3,031,015
20	10/23/05	NS							
21	11/01/05	NS							
22	11/28/05	NS							
23	12/08/05	NS							
24	02/03/06	NS							
Average			44	4.733	0.34	18.4	18.4	2,075,914	2,075,914
Minimum			9	0.177	0.04	1.1	1.1	106,688	106,688
Maximum			120	8.783	1.15	70.2	70.2	4,528,585	4,528,585

Notes:

(e) = Estimated from Sanford Airport rainfall data or average of other stations

NA = Data not available, data logger did not report data or reported incorrect data

NS = No sample taken

(P) Partial data

Flow was not adjusted

Table 5.2: Howell Creek Sampling Station Water Quantity Results

Sample Event No.	Storm Event Date	Rainfall Amount (in)	Hydrograph Duration (hrs)	Average Level (ft)	Average Velocity (fps)	Average Flow (cfs)	Adjusted Flow (cfs)	Reported Volume (cf)	Adjusted Volume (cf)
1	08/13/04	2.66 (e)	NA	NA	NA	NA	NA	NA	NA
2	11/25/04	NS							
3	12/25/04	NS							
4	01/14/05	0.24	36	4.559	0.48	16.6	66.6	2,157,119	8,628,476
5	02/23/04	0.47	46	4.547	0.12	4.4	17.5	726,005	2,904,020
6	02/27/05	NS							
7	03/09/05	NS							
8	03/16/05	0.51	16	4.543	0.22	7.9	31.5	453,462	1,813,848
9	04/07/05	0.40	68	4.535	0.36	12.9	51.6	3,156,082	12,624,328
10	04/30/05	0.45	38	4.528	0.26	9.0	36.1	1,235,243	4,940,972
11	05/04/05	NS							
12	06/01/05	0.43	24	4.513	0.45	12.6	50.3	1,087,225	4,348,900
13	06/29/05	0.45 (e)	NA	NA	NA	NA	NA	NA	NA
14	08/18/05	0.67	23	4.379	0.87	30.5	122.0	2,524,822	10,099,288
15	08/24/05	NS							
16	08/30/05	NS							
17	09/02/05	1.48	30	4.67	NA	31.8	127.0	3,430,287	13,721,148
18	09/21/05	0.56	14	NA	NA	NA	NA	NA	NA
19	10/05/05	NS							
20	10/23/05	NS							
21	11/01/05	NS							
22	11/28/05	NS							
23	12/08/05	1.00	36	4.771	NA	32.0	127.9	4,145,301	16,581,204
24	02/03/06	NS							
Average			33	4.561	0.39	17.5	70.1	2,101,727	8,406,909
Minimum			14	4.379	0.12	4.4	17.5	453,462	1,813,848
Maximum			68	4.771	0.87	32.0	127.9	4,145,301	16,581,204

Notes:

(e) = Estimated from Sanford Airport rainfall data or average of other stations

NA = Data not available, data logger did not report data or reported incorrect data

NS = No sample taken

(P) Partial data

Flow was adjusted for multiple culverts

Table 5.3: Six Mile Creek Sampling Station Water Quantity Results

Sample Event No.	Storm Event Date	Rainfall Amount (in)	Hydrograph Duration (hrs)	Average Level (ft)	Average Velocity (fps)	Average Flow (cfs)	Adjusted Flow (cfs)	Reported Volume (cf)	Adjusted Volume (cf)
1	08/13/04	2.66 (e)	120	3.468	1.58	115.3	115.3	49,803,030	49,803,030
2	11/25/04	NS							
3	12/25/04	NS							
4	01/14/05	NS							
5	02/23/04	NS							
6	02/27/05	1.39	54	1.19	1.10	26.3	26.3	5,105,787	5,105,787
7	03/09/05	0.39	36	0.573	0.40	9.6	9.6	1,248,935	1,248,935
8	03/16/05	NS							
9	04/07/05	0.61	68	1.169	1.02	25.3	25.3	6,193,227	6,193,227
10	04/30/05	NS							
11	05/04/05	NS							
12	06/01/05	0.51	24	1.919	NA	NA	NA	NA	NA
13	06/29/05	0.45 (e)	NA	NA	NA	NA	NA	NA	NA
14	08/18/05	NS							
15	08/24/05	0.49	26	0.812	1.00	16.3	16.3	1,524,191	1,524,191
16	08/30/05	NS							
17	09/02/05	0.36	41	1.006	1.10	22.5	22.5	3,324,280	3,324,280
18	09/21/05	0.56	14	NA	NA	NA	NA	NA	NA
19	10/05/05	1.94 (e)	12	NA	NA	NA	NA	NA	NA
20	10/23/05	0.46 (e)	NA	NA	NA	NA	NA	NA	NA
21	11/01/05	0.32	72	1.757	1.16	40.8	40.8	10,582,030	10,582,030
22	11/28/05	NS							
23	12/08/05	NS							
24	02/03/06	0.85 (e)	NA	NA	NA	NA	NA	NA	NA
Average			47	1.487	1.05	36.6	36.6	11,111,640	11,111,640
Minimum			12	0.573	0.40	9.6	9.6	1,248,935	1,248,935
Maximum			120	3.468	1.58	115.3	115.3	49,803,030	49,803,030

Notes:

(e) = Estimated from Sanford Airport rainfall data or average of other stations

NA = Data not available, data logger did not report data or reported incorrect data

NS = No sample taken

(P) Partial data

Flow was not adjusted

Table 5.4: Solary Canal Sampling Station Water Quantity Results

Sample Event No.	Storm Event Date	Rainfall Amount (in)	Hydrograph Duration (hrs)	Average Level (ft)	Average Velocity (fps)	Average Flow (cfs)	Adjusted Flow (cfs)	Reported Volume (cf)	Adjusted Volume (cf)
1	08/13/04	NS							
2	11/25/04	NS							
3	12/25/04	NS							
4	01/14/05	0.43 (e)	NA	NA	NA	NA	NA	NA	NA
5	02/23/04	NS							
6	02/27/05	1.50	54	1.162	1.31	NA	NA	815,702 (P)	815,702 (P)
7	03/09/05	0.45	36	0.67	1.23	NA	NA	262,005 (P)	262,005 (P)
8	03/16/05	1.27 (e)	NA	NA	NA	NA	NA	NA	NA
9	04/07/05	0.50 (e)	55	0.599	0.78	1.6	1.6	323,777	323,777
10	04/30/05	0.7	38	0.221	0.26	0.5	0.5	62,366	62,366
11	05/04/05	NS							
12	06/01/05	NS							
13	06/29/05	0.45 (e)	NA	NA	NA	NA	NA	NA	NA
14	08/18/05	0.55 (e)	NA	NA	NA	NA	NA	NA	NA
15	08/24/05	NS							
16	08/30/05	NS							
17	09/02/05	NS							
18	09/21/05	0.56	NA	NA	NA	NA	NA	NA	NA
19	10/05/05	NS							
20	10/23/05	NS							
21	11/01/05	0.54 (e)	NA	NA	NA	NA	NA	NA	NA
22	11/28/05	0.49 (e)	NA	NA	NA	NA	NA	NA	NA
23	12/08/05	0.81	36	0.71	NA	NA	NA	NA	NA
24	02/03/06	NS							
Average			44	0.672	0.90	1.0	1.0	193,072	193,072
Minimum			36	0.221	0.26	0.5	0.5	62,366	62,366
Maximum			55	1.162	1.31	1.6	1.6	323,777	323,777

Notes:

(e) = Estimated from Sanford Airport rainfall data or average of other stations

NA = Data not available, data logger did not report data or reported incorrect data

NS = No sample taken

(P) Partial data

Flow was not adjusted

Table 5.5: Soldier Creek Sampling Station Water Quantity Results

Sample Event No.	Storm Event Date	Rainfall Amount (in)	Hydrograph Duration (hrs)	Average Level (ft)	Average Velocity (fps)	Average Flow (cfs)	Adjusted Flow (cfs)	Reported Volume (cf)	Adjusted Volume (cf)
1	08/13/04	2.66 (e)	NA	NA	NA	NA	NA	NA	NA
2	11/25/04	0.35 (e)	NA	NA	NA	NA	NA	NA	NA
3	12/25/04	1.05 (e)	NA	NA	NA	NA	NA	NA	NA
4	01/14/05	0.43 (e)	NA	NA	NA	NA	NA	NA	NA
5	02/23/04	NS							
6	02/27/05	NS							
7	03/09/05	NS							
8	03/16/05	1.03	16	0.797	0.86	6.3	18.8	361,728	1,085,184
9	04/07/05	0.74	55	0.367	0.07	0.3	0.9	56,673	170,019
10	04/30/05	NS							
11	05/04/05	1.48 (e)	NA	NA	NA	NA	NA	NA	NA
12	06/01/05	0.85	24	0.79	0.88	8.5	25.4	732,166	2,196,498
13	06/29/05	NS							
14	08/18/05	NS							
15	08/24/05	NS							
16	08/30/05	0.27	41	0.482	0.07	0.4	1.1	53,252	159,756
17	09/02/05	1.22	48	1.024	0.08	0.8	2.5	145,080	435,240
18	09/20/05	0.56	14	NA	NA	NA	NA	NA	NA
19	10/05/05	NS							
20	10/23/05	0.46 (e)	NA	NA	NA	NA	NA	NA	
21	11/01/05	0.56	72	1.573	1.21	19.1	57.3	4,953,512	14,860,536
22	11/28/05	0.31	43	0.614	0.16	1.0	3.1	161,021	483,063
23	12/08/05	NS							
24	02/03/06	NS							
Average			39	0.807	0.48	5.2	15.6	923,347	2,770,042
Minimum			14	0.367	0.07	0.3	0.9	53,252	159,756
Maximum			72	1.573	1.21	19.1	57.3	4,953,512	14,860,536

Notes:

(e) = Estimated from Sanford Airport rainfall data or average of other stations

NA = Data not available, data logger did not report data or reported incorrect data

NS = No sample taken

(P) Partial data

Flow was adjusted for multiple culverts

6.0 SUMMARY AND RECOMMENDATIONS

A total of 24 storm events were monitored and sampled by ECT over a 24 month period providing results for a minimum of twelve storm events for each sampling station. Both composite and grab samples were taken and analyzed for eight water quality constituents. A summary of the water quality results are presented in Section 4 and the laboratory analytical results are presented in Appendix A. From the water quality data it can be seen that in general, Howell Creek and Gee Creek have the best water quality followed by Six Mile Creek, Soldier Creek and Solary Canal.

Water quantity data was analyzed from the data collected by the ISCO sampling units and is summarized in Section 5. Detailed plots of water quantity and flow data are provided in Appendix B.

During sampling, several problems were encountered with the equipment that should be addressed to provide more reliable and useful data in an efficient manner in the future. Problems encountered involved battery charging, data recording, and remote communications. The original ISCO sampling units acquired to collect data for the NPDES permit are getting old and may need to be refurbished or replaced soon. The County should consider establishing a replacement program for this equipment. In addition, the latest SOP issued by FDEP for water sampling should be reviewed to determine if refrigerated units are now required for the constituents being sampled. If new units are installed, consideration should be given to switching from cellular communications to IP address based communication equipment to eliminate communications problems being experienced.

Consideration should also be given to expanding the sampling program to include other tributaries to Lake Jesup, particularly on the north and east sides of the lake. This would allow comparison of water quality and quantity data between more tributaries located all around the lake.

APPENDIX A
LABORATORY ANALYTICAL REPORTS

Lake Jesup Stormwater Sampling and Water Quality Analysis
Gee Creek Sampling Station Water Analysis Detection Limits

Sample Event No.	Storm Event Date	Composite Sample Parameters						Grab Sample Parameters	
		Total N (mg/L)	TKN (mg/L)	NO ₂ /nO ₃ -N (mg/L)	NH ₃ -N (mg/L)	Total P (mg/L)	TSS (mg/L)	BOD ₅ (mg/L)	Fecal (CFU/100mL)
1	08/13/04	0.200	0.2000	0.0200	0.050	0.0500	3.3	2.0	100
2	11/25/04	0.048	0.0450	0.0075	0.009	0.0012	0.8	2.0	10
3	12/25/04								
4	01/14/05	0.048	0.0045	0.0075	0.009	0.0012	1.0	2.0	100
5	02/23/04								
6	02/27/05	0.048	0.0450	0.0075	0.009	0.0012	0.6	2.0	10
7	03/09/05	0.200	0.2000	0.0200	0.050	0.0046	1.1	2.0	10
8	03/16/05	0.048	0.0450	0.0075	0.009	0.0012	0.8	2.0	10
9	04/07/05	0.048	0.0450	0.0075	0.009	0.0012	0.5	2.0	10
10	04/30/05								
11	05/04/05	0.048	0.0450	0.0075	0.009	0.0012	1.0	2.0	10
12	06/01/05	0.048	0.0450	0.0075	0.009	0.0012	1.7	2.0	10
13	06/29/05	0.048	0.0450	0.0075	0.009	0.0120	1.0	2.0	10
14	08/18/05	0.048	0.0450	0.0075	0.009	0.0012	1.7	2.0	10
15	08/24/05								
16	08/30/05								
17	09/02/05	0.048	0.0450	0.0075	0.009	0.0012	1.0	2.0	10
18	09/21/05	NL	NL	0.0075	0.009	0.0012	1.2	2.0	100
19	10/05/05	0.048	0.0450	0.0075	0.018	0.0012	0.8	2.0	10
20	10/23/05								
21	11/01/05								
22	11/28/05								
23	12/08/05								
24	02/03/06								

NL = Constituent not analyzed or reported by laboratory

Lake Jesup Stormwater Sampling and Water Quality Analysis
Howell Creek Sampling Station Water Analysis Detection Limits

Sample Event No.	Storm Event Date	Composite Sample Parameters						Grab Sample Parameters	
		Total N (mg/L)	TKN (mg/L)	NO ₂ /nO ₃ -N (mg/L)	NH ₃ -N (mg/L)	Total P (mg/L)	TSS (mg/L)	BOD ₅ (mg/L)	Fecal (CFU/100mL)
1	08/13/04	0.200	0.200	0.0400	0.050	0.0500	5.0	2.0	100
2	11/25/04								
3	12/25/04								
4	01/14/05	0.048	0.045	0.0075	0.018	0.0012	1.0	2.0	100
5	02/23/04	0.048	0.045	0.0075	0.009	0.0120	1.0	2.0	100
6	02/27/05								
7	03/09/05								
8	03/16/05	0.048	0.045	0.0075	0.009	0.0012	0.8	2.0	10
9	04/07/05	0.048	0.045	0.0075	0.009	0.0012	0.8	2.0	10
10	04/30/05	0.048	0.045	0.0075	0.009	0.0012	0.5	2.0	10
11	05/04/05								
12	06/01/05	0.048	0.045	0.0075	0.009	0.0012	1.7	2.0	10
13	06/29/05	0.048	0.045	0.0075	0.009	0.0012	0.8	2.0	10
14	08/18/05	0.048	0.045	0.0075	0.009	0.0012	1.0	2.0	100
15	08/24/05								
16	08/30/05								
17	09/02/05	0.048	0.045	0.0075	0.009	0.0012	0.8	2.0	10
18	09/21/05	NL	NL	0.0075	0.009	0.0012	0.5	2.0	100
19	10/05/05								
20	10/23/05								
21	11/01/05								
22	11/28/05								
23	12/08/05	0.048	0.045	0.0075	0.009	0.0012	1.7	2.0	100
24	02/03/06								

NL = Constituent not analyzed or reported by laboratory

Lake Jesup Stormwater Sampling and Water Quality Analysis
Six Mile Creek Sampling Station Water Analysis Detection Limits

Sample Event No.	Storm Event Date	Composite Sample Parameters						Grab Sample Parameters	
		Total N (mg/L)	TKN (mg/L)	NO ₂ /nO ₃ -N (mg/L)	NH ₃ -N (mg/L)	Total P (mg/L)	TSS (mg/L)	BOD ₅ (mg/L)	Fecal (CFU/100mL)
1	08/13/04	0.200	0.400	0.0200	0.050	0.0500	5.0	2.0	100
2	11/25/04								
3	12/25/04								
4	01/14/05								
5	02/23/04								
6	02/27/05	0.048	0.045	0.0075	0.009	0.0012	1.7	2.0	10
7	03/09/05	0.200	0.200	0.0200	0.050	0.0046	2.0	2.0	10
8	03/16/05								
9	04/07/05	0.048	0.045	0.0075	0.009	0.0012	2.0	2.0	10
10	04/30/05								
11	05/04/05								
12	06/01/05	0.048	0.045	0.0075	0.009	0.0012	1.0	2.0	10
13	06/29/05	0.048	0.450	0.0075	0.009	0.0012	10.0	2.0	10
14	08/18/05								
15	08/24/05	0.048	0.045	0.0075	0.009	0.0012	1.2	2.0	10
16	08/30/05								
17	09/02/05	0.048	0.045	0.0075	0.009	0.0012	1.0	2.0	10
18	09/21/05	NL	NL	0.0075	0.009	0.0012	1.7	2.0	10
19	10/05/05	0.048	0.045	0.0075	0.009	0.0012	1.7	2.0	100
20	10/23/05	0.048	0.045	0.0075	0.009	0.0012	2.5	2.0	10
21	11/01/05	0.048	0.045	0.0075	0.009	0.0012	1.0	2.0	10
22	11/28/05								
23	12/08/05								
24	02/03/06	0.048	0.045	0.0075	0.009	0.0012	2.0	2.0	100

NL = Constituent not analyzed or reported by laboratory

Lake Jesup Stormwater Sampling and Water Quality Analysis
 Solary Canal Sampling Station Water Analysis Detection Limits

Sample Event No.	Storm Event Date	Composite Sample Parameters						Grab Sample Parameters	
		Total N (mg/L)	TKN (mg/L)	NO ₂ /NO ₃ -N (mg/L)	NH ₃ -N (mg/L)	Total P (mg/L)	TSS (mg/L)	BOD ₅ (mg/L)	Fecal (CFU/100mL)
1	08/13/04								
2	11/25/04								
3	12/25/04								
4	01/14/05	0.048	0.045	0.0075	0.009	0.0012	1.7	2.0	100
5	02/23/04								
6	02/27/05	0.048	0.045	0.0075	0.009	0.0012	2.5	2.0	10
7	03/09/05	0.200	0.200	0.0200	0.050	0.0046	3.3	2.0	10
8	03/16/05	0.048	0.045	0.0075	0.009	0.0012	3.3	2.0	100
9	04/07/05	0.048	0.045	0.0075	0.009	0.0012	0.8	2.0	10
10	04/30/05	0.048	0.450	0.0075	0.009	0.0012	2.5	2.0	10
11	05/04/05								
12	06/01/05								
13	06/29/05	0.048	0.045	0.0075	0.009	0.0012	0.8	2.0	10
14	08/18/05	0.048	0.090	0.0075	0.009	0.0012	5.0	2.0	100
15	08/24/05								
16	08/30/05								
17	09/02/05								
18	09/21/05	NL	NL	0.0075	0.009	0.0012	1.0	2.0	100
19	10/05/05								
20	10/23/05								
21	11/01/05	0.048	0.045	0.0075	0.009	0.0012	1.0	2.0	10
22	11/28/05	0.048	0.045	0.0075	0.009	0.0012	1.0	2.0	10
23	12/08/05	0.048	0.045	0.0075	0.009	0.0012	0.6	2.0	100
24	02/03/06								

Lake Jesup Stormwater Sampling and Water Quality Analysis
Soldier Creek Sampling Station Water Analysis Detection Limits

Sample Event No.	Storm Event Date	Composite Sample Parameters						Grab Sample Parameters	
		Total N (mg/L)	TKN (mg/L)	NO ₂ /nO ₃ -N (mg/L)	NH ₃ -N (mg/L)	Total P (mg/L)	TSS (mg/L)	BOD ₅ (mg/L)	Fecal (CFU/100mL)
1	08/13/04	0.200	0.200	0.0200	0.0500	0.0500	4.0	2.0	10
2	11/25/04	0.048	0.045	0.0075	0.0090	0.0012	1.2	2.0	2
3	12/25/04	0.048	0.045	0.0075	0.0090	0.0012	1.2	2.0	10
4	01/14/05	0.048	0.045	0.0075	0.0090	0.0012	1.0	2.0	100
5	02/23/04								
6	02/27/05								
7	03/09/05								
8	03/16/05	0.048	0.045	0.0075	0.0090	0.0012	2.0	2.0	100
9	04/07/05	0.048	0.045	0.0075	0.0090	0.0012	1.0	2.0	10
10	04/30/05								
11	05/04/05	0.048	0.045	0.0075	0.0090	0.0012	2.5	2.0	10
12	06/01/05	0.048	0.045	0.0075	0.0090	0.0012	1.2	2.0	100
13	06/29/05								
14	08/18/05								
15	08/24/05								
16	08/30/05	NL	0.045	0.0075	0.0090	0.0012	0.8	2.0	100
17	09/02/05	0.048	0.045	0.0075	0.0090	0.0012	1.0	2.0	10
18	09/21/05	NL	NL	0.0075	0.0090	0.0012	1.0	2.0	100
19	10/05/05								
20	10/23/05	0.048	0.045	0.0075	0.0090	0.0012	2.0	2.0	100
21	11/01/05	0.048	0.045	0.0075	0.0090	0.0012	1.0	2.0	10
22	11/28/05	0.048	0.045	0.0075	0.0090	0.0011	0.5	2.0	10
23	12/08/05								
24	02/03/06								

NL = Constituent not analyzed or reported by laboratory

LABORATORY RESULTS

SAMPLE EVENT NO. 1

August 13, 2004

STATIONS SAMPLED:

GEE CREEK
HOWELL CREEK
SIX MILE CREEK
SOLDIER CREEK

**HARBOR BRANCH
ENVIRONMENTAL
LABORATORIES, INC.**

5600 U.S. 1 North, Fort Pierce FL 34946
Phone: (772) 465-2400, Ext. 285 Fax: (772) 467-1584

August 24, 2004

*Note: Howell station sample
Incorrectly reported as
Solary Canal per log book
field notes. (RJB)*

To: Gloria Eby
Seminole County
520 W Lake Mary Blvd, 200
Sanford, FL 32773

Client: Seminole County
Workorder ID: Lake Jessup - ECT
Received: 8/17/04 14:45

[2119012]

Dear Gloria Eby;

Analytical results presented in this report have been reviewed for compliance with the HARBOR BRANCH Environmental Laboratories Inc.'s (HBEL) Quality Systems Manual and have been determined to meet the standards referenced in the July 1999 National Environmental Laboratory Accreditation Program (NELAP) Quality Manual. The associated Quality Control parameters have been evaluated and meet all Method, Compliance and Standards criteria unless otherwise noted on a Quality Control Summary Page.

FDOH Safe Drinking Water Act, Clean Water Act and RCRA Certification #'s:

E96080, E83509, E85370, E84418

Analytical results herein reflect the values obtained from tests performed on samples as received by the laboratory unless otherwise indicated.

Should you have any questions, please contact HBEL at (772) 465-2400, Ext. 285 and reference the HBEL Workorder ID [Number].

Respectfully submitted,

Cindy Cromer
HBEL, Inc. Director

Note: This report is not to be copied, except in full, without the expressed written consent of the HARBOR BRANCH Environmental Laboratories, Inc.

Southeast Florida
FDOH # E96080

Central Florida
FDOH # E83509

Southwest Florida
FDOH # E85370

West Central Florida
FDOH # E84418

Printed: 8/24/04



Page 1 of 5

HARBOR BRANCH ENVIRONMENTAL LABORATORIES, INC.

5600 U.S. 1 North, Fort Pierce FL 34946
Phone: (772) 465-2400, Ext. 285 Fax: (772) 467-1584

Method Narratives/FDEP Data Qualifiers

Client: Seminole County
Workorder ID: Lake Jessup - ECT
Received: 8/17/04 14:45

[2119012]

MB=Method Blank LCS=Laboratory Control Sample LCSD=Laboratory Control Sample Duplicate MS=Matrix Spike MSD=Matrix Spike Duplicate DUP=Sample Duplicate

HBEL Sample

Method Narratives (If Applicable)

Number	Sample ID	Analytical Method	Description
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HBEL Sample

Data Qualifiers (If Applicable)

Number	Sample ID	Parameter	Method	Qualifier Code	Qualifier Definition
2119012005	Solary Canal Grab	Fecal Coliform	SM9222 D	B	Results based upon colony counts outside of the acceptable range
2119012006	Gee Creek Grab	Fecal Coliform	SM9222 D	B	Results based upon colony counts outside of the acceptable range

Quality Control Summary

Method	HBEL Batch	Analyte	Analytical Issue
--------	------------	---------	------------------

Nitrate/Nitrite

AUTO12469

2119012001	Nitrate/Nitrite as N	Accuracy - Outside acceptance limits in the MS.
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HARBOR BRANCH ENVIRONMENTAL LABORATORIES, INC.

5600 U.S. 1 North, Fort Pierce FL 34946
Phone: (772) 465-2400, Ext. 285 Fax: (772) 467-1584

CERTIFICATE OF ANALYSIS

[2119012]

Client: Seminole County

Workorder ID: Lake Jessup - ECT

Parameter	Result ¹	Units	Reporting Limit	Method	Laboratory Batch	Prep Date/Time	Analyzed Date/Time	Analyst	Lab ID
Laboratory ID: 2119012001				Sampled: 08/14/04 15:00 Received: 08/17/04 14:45					
Sample ID: Solary Canal Composite				Matrix: Water Results reported on As Received Basis					
Total Suspended Solids	36	mg/L	5.0	EPA 160.2	WCDE11915		08/18/04 16:07	PA	E83509
Ammonia, as N	0.050 U	mg/L	0.050	EPA 350.1	AUTO12473		08/23/04 15:12	JL	E96080
Total Kjeldahl Nitrogen	1.4	mg/L	0.20	EPA 351.2	AUTO12471	8/20/04 11:00	08/20/04 16:26	SMB	E96080
Total Nitrogen	1.5	mg/L	0.20	EPA 351.2	CALC4786		08/23/04 12:39	DH	E96080
Nitrate/Nitrite as N	0.12	mg/L	0.040	EPA 353.2	AUTO12469		08/20/04 12:29	SMB	E96080
Total Phosphorus as P	0.21	mg/L	0.050	EPA 365.4	AUTO12472	8/20/04 11:00	08/20/04 16:26	SMB	E96080
Laboratory ID: 2119012002				Sampled: 08/14/04 15:30 Received: 08/17/04 14:45					
Sample ID: Gee Creek Composite				Matrix: Water Results reported on As Received Basis					
Total Suspended Solids	88	mg/L	3.3	EPA 160.2	WCDE11915		08/18/04 16:07	PA	E83509
Ammonia, as N	0.050 U	mg/L	0.050	EPA 350.1	AUTO12473		08/23/04 15:12	JL	E96080
Total Kjeldahl Nitrogen	2.1	mg/L	0.20	EPA 351.2	AUTO12471	8/20/04 11:00	08/20/04 16:26	SMB	E96080
Total Nitrogen	2.2	mg/L	0.20	EPA 351.2	CALC4786		08/23/04 12:39	DH	E96080
Nitrate/Nitrite as N	0.15	mg/L	0.020	EPA 353.2	AUTO12469		08/20/04 12:29	SMB	E96080
Total Phosphorus as P	0.34	mg/L	0.050	EPA 365.4	AUTO12472	8/20/04 11:00	08/20/04 16:26	SMB	E96080
Laboratory ID: 2119012003				Sampled: 08/14/04 15:45 Received: 08/17/04 14:45					
Sample ID: Soldier's Creek Composite				Matrix: Water Results reported on As Received Basis					
Total Suspended Solids	340	mg/L	4.0	EPA 160.2	WCDE11915		08/18/04 16:07	PA	E83509
Ammonia, as N	0.050 U	mg/L	0.050	EPA 350.1	AUTO12473		08/23/04 15:12	JL	E96080
Total Kjeldahl Nitrogen	2.7	mg/L	0.20	EPA 351.2	AUTO12471	8/20/04 11:00	08/20/04 16:26	SMB	E96080
Total Nitrogen	2.9	mg/L	0.20	EPA 351.2	CALC4786		08/23/04 12:39	DH	E96080
Nitrate/Nitrite as N	0.11	mg/L	0.020	EPA 353.2	AUTO12469		08/20/04 12:29	SMB	E96080
Total Phosphorus as P	0.38	mg/L	0.050	EPA 365.4	AUTO12472	8/20/04 11:00	08/20/04 16:26	SMB	E96080
Laboratory ID: 2119012004				Sampled: 08/14/04 16:00 Received: 08/17/04 14:45					
Sample ID: Six Mile Creek Composite				Matrix: Water Results reported on As Received Basis					
Total Suspended Solids	160	mg/L	5.0	EPA 160.2	WCDE11915		08/18/04 16:07	PA	E83509
Ammonia, as N	0.050 U	mg/L	0.050	EPA 350.1	AUTO12473		08/23/04 15:12	JL	E96080
Total Kjeldahl Nitrogen	3.0	mg/L	0.40	EPA 351.2	AUTO12471	8/20/04 11:00	08/20/04 16:26	SMB	E96080
Total Nitrogen	3.1	mg/L	0.20	EPA 351.2	CALC4786		08/23/04 12:39	DH	E96080
Nitrate/Nitrite as N	0.079	mg/L	0.020	EPA 353.2	AUTO12469		08/20/04 12:29	SMB	E96080
Total Phosphorus as P	0.47	mg/L	0.050	EPA 365.4	AUTO12472	8/20/04 11:00	08/20/04 16:26	SMB	E96080
Laboratory ID: 2119012005				Sampled: 08/17/04 13:30 Received: 08/17/04 14:45					
Sample ID: Solary Canal Grab				Matrix: Water Results reported on As Received Basis					
BOD5	7.6	mg/L	2.0	EPA 405.1	WCDE11914		08/19/04 12:51	PA	E83509
Fecal Coliform	1000	CFU/100mL	100	SM9222 D	WCDE11912		08/17/04 17:30	RM	E83509
Laboratory ID: 2119012006				Sampled: 08/17/04 13:40 Received: 08/17/04 14:45					
Sample ID: Gee Creek Grab				Matrix: Water Results reported on As Received Basis					
BOD5	16	mg/L	2.0	EPA 405.1	WCDE11914		08/19/04 12:51	PA	E83509
Fecal Coliform	1300	CFU/100mL	100	SM9222 D	WCDE11912		08/17/04 17:30	RM	E83509

Southeast Florida
FDOH # E96080

Central Florida
FDOH # E83509

Southwest Florida
FDOH # E85370

West Central Florida
FDOH # E84418

Printed: 8/24/04



HARBOR BRANCH ENVIRONMENTAL LABORATORIES, INC.

5600 U.S. 1 North, Fort Pierce FL 34946
Phone: (772) 465-2400, Ext. 285 Fax: (772) 467-1584

CERTIFICATE OF ANALYSIS

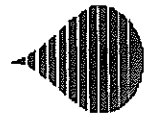
[2119012]

Client: Seminole County

Workorder ID: Lake Jessup - ECT

Parameter	Result ¹	Units	Reporting Limit	Method	Laboratory Batch	Prep Date/Time	Analyzed Date/Time	Analyst	Lab ID
Laboratory ID: 2119012007				Sampled: 08/17/04 13:55 Received: 08/17/04 14:45					
Sample ID: Soldier's Creek Grab				Matrix: Water Results reported on As Received Basis					
BOD5	5.5	mg/L	2.0	EPA 405.1	WCDE11914		08/19/04 12:51	PA	E83509
Fecal Coliform	240	CFU/100mL	10	SM9222 D	WCDE11912		08/17/04 17:30	RM	E83509
Laboratory ID: 2119012008				Sampled: 08/17/04 14:05 Received: 08/17/04 14:45					
Sample ID: Six Mile Creek Grab				Matrix: Water Results reported on As Received Basis					
BOD5	9.5	mg/L	2.0	EPA 405.1	WCDE11914		08/19/04 12:51	PA	E83509
Fecal Coliform	3800	CFU/100mL	100	SM9222 D	WCDE11912		08/17/04 17:30	RM	E83509

Result Qualifiers: U = Not Detected ND = Not Detected I = Analyte Detected between Laboratory's MDL and PQL.



**HARBOR BRANCH
ENVIRONMENTAL
LABORATORIES, INC.**
5600 US 1 North, Fort Pierce, FL 34946
Phone: (772) 465-2400, Ext. 285 Fax: (772) 467-4584

Company: Seminole County Storm
Water
Address: 520 W. Lk. Mary Blue
Seaford, FL Zip: 32772

Phone: _____ Fax: _____
Client Contact: Gloria Eby
Project Name: Lake Jessup - ECT
Sampled By: Robert J. Nolaway

Chain-of-Custody
and
Agreement to Perform Services

Method(s) of
Standard Laboratory
Turn Around Time
Or
Rush in _____ Business Days
Requires Laboratory Approval

E-mail: _____
Standard Laboratory
Turn Around Time
Or
Rush in _____ Business Days
Requires Laboratory Approval

LAB ID	COLLECTION		Sample Type	MATRIX	# Containers	SAMPLE DESCRIPTION	As Will Appear On Report
	DATE	TIME					
001	8/14/04	1500	C SW	Z	2	Solary Canal	
002	8/14/04	1530	C SW	Z	2	Gee Creek	
003	8/14/04	1545	C SW	Z	2	Soldier's Creek	
004	8/14/04	1600	C SW	Z	2	Six Mile Creek	
005	8/17/04	1330	G SW	Z	2	Solary Canal	
006	8/17/04	1340	G SW	Z	2	Gee Creek	
007	8/17/04	1355	G SW	Z	2	Soldier Creek	
008	8/17/04	1405	G SW	Z	2	Six Mile Creek	

Sample Type: G=Grab C=Composite		Matrix: S=Solid SL=Sludge DW=Drinking Water GW=Ground Water SW=Surface Water WW=Wastewater M=Marine	
RELINQUISHED BY	RELINQUISHED BY	RELINQUISHED BY	RELINQUISHED BY
DATE/TIME	DATE/TIME	DATE/TIME	DATE/TIME
8/14/04 1445	8/14/04 1600	8/14/04 1600	8/14/04 1600
RECEIVED BY	RECEIVED BY	RECEIVED BY	RECEIVED BY
DATE/TIME	DATE/TIME	DATE/TIME	DATE/TIME
8/17/04 1445	8/17/04 1445	8/17/04 1445	8/17/04 1445

Distribution: WHITE with REPORT; YELLOW for FILE; PINK to CLIENT; GOLD for SAMPLER

USE BALL POINT PEN
PRESS HARD
COMPLETELY FILL OUT
ALL NON GREYED AREAS
PRINT LEGIBLY



For Lab Use Only
Temperature Checked
Custody Seals Intact
pH Checked
LAB # 211901Z

ANALYSES REQUESTED
A B C D
S ST
BODs
TSS
TSS
TSS

PRESERVATIVE		ANALYSES REQUESTED		COMMENTS	
Y	N	Y	N	Y	N
X		X		X	
X		X		X	
X		X		X	
X		X		X	
		X		X	
		X		X	
		X		X	
		X		X	

RELINQUISHED BY
DATE/TIME
RECEIVED FOR HBEL CUSTODY BY
DATE/TIME

CHAIN PAGE 1 of 1

LABORATORY RESULTS

SAMPLE EVENT NO. 2

November 25, 2004

STATIONS SAMPLED:

GEE CREEK
SOLDIER CREEK

**HARBOR BRANCH
ENVIRONMENTAL
LABORATORIES, INC.**

5600 U.S. 1 North, Fort Pierce FL 34946
Phone: (772) 465-2400, Ext. 285 Fax: (772) 467-1584

December 7, 2004

To: Gloria Eby
Seminole County
520 W Lake Mary Blvd, 200
Sanford, FL 32773

Client: Seminole County
Workorder ID: Lake Jesup Surface Water
Received: 11/29/04 13:15

[2120129]

Dear Gloria Eby;

Analytical results presented in this report have been reviewed for compliance with the HARBOR BRANCH Environmental Laboratories Inc.'s (HBEL) Quality Systems Manual and have been determined to meet the standards referenced in the July 1999 National Environmental Laboratory Accreditation Program (NELAP) Quality Manual. The associated Quality Control parameters have been evaluated and meet all Method, Compliance and Standards criteria unless otherwise noted on a Quality Control Summary Page.

FDOH Safe Drinking Water Act, Clean Water Act and RCRA Certification #'s:

E96080, E83509, E85370, E84418

Analytical results herein reflect the values obtained from tests performed on samples as received by the laboratory unless otherwise indicated.

Should you have any questions, please contact HBEL at (772) 465-2400, Ext. 285 and reference the HBEL Workorder ID [Number].

Respectfully submitted,

Cindy Cromer
HBEL, Inc. Director

Note: This report is not to be copied, except in full, without the expressed written consent of the HARBOR BRANCH Environmental Laboratories, Inc.

Southeast Florida
FDOH # E96080

Central Florida
FDOH # E83509

Southwest Florida
FDOH # E85370

West Central Florida
FDOH # E84418

Printed: 12/7/04



Page 1 of 4

**HARBOR BRANCH
ENVIRONMENTAL
LABORATORIES, INC.**

5600 U.S. 1 North, Fort Pierce FL 34946
Phone: (772) 465-2400, Ext. 285 Fax: (772) 467-1584

Method Narratives/FDEP Data Qualifiers

Client: Seminole County
Workorder ID: Lake Jesup Surface Water
Received: 11/29/04 13:15

[2120129]

MB=Method Blank LCS=Laboratory Control Sample LCSD=Laboratory Control Sample Duplicate MS=Matrix Spike MSD=Matrix Spike Duplicate DUP=Sample Duplicate

HBEL Sample

Method Narratives (If Applicable)

<u>Number</u>	<u>Sample ID</u>	<u>Analytical Method</u>	<u>Description</u>
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HBEL Sample

Data Qualifiers (If Applicable)

<u>Number</u>	<u>Sample ID</u>	<u>Parameter</u>	<u>Method</u>	<u>Qualifier Code</u>	<u>Qualifier Definition</u>
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Quality Control Summary

<u>Method</u>	<u>HBEL Batch</u>	<u>Analyte</u>	<u>Analytical Issue</u>
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HARBOR BRANCH ENVIRONMENTAL LABORATORIES, INC.

5600 U.S. 1 North, Fort Pierce FL 34946
Phone: (772) 465-2400, Ext. 285 Fax: (772) 467-1584

CERTIFICATE OF ANALYSIS

[2120129]

Client: Seminole County

Workorder ID: Lake Jesup Surface Water

Parameter	Result ¹	Units	Reporting Limit	Method	Laboratory Batch	Prep Date/Time	Analyzed Date/Time	Analyst	Lab ID
Laboratory ID: 2120129001 Sample ID: Gee Creek Comp				Sampled: 11/27/04 7:45 Received: 11/29/04 13:15 Matrix: Water Results reported on As Received Basis					
Total Suspended Solids	8.7	mg/L	0.8	EPA 160.2	WCDE12354		11/29/04 17:20	RM	E83509
Laboratory ID: 2120129002 Sample ID: Gee Creek Comp				Sampled: 11/27/04 7:45 Received: 11/29/04 13:15 Matrix: Water Results reported on As Received Basis					
Ammonia, as N	0.058	mg/L	0.0090	EPA 350.1	AUTO12745		12/2/04 17:02	JL	E96080
Total Kjeldahl Nitrogen	1.0	mg/L	0.045	EPA 351.2	AUTO12751	12/2/04 12:00	12/2/04 16:36	SMB	E96080
Total Nitrogen	1.2	mg/L	0.048	EPA 351.2	CALC4833		12/3/04 16:54	DH	E96080
Nitrate/Nitrite as N	0.20	mg/L	0.0075	EPA 353.2	AUTO12747		12/3/04 12:22	SMB	E96080
Total Phosphorus as P	0.15	mg/L	0.0012	EPA 365.1	AUTO12762	12/3/04 9:30	12/3/04 15:57	JL	E96080
Laboratory ID: 2120129003 Sample ID: Soldier Creek Comp				Sampled: 11/27/04 8:00 Received: 11/29/04 13:15 Matrix: Water Results reported on As Received Basis					
Total Suspended Solids	21	mg/L	1.2	EPA 160.2	WCDE12354		11/29/04 17:20	RM	E83509
Laboratory ID: 2120129004 Sample ID: Soldier Creek Comp				Sampled: 11/27/04 8:00 Received: 11/29/04 13:15 Matrix: Water Results reported on As Received Basis					
Ammonia, as N	0.012	mg/L	0.0090	EPA 350.1	AUTO12745		12/2/04 17:02	JL	E96080
Total Kjeldahl Nitrogen	1.4	mg/L	0.045	EPA 351.2	AUTO12751	12/2/04 12:00	12/2/04 16:36	SMB	E96080
Total Nitrogen	1.7	mg/L	0.048	EPA 351.2	CALC4833		12/3/04 16:54	DH	E96080
Nitrate/Nitrite as N	0.23	mg/L	0.0075	EPA 353.2	AUTO12747		12/3/04 12:22	SMB	E96080
Total Phosphorus as P	0.19	mg/L	0.0012	EPA 365.1	AUTO12762	12/3/04 9:30	12/3/04 15:57	JL	E96080
Laboratory ID: 2120129005 Sample ID: Gee Creek Grab				Sampled: 11/29/04 11:55 Received: 11/29/04 13:15 Matrix: Water Results reported on As Received Basis					
Fecal Coliform	290	CFU/100mL	10	SM9222 D	WCDE12357		11/29/04 16:25	RM	E83509
Laboratory ID: 2120129006 Sample ID: Gee Creek Grab				Sampled: 11/29/04 11:55 Received: 11/29/04 13:15 Matrix: Water Results reported on As Received Basis					
BOD5	2.0 U	mg/L	2.0	EPA 405.1	WCDE12360		12/1/04 9:38	PA	E83509
Laboratory ID: 2120129007 Sample ID: Soldier Creek Grab				Sampled: 11/29/04 12:05 Received: 11/29/04 13:15 Matrix: Water Results reported on As Received Basis					
Fecal Coliform	120	CFU/100mL	2.0	SM9222 D	WCDE12357		11/29/04 16:25	RM	E83509
Laboratory ID: 2120129008 Sample ID: Soldier Creek Grab				Sampled: 11/29/04 12:05 Received: 11/29/04 13:15 Matrix: Water Results reported on As Received Basis					
BOD5	2.0 U	mg/L	2.0	EPA 405.1	WCDE12360		12/1/04 9:38	PA	E83509

Result Qualifiers: U = Not Detected ND¹ = Not Detected I = Analyte Detected between Laboratory's MDL and PQL.

Southeast Florida
FDOH # E96080

Central Florida
FDOH # E83509

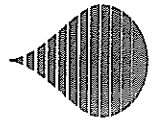
Southwest Florida
FDOH # E85370

West Central Florida
FDOH # E84418

Printed: 12/7/04



Page 3 of 4



**HARBOR BRANCH
ENVIRONMENTAL
LABORATORIES, INC.**
5600 US 1 North, Fort Pierce, FL 34946
Phone: (772) 465-2400, Ext. 285 Fax: (772) 467-1584

Chain-of-Custody
and
Agreement to Perform Services

USE BALL POINT PEN
PRESS HARD
COMPLETELY FILL OUT
ALL NON GREYED AREAS
PRINT LEGIBLY

Laboratory not responsible for omitted information
FDOH # E96080 FDOH # E86370
5600 U.S. 1 North 307 Coolidge Avenue
Fort Pierce, FL 34946 Lehigh Acres, FL 33936

Method(s) of
Shipment:

FDOH # E83509 FDOH # E84418
255 Enterprise Rd., Suite 1 2514 Osawaw Blvd.
Deltona, FL 32725 Spring Hill, FL 34607



Company: Sealing Co.

Address: Sealing Co.

Phone: 888-777-7777 Zip: 34946

e-mail: Standard Laboratory

Client Contact: Bob Barber

Turn Around Time

Project Name: Water Sampling

Or

Sampled By: Wes Jones

Rush in Business Days

Requires Laboratory Approval

For Lab Use Only

Temperature Checked Y N
Custody Seals Intact Y N
pH Checked Y N

LAB #

PRESERVATIVE

ANALYSES REQUESTED

Preservation Key
H=Hydrochloric Acid P=Phosphoric Acid
N=Nitric Acid ST=Stadium
S=Sulfuric Acid Thiosulfate
SH=Sodium Hydroxide U=Unpreserved

SAMPLE DESCRIPTION

As Will Appear On Report

COLLECTION

DATE TIME

LAB ID

Sample Type

MATRIX

Containers

RELINQUISHED BY

DATE/TIME

RECEIVED BY

DATE/TIME

RELINQUISHED BY

DATE/TIME

RECEIVED FOR HBEL CUSTODY BY

DATE/TIME

COMMENTS

Matrix: S=Solid SL=Sludge DW=Drinking Water GW=Ground Water SW=Surface Water WW=Wastewater M=Marine

* Sample Type: G=Grab C=Composite

Report Page

isribution: WHITE with REPORT; YELLOW for FILE; PINK to CLIENT; GOLD for SAMPLER

CHAIN PAGE of

LABORATORY RESULTS

SAMPLE EVENT NO. 3

December 25, 2004

STATIONS SAMPLED:

SOLDIER CREEK

**HARBOR BRANCH
ENVIRONMENTAL
LABORATORIES, INC.**

5600 U.S. 1 North, Fort Pierce FL 34946
Phone: (772) 465-2400, Ext. 285 Fax: (772) 467-1584

January 12, 2005

To: Gloria Eby
Seminole County
520 W Lake Mary Blvd, 200
Sanford, FL 32773

Client: Seminole County

Workorder ID: Lake Jesup SW

[2120419]

Received: 12/27/04 12:35

Dear Gloria Eby;

Analytical results presented in this report have been reviewed for compliance with the HARBOR BRANCH Environmental Laboratories Inc.'s (HBEL) Quality Systems Manual and have been determined to meet the standards referenced in the July 1999 National Environmental Laboratory Accreditation Program (NELAP) Quality Manual. The associated Quality Control parameters have been evaluated and meet all Method, Compliance and Standards criteria unless otherwise noted on a Quality Control Summary Page.

FDOH Safe Drinking Water Act, Clean Water Act and RCRA Certification #'s:

E96080, E83509, E85370, E84418

Analytical results herein reflect the values obtained from tests performed on samples as received by the laboratory unless otherwise indicated.

Should you have any questions, please contact HBEL at (772) 465-2400, Ext. 285 and reference the HBEL Workorder ID [Number].

Respectfully submitted,

Cindy Cromer
HBEL, Inc. Director

Note: This report is not to be copied, except in full, without the expressed written consent of the HARBOR BRANCH Environmental Laboratories, Inc.

Southeast Florida
FDOH # E96080

Central Florida
FDOH # E83509

Southwest Florida
FDOH # E85370

West Central Florida
FDOH # E84418

Printed: 1/12/05



Page 1 of 4

**HARBOR BRANCH
ENVIRONMENTAL
LABORATORIES, INC.**

5600 U.S. 1 North, Fort Pierce FL 34946
Phone: (772) 465-2400, Ext. 285 Fax: (772) 467-1584

Method Narratives/FDEP Data Qualifiers

Client: Seminole County

Workorder ID: Lake Jesup SW

[2120419]

Received: 12/27/04 12:35

MB=Method Blank LCS=Laboratory Control Sample LCSD=Laboratory Control Sample Duplicate MS=Matrix Spike MSD=Matrix Spike Duplicate DUP=Sample Duplicate

HBEL Sample

Method Narratives (If Applicable)

<u>Number</u>	<u>Sample ID</u>	<u>Analytical Method</u>	<u>Description</u>
---------------	------------------	--------------------------	--------------------

HBEL Sample

Data Qualifiers (If Applicable)

<u>Number</u>	<u>Sample ID</u>	<u>Parameter</u>	<u>Method</u>	<u>Qualifier Code</u>	<u>Qualifier Definition</u>
---------------	------------------	------------------	---------------	-----------------------	-----------------------------

Quality Control Summary

<u>Method</u>	<u>HBEL Batch</u>	<u>Analyte</u>	<u>Analytical Issue</u>
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HARBOR BRANCH ENVIRONMENTAL LABORATORIES, INC.

5600 U.S. 1 North, Fort Pierce FL 34946
Phone: (772) 465-2400, Ext. 285 Fax: (772) 467-1584

CERTIFICATE OF ANALYSIS

[2120419]

Client: Seminole County

Workorder ID: Lake Jesup SW

Parameter	Result ¹	Units	Reporting Limit	Method	Laboratory Batch	Prep Date/Time	Analyzed Date/Time	Analyst	Lab ID
Laboratory ID: 2120419001				Sampled: 12/27/04 11:40 Received: 12/27/04 12:35					
Sample ID: Soldier Creek Comp				Matrix: Water Results reported on As Received Basis					
Total Suspended Solids	14	mg/L	1.2	EPA 160.2	WCDE12468		12/29/04 10:15	PA	E83509
Laboratory ID: 2120419002				Sampled: 12/27/04 11:40 Received: 12/27/04 12:35					
Sample ID: Soldier Creek Comp				Matrix: Water Results reported on As Received Basis					
Ammonia, as N	0.015	mg/L	0.0090	EPA 350.1	AUTO12808		12/29/04 16:14	JL	E96080
Total Kjeldahl Nitrogen	1.2	mg/L	0.045	EPA 351.2	AUTO12810	12/28/04 13:24	12/29/04 11:37	SMB	E96080
Total Nitrogen	1.3	mg/L	0.048	EPA 351.2	CALC4850		01/17/05 16:14	DH	E96080
Nitrate/Nitrite as N	0.076	mg/L	0.0075	EPA 353.2	AUTO12814		01/17/05 14:05	SMB	E96080
Total Phosphorus as P	0.12	mg/L	0.0012	EPA 365.1	AUTO12842	01/15/05 10:30	01/16/05 12:13	JL	E96080
Laboratory ID: 2120419003				Sampled: 12/27/04 11:45 Received: 12/27/04 12:35					
Sample ID: Soldier Creek Grab				Matrix: Water Results reported on As Received Basis					
BOD5	2.3	mg/L	2.0	EPA 405.1	WCDE12470		12/29/04 9:00	PA	E83509
Laboratory ID: 2120419004				Sampled: 12/27/04 11:55 Received: 12/27/04 12:35					
Sample ID: Soldier Creek Grab				Matrix: Water Results reported on As Received Basis					
Fecal Coliform	360	CFU/100mL	10	SM9222 D	WCDE12464		12/27/04 13:00	JLH	E83509

Result Qualifiers: U = Not Detected ND = Not Detected I = Analyte Detected between Laboratory's MDL and PQL.



Chain-of-Custody

and
Agreement to Perform Services

Method(s) of Shipment: _____

USE BALL POINT PEN
PRESS HARD
COMPLETELY FILL OUT
ALL NON GREYED AREAS
PRINT LEGIBLY

Laboratory not responsible for omitted information

_____ FDOH # E96080	_____ FDOH # E85370
5600 U.S. 1 North	307 Coolidge Avenue
Fort Pierce, FL 34946	Lehigh Acres FL 33939

Shipment: _____

2 FDOH # E83509 FDOH # E84418
255 Enterprise Rd., Suite 1 2514 Osawaw Blvd.
Deltona, FL 32725 Spring Hill, FL 34607

Company:

Address:

Zip:

Phone:

Fax:

Client Contact:

Project Name:

Sampled By:

SAMPLE DESCRIPTION

As Will Appear On Report

LAB ID	COLLECTION		Sample Type*	MATRIX**	# Containers
	DATE	TIME			
20030001	2/1/03	10:00	C	SM	
20030002	2/1/03	10:05	C	SM	
20030003	2/1/03	10:10	C	SM	
20030004	2/1/03	10:15	C	SM	
20030005	2/1/03	10:20	C	SM	

[illegible]

* Sample Type: G=Grab C=Composite

*** Matrix: S=Solid SL=Sludge DW=Drinking Water GW=Ground Water SW=Surface Water WW=Wastewater M=Marine

RELINQUISHED BY	RELINQUISHED BY	RELINQUISHED BY
DATE/TIME	DATE/TIME	DATE/TIME
RECEIVED BY	RECEIVED BY	RECEIVED FOR HBI
DATE/TIME	DATE/TIME	DATE/TIME

Distribution: WHITE with REPORT; YELLOW for FILE; PINK to CLIENT; GOLD for SAMPLER

CHAIN PAGE of

LABORATORY RESULTS

SAMPLE EVENT NO. 4

January 14, 2005

STATIONS SAMPLED:

GEE CREEK
HOWELL CREEK
SOLARY CANAL
SOLDIER CREEK

**HARBOR BRANCH
ENVIRONMENTAL
LABORATORIES, INC.**

5600 U.S. 1 North, Fort Pierce FL 34946
Phone: (772) 465-2400, Ext. 285 Fax: (772) 467-1584

January 27, 2005

To: Gloria Eby
Seminole County
520 W Lake Mary Blvd, 200
Sanford, FL 32773

Client: Seminole County

Workorder ID: Lake Jesup SW

[2120592]

Received: 1/14/05 15:55

Dear Gloria Eby;

Analytical results presented in this report have been reviewed for compliance with the HARBOR BRANCH Environmental Laboratories Inc.'s (HBEL) Quality Systems Manual and have been determined to meet the standards referenced in the July 1999 National Environmental Laboratory Accreditation Program (NELAP) Quality Manual. The associated Quality Control parameters have been evaluated and meet all Method, Compliance and Standards criteria unless otherwise noted on a Quality Control Summary Page.

FDOH Safe Drinking Water Act, Clean Water Act and RCRA Certification #'s:

E96080, E83509, E85370, E84418

Analytical results herein reflect the values obtained from tests performed on samples as received by the laboratory unless otherwise indicated.

Should you have any questions, please contact HBEL at (772) 465-2400, Ext. 285 and reference the HBEL Workorder ID [Number].

Respectfully submitted,

Cindy Cromer
HBEL, Inc. Director

Note: This report is not to be copied, except in full, without the expressed written consent of the HARBOR BRANCH Environmental Laboratories, Inc.

Southeast Florida
FDOH # E96080

Central Florida
FDOH # E83509

Southwest Florida
FDOH # E85370

West Central Florida
FDOH # E84418

Printed: 1/27/05



Page 1 of 4

**HARBOR BRANCH
ENVIRONMENTAL
LABORATORIES, INC.**

5600 U.S. 1 North, Fort Pierce FL 34946
Phone: (772) 465-2400, Ext. 285 Fax: (772) 467-1584

Method Narratives/FDEP Data Qualifiers

Client: Seminole County

Workorder ID: Lake Jesup SW

[2120592]

Received: 1/14/05 15:55

MB=Method Blank LCS=Laboratory Control Sample LCSD=Laboratory Control Sample Duplicate MS=Matrix Spike MSD=Matrix Spike Duplicate DUP=Sample Duplicate

HBEL Sample

Method Narratives (If Applicable)

<u>Number</u>	<u>Sample ID</u>	<u>Analytical Method</u>	<u>Description</u>
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HBEL Sample

Data Qualifiers (If Applicable)

<u>Number</u>	<u>Sample ID</u>	<u>Parameter</u>	<u>Method</u>	<u>Qualifier Code</u>	<u>Qualifier Definition</u>
2120592003	Gee Creek Grab	Fecal Coliform	SM9222 D	B	Results based upon colony counts outside of the acceptable range

Quality Control Summary

<u>Method</u>	<u>HBEL Batch</u>	<u>Analyte</u>	<u>Analytical Issue</u>
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HARBOR BRANCH ENVIRONMENTAL LABORATORIES, INC.

5600 U.S. 1 North, Fort Pierce FL 34946
Phone: (772) 465-2400, Ext. 285 Fax: (772) 467-1584

CERTIFICATE OF ANALYSIS

[2120592]

Client: Seminole County

Workorder ID: Lake Jesup SW

Parameter	Result ¹	Units	Reporting Limit	Method	Laboratory Batch	Prep Date/Time	Analyzed Date/Time	Analyst	Lab ID
Laboratory ID: 2120592001				Sampled: 01/14/05 14:20 Received: 01/14/05 15:55					
Sample ID: Gee Creek Comp				Matrix: Water Results reported on As Received Basis					
Total Suspended Solids	25	mg/L	1.0	EPA 160.2	WCDE12528		01/15/05 13:15	PA	E83509
Laboratory ID: 2120592002				Sampled: 01/14/05 14:20 Received: 01/14/05 15:55					
Sample ID: Gee Creek Comp				Matrix: Water Results reported on As Received Basis					
Ammonia, as N	0.049	mg/L	0.0090	EPA 350.1	AUTO12878		01/20/05 13:25	JL	E96080
Total Kjeldahl Nitrogen	1.2	mg/L	0.045	EPA 351.2	AUTO12886	01/20/05 11:00	01/20/05 15:54	SMB	E96080
Total Nitrogen	1.5	mg/L	0.048	EPA 351.2	CALC4866		01/27/05 9:28	DH	E96080
Nitrate/Nitrite as N	0.23	mg/L	0.0075	EPA 353.2	AUTO12897		01/26/05 12:00	SMB	E96080
Total Phosphorus as P	0.21	mg/L	0.0012	EPA 365.1	AUTO12892	01/19/05 13:00	01/19/05 15:48	JL	E96080
Laboratory ID: 2120592003				Sampled: 01/14/05 14:20 Received: 01/14/05 15:55					
Sample ID: Gee Creek Grab				Matrix: Water Results reported on As Received Basis					
Fecal Coliform	7400	CFU/100mL	100	SM9222 D	WCDE12530		01/14/05 16:25	RM	E83509
Laboratory ID: 2120592004				Sampled: 01/14/05 14:20 Received: 01/14/05 15:55					
Sample ID: Gee Creek Grab				Matrix: Water Results reported on As Received Basis					
BOD5	4.0	mg/L	2.0	EPA 405.1	WCDE12527		01/15/05 10:25	PA	E83509

Result Qualifiers: U = Not Detected ND¹ = Not Detected I = Analyte Detected between Laboratory's MDL and PQL.

**HARBOR BRANCH
ENVIRONMENTAL
LABORATORIES, INC.**

5600 U.S. 1 North, Fort Pierce FL 34946
Phone: (772) 465-2400, Ext. 285 Fax: (772) 467-1584

January 27, 2005

To: Gloria Eby
Seminole County
520 W Lake Mary Blvd, 200
Sanford, FL 32773

Client: Seminole County

Workorder ID: Lake Jesup SW

[2120593]

Received: 1/15/05 9:50

Dear Gloria Eby;

Analytical results presented in this report have been reviewed for compliance with the HARBOR BRANCH Environmental Laboratories Inc.'s (HBEL) Quality Systems Manual and have been determined to meet the standards referenced in the July 1999 National Environmental Laboratory Accreditation Program (NELAP) Quality Manual. The associated Quality Control parameters have been evaluated and meet all Method, Compliance and Standards criteria unless otherwise noted on a Quality Control Summary Page.

FDOH Safe Drinking Water Act, Clean Water Act and RCRA Certification #'s:

E96080, E83509, E85370, E84418

Analytical results herein reflect the values obtained from tests performed on samples as received by the laboratory unless otherwise indicated.

Should you have any questions, please contact HBEL at (772) 465-2400, Ext. 285 and reference the HBEL Workorder ID [Number].

Respectfully submitted,

Cindy Cromer
HBEL, Inc. Director

Note: This report is not to be copied, except in full, without the expressed written consent of the HARBOR BRANCH Environmental Laboratories, Inc.

Southeast Florida Central Florida
FDOH # E96080 FDOH # E83509

Southwest Florida
FDOH # E85370

West Central Florida
FDOH # E84418

Printed: 1/27/05



Page 1 of 5

**HARBOR BRANCH
ENVIRONMENTAL
LABORATORIES, INC.**

5600 U.S. 1 North, Fort Pierce FL 34946
Phone: (772) 465-2400, Ext. 285 Fax: (772) 467-1584

Method Narratives/FDEP Data Qualifiers

Client: Seminole County

Workorder ID: Lake Jesup SW

[2120593]

Received: 1/15/05 9:50

MB=Method Blank LCS=Laboratory Control Sample LCSD=Laboratory Control Sample Duplicate MS=Matrix Spike MSD=Matrix Spike Duplicate DUP=Sample Duplicate

HBEL Sample

Method Narratives (If Applicable)

<u>Number</u>	<u>Sample ID</u>	<u>Analytical Method</u>	<u>Description</u>
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HBEL Sample

Data Qualifiers (If Applicable)

<u>Number</u>	<u>Sample ID</u>	<u>Parameter</u>	<u>Method</u>	<u>Qualifier Code</u>	<u>Qualifier Definition</u>
2120593003	Howel Creek grab	Fecal Coliform	SM9222 D	B	Results based upon colony counts outside of the acceptable range

Quality Control Summary

<u>Method</u>	<u>HBEL Batch</u>	<u>Analyte</u>	<u>Analytical Issue</u>
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Nitrate/Nitrite

AUTO12898

2120593006	Nitrate/Nitrite as N	Accuracy - Outside acceptance limits in the MS.
2120593006	Nitrate/Nitrite as N	Precision - Outside acceptance limits between the MS and MSD.

Due to matrix effects. Accuracy/Precision demonstrated with other QC samples.

HARBOR BRANCH ENVIRONMENTAL LABORATORIES, INC.

5600 U.S. 1 North, Fort Pierce, FL 34946
Phone: (772) 465-2400, Ext. 285 Fax: (772) 467-1584

CERTIFICATE OF ANALYSIS

[2120593]

Client: Seminole County

Workorder ID: Lake Jesup SW

Parameter	Result ¹	Units	Reporting Limit	Method	Laboratory Batch	Prep Date/Time	Analyzed Date/Time	Analyst	Lab ID
Laboratory ID: 2120593001 Sample ID: Howel Creek comp				Sampled: 01/15/05 8:30 Received: 01/15/05 9:50 Matrix: Water Results reported on As Received Basis					
Total Suspended Solids	21	mg/L	1.0	EPA 160.2	WCDE12528		01/15/05 13:15	PA	E83509
Laboratory ID: 2120593002 Sample ID: Howel Creek comp				Sampled: 01/15/05 8:30 Received: 01/15/05 9:50 Matrix: Water Results reported on As Received Basis					
Ammonia, as N	0.030	mg/L	0.018	EPA 350.1	AUTO12878		01/20/05 13:25	JL	E96080
Total Kjeldahl Nitrogen	1.3	mg/L	0.045	EPA 351.2	AUTO12886	01/20/05 11:00	01/20/05 15:54	SMB	E96080
Total Nitrogen	1.5	mg/L	0.048	EPA 351.2	CALC4866		01/27/05 9:28	DH	E96080
Nitrate/Nitrite as N	0.26	mg/L	0.0075	EPA 353.2	AUTO12897		01/26/05 12:00	SMB	E96080
Total Phosphorus as P	0.22	mg/L	0.0012	EPA 365.1	AUTO12892	01/19/05 13:00	01/19/05 15:48	JL	E96080
Laboratory ID: 2120593003 Sample ID: Howel Creek grab				Sampled: 01/15/05 8:30 Received: 01/15/05 9:50 Matrix: Water Results reported on As Received Basis					
Fecal Coliform	900	CFU/100mL	100	SM9222 D	WCDE12531		01/15/05 11:15	PA	E83509
Laboratory ID: 2120593004 Sample ID: Howel Creek grab				Sampled: 01/15/05 8:30 Received: 01/15/05 9:50 Matrix: Water Results reported on As Received Basis					
BOD5	2.7	mg/L	2.0	EPA 405.1	WCDE12527		01/15/05 10:25	PA	E83509
Laboratory ID: 2120593005 Sample ID: Solary comp				Sampled: 01/15/05 8:45 Received: 01/15/05 9:50 Matrix: Water Results reported on As Received Basis					
Total Suspended Solids	61	mg/L	1.7	EPA 160.2	WCDE12528		01/15/05 13:15	PA	E83509
Laboratory ID: 2120593006 Sample ID: Solary comp de				Sampled: 01/15/05 8:45 Received: 01/15/05 9:50 Matrix: Water Results reported on As Received Basis					
Ammonia, as N	0.044	mg/L	0.0090	EPA 350.1	AUTO12878		01/20/05 13:25	JL	E96080
Total Kjeldahl Nitrogen	2.0	mg/L	0.045	EPA 351.2	AUTO12886	01/20/05 11:00	01/20/05 15:54	SMB	E96080
Total Nitrogen	2.3	mg/L	0.048	EPA 351.2	CALC4866		01/27/05 9:28	DH	E96080
Nitrate/Nitrite as N	0.31	mg/L	0.0075	EPA 353.2	AUTO12898		01/26/05 12:00	SMB	E96080
Total Phosphorus as P	0.60	mg/L	0.0012	EPA 365.1	AUTO12892	01/19/05 13:00	01/19/05 15:48	JL	E96080
Laboratory ID: 2120593007 Sample ID: Solary grab				Sampled: 01/15/05 8:45 Received: 01/15/05 9:50 Matrix: Water Results reported on As Received Basis					
Fecal Coliform	2400	CFU/100mL	100	SM9222 D	WCDE12531		01/15/05 11:15	PA	E83509
Laboratory ID: 2120593008 Sample ID: Solary grab				Sampled: 01/15/05 8:45 Received: 01/15/05 9:50 Matrix: Water Results reported on As Received Basis					
BOD5	2.8	mg/L	2.0	EPA 405.1	WCDE12527		01/15/05 10:25	PA	E83509
Laboratory ID: 2120593009 Sample ID: Soldier's Creek comp				Sampled: 01/15/05 9:15 Received: 01/15/05 9:50 Matrix: Water Results reported on As Received Basis					
Total Suspended Solids	15	mg/L	1.0	EPA 160.2	WCDE12528		01/15/05 13:15	PA	E83509

HARBOR BRANCH ENVIRONMENTAL LABORATORIES, INC.

5600 U.S. 1 North, Fort Pierce FL 34946
Phone: (772) 465-2400, Ext. 285 Fax: (772) 467-1584

CERTIFICATE OF ANALYSIS

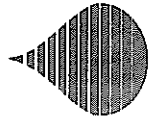
[2120593]

Client: Seminole County

Workorder ID: Lake Jesup SW

Parameter	Result ¹	Units	Reporting Limit	Method	Laboratory Batch	Prep Date/Time	Analyzed Date/Time	Analyst	Lab ID
Laboratory ID: 2120593010				Sampled: 01/15/05 9:15 Received: 01/15/05 9:50					
Sample ID: Soldier's Creek comp				Matrix: Water Results reported on As Received Basis					
Ammonia, as N	0.018	mg/L	0.0090	EPA 350.1	AUTO12878		01/20/05 13:25	JL	E96080
Total Kjeldahl Nitrogen	1.3	mg/L	0.045	EPA 351.2	AUTO12886	01/20/05 11:00	01/20/05 15:54	SMB	E96080
Total Nitrogen	1.4	mg/L	0.048	EPA 351.2	CALC4866		01/27/05 9:28	DH	E96080
Nitrate/Nitrite as N	0.093	mg/L	0.0075	EPA 353.2	AUTO12897		01/26/05 12:00	SMB	E96080
Total Phosphorus as P	0.16	mg/L	0.0012	EPA 365.1	AUTO12892	01/19/05 13:00	01/19/05 15:48	JL	E96080
Laboratory ID: 2120593011				Sampled: 01/15/05 9:15 Received: 01/15/05 9:50					
Sample ID: Soldier's Creek grab				Matrix: Water Results reported on As Received Basis					
Fecal Coliform	500	CFU/100mL	100	SM9222 D	WCDE12531		01/15/05 11:15	PA	E83509
Laboratory ID: 2120593012				Sampled: 01/15/05 9:15 Received: 01/15/05 9:50					
Sample ID: Soldier's Creek grab				Matrix: Water Results reported on As Received Basis					
BOD5	2.0 U	mg/L	2.0	EPA 405.1	WCDE12527		01/15/05 10:25	PA	E83509

Result Qualifiers: U = Not Detected ND = Not Detected I = Analyte Detected between Laboratory's MDL and PQL.



**HARBOR BRANCH
ENVIRONMENTAL
LABORATORIES, INC.**
5600 US 1 North, Fort Pierce, FL 34946
Phone: (772) 465-2400, Ext. 285 Fax: (772) 467-1584

Chain-of-Custody
and
Agreement to Perform Services

USE BALL POINT PEN
PRESS HARD
COMPLETELY FILL OUT
ALL NON GREYED AREAS
PRINT LEGIBLY



Laboratory not responsible for omitted information
FDOH # E96080 FDOH # E85370
5600 U.S. 1 North 307 Coolidge Avenue
Fort Pierce, FL 34946 Lehigh Acres, FL 33936
FDOH # E83509 FDOH # E84418
255 Enterprise Rd., Suite 1 2514 Osawaw Blvd.
Deltona, FL 32725 Spring Hill, FL 34607

Method(s) of
Shipment:

Company: Seawater Co
Address: _____

Zip: _____

Phone: _____ Fax: _____

Client Contact: _____

Project Name: Lake Tassap

Sampled By: Wes Waters

e-mail: _____

Standard Laboratory
Turn Around Time

Or

Rush in _____ Business Days
Requires Laboratory Approval

For Lab Use Only

Temperature Checked Y N
Custody Seals Intact Y N
pH Checked Y N

LAB # _____

PRESERVATIVE

ANALYSES REQUESTED

Preservation Key

H=Hydrochloric Acid P=Phosphoric Acid
N=Nitric Acid ST=Sodium
S=Sulfuric Acid Thiosulfate
SH=Sodium Hydroxide U=Unpreserved

COMMENTS

SAMPLE DESCRIPTION

As Will Appear On Report

LAB ID DATE TIME COLLECTION DATE TIME

Sample Type* MATRIX* # Containers

001 1-16-06 8:00 C SW 1 Howell creek
002 1-16 8:20 C SW 1 Howell
003 1-16 8:30 C SW 1 Howell
004 1-16 8:30 C SW 1 Howell
005 1-16 8:45 C SW 1 Solady
006 1-16 8:45 C SW 1 Solady
007 1-16 8:45 C SW 1 Solady
008 1-16 8:45 C SW 1 Solady

* Sample Type: G=Grab C=Composite

** Matrix: S=Solid SL=Sludge DW=Drinking Water GW=Ground Water SW=Surface Water WW=Wastewater MI=Marine

Report Page

RELINQUISHED BY

DATE/TIME

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DATE/TIME

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DATE/TIME

RECEIVED FOR HBEL CUSTODY BY

DATE/TIME

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CHAIN PAGE _____ of _____

LABORATORY RESULTS

SAMPLE EVENT NO. 5

February 23, 2005

STATIONS SAMPLED:

HOWELL CREEK

**HARBOR BRANCH
ENVIRONMENTAL
LABORATORIES, INC.**

5600 U.S. 1 North, Fort Pierce FL 34946
Phone: (772) 465-2400, Ext. 285 Fax: (772) 467-1584

March 10, 2005

To: Gloria Eby
Seminole County
520 W Lake Mary Blvd, 200
Sanford, FL 32773

Client: Seminole County
Workorder ID: Lake Jessup Project
Received: 2/24/05 16:10

[2121014]

Dear Gloria Eby;

Analytical results presented in this report have been reviewed for compliance with the HARBOR BRANCH Environmental Laboratories Inc.'s (HBEL) Quality Systems Manual and have been determined to meet applicable Method guidelines and Standards referenced in the July 2002 National Environmental Laboratory Accreditation Program (NELAP) Quality Manual unless otherwise noted. The Analytical Results within these report pages reflect the values obtained from tests performed on Samples As Received by the laboratory unless indicated differently.

FDOH Safe Drinking Water Act, Clean Water Act and RCRA Certification #'s:

E96080, E83509, E85370, E84418

Questions regarding this report should be directed to the Report Signatory at (772) 465-2400 Ext. 285 referencing the HBEL Workorder ID [Number].

Respectfully submitted,

Cindy Cromer
Technical Director or Designee

Note: This report is not to be copied, except in full, without the expressed written consent of the HARBOR BRANCH Environmental Laboratories, Inc.

5600 US 1 North
Fort Pierce, FL 34946
FDOH # E96080

255 Enterprise Road, Suite 1
Deltona, FL 32725
FDOH # E83509

307 Coolidge Avenue
Lehigh Acres, FL 33936
FDOH # E85370

2514 Osawaw Boulevard
Spring Hill, FL 34607
FDOH # E84418



**HARBOR BRANCH
ENVIRONMENTAL
LABORATORIES, INC.**

5600 U.S. 1 North, Fort Pierce FL 34946
Phone: (772) 465-2400, Ext. 285 Fax: (772) 467-1584

Method Narratives/FDEP Data Qualifiers

Client: Seminole County
Workorder ID: Lake Jessup Project
Received: 2/24/05 16:10

[2121014]

MB=Method Blank LCS=Laboratory Control Sample LCSD=Laboratory Control Sample Duplicate MS=Matrix Spike MSD=Matrix Spike Duplicate DUP=Sample Duplicate

HBEL Sample

Method Narratives (If Applicable)

<u>Number</u>	<u>Sample ID</u>	<u>Analytical Method</u>	<u>Description</u>
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HBEL Sample

Data Qualifiers (If Applicable)

<u>Number</u>	<u>Sample ID</u>	<u>Parameter</u>	<u>Method</u>	<u>Qualifier Code</u>	<u>Qualifier Definition</u>
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Quality Control Summary

<u>Method</u>	<u>HBEL Batch</u>	<u>Analyte</u>
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<u>Analytical Issue</u>

2121014002	Howell Creek	Grab			
	Fecal Coliform	SM9222 D	B		Results based upon colony counts outside of the acceptable range

HARBOR BRANCH ENVIRONMENTAL LABORATORIES, INC.

5600 U.S. 1 North, Fort Pierce, FL 34946
Phone: (772) 465-2400, Ext. 285 Fax: (772) 467-1584

CERTIFICATE OF ANALYSIS

[2121014]

Client: Seminole County

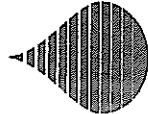
Workorder ID: Lake Jessup Project

Parameter	Result ¹	Units	Reporting Limit	Method	Laboratory Batch	Prep Date/Time	Analyzed Date/Time	Analyst	Lab ID
Laboratory ID: 2121014001					Sampled: 02/24/05 15:10		Received: 02/24/05 16:10		
Sample ID: Howell Creek Comp					Matrix: Water		Results reported on As Received Basis		
Total Suspended Solids	15	mg/L	1.0	EPA 160.2	WCDE12696		02/26/05 8:50	PA	E83509
Ammonia, as N	0.052	mg/L	0.0090	EPA 350.1	AUTO13015		03/7/05 12:42	JL	E96080
Total Kjeldahl Nitrogen	1.0	mg/L	0.045	EPA 351.2	AUTO13007	03/3/05 11:00	03/3/05 18:01	JL	E96080
Total Nitrogen	1.4	mg/L	0.048	EPA 351.2	CALC4898		03/10/05 13:12	DH	E96080
Nitrate/Nitrite as N	0.33	mg/L	0.0075	EPA 353.2	AUTO13008		03/3/05 23:27	JL	E96080
Total Phosphorus as P	0.17	mg/L	0.012	EPA 365.4	AUTO13006	03/3/05 11:00	03/3/05 18:01	JL	E96080

Laboratory ID: 2121014002					Sampled: 02/24/05 15:10		Received: 02/24/05 16:10		
Sample ID: Howell Creek Grab					Matrix: Water		Results reported on As Received Basis		
BOD5	2.0	mg/L	2.0	EPA 405.1	WCDE12693		02/25/05 14:00	PA	E83509
Fecal Coliform	1600	CFU/100mL	100	SM9222 D	WCDE12700		02/24/05 17:45	RM	E83509

¹Result Qualifiers: U = Not Detected

A Statement of Estimated Uncertainty is available upon request



**HARBOR BRANCH
ENVIRONMENTAL
LABORATORIES, INC.**
5600 US 1 North, Fort Pierce, FL 34946
Phone: (772) 465-2400, Ext. 285 Fax: (772) 467-1584

Chain-of-Custody
and
Agreement to Perform Services

Method(s) of _____
Shipment: _____

Company: Harbor Branch
Address: _____

Zip: _____

Phone: _____ Fax: _____

Client Contact: _____

Project Name: Lehigh Acres

Sampled By: Wesley Adams

USE BALL POINT PEN
PRESS HARD
COMPLETELY FILL OUT
ALL NON GREYED AREAS
PRINT LEGIBLY

Laboratory not responsible for omitted information
FDOH # E96080 FDOH # E85370
5600 U.S. 1 North 307 Coolidge Avenue
Fort Pierce, FL 34946 Lehigh Acres, FL 33936



FDOH # E83509 FDOH # E84418
255 Enterprise Rd., Suite 1 2514 Osawaw Blvd.
Deltona, FL 32725 Spring Hill, FL 34607

For Lab Use Only				LAB #	
Temperature	Custody Seals	pH	Checked	Y	N
Y	Y	Y	Y	Y	N
PRESERVATIVE					
ANALYSES REQUESTED					
H=Hydrochloric Acid P=Phosphoric Acid					
N=Nitric Acid ST=Sodium					
S=Sulfuric Acid Thiosulfate					
SH=Sodium Hydroxide U=Unpreserved					
COMMENTS					

RELINQUISHED BY		RECEIVED BY	
DATE/TIME	DATE/TIME	DATE/TIME	DATE/TIME
RELINQUISHED BY		RECEIVED FOR HBEL CUSTODY BY	
DATE/TIME		DATE/TIME	

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LABORATORY RESULTS

SAMPLE EVENT NO. 6

February 27, 2005

STATIONS SAMPLED:

GEE CREEK
SIX MILE CREEK
SOLARY CANAL

**HARBOR BRANCH
ENVIRONMENTAL
LABORATORIES, INC.**

5600 U.S. 1 North, Fort Pierce FL 34946
Phone: (772) 465-2400, Ext. 285 Fax: (772) 467-1584

March 10, 2005

To: Gloria Eby
Seminole County
520 W Lake Mary Blvd, 200
Sanford, FL 32773

Client: Seminole County

Workorder ID: Lake Jesus SW

[2121030]

Received: 2/28/05 13:15

Dear Gloria Eby;

Analytical results presented in this report have been reviewed for compliance with the HARBOR BRANCH Environmental Laboratories Inc.'s (HBEL) Quality Systems Manual and have been determined to meet applicable Method guidelines and Standards referenced in the July 2002 National Environmental Laboratory Accreditation Program (NELAP) Quality Manual unless otherwise noted. The Analytical Results within these report pages reflect the values obtained from tests performed on Samples As Received by the laboratory unless indicated differently.

FDOH Safe Drinking Water Act, Clean Water Act and RCRA Certification #'s:

E96080, E83509, E85370, E84418

Questions regarding this report should be directed to the Report Signatory at (772) 465-2400 Ext. 285 referencing the HBEL Workorder ID [Number].

Respectfully submitted,

Cindy Cromer
Technical Director or Designee

Note: This report is not to be copied, except in full, without the expressed written consent of the HARBOR BRANCH Environmental Laboratories, Inc.

5600 US 1 North
Fort Pierce, FL 34946
FDOH # E96080

255 Enterprise Road, Suite 1
Deltona, FL 32725
FDOH # E83509

307 Coolidge Avenue
Lehigh Acres, FL 33936
FDOH # E85370

2514 Osawaw Boulevard
Spring Hill, FL 34607
FDOH # E84418

Printed: 3/10/05



Page 1 of 4

HARBOR BRANCH ENVIRONMENTAL LABORATORIES, INC.

5600 U.S. 1 North, Fort Pierce, FL 34946
Phone: (772) 465-2400, Ext. 285 Fax: (772) 467-1584

Method Narratives/FDEP Data Qualifiers

Client: Seminole County
Workorder ID: Lake Jesup SW
Received: 2/28/05 13:15

[2121030]

MB=Method Blank LCS=Laboratory Control Sample LCSD=Laboratory Control Sample Duplicate MS=Matrix Spike MSD=Matrix Spike Duplicate DUP=Sample Duplicate

HBEL Sample

Method Narratives (If Applicable)

<u>Number</u>	<u>Sample ID</u>	<u>Analytical Method</u>	<u>Description</u>
---------------	------------------	--------------------------	--------------------

HBEL Sample

Data Qualifiers (If Applicable)

<u>Number</u>	<u>Sample ID</u>	<u>Parameter</u>	<u>Method</u>	<u>Qualifier Code</u>	<u>Qualifier Definition</u>
---------------	------------------	------------------	---------------	-----------------------	-----------------------------

Quality Control Summary

<u>Method</u>	<u>HBEL Batch</u>	<u>Analyte</u>	<u>Analytical Issue</u>
2121030002	Solary Creek Grab	Fecal Coliform	SM9222 D B Results based upon colony counts outside of the acceptable range
2121030004	Gee Creek Grab	Fecal Coliform	SM9222 D B Results based upon colony counts outside of the acceptable range
2121030006	6 Mile Creek Grab	Fecal Coliform	SM9222 D B Results based upon colony counts outside of the acceptable range

HARBOR BRANCH ENVIRONMENTAL LABORATORIES, INC.

5600 US 1 North, Fort Pierce FL 34946
Phone: (772) 465-2400, Ext. 285 Fax: (772) 467-1584

CERTIFICATE OF ANALYSIS

[2121030]

Client: Seminole County

Workorder ID: Lake Jesup SW

Parameter	Result ¹	Units	Reporting Limit	Method	Laboratory Batch	Prep Date/Time	Analyzed Date/Time	Analyst	Lab ID
Laboratory ID: 2121030001					Sampled: 02/28/05 10:40		Received: 02/28/05 13:15		
Sample ID: Solary Creek Composite					Matrix: Water		Results reported on As Received Basis		
Total Suspended Solids	50	mg/L	2.5	EPA 160.2	WCDE12717		03/2/05 13:00	PA	E83509
Ammonia, as N	0.059	mg/L	0.0090	EPA 350.1	AUTO13015		03/7/05 12:42	JL	E96080
Total Kjeldahl Nitrogen	1.7	mg/L	0.045	EPA 351.2	AUTO13007	03/3/05 11:00	03/3/05 18:01	JL	E96080
Total Nitrogen	2.0	mg/L	0.048	EPA 351.2	CALC4898		03/10/05 13:12	DH	E96080
Nitrate/Nitrite as N	0.36	mg/L	0.0075	EPA 353.2	AUTO13008		03/3/05 23:27	JL	E96080
Total Phosphorus as P	0.51	mg/L	0.0012	EPA 365.1	AUTO13037	03/8/05 9:00	03/8/05 14:08	JL	E96080
Laboratory ID: 2121030002					Sampled: 02/28/05 10:40		Received: 02/28/05 13:15		
Sample ID: Solary Creek Grab					Matrix: Water		Results reported on As Received Basis		
BOD5	2.8	mg/L	2.0	EPA 405.1	WCDE12707		03/2/05 9:54	PA	E83509
Fecal Coliform	1200	CFU/100mL	10	SM9222 D	WCDE12716		02/28/05 13:50	RM	E83509
Laboratory ID: 2121030003					Sampled: 02/28/05 11:30		Received: 02/28/05 13:15		
Sample ID: Gee Creek Composite					Matrix: Water		Results reported on As Received Basis		
Total Suspended Solids	9.2	mg/L	0.6	EPA 160.2	WCDE12717		03/2/05 13:00	PA	E83509
Ammonia, as N	0.026	mg/L	0.0090	EPA 350.1	AUTO13015		03/7/05 12:42	JL	E96080
Total Kjeldahl Nitrogen	0.87	mg/L	0.045	EPA 351.2	AUTO13007	03/3/05 11:00	03/3/05 18:01	JL	E96080
Total Nitrogen	1.1	mg/L	0.048	EPA 351.2	CALC4898		03/10/05 13:12	DH	E96080
Nitrate/Nitrite as N	0.26	mg/L	0.0075	EPA 353.2	AUTO13008		03/3/05 23:27	JL	E96080
Total Phosphorus as P	0.17	mg/L	0.0012	EPA 365.1	AUTO13037	03/8/05 9:00	03/8/05 14:08	JL	E96080
Laboratory ID: 2121030004					Sampled: 02/28/05 11:30		Received: 02/28/05 13:15		
Sample ID: Gee Creek Grab					Matrix: Water		Results reported on As Received Basis		
BOD5	2.0 U	mg/L	2.0	EPA 405.1	WCDE12707		03/2/05 9:54	PA	E83509
Fecal Coliform	740	CFU/100mL	10	SM9222 D	WCDE12716		02/28/05 13:50	RM	E83509
Laboratory ID: 2121030005					Sampled: 02/28/05 12:40		Received: 02/28/05 13:15		
Sample ID: 6 Mile Creek Composite					Matrix: Water		Results reported on As Received Basis		
Total Suspended Solids	26	mg/L	1.7	EPA 160.2	WCDE12717		03/2/05 13:00	PA	E83509
Ammonia, as N	0.017	mg/L	0.0090	EPA 350.1	AUTO13015		03/7/05 12:42	JL	E96080
Total Kjeldahl Nitrogen	1.6	mg/L	0.045	EPA 351.2	AUTO13007	03/3/05 11:00	03/3/05 18:01	JL	E96080
Total Nitrogen	1.8	mg/L	0.048	EPA 351.2	CALC4898		03/10/05 13:12	DH	E96080
Nitrate/Nitrite as N	0.20	mg/L	0.0075	EPA 353.2	AUTO13008		03/3/05 23:27	JL	E96080
Total Phosphorus as P	0.26	mg/L	0.0012	EPA 365.1	AUTO13037	03/8/05 9:00	03/8/05 14:08	JL	E96080
Laboratory ID: 2121030006					Sampled: 02/28/05 12:40		Received: 02/28/05 13:15		
Sample ID: 6 Mile Creek Grab					Matrix: Water		Results reported on As Received Basis		
BOD5	2.1	mg/L	2.0	EPA 405.1	WCDE12707		03/2/05 9:54	PA	E83509
Fecal Coliform	1300	CFU/100mL	10	SM9222 D	WCDE12716		02/28/05 13:50	RM	E83509

¹Result Qualifiers: U = Not Detected
A Statement of Estimated Uncertainty is available upon request

5600 US 1 North
Fort Pierce, FL 34946
FDOH # E96080

255 Enterprise Road, Suite 1
Deltona, FL 32725
FDOH # E83509



307 Coolidge Avenue
Lehigh Acres, FL 33936
FDOH # E85370

2514 Osawaw Boulevard
Spring Hill, FL 34607
FDOH # E84418

Printed: 3/10/05

Page 3 of 4



Chain-of-Custody

and

Agreement to Perform Services

Method(s) of Shipment:

Company:

Address:

20

phone:

Fax:

Client Contact:

Project Name:

Sampled By:

SAMPLE DESCRIPTION

As Will Appear On Report

LAB ID	COLLECTION		Sample Type*	MATRIX**	# Containers	SAMPLE DESCRIPTION As Will Appear On Report
	DATE	TIME				
	4/28	1040	C	56/54	1	Solar V Canal
			C			
			C	56/35		
			C			
	4/28	1130	C	56	1	Geese Creek
			C			
			C			
			C			

* Sample Type: G=Grab C=Composite

*** Matrix: S=Solid SL=Sludge DW=Drinking Water GW=Ground Water SW=Surface Water WW=Wastewater M=Marine

RELINQUISHED BY	RELINQUISHED BY	RELINQUISHED BY
DATE/TIME	DATE/TIME	DATE/TIME
RECEIVED BY	RECEIVED BY	RECEIVED FOR HBEL CUSTODY BY
DATE/TIME	DATE/TIME	DATE/TIME

istribution: WHITE with REPORT; YELLOW for FILE; PINK to CLIENT; GOLD for SAMPLER

CHAIN PAGE 1 of 1

USE BALL POINT PEN

PRESS HARD

COMPLETELY FILL OUT

ALL NON GREYED AREAS

PRINT LEGIBLY



For Lab Use Only

Temperature Custody Seals pH

॥

Checked

PRESERVATIVE

**Rush in ___ Business Days
Requires Laboratory Approval**

Laboratory not responsible for omitted information

FDOH # E85370

307 Coolidge Avenue

Lehigh Acres, FL 33936

FDOH # E84418

255 Enterprise Rd., Suite 1 2514 Osawaw Blvd.

Spring Hill, FL 34607

34

LABORATORY RESULTS

SAMPLE EVENT NO. 7

March 9, 2005

STATIONS SAMPLED:

GEE CREEK
SIX MILE CREEK
SOLARY CANAL

**HARBOR BRANCH
ENVIRONMENTAL
LABORATORIES, INC.**

5600 U.S. 1 North, Fort Pierce FL 34946
Phone: (772) 465-2400, Ext. 285 Fax: (772) 467-1584

March 30, 2005

To: Gloria Eby
Seminole County
520 W Lake Mary Blvd, 200
Sanford, FL 32773

Client: Seminole County

Workorder ID: Lake Jesup SW

[2121179]

Received: 3/10/05 12:45

Dear Gloria Eby;

Analytical results presented in this report have been reviewed for compliance with the HARBOR BRANCH Environmental Laboratories Inc.'s (HBEL) Quality Systems Manual and have been determined to meet applicable Method guidelines and Standards referenced in the July 2002 National Environmental Laboratory Accreditation Program (NELAP) Quality Manual unless otherwise noted. The Analytical Results within these report pages reflect the values obtained from tests performed on Samples As Received by the laboratory unless indicated differently.

FDOH Safe Drinking Water Act, Clean Water Act and RCRA Certification #'s:

E96080, E83509, E85370, E84418

Questions regarding this report should be directed to the Report Signatory at (772) 465-2400 Ext. 285 referencing the HBEL Workorder ID [Number].

Respectfully submitted,

Cindy Cromer
Technical Director or Designee

Note: This report is not to be copied, except in full, without the expressed written consent of the HARBOR BRANCH Environmental Laboratories, Inc.

5600 US 1 North
Fort Pierce, FL 34946
FDOH # E96080

255 Enterprise Road, Suite 1
Deltona, FL 32725
FDOH # E83509



307 Coolidge Avenue
Lehigh Acres, FL 33936
FDOH # E85370

2514 Osawaw Boulevard
Spring Hill, FL 34607
FDOH # E84418

**HARBOR BRANCH
ENVIRONMENTAL
LABORATORIES, INC.**

5600 U.S. 1 North, Fort Pierce FL 34946
Phone: (772) 465-2400, Ext. 285 Fax: (772) 467-1584

Method Narratives/FDEP Data Qualifiers

Client: Seminole County

Workorder ID: Lake Jesup SW

[2121179]

Received: 3/10/05 12:45

MB=Method Blank LCS=Laboratory Control Sample LCSD=Laboratory Control Sample Duplicate MS=Matrix Spike MSD=Matrix Spike Duplicate DUP=Sample Duplicate

HBEL Sample

Method Narratives (If Applicable)

<u>Number</u>	<u>Sample ID</u>	<u>Analytical Method</u>	<u>Description</u>
---------------	------------------	--------------------------	--------------------

HBEL Sample

Data Qualifiers (If Applicable)

<u>Number</u>	<u>Sample ID</u>	<u>Parameter</u>	<u>Method</u>	<u>Qualifier Code</u>	<u>Qualifier Definition</u>
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EPA 351.2

Quality Control Summary

AUTO13068

2121179005	Total Kjeldahl Nitrogen	Accuracy - Outside acceptance limits in the MS.
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Nitrate/Nitrite

AUTO13074

2121179005	Nitrate/Nitrite as N	Accuracy - Outside acceptance limits in the MS.
2121179005	Nitrate/Nitrite as N	Accuracy - Outside acceptance limits in the MSD.

Method HBEL Batch Analyte

Analytical Issue

2121179002 Solary Grab

Fecal Coliform

SM9222 D

B

Results based upon colony counts outside of the acceptable range

Due to matrix effects. Accuracy demonstrated with other QC samples.

HARBOR BRANCH ENVIRONMENTAL LABORATORIES, INC.

5600 U.S. 1 North, Fort Pierce, FL 34946
Phone: (772) 465-2400, Ext. 285 Fax: (772) 467-1584

CERTIFICATE OF ANALYSIS

[2121179]

Client: Seminole County

Workorder ID: Lake Jesup SW

Parameter	Result ¹	Units	Reporting Limit	Method	Laboratory Batch	Prep Date/Time	Analyzed Date/Time	Analyst	Lab ID
Laboratory ID: 2121179001				Sampled: 03/10/05 10:40 Received: 03/10/05 12:45					
Sample ID: Solary Comp				Matrix: Water Results reported on As Received Basis					
Total Suspended Solids	42	mg/L	3.3	EPA 160.2	WCDE12765		03/11/05 15:55	PA	E83509
Ammonia, as N	0.13	mg/L	0.050	EPA 350.1	AUTO13045		03/11/05 15:10	JL	E96080
Total Kjeldahl Nitrogen	1.7	mg/L	0.20	EPA 351.2	AUTO13056	03/14/05 10:00	03/14/05 17:33	JL	E96080
Total Nitrogen	2.3	mg/L	0.20	EPA 351.2	CALC4903		03/29/05 7:20	PW	E96080
Nitrate/Nitrite as N	0.54	mg/L	0.020	EPA 353.2	AUTO13074		03/24/05 11:17	SMB	E96080
Total Phosphorus as P	0.48	mg/L	0.0046	EPA 365.1	AUTO13050	03/11/05 11:00	03/11/05 16:14	JL	E96080
Laboratory ID: 2121179002				Sampled: 03/10/05 10:40 Received: 03/10/05 12:45					
Sample ID: Solary Grab				Matrix: Water Results reported on As Received Basis					
BOD5	2.0U	mg/L	2.0	EPA 405.1	WCDE12763		03/11/05 9:15	PA	E83509
Fecal Coliform	780	CFU/100mL	10	SM9222 D	WCDE12760		03/10/05 13:25	RM	E83509
Laboratory ID: 2121179003				Sampled: 03/10/05 11:10 Received: 03/10/05 12:45					
Sample ID: Gee Comp				Matrix: Water Results reported on As Received Basis					
Total Suspended Solids	3.9	mg/L	1.1	EPA 160.2	WCDE12765		03/11/05 15:55	PA	E83509
Ammonia, as N	0.055	mg/L	0.050	EPA 350.1	AUTO13045		03/11/05 15:10	JL	E96080
Total Kjeldahl Nitrogen	0.79	mg/L	0.20	EPA 351.2	AUTO13068	03/18/05 12:00	03/21/05 15:01	SMB	E96080
Total Nitrogen	0.97	mg/L	0.20	EPA 351.2	CALC4907		03/29/05 7:21	PW	E96080
Nitrate/Nitrite as N	0.18	mg/L	0.020	EPA 353.2	AUTO13074		03/24/05 16:27	SMB	E96080
Total Phosphorus as P	0.12	mg/L	0.0046	EPA 365.1	AUTO13050	03/11/05 11:00	03/11/05 16:14	JL	E96080
Laboratory ID: 2121179004				Sampled: 03/10/05 11:10 Received: 03/10/05 12:45					
Sample ID: Gee Grab				Matrix: Water Results reported on As Received Basis					
BOD5	2.0U	mg/L	2.0	EPA 405.1	WCDE12763		03/11/05 9:15	PA	E83509
Fecal Coliform	350	CFU/100mL	10	SM9222 D	WCDE12760		03/10/05 13:25	RM	E83509
Laboratory ID: 2121179005				Sampled: 03/10/05 12:00 Received: 03/10/05 12:45					
Sample ID: 6 Mile Comp				Matrix: Water Results reported on As Received Basis					
Total Suspended Solids	9.8	mg/L	2.0	EPA 160.2	WCDE12765		03/11/05 15:55	PA	E83509
Ammonia, as N	0.0191	mg/L	0.050	EPA 350.1	AUTO13045		03/11/05 15:10	JL	E96080
Total Kjeldahl Nitrogen	1.1	mg/L	0.20	EPA 351.2	AUTO13068	03/18/05 12:00	03/21/05 15:01	SMB	E96080
Total Nitrogen	1.3	mg/L	0.20	EPA 351.2	CALC4907		03/29/05 7:21	PW	E96080
Nitrate/Nitrite as N	0.16	mg/L	0.020	EPA 353.2	AUTO13074		03/24/05 11:17	SMB	E96080
Total Phosphorus as P	0.11	mg/L	0.0046	EPA 365.1	AUTO13050	03/11/05 11:00	03/11/05 16:14	JL	E96080
Laboratory ID: 2121179006				Sampled: 03/10/05 12:00 Received: 03/10/05 12:45					
Sample ID: 6 Mile Grab				Matrix: Water Results reported on As Received Basis					
BOD5	2.0U	mg/L	2.0	EPA 405.1	WCDE12763		03/11/05 9:15	PA	E83509
Fecal Coliform	590	CFU/100mL	10	SM9222 D	WCDE12760		03/10/05 13:25	RM	E83509

¹Result Qualifiers: U = Not Detected

A Statement of Estimated Uncertainty is available upon request

5600 US 1 North
Fort Pierce, FL 34946
FDOH # E96080

255 Enterprise Road, Suite 1
Deltona, FL 32725
FDOH # E83509

307 Coolidge Avenue
Lehigh Acres, FL 33936
FDOH # E85370

2514 Osawaw Boulevard
Spring Hill, FL 34607
FDOH # E84418



Printed: 3/30/05

Page 3 of 4



Chain-of-Custody and Agreement to Perform Services

Method(s) of Shipment:

Address:

zip

Fax:

Client Contact:

Project Name:

Sampled By:

e-mail:

Standard Laboratory
Turn Around Time

 $\dot{O}$

Rush in _____ Business Days
Requires Laboratory Approval

SAMPLE DESCRIPTION

As Will Appear On Report

LAB ID	COLLECTION		Sample Type*	MATRIX**	# Containers	SAMPLE DESCRIPTION As Will Appear On Report
	DATE	TIME				
	3/10	10:10	C	2	2	Salary
	↓	11:10	C	2	2	
	3/10	11:10	C	2	2	Gre
	↓	11:10	C	2	2	
	3/10	11:10	C	2	2	Conte
	↓	11:10	C	2	2	

Sample Type: G=Grab C=Composite

*** Matrix: S=Solid SL=Sludge DW=Drinking Water GW=Ground Water SW=Surface Water WW=Wastewater M=Marine

Report Page
_____ of _____

RELINQUISHED BY

DATE/TIME

RECEIVED BY

DATE/TIME

REINFORCED BY

DATE/TIME

RECEIVED FOR HREF CUSTODY BY

DATE/TIME

Distribution: WHITE with REPORT; YELLOW for FILE; PINK to CLIENT; GOLD for SAMPLER

CHAIN PAGE of

USE BALL POINT PEN
PRESS HARD
COMPLETELY FILL OUT
ALL NON GREYED AREAS
PRINT LEGIBLY



For Lab Use Only

Temperature Custody Seals pH

Checked

7

PRESERVATIVE

ANALYSES REQUESTED

Preservation Key

H=Hydrochloric Acid

N=Nitric Acid

S=Sulfuric Acid

SH= Sodium Hydroxide

COMMENTS

LABORATORY RESULTS

SAMPLE EVENT NO. 8

March 16, 2005

STATIONS SAMPLED:

GEE CREEK
HOWELL CREEK
SOLARY CANAL
SOLDIER CREEK

**HARBOR BRANCH
ENVIRONMENTAL
LABORATORIES, INC.**

5600 U.S. 1 North, Fort Pierce, FL 34946
Phone: (772) 465-2400, Ext. 285 Fax: (772) 467-1584

April 1, 2005

To: Gloria Eby
Seminole County
520 W Lake Mary Blvd, 200
Sanford, FL 32773

Client: Seminole County

Workorder ID: Lake Jesup SW

[2121248]

Received: 3/17/05 13:37

Dear Gloria Eby;

Analytical results presented in this report have been reviewed for compliance with the HARBOR BRANCH Environmental Laboratories Inc.'s (HBEL) Quality Systems Manual and have been determined to meet applicable Method guidelines and Standards referenced in the July 2002 National Environmental Laboratory Accreditation Program (NELAP) Quality Manual unless otherwise noted. The Analytical Results within these report pages reflect the values obtained from tests performed on Samples As Received by the laboratory unless indicated differently.

FDOH Safe Drinking Water Act, Clean Water Act and RCRA Certification #'s:

E96080, E83509, E85370, E84418

Questions regarding this report should be directed to the Report Signatory at (772) 465-2400 Ext. 285 referencing the HBEL Workorder ID [Number].

Respectfully submitted,

Cindy Cromer
Technical Director or Designee

Note: This report is not to be copied, except in full, without the expressed written consent of the HARBOR BRANCH Environmental Laboratories, Inc.

5600 US 1 North
Fort Pierce, FL 34946
FDOH # E96080

255 Enterprise Road, Suite 1
Deltona, FL 32725
FDOH # E83509

307 Coolidge Avenue
Lehigh Acres, FL 33936
FDOH # E85370

2514 Osawaw Boulevard
Spring Hill, FL 34607
FDOH # E84418



HARBOR BRANCH ENVIRONMENTAL LABORATORIES, INC.

5600 U.S. 1 North, Fort Pierce FL 34946
Phone: (772) 465-2400, Ext. 285 Fax: (772) 467-1584

Method Narratives/FDEP Data Qualifiers

Client: Seminole County
Workorder ID: Lake Jesup SW
Received: 3/17/05 13:37

[2121248]

MB=Method Blank LCS=Laboratory Control Sample LCSD=Laboratory Control Sample Duplicate MS=Matrix Spike MSD=Matrix Spike Duplicate DUP=Sample Duplicate

HBEL Sample

Method Narratives (If Applicable)

Number	Sample ID	Analytical Method	Description
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HBEL Sample

Data Qualifiers (If Applicable)

Number	Sample ID	Parameter	Method	Qualifier Code	Qualifier Definition
--------	-----------	-----------	--------	----------------	----------------------

EPA 351.2

Quality Control Summary

AUTO13085

2121248001	Total Kjeldahl Nitrogen	Accuracy - Outside acceptance limits in the MS.
2121248001	Total Kjeldahl Nitrogen	Accuracy - Outside acceptance limits in the MSD.

EPA 365.4

AUTO13086

2121248001	Total Phosphorus as P	Precision - Outside acceptance limits between the MS and MSD.
2121248001	Total Phosphorus as P	Accuracy - Outside acceptance limits in the MSD.

Method	HBEL Batch	Analyte	Analytical Issue
--------	------------	---------	------------------

2121248002	Howell Grab		
	Fecal Coliform	SM9222 D	B Results based upon colony counts outside of the acceptable range
2121248004	Solary Grab		
	Fecal Coliform	SM9222 D	B Results based upon colony counts outside of the acceptable range
2121248006	Gee Grab		
	Fecal Coliform	SM9222 D	B Results based upon colony counts outside of the acceptable range

Due to matrix effects. Accuracy/Precision demonstrated with other QC samples.

HARBOR BRANCH ENVIRONMENTAL LABORATORIES, INC.

5600 U.S. 1 North, Fort Pierce FL 34946
Phone: (772) 465-2400, Ext. 285 Fax: (772) 467-1584

CERTIFICATE OF ANALYSIS

[2121248]

Client: Seminole County

Workorder ID: Lake Jesup SW

Parameter	Result ¹	Units	Reporting Limit	Method	Laboratory Batch	Prep Date/Time	Analyzed Date/Time	Analyst	Lab ID
Laboratory ID: 2121248001				Sampled: 03/17/05 12:00 Received: 03/17/05 13:37					
Sample ID: Howell Comp				Matrix: Water Results reported on As Received Basis					
Total Suspended Solids	20	mg/L	0.8	EPA 160.2	WCDE12787		03/18/05 14:55	PA	E83509
Ammonia, as N	0.21	mg/L	0.0090	EPA 350.1	AUTO13063		03/21/05 14:14	JL	E96080
Total Kjeldahl Nitrogen	1.6	mg/L	0.045	EPA 351.2	AUTO13085	03/24/05 10:00	03/28/05 15:29	SMB	E96080
Total Nitrogen	2.0	mg/L	0.048	EPA 351.2	CALC4912		03/29/05 11:28	DH	E96080
Nitrate/Nitrite as N	0.37	mg/L	0.0075	EPA 353.2	AUTO13074		03/24/05 11:17	SMB	E96080
Total Phosphorus as P	0.43	mg/L	0.0012	EPA 365.1	AUTO13099	03/29/05 11:00	03/29/05 16:16	JL	E96080
Laboratory ID: 2121248002				Sampled: 03/17/05 12:00 Received: 03/17/05 13:37					
Sample ID: Howell Grab				Matrix: Water Results reported on As Received Basis					
BOD5	7.7	mg/L	2.0	EPA 405.1	WCDE12785		03/18/05 9:00	PA	E83509
Fecal Coliform	1100	CFU/100mL	10	SM9222 D	WCDE12794		03/17/05 13:45	RM	E83509
Laboratory ID: 2121248003				Sampled: 03/17/05 12:15 Received: 03/17/05 13:37					
Sample ID: Solary Comp				Matrix: Water Results reported on As Received Basis					
Total Suspended Solids	130	mg/L	3.3	EPA 160.2	WCDE12787		03/18/05 14:55	PA	E83509
Ammonia, as N	0.016	mg/L	0.0090	EPA 350.1	AUTO13063		03/21/05 14:14	JL	E96080
Total Kjeldahl Nitrogen	2.1	mg/L	0.045	EPA 351.2	AUTO13085	03/24/05 10:00	03/28/05 15:29	SMB	E96080
Total Nitrogen	2.6	mg/L	0.048	EPA 351.2	CALC4912		03/29/05 11:28	DH	E96080
Nitrate/Nitrite as N	0.49	mg/L	0.0075	EPA 353.2	AUTO13074		03/24/05 11:17	SMB	E96080
Total Phosphorus as P	0.67	mg/L	0.0012	EPA 365.1	AUTO13099	03/29/05 11:00	03/29/05 16:16	JL	E96080
Laboratory ID: 2121248004				Sampled: 03/17/05 12:15 Received: 03/17/05 13:37					
Sample ID: Solary Grab				Matrix: Water Results reported on As Received Basis					
BOD5	2.1	mg/L	2.0	EPA 405.1	WCDE12785		03/18/05 9:00	PA	E83509
Fecal Coliform	1000	CFU/100mL	100	SM9222 D	WCDE12794		03/17/05 13:45	RM	E83509
Laboratory ID: 2121248005				Sampled: 03/17/05 12:35 Received: 03/17/05 13:37					
Sample ID: Gee Comp				Matrix: Water Results reported on As Received Basis					
Total Suspended Solids	28	mg/L	0.8	EPA 160.2	WCDE12787		03/18/05 14:55	PA	E83509
Ammonia, as N	0.047	mg/L	0.0090	EPA 350.1	AUTO13063		03/21/05 14:14	JL	E96080
Total Kjeldahl Nitrogen	1.4	mg/L	0.045	EPA 351.2	AUTO13085	03/24/05 10:00	03/28/05 15:29	SMB	E96080
Total Nitrogen	1.7	mg/L	0.048	EPA 351.2	CALC4912		03/29/05 11:28	DH	E96080
Nitrate/Nitrite as N	0.25	mg/L	0.0075	EPA 353.2	AUTO13074		03/24/05 11:17	SMB	E96080
Total Phosphorus as P	0.23	mg/L	0.0012	EPA 365.1	AUTO13099	03/29/05 11:00	03/29/05 16:16	JL	E96080
Laboratory ID: 2121248006				Sampled: 03/17/05 12:35 Received: 03/17/05 13:37					
Sample ID: Gee Grab				Matrix: Water Results reported on As Received Basis					
BOD5	2.0 U	mg/L	2.0	EPA 405.1	WCDE12785		03/18/05 9:00	PA	E83509
Fecal Coliform	830	CFU/100mL	10	SM9222 D	WCDE12794		03/17/05 13:45	RM	E83509

HARBOR BRANCH ENVIRONMENTAL LABORATORIES, INC.

5600 U.S. 1 North, Fort Pierce FL 34946
Phone: (772) 465-2400, Ext. 285 Fax: (772) 467-1584

CERTIFICATE OF ANALYSIS

[2121248]

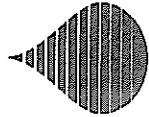
Client: Seminole County

Workorder ID: Lake Jesup SW

Parameter	Result ¹	Units	Reporting Limit	Method	Laboratory Batch	Prep Date/Time	Analyzed Date/Time	Analyst	Lab ID
Laboratory ID: 2121248007				Sampled: 03/17/05 12:50 Received: 03/17/05 13:37					
Sample ID: Soldier Comp				Matrix: Water Results reported on As Received Basis					
Total Suspended Solids	65	mg/L	2.0	EPA 160.2	WCDE12787		03/18/05 14:55	PA	E83509
Ammonia, as N	0.060	mg/L	0.0090	EPA 350.1	AUTO13063		03/21/05 14:14	JL	E96080
Total Kjeldahl Nitrogen	1.4	mg/L	0.045	EPA 351.2	AUTO13085	03/24/05 10:00	03/28/05 15:29	SMB	E96080
Total Nitrogen	1.6	mg/L	0.048	EPA 351.2	CALC4912		03/29/05 11:28	DH	E96080
Nitrate/Nitrite as N	0.19	mg/L	0.0075	EPA 353.2	AUTO13075		03/24/05 14:28	SMB	E96080
Total Phosphorus as P	0.32	mg/L	0.0012	EPA 365.1	AUTO13099	03/29/05 11:00	03/29/05 16:16	JL	E96080
Laboratory ID: 2121248008				Sampled: 03/17/05 12:50 Received: 03/17/05 13:37					
Sample ID: Soldier Grab				Matrix: Water Results reported on As Received Basis					
BOD5	2.6	mg/L	2.0	EPA 405.1	WCDE12785		03/18/05 9:00	PA	E83509
Fecal Coliform	4000	CFU/100mL	100	SM9222 D	WCDE12794		03/17/05 13:45	RM	E83509

¹Result Qualifiers: U = Not Detected

A Statement of Estimated Uncertainty is available upon request



**HARBOR BRANCH
ENVIRONMENTAL
LABORATORIES, INC.**
5600 US 1 North, Fort Pierce, FL 34946
Phone (772) 465-2400, Ext. 285 Fax: (772) 467-4584

Chain-of-Custody
and
Agreement to Perform Services

USE BALL POINT PEN
PRESS HARD
COMPLETELY FILL OUT
ALL NON GREYED AREAS
PRINT LEGIBLY

Laboratory not responsible for omitted information
FDOH # E96080 FDOH # E85370
5600 U.S. 1 North 307 Coolidge Avenue
Fort Pierce, FL 34946 Lehigh Acres, FL 33936
FDOH # E83509 FDOH # E84418
255 Enterprise Rd., Suite 1 2514 Osawaw Blvd.
DeLtona, FL 32725 Spring Hill, FL 34607

Company: Seamole Co.
Address: _____

Zip: _____

Phone: _____

Fax: _____

Client Contact: _____

Project Name: Lake Setup

Sampled By: Wen Waters

e-mail: _____

Standard Laboratory
Turn Around Time

Or

Rush in _____ Business Days
Requires Laboratory Approval

Method(s) of
Shipment: _____



For Lab Use Only

Temperature Checked Y N
Custody Seals Intact Y N
pH Checked Y N

LAB #

PRESERVATIVE

ANALYSES REQUESTED

Preservation Key

H=Hydrochloric Acid P=Phosphoric Acid
N=Nitric Acid ST=Sodium
S=Sulfuric Acid Thiosulfate
SH=Sodium Hydroxide U=Unpreserved

COMMENTS

SAMPLE DESCRIPTION

As Will Appear On Report

LAB ID
COLLECTION DATE TIME
Containers
MATRIX**
Sample Type

	12/17	12:00	2	C	Howell
	12/17	12:00	2	G	
	12/17	12:00	2	G	Solary
	12/17	12:00	2	G	
	12/17	12:00	2	G	Gee
	12/17	12:00	2	G	Soldier
	12/17	12:00	2	G	to white

* Sample Type: G=Grab C=Composite

** Matrix: S=Solid SL=Sludge DW=Drinking Water GW=Ground Water SW=Surface Water WW=Wastewater M=Marine

Report Page

RELINQUISHED BY
DATE/TIME

RELINQUISHED BY
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DATE/TIME

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DATE/TIME

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DATE/TIME

RECEIVED FOR HBEL CUSTODY BY
DATE/TIME

Distribution: WHITE with REPORT; YELLOW for FILE; PINK to CLIENT; GOLD for SAMPLER

CHAIN PAGE _____ of _____

LABORATORY RESULTS

SAMPLE EVENT NO. 9

April 7, 2005

STATIONS SAMPLED:

GEE CREEK
HOWELL CREEK
SIX MILE CREEK
SOLARY CANAL
SOLDIER CREEK

**HARBOR BRANCH
ENVIRONMENTAL
LABORATORIES, INC.**

5600 U.S. 1 North, Fort Pierce FL 34946
Phone: (772) 465-2400, Ext. 285 Fax: (772) 467-1584

Date issued: April 13, 2005

To: Gloria Eby
Seminole County
520 W Lake Mary Blvd, 200
Sanford, FL 32773

Client: Seminole County

Workorder ID: Lake Jesup

[2121445]

Received: 4/08/05 11:45

Dear Gloria Eby;

Analytical results presented in this report have been reviewed for compliance with the HARBOR BRANCH Environmental Laboratories Inc.'s (HBEL) Quality Systems Manual and have been determined to meet applicable Method guidelines and Standards referenced in the July 2002 National Environmental Laboratory Accreditation Program (NELAP) Quality Manual unless otherwise noted. The Analytical Results within these report pages reflect the values obtained from tests performed on Samples As Received by the laboratory unless indicated differently.

FDOH Safe Drinking Water Act, Clean Water Act and RCRA Certification #'s:

E96080, E83509, E85370, E84418

Questions regarding this report should be directed to the Report Signatory at (772) 465-2400, Ext. 285 referencing the HBEL Workorder ID [Number].

Respectfully submitted,

Cindy Cromer
Technical Director or Designee

Note: This report is not to be copied, except in full, without the expressed written consent of the HARBOR BRANCH Environmental Laboratories, Inc.

5600 US 1 North
Fort Pierce, FL 34946
FDOH # E96080

255 Enterprise Road, Suite 1
Deltona, FL 32725
FDOH # E83509

307 Coolidge Avenue
Lehigh Acres, FL 33936
FDOH # E85370

2514 Osawaw Boulevard
Spring Hill, FL 34607
FDOH # E84418

Printed: 4/13/05



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ENVIRONMENTAL
LABORATORIES, INC.**

5600 U.S. 1 North, Fort Pierce FL 34946
Phone: (772) 465-2400, Ext. 285 Fax: (772) 467-1584

Quality Control Summary

Client: Seminole County

Workorder ID: Lake Jesup

[2121445]

Received: 4/08/05 11:45

MB=Method Blank LCS=Laboratory Control Sample LCSD=Laboratory Control Sample Duplicate MS=Matrix Spike MSD=Matrix Spike Duplicate DUP=Sample Duplicate

HBEL Sample

Method Narratives (If Applicable)

<u>Number</u>	<u>Sample ID</u>	<u>Analytical Method</u>	<u>Description</u>
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Quality Control Summary

<u>Method</u>	<u>HBEL Batch</u>	<u>Analyte</u>	<u>Analytical Issue</u>
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HARBOR BRANCH ENVIRONMENTAL LABORATORIES, INC.

5600 U.S. 1 North, Fort Pierce, FL 34946
Phone: (772) 465-2400, Ext. 285 Fax: (772) 467-1584

CERTIFICATE OF ANALYSIS

[2121445]

Client: Seminole County

Workorder ID: Lake Jesup

Parameter	Qualifier	Result ¹	Units	Reporting Limit	Method	Laboratory Batch	Prep Date/Time	Analyzed Date/Time	Analyst	Lab ID
Laboratory ID: 2121445001 Sample ID: Howell Grab						Sampled: 04/08/05 10:20 Received: 04/08/05 11:45 Matrix: Water Results reported on Wet Weight Basis				
BOD5		2.0 U	mg/L	2.0	EPA 405.1	WCDE12869		04/8/05 12:15	PA	E83509
Fecal Coliform	B	120	CFU/100mL	10	SM9222 D	WCDE12872		04/8/05 13:55	RM	E83509
Laboratory ID: 2121445002 Sample ID: Solarly Grab						Sampled: 04/08/05 10:35 Received: 04/08/05 11:45 Matrix: Water Results reported on Wet Weight Basis				
BOD5		2.0 U	mg/L	2.0	EPA 405.1	WCDE12869		04/8/05 12:15	PA	E83509
Fecal Coliform	B	780	CFU/100mL	10	SM9222 D	WCDE12872		04/8/05 13:55	RM	E83509
Laboratory ID: 2121445003 Sample ID: Gee Grab						Sampled: 04/08/05 10:50 Received: 04/08/05 11:45 Matrix: Water Results reported on Wet Weight Basis				
BOD5		2.0 U	mg/L	2.0	EPA 405.1	WCDE12869		04/8/05 12:15	PA	E83509
Fecal Coliform		430	CFU/100mL	10	SM9222 D	WCDE12872		04/8/05 13:55	RM	E83509
Laboratory ID: 2121445004 Sample ID: Soldier Grab						Sampled: 04/08/05 11:00 Received: 04/08/05 11:45 Matrix: Water Results reported on Wet Weight Basis				
BOD5		2.0 U	mg/L	2.0	EPA 405.1	WCDE12869		04/8/05 12:15	PA	E83509
Fecal Coliform		400	CFU/100mL	10	SM9222 D	WCDE12872		04/8/05 13:55	RM	E83509
Laboratory ID: 2121445005 Sample ID: 6 Mile Grab						Sampled: 04/08/05 11:10 Received: 04/08/05 11:45 Matrix: Water Results reported on Wet Weight Basis				
BOD5		2.3	mg/L	2.0	EPA 405.1	WCDE12869		04/8/05 12:15	PA	E83509
Fecal Coliform	B	760	CFU/100mL	10	SM9222 D	WCDE12872		04/8/05 13:55	RM	E83509

¹Result Qualifiers: U = Not Detected I = Analyte detected between the Laboratory Method Detection Limit and Laboratory Reporting Limit
Applicable Florida Department of Environmental Protection Qualifiers defined below. Statement of Estimated Uncertainty available upon request.

B Results based upon colony counts outside of the acceptable range

**HARBOR BRANCH
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LABORATORIES, INC.**

5600 U.S. 1 North, Fort Pierce, FL 34946
Phone: (772) 465-2400, Ext. 285 Fax: (772) 467-1584

Date issued: April 25, 2005

To: Gloria Eby
Seminole County
520 W Lake Mary Blvd, 200
Sanford, FL 32773

Client: Seminole County

Workorder ID: Lake Jesup

[2121455]

Received: 4/10/05 11:30

Dear Gloria Eby;

Analytical results presented in this report have been reviewed for compliance with the HARBOR BRANCH Environmental Laboratories Inc.'s (HBEL) Quality Systems Manual and have been determined to meet applicable Method guidelines and Standards referenced in the July 2002 National Environmental Laboratory Accreditation Program (NELAP) Quality Manual unless otherwise noted. The Analytical Results within these report pages reflect the values obtained from tests performed on Samples As Received by the laboratory unless indicated differently.

FDOH Safe Drinking Water Act, Clean Water Act and RCRA Certification #'s:

E96080, E83509, E85370, E84418

Questions regarding this report should be directed to the Report Signatory at (772) 465-2400, Ext. 285 referencing the HBEL Workorder ID [Number].

Respectfully submitted,

Cindy Cromer
Technical Director or Designee

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5600 US 1 North
Fort Pierce, FL 34946
FDOH # E96080

255 Enterprise Road, Suite 1
Deltona, FL 32725
FDOH # E83509



307 Coolidge Avenue
Lehigh Acres, FL 33936
FDOH # E85370

2514 Osawaw Boulevard
Spring Hill, FL 34607
FDOH # E84418

HARBOR BRANCH ENVIRONMENTAL LABORATORIES, INC.

5600 U.S. 1 North, Fort Pierce, FL 34946
Phone: (772) 465-2400, Ext. 285 Fax: (772) 467-1584

Quality Control Summary

Client: Seminole County

Workorder ID: Lake Jesup

[2121455]

Received: 4/10/05 11:30

MB=Method Blank LCS=Laboratory Control Sample LCSD=Laboratory Control Sample Duplicate MS=Matrix Spike MSD=Matrix Spike Duplicate DUP=Sample Duplicate

HBEL Sample

Method Narratives (If Applicable)

Number	Sample ID	Analytical Method	Description
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Quality Control Summary

Method	HBEL Batch	Analyte
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Analytical Issue

Nitrate/Nitrite

AUTO13116

2121455005 Nitrate/Nitrite as N

Accuracy - Outside acceptance limits in the MS.

Above due to matrix effects. Accuracy/Precision demonstrated with other QC samples.

HARBOR BRANCH ENVIRONMENTAL LABORATORIES, INC.

5600 U.S. 1 North, Fort Pierce, FL 34946
Phone: (772) 465-2400, Ext. 285 Fax: (772) 467-1584

CERTIFICATE OF ANALYSIS

[2121455]

Client: Seminole County

Workorder ID: Lake Jesup

Parameter	Qualifier	Result ¹	Units	Reporting Limit	Method	Laboratory Batch	Prep Date/Time	Analyzed Date/Time	Analyst	Lab ID
Laboratory ID: 2121455001 Sample ID: Howell Comp						Sampled: 04/10/05 9:00 Received: 04/10/05 11:30 Matrix: Water Results reported on Wet Weight Basis				
Total Suspended Solids		12	mg/L	0.8	EPA 160.2	WCDE12887		04/13/05 9:10	PA	E83509
Ammonia, as N		0.059	mg/L	0.0090	EPA 350.1	AUTO13124		04/18/05 15:14	JL	E96080
Total Kjeldahl Nitrogen		1.1	mg/L	0.045	EPA 351.2	AUTO13126	04/14/05 12:00	04/15/05 14:40	SMB	E96080
Total Nitrogen		1.1	mg/L	0.048	EPA 351.2	CALC4925		04/18/05 15:07	DH	E96080
Nitrate/Nitrite as N		0.0075 U	mg/L	0.0075	EPA 353.2	AUTO13116		04/14/05 16:50	SMB	E96080
Total Phosphorus as P		0.12	mg/L	0.0012	EPA 365.1	AUTO13141	04/19/05 10:00	04/19/05 17:01	JL	E96080
Laboratory ID: 2121455002 Sample ID: Solarly Comp						Sampled: 04/10/05 9:30 Received: 04/10/05 11:30 Matrix: Water Results reported on Wet Weight Basis				
Total Suspended Solids		47	mg/L	2.0	EPA 160.2	WCDE12884		04/12/05 17:15	PA	E83509
Ammonia, as N		0.035	mg/L	0.0090	EPA 350.1	AUTO13124		04/18/05 15:14	JL	E96080
Total Kjeldahl Nitrogen		1.8	mg/L	0.045	EPA 351.2	AUTO13126	04/14/05 12:00	04/15/05 14:40	SMB	E96080
Total Nitrogen		2.2	mg/L	0.048	EPA 351.2	CALC4925		04/18/05 15:07	DH	E96080
Nitrate/Nitrite as N		0.34	mg/L	0.0075	EPA 353.2	AUTO13116		04/14/05 16:50	SMB	E96080
Total Phosphorus as P		0.32	mg/L	0.0012	EPA 365.1	AUTO13141	04/19/05 10:00	04/19/05 17:01	JL	E96080
Laboratory ID: 2121455003 Sample ID: Gee Comp						Sampled: 04/10/05 10:10 Received: 04/10/05 11:30 Matrix: Water Results reported on Wet Weight Basis				
Total Suspended Solids		9.8	mg/L	0.5	EPA 160.2	WCDE12887		04/13/05 9:10	PA	E83509
Ammonia, as N		0.057	mg/L	0.0090	EPA 350.1	AUTO13124		04/18/05 15:14	JL	E96080
Total Kjeldahl Nitrogen		1.0	mg/L	0.045	EPA 351.2	AUTO13126	04/14/05 12:00	04/15/05 14:40	SMB	E96080
Total Nitrogen		1.3	mg/L	0.048	EPA 351.2	CALC4925		04/18/05 15:07	DH	E96080
Nitrate/Nitrite as N		0.26	mg/L	0.0075	EPA 353.2	AUTO13116		04/14/05 16:50	SMB	E96080
Total Phosphorus as P		0.14	mg/L	0.0012	EPA 365.1	AUTO13141	04/19/05 10:00	04/19/05 17:01	JL	E96080
Laboratory ID: 2121455004 Sample ID: Soldiers Comp						Sampled: 04/10/05 10:30 Received: 04/10/05 11:30 Matrix: Water Results reported on Wet Weight Basis				
Total Suspended Solids		55	mg/L	1.0	EPA 160.2	WCDE12887		04/13/05 9:10	PA	E83509
Ammonia, as N		0.0090 U	mg/L	0.0090	EPA 350.1	AUTO13124		04/18/05 15:14	JL	E96080
Total Kjeldahl Nitrogen		1.7	mg/L	0.045	EPA 351.2	AUTO13126	04/14/05 12:00	04/15/05 14:40	SMB	E96080
Total Nitrogen		1.9	mg/L	0.048	EPA 351.2	CALC4925		04/18/05 15:07	DH	E96080
Nitrate/Nitrite as N		0.21	mg/L	0.0075	EPA 353.2	AUTO13116		04/14/05 16:50	SMB	E96080
Total Phosphorus as P		0.33	mg/L	0.0012	EPA 365.1	AUTO13141	04/19/05 10:00	04/19/05 17:01	JL	E96080
Laboratory ID: 2121455005 Sample ID: 6 Mile Comp						Sampled: 04/10/05 11:00 Received: 04/10/05 11:30 Matrix: Water Results reported on Wet Weight Basis				
Total Suspended Solids		59	mg/L	2.0	EPA 160.2	WCDE12887		04/13/05 9:10	PA	E83509
Ammonia, as N		0.12	mg/L	0.0090	EPA 350.1	AUTO13124		04/18/05 15:14	JL	E96080
Total Kjeldahl Nitrogen		2.3	mg/L	0.045	EPA 351.2	AUTO13126	04/14/05 12:00	04/15/05 14:40	SMB	E96080
Total Nitrogen		2.5	mg/L	0.048	EPA 351.2	CALC4925		04/18/05 15:07	DH	E96080
Nitrate/Nitrite as N		0.22	mg/L	0.0075	EPA 353.2	AUTO13116		04/14/05 16:50	SMB	E96080
Total Phosphorus as P		0.32	mg/L	0.0012	EPA 365.1	AUTO13141	04/19/05 10:00	04/19/05 17:01	JL	E96080

5600 US 1 North
Fort Pierce, FL 34946
FDOH # E96080

255 Enterprise Road, Suite 1
Deltona, FL 32725
FDOH # E83509

307 Coolidge Avenue
Lehigh Acres, FL 33936
FDOH # E85370

2514 Osawaw Boulevard
Spring Hill, FL 34607
FDOH # E84418



Printed: 4/25/05

**HARBOR BRANCH
ENVIRONMENTAL
LABORATORIES, INC.**

5600 U.S. 1 North, Fort Pierce, FL 34946
Phone: (772) 465-2400, Ext. 285 Fax: (772) 467-1584

CERTIFICATE OF ANALYSIS

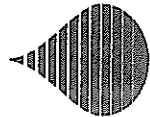
[2121455]

Client: Seminole County

Workorder ID: Lake Jesup

Parameter	Qualifier	Result ¹	Units	Reporting Limit	Method	Laboratory Batch	Prep Date/Time	Analyzed Date/Time	Analyst	Lab ID
-----------	-----------	---------------------	-------	--------------------	--------	---------------------	-------------------	-----------------------	---------	-----------

¹Result Qualifiers: U = Not Detected I = Analyte detected between the Laboratory Method Detection Limit and Laboratory Reporting Limit
Applicable Florida Department of Environmental Protection Qualifiers defined below. Statement of Estimated Uncertainty available upon request.



**HARBOR BRANCH
ENVIRONMENTAL
LABORATORIES, INC.**
5600 US 1 North, Fort Pierce, FL 34946
Phone: (772) 465-2400, Ext. 285 Fax: (772) 467-1584

Chain-of-Custody
and
Agreement to Perform Services

USE BALL POINT PEN
PRESS HARD
COMPLETELY FILL OUT
ALL NON GREYED AREAS
PRINT LEGIBLY

Laboratory not responsible for omitted information
____ FDOH # E86080 ____ FDOH # E85370
5600 U.S. 1 North 307 Coolidge Avenue
Fort Pierce, FL 34946 Lehigh Acres, FL 33936

Method(s) of
Shipment: _____

____ FDOH # E83509 ____ FDOH # E84418
255 Enterprise Rd., Suite 1 2514 Osawaw Blvd.
Deltona, FL 32725 Spring Hill, FL 34607

Company: Seaville Co
Address: _____
Phone: _____ Zip: _____
Fax: _____

Client Contact: _____
Project Name: Lake Jesup
Sampled By: Wes Winters

e-mail: _____
Standard Laboratory
Turn Around Time
Or
Rush in _____ Business Days
Requires Laboratory Approval

Temperature Checked Y N		Custody Seals Intact Y N		pH Checked Y N		LAB #	
PRESERVATIVE						LAB #	
ANALYSES REQUESTED						PRESERVATION KEY	
755 1/10/10 1/10/10 1/10/10 1/10/10 1/10/10						H=Hydrochloric Acid N=Nitric Acid S=Sulfuric Acid SH=Sodium Hydroxide	
						P=Phosphoric Acid ST=Sodium Thiosulfate	
						U=Unpreserved	
COMMENTS							

* Sample Type: G=Grab C=Composite		** Matrix: S=Solid SL=Sludge DW=Drinking Water GW=Ground Water SW=Surface Water WW=Wastewater M=Marine	
RELINQUISHED BY	RELINQUISHED BY	DATE/TIME	DATE/TIME
RECEIVED BY	RECEIVED BY	DATE/TIME	DATE/TIME
DATE/TIME	DATE/TIME	DATE/TIME	DATE/TIME

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LABORATORY RESULTS

SAMPLE EVENT NO. 10

April 30, 2005

STATIONS SAMPLED:

HOWELL CREEK
SOLARY CANAL

**HARBOR BRANCH
ENVIRONMENTAL
LABORATORIES, INC.**

5600 U.S. 1 North, Fort Pierce FL 34946
Phone: (772) 465-2400, Ext. 285 Fax: (772) 467-1584

Date issued: May 16, 2005

To: Gloria Eby
Seminole County
520 W Lake Mary Blvd, 200
Sanford, FL 32773

Client: Seminole County

Workorder ID: Lake Jesup

[2121648]

Received: 5/02/05 13:00

Dear Gloria Eby;

Analytical results presented in this report have been reviewed for compliance with the HARBOR BRANCH Environmental Laboratories Inc.'s (HBEL) Quality Systems Manual and have been determined to meet applicable Method guidelines and Standards referenced in the July 2002 National Environmental Laboratory Accreditation Program (NELAP) Quality Manual unless otherwise noted. The Analytical Results within these report pages reflect the values obtained from tests performed on Samples As Received by the laboratory unless indicated differently.

FDOH Safe Drinking Water Act, Clean Water Act and RCRA Certification #'s:

E96080, E83509, E85370, E84418

Questions regarding this report should be directed to the Report Signatory at (772) 465-2400, Ext. 285 referencing the HBEL Workorder ID [Number].

Respectfully submitted,

Cindy Cromer
Technical Director or Designee

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Deltona, FL 32725
FDOH # E83509



307 Coolidge Avenue
Lehigh Acres, FL 33936
FDOH # E85370

2514 Osawaw Boulevard
Spring Hill, FL 34607
FDOH # E84418

**HARBOR BRANCH
ENVIRONMENTAL
LABORATORIES, INC.**

5600 U.S. 1 North, Fort Pierce, FL 34946
Phone: (772) 465-2400, Ext. 285 Fax: (772) 467-1584

Quality Control Summary

Client: Seminole County

Workorder ID: Lake Jesup

[2121648]

Received: 5/02/05 13:00

MB=Method Blank LCS=Laboratory Control Sample LCSD=Laboratory Control Sample Duplicate MS=Matrix Spike MSD=Matrix Spike Duplicate DUP=Sample Duplicate

HBEL Sample

Method Narratives (If Applicable)

<u>Number</u>	<u>Sample ID</u>	<u>Analytical Method</u>	<u>Description</u>
---------------	------------------	--------------------------	--------------------

Quality Control Summary

<u>Method</u>	<u>HBEL Batch</u>	<u>Analyte</u>	<u>Analytical Issue</u>
---------------	-------------------	----------------	-------------------------

HARBOR BRANCH ENVIRONMENTAL LABORATORIES, INC.

5600 U.S. 1 North, Fort Pierce FL 34946
Phone: (772) 465-2400, Ext. 285 Fax: (772) 467-1584

CERTIFICATE OF ANALYSIS

[2121648]

Client: Seminole County

Workorder ID: Lake Jesup

Parameter	Qualifier	Result ¹	Units	Reporting Limit	Method	Laboratory Batch	Prep Date/Time	Analyzed Date/Time	Analyst	Lab ID
Laboratory ID: 2121648001 Sample ID: Howell Comp						Sampled: 05/02/05 11:20 Received: 05/02/05 13:00 Matrix: Water Results reported on Wet Weight Basis				
Total Suspended Solids		9.9	mg/L	0.5	EPA 160.2	WCDE12992		05/4/05 15:55	PA	E83509
Ammonia, as N		0.059	mg/L	0.0090	EPA 350.1	AUTO13187		05/9/05 13:53	JL	E96080
Total Kjeldahl Nitrogen		0.76	mg/L	0.045	EPA 351.2	AUTO13206	05/10/05 12:00	05/11/05 10:46	SMB	E96080
Total Nitrogen		1.0	mg/L	0.048	EPA 351.2	CALC4941		05/13/05 10:29	DH	E96080
Nitrate/Nitrite as N		0.28	mg/L	0.0075	EPA 353.2	AUTO13191		05/10/05 17:10	SMB	E96080
Total Phosphorus as P		0.12	mg/L	0.0012	EPA 365.1	AUTO13200	05/10/05 11:20	05/10/05 14:13	JL	E96080
Laboratory ID: 2121648002 Sample ID: Howell Grab						Sampled: 05/02/05 11:25 Received: 05/02/05 13:00 Matrix: Water Results reported on Wet Weight Basis				
BOD5		2.0 U	mg/L	2.0	EPA 405.1	WCDE12986		05/4/05 9:30	PA	E83509
Fecal Coliform		420	CFU/100mL	10	SM9222 D	WCDE12985		05/2/05 13:45	RM	E83509
Laboratory ID: 2121648003 Sample ID: Solary Comp						Sampled: 05/02/05 12:00 Received: 05/02/05 13:00 Matrix: Water Results reported on Wet Weight Basis				
Total Suspended Solids		190	mg/L	2.5	EPA 160.2	WCDE12992		05/4/05 15:55	PA	E83509
Ammonia, as N		0.068	mg/L	0.0090	EPA 350.1	AUTO13187		05/9/05 13:53	JL	E96080
Total Kjeldahl Nitrogen		3.4	mg/L	0.45	EPA 351.2	AUTO13206	05/10/05 12:00	05/11/05 11:19	SMB	E96080
Total Nitrogen		3.8	mg/L	0.048	EPA 351.2	CALC4941		05/13/05 10:29	DH	E96080
Nitrate/Nitrite as N		0.38	mg/L	0.0075	EPA 353.2	AUTO13191		05/10/05 17:10	SMB	E96080
Total Phosphorus as P		0.78	mg/L	0.0012	EPA 365.1	AUTO13200	05/10/05 11:20	05/10/05 14:13	JL	E96080
Laboratory ID: 2121648004 Sample ID: Solary Grab						Sampled: 05/02/05 12:05 Received: 05/02/05 13:00 Matrix: Water Results reported on Wet Weight Basis				
BOD5		2.0 U	mg/L	2.0	EPA 405.1	WCDE12986		05/4/05 9:30	PA	E83509
Fecal Coliform		330	CFU/100mL	10	SM9222 D	WCDE12985		05/2/05 13:45	RM	E83509

¹Result Qualifiers: U = Not Detected I = Analyte detected between the Laboratory Method Detection Limit and Laboratory Reporting Limit
Applicable Florida Department of Environmental Protection Qualifiers defined below. Statement of Estimated Uncertainty available upon request.



Chain-of-Custody

and

Agreement to Perform Services

Method(s) of

Shipment:

Company:

Address:

Zip:

Phone:

Fax:

Client Contact:

Project Name:

Sampled By:

SAMPLE DESCRIPTION

As Will Appear On Report

LAB ID	COLLECTION		Sample Type*	MATRIX**	# Containers	SAMPLE DESCRIPTION As Will Appear On Report
	DATE	TIME				
	4/2	1120	C	W	2	Hotchk
	4/2	1125	C	W	2	
	5/2	1200	C	W	2	Solvent
	5/2	1202	C	W	2	
	5/2		C	W	2	Geo
	5/2		C	W	2	
	5/2		C	W	2	Solvent
	5/2		C	W	2	Geo

* Sample Type: G=Grab C=Composite

** Matrix: S=Solid SL=Sludge DW=Drinking Water GW=Ground Water SW=Surface Water WW=Wastewater M=Marine

RELINQUISHED BY	RELINQUISHED BY
DATE/TIME	DATE/TIME
RECEIVED BY	RECEIVED FOR HBEL CUSTODY BY
DATE/TIME	DATE/TIME

distribution: WHITE with REPORT; YELLOW for FILE; PINK to CLIENT; GOLD for SAMPLER

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Custody Seals

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PRESERVATIVE

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ANALYSES REQUESTED

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Preservation Key

H=Hydrochloric Acid
P=Phosphoric Acid

N=Nitric Acid
ST= Sodium

S=Sulfuric Acid

Chemical Hydrolysis

nasal cavity = 0

COMMENTS

LABORATORY RESULTS

SAMPLE EVENT NO. 11

May 4, 2005

STATIONS SAMPLED:

GEE CREEK
SOLDIER CREEK

**HARBOR BRANCH
ENVIRONMENTAL
LABORATORIES, INC.**

5600 U.S. 1 North, Fort Pierce FL 34946
Phone: (772) 465-2400, Ext. 285 Fax: (772) 467-1584

Date issued: May 13, 2005

To: Gloria Eby
Seminole County
520 W Lake Mary Blvd, 200
Sanford, FL 32773

Client: Seminole County

Workorder ID: Lake Jesup

[2121710]

Received: 5/05/05 13:00

Dear Gloria Eby;

Analytical results presented in this report have been reviewed for compliance with the HARBOR BRANCH Environmental Laboratories Inc.'s (HBEL) Quality Systems Manual and have been determined to meet applicable Method guidelines and Standards referenced in the July 2002 National Environmental Laboratory Accreditation Program (NELAP) Quality Manual unless otherwise noted. The Analytical Results within these report pages reflect the values obtained from tests performed on Samples As Received by the laboratory unless indicated differently.

FDOH Safe Drinking Water Act, Clean Water Act and RCRA Certification #'s:

E96080, E83509, E85370, E84418

Questions regarding this report should be directed to the Report Signatory at (772) 465-2400, Ext. 285 referencing the HBEL Workorder ID [Number].

Respectfully submitted,

Cindy Cromer
Technical Director or Designee

Note: This report is not to be copied, except in full, without the expressed written consent of the HARBOR BRANCH Environmental Laboratories, Inc.

5600 US 1 North
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FDOH # E96080

255 Enterprise Road, Suite 1
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FDOH # E83509

307 Coolidge Avenue
Lehigh Acres, FL 33936
FDOH # E85370

2514 Osawaw Boulevard
Spring Hill, FL 34607
FDOH # E84418

Printed: 5/13/05



**HARBOR BRANCH
ENVIRONMENTAL
LABORATORIES, INC.**

5600 U.S. 1 North, Fort Pierce, FL 34946
Phone: (772) 465-2400, Ext. 285 Fax: (772) 467-1584

Quality Control Summary

Client: Seminole County

Workorder ID: Lake Jesup

[2121710]

Received: 5/05/05 13:00

MB=Method Blank LCS=Laboratory Control Sample LCSD=Laboratory Control Sample Duplicate MS=Matrix Spike MSD=Matrix Spike Duplicate DUP=Sample Duplicate

HBEL Sample

Method Narratives (If Applicable)

<u>Number</u>	<u>Sample ID</u>	<u>Analytical Method</u>	<u>Description</u>
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Quality Control Summary

<u>Method</u>	<u>HBEL Batch</u>	<u>Analyte</u>	<u>Analytical Issue</u>
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HARBOR BRANCH ENVIRONMENTAL LABORATORIES, INC.

5600 U.S. 1 North, Fort Pierce FL 34946
Phone: (772) 465-2400, Ext. 285 Fax: (772) 467-1584

CERTIFICATE OF ANALYSIS

[2121710]

Client: Seminole County

Workorder ID: Lake Jesup

Parameter	Qualifier	Result ¹	Units	Reporting Limit	Method	Laboratory Batch	Prep Date/Time	Analyzed Date/Time	Analyst	Lab ID
Laboratory ID: 2121710001 Sample ID: Soldier Comp						Sampled: 05/05/05 12:00 Received: 05/05/05 13:00 Matrix: Water Results reported on Wet Weight Basis				
Total Suspended Solids		120	mg/L	2.5	EPA 160.2	WCDE13004		05/06/05 16:15	PA	E83509
Ammonia, as N		0.046	mg/L	0.0090	EPA 350.1	AUTO13188		05/09/05 13:53	JL	E96080
Total Kjeldahl Nitrogen		2.4	mg/L	0.045	EPA 351.2	AUTO13206	05/10/05 12:00	05/11/05 11:01	SMB	E96080
Total Nitrogen		2.7	mg/L	0.048	EPA 351.2	CALC4941		05/13/05 10:29	DH	E96080
Nitrate/Nitrite as N		0.28	mg/L	0.0075	EPA 353.2	AUTO13191		05/10/05 17:10	SMB	E96080
Total Phosphorus as P		0.54	mg/L	0.0012	EPA 365.1	AUTO13200	05/10/05 11:20	05/10/05 14:13	JL	E96080

Laboratory ID: 2121710002 Sample ID: Soldier Grab						Sampled: 05/05/05 12:00 Received: 05/05/05 13:00 Matrix: Water Results reported on Wet Weight Basis				
BOD5		2.0 U	mg/L	2.0	EPA 405.1	WCDE13001		05/06/05 12:10	PA	E83509
Fecal Coliform	B	850	CFU/100mL	10	SM9222 D	WCDE12998		05/05/05 14:55	RM	E83509

Laboratory ID: 2121710003 Sample ID: GEE Comp						Sampled: 05/05/05 12:20 Received: 05/05/05 13:00 Matrix: Water Results reported on Wet Weight Basis				
Total Suspended Solids		46	mg/L	1.0	EPA 160.2	WCDE13004		05/06/05 16:15	PA	E83509
Ammonia, as N		0.087	mg/L	0.0090	EPA 350.1	AUTO13188		05/09/05 13:53	JL	E96080
Total Kjeldahl Nitrogen		1.4	mg/L	0.045	EPA 351.2	AUTO13206	05/10/05 12:00	05/11/05 11:04	SMB	E96080
Total Nitrogen		1.7	mg/L	0.048	EPA 351.2	CALC4941		05/13/05 10:29	DH	E96080
Nitrate/Nitrite as N		0.26	mg/L	0.0075	EPA 353.2	AUTO13191		05/10/05 17:10	SMB	E96080
Total Phosphorus as P		0.25	mg/L	0.0012	EPA 365.1	AUTO13200	05/10/05 11:20	05/10/05 14:13	JL	E96080

Laboratory ID: 2121710004 Sample ID: GEE Grab						Sampled: 05/05/05 12:20 Received: 05/05/05 13:00 Matrix: Water Results reported on Wet Weight Basis				
BOD5		2.0 U	mg/L	2.0	EPA 405.1	WCDE13001		05/06/05 12:10	PA	E83509
Fecal Coliform	B	830	CFU/100mL	10	SM9222 D	WCDE12998		05/05/05 14:55	RM	E83509

¹Result Qualifiers: U = Not Detected I = Analyte detected between the Laboratory Method Detection Limit and Laboratory Reporting Limit
Applicable Florida Department of Environmental Protection Qualifiers defined below. Statement of Estimated Uncertainty available upon request.

B Results based upon colony counts outside of the acceptable range

LABORATORY RESULTS

SAMPLE EVENT NO. 12

June 1, 2005

STATIONS SAMPLED:

GEE CREEK
HOWELL CREEK
SIX MILE CREEK
SOLDIER CREEK

**HARBOR BRANCH
ENVIRONMENTAL
LABORATORIES, INC.**

5600 U.S. 1 North, Fort Pierce FL 34946
Phone: (772) 465-2400, Ext. 285 Fax: (772) 467-1584

Date issued: June 9, 2005

To: Gloria Eby
Seminole County
520 W Lake Mary Blvd, 200
Sanford, FL 32773

Client: Seminole County

Workorder ID: Lake Jesup SW

[2121961]

Received: 6/02/05 10:05

Dear Gloria Eby;

Analytical results presented in this report have been reviewed for compliance with the HARBOR BRANCH Environmental Laboratories Inc.'s (HBEL) Quality Systems Manual and have been determined to meet applicable Method guidelines and Standards referenced in the July 2002 National Environmental Laboratory Accreditation Program (NELAP) Quality Manual unless otherwise noted. The Analytical Results within these report pages reflect the values obtained from tests performed on Samples As Received by the laboratory unless indicated differently.

FDOH Safe Drinking Water Act, Clean Water Act and RCRA Certification #'s:

E96080, E83509, E85370, E84418

Questions regarding this report should be directed to the Report Signatory at (772) 465-2400, Ext. 285 referencing the HBEL Workorder ID [Number].

Respectfully submitted,

Cindy Cromer
Technical Director or Designee

Note: This report is not to be copied, except in full, without the expressed written consent of the HARBOR BRANCH Environmental Laboratories, Inc.

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Fort Pierce, FL 34946
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FDOH # E83509



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Lehigh Acres, FL 33936
FDOH # E85370

2514 Osawaw Boulevard
Spring Hill, FL 34607
FDOH # E84418

**HARBOR BRANCH
ENVIRONMENTAL
LABORATORIES, INC.**

5600 U.S. 1 North, Fort Pierce FL 34946
Phone: (772) 465-2400, Ext. 285 Fax: (772) 467-1584

Quality Control Summary

Client: Seminole County

Workorder ID: Lake Jesup SW

[2121961]

Received: 6/02/05 10:05

MB=Method Blank LCS=Laboratory Control Sample LCSD=Laboratory Control Sample Duplicate MS=Matrix Spike MSD=Matrix Spike Duplicate DUP=Sample Duplicate

HBEL Sample

Method Narratives (If Applicable)

<u>Number</u>	<u>Sample ID</u>	<u>Analytical Method</u>	<u>Description</u>
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Quality Control Summary

<u>Method</u>	<u>HBEL Batch</u>	<u>Analyte</u>
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<u>Analytical Issue</u>

HARBOR BRANCH ENVIRONMENTAL LABORATORIES, INC.

5600 U.S. 1 North, Fort Pierce FL 34946
Phone: (772) 465-2400, Ext. 285 Fax: (772) 467-1584

CERTIFICATE OF ANALYSIS

[2121961]

Client: Seminole County

Workorder ID: Lake Jesup SW

Parameter	Qualifier	Result ¹	Units	Reporting Limit	Method	Laboratory Batch	Prep Date/Time	Analyzed Date/Time	Analyst	Lab ID
Laboratory ID: 2121961001 Sample ID: Howell Comp						Sampled: 06/02/05 8:20 Received: 06/02/05 10:05 Matrix: Water Results reported on Wet Weight Basis				
Total Suspended Solids		21	mg/L	1.7	EPA 160.2	WCDE13108		06/3/05 16:00	PA	E83509
Ammonia, as N		0.018	mg/L	0.0090	EPA 350.1	AUTO13267		06/7/05 15:36	JL	E96080
Total Kjeldahl Nitrogen		1.1	mg/L	0.045	EPA 351.2	AUTO13259	06/3/05 12:00	06/2/05 16:24	SMB	E96080
Total Nitrogen		1.2	mg/L	0.048	EPA 351.2	CALC4957		06/8/05 10:39	DH	E96080
Nitrate/Nitrite as N		0.15	mg/L	0.0075	EPA 353.2	AUTO13262		06/7/05 14:13	SMB	E96080
Total Phosphorus as P		0.17	mg/L	0.0012	EPA 365.1	AUTO13266	06/6/05 11:20	06/6/05 14:43	JL	E96080
Laboratory ID: 2121961002 Sample ID: Howell Grab						Sampled: 06/02/05 8:20 Received: 06/02/05 10:05 Matrix: Water Results reported on Wet Weight Basis				
BOD5		2.0 U	mg/L	2.0	EPA 405.1	WCDE13106		06/3/05 10:38	PA	E83509
Fecal Coliform		440	CFU/100mL	10	SM9222 D	WCDE13104		06/2/05 13:55	RM	E83509
Laboratory ID: 2121961003 Sample ID: GEE Comp						Sampled: 06/02/05 9:00 Received: 06/02/05 10:05 Matrix: Water Results reported on Wet Weight Basis				
Total Suspended Solids		16	mg/L	1.7	EPA 160.2	WCDE13108		06/3/05 16:00	PA	E83509
Ammonia, as N		0.028	mg/L	0.0090	EPA 350.1	AUTO13267		06/7/05 15:36	JL	E96080
Total Kjeldahl Nitrogen		1.1	mg/L	0.045	EPA 351.2	AUTO13259	06/3/05 12:00	06/2/05 16:25	SMB	E96080
Total Nitrogen		1.2	mg/L	0.048	EPA 351.2	CALC4957		06/8/05 10:39	DH	E96080
Nitrate/Nitrite as N		0.099	mg/L	0.0075	EPA 353.2	AUTO13262		06/7/05 14:14	SMB	E96080
Total Phosphorus as P		0.14	mg/L	0.0012	EPA 365.1	AUTO13266	06/6/05 11:20	06/6/05 14:43	JL	E96080
Laboratory ID: 2121961004 Sample ID: GEE Grab						Sampled: 06/02/05 9:00 Received: 06/02/05 10:05 Matrix: Water Results reported on Wet Weight Basis				
BOD5		2.0 U	mg/L	2.0	EPA 405.1	WCDE13106		06/3/05 10:38	PA	E83509
Fecal Coliform	B	980	CFU/100mL	10	SM9222 D	WCDE13104		06/2/05 13:55	RM	E83509
Laboratory ID: 2121961005 Sample ID: Soldier Comp						Sampled: 06/02/05 9:15 Received: 06/02/05 10:05 Matrix: Water Results reported on Wet Weight Basis				
Total Suspended Solids		76	mg/L	1.2	EPA 160.2	WCDE13108		06/3/05 16:00	PA	E83509
Ammonia, as N		0.019	mg/L	0.0090	EPA 350.1	AUTO13267		06/7/05 15:36	JL	E96080
Total Kjeldahl Nitrogen		1.4	mg/L	0.045	EPA 351.2	AUTO13259	06/3/05 12:00	06/2/05 16:26	SMB	E96080
Total Nitrogen		1.5	mg/L	0.048	EPA 351.2	CALC4957		06/8/05 10:39	DH	E96080
Nitrate/Nitrite as N		0.11	mg/L	0.0075	EPA 353.2	AUTO13262		06/7/05 14:15	SMB	E96080
Total Phosphorus as P		0.25	mg/L	0.0012	EPA 365.1	AUTO13266	06/6/05 11:20	06/6/05 14:43	JL	E96080
Laboratory ID: 2121961006 Sample ID: Soldier Grab						Sampled: 06/02/05 9:15 Received: 06/02/05 10:05 Matrix: Water Results reported on Wet Weight Basis				
BOD5		2.0 U	mg/L	2.0	EPA 405.1	WCDE13106		06/3/05 10:38	PA	E83509
Fecal Coliform	B	1800	CFU/100mL	100	SM9222 D	WCDE13104		06/2/05 13:55	RM	E83509

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Deltona, FL 32725
FDOH # E83509

307 Coolidge Avenue
Lehigh Acres, FL 33936
FDOH # E85370

2514 Osawaw Boulevard
Spring Hill, FL 34607
FDOH # E84418



HARBOR BRANCH ENVIRONMENTAL LABORATORIES, INC.

5600 U.S. 1 North, Fort Pierce FL 34946
Phone: (772) 465-2400, Ext. 285 Fax: (772) 467-1584

CERTIFICATE OF ANALYSIS

[2121961]

Client: Seminole County

Workorder ID: Lake Jesup SW

Parameter	Qualifier	Result ¹	Units	Reporting Limit	Method	Laboratory Batch	Prep Date/Time	Analyzed Date/Time	Analyst	Lab ID
Laboratory ID: 2121961007 Sample ID: 6 Mile Comp						Sampled: 06/02/05 9:30 Received: 06/02/05 10:05 Matrix: Water Results reported on Wet Weight Basis				
Total Suspended Solids		16	mg/L	1.0	EPA 160.2	WCDE13108		06/3/05 16:00	PA	E83509
Ammonia, as N		0.10	mg/L	0.0090	EPA 350.1	AUTO13267		06/7/05 15:36	JL	E96080
Total Kjeldahl Nitrogen		1.3	mg/L	0.045	EPA 351.2	AUTO13259	06/3/05 12:00	06/2/05 16:26	SMB	E96080
Total Nitrogen		1.4	mg/L	0.048	EPA 351.2	CALC4957		06/8/05 10:39	DH	E96080
Nitrate/Nitrite as N		0.059	mg/L	0.0075	EPA 353.2	AUTO13262		06/7/05 14:16	SMB	E96080
Total Phosphorus as P		0.14	mg/L	0.0012	EPA 365.1	AUTO13266	06/6/05 11:20	06/6/05 14:43	JL	E96080
Laboratory ID: 2121961008 Sample ID: 6 Mile Grab						Sampled: 06/02/05 9:30 Received: 06/02/05 10:05 Matrix: Water Results reported on Wet Weight Basis				
BOD5		2.0 U	mg/L	2.0	EPA 405.1	WCDE13106		06/3/05 10:38	PA	E83509
Fecal Coliform		590	CFU/100mL	10	SM9222 D	WCDE13104		06/2/05 13:55	RM	E83509

¹Result Qualifiers: U = Not Detected I = Analyte detected between the Laboratory Method Detection Limit and Laboratory Reporting Limit
Applicable Florida Department of Environmental Protection Qualifiers defined below. Statement of Estimated Uncertainty available upon request.

B Results based upon colony counts outside of the acceptable range

LABORATORY RESULTS

SAMPLE EVENT NO. 13

June 29, 2005

STATIONS SAMPLED:

GEE CREEK
HOWELL CREEK
SIX MILE CREEK
SOLARY CANAL

04-0013

**HARBOR BRANCH
ENVIRONMENTAL
LABORATORIES, INC.**

5600 U.S. 1 North, Fort Pierce FL 34946
Phone: (772) 465-2400, Ext. 285 Fax: (772) 467-1584

Date issued: July 12, 2005

To: Gloria Eby
Seminole County
520 W Lake Mary Blvd, 200
Sanford, FL 32773

Client: Seminole County
Workorder ID: Lake Jesup Stormwater
Received: 7/02/05 9:55

[2122309]

Dear Gloria Eby;

Analytical results presented in this report have been reviewed for compliance with the HARBOR BRANCH Environmental Laboratories Inc.'s (HBEL) Quality Systems Manual and have been determined to meet applicable Method guidelines and Standards referenced in the July 2003 National Environmental Laboratory Accreditation Program (NELAP) Quality Manual unless otherwise noted. The Analytical Results within these report pages reflect the values obtained from tests performed on Samples As Received by the laboratory unless indicated differently.

FDOH Safe Drinking Water Act, Clean Water Act and RCRA Certification #'s:

E96080, E83509, E85370, E84418

Questions regarding this report should be directed to the Report Signatory at (772) 465-2400, Ext. 285 referencing the HBEL Workorder ID [Number].

Respectfully submitted,

Cindy Cromer
Technical Director or Designee

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5600 US 1 North
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FDOH # E83509

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FDOH # E85370

2514 Osawaw Boulevard
Spring Hill, FL 34607
FDOH # E84418



**HARBOR BRANCH
ENVIRONMENTAL
LABORATORIES, INC.**

5600 U.S. 1 North, Fort Pierce, FL 34946
Phone: (772) 465-2400, Ext. 285 Fax: (772) 467-1584

Quality Control Summary

Client: Seminole County
Workorder ID: Lake Jesup Stormwater
Received: 7/02/05 9:55

[2122309]

MB=Method Blank LCS=Laboratory Control Sample LCSD=Laboratory Control Sample Duplicate MS=Matrix Spike MSD=Matrix Spike Duplicate DUP=Sample Duplicate

HBEL Sample

Method Narratives (If Applicable)

<u>Number</u>	<u>Sample ID</u>	<u>Analytical Method</u>	<u>Description</u>
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Quality Control Summary

Method HBEL Batch Analyte

Analytical Issue

Nitrate/Nitrite

AUTO13450

2122309007 Nitrate/Nitrite as N Accuracy - Outside acceptance limits in the MSD.

The above due to matrix effects. Accuracy demonstrated with other QC samples.

HARBOR BRANCH ENVIRONMENTAL LABORATORIES, INC.

5600 U.S. 1 North, Fort Pierce, FL 34946
Phone: (772) 465-2400, Ext. 285 Fax: (772) 467-1584

CERTIFICATE OF ANALYSIS

[2122309]

Client: Seminole County

Workorder ID: Lake Jesup Stormwater

Parameter	Qualifier	Result ¹	Units	Reporting Limit	Method	Laboratory Batch	Prep Date/Time	Analyzed Date/Time	Analyst	Lab ID
Laboratory ID: 2122309001 Sample ID: Howell comp						Sampled: 07/02/05 8:15 Received: 07/02/05 9:55 Matrix: Water Results reported on Wet Weight Basis				
Total Suspended Solids		14	mg/L	0.8	EPA 160.2	WCDE13225		07/2/05 10:45	PA	E83509
Ammonia, as N		0.049	mg/L	0.0090	EPA 350.1	AUTO13438		07/7/05 16:01	JL	E96080
Total Kjeldahl Nitrogen		1.5	mg/L	0.045	EPA 351.2	AUTO13442	07/6/05 14:00	07/7/05 11:28	SMB	E96080
Total Nitrogen		1.6	mg/L	0.048	EPA 351.2	CALC4993		07/12/05 13:26	DH	E96080
Nitrate/Nitrite as N		0.096	mg/L	0.0075	EPA 353.2	AUTO13450		07/8/05 10:46	SMB	E96080
Total Phosphorus as P		0.17	mg/L	0.0012	EPA 365.1	AUTO13436	07/6/05 14:00	07/6/05 17:17	JL	E96080
Laboratory ID: 2122309002 Sample ID: Howell grab						Sampled: 07/02/05 8:15 Received: 07/02/05 9:55 Matrix: Water Results reported on Wet Weight Basis				
BOD5		9.8	mg/L	2.0	EPA 405.1	WCDE13226		07/2/05 12:00	PA	E83509
Fecal Coliform		210	CFU/100mL	10	SM9222 D	WCDE13230		07/2/05 12:00	PA	E83509
Laboratory ID: 2122309003 Sample ID: Solary comp						Sampled: 07/02/05 8:40 Received: 07/02/05 9:55 Matrix: Water Results reported on Wet Weight Basis				
Total Suspended Solids		23	mg/L	0.8	EPA 160.2	WCDE13225		07/2/05 10:45	PA	E83509
Ammonia, as N		0.049	mg/L	0.0090	EPA 350.1	AUTO13438		07/7/05 16:01	JL	E96080
Total Kjeldahl Nitrogen		1.9	mg/L	0.045	EPA 351.2	AUTO13442	07/6/05 14:00	07/7/05 11:29	SMB	E96080
Total Nitrogen		2.2	mg/L	0.048	EPA 351.2	CALC4993		07/12/05 13:26	DH	E96080
Nitrate/Nitrite as N		0.34	mg/L	0.0075	EPA 353.2	AUTO13450		07/8/05 10:47	SMB	E96080
Total Phosphorus as P		0.36	mg/L	0.0012	EPA 365.1	AUTO13436	07/6/05 14:00	07/6/05 17:17	JL	E96080
Laboratory ID: 2122309004 Sample ID: Solary grab						Sampled: 07/02/05 8:40 Received: 07/02/05 9:55 Matrix: Water Results reported on Wet Weight Basis				
BOD5		2.0	mg/L	2.0	EPA 405.1	WCDE13226		07/2/05 12:00	PA	E83509
Fecal Coliform		200	CFU/100mL	10	SM9222 D	WCDE13230		07/2/05 12:00	PA	E83509
Laboratory ID: 2122309005 Sample ID: Gee comp						Sampled: 07/02/05 8:55 Received: 07/02/05 9:55 Matrix: Water Results reported on Wet Weight Basis				
Total Suspended Solids		62	mg/L	1.0	EPA 160.2	WCDE13233		07/6/05 12:00	PA	E83509
Ammonia, as N		0.059	mg/L	0.0090	EPA 350.1	AUTO13438		07/7/05 16:01	JL	E96080
Total Kjeldahl Nitrogen		1.5	mg/L	0.045	EPA 351.2	AUTO13442	07/6/05 14:00	07/7/05 11:30	SMB	E96080
Total Nitrogen		1.6	mg/L	0.048	EPA 351.2	CALC4993		07/12/05 13:26	DH	E96080
Nitrate/Nitrite as N		0.072	mg/L	0.0075	EPA 353.2	AUTO13450		07/8/05 10:47	SMB	E96080
Total Phosphorus as P		0.22	mg/L	0.0012	EPA 365.1	AUTO13436	07/6/05 14:00	07/6/05 17:17	JL	E96080
Laboratory ID: 2122309006 Sample ID: Gee grab						Sampled: 07/02/05 8:55 Received: 07/02/05 9:55 Matrix: Water Results reported on Wet Weight Basis				
BOD5		2.2	mg/L	2.0	EPA 405.1	WCDE13226		07/2/05 12:00	PA	E83509
Fecal Coliform	B	60	CFU/100mL	10	SM9222 D	WCDE13230		07/2/05 12:00	PA	E83509

5600 US 1 North
Fort Pierce, FL 34946
FDOH # E96080

255 Enterprise Road, Suite 1
Deltona, FL 32725
FDOH # E83509

307 Coolidge Avenue
Lehigh Acres, FL 33936
FDOH # E85370

2514 Osawaw Boulevard
Spring Hill, FL 34607
FDOH # E84418



HARBOR BRANCH ENVIRONMENTAL LABORATORIES, INC.

5600 U.S. 1 North, Fort Pierce FL 34946
Phone: (772) 465-2400, Ext. 285 Fax: (772) 467-1584

CERTIFICATE OF ANALYSIS

[2122309]

Client: Seminole County

Workorder ID: Lake Jesup Stormwater

Parameter	Qualifier	Result ¹	Units	Reporting Limit	Method	Laboratory Batch	Prep Date/Time	Analyzed Date/Time	Analyst	Lab ID
Laboratory ID: 2122309007 Sample ID: Six Mile comp						Sampled: 07/02/05 9:25 Received: 07/02/05 9:55 Matrix: Water Results reported on Wet Weight Basis				
Total Suspended Solids		220	mg/L	10	EPA 160.2	WCDE13225		07/2/05 10:45	PA	E83509
Ammonia, as N		0.23	mg/L	0.0090	EPA 350.1	AUTO13438		07/7/05 16:01	JL	E96080
Total Kjeldahl Nitrogen		6.2	mg/L	0.45	EPA 351.2	AUTO13455	07/8/05 12:00	07/8/05 16:11	SMB	E96080
Total Nitrogen		6.2	mg/L	0.048	EPA 351.2	CALC4993		07/12/05 13:26	DH	E96080
Nitrate/Nitrite as N		0.0075 U	mg/L	0.0075	EPA 353.2	AUTO13450		07/8/05 10:48	SMB	E96080
Total Phosphorus as P		0.75	mg/L	0.0012	EPA 365.1	AUTO13436	07/6/05 14:00	07/6/05 17:17	JL	E96080
Laboratory ID: 2122309008 Sample ID: Six Mile grab						Sampled: 07/02/05 9:25 Received: 07/02/05 9:55 Matrix: Water Results reported on Wet Weight Basis				
BOD5		2.0 U	mg/L	2.0	EPA 405.1	WCDE13226		07/2/05 12:00	PA	E83509
Fecal Coliform	B	1000	CFU/100mL	10	SM9222 D	WCDE13230		07/2/05 12:00	PA	E83509

¹Result Qualifiers: U = Not Detected I = Analyte detected between the Laboratory Method Detection Limit and Laboratory Reporting Limit
Applicable Florida Department of Environmental Protection Qualifiers defined below. Statement of Estimated Uncertainty available upon request.

B Results based upon colony counts outside of the acceptable range.

LABORATORY RESULTS

SAMPLE EVENT NO. 14

August 18, 2005

STATIONS SAMPLED:

GEE CREEK
HOWELL CREEK
SOLARY CANAL

**HARBOR BRANCH
ENVIRONMENTAL
LABORATORIES, INC.**

5600 U.S. 1 North, Fort Pierce FL 34946
Phone: (772) 465-2400, Ext. 285 Fax: (772) 467-1584

Date issued: September 2, 2005

To: Gloria Eby
Seminole County
520 W Lake Mary Blvd, 200
Sanford, FL 32773

Client: Seminole County
Workorder ID: Lake Jesup Stormwater
Received: 8/20/05 9:45

[2122875]

Dear Gloria Eby;

Analytical results presented in this report have been reviewed for compliance with the HARBOR BRANCH Environmental Laboratories Inc.'s (HBEL) Quality Systems Manual and have been determined to meet applicable Method guidelines and Standards referenced in the July 2003 National Environmental Laboratory Accreditation Program (NELAP) Quality Manual unless otherwise noted. The Analytical Results within these report pages reflect the values obtained from tests performed on Samples As Received by the laboratory unless indicated differently.

FDOH Safe Drinking Water Act, Clean Water Act and RCRA Certification #'s:

E96080, E83509, E85370, E84418

Questions regarding this report should be directed to the Report Signatory at (772) 465-2400, Ext. 285 referencing the HBEL Workorder ID [Number].

Respectfully submitted,

Cindy Cromer
Technical Director or Designee

Note: This report is not to be copied, except in full, without the expressed written consent of the HARBOR BRANCH Environmental Laboratories, Inc.

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Deltona, FL 32725
FDOH # E83509



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Lehigh Acres, FL 33936
FDOH # E85370

2514 Osawaw Boulevard
Spring Hill, FL 34607
FDOH # E84418

**HARBOR BRANCH
ENVIRONMENTAL
LABORATORIES, INC.**

5600 U.S. 1 North, Fort Pierce FL 34946
Phone: (772) 465-2400, Ext. 285 Fax: (772) 467-1584

Quality Control Summary

Client: Seminole County
Workorder ID: Lake Jesup Stormwater
Received: 8/20/05 9:45

[2122875]

MB=Method Blank LCS=Laboratory Control Sample LCSD=Laboratory Control Sample Duplicate MS=Matrix Spike MSD=Matrix Spike Duplicate DUP=Sample Duplicate

HBEL Sample

Method Narratives (If Applicable)

<u>Number</u>	<u>Sample ID</u>	<u>Analytical Method</u>	<u>Description</u>
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Quality Control Summary

<u>Method</u>	<u>HBEL Batch</u>	<u>Analyte</u>
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<u>Analytical Issue</u>

Nitrate/Nitrite

AUTO13699

2122875001	Nitrate/Nitrite as N	Accuracy - Outside acceptance limits in the MS.
2122875001	Nitrate/Nitrite as N	Accuracy - Outside acceptance limits in the MSD.

The above due to matrix effects. Accuracy demonstrated with other QC samples.

HARBOR BRANCH ENVIRONMENTAL LABORATORIES, INC.

5600 U.S. 1 North, Fort Pierce FL 34946
Phone: (772) 465-2400, Ext. 285 Fax: (772) 467-1584

CERTIFICATE OF ANALYSIS

[2122875]

Client: Seminole County

Workorder ID: Lake Jesup Stormwater

Parameter	Qualifier	Result	Units	Reporting Limit	Method	Laboratory Batch	Prep Date/Time	Analyzed Date/Time	Analyst	Lab ID
Laboratory ID: 2122875001 Sample ID: Howell comp						Sampled: 08/20/05 8:15 Matrix: Water		Received: 08/20/05 9:45 Results reported on Wet Weight Basis		
Total Suspended Solids		36	mg/L	1.0	EPA 160.2	WCDE13458		08/24/05 8:15	PA	E83509
Ammonia, as N		0.037	mg/L	0.0090	EPA 350.1	AUTO13698		08/23/05 15:24	JL	E96080
Total Kjeldahl Nitrogen		1.2	mg/L	0.045	EPA 351.2	AUTO13704	08/23/05 14:00	08/24/05 11:03	SMB	E96080
Total Nitrogen		1.5	mg/L	0.048	EPA 351.2	CALC5024		08/25/05 10:28	DH	E96080
Nitrate/Nitrite as N		0.25	mg/L	0.0075	EPA 353.2	AUTO13699		08/23/05 15:27	SMB	E96080
Total Phosphorus as P		0.18	mg/L	0.0012	EPA 365.1	AUTO13741	08/30/05 10:45	08/30/05 15:13	JL	E96080
Laboratory ID: 2122875002 Sample ID: Howell grab						Sampled: 08/20/05 8:15 Matrix: Water		Received: 08/20/05 9:45 Results reported on Wet Weight Basis		
BOD5		2.0 U	mg/L	2.0	EPA 405.1	WCDE13445		08/20/05 10:55	PA	E83509
Fecal Coliform	B	1500	CFU/100mL	100	SM9222 D	WCDE13450		08/20/05 11:55	PA	E83509
Laboratory ID: 2122875003 Sample ID: Solary comp						Sampled: 08/20/05 8:30 Matrix: Water		Received: 08/20/05 9:45 Results reported on Wet Weight Basis		
Total Suspended Solids		270	mg/L	5.0	EPA 160.2	WCDE13458		08/24/05 8:15	PA	E83509
Ammonia, as N		0.049	mg/L	0.0090	EPA 350.1	AUTO13698		08/23/05 15:24	JL	E96080
Total Kjeldahl Nitrogen		3.7	mg/L	0.090	EPA 351.2	AUTO13704	08/23/05 14:00	08/24/05 11:09	SMB	E96080
Total Nitrogen		4.2	mg/L	0.048	EPA 351.2	CALC5024		08/25/05 10:28	DH	E96080
Nitrate/Nitrite as N		0.48	mg/L	0.0075	EPA 353.2	AUTO13699		08/23/05 15:28	SMB	E96080
Total Phosphorus as P		0.98	mg/L	0.0012	EPA 365.1	AUTO13741	08/30/05 10:45	08/30/05 15:13	JL	E96080
Laboratory ID: 2122875004 Sample ID: Solary grab						Sampled: 08/20/05 8:30 Matrix: Water		Received: 08/20/05 9:45 Results reported on Wet Weight Basis		
BOD5		2.0 U	mg/L	2.0	EPA 405.1	WCDE13445		08/20/05 10:55	PA	E83509
Fecal Coliform	B	1200	CFU/100mL	100	SM9222 D	WCDE13450		08/20/05 11:55	PA	E83509
Laboratory ID: 2122875005 Sample ID: Gee comp						Sampled: 08/20/05 8:50 Matrix: Water		Received: 08/20/05 9:45 Results reported on Wet Weight Basis		
Total Suspended Solids		110	mg/L	1.7	EPA 160.2	WCDE13458		08/24/05 8:15	PA	E83509
Ammonia, as N		0.049	mg/L	0.0090	EPA 350.1	AUTO13698		08/23/05 15:24	JL	E96080
Total Kjeldahl Nitrogen		1.9	mg/L	0.045	EPA 351.2	AUTO13704	08/23/05 14:00	08/24/05 11:04	SMB	E96080
Total Nitrogen		2.4	mg/L	0.048	EPA 351.2	CALC5024		08/25/05 10:28	DH	E96080
Nitrate/Nitrite as N		0.51	mg/L	0.0075	EPA 353.2	AUTO13699		08/23/05 15:30	SMB	E96080
Total Phosphorus as P		0.32	mg/L	0.0012	EPA 365.1	AUTO13741	08/30/05 10:45	08/30/05 15:13	JL	E96080
Laboratory ID: 2122875006 Sample ID: Gee grab						Sampled: 08/20/05 8:50 Matrix: Water		Received: 08/20/05 9:45 Results reported on Wet Weight Basis		
BOD5		2.0 U	mg/L	2.0	EPA 405.1	WCDE13445		08/20/05 10:55	PA	E83509
Fecal Coliform		440	CFU/100mL	10	SM9222 D	WCDE13450		08/20/05 11:55	PA	E83509

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FDOH # E96080

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FDOH # E83509

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Lehigh Acres, FL 33936
FDOH # E85370

2514 Osawaw Boulevard
Spring Hill, FL 34607
FDOH # E84418



**HARBOR BRANCH
ENVIRONMENTAL
LABORATORIES, INC.**

5600 U.S. 1 North, Fort Pierce FL 34946
Phone: (772) 465-2400, Ext. 285 Fax: (772) 467-1584

CERTIFICATE OF ANALYSIS

[2122875]

Client: Seminole County

Workorder ID: Lake Jesup Stormwater

Parameter	Qualifier	Result ¹	Units	Reporting Limit	Method	Laboratory Batch	Prep Date/Time	Analyzed Date/Time	Analyst	Lab ID
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¹Result Qualifiers: U = Not Detected I = Analyte detected between the Laboratory Method Detection Limit and Laboratory Reporting Limit
Applicable Florida Department of Environmental Protection Qualifiers defined below. Statement of Estimated Uncertainty available upon request.

B Results based upon colony counts outside of the acceptable range.

LABORATORY RESULTS

SAMPLE EVENT NO. 15

August 24, 2005

STATIONS SAMPLED:

SIX MILE CREEK

**HARBOR BRANCH
ENVIRONMENTAL
LABORATORIES, INC.**

5600 U.S. 1 North, Fort Pierce, FL 34946
Phone: (772) 465-2400, Ext. 285 Fax: (772) 467-1584

Date issued: September 8, 2005

To: Gloria Eby
Seminole County
520 W Lake Mary Blvd, 200
Sanford, FL 32773

Client: Seminole County

Workorder ID: Lake Jesup

[2122934]

Received: 8/26/05 10:20

Dear Gloria Eby;

Analytical results presented in this report have been reviewed for compliance with the HARBOR BRANCH Environmental Laboratories Inc.'s (HBEL) Quality Systems Manual and have been determined to meet applicable Method guidelines and Standards referenced in the July 2003 National Environmental Laboratory Accreditation Program (NELAP) Quality Manual unless otherwise noted. The Analytical Results within these report pages reflect the values obtained from tests performed on Samples As Received by the laboratory unless indicated differently.

FDOH Safe Drinking Water Act, Clean Water Act and RCRA Certification #'s:

E96080, E83509, E85370, E84418

Questions regarding this report should be directed to the Report Signatory at (772) 465-2400, Ext. 285 referencing the HBEL Workorder ID [Number].

Respectfully submitted,

Cindy Cromer
Technical Director or Designee

Note: This report is not to be copied, except in full, without the expressed written consent of the HARBOR BRANCH Environmental Laboratories, Inc.

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FDOH # E85370

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Spring Hill, FL 34607
FDOH # E84418

**HARBOR BRANCH
ENVIRONMENTAL
LABORATORIES, INC.**

5600 U.S. 1 North, Fort Pierce FL 34946
Phone: (772) 465-2400, ext. 285 Fax: (772) 467-1584

Quality Control Summary

Client: Seminole County

Workorder ID: Lake Jesup

[2122934]

Received: 8/26/05 10:20

MB=Method Blank LCS=Laboratory Control Sample LCSD=Laboratory Control Sample Duplicate MS=Matrix Spike MSD=Matrix Spike Duplicate DUP=Sample Duplicate

HBEL Sample

Method Narratives (If Applicable)

<u>Number</u>	<u>Sample ID</u>	<u>Analytical Method</u>	<u>Description</u>
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Quality Control Summary

<u>Method</u>	<u>HBEL Batch</u>	<u>Analyte</u>	<u>Analytical Issue</u>
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HARBOR BRANCH ENVIRONMENTAL LABORATORIES, INC.

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Phone: (772) 465-2400, Ext. 285 Fax: (772) 467-1584

CERTIFICATE OF ANALYSIS

[2122934]

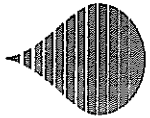
Client: Seminole County

Workorder ID: Lake Jesup

Parameter	Qualifier	Result ¹	Units	Reporting Limit	Method	Laboratory Batch	Prep Date/Time	Analyzed Date/Time	Analyst	Lab ID
Laboratory ID: 2122934001 Sample ID: 6 Mile Grab						Sampled: 08/26/05 9:50 Received: 08/26/05 10:20 Matrix: Water Results reported on Wet Weight Basis				
BOD5		2.0 U	mg/L	2.0	EPA 405.1	WCDE13478		08/26/05 10:30	PA	E83509
Fecal Coliform	B	150	CFU/100mL	10	SM9222 D	WCDE13476		08/26/05 13:20	RM	E83509
Laboratory ID: 2122934002 Sample ID: 6 Mile Comp						Sampled: 08/26/05 9:50 Received: 08/26/05 10:20 Matrix: Water Results reported on Wet Weight Basis				
Total Suspended Solids		34	mg/L	1.2	EPA 160.2	WCDE13490		08/30/05 9:30	PA	E83509
Ammonia, as N		0.049	mg/L	0.0090	EPA 350.1	AUTO13742		09/05/05 13:08	JL	E96080
Total Kjeldahl Nitrogen		1.6	mg/L	0.045	EPA 351.2	AUTO13735	08/31/05 10:00	09/1/05 10:33	SMB	E96080
Total Nitrogen		1.9	mg/L	0.048	EPA 351.2	CALC5026		09/2/05 8:38	DH	E96080
Nitrate/Nitrite as N		0.25	mg/L	0.0075	EPA 353.2	AUTO13734		09/1/05 15:39	SMB	E96080
Total Phosphorus as P		0.27	mg/L	0.0012	EPA 365.1	AUTO13741	08/30/05 10:45	08/30/05 15:13	JL	E96080

¹Result Qualifiers: U = Not Detected I = Analyte detected between the Laboratory Method Detection Limit and Laboratory Reporting Limit
Applicable Florida Department of Environmental Protection Qualifiers defined below. Statement of Estimated Uncertainty available upon request.

B Results based upon colony counts outside of the acceptable range.



**HARBOR BRANCH
ENVIRONMENTAL
LABORATORIES, INC.**
5600 US 1 North, Fort Pierce, FL 34946
Phone: (772) 465-2400, Ext. 285 Fax: (772) 467-1584

Chain-of-Custody
and
Agreement to Perform Services

Company: Seaside Co
Address: _____

Method(s) of _____
Shipment: _____

Zip: _____

Phone: _____ Fax: _____

Client Contact: _____

Project Name: Lake Jesup

Sampled By: libc

e-mail: _____
Standard Laboratory
Turn Around Time

Or
Rush in _____ Business Days
Requires Laboratory Approval

SAMPLE DESCRIPTION

As Will Appear On Report

LAB ID
COLLECTION
DATE TIME
Containers
MATRIX**
Sample Type

8/26 9:50 AM
8/26 9:50 AM
6 mile
6 mile

USE BALL POINT PEN
PRESS HARD
COMPLETELY FILL OUT
ALL NON GREYED AREAS
PRINT LEGIBLY



Laboratory not responsible for omitted information
FDOH # E96080 FDOH # E86370
5600 U.S. 1 North 307 Coolidge Avenue
Fort Pierce, FL 34946 Lehigh Acres, FL 33936
FDOH # E83509 FDOH # E84418
255 Enterprise Rd., Suite 1 2514 Osawaw Blvd.
Deltona, FL 32725 Spring Hill, FL 34607

For Lab Use Only

Temperature Checked Y N
Custody Seals Intact Y N
pH Checked Y N

LAB #

PRESERVATIVE

ANALYSES REQUESTED

Preservation Key

H=Hydrochloric Acid
N=Nitric Acid
S=Sulfuric Acid
SH=Sodium Hydroxide
P=Phosphoric Acid
ST=Sodium Thiosulfate
U=Unpreserved

COMMENTS

* Sample Type: G=Grab C=Composite ** Matrix: S=Solid SL=Sludge DW=Drinking Water GW=Ground Water SW=Surface Water WW=Wastewater M=Marine

RELINQUISHED BY	RELINQUISHED BY
DATE/TIME	DATE/TIME
RECEIVED BY	RECEIVED FOR HBEL CUSTODY BY
DATE/TIME	DATE/TIME

Distribution: WHITE with REPORT; YELLOW for FILE; PINK to CLIENT; GOLD for SAMPLER

CHAIN PAGE _____ of _____

LABORATORY RESULTS

SAMPLE EVENT NO. 16

August 30, 2005

STATIONS SAMPLED:

SOLDIER CREEK

**HARBOR BRANCH
ENVIRONMENTAL
LABORATORIES, INC.**

5600 U.S. 1 North, Fort Pierce, FL 34946
Phone: (772) 465-2400, Ext. 285 Fax: (772) 467-1584

Date issued: September 15, 2005

To: Gloria Eby
Seminole County
520 W Lake Mary Blvd, 200
Sanford, FL 32773

Client: Seminole County

Workorder ID: Lake Jesup

[2123013]

Received: 9/01/05 13:05

Dear Gloria Eby;

Analytical results presented in this report have been reviewed for compliance with the HARBOR BRANCH Environmental Laboratories Inc.'s (HBEL) Quality Systems Manual and have been determined to meet applicable Method guidelines and Standards referenced in the July 2003 National Environmental Laboratory Accreditation Program (NELAP) Quality Manual unless otherwise noted. The Analytical Results within these report pages reflect the values obtained from tests performed on Samples As Received by the laboratory unless indicated differently.

FDOH Safe Drinking Water Act, Clean Water Act and RCRA Certification #'s:

E96080, E83509, E85370, E84418

Questions regarding this report should be directed to the Report Signatory at (772) 465-2400, Ext. 285 referencing the HBEL Workorder ID [Number].

Respectfully submitted,

Cindy Cromer
Technical Director or Designee

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FDOH # E83509

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2514 Osawaw Boulevard
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FDOH # E84418

Printed: 9/15/05



Page 1 of 4

**HARBOR BRANCH
ENVIRONMENTAL
LABORATORIES, INC.**

5600 U.S. 1 North, Fort Pierce FL 34946
Phone: (772) 465-2400, Ext. 285 Fax: (772) 467-1584

Quality Control Summary

Client: Seminole County

Workorder ID: Lake Jesup

[2123013]

Received: 9/01/05 13:05

MB=Method Blank LCS=Laboratory Control Sample LCSD=Laboratory Control Sample Duplicate MS=Matrix Spike MSD=Matrix Spike Duplicate DUP=Sample Duplicate

HBEL Sample

Method Narratives (If Applicable)

<u>Number</u>	<u>Sample ID</u>	<u>Analytical Method</u>	<u>Description</u>
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Quality Control Summary

<u>Method</u>	<u>HBEL Batch</u>	<u>Analyte</u>	<u>Analytical Issue</u>
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HARBOR BRANCH ENVIRONMENTAL LABORATORIES, INC.

5600 U.S. 1 North, Fort Pierce, FL 34946
Phone: (772) 465-2400, Ext. 285 Fax: (772) 467-1584

CERTIFICATE OF ANALYSIS

[2123013]

Client: Seminole County

Workorder ID: Lake Jesup

Parameter	Qualifier	Result ¹	Units	Reporting Limit	Method	Laboratory Batch	Prep Date/Time	Analyzed Date/Time	Analyst	Lab ID
Laboratory ID: 2123013001					Sampled: 09/01/05 11:50 Received: 09/01/05 13:05					
Sample ID: Soldier Grab					Matrix: Water Results reported on Wet Weight Basis					
BOD5		3.0	mg/L	2.0	EPA 405.1	WCDE13500		09/2/05 9:15	PA	E83509
Fecal Coliform	B	18000	CFU/100mL	100	SM9222 D	WCDE13513		09/1/05 13:55	RM	E83509
Laboratory ID: 2123013002					Sampled: 09/01/05 11:50 Received: 09/01/05 13:05					
Sample ID: Soldier Comp					Matrix: Water Results reported on Wet Weight Basis					
Total Suspended Solids		15	mg/L	0.8	EPA 160.2	WCDE13508		09/3/05 9:10	PA	E83509
Ammonia, as N		0.013	mg/L	0.0090	EPA 350.1	AUTO13743		09/6/05 13:08	JL	E96080
Total Kjeldahl Nitrogen		1.3	mg/L	0.045	EPA 351.2	AUTO13776	09/9/05 11:30	09/9/05 15:55	JL	E96080
Nitrate/Nitrite as N		0.14	mg/L	0.0075	EPA 353.2	AUTO13747		09/6/05 17:26	DM	E96080
Total Phosphorus as P		0.21	mg/L	0.0012	EPA 365.1	AUTO13793	09/14/05 10:15	09/13/05 16:06	JL	E96080

¹Result Qualifiers: U = Not Detected I = Analyte detected between the Laboratory Method Detection Limit and Laboratory Reporting Limit
Applicable Florida Department of Environmental Protection Qualifiers defined below. Statement of Estimated Uncertainty available upon request.

B Results based upon colony counts outside of the acceptable range.



Chain-of-Custody and Agreement to Perform Services

Method(s) of Shipment:

Company: Seavale Co
Address:

Sampled By:

SAMPLE DESCRIPTION	TEST RESULTS
1. 100% Virgin Polypropylene (PP)	1. Tensile Strength: 35 MPa
2. 100% Virgin Polyethylene (PE)	2. Tensile Strength: 25 MPa
3. 100% Virgin Polystyrene (PS)	3. Tensile Strength: 50 MPa
4. 100% Virgin Polyvinyl Chloride (PVC)	4. Tensile Strength: 40 MPa
5. 100% Virgin Polyethylene Glycol (PEG)	5. Tensile Strength: 30 MPa
6. 100% Virgin Polypropylene (PP) + 10% Carbon Black	6. Tensile Strength: 30 MPa
7. 100% Virgin Polyethylene (PE) + 10% Carbon Black	7. Tensile Strength: 20 MPa
8. 100% Virgin Polystyrene (PS) + 10% Carbon Black	8. Tensile Strength: 45 MPa
9. 100% Virgin Polyvinyl Chloride (PVC) + 10% Carbon Black	9. Tensile Strength: 35 MPa
10. 100% Virgin Polyethylene Glycol (PEG) + 10% Carbon Black	10. Tensile Strength: 25 MPa
11. 100% Virgin Polypropylene (PP) + 20% Carbon Black	11. Tensile Strength: 25 MPa
12. 100% Virgin Polyethylene (PE) + 20% Carbon Black	12. Tensile Strength: 15 MPa
13. 100% Virgin Polystyrene (PS) + 20% Carbon Black	13. Tensile Strength: 40 MPa
14. 100% Virgin Polyvinyl Chloride (PVC) + 20% Carbon Black	14. Tensile Strength: 30 MPa
15. 100% Virgin Polyethylene Glycol (PEG) + 20% Carbon Black	15. Tensile Strength: 20 MPa
16. 100% Virgin Polypropylene (PP) + 30% Carbon Black	16. Tensile Strength: 20 MPa
17. 100% Virgin Polyethylene (PE) + 30% Carbon Black	17. Tensile Strength: 10 MPa
18. 100% Virgin Polystyrene (PS) + 30% Carbon Black	18. Tensile Strength: 35 MPa
19. 100% Virgin Polyvinyl Chloride (PVC) + 30% Carbon Black	19. Tensile Strength: 25 MPa
20. 100% Virgin Polyethylene Glycol (PEG) + 30% Carbon Black	20. Tensile Strength: 15 MPa
21. 100% Virgin Polypropylene (PP) + 40% Carbon Black	21. Tensile Strength: 15 MPa
22. 100% Virgin Polyethylene (PE) + 40% Carbon Black	22. Tensile Strength: 5 MPa
23. 100% Virgin Polystyrene (PS) + 40% Carbon Black	23. Tensile Strength: 30 MPa
24. 100% Virgin Polyvinyl Chloride (PVC) + 40% Carbon Black	24. Tensile Strength: 20 MPa
25. 100% Virgin Polyethylene Glycol (PEG) + 40% Carbon Black	25. Tensile Strength: 10 MPa
26. 100% Virgin Polypropylene (PP) + 50% Carbon Black	26. Tensile Strength: 10 MPa
27. 100% Virgin Polyethylene (PE) + 50% Carbon Black	27. Tensile Strength: 0 MPa
28. 100% Virgin Polystyrene (PS) + 50% Carbon Black	28. Tensile Strength: 25 MPa
29. 100% Virgin Polyvinyl Chloride (PVC) + 50% Carbon Black	29. Tensile Strength: 15 MPa
30. 100% Virgin Polyethylene Glycol (PEG) + 50% Carbon Black	30. Tensile Strength: 5 MPa
31. 100% Virgin Polypropylene (PP) + 60% Carbon Black	31. Tensile Strength: 5 MPa
32. 100% Virgin Polyethylene (PE) + 60% Carbon Black	32. Tensile Strength: 0 MPa
33. 100% Virgin Polystyrene (PS) + 60% Carbon Black	33. Tensile Strength: 20 MPa
34. 100% Virgin Polyvinyl Chloride (PVC) + 60% Carbon Black	34. Tensile Strength: 10 MPa
35. 100% Virgin Polyethylene Glycol (PEG) + 60% Carbon Black	35. Tensile Strength: 0 MPa
36. 100% Virgin Polypropylene (PP) + 70% Carbon Black	36. Tensile Strength: 0 MPa
37. 100% Virgin Polyethylene (PE) + 70% Carbon Black	37. Tensile Strength: 0 MPa
38. 100% Virgin Polystyrene (PS) + 70% Carbon Black	38. Tensile Strength: 15 MPa
39. 100% Virgin Polyvinyl Chloride (PVC) + 70% Carbon Black	39. Tensile Strength: 5 MPa
40. 100% Virgin Polyethylene Glycol (PEG) + 70% Carbon Black	40. Tensile Strength: 0 MPa
41. 100% Virgin Polypropylene (PP) + 80% Carbon Black	41. Tensile Strength: 0 MPa
42. 100% Virgin Polyethylene (PE) + 80% Carbon Black	42. Tensile Strength: 0 MPa
43. 100% Virgin Polystyrene (PS) + 80% Carbon Black	43. Tensile Strength: 10 MPa
44. 100% Virgin Polyvinyl Chloride (PVC) + 80% Carbon Black	44. Tensile Strength: 0 MPa
45. 100% Virgin Polyethylene Glycol (PEG) + 80% Carbon Black	45. Tensile Strength: 0 MPa
46. 100% Virgin Polypropylene (PP) + 90% Carbon Black	46. Tensile Strength: 0 MPa
47. 100% Virgin Polyethylene (PE) + 90% Carbon Black	47. Tensile Strength: 0 MPa
48. 100% Virgin Polystyrene (PS) + 90% Carbon Black	48. Tensile Strength: 5 MPa
49. 100% Virgin Polyvinyl Chloride (PVC) + 90% Carbon Black	49. Tensile Strength: 0 MPa
50. 100% Virgin Polyethylene Glycol (PEG) + 90% Carbon Black	50. Tensile Strength: 0 MPa
51. 100% Virgin Polypropylene (PP) + 100% Carbon Black	51. Tensile Strength: 0 MPa
52. 100% Virgin Polyethylene (PE) + 100% Carbon Black	52. Tensile Strength: 0 MPa
53. 100% Virgin Polystyrene (PS) + 100% Carbon Black	53. Tensile Strength: 0 MPa
54. 100% Virgin Polyvinyl Chloride (PVC) + 100% Carbon Black	54. Tensile Strength: 0 MPa
55. 100% Virgin Polyethylene Glycol (PEG) + 100% Carbon Black	55. Tensile Strength: 0 MPa

As Will Appear On Report

9.7	1150 C	SW 2	Solder
9.7	1150 C	SW 2	Solder

COLLECTION	DATE	TIME	Sample Type*	MATRIX**	# Containers

9.7	1150 C	SW 2	Solder
9.7	1150 C	SW 2	Solder

* Sample Type: G=Grab C=Composite

** Matrix: S=Solid SL=Sludge DW=Drinking Water GW=Ground Water SW=Surface Water WW=Wastewater M=Marine

RELINQUISHED BY

DATE/TIME

RECEIVED BY

DATE/TIME

REI INOLISHED BV

DATE/TIME

RECEIVED FOR HREI CUSTODY BY

DATE/TIME

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**USE BALL POINT PEN
PRESS HARD
COMPLETELY FILL OUT
ALL NON GREYED AREAS
PRINT LEGIBLY**

____ FDOH # E96080 307 Coolidge Avenue
5600 U.S. 1 North Lehigh Acres, FL 33901
Fort Pierce, FL 34946

FD0H # E83509
255 Enterprise Rd., Suite 1
Deltona, FL 32725

FD0H # E84418
2514 Osawaw Blvd.
Spring Hill, FL 34607



For Lab Use Only

Temperature	Custody Seals	pH
Checked	Intact	Checked
Y	Y	Y
N	N	N

LAB#

Preservation Key

H=Hydrochloric Acid	P=Phosphoric Acid
N=Nitric Acid	ST= Sodium
S=Sulfuric Acid	Thiosulfate
SH= Sodium Hydroxide	U=Unreserved

COMMENTS

LABORATORY RESULTS

SAMPLE EVENT NO. 17

September 2, 2005

STATIONS SAMPLED:

GEE CREEK
HOWELL CREEK
SIX MILE CREEK
SOLDIER CREEK

**HARBOR BRANCH
ENVIRONMENTAL
LABORATORIES, INC.**

5600 U.S. 1 North, Fort Pierce FL 34946
Phone: (772) 465-2400, Ext. 285 Fax: (772) 467-1584

Date issued: September 15, 2005

To: Gloria Eby
Seminole County
520 W Lake Mary Blvd, 200
Sanford, FL 32773

Client: Seminole County
Workorder ID: Lake Jesup Stormwater
Received: 9/04/05 11:15

[2123027]

Dear Gloria Eby;

Analytical results presented in this report have been reviewed for compliance with the HARBOR BRANCH Environmental Laboratories Inc.'s (HBEL) Quality Systems Manual and have been determined to meet applicable Method guidelines and Standards referenced in the July 2003 National Environmental Laboratory Accreditation Program (NELAP) Quality Manual unless otherwise noted. The Analytical Results within these report pages reflect the values obtained from tests performed on Samples As Received by the laboratory unless indicated differently.

FDOH Safe Drinking Water Act, Clean Water Act and RCRA Certification #'s:

E96080, E83509, E85370, E84418

Questions regarding this report should be directed to the Report Signatory at (772) 465-2400, Ext. 285 referencing the HBEL Workorder ID [Number].

Respectfully submitted,

Cindy Cromer
Technical Director or Designee

Note: This report is not to be copied, except in full, without the expressed written consent of the HARBOR BRANCH Environmental Laboratories, Inc.

5600 US 1 North
Fort Pierce, FL 34946
FDOH # E96080

255 Enterprise Road, Suite 1
Deltona, FL 32725
FDOH # E83509



307 Coolidge Avenue
Lehigh Acres, FL 33936
FDOH # E85370

2514 Osawaw Boulevard
Spring Hill, FL 34607
FDOH # E84418

**HARBOR BRANCH
ENVIRONMENTAL
LABORATORIES, INC.**

5600 U.S. 1 North, Fort Pierce, FL 34946
Phone: (772) 465-2400, Ext. 285 Fax: (772) 467-1584

Quality Control Summary

Client: Seminole County
Workorder ID: Lake Jesup Stormwater
Received: 9/04/05 11:15

[2123027]

MB=Method Blank LCS=Laboratory Control Sample LCSD=Laboratory Control Sample Duplicate MS=Matrix Spike MSD=Matrix Spike Duplicate DUP=Sample Duplicate

HBEL Sample

Method Narratives (If Applicable)

<u>Number</u>	<u>Sample ID</u>	<u>Analytical Method</u>	<u>Description</u>
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Quality Control Summary

<u>Method</u>	<u>HBEL Batch</u>	<u>Analyte</u>
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<u>Analytical Issue</u>

HARBOR BRANCH ENVIRONMENTAL LABORATORIES, INC.

5600 U.S. 1 North, Fort Pierce FL 34946
Phone: (772) 465-2400, Ext. 285 Fax: (772) 467-1584

CERTIFICATE OF ANALYSIS

[2123027]

Client: Seminole County

Workorder ID: Lake Jesup Stormwater

Parameter	Qualifier	Result ¹	Units	Reporting Limit	Method	Laboratory Batch	Prep Date/Time	Analyzed Date/Time	Analyst	Lab ID
Laboratory ID: 2123027001 Sample ID: Howell grab						Sampled: 09/04/05 9:15 Received: 09/04/05 11:15 Matrix: Water Results reported on Wet Weight Basis				
BOD5		2.0 U	mg/L	2.0	EPA 405.1	WCDE13509		09/5/05 9:45	PA	E83509
Fecal Coliform	B	160	CFU/100mL	10	SM9222 D	WCDE13516		09/4/05 12:30	PA	E83509
Laboratory ID: 2123027002 Sample ID: Howell comp						Sampled: 09/04/05 9:15 Received: 09/04/05 11:15 Matrix: Water Results reported on Wet Weight Basis				
Total Suspended Solids		29	mg/L	0.8	EPA 160.2	WCDE13519		09/6/05 12:20	PA	E83509
Ammonia, as N		0.038	mg/L	0.0090	EPA 350.1	AUTO13759		09/8/05 16:14	JL	E96080
Total Kjeldahl Nitrogen		1.2	mg/L	0.045	EPA 351.2	AUTO13776	09/9/05 11:30	09/9/05 15:55	JL	E96080
Total Nitrogen		1.4	mg/L	0.048	EPA 351.2	CALC5033		09/14/05 11:09	DH	E96080
Nitrate/Nitrite as N		0.26	mg/L	0.0075	EPA 353.2	AUTO13775		09/13/05 12:00	DM	E96080
Total Phosphorus as P		0.19	mg/L	0.0012	EPA 365.1	AUTO13793	09/14/05 10:15	09/13/05 16:06	JL	E96080
Laboratory ID: 2123027003 Sample ID: Gee grab						Sampled: 09/04/05 10:00 Received: 09/04/05 11:15 Matrix: Water Results reported on Wet Weight Basis				
BOD5		2.0 U	mg/L	2.0	EPA 405.1	WCDE13509		09/5/05 9:45	PA	E83509
Fecal Coliform		310	CFU/100mL	10	SM9222 D	WCDE13516		09/4/05 12:30	PA	E83509
Laboratory ID: 2123027004 Sample ID: Gee comp						Sampled: 09/04/05 10:00 Received: 09/04/05 11:15 Matrix: Water Results reported on Wet Weight Basis				
Total Suspended Solids		46	mg/L	1.0	EPA 160.2	WCDE13519		09/6/05 12:20	PA	E83509
Ammonia, as N		0.080	mg/L	0.0090	EPA 350.1	AUTO13759		09/8/05 16:14	JL	E96080
Total Kjeldahl Nitrogen		1.4	mg/L	0.045	EPA 351.2	AUTO13776	09/9/05 11:30	09/9/05 15:55	JL	E96080
Total Nitrogen		1.6	mg/L	0.048	EPA 351.2	CALC5033		09/14/05 11:09	DH	E96080
Nitrate/Nitrite as N		0.22	mg/L	0.0075	EPA 353.2	AUTO13775		09/13/05 12:01	DM	E96080
Total Phosphorus as P		0.19	mg/L	0.0012	EPA 365.1	AUTO13793	09/14/05 10:15	09/13/05 16:06	JL	E96080
Laboratory ID: 2123027005 Sample ID: Soldier grab						Sampled: 09/04/05 10:10 Received: 09/04/05 11:15 Matrix: Water Results reported on Wet Weight Basis				
BOD5		2.0 U	mg/L	2.0	EPA 405.1	WCDE13509		09/5/05 9:45	PA	E83509
Fecal Coliform		290	CFU/100mL	10	SM9222 D	WCDE13516		09/4/05 12:30	PA	E83509
Laboratory ID: 2123027006 Sample ID: Soldier comp						Sampled: 09/04/05 10:10 Received: 09/04/05 11:15 Matrix: Water Results reported on Wet Weight Basis				
Total Suspended Solids		38	mg/L	1.0	EPA 160.2	WCDE13519		09/6/05 12:20	PA	E83509
Ammonia, as N		0.022	mg/L	0.0090	EPA 350.1	AUTO13759		09/8/05 16:14	JL	E96080
Total Kjeldahl Nitrogen		1.3	mg/L	0.045	EPA 351.2	AUTO13776	09/9/05 11:30	09/9/05 15:55	JL	E96080
Total Nitrogen		1.4	mg/L	0.048	EPA 351.2	CALC5033		09/14/05 11:09	DH	E96080
Nitrate/Nitrite as N		0.13	mg/L	0.0075	EPA 353.2	AUTO13775		09/13/05 12:01	DM	E96080
Total Phosphorus as P		0.23	mg/L	0.0012	EPA 365.1	AUTO13793	09/14/05 10:15	09/13/05 16:06	JL	E96080

5600 US 1 North
Fort Pierce, FL 34946
FDOH # E96080

255 Enterprise Road, Suite 1
Deltona, FL 32725
FDOH # E83509



307 Coolidge Avenue
Lehigh Acres, FL 33936
FDOH # E85370

2514 Osawaw Boulevard
Spring Hill, FL 34607
FDOH # E84418

Printed: 9/15/05

HARBOR BRANCH ENVIRONMENTAL LABORATORIES, INC.

5600 U.S. 1 North, Fort Pierce FL 34946
Phone: (772) 465-2400, Ext. 285 Fax: (772) 467-1584

CERTIFICATE OF ANALYSIS

[2123027]

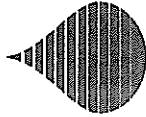
Client: Seminole County

Workorder ID: Lake Jesup Stormwater

Parameter	Qualifier	Result ¹	Units	Reporting Limit	Method	Laboratory Batch	Prep Date/Time	Analyzed Date/Time	Analyst	Lab ID
Laboratory ID: 2123027007						Sampled: 09/04/05 10:35		Received: 09/04/05 11:15		
Sample ID: Six-Mile grab						Matrix: Water		Results reported on Wet Weight Basis		
BOD5		2.0 U	mg/L	2.0	EPA 405.1	WCDE13509		09/05/05 9:45	PA	E83509
Fecal Coliform		390	CFU/100mL	10	SM9222 D	WCDE13516		09/04/05 12:30	PA	E83509
Laboratory ID: 2123027008						Sampled: 09/04/05 10:35		Received: 09/04/05 11:15		
Sample ID: Six-Mile comp						Matrix: Water		Results reported on Wet Weight Basis		
Total Suspended Solids		37	mg/L	1.0	EPA 160.2	WCDE13519		09/06/05 12:20	PA	E83509
Ammonia, as N		0.099	mg/L	0.0090	EPA 350.1	AUTO13759		09/08/05 16:14	JL	E96080
Total Kjeldahl Nitrogen		1.8	mg/L	0.045	EPA 351.2	AUTO13776	09/09/05 11:30	09/09/05 15:55	JL	E96080
Total Nitrogen		2.0	mg/L	0.048	EPA 351.2	CALC5033		09/14/05 11:09	DH	E96080
Nitrate/Nitrite as N		0.22	mg/L	0.0075	EPA 353.2	AUTO13775		09/13/05 12:02	DM	E96080
Total Phosphorus as P		0.28	mg/L	0.0012	EPA 365.1	AUTO13793	09/14/05 10:15	09/13/05 16:06	JL	E96080

¹Result Qualifiers: U = Not Detected I = Analyte detected between the Laboratory Method Detection Limit and Laboratory Reporting Limit
Applicable Florida Department of Environmental Protection Qualifiers defined below. Statement of Estimated Uncertainty available upon request.

B Results based upon colony counts outside of the acceptable range.



**HARBOR BRANCH
ENVIRONMENTAL
LABORATORIES, INC.**
5600 US 1 North, Fort Pierce, FL 34946
Phone: (772) 465-2400, ext. 285 Fax: (772) 467-1584

Chain-of-Custody
and
Agreement to Perform Services

Method(s) of _____
Shipment: _____

Company: Seawater Co
Address: _____

Phone: _____ Zip: _____
Fax: _____

Client Contact: _____
Project Name: Lake Jesup
Sampled By: Wes

For Lab Use Only				LAB #	
Temperature	Checked	Custody Seals	pH	Checked	
Y	N	Y	N	Y	N
PRESERVATIVE					
ANALYSES REQUESTED					
H=Hydrochloric Acid P=Phosphoric Acid N=Nitric Acid ST=Sodium S=Sulfuric Acid Thiosulfate SH=Sodium Hydroxide U=Unpreserved					
COMMENTS					

USE BALL POINT PEN
PRESS HARD
COMPLETELY FILL OUT
ALL NON GREYED AREAS
PRINT LEGIBLY



Laboratory not responsible for omitted information
FDOH # E96080 FDOH # E85370
5600 U.S. 1 North 307 Coolidge Avenue
Fort Pierce, FL 34946 Lehigh Acres, FL 33936
FDOH # E83509 FDOH # E84418
255 Enterprise Rd., Suite 1 2514 Osawaw Blvd.
Deltona, FL 32725 Spring Hill, FL 34607

SAMPLE DESCRIPTION
As Will Appear On Report

LAB ID	COLLECTION DATE	TIME	Sample Type	MATRIX	# Containers
	9-4	915	W	G	2
	"	"	"	"	"
	9-4	1000	W	G	2
	"	"	"	"	"
	9-4	1010	W	G	2
	"	"	"	"	"
	9-4	1035	W	G	2
	"	"	"	"	"

* Sample Type: G=Grab C=Composite ** Matrix: S=Solid SL=Sludge DW=Drinking Water GW=Ground Water SW=Surface Water WW=Wastewater M=Marine

RELINQUISHED BY		RECEIVED BY	
DATE/TIME	DATE/TIME	DATE/TIME	DATE/TIME
9-4 915	9-4 915	9-4 915	9-4 915
9-4 1000	9-4 1000	9-4 1000	9-4 1000
9-4 1010	9-4 1010	9-4 1010	9-4 1010
9-4 1035	9-4 1035	9-4 1035	9-4 1035

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LABORATORY RESULTS

SAMPLE EVENT NO. 18

September 20, 2005

STATIONS SAMPLED:

GEE CREEK
HOWELL CREEK
SIX MILE CREEK
SOLARY CANAL
SOLDIER CREEK

**HARBOR BRANCH
ENVIRONMENTAL
LABORATORIES, INC.**

5600 U.S. 1 North, Fort Pierce FL 34946
Phone: (772) 465-2400, Ext. 285 Fax: (772) 467-1584

Date issued: September 30, 2005

To: Gloria Eby
Seminole County
520 W Lake Mary Blvd, 200
Sanford, FL 32773

Client: Seminole County

Workorder ID: Lake Jesup

[2123252]

Received: 9/21/05 14:45

Dear Gloria Eby;

Analytical results presented in this report have been reviewed for compliance with the HARBOR BRANCH Environmental Laboratories Inc.'s (HBEL) Quality Systems Manual and have been determined to meet applicable Method guidelines and Standards referenced in the July 2003 National Environmental Laboratory Accreditation Program (NELAP) Quality Manual unless otherwise noted. The Analytical Results within these report pages reflect the values obtained from tests performed on Samples As Received by the laboratory unless indicated differently.

FDOH Safe Drinking Water Act, Clean Water Act and RCRA Certification #'s:

E96080, E83509, E85370, E84418

Questions regarding this report should be directed to the Report Signatory at (772) 465-2400, Ext. 285 referencing the HBEL Workorder ID [Number].

Respectfully submitted,

Cindy Cromer
Technical Director or Designee

Note: This report is not to be copied, except in full, without the expressed written consent of the HARBOR BRANCH Environmental Laboratories, Inc.

5600 US 1 North
Fort Pierce, FL 34946
FDOH # E96080

255 Enterprise Road, Suite 1
Deltona, FL 32725
FDOH # E83509

307 Coolidge Avenue
Lehigh Acres, FL 33936
FDOH # E85370

2514 Osawaw Boulevard
Spring Hill, FL 34607
FDOH # E84418

Printed: 9/30/05



Quality Control Summary

Client: Seminole County
Workorder ID: Lake Jesup
Received: 9/21/05 14:45

[2123252]

MB=Method Blank LCS=Laboratory Control Sample LCSD=Laboratory Control Sample Duplicate MS=Matrix Spike MSD=Matrix Spike Duplicate DUP=Sample Duplicate

HBEL Sample

Method Narratives (If Applicable)

Number	Sample ID	Analytical Method	Description
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Quality Control Summary

Method	HBEL Batch	Analyte	Analytical Issue
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HARBOR BRANCH ENVIRONMENTAL LABORATORIES, INC.

5600 U.S. 1 North, Fort Pierce FL 34946
Phone: (772) 465-2400, Ext. 285 Fax: (772) 467-1584

CERTIFICATE OF ANALYSIS

[2123252]

Client: Seminole County

Workorder ID: Lake Jesup

Parameter	Qualifier	Result ¹	Units	Reporting Limit	Method	Laboratory Batch	Prep Date/Time	Analyzed Date/Time	Analyst	Lab ID
Laboratory ID: 2123252001 Sample ID: Howell Grab						Sampled: 09/21/05 13:00 Received: 09/21/05 14:45 Matrix: Water Results reported on Wet Weight Basis				
BOD5		2.4	mg/L	2.0	EPA 405.1	WCDE13608		09/23/05 8:45	PA	E83509
Fecal Coliform		5700	CFU/100mL	100	SM9222 D	WCDE13600		09/21/05 16:40	RM	E83509
Laboratory ID: 2123252002 Sample ID: Howell Comp						Sampled: 09/21/05 13:00 Received: 09/21/05 14:45 Matrix: Water Results reported on Wet Weight Basis				
Total Suspended Solids		8.8	mg/L	0.5	EPA 160.2	WCDE13611		09/24/05 9:40	PA	E83509
Ammonia, as N		0.012	mg/L	0.0090	EPA 350.1	AUTO13857		09/26/05 13:00	JL	E96080
Nitrate/Nitrite as N		0.25	mg/L	0.0075	EPA 353.2	AUTO13878		09/30/05 11:54	SMB	E96080
Total Phosphorus as P		0.096	mg/L	0.0012	EPA 365.1	AUTO13859	09/23/05 15:00	09/26/05 12:00	JL	E96080
Laboratory ID: 2123252003 Sample ID: Solary Grab						Sampled: 09/21/05 13:15 Received: 09/21/05 14:45 Matrix: Water Results reported on Wet Weight Basis				
BOD5		2.5	mg/L	2.0	EPA 405.1	WCDE13608		09/23/05 8:45	PA	E83509
Fecal Coliform		2200	CFU/100mL	100	SM9222 D	WCDE13600		09/21/05 16:40	RM	E83509
Laboratory ID: 2123252004 Sample ID: Solary Comp						Sampled: 09/21/05 13:15 Received: 09/21/05 14:45 Matrix: Water Results reported on Wet Weight Basis				
Total Suspended Solids		22	mg/L	1.0	EPA 160.2	WCDE13611		09/24/05 9:40	PA	E83509
Ammonia, as N		0.0090 U	mg/L	0.0090	EPA 350.1	AUTO13857		09/26/05 13:00	JL	E96080
Nitrate/Nitrite as N		0.34	mg/L	0.0075	EPA 353.2	AUTO13878		09/30/05 11:54	SMB	E96080
Total Phosphorus as P		0.37	mg/L	0.0012	EPA 365.1	AUTO13859	09/23/05 15:00	09/26/05 12:00	JL	E96080
Laboratory ID: 2123252005 Sample ID: GEE Grab						Sampled: 09/21/05 13:30 Received: 09/21/05 14:45 Matrix: Water Results reported on Wet Weight Basis				
BOD5		2.0 U	mg/L	2.0	EPA 405.1	WCDE13608		09/23/05 8:45	PA	E83509
Fecal Coliform		3300	CFU/100mL	100	SM9222 D	WCDE13600		09/21/05 16:40	RM	E83509
Laboratory ID: 2123252006 Sample ID: GEE Comp						Sampled: 09/21/05 13:30 Received: 09/21/05 14:45 Matrix: Water Results reported on Wet Weight Basis				
Total Suspended Solids		35	mg/L	1.2	EPA 160.2	WCDE13611		09/24/05 9:40	PA	E83509
Ammonia, as N		0.012	mg/L	0.0090	EPA 350.1	AUTO13857		09/26/05 13:00	JL	E96080
Nitrate/Nitrite as N		0.24	mg/L	0.0075	EPA 353.2	AUTO13878		09/30/05 11:55	SMB	E96080
Total Phosphorus as P		0.22	mg/L	0.0012	EPA 365.1	AUTO13859	09/23/05 15:00	09/26/05 12:00	JL	E96080
Laboratory ID: 2123252007 Sample ID: Soldier Grab						Sampled: 09/21/05 13:50 Received: 09/21/05 14:45 Matrix: Water Results reported on Wet Weight Basis				
BOD5		2.0 U	mg/L	2.0	EPA 405.1	WCDE13608		09/23/05 8:45	PA	E83509
Fecal Coliform		2000	CFU/100mL	100	SM9222 D	WCDE13600		09/21/05 16:40	RM	E83509

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FDOH # E85370

2514 Osawaw Boulevard
Spring Hill, FL 34607
FDOH # E84418

Printed: 9/30/05

HARBOR BRANCH ENVIRONMENTAL LABORATORIES, INC.

5600 U.S. 1 North, Fort Pierce FL 34946
Phone: (772) 465-2400, Ext. 285 Fax: (772) 467-1584

CERTIFICATE OF ANALYSIS

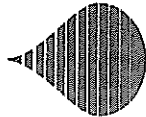
[2123252]

Client: Seminole County

Workorder ID: Lake Jesup

Parameter	Qualifier	Result ¹	Units	Reporting Limit	Method	Laboratory Batch	Prep Date/Time	Analyzed Date/Time	Analyst	Lab ID
Laboratory ID: 2123252008						Sampled: 09/21/05 13:50		Received: 09/21/05 14:45		
Sample ID: Soldier Comp						Matrix: Water		Results reported on Wet Weight Basis		
Total Suspended Solids		30	mg/L	1.0	EPA 160.2	WCDE13611		09/24/05 9:40	PA	E83509
Ammonia, as N		0.015	mg/L	0.0090	EPA 350.1	AUTO13857		09/26/05 13:00	JL	E96080
Nitrate/Nitrite as N		0.28	mg/L	0.0075	EPA 353.2	AUTO13878		09/30/05 11:57	SMB	E96080
Total Phosphorus as P		0.25	mg/L	0.0012	EPA 365.1	AUTO13859	09/23/05 15:00	09/26/05 12:00	JL	E96080
Laboratory ID: 2123252009						Sampled: 09/21/05 14:05		Received: 09/21/05 14:45		
Sample ID: 6 Mile Grab						Matrix: Water		Results reported on Wet Weight Basis		
BOD5		2.0 U	mg/L	2.0	EPA 405.1	WCDE13608		09/23/05 8:45	PA	E83509
Fecal Coliform		560	CFU/100mL	10	SM9222 D	WCDE13600		09/21/05 16:40	RM	E83509
Laboratory ID: 2123252010						Sampled: 09/21/05 14:05		Received: 09/21/05 14:45		
Sample ID: 6 Mile Comp						Matrix: Water		Results reported on Wet Weight Basis		
Total Suspended Solids		23	mg/L	1.7	EPA 160.2	WCDE13611		09/24/05 9:40	PA	E83509
Ammonia, as N		0.015	mg/L	0.0090	EPA 350.1	AUTO13857		09/26/05 13:00	JL	E96080
Nitrate/Nitrite as N		0.20	mg/L	0.0075	EPA 353.2	AUTO13878		09/30/05 11:58	SMB	E96080
Total Phosphorus as P		0.13	mg/L	0.0012	EPA 365.1	AUTO13859	09/23/05 15:00	09/26/05 12:00	JL	E96080

¹Result Qualifiers: U = Not Detected I = Analyte detected between the Laboratory Method Detection Limit and Laboratory Reporting Limit
Applicable Florida Department of Environmental Protection Qualifiers defined below. Statement of Estimated Uncertainty available upon request.



**HARBOR BRANCH
ENVIRONMENTAL
LABORATORIES, INC.**
5600 US 1 North, Fort Pierce, FL 34946
Phone: (772) 465-2400, Ext. 285 Fax: (772) 467-1584

Company: Sample Counts
Address: _____

Phone: _____ Zip: _____
Fax: _____

Client Contact: _____

Project Name: Lake T-50

Sampled By: WGS

Chain-of-Custody

and
Agreement to Perform Services

Method(s) of _____
Shipment: _____

USE BALL POINT PEN
PRESS HARD
COMPLETELY FILL OUT
ALL NON GREYED AREAS
PRINT LEGIBLY

Laboratory not responsible for omitted information
FDOH # E96080 FDOH # E85370
5600 U.S. 1 North 307 Coolidge Avenue
Fort Pierce, FL 34946 Lehigh Acres, FL 33936

FDOH # E83509 FDOH # E84418
255 Enterprise Rd., Suite 1 2514 Osawaw Blvd.
Deltona, FL 32725 Spring Hill, FL 34607



For Lab Use Only

Temperature Checked Y N
Custody Seals Intact Y N
pH Checked Y N

LAB #

PRESERVATIVE

ANALYSES REQUESTED

Preservation Key

H=Hydrochloric Acid P=Phosphoric Acid
N=Nitric Acid ST=Sodium
S=Sulfuric Acid Thiosulfate
SH=Sodium Hydroxide U=Unpreserved

COMMENTS

SAMPLE DESCRIPTION

As Will Appear On Report

LAB ID
COLLECTION DATE TIME
Containers
MATRIX
Sample Type

9-21	1300	2	G	G	1000
9-21	1300	2	G	G	1000
9-21	1315	2	G	G	1000
9-21	1315	2	G	G	1000
9-21	1330	2	G	G	1000
9-21	1330	2	G	G	1000
9-21	1350	2	G	G	1000
9-21	1350	2	G	G	1000
9-21	1405	2	G	G	1000
9-21	1405	2	G	G	1000

* Sample Type: G=Grab C=Composite

** Matrix: S=Solid SL=Sludge DW=Drinking Water GW=Ground Water SW=Surface Water WW=Wastewater M=Marine

RELINQUISHED BY
DATE/TIME
RECEIVED BY
DATE/TIME

RELINQUISHED BY
DATE/TIME
RECEIVED FOR HBEL CUSTODY BY
DATE/TIME

Distribution: WHITE with REPORT; YELLOW for FILE; PINK to CLIENT; GOLD for SAMPLER

CHAIN PAGE

of

LABORATORY RESULTS

SAMPLE EVENT NO. 19

October 5, 2005

STATIONS SAMPLED:

GEE CREEK
SIX MILE CREEK

**HARBOR BRANCH
ENVIRONMENTAL
LABORATORIES, INC.**

5600 U.S. 1 North, Fort Pierce FL 34946
Phone: (772) 465-2400, Ext. 285 Fax: (772) 467-1584

Date issued: October 19, 2005

To: Gloria Eby
Seminole County
520 W Lake Mary Blvd, 200
Sanford, FL 32773

Client: Seminole County

Workorder ID: Lake Jesup

[2123402]

Received: 10/06/05 10:25

Dear Gloria Eby;

Analytical results presented in this report have been reviewed for compliance with the HARBOR BRANCH Environmental Laboratories Inc.'s (HBEL) Quality Systems Manual and have been determined to meet applicable Method guidelines and Standards referenced in the July 2003 National Environmental Laboratory Accreditation Program (NELAP) Quality Manual unless otherwise noted. The Analytical Results within these report pages reflect the values obtained from tests performed on Samples As Received by the laboratory unless indicated differently.

FDOH Safe Drinking Water Act, Clean Water Act and RCRA Certification #'s:

E96080, E83509, E85370, E84418

Questions regarding this report should be directed to the Report Signatory at (772) 465-2400, Ext. 285 referencing the HBEL Workorder ID [Number].

Respectfully submitted,

Cindy Cromer
Technical Director or Designee

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FDOH # E83509

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Spring Hill, FL 34607
FDOH # E84418

Printed: 10/19/05



**HARBOR BRANCH
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LABORATORIES, INC.**

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Phone: (772) 465-2400, Ext. 285 Fax: (772) 467-1584

Quality Control Summary

Client: Seminole County
Workorder ID: Lake Jesup
Received: 10/06/05 10:25

[2123402]

MB=Method Blank LCS=Laboratory Control Sample LCSD=Laboratory Control Sample Duplicate MS=Matrix Spike MSD=Matrix Spike Duplicate DUP=Sample Duplicate

HBEL Sample

Method Narratives (If Applicable)

<u>Number</u>	<u>Sample ID</u>	<u>Analytical Method</u>	<u>Description</u>
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Quality Control Summary

<u>Method</u>	<u>HBEL Batch</u>	<u>Analyte</u>	<u>Analytical Issue</u>
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5600 US 1 North
Fort Pierce, FL 34946
FDOH # E96080

255 Enterprise Road, Suite 1
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FDOH # E83509

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Lehigh Acres, FL 33936
FDOH # E85370

2514 Osawaw Boulevard
Spring Hill, FL 34607
FDOH # E84418



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Phone: (772) 465-2400, Ext. 285 Fax: (772) 467-1584

CERTIFICATE OF ANALYSIS

[2123402]

Client: Seminole County

Workorder ID: Lake Jesup

Parameter	Qualifier	Result ¹	Units	Reporting Limit	Method	Laboratory Batch	Prep Date/Time	Analyzed Date/Time	Analyst	Lab ID
Laboratory ID: 2123402001					Sampled: 10/06/05 9:30		Received: 10/06/05 10:25			
Sample ID: GEE Grab					Matrix: Water		Results reported on Wet Weight Basis			
BOD5		2.0 U	mg/L	2.0	EPA 405.1	WCDE13672		10/7/05 10:30	PA	E83509
Fecal Coliform		480	CFU/100mL	10	SM9222 D	WCDE13666		10/6/05 13:55	RM	E83509
Laboratory ID: 2123402002					Sampled: 10/06/05 9:30		Received: 10/06/05 10:25			
Sample ID: GEE Comp					Matrix: Water		Results reported on Wet Weight Basis			
Total Suspended Solids		17	mg/L	0.8	EPA 160.2	WCDE13668		10/7/05 9:00	PA	E83509
Ammonia, as N		0.075	mg/L	0.018	EPA 350.1	AUTO13933		10/7/05 16:50	JL	E96080
Total Kjeldahl Nitrogen		1.2	mg/L	0.045	EPA 351.2	AUTO13943	10/10/05 8:30	10/10/05 13:42	JL	E96080
Total Nitrogen		1.3	mg/L	0.048	EPA 351.2	CALC5063		10/19/05 9:49	DH	E96080
Nitrate/Nitrite as N		0.092	mg/L	0.0075	EPA 353.2	AUTO13982		10/18/05 14:54	DM	E96080
Total Phosphorus as P		0.16	mg/L	0.0012	EPA 365.1	AUTO13986	10/13/05 14:00	10/13/05 17:24	JL	E96080
Laboratory ID: 2123402003					Sampled: 10/06/05 10:00		Received: 10/06/05 10:25			
Sample ID: 6 Mile Grab					Matrix: Water		Results reported on Wet Weight Basis			
BOD5		2.0 U	mg/L	2.0	EPA 405.1	WCDE13672		10/7/05 10:30	PA	E83509
Fecal Coliform		3500	CFU/100mL	100	SM9222 D	WCDE13666		10/6/05 13:55	RM	E83509
Laboratory ID: 2123402004					Sampled: 10/06/05 10:00		Received: 10/06/05 10:25			
Sample ID: 6 Mile Comp					Matrix: Water		Results reported on Wet Weight Basis			
Total Suspended Solids		63	mg/L	1.7	EPA 160.2	WCDE13668		10/7/05 9:00	PA	E83509
Ammonia, as N		0.027	mg/L	0.0090	EPA 350.1	AUTO13933		10/7/05 16:50	JL	E96080
Total Kjeldahl Nitrogen		2.3	mg/L	0.045	EPA 351.2	AUTO13943	10/10/05 8:30	10/10/05 13:42	JL	E96080
Total Nitrogen		2.4	mg/L	0.048	EPA 351.2	CALC5063		10/19/05 9:49	DH	E96080
Nitrate/Nitrite as N		0.13	mg/L	0.0075	EPA 353.2	AUTO13982		10/18/05 14:54	DM	E96080
Total Phosphorus as P		0.54	mg/L	0.0012	EPA 365.1	AUTO13986	10/13/05 14:00	10/13/05 17:24	JL	E96080

¹Result Qualifiers: U = Not Detected I = Analyte detected between the Laboratory Method Detection Limit and Laboratory Reporting Limit
Applicable Florida Department of Environmental Protection Qualifiers defined below. Statement of Estimated Uncertainty available upon request.

LABORATORY RESULTS

SAMPLE EVENT NO. 20

October 23, 2005

STATIONS SAMPLED:

SIX MILE CREEK
SOLDIER CREEK

**HARBOR BRANCH
ENVIRONMENTAL
LABORATORIES, INC.**

5600 U.S. 1 North, Fort Pierce FL 34946
Phone: (772) 465-2400, Ext. 285 Fax: (772) 467-1584

Date issued: November 10, 2005

To: Shannon Wetzel
Seminole County
520 W Lake Mary Blvd, 200
Sanford, FL 32773

Client: Seminole County

Workorder ID: Lake Jesup Storm Water

[2123629]

Received: 10/26/05 11:30

Dear Shannon Wetzel;

Analytical results presented in this report have been reviewed for compliance with the HARBOR BRANCH Environmental Laboratories Inc.'s (HBEL) Quality Systems Manual and have been determined to meet applicable Method guidelines and Standards referenced in the July 2003 National Environmental Laboratory Accreditation Program (NELAP) Quality Manual unless otherwise noted. The Analytical Results within these report pages reflect the values obtained from tests performed on Samples As Received by the laboratory unless indicated differently.

FDOH Safe Drinking Water Act, Clean Water Act and RCRA Certification #'s:

E96080, E83509, E85370, E84418

Questions regarding this report should be directed to the Report Signatory at (772) 465-2400, Ext. 285 referencing the HBEL Workorder ID [Number].

Respectfully submitted,

Cindy Cromer
Technical Director or Designee

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FDOH # E83509

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Lehigh Acres, FL 33936
FDOH # E85370

2514 Osawaw Boulevard
Spring Hill, FL 34607
FDOH # E84418



**HARBOR BRANCH
ENVIRONMENTAL
LABORATORIES, INC.**

5600 U.S. 1 North, Fort Pierce FL 34946
Phone: (772) 465-2400, Ext. 285 Fax: (772) 467-1584

Quality Control Summary

Client: Seminole County
Workorder ID: Lake Jesup Storm Water
Received: 10/26/05 11:30

[2123629]

MB=Method Blank LCS=Laboratory Control Sample LCSD=Laboratory Control Sample Duplicate MS=Matrix Spike MSD=Matrix Spike Duplicate DUP=Sample Duplicate

HBEL Sample

Method Narratives (If Applicable)

<u>Number</u>	<u>Sample ID</u>	<u>Analytical Method</u>	<u>Description</u>
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Quality Control Summary

<u>Method</u>	<u>HBEL Batch</u>	<u>Analyte</u>	<u>Analytical Issue</u>
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5600 US 1 North
Fort Pierce, FL 34946
FDOH # E96080

255 Enterprise Road, Suite 1
Deltona, FL 32725
FDOH # E83509



307 Coolidge Avenue
Lehigh Acres, FL 33936
FDOH # E85370

2514 Osawaw Boulevard
Spring Hill, FL 34607
FDOH # E84418

Printed: 11/10/05

HARBOR BRANCH ENVIRONMENTAL LABORATORIES, INC.

5600 U.S. 1 North, Fort Pierce FL 34946
Phone: (772) 465-2400, Ext. 285 Fax: (772) 467-1584

CERTIFICATE OF ANALYSIS

[2123629]

Client: Seminole County

Workorder ID: Lake Jesup Storm Water

Parameter	Qualifier	Result ¹	Units	Reporting Limit	Method	Laboratory Batch	Prep Date/Time	Analyzed Date/Time	Analyst	Lab ID
Laboratory ID: 2123629001 Sample ID: Soldier Comp						Sampled: 10/26/05 10:25 Received: 10/26/05 11:30 Matrix: Water Results reported on Wet Weight Basis				
Total Suspended Solids		490	mg/L	2.0	EPA 160.2	WCDE13763		10/28/05 8:20	PA	E83509
Ammonia, as N		0.029	mg/L	0.0090	EPA 350.1	AUTO14018		10/31/05 15:02	JL	E96080
Total Kjeldahl Nitrogen		2.4	mg/L	0.045	EPA 351.2	AUTO14006	10/27/05 12:00	10/27/05 15:59	JL	E96080
Total Nitrogen		2.8	mg/L	0.048	EPA 351.2	CALC5079		11/10/05 13:33	PW	E96080
Nitrate/Nitrite as N		0.32	mg/L	0.0075	EPA 353.2	AUTO14057		11/9/05 16:55	DM	E96080
Total Phosphorus as P		0.36	mg/L	0.0012	EPA 365.1	AUTO14047	11/7/05 9:50	11/7/05 17:31	JL	E96080
Laboratory ID: 2123629002 Sample ID: Soldier Grab						Sampled: 10/26/05 10:25 Received: 10/26/05 11:30 Matrix: Water Results reported on Wet Weight Basis				
BOD5		2.0 U	mg/L	2.0	EPA 405.1	WCDE13761		10/27/05 12:20	PA	E83509
Fecal Coliform	B	1100	CFU/100mL	100	SM9222 D	WCDE13756		10/26/05 12:28	RM	E83509
Laboratory ID: 2123629003 Sample ID: 6 Mile Comp						Sampled: 10/26/05 10:45 Received: 10/26/05 11:30 Matrix: Water Results reported on Wet Weight Basis				
Total Suspended Solids		97	mg/L	2.5	EPA 160.2	WCDE13763		10/28/05 8:20	PA	E83509
Ammonia, as N		0.029	mg/L	0.0090	EPA 350.1	AUTO14018		10/31/05 15:02	JL	E96080
Total Kjeldahl Nitrogen		2.3	mg/L	0.045	EPA 351.2	AUTO14006	10/27/05 12:00	10/27/05 16:00	JL	E96080
Total Nitrogen		2.4	mg/L	0.048	EPA 351.2	CALC5079		11/10/05 13:33	PW	E96080
Nitrate/Nitrite as N		0.14	mg/L	0.0075	EPA 353.2	AUTO14057		11/9/05 16:56	DM	E96080
Total Phosphorus as P		0.39	mg/L	0.0012	EPA 365.1	AUTO14047	11/7/05 9:50	11/7/05 17:31	JL	E96080
Laboratory ID: 2123629004 Sample ID: 6 Mile Grab						Sampled: 10/26/05 10:45 Received: 10/26/05 11:30 Matrix: Water Results reported on Wet Weight Basis				
BOD5		2.0 U	mg/L	2.0	EPA 405.1	WCDE13761		10/27/05 12:20	PA	E83509
Fecal Coliform		430	CFU/100mL	10	SM9222 D	WCDE13756		10/26/05 12:28	RM	E83509

¹Result Qualifiers: U = Not Detected I = Analyte detected between the Laboratory Method Detection Limit and Laboratory Reporting Limit
Applicable Florida Department of Environmental Protection Qualifiers defined below. Statement of Estimated Uncertainty available upon request.

B Results based upon colony counts outside of the acceptable range.

LABORATORY RESULTS

SAMPLE EVENT NO. 21

November 1, 2005

STATIONS SAMPLED:

SIX MILE CREEK
SOLARY CANAL
SOLDIER CREEK

**HARBOR BRANCH
ENVIRONMENTAL
LABORATORIES, INC.**

5600 U.S. 1 North, Fort Pierce FL 34946
Phone: (772) 465-2400, Ext. 285 Fax: (772) 467-1584

Date issued: November 16, 2005

To: Shannon Wetzel
Seminole County
520 W Lake Mary Blvd, 200
Sanford, FL 32773

Client: Seminole County
Workorder ID: Lake Jesup Storm Event
Received: 11/03/05 14:05

[2123753]

Dear Shannon Wetzel;

Analytical results presented in this report have been reviewed for compliance with the HARBOR BRANCH Environmental Laboratories Inc.'s (HBEL) Quality Systems Manual and have been determined to meet applicable Method guidelines and Standards referenced in the July 2003 National Environmental Laboratory Accreditation Program (NELAP) Quality Manual unless otherwise noted. The Analytical Results within these report pages reflect the values obtained from tests performed on Samples As Received by the laboratory unless indicated differently.

FDOH Safe Drinking Water Act, Clean Water Act and RCRA Certification #'s:

E96080, E83509, E85370, E84418

Questions regarding this report should be directed to the Report Signatory at (772) 465-2400, Ext. 285 referencing the HBEL Workorder ID [Number].

Respectfully submitted,

Cindy Cromer
Technical Director or Designee

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FDOH # E83509



307 Coolidge Avenue
Lehigh Acres, FL 33936
FDOH # E85370

2514 Osawaw Boulevard
Spring Hill, FL 34607
FDOH # E84418

**HARBOR BRANCH
ENVIRONMENTAL
LABORATORIES, INC.**

5600 U.S. 1 North, Fort Pierce FL 34946
Phone: (772) 465-2400, Ext. 285 Fax: (772) 467-1584

Quality Control Summary

Client: Seminole County
Workorder ID: Lake Jesup Storm Event
Received: 11/03/05 14:05

[2123753]

MB=Method Blank LCS=Laboratory Control Sample LCSD=Laboratory Control Sample Duplicate MS=Matrix Spike MSD=Matrix Spike Duplicate DUP=Sample Duplicate

HBEL Sample

Method Narratives (If Applicable)

<u>Number</u>	<u>Sample ID</u>	<u>Analytical Method</u>	<u>Description</u>
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Quality Control Summary

<u>Method</u>	<u>HBEL Batch</u>	<u>Analyte</u>
---------------	-------------------	----------------

<u>Analytical Issue</u>

Nitrate/Nitrite

AUTO14057

2123753003	Nitrate/Nitrite as N	Accuracy - Outside acceptance limits in the MS.
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The above due to matrix effects. Accuracy demonstrated with other QC samples.

HARBOR BRANCH ENVIRONMENTAL LABORATORIES, INC.

5600 U.S. 1 North, Fort Pierce FL 34946
Phone: (772) 465-2400, Ext. 285 Fax: (772) 467-1584

CERTIFICATE OF ANALYSIS

[2123753]

Client: Seminole County

Workorder ID: Lake Jesup Storm Event

Parameter	Qualifier	Result ¹	Units	Reporting Limit	Method	Laboratory Batch	Prep Date/Time	Analyzed Date/Time	Analyst	Lab ID
Laboratory ID: 2123753001 Sample ID: Solary Comp						Sampled: 11/03/05 12:30 Received: 11/03/05 14:05 Matrix: Water Results reported on Wet Weight Basis				
Total Suspended Solids		16	mg/L	1.0	EPA 160.2	WCDE13806		11/5/05 8:40	PA	E83509
Ammonia, as N		0.039	mg/L	0.0090	EPA 350.1	AUTO14037		11/7/05 14:26	JL	E96080
Total Kjeldahl Nitrogen		1.4	mg/L	0.045	EPA 351.2	AUTO14079	11/8/05 5:30	11/8/05 20:56	JL	E96080
Total Nitrogen		2.0	mg/L	0.048	EPA 351.2	CALC5080		11/16/05 11:05	DH	E96080
Nitrate/Nitrite as N		0.55	mg/L	0.0075	EPA 353.2	AUTO14057		11/9/05 17:22	DM	E96080
Total Phosphorus as P		0.33	mg/L	0.0012	EPA 365.1	AUTO14047	11/7/05 9:50	11/7/05 17:31	JL	E96080
Laboratory ID: 2123753002 Sample ID: Solary Grab						Sampled: 11/03/05 12:30 Received: 11/03/05 14:05 Matrix: Water Results reported on Wet Weight Basis				
BOD5	2.0 U		mg/L	2.0	EPA 405.1	WCDE13801		11/4/05 10:10	PA	E83509
Fecal Coliform	260		CFU/100mL	10	SM9222 D	WCDE13804		11/3/05 16:00	JLH	E83509
Laboratory ID: 2123753003 Sample ID: Soldier Comp						Sampled: 11/03/05 13:00 Received: 11/03/05 14:05 Matrix: Water Results reported on Wet Weight Basis				
Total Suspended Solids		25	mg/L	1.0	EPA 160.2	WCDE13806		11/5/05 8:40	PA	E83509
Ammonia, as N		0.051	mg/L	0.0090	EPA 350.1	AUTO14037		11/7/05 14:26	JL	E96080
Total Kjeldahl Nitrogen		1.2	mg/L	0.045	EPA 351.2	AUTO14079	11/8/05 5:30	11/8/05 20:57	JL	E96080
Total Nitrogen		1.4	mg/L	0.048	EPA 351.2	CALC5080		11/16/05 11:05	DH	E96080
Nitrate/Nitrite as N		0.19	mg/L	0.0075	EPA 353.2	AUTO14057		11/9/05 17:23	DM	E96080
Total Phosphorus as P		0.16	mg/L	0.0012	EPA 365.1	AUTO14047	11/7/05 9:50	11/7/05 17:31	JL	E96080
Laboratory ID: 2123753004 Sample ID: Soldier Grab						Sampled: 11/03/05 13:00 Received: 11/03/05 14:05 Matrix: Water Results reported on Wet Weight Basis				
BOD5	2.0 U		mg/L	2.0	EPA 405.1	WCDE13801		11/4/05 10:10	PA	E83509
Fecal Coliform	290		CFU/100mL	10	SM9222 D	WCDE13804		11/3/05 16:00	JLH	E83509
Laboratory ID: 2123753005 Sample ID: 6 Mile Comp						Sampled: 11/03/05 13:40 Received: 11/03/05 14:05 Matrix: Water Results reported on Wet Weight Basis				
Total Suspended Solids		21	mg/L	1.0	EPA 160.2	WCDE13806		11/5/05 8:40	PA	E83509
Ammonia, as N		0.055	mg/L	0.0090	EPA 350.1	AUTO14037		11/7/05 14:26	JL	E96080
Total Kjeldahl Nitrogen		1.5	mg/L	0.045	EPA 351.2	AUTO14079	11/8/05 5:30	11/8/05 20:57	JL	E96080
Total Nitrogen		1.6	mg/L	0.048	EPA 351.2	CALC5080		11/16/05 11:05	DH	E96080
Nitrate/Nitrite as N		0.12	mg/L	0.0075	EPA 353.2	AUTO14057		11/9/05 17:24	DM	E96080
Total Phosphorus as P		0.16	mg/L	0.0012	EPA 365.1	AUTO14047	11/7/05 9:50	11/7/05 17:31	JL	E96080
Laboratory ID: 2123753006 Sample ID: 6 Mile Grab						Sampled: 11/03/05 13:40 Received: 11/03/05 14:05 Matrix: Water Results reported on Wet Weight Basis				
BOD5	2.0 U		mg/L	2.0	EPA 405.1	WCDE13801		11/4/05 10:10	PA	E83509
Fecal Coliform	B 100		CFU/100mL	10	SM9222 D	WCDE13804		11/3/05 16:00	JLH	E83509

5600 US 1 North
Fort Pierce, FL 34946
FDOH # E96080

255 Enterprise Road, Suite 1
Deftona, FL 32725
FDOH # E83509



307 Coolidge Avenue
Lehigh Acres, FL 33936
FDOH # E85370

2514 Osawaw Boulevard
Spring Hill, FL 34607
FDOH # E84418

Printed: 11/16/05

**HARBOR BRANCH
ENVIRONMENTAL
LABORATORIES, INC.**

5600 U.S. 1 North, Fort Pierce FL 34946
Phone: (772) 465-2400, Ext. 285 Fax: (772) 467-1584

CERTIFICATE OF ANALYSIS

[2123753]

Client: Seminole County

Workorder ID: Lake Jesup Storm Event

Parameter	Qualifier	Result ¹	Units	Reporting Limit	Method	Laboratory Batch	Prep Date/Time	Analyzed Date/Time	Analyst	Lab ID
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¹Result Qualifiers: U = Not Detected I = Analyte detected between the Laboratory Method Detection Limit and Laboratory Reporting Limit
Applicable Florida Department of Environmental Protection Qualifiers defined below. Statement of Estimated Uncertainty available upon request.

B Results based upon colony counts outside of the acceptable range.

Chain-of-Custody and Agreement to Perform Services

Agreement to Perform Services

Method(s) of

Shipment:

USE BALL POINT PEN	Labo.
PRESS HARD	560C
COMPLETELY FILL OUT	Fort
ALL NON GREYED AREAS	
PRINT LEGIBLY	

Visible for omitted information

FDOH # E85370

07 Coolidge Avenue

High Acres, FL 33936

FDOH # E84418

2514 Osawaw Blvd.

Spring Hill, FL 34607

[illegible]

Zip: _____

Phone: _____
Fax: _____
Standard Laboratory

Client Contact: _____

Project Name: Week 10 - Project

Sampled By: _____

[illegible]

LAB ID	DATE	TIME	ATTN	Comments
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Figure 1. The effect of the number of trials on the number of correct responses. The number of correct responses (Y-axis) is plotted against the number of trials (X-axis). The data points show a positive correlation, indicating that the number of correct responses increases as the number of trials increases.

[illegible][illegible]

* Sample Type: G=Grab C=Composite

	DATE/TIME	DATE/TIME
epc	07-08-2006 14:00	07-08-2006 14:00

RECEIVED BY _____ DATE/TIME _____

RECEIVED BY _____ DATE/TIME _____

distribution: WHITE with REPORT; YELLOW for FILE; PINK to CLIENT; GOLD for SAMPLER

Distribution: WHITE with REPORT: YELLOW for FILE: PINK to CLIENT: GOLD for SAMPLER

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LABORATORY RESULTS

SAMPLE EVENT NO. 22

November 28, 2005

STATIONS SAMPLED:

SOLARY CANAL
SOLDIER CREEK

**HARBOR BRANCH
ENVIRONMENTAL
LABORATORIES, INC.**

5600 U.S. 1 North, Fort Pierce FL 34946
Phone: (772) 465-2400, Ext. 285 Fax: (772) 467-1584

Date issued: December 12, 2005

To: Shannon Wetzel
Seminole County
520 W Lake Mary Blvd, 200
Sanford, FL 32773

Client: Seminole County
Workorder ID: Lake Jesus Storm Water
Received: 11/30/05 11:35

[2123964]

Dear Shannon Wetzel;

Analytical results presented in this report have been reviewed for compliance with the HARBOR BRANCH Environmental Laboratories Inc.'s (HBEL) Quality Systems Manual and have been determined to meet applicable Method guidelines and Standards referenced in the July 2003 National Environmental Laboratory Accreditation Program (NELAP) Quality Manual unless otherwise noted. The Analytical Results within these report pages reflect the values obtained from tests performed on Samples As Received by the laboratory unless indicated differently.

FDOH Safe Drinking Water Act, Clean Water Act and RCRA Certification #'s:

E96080, E83509, E85370, E84418

Questions regarding this report should be directed to the Report Signatory at (772) 465-2400, Ext. 285 referencing the HBEL Workorder ID [Number].

Respectfully submitted,

Cindy Cromer
Technical Director or Designee

Note: This report is not to be copied, except in full, without the expressed written consent of the HARBOR BRANCH Environmental Laboratories, Inc.

5600 US 1 North
Fort Pierce, FL 34946
FDOH # E96080

255 Enterprise Road, Suite 1
Deltona, FL 32725
FDOH # E83509

307 Coolidge Avenue
Lehigh Acres, FL 33936
FDOH # E85370

2514 Osawaw Boulevard
Spring Hill, FL 34607
FDOH # E84418



**HARBOR BRANCH
ENVIRONMENTAL
LABORATORIES, INC.**

5600 U.S. 1 North, Fort Pierce, FL 34946
Phone: (772) 465-2400, Ext. 285 Fax: (772) 467-1584

Quality Control Summary

Client: Seminole County
Workorder ID: Lake Jesup Storm Water
Received: 11/30/05 11:35

[2123964]

MB=Method Blank LCS=Laboratory Control Sample LCSD=Laboratory Control Sample Duplicate MS=Matrix Spike MSD=Matrix Spike Duplicate DUP=Sample Duplicate

HBEL Sample

Method Narratives (If Applicable)

<u>Number</u>	<u>Sample ID</u>	<u>Analytical Method</u>	<u>Description</u>
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Quality Control Summary

<u>Method</u>	<u>HBEL Batch</u>	<u>Analyte</u>
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<u>Analytical Issue</u>

CERTIFICATE OF ANALYSIS

[2123964]

Client: Seminole County

Workorder ID: Lake Jesup Storm Water

Parameter	Qualifier	Result ¹	Units	Reporting Limit	Method	Laboratory Batch	Prep Date/Time	Analyzed Date/Time	Analyst	Lab ID
Laboratory ID: 2123964001						Sampled: 11/30/05 10:30		Received: 11/30/05 11:35		
Sample ID: Solary Grab						Matrix: Water		Results reported on Wet Weight Basis		
BOD5		2.0 U	mg/L	2.0	EPA 405.1	WCDE13913		12/2/05 10:20	PA	E83509
Fecal Coliform	B	620	CFU/100mL	10	SM9222 D	WCDE13900		11/30/05 13:00	RM	E83509
Laboratory ID: 2123964002						Sampled: 11/30/05 10:30		Received: 11/30/05 11:35		
Sample ID: Solary Comp						Matrix: Water		Results reported on Wet Weight Basis		
Total Suspended Solids		24	mg/L	1.0	EPA 160.2	WCDE13912		12/1/05 17:40	PA	E83509
Ammonia, as N		0.067	mg/L	0.0090	EPA 350.1	AUTO14137		12/2/05 15:17	JL	E96080
Total Kjeldahl Nitrogen		1.3	mg/L	0.045	EPA 351.2	AUTO14144	12/1/05 11:30	12/1/05 17:08	JL	E96080
Total Nitrogen		1.9	mg/L	0.048	EPA 351.2	CALC5110		12/12/05 6:55	PW	E96080
Nitrate/Nitrite as N		0.53	mg/L	0.0075	EPA 353.2	AUTO14141		12/5/05 13:18	DM	E96080
Total Phosphorus as P		0.35	mg/L	0.0012	EPA 365.1	AUTO14167	12/1/05 13:00	12/2/05 11:02	JL	E96080
Laboratory ID: 2123964003						Sampled: 11/30/05 11:00		Received: 11/30/05 11:35		
Sample ID: Soldier Grab						Matrix: Water		Results reported on Wet Weight Basis		
BOD5		2.0 U	mg/L	2.0	EPA 405.1	WCDE13913		12/2/05 10:20	PA	E83509
Fecal Coliform		320	CFU/100mL	10	SM9222 D	WCDE13900		11/30/05 13:00	RM	E83509
Laboratory ID: 2123964004						Sampled: 11/30/05 11:00		Received: 11/30/05 11:35		
Sample ID: Soldier Comp						Matrix: Water		Results reported on Wet Weight Basis		
Total Suspended Solids		9.7	mg/L	0.5	EPA 160.2	WCDE13912		12/1/05 17:40	PA	E83509
Ammonia, as N		0.071	mg/L	0.0090	EPA 350.1	AUTO14137		12/2/05 15:17	JL	E96080
Total Kjeldahl Nitrogen		0.99	mg/L	0.045	EPA 351.2	AUTO14144	12/1/05 11:30	12/1/05 17:09	JL	E96080
Total Nitrogen		1.1	mg/L	0.048	EPA 351.2	CALC5110		12/12/05 6:55	PW	E96080
Nitrate/Nitrite as N		0.14	mg/L	0.0075	EPA 353.2	AUTO14141		12/5/05 13:19	DM	E96080
Total Phosphorus as P		0.14	mg/L	0.0012	EPA 365.1	AUTO14167	12/1/05 13:00	12/2/05 11:02	JL	E96080

¹Result Qualifiers: U = Not Detected I = Analyte detected between the Laboratory Method Detection Limit and Laboratory Reporting Limit
Applicable Florida Department of Environmental Protection Qualifiers defined below. Statement of Estimated Uncertainty available upon request.

B Results based upon colony counts outside of the acceptable range.

LABORATORY RESULTS

SAMPLE EVENT NO. 23

December 8, 2005

STATIONS SAMPLED:

HOWELL CREEK
SOLARY CANAL

**HARBOR BRANCH
ENVIRONMENTAL
LABORATORIES, INC.**

5600 U.S. 1 North, Fort Pierce FL 34946-
Phone: (772) 465-2400, Ext. 285 Fax: (772) 467-1584

Date issued: December 20, 2005

To: Shannon Wetzel
Seminole County
520 W Lake Mary Blvd, 200
Sanford, FL 32773

Client: Seminole County
Workorder ID: Lake Jesup Storm Water
Received: 12/09/05 12:25

[2124055]

Dear Shannon Wetzel;

Analytical results presented in this report have been reviewed for compliance with the HARBOR BRANCH Environmental Laboratories Inc.'s (HBEL) Quality Systems Manual and have been determined to meet applicable Method guidelines and Standards referenced in the July 2003 National Environmental Laboratory Accreditation Program (NELAP) Quality Manual unless otherwise noted. The Analytical Results within these report pages reflect the values obtained from tests performed on Samples As Received by the laboratory unless indicated differently.

FDOH Safe Drinking Water Act, Clean Water Act and RCRA Certification #'s:

E96080, E83509, E85370, E84418

Questions regarding this report should be directed to the Report Signatory at (772) 465-2400, Ext. 285 referencing the HBEL Workorder ID [Number].

Respectfully submitted,

Cindy Cromer
Technical Director or Designee

Note: This report is not to be copied, except in full, without the expressed written consent of the HARBOR BRANCH Environmental Laboratories, Inc.

5600 US 1 North
Fort Pierce, FL 34946
FDOH # E96080
Printed: 12/20/05

255 Enterprise Road, Suite 1
Deltona, FL 32725
FDOH # E83509



307 Coolidge Avenue
Lehigh Acres, FL 33936
FDOH # E85370

2514 Osawaw Boulevard
Spring Hill, FL 34607
FDOH # E84418

**HARBOR BRANCH
ENVIRONMENTAL
LABORATORIES, INC.**

5600 U.S. 1 North, Fort Pierce, FL 34946
Phone: (772) 465-2400, Ext. 285 Fax: (772) 467-1584

Quality Control Summary

Client: Seminole County
Workorder ID: Lake Jesup Storm Water
Received: 12/09/05 12:25

[2124055]

MB=Method Blank LCS=Laboratory Control Sample LCSD=Laboratory Control Sample Duplicate MS=Matrix Spike MSD=Matrix Spike Duplicate DUP=Sample Duplicate

HBEL Sample

Method Narratives (If Applicable)

<u>Number</u>	<u>Sample ID</u>	<u>Analytical Method</u>	<u>Description</u>
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Quality Control Summary

<u>Method</u>	<u>HBEL Batch</u>	<u>Analyte</u>	<u>Analytical Issue</u>
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HARBOR BRANCH ENVIRONMENTAL LABORATORIES, INC.

5600 U.S. 1 North, Fort Pierce FL 34946
Phone: (772) 465-2400, Ext. 285 Fax: (772) 467-1584

CERTIFICATE OF ANALYSIS

[2124055]

Client: Seminole County

Workorder ID: Lake Jesup Storm Water

Parameter	Qualifier	Result ¹	Units	Reporting Limit	Method	Laboratory Batch	Prep Date/Time	Analyzed Date/Time	Analyst	Lab ID
Laboratory ID: 2124055001						Sampled: 12/09/05 10:35		Received: 12/09/05 12:25		
Sample ID: Howell comp						Matrix: Water		Results reported on Wet Weight Basis		
Total Suspended Solids		30	mg/L	1.7	EPA 160.2	WCDE13964		12/13/05 8:35	PA	E83509
Ammonia, as N		0.089	mg/L	0.0090	EPA 350.1	AUTO14187		12/16/05 12:07	JL	E96080
Total Kjeldahl Nitrogen		0.82	mg/L	0.045	EPA 351.2	AUTO14178	12/13/05 12:15	12/14/05 11:33	JL	E96080
Total Nitrogen		1.1	mg/L	0.048	EPA 351.2	CALC5115		12/19/05 10:49	DH	E96080
Nitrate/Nitrite as N		0.31	mg/L	0.0075	EPA 353.2	AUTO14182		12/15/05 12:42	DM	E96080
Total Phosphorus as P		0.10	mg/L	0.0012	EPA 365.1	AUTO14175	12/13/05 12:00	12/13/05 16:19	JL	E96080
Laboratory ID: 2124055002						Sampled: 12/09/05 10:35		Received: 12/09/05 12:25		
Sample ID: Howell grab						Matrix: Water		Results reported on Wet Weight Basis		
BOD5		2.0 U	mg/L	2.0	EPA 405.1	WCDE13953		12/10/05 10:30	PA	E83509
Fecal Coliform	B	900	CFU/100mL	100	SM9222 D	WCDE13949		12/9/05 13:00	RM	E83509
Laboratory ID: 2124055003						Sampled: 12/09/05 11:05		Received: 12/09/05 12:25		
Sample ID: Solary comp						Matrix: Water		Results reported on Wet Weight Basis		
Total Suspended Solids		15	mg/L	0.6	EPA 160.2	WCDE13964		12/13/05 8:35	PA	E83509
Ammonia, as N		0.057	mg/L	0.0090	EPA 350.1	AUTO14187		12/16/05 12:07	JL	E96080
Total Kjeldahl Nitrogen		1.4	mg/L	0.045	EPA 351.2	AUTO14178	12/13/05 12:15	12/14/05 11:34	JL	E96080
Total Nitrogen		1.8	mg/L	0.048	EPA 351.2	CALC5115		12/19/05 10:49	DH	E96080
Nitrate/Nitrite as N		0.42	mg/L	0.0075	EPA 353.2	AUTO14182		12/15/05 12:45	DM	E96080
Total Phosphorus as P		0.41	mg/L	0.0012	EPA 365.1	AUTO14175	12/13/05 12:00	12/13/05 16:19	JL	E96080
Laboratory ID: 2124055004						Sampled: 12/09/05 11:05		Received: 12/09/05 12:25		
Sample ID: Solary grab						Matrix: Water		Results reported on Wet Weight Basis		
BOD5		2.0 U	mg/L	2.0	EPA 405.1	WCDE13953		12/10/05 10:30	PA	E83509
Fecal Coliform	B	1500	CFU/100mL	100	SM9222 D	WCDE13949		12/9/05 13:00	RM	E83509

¹Result Qualifiers: U = Not Detected I = Analyte detected between the Laboratory Method Detection Limit and Laboratory Reporting Limit
Applicable Florida Department of Environmental Protection Qualifiers defined below. Statement of Estimated Uncertainty available upon request.

B Results based upon colony counts outside of the acceptable range.

LABORATORY RESULTS

SAMPLE EVENT NO. 24

February 03, 2006

STATIONS SAMPLED:

SIX MILE CREEK

**HARBOR BRANCH
ENVIRONMENTAL
LABORATORIES, INC.**

5600 U.S. 1 North, Fort Pierce FL 34946
Phone: (772) 465-2400, Ext. 285 Fax: (772) 467-1584

Date issued: February 14, 2006

To: Shannon Wetzel
Seminole County
520 W Lake Mary Blvd, 200
Sanford, FL 32773

Client: Seminole County
Workorder ID: Lake Jesup Stormwater
Received: 2/04/06 13:25

[2124658]

Dear Shannon Wetzel;

Analytical results presented in this report have been reviewed for compliance with the HARBOR BRANCH Environmental Laboratories Inc.'s (HBEL) Quality Systems Manual and have been determined to meet applicable Method guidelines and Standards referenced in the July 2003 National Environmental Laboratory Accreditation Program (NELAP) Quality Manual unless otherwise noted. The Analytical Results within these report pages reflect the values obtained from tests performed on Samples As Received by the laboratory unless indicated differently.

FDOH Safe Drinking Water Act, Clean Water Act and RCRA Certification #'s:

E96080, E83509, E85370, E84418

Questions regarding this report should be directed to the Report Signatory at (772) 465-2400, Ext. 285 referencing the HBEL Workorder ID [Number].

Respectfully submitted,

Cindy Cromer
Technical Director or Designee

Note: This report is not to be copied, except in full, without the expressed written consent of the HARBOR BRANCH Environmental Laboratories, Inc.

5600 US 1 North
Fort Pierce, FL 34946
FDOH # E96080

4155 St. Johns Pkwy Suite 1300
Sanford, FL 32771
FDOH # E83509

307 Coolidge Avenue
Lehigh Acres, FL 33936
FDOH # E85370

2514 Osawaw Boulevard
Spring Hill, FL 34607
FDOH # E84418

Printed: 2/14/06



Page 1 of 4

**HARBOR BRANCH
ENVIRONMENTAL
LABORATORIES, INC.**

5600 U.S. 1 North, Fort Pierce FL 34946
Phone: (772) 465-2400, Ext. 285 Fax: (772) 467-1584

Quality Control Summary

Client: Seminole County
Workorder ID: Lake Jesup Stormwater
Received: 2/04/06 13:25

[2124658]

MB=Method Blank LCS=Laboratory Control Sample LCSD=Laboratory Control Sample Duplicate MS=Matrix Spike MSD=Matrix Spike Duplicate DUP=Sample Duplicate

HBEL Sample

Method Narratives (If Applicable)

<u>Number</u>	<u>Sample ID</u>	<u>Analytical Method</u>	<u>Description</u>
---------------	------------------	--------------------------	--------------------

Quality Control Summary

<u>Method</u>	<u>HBEL Batch</u>	<u>Analyte</u>	<u>Analytical Issue</u>
---------------	-------------------	----------------	-------------------------

HARBOR BRANCH ENVIRONMENTAL LABORATORIES, INC.

5600 U.S. 1 North, Fort Pierce FL 34946
Phone: (772) 465-2400, Ext. 285 Fax: (772) 467-1584

CERTIFICATE OF ANALYSIS

[2124658]

Client: Seminole County

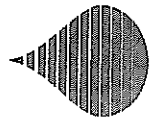
Workorder ID: Lake Jesup Stormwater

Parameter	Qualifier	Result ¹	Units	Reporting Limit	Method	Laboratory Batch	Prep Date/Time	Analyzed Date/Time	Analyst	Lab ID
Laboratory ID: 2124658001						Sampled: 02/04/06 12:50		Received: 02/04/06 13:25		
Sample ID: 6 Mile comp						Matrix: Water		Results reported on Wet Weight Basis		
Total Suspended Solids		44	mg/L	2.0	EPA 160.2	WCDE14175		02/7/06 16:00	RM	E83509
Ammonia, as N		0.079	mg/L	0.0090	EPA 350.1	AUTO14376		02/13/06 15:02	JL	E96080
Total Kjeldahl Nitrogen		1.8	mg/L	0.045	EPA 351.2	AUTO14365	02/8/06 11:30	02/8/06 15:26	JL	E96080
Total Nitrogen		2.0	mg/L	0.048	EPA 351.2	CALC5155		02/14/06 13:03	DH	E96080
Nitrate/Nitrite as N		0.23	mg/L	0.0075	EPA 353.2	AUTO14381		02/13/06 12:29	DM	E96080
Total Phosphorus as P		0.29	mg/L	0.0012	EPA 365.1	AUTO14370	02/8/06 11:30	02/8/06 14:46	JL	E96080

Laboratory ID: 2124658002						Sampled: 02/04/06 12:50		Received: 02/04/06 13:25		
Sample ID: 6 Mile grab						Matrix: Water		Results reported on Wet Weight Basis		
BOD5		5.9	mg/L	2.0	EPA 405.1	WCDE14165		02/4/06 13:45	PA	E83509
Fecal Coliform	B	6400	CFU/100mL	100	SM9222 D	WCDE14171		02/4/06 14:20	PA	E83509

¹Result Qualifiers: U = Not Detected I = Analyte detected between the Laboratory Method Detection Limit and Laboratory Reporting Limit
Applicable Florida Department of Environmental Protection Qualifiers defined below. Statement of Estimated Uncertainty available upon request.

B Results based upon colony counts outside of the acceptable range.



**HARBOR BRANCH
ENVIRONMENTAL
LABORATORIES, INC.**
5600 US 1 North, Fort Pierce, FL 34946
Phone: (772) 465-2400, Ext. 285 Fax: (772) 467-1584

Chain-of-Custody

and

Agreement to Perform Services

Method(s) of _____
Shipment: _____

Company: Seminole Co
Address: _____

Phone: _____ Zip: _____
Fax: _____

Client Contact: _____

Project Name: Lake Jesup Storm Drains

Sampled By: _____

e-mail: _____
Standard Laboratory
Turn Around Time

Or
Rush in _____ Business Days
Requires Laboratory Approval

SAMPLE DESCRIPTION

As Will Appear On Report

LAB ID
COLLECTION
DATE TIME

Sample Type*

MATRIX*

Containers

2/4 1250 C SW 2
2/4 1250 G SW 2

* Sample Type: G=Grab C=Composite

** Matrix: S=Solid SL=Sludge DW=Drinking Water GW=Ground Water SW=Surface Water WW=Wastewater M=Marine

RELINQUISHED BY [Signature] 125

DATE/TIME 2/4/01

RECEIVED BY [Signature]

DATE/TIME 2/4/01 1225

RELINQUISHED BY

DATE/TIME

RECEIVED FOR HBEL CUSTODY BY

DATE/TIME

Report Page

Distribution: WHITE with REPORT; YELLOW for FILE; PINK to CLIENT; GOLD for SAMPLER

CHAIN PAGE _____ of _____

USE BALL POINT PEN
PRESS HARD
COMPLETELY FILL OUT
ALL NON GREYED AREAS
PRINT LEGIBLY



For Lab Use Only

Temperature Checked Y N
Custody Seals Intact Y N
pH Checked Y N

LAB #

PRESERVATIVE

ANALYSES REQUESTED

Preservation Key

H=Hydrochloric Acid
N=Nitric Acid
S=Sulfuric Acid
SH=Sodium Hydroxide
P=Phosphoric Acid
ST=Sodium
Thiosulfate
U=Unpreserved

COMMENTS

Laboratory not responsible for omitted information
____ FDOH # E96080
5600 U.S. 1 North
Fort Pierce, FL 34946
____ FDOH # E83509
255 Enterprise Rd., Suite 1
Deltona, FL 32725
____ FDOH # E84418
307 Coolidge Avenue
Lehigh Acres, FL 33936

APPENDIX B

GRAPHICAL RESULTS

GRAPHICAL RESULTS

SAMPLE EVENT NO. 1

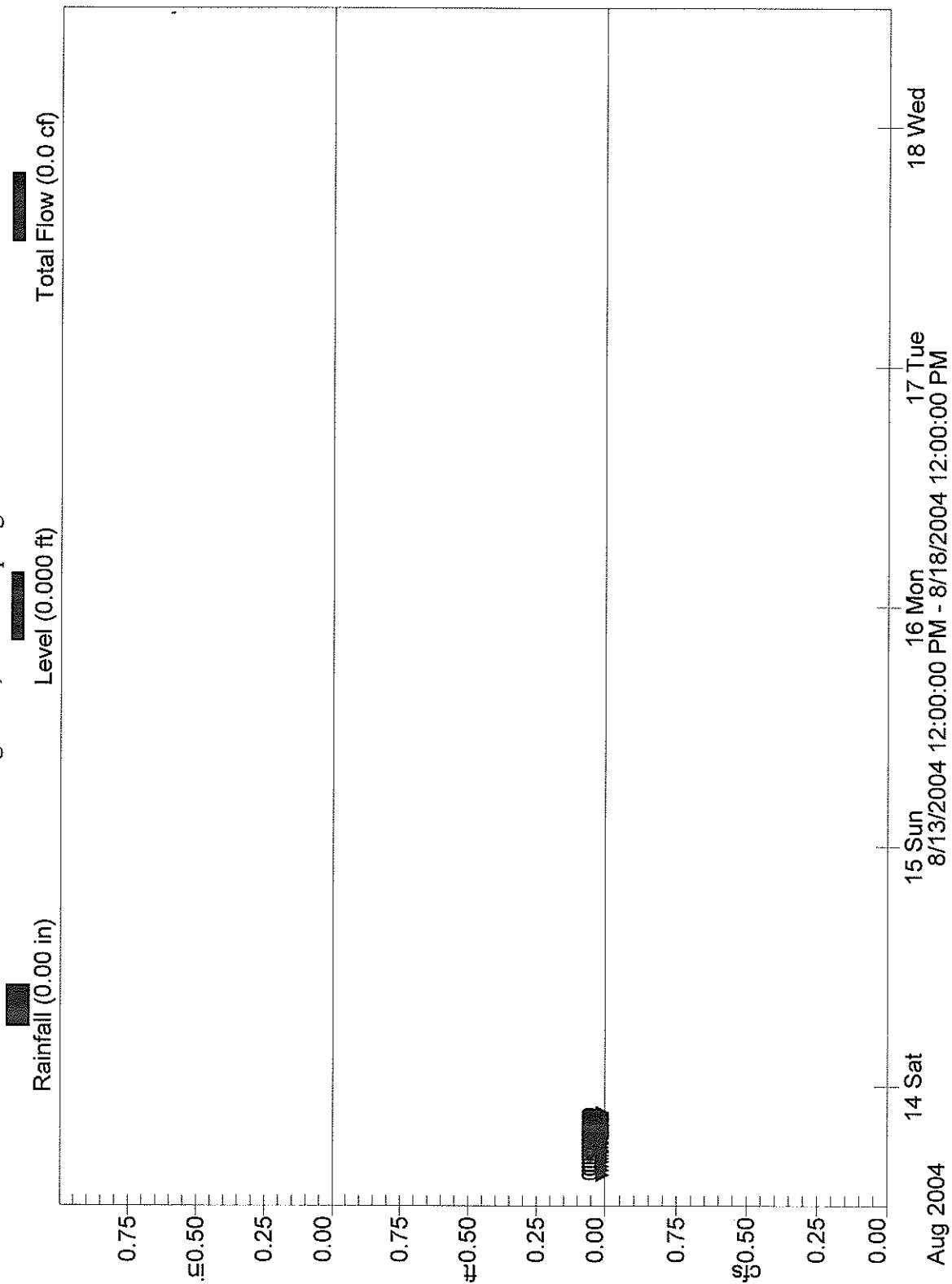
August 13, 2004

STATIONS SAMPLED:

GEE CREEK
HOWELL CREEK
SIX MILE CREEK
SOLDIER CREEK

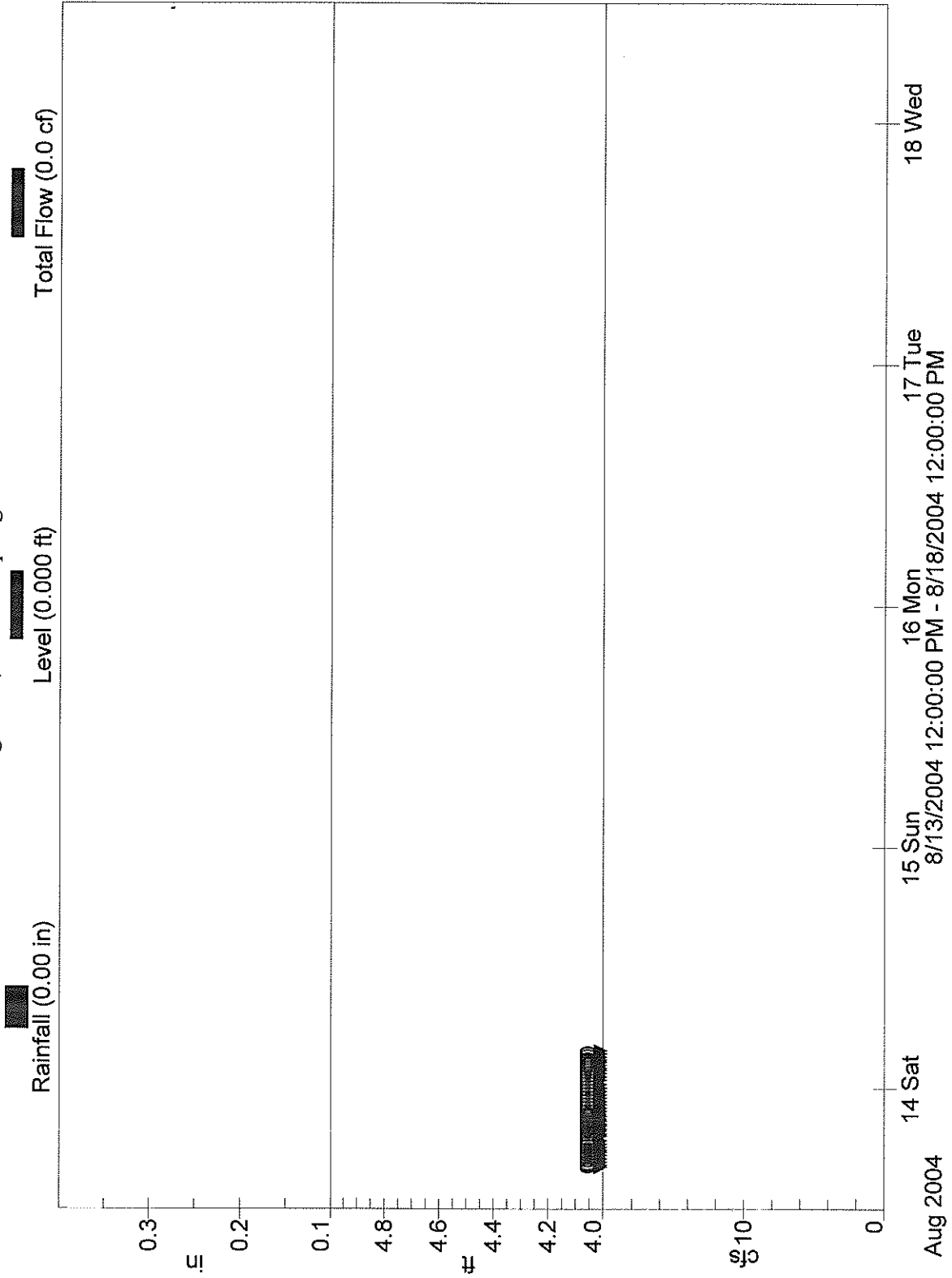
Gee Creek Sampling Station

August 13, 2004 Sampling Event



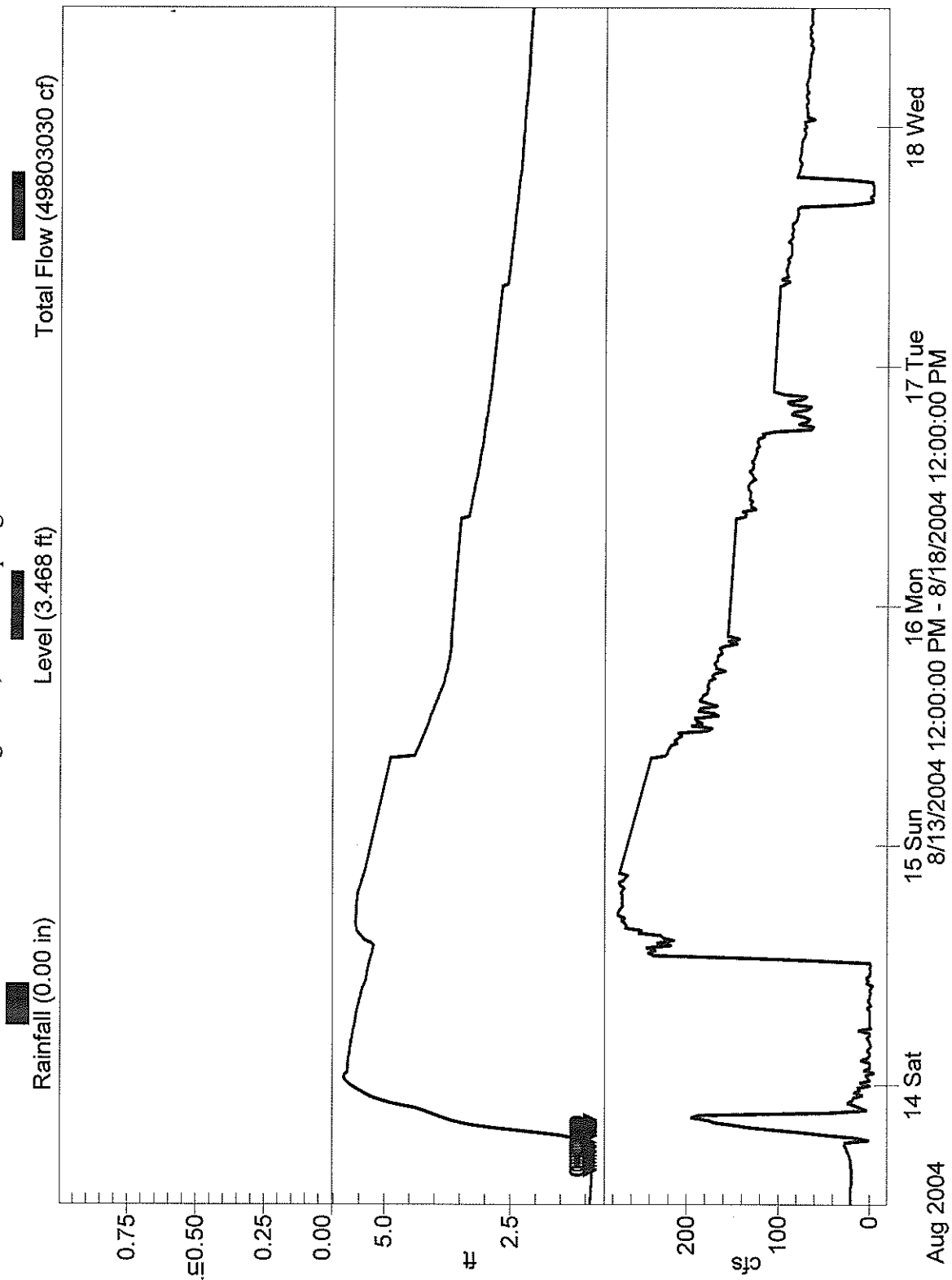
Howell Creek Sampling Station

August 13, 2004 Sampling Event



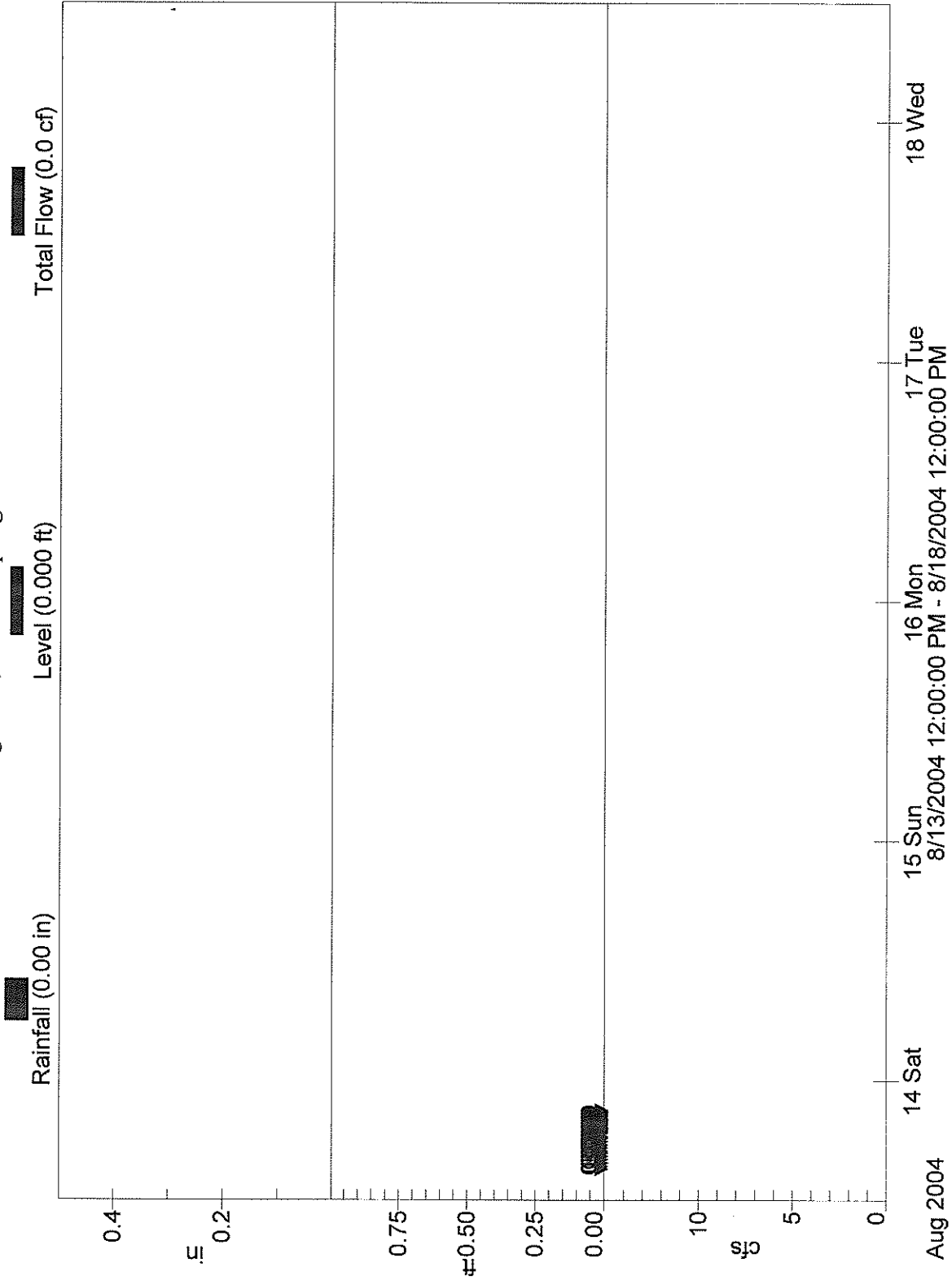
Six Mile Creek Sampling Station

August 13, 2004 Sampling Event



Soldier Creek Sampling Station

August 13, 2004 Sampling Event



GRAPHICAL RESULTS

SAMPLE EVENT NO. 2

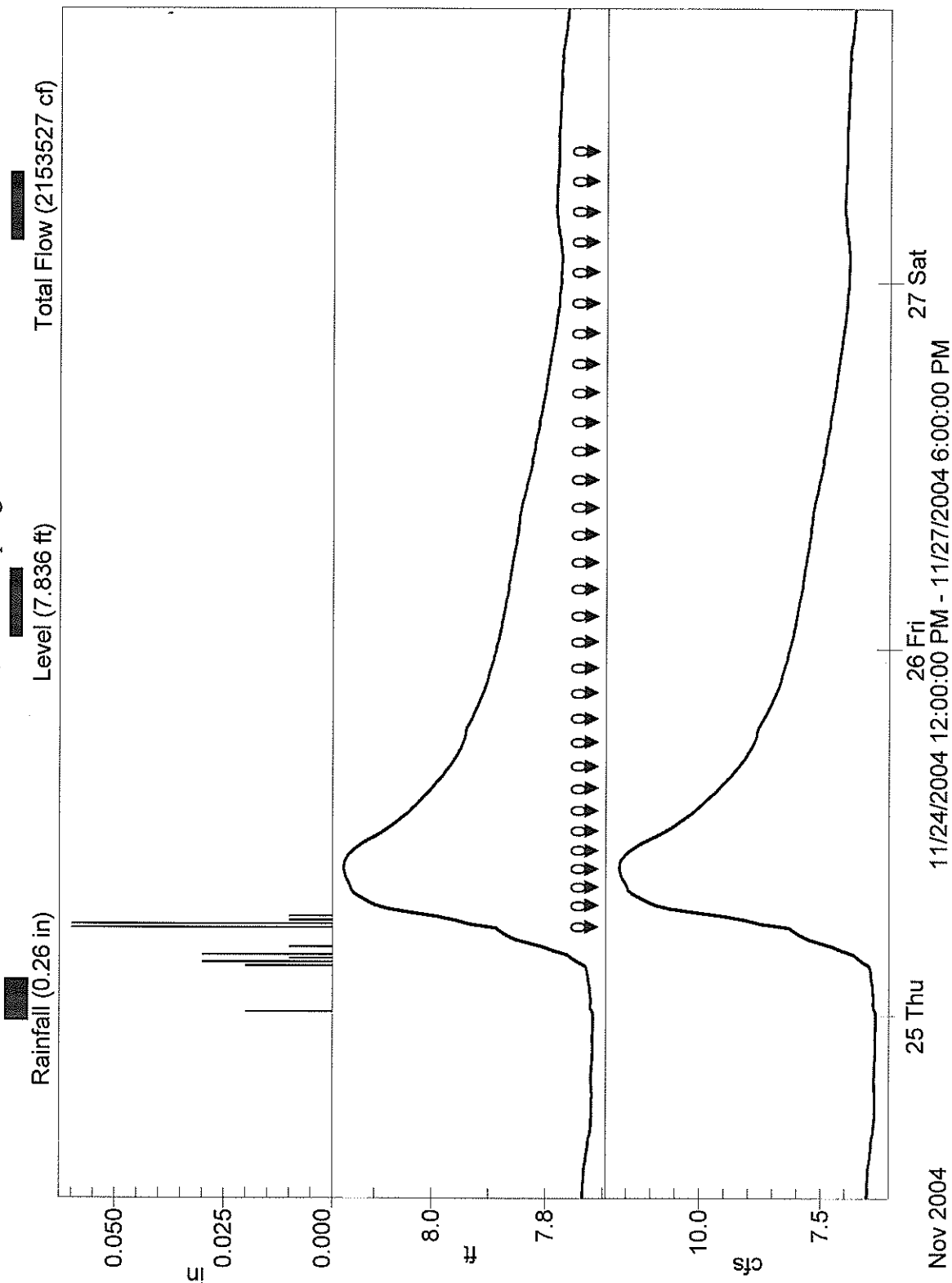
November 25, 2004

STATIONS SAMPLED:

GEE CREEK
SOLDIER CREEK

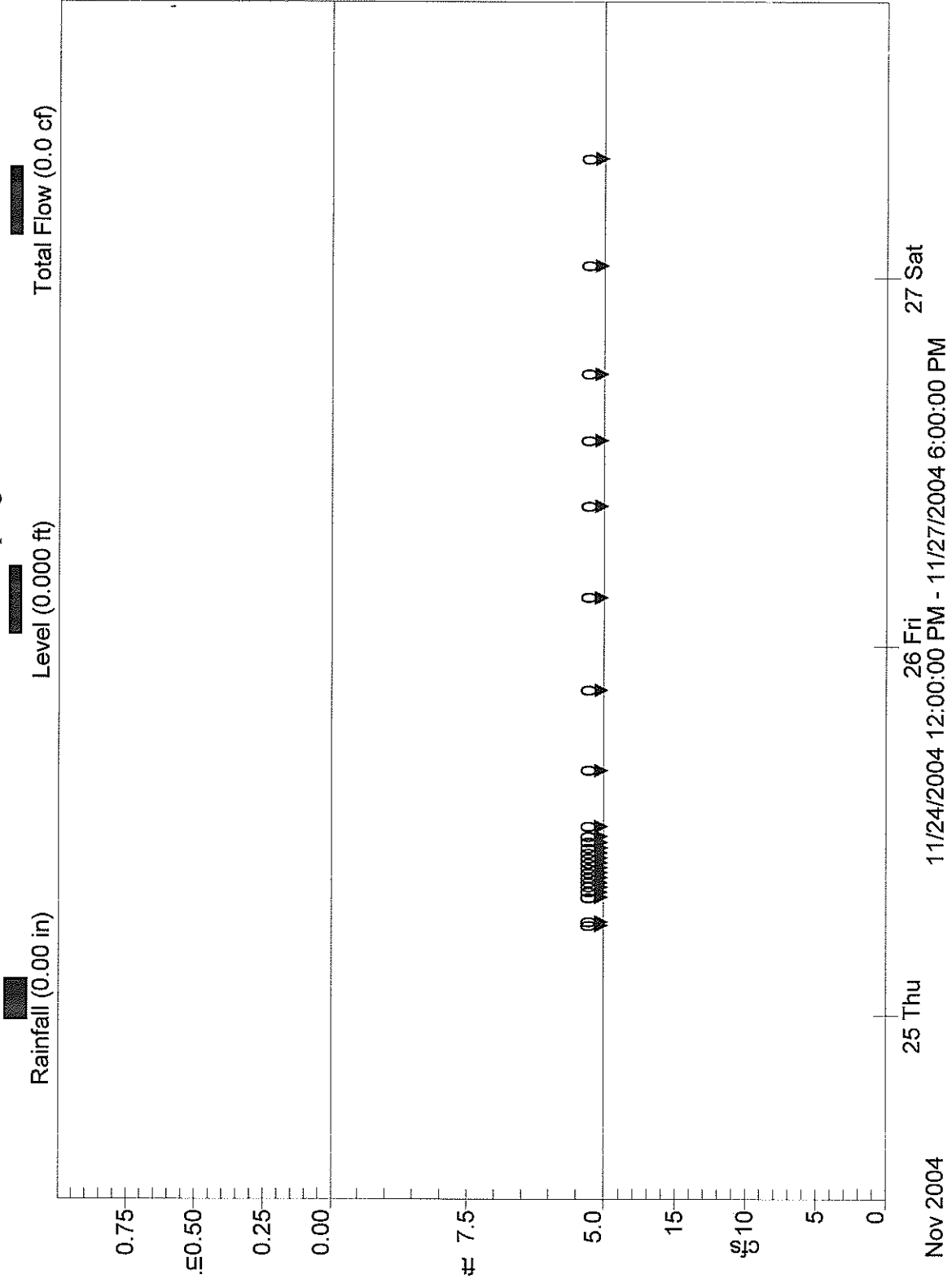
Gee Creek Sampling Station

November 25, 2004 Sampling Event



Soldier Creek Sampling Station

November 25, 2004 Sampling Event



GRAPHICAL RESULTS

SAMPLE EVENT NO. 3

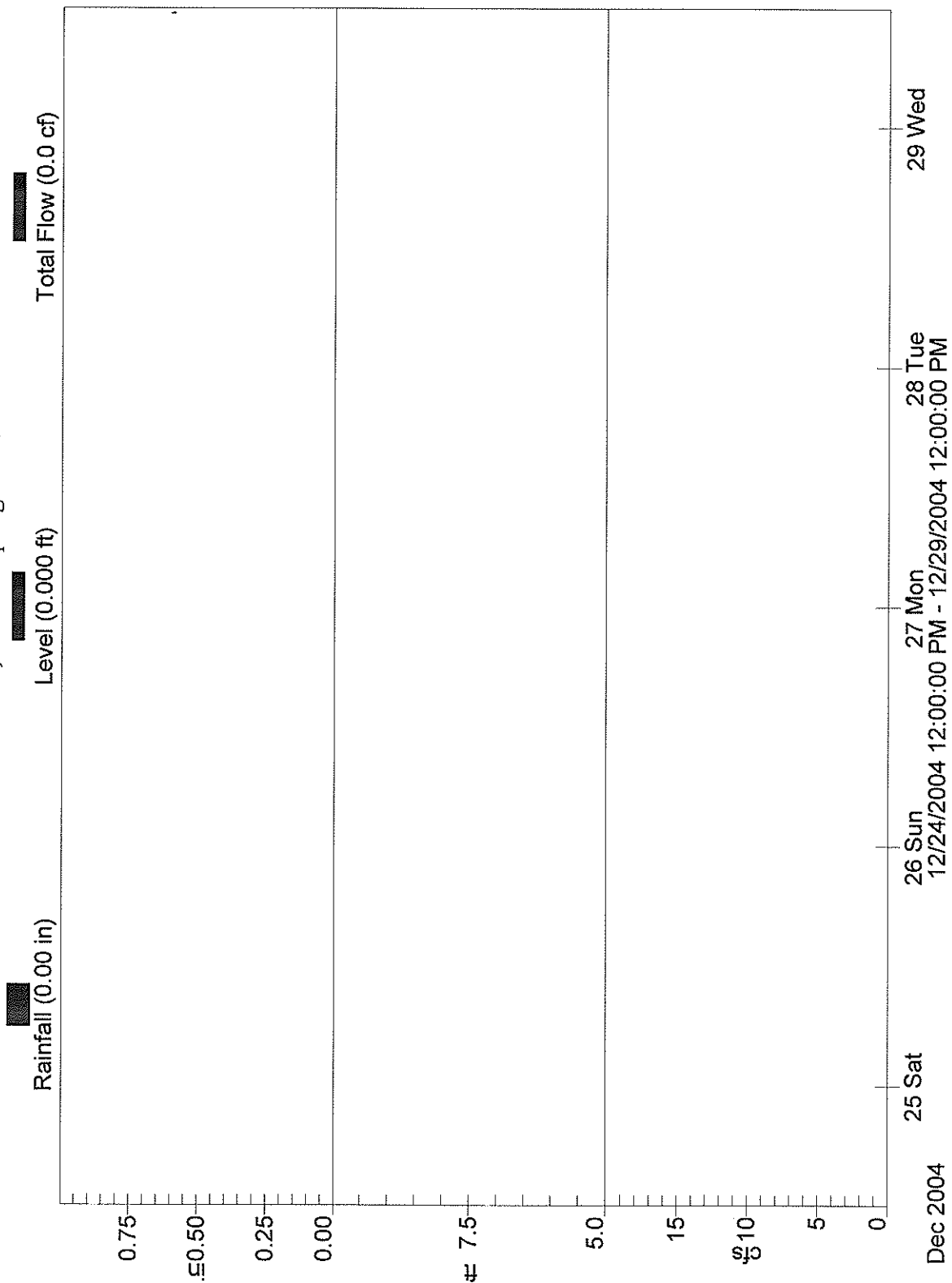
December 25, 2004

STATIONS SAMPLED:

SOLDIER CREEK

Soldier Creek Sampling Station

December 25, 2004 Sampling Event



GRAPHICAL RESULTS

SAMPLE EVENT NO. 4

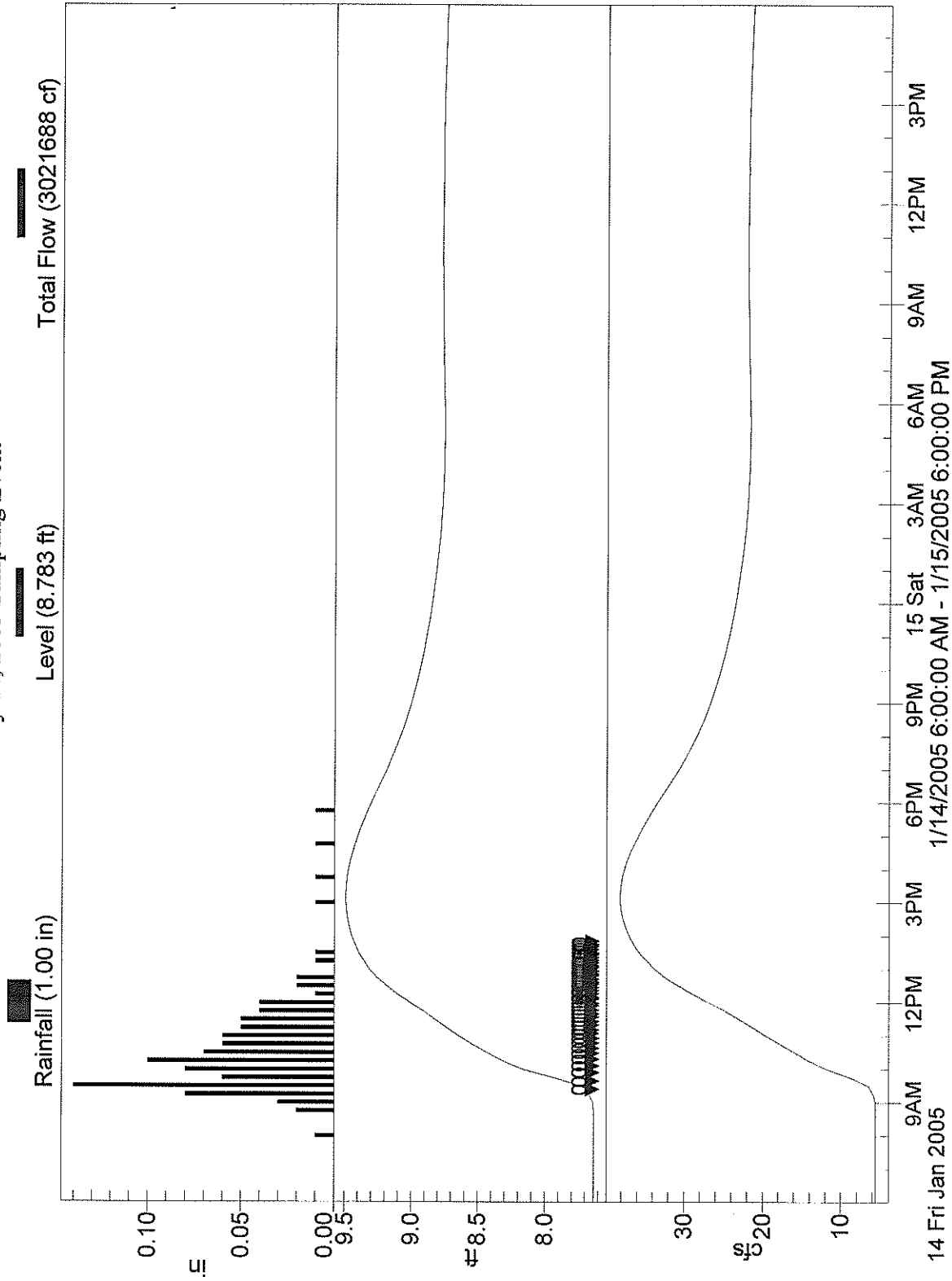
January 14, 2005

STATIONS SAMPLED:

GEE CREEK
HOWELL CREEK
SOLARY CANAL
SOLDIER CREEK

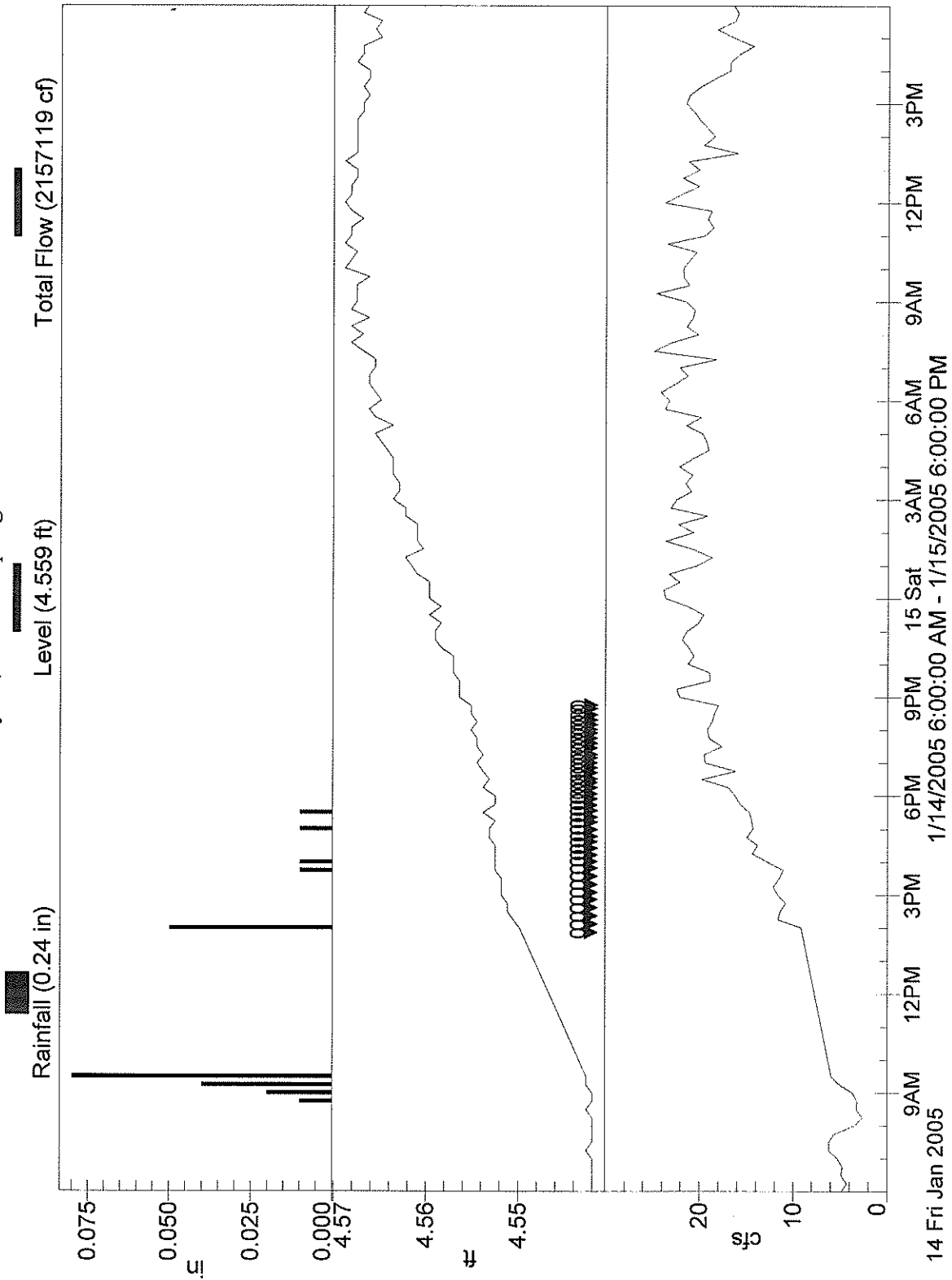
Gee Creek Sampling Station

January 14, 2005 Sampling Event



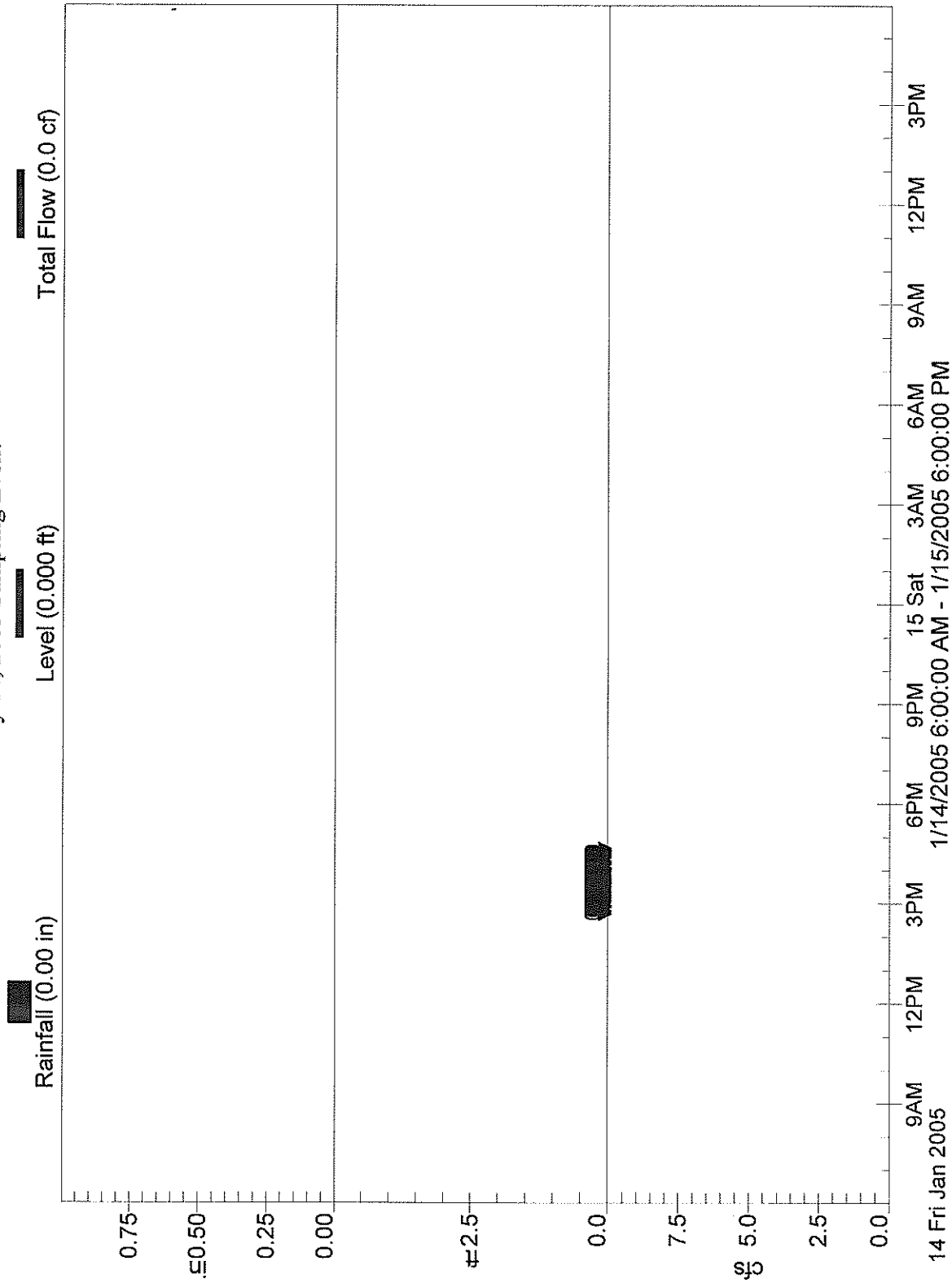
Howell Creek Sampling Station

January 14, 2005 Sampling Event



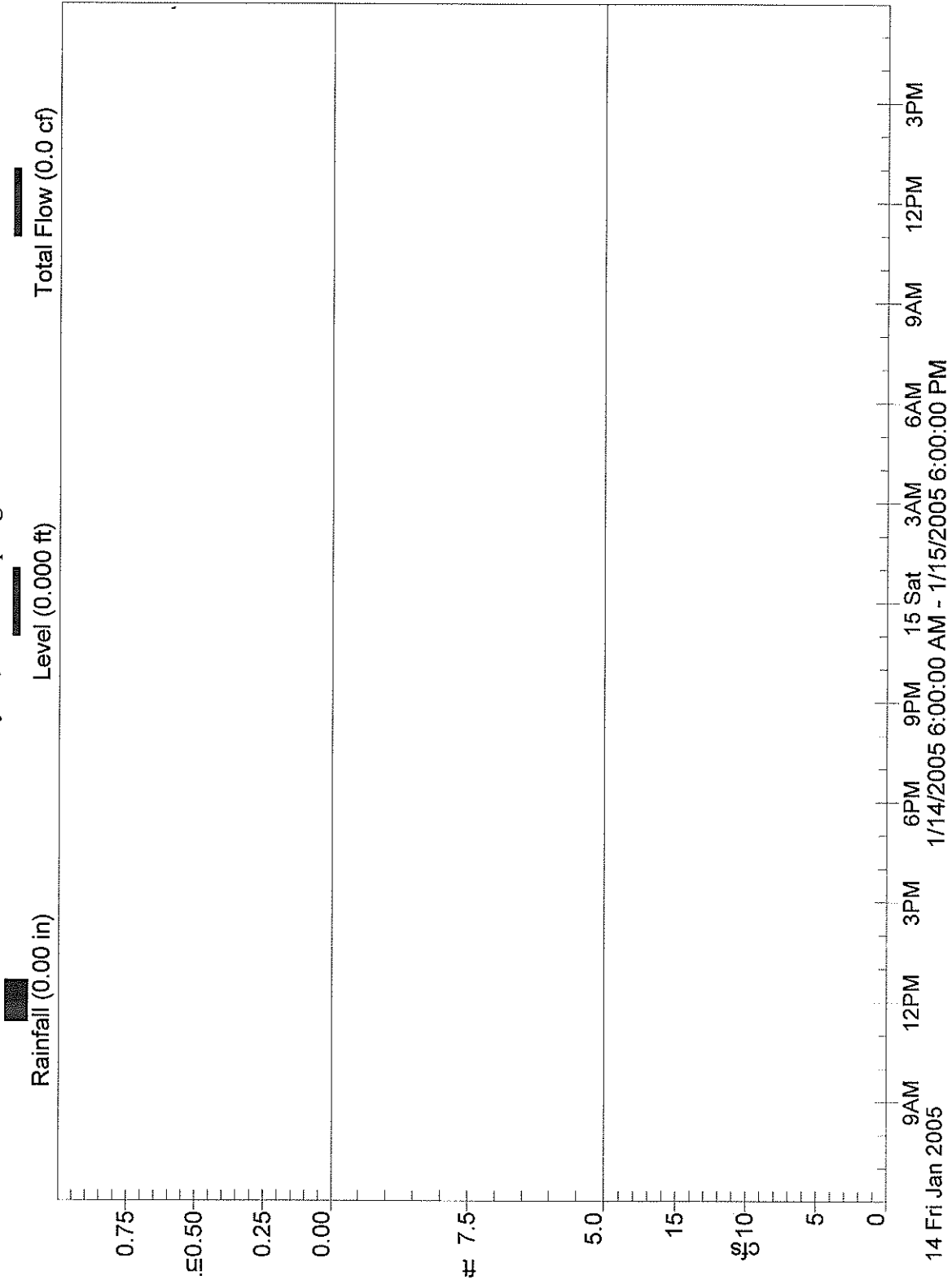
Solary Canal Sampling Station

January 14, 2005 Sampling Event



Soldier Creek Sampling Station

January 14, 2005 Sampling Event



GRAPHICAL RESULTS

SAMPLE EVENT NO. 5

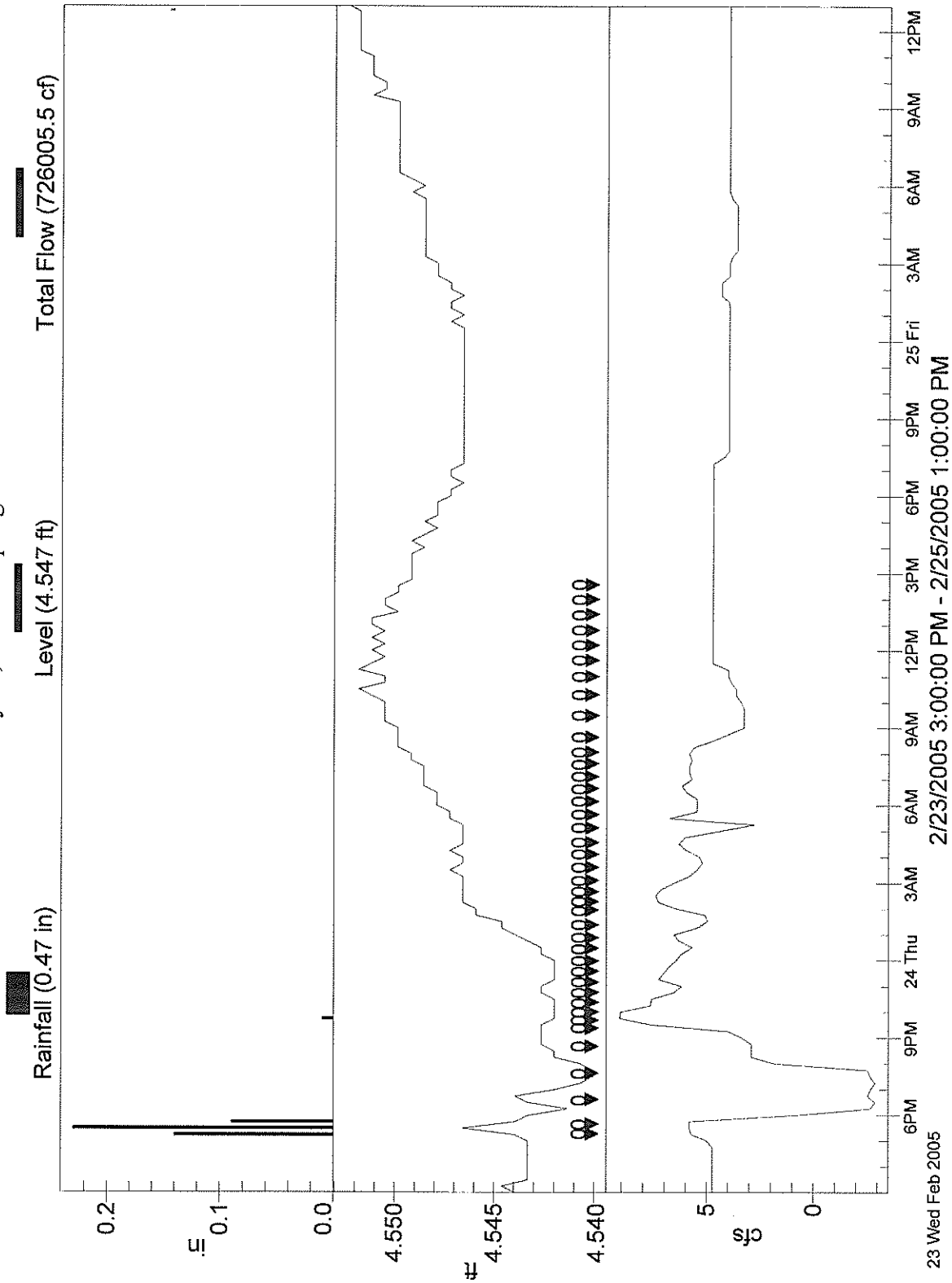
February 23, 2005

STATIONS SAMPLED:

HOWELL CREEK

Howell Creek Sampling Station

February 23, 2005 Sampling Event



GRAPHICAL RESULTS

SAMPLE EVENT NO. 6

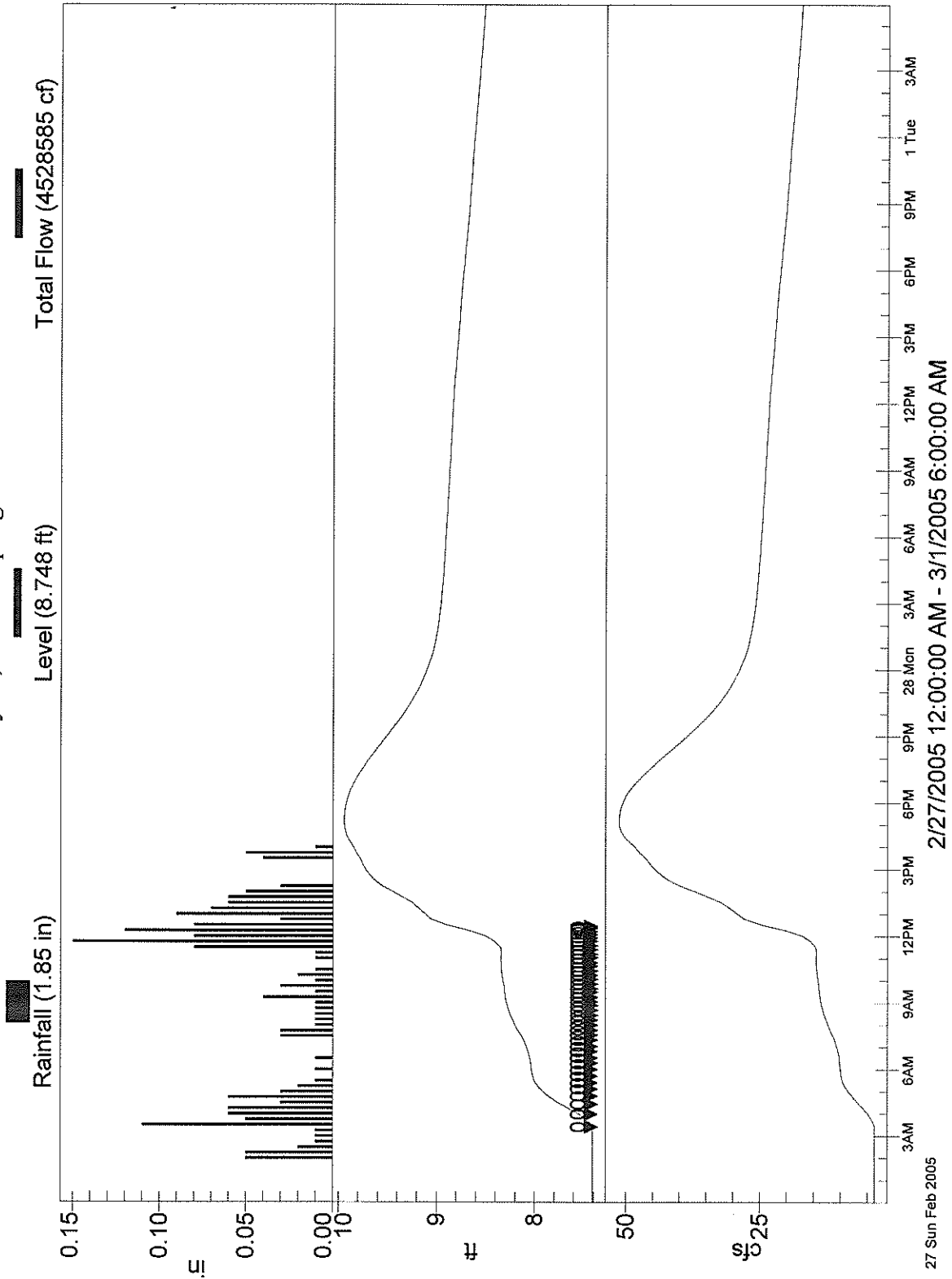
February 27, 2005

STATIONS SAMPLED:

GEE CREEK
SIX MILE CREEK
SOLARY CANAL

Gee Creek Sampling Station

February 27, 2005 Sampling Event

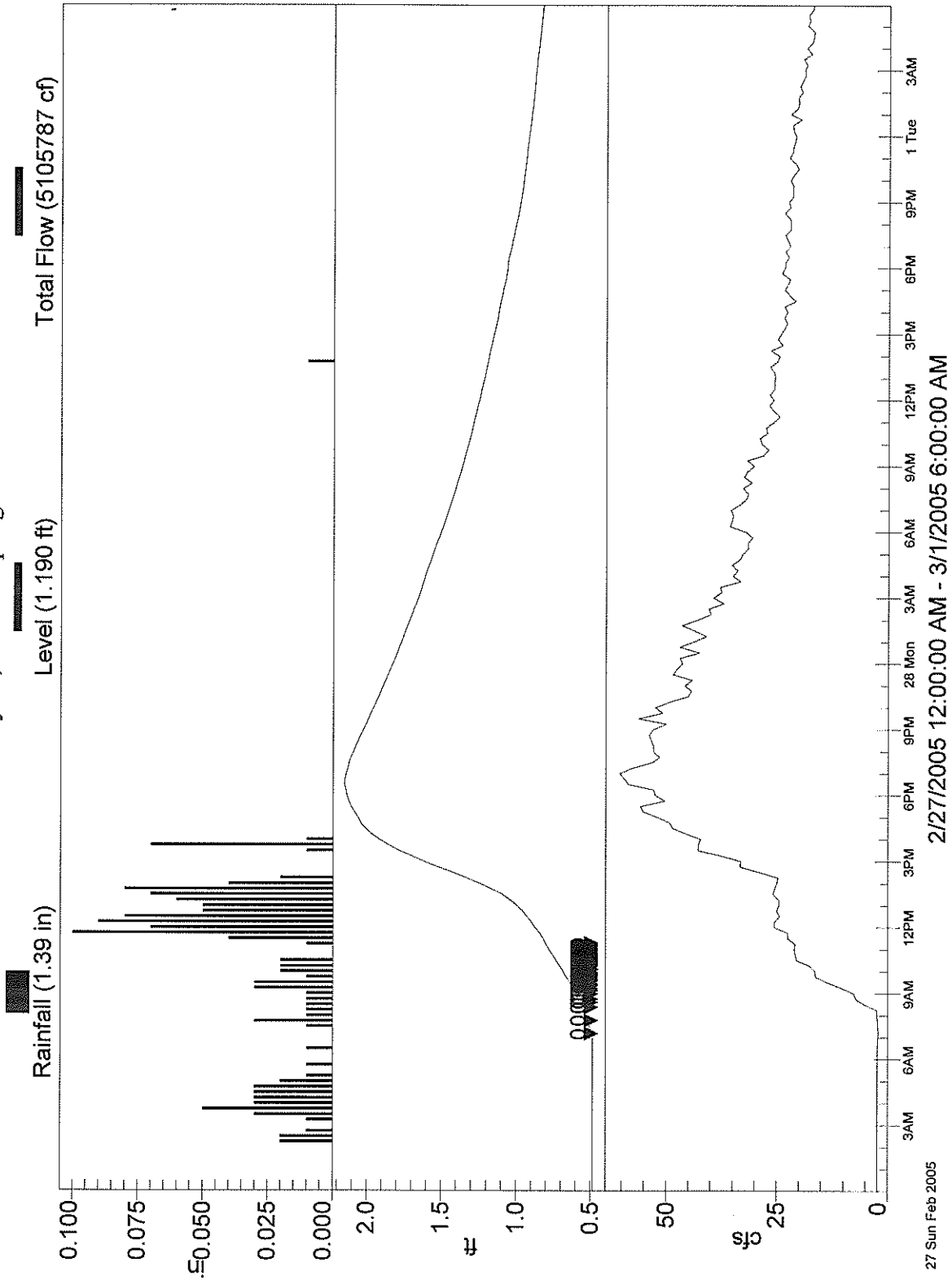


2/27/2005 12:00:00 AM - 3/1/2005 6:00:00 AM

27 Sun Feb 2005

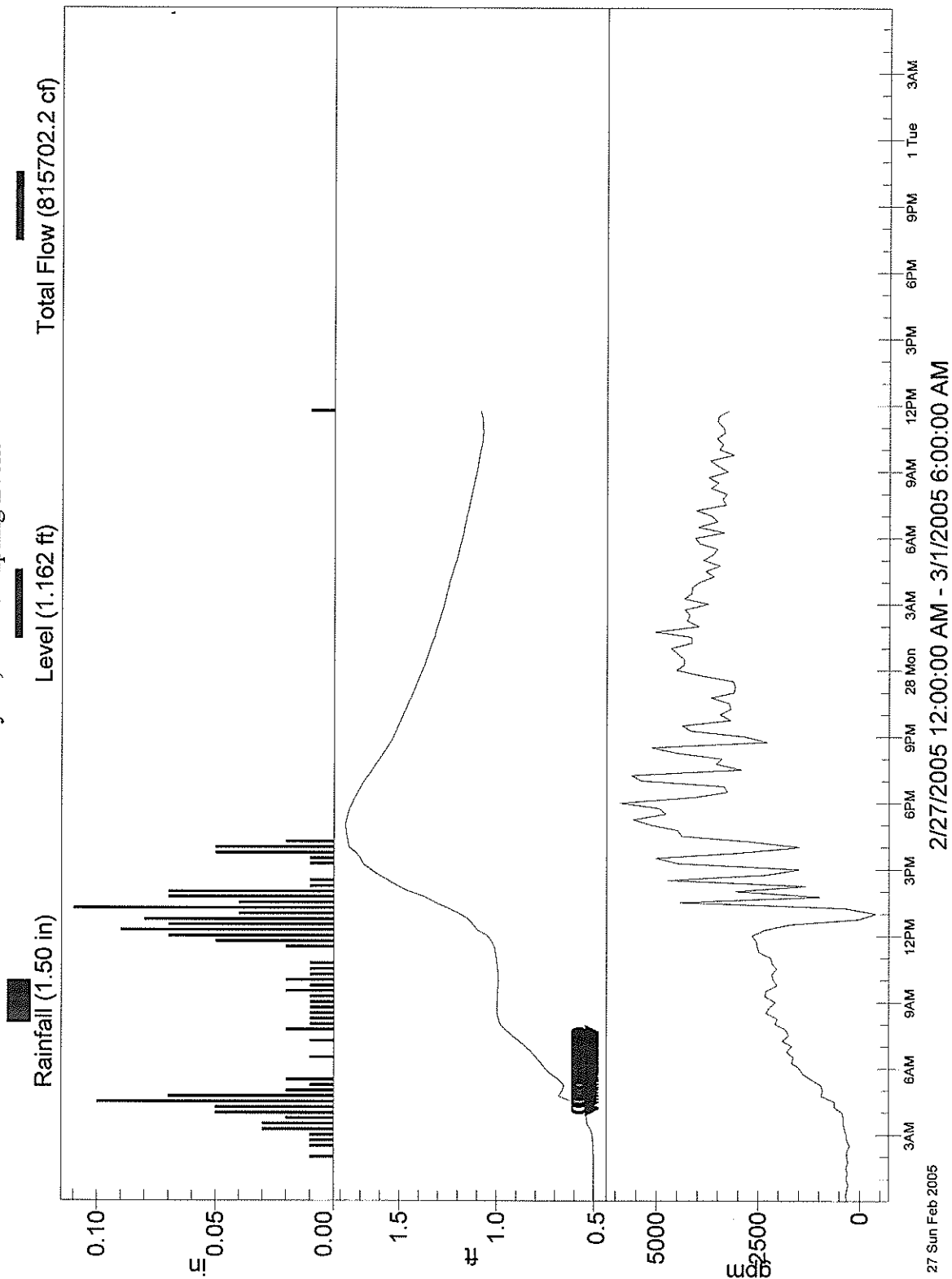
Six Mile Creek Sampling Station

February 27, 2005 Sampling Event



Solary Canal Sampling Station

February 27, 2005 Sampling Event



GRAPHICAL RESULTS

SAMPLE EVENT NO. 7

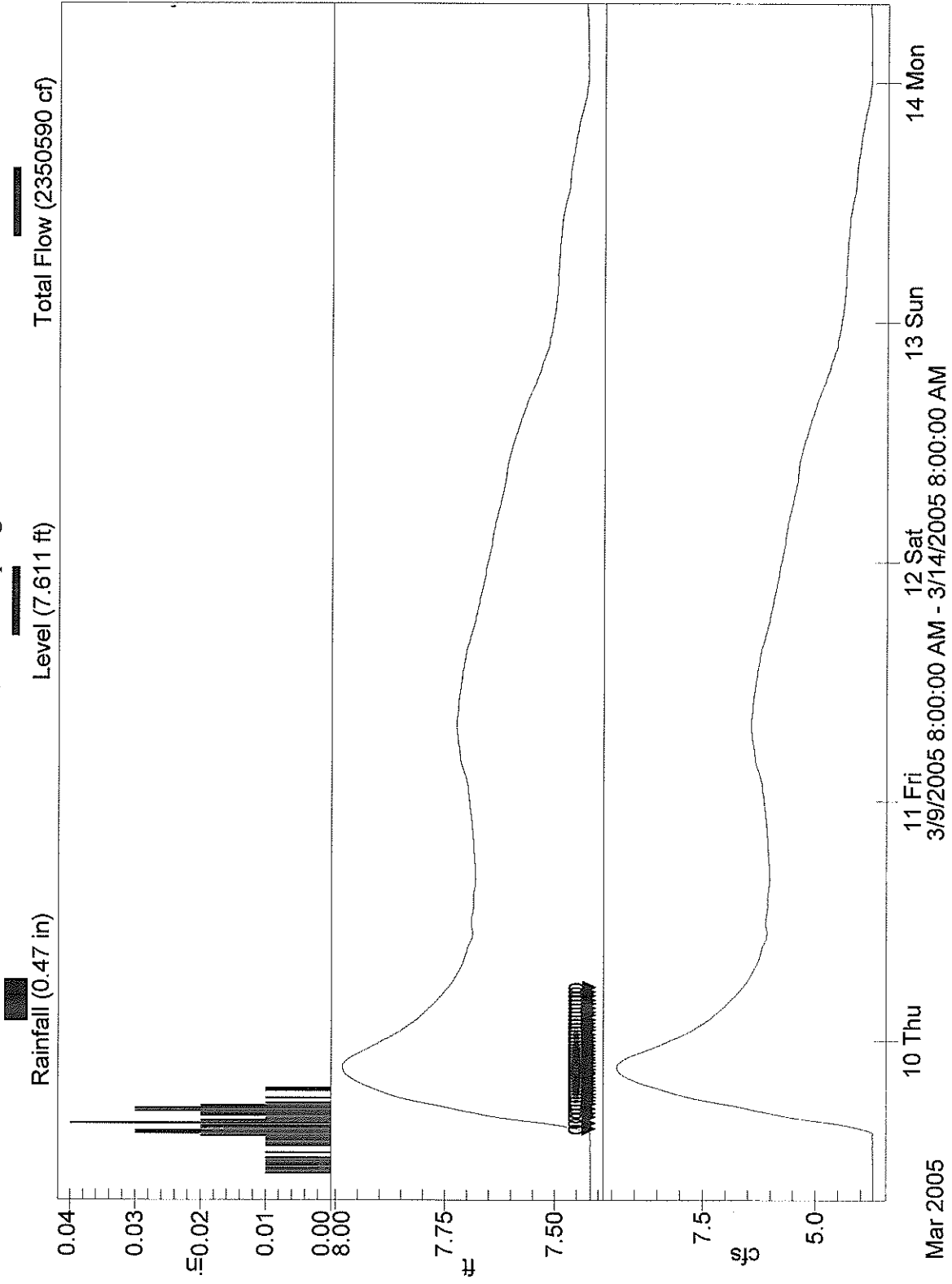
March 9, 2005

STATIONS SAMPLED:

GEE CREEK
SIX MILE CREEK
SOLARY CANAL

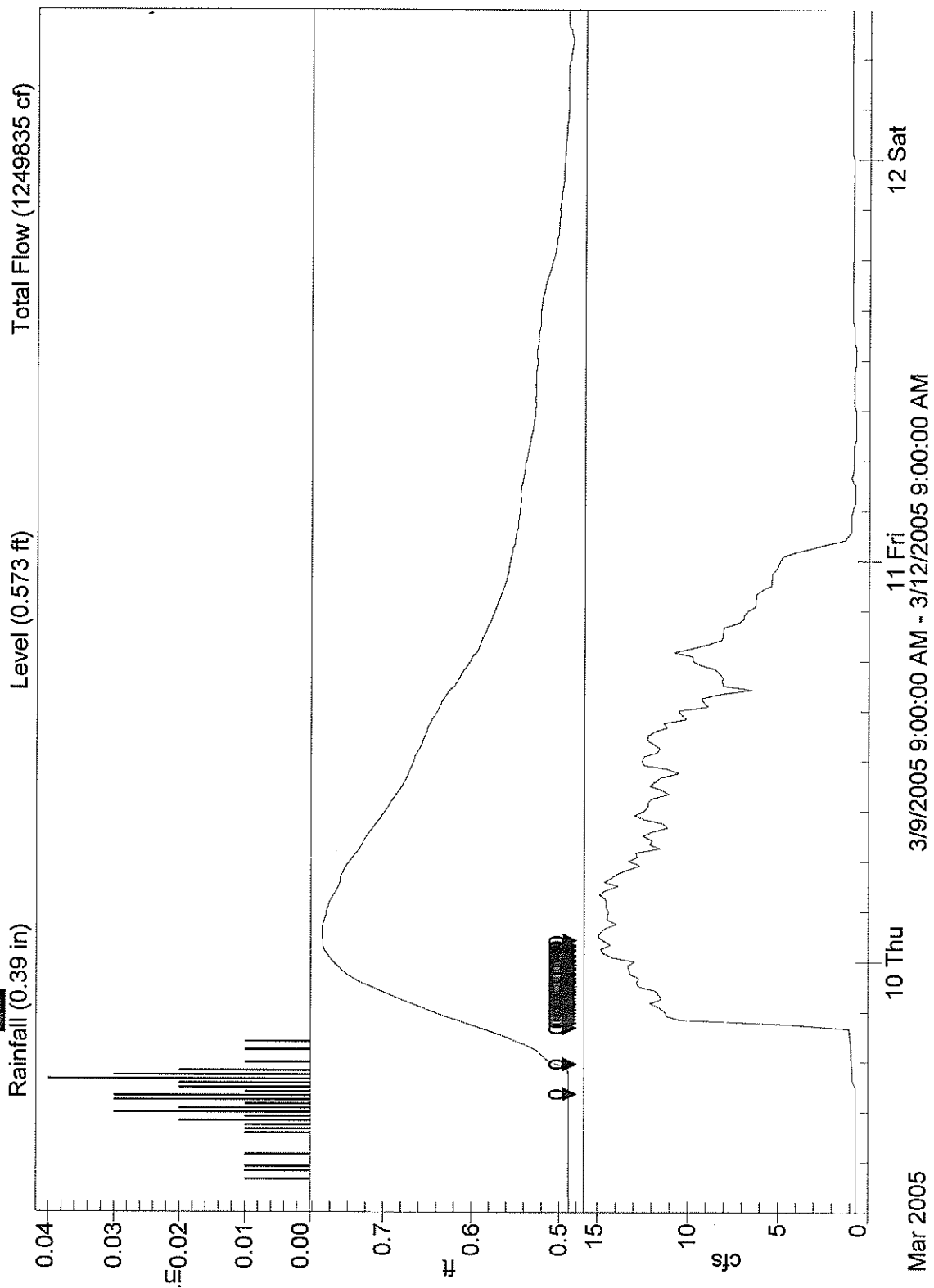
Gee Creek Sampling Station

March 9, 2005 Sampling Event



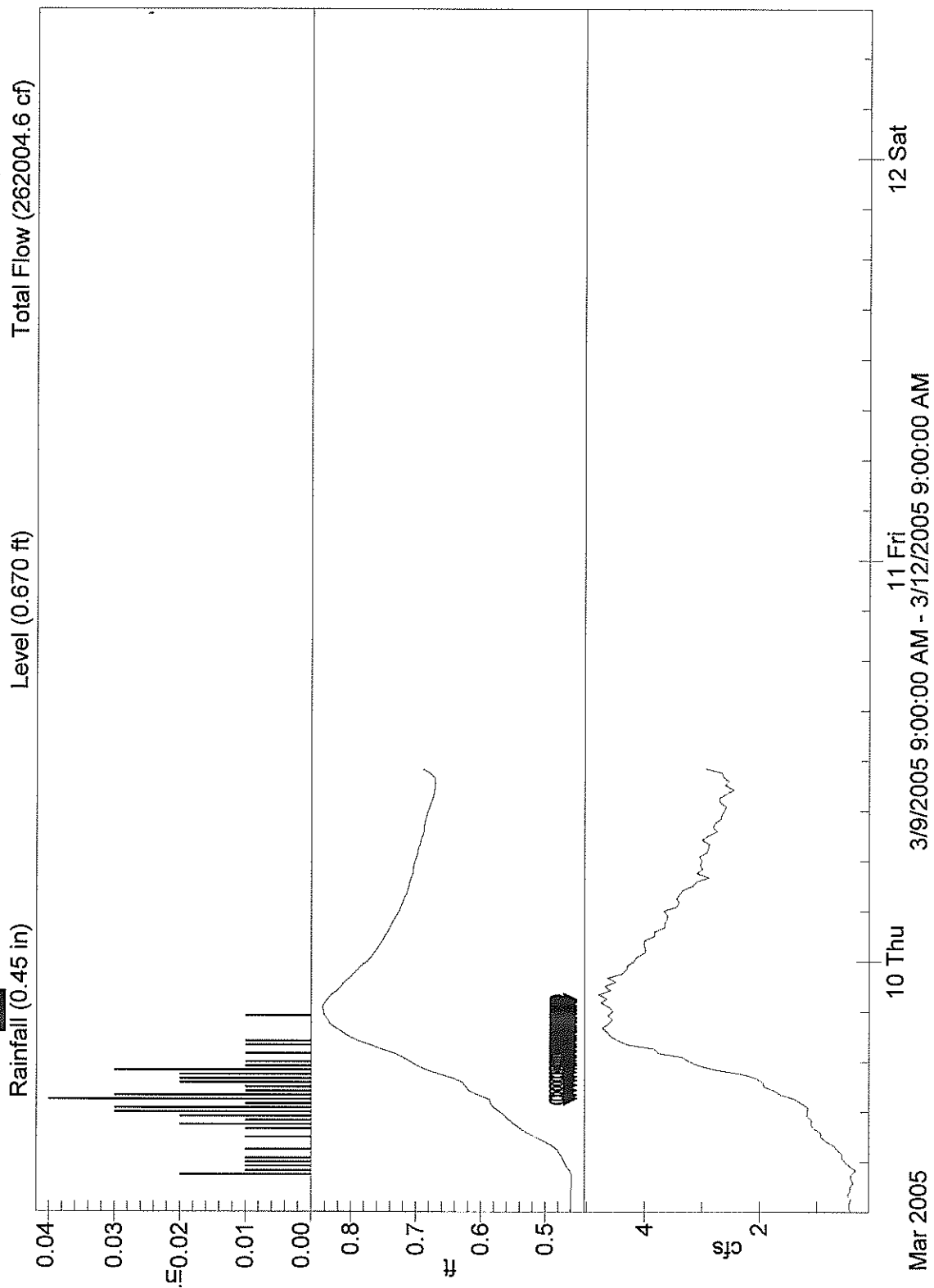
Six Mile Creek Sampling Station

March 9, 2005 Sampling Event



Solary Canal Sampling Station

March 9, 2005 Sampling Event



GRAPHICAL RESULTS

SAMPLE EVENT NO. 8

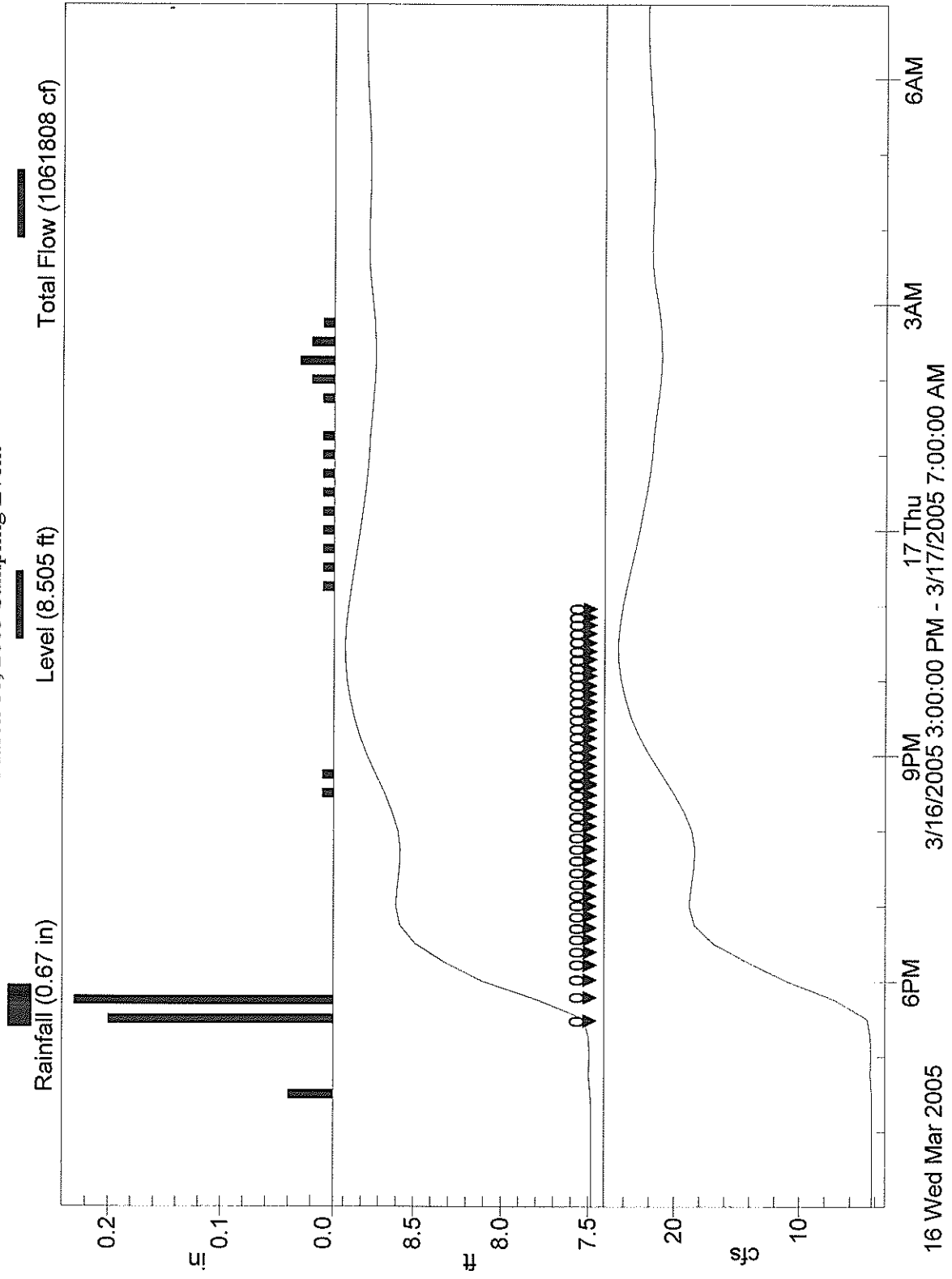
March 16, 2005

STATIONS SAMPLED:

GEE CREEK
HOWELL CREEK
SOLARY CANAL
SOLDIER CREEK

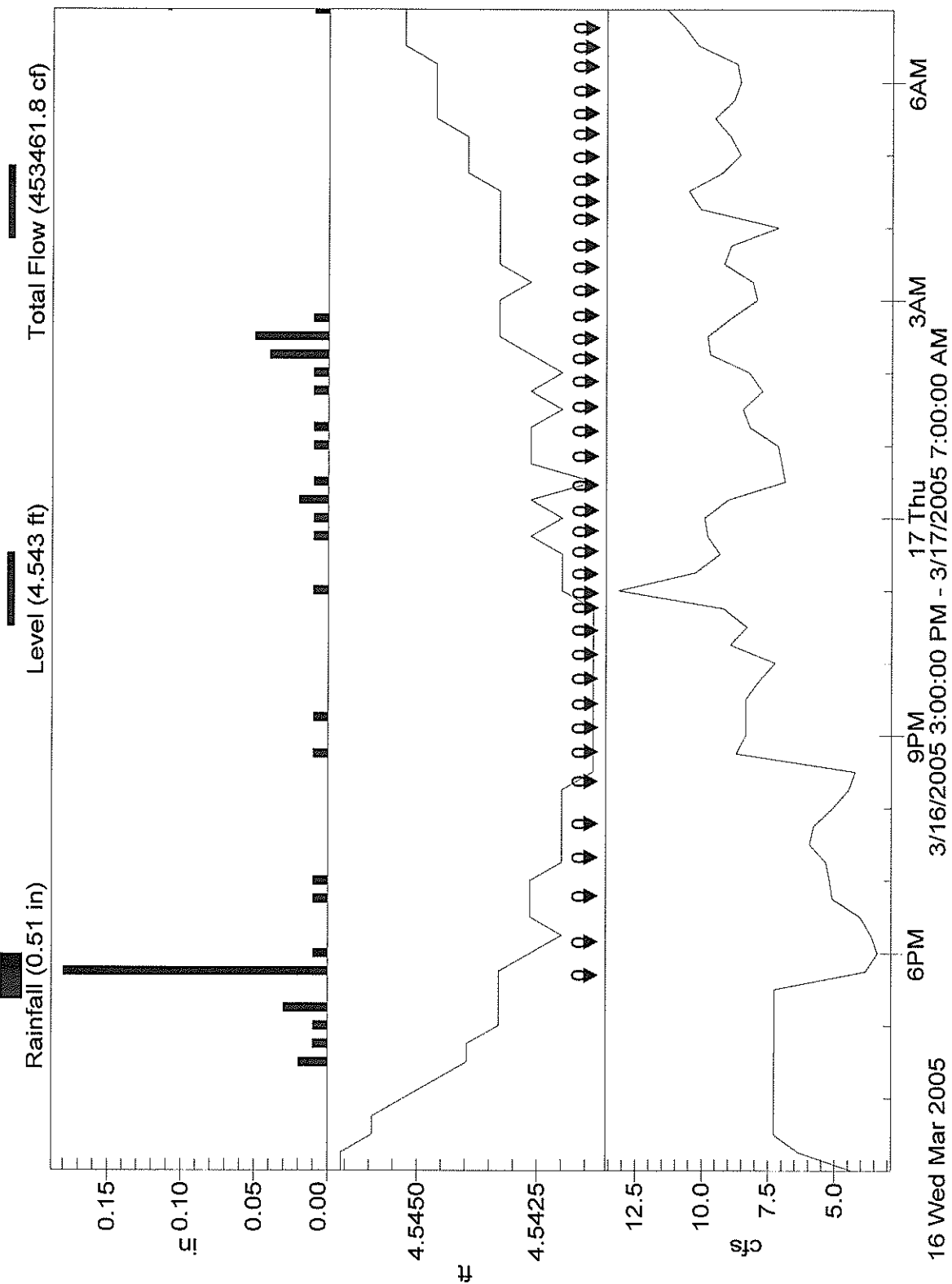
Gee Creek Sampling Station

March 16, 2005 Sampling Event



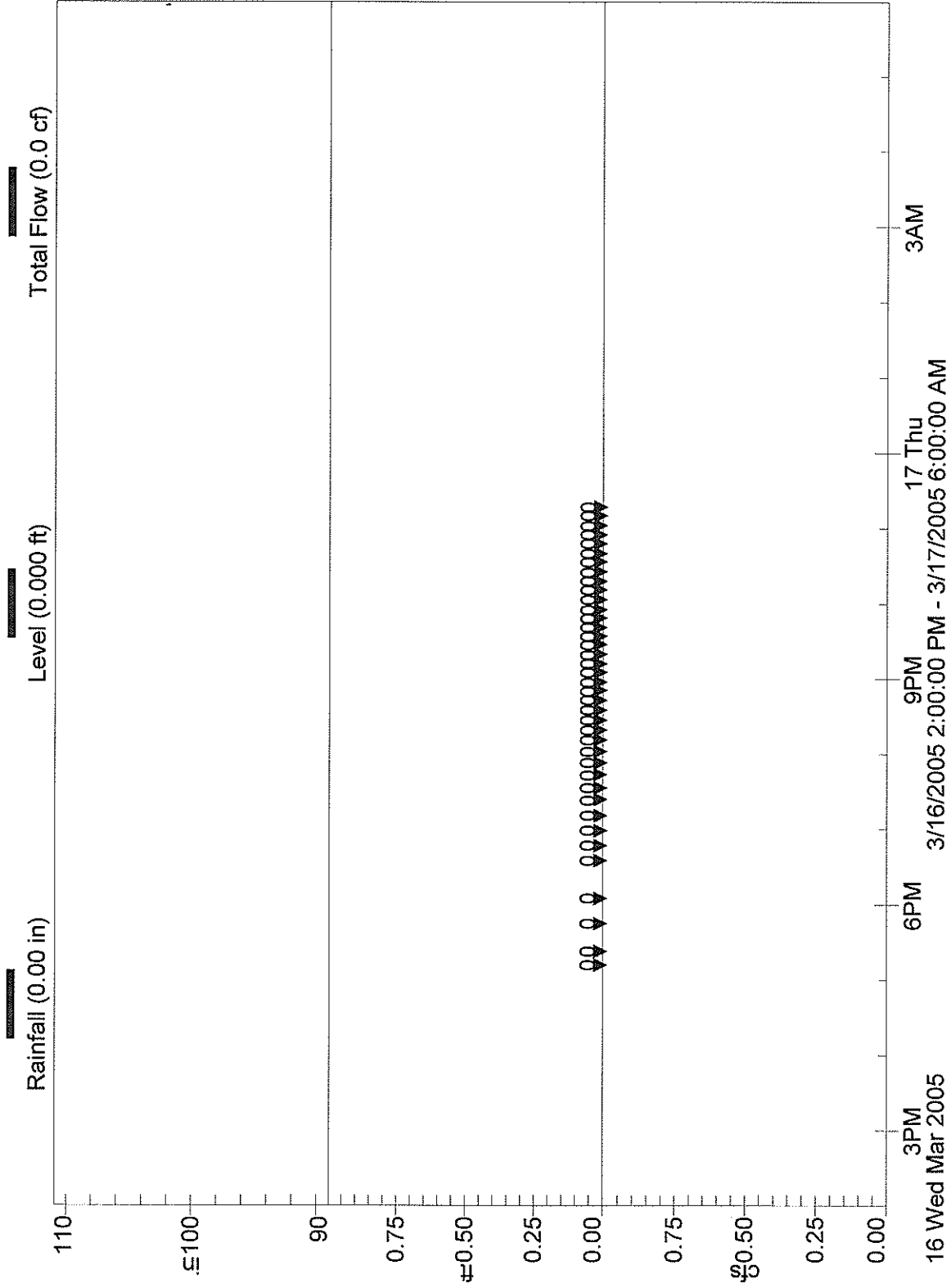
Howell Creek Sampling Station

March 16, 2005 Sampling Event



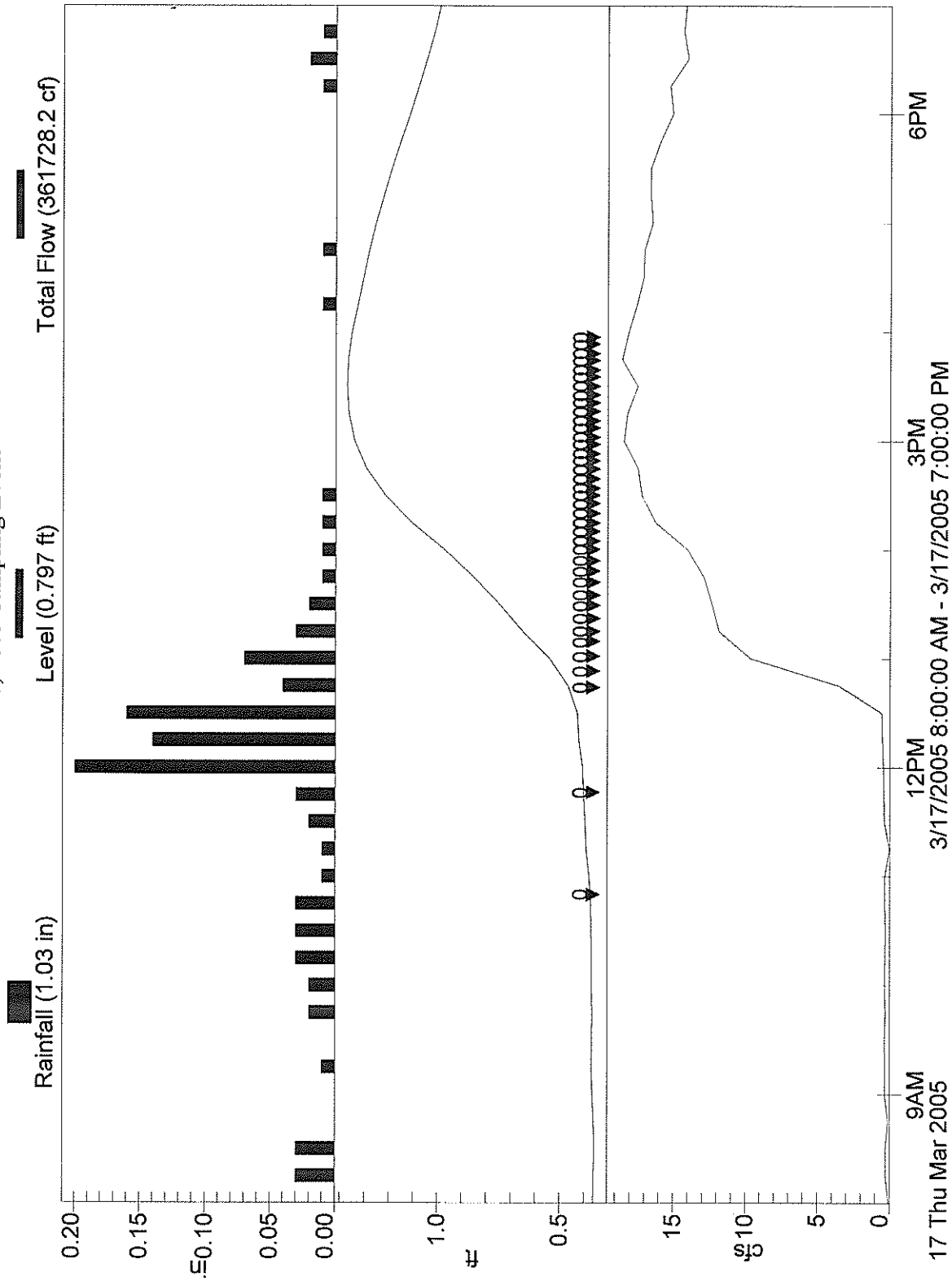
Solary Canal Sampling Station

March 16, 2005 Sampling Event



Soldier Creek Sampling Station

March 16, 2005 Sampling Event



GRAPHICAL RESULTS

SAMPLE EVENT NO. 9

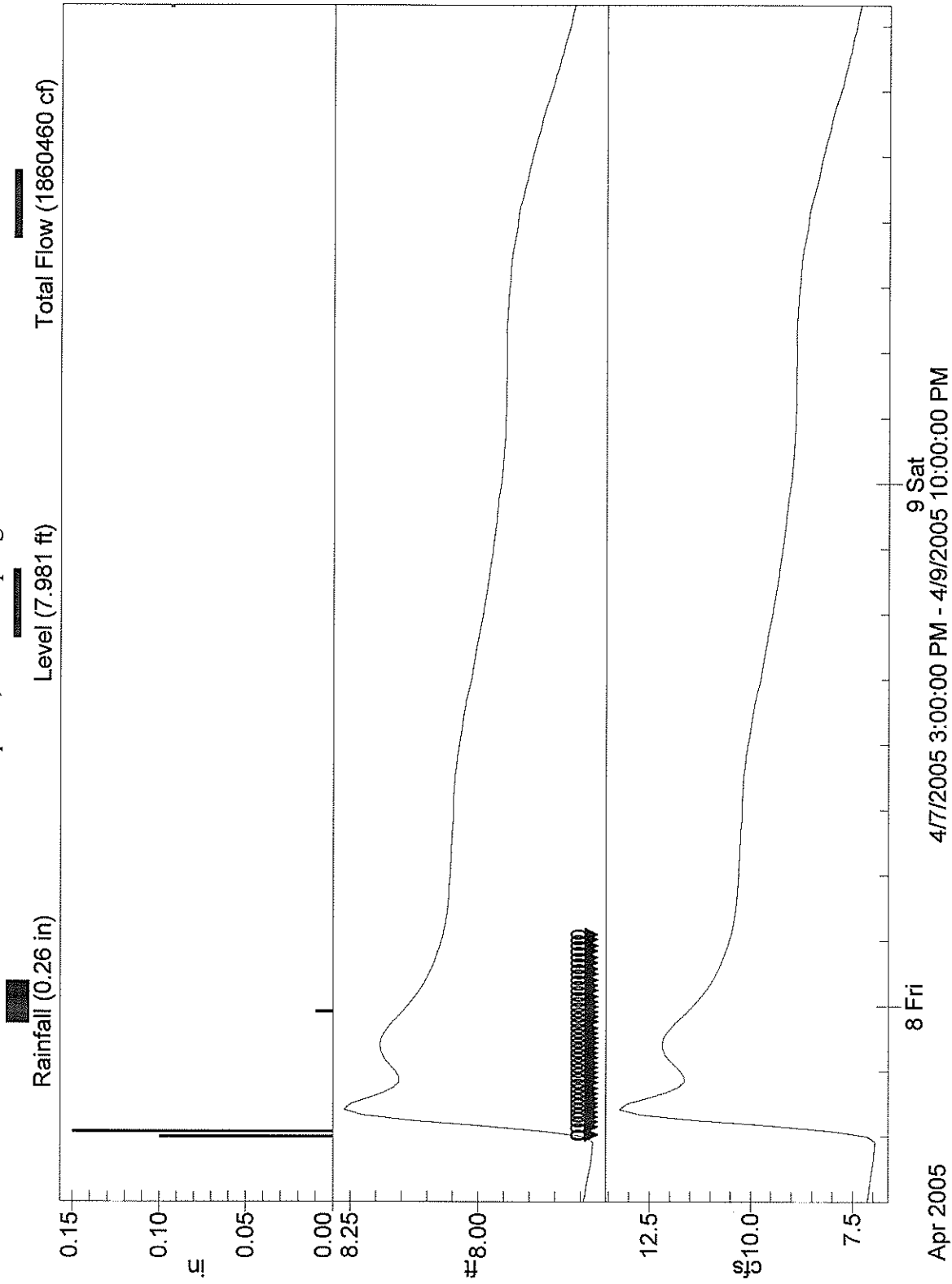
April 7, 2005

STATIONS SAMPLED:

GEE CREEK
HOWELL CREEK
SIX MILE CREEK
SOLARY CANAL
SOLDIER CREEK

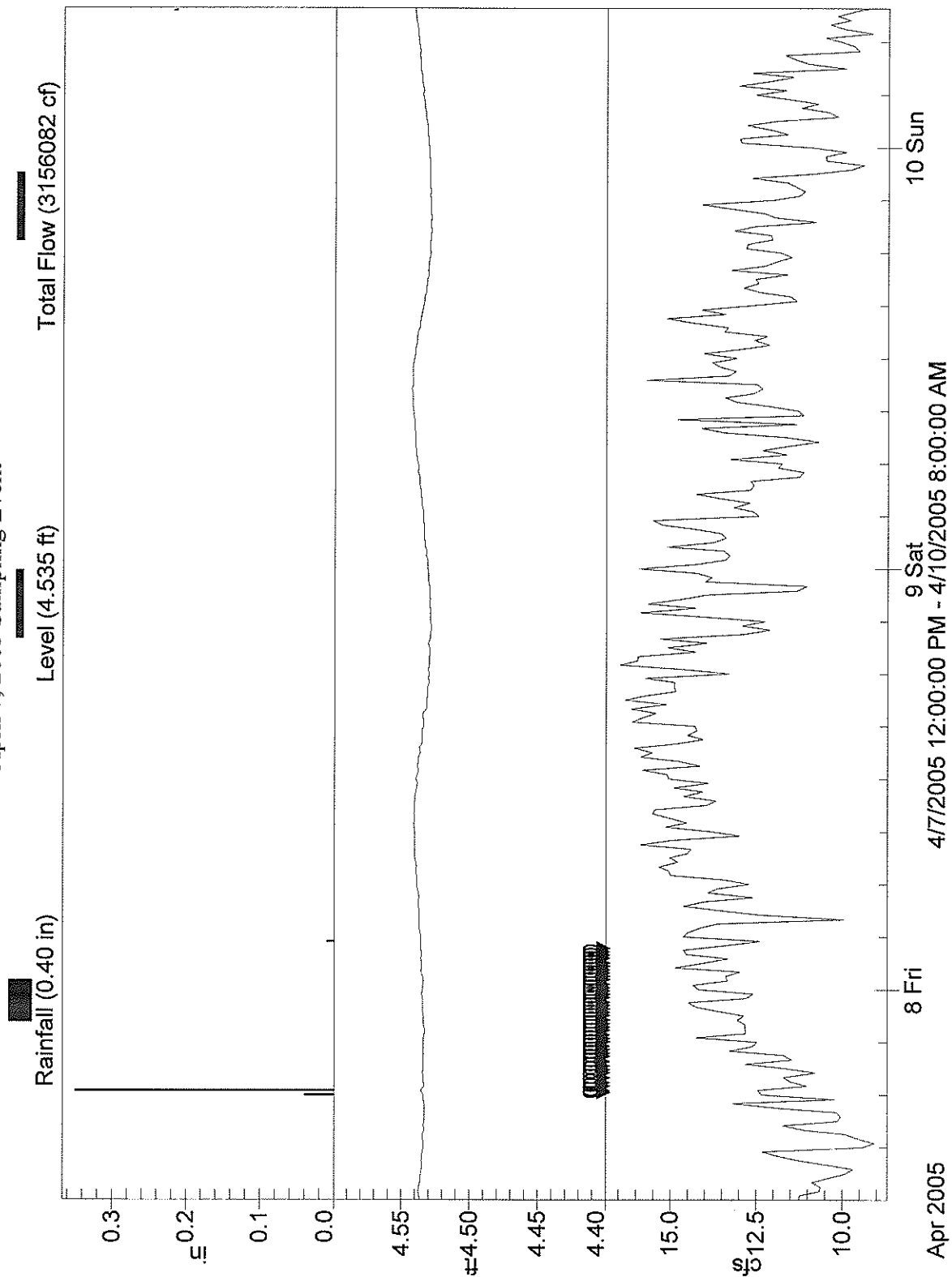
Gee Creek Sampling Station

April 7, 2005 Sampling Event



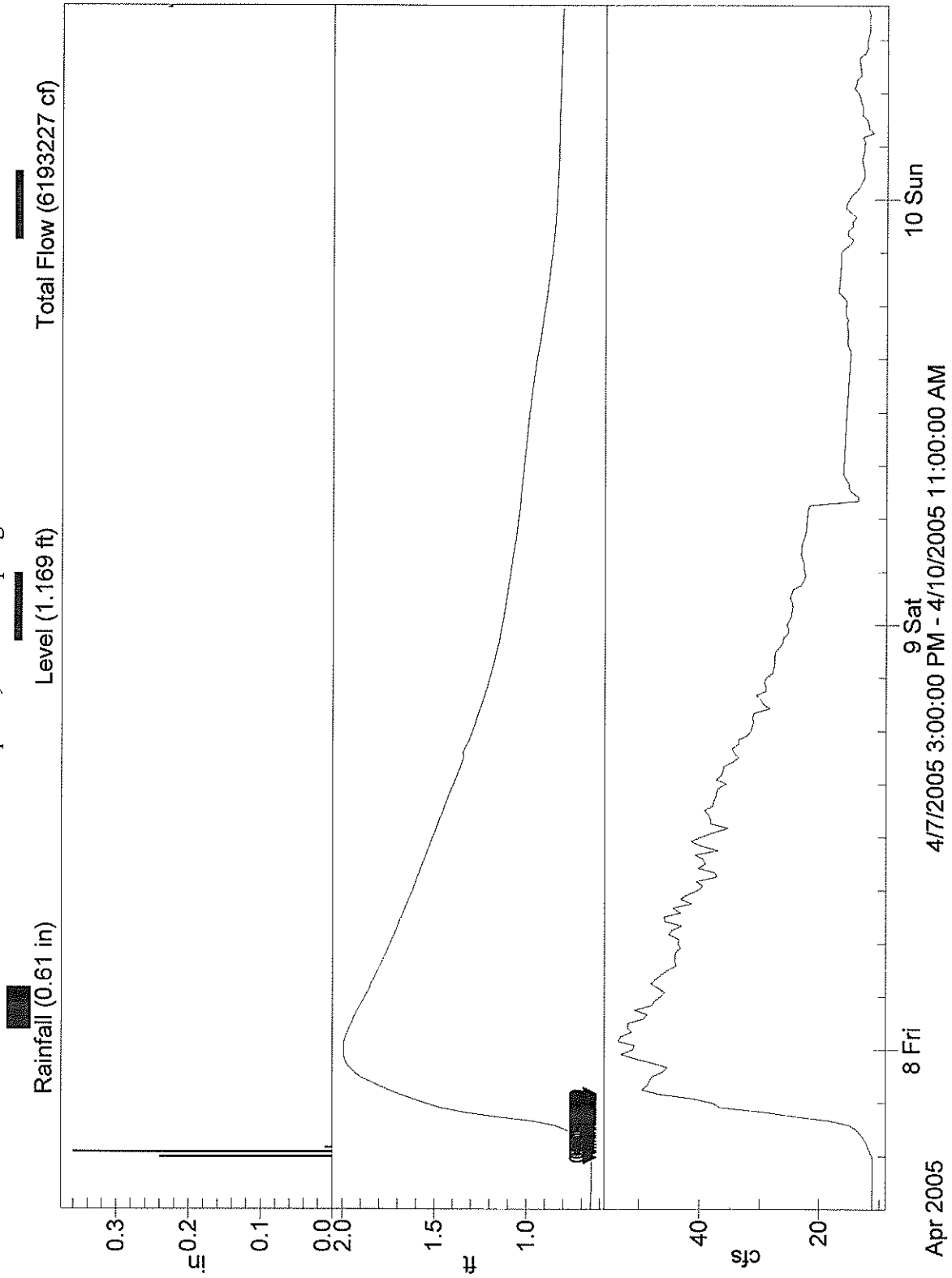
Howell Creek Sampling Station

April 7, 2005 Sampling Event



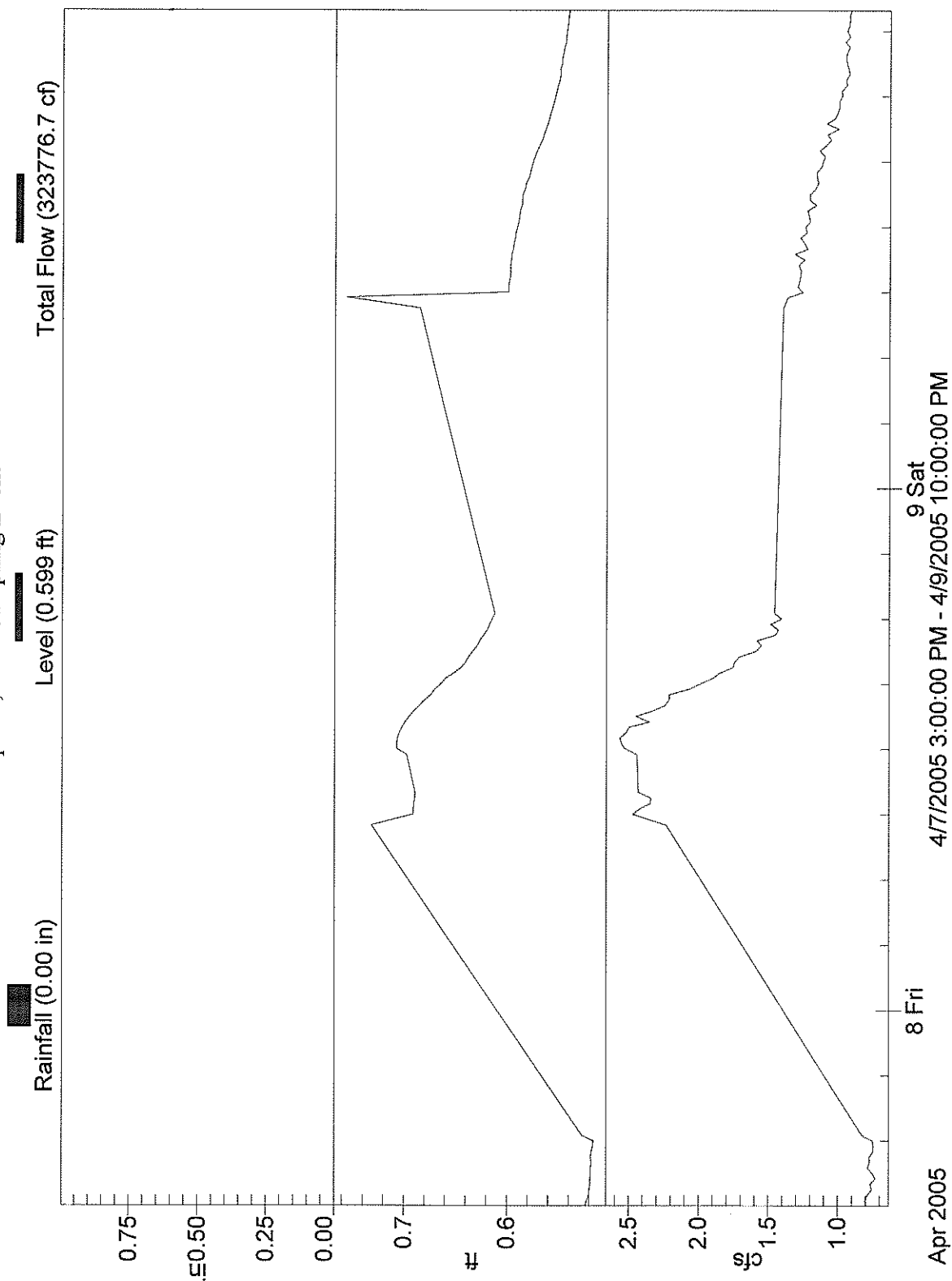
Six Mile Creek Sampling Data

April 7, 2005 Sampling Event



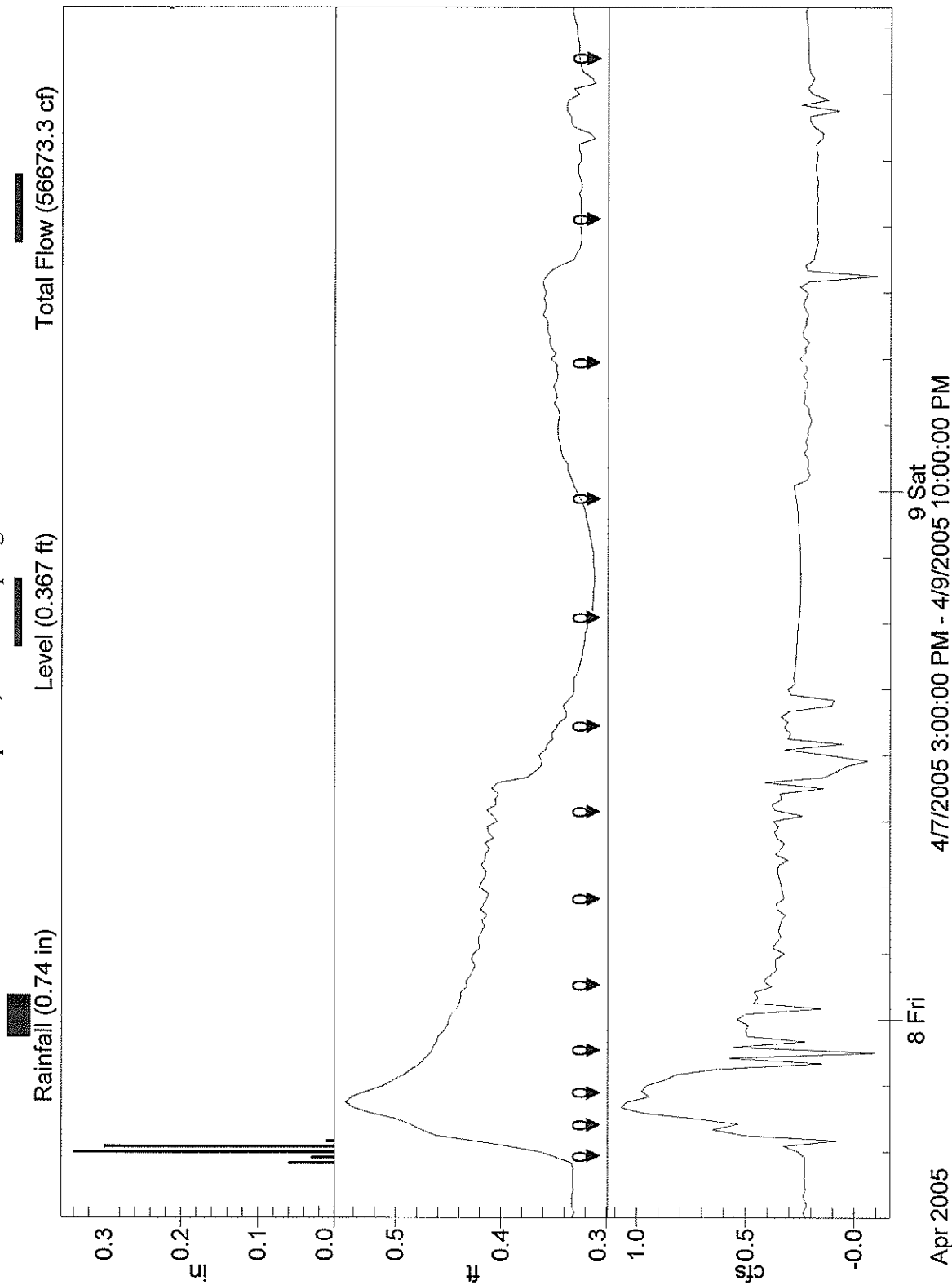
Solary Canal Sampling Station

April 7, 2005 Sampling Event



Soldier Creek Sampling Station

April 7, 2005 Sampling Event



GRAPHICAL RESULTS

SAMPLE EVENT NO. 10

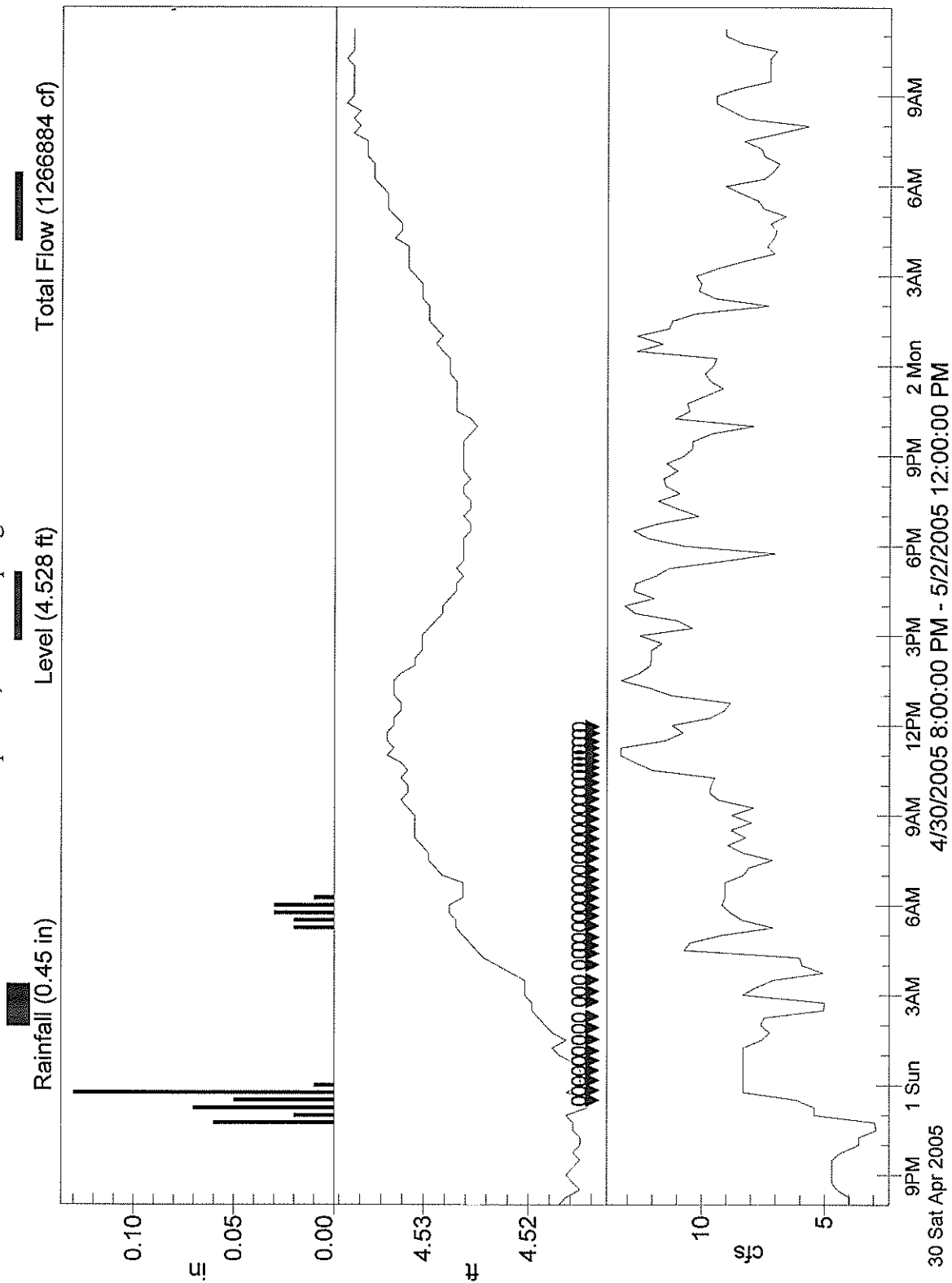
April 30, 2005

STATIONS SAMPLED:

HOWELL CREEK
SOLARY CANAL

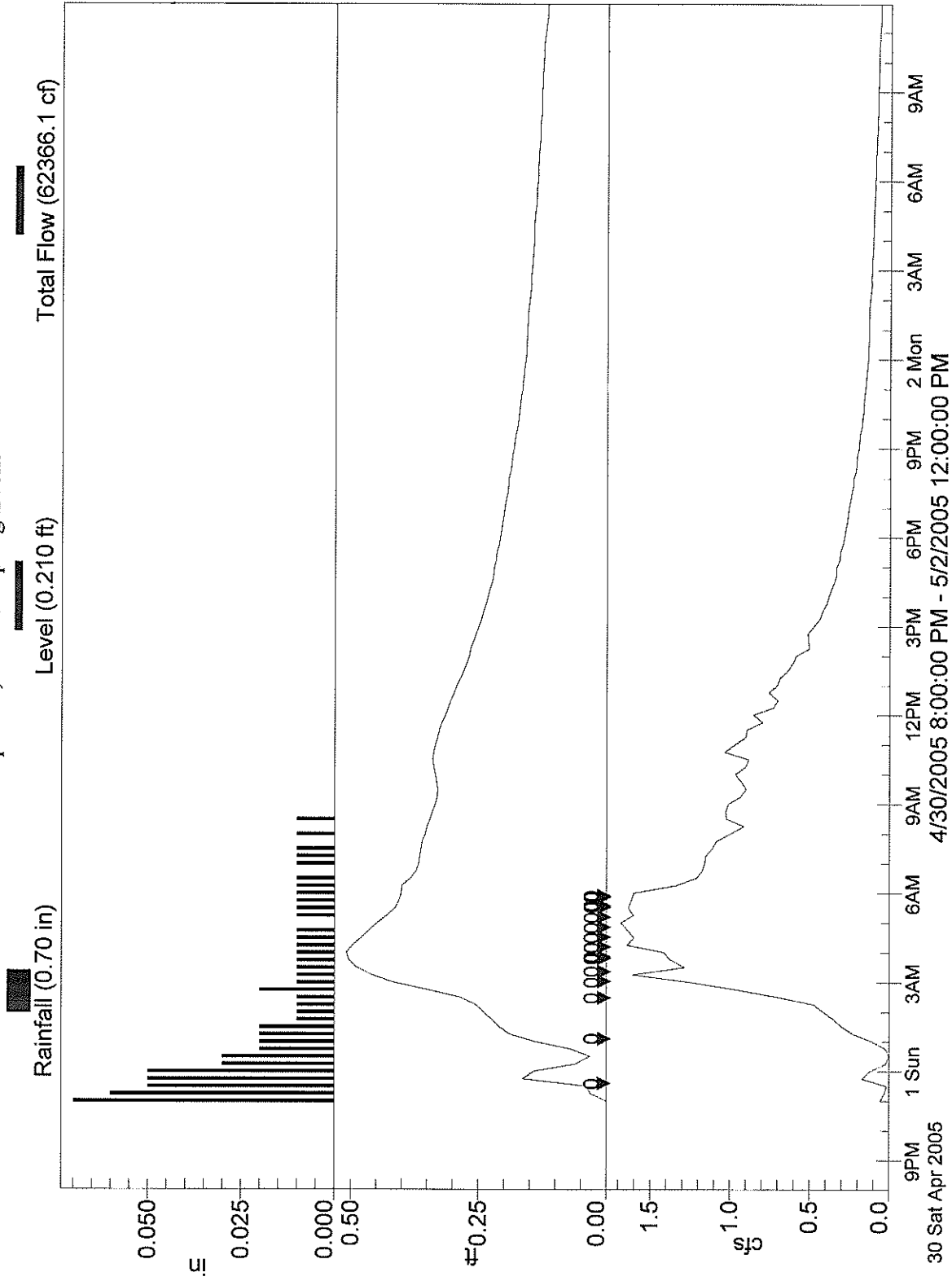
Howell Creek Sampling Station

April 30, 2005 Sampling Event



Solary Canal Sampling Station

April 30, 2005 Sampling Event



GRAPHICAL RESULTS

SAMPLE EVENT NO. 11

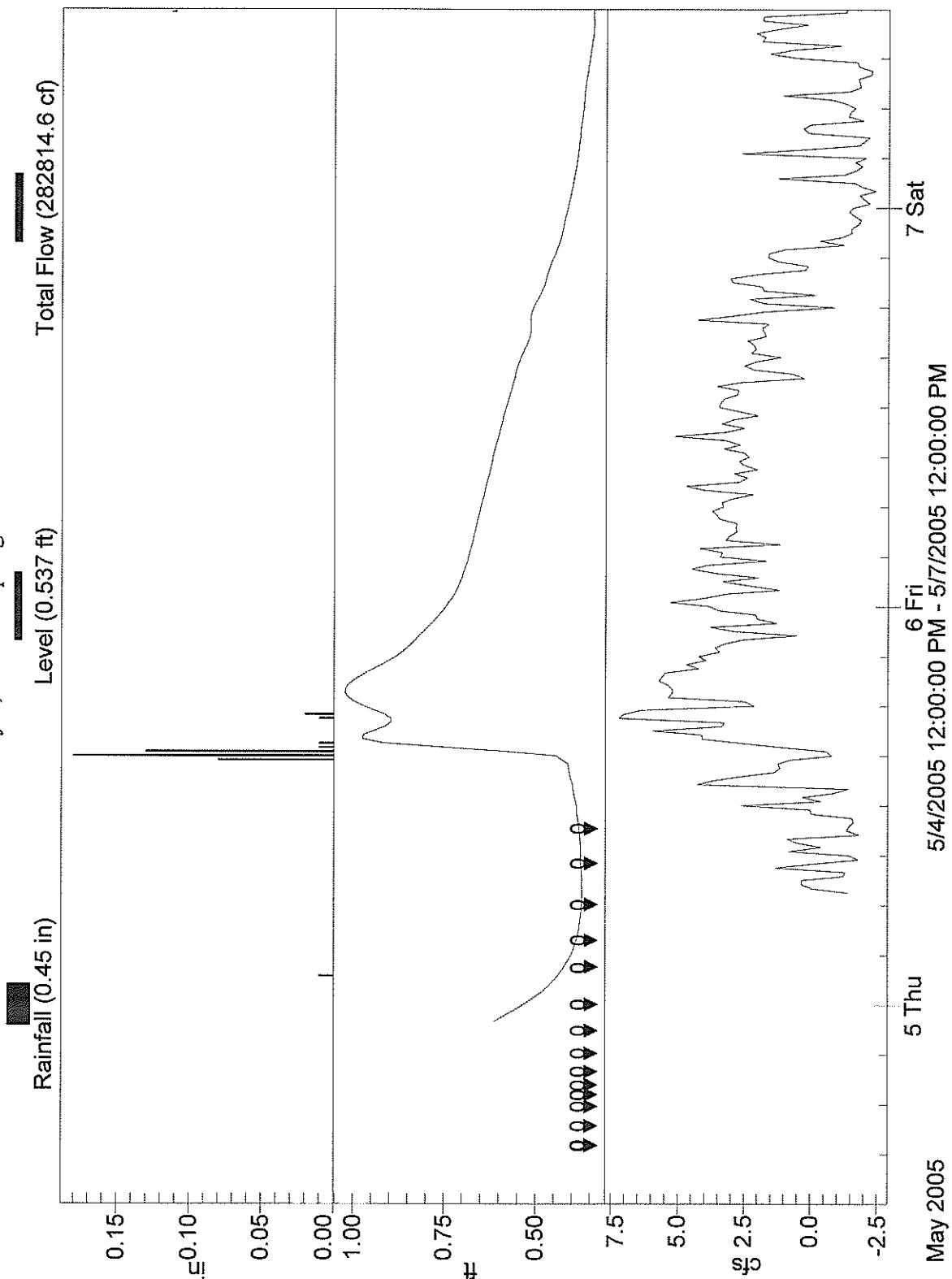
May 4, 2005

STATIONS SAMPLED:

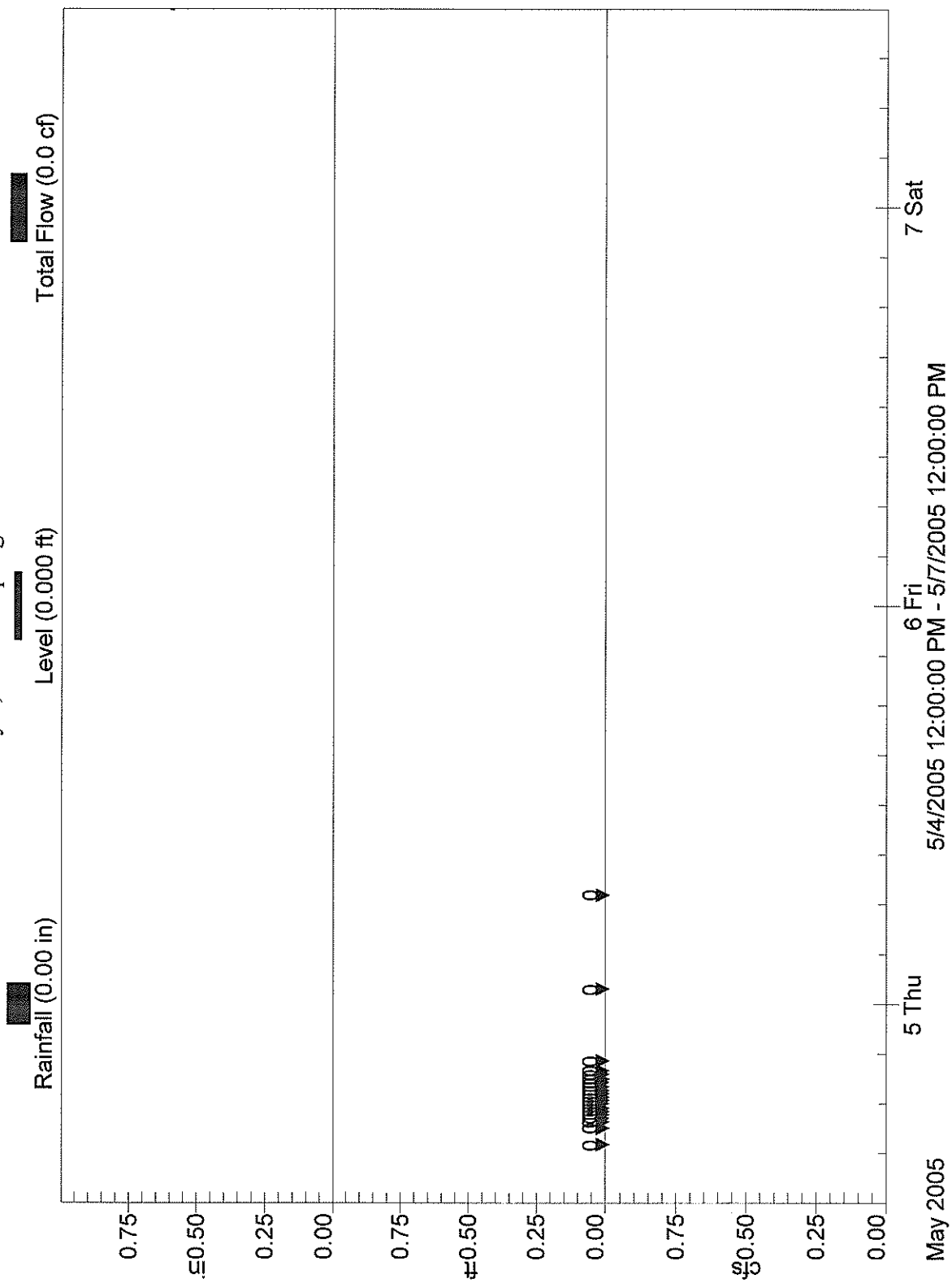
GEE CREEK
SOLDIER CREEK

Gee Creek Sampling Station

May 4, 2005 Sampling Event



May 4, 2005 Sampling Event



GRAPHICAL RESULTS

SAMPLE EVENT NO. 12

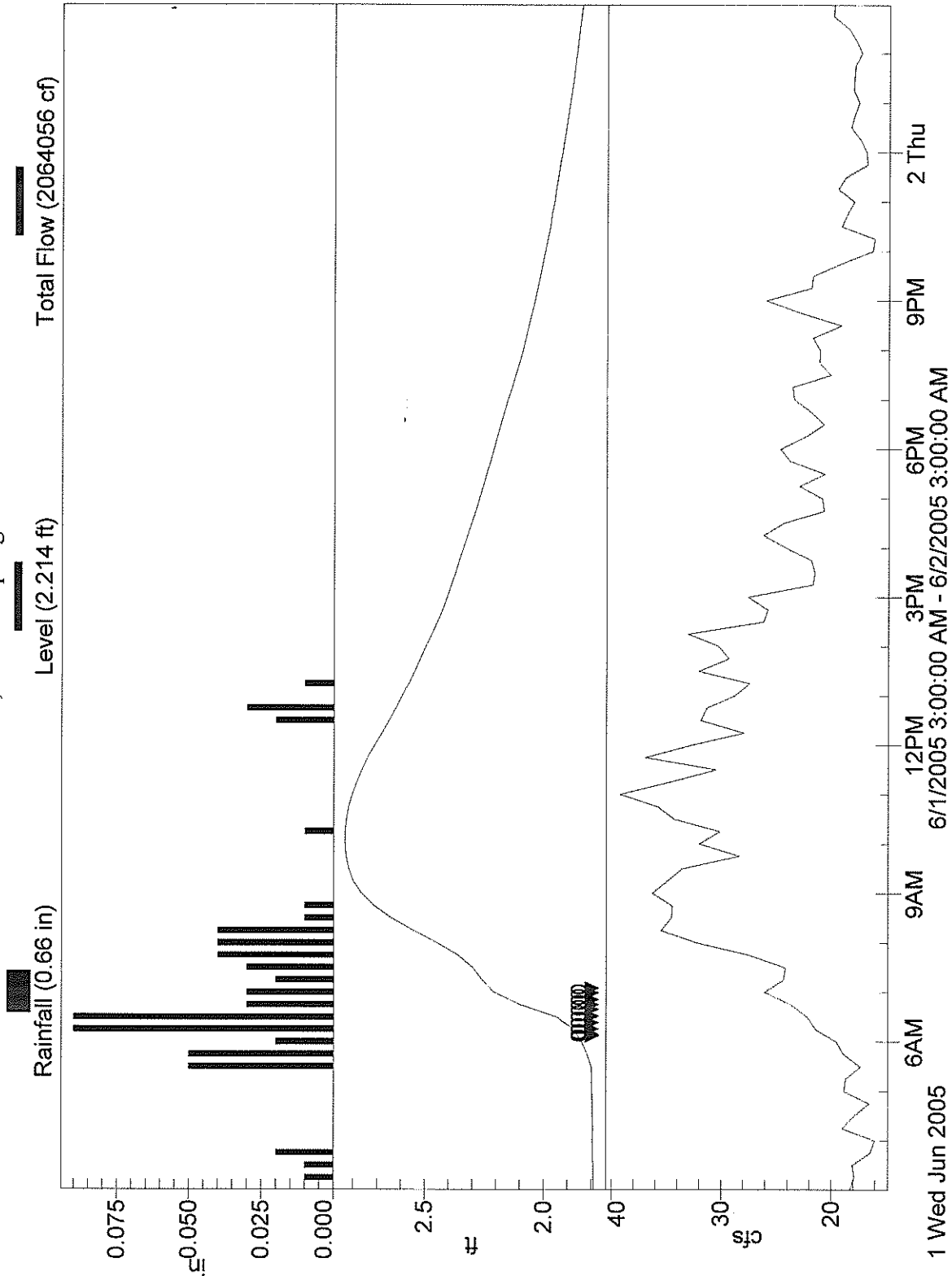
June 1, 2005

STATIONS SAMPLED:

GEE CREEK
HOWELL CREEK
SIX MILE CREEK
SOLDIER CREEK

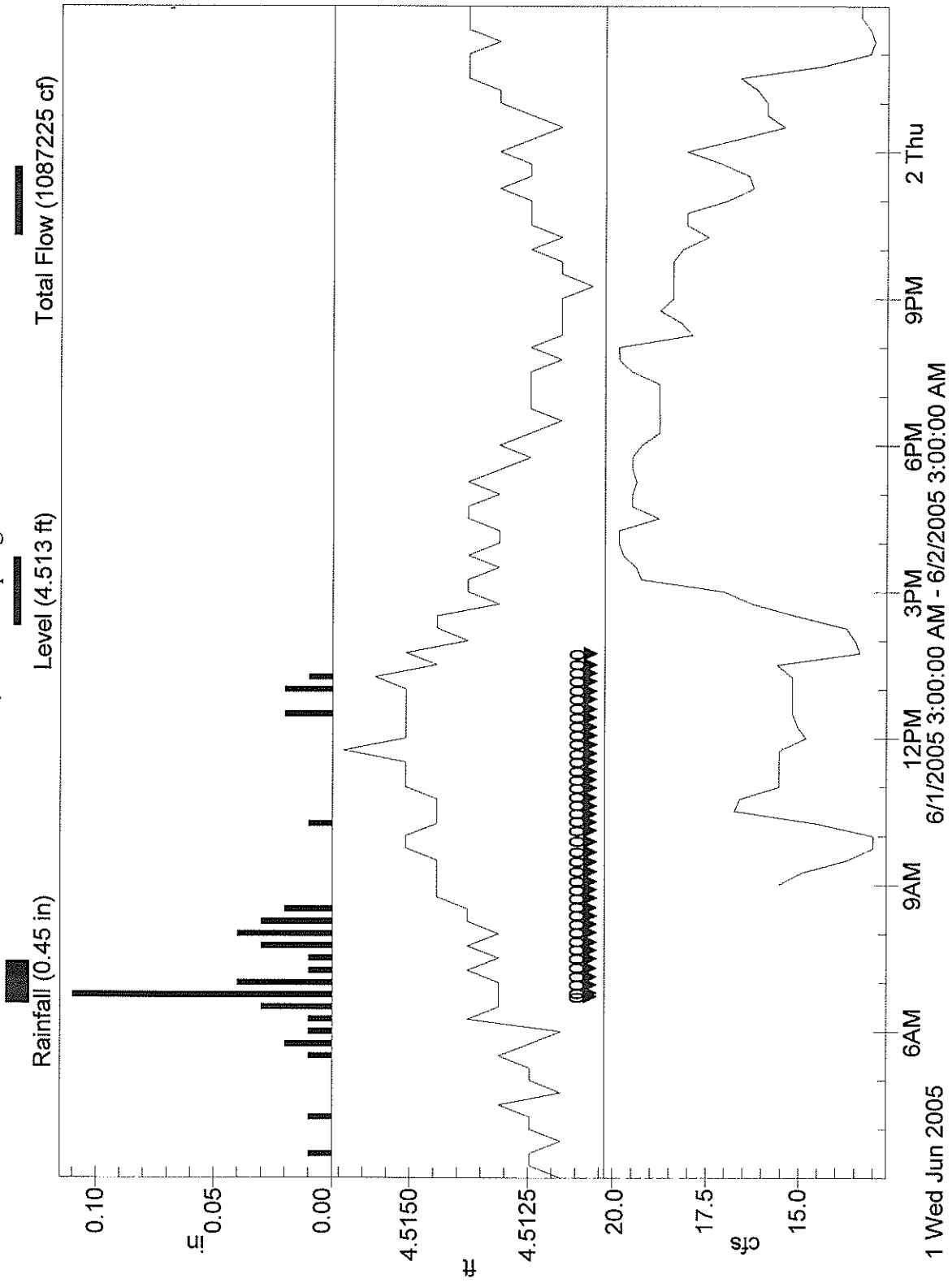
Gee Creek Sampling Station

June 1, 2005 Sampling Event



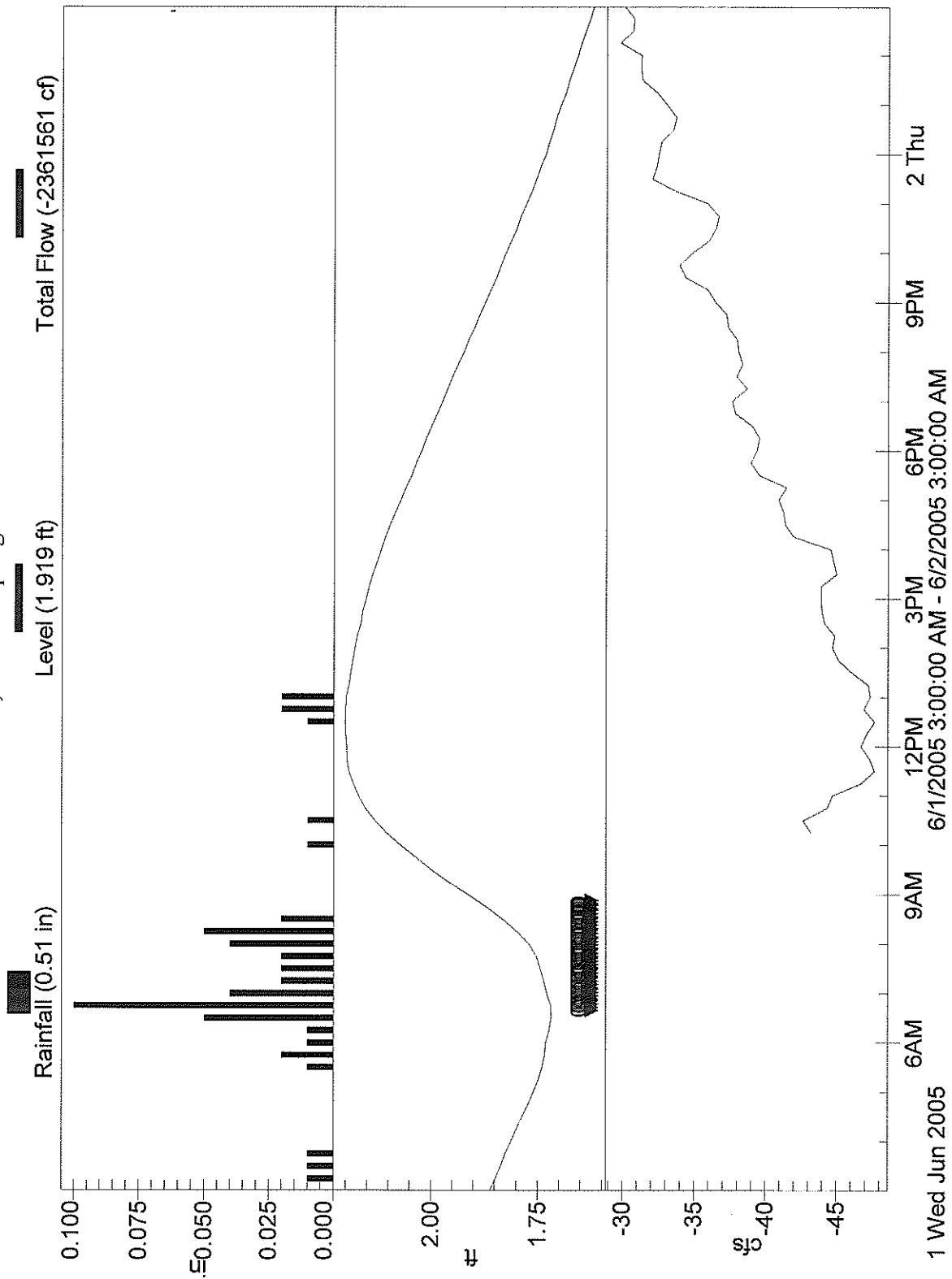
Howell Creek Sampling Station

June 1, 2005 Sampling Event



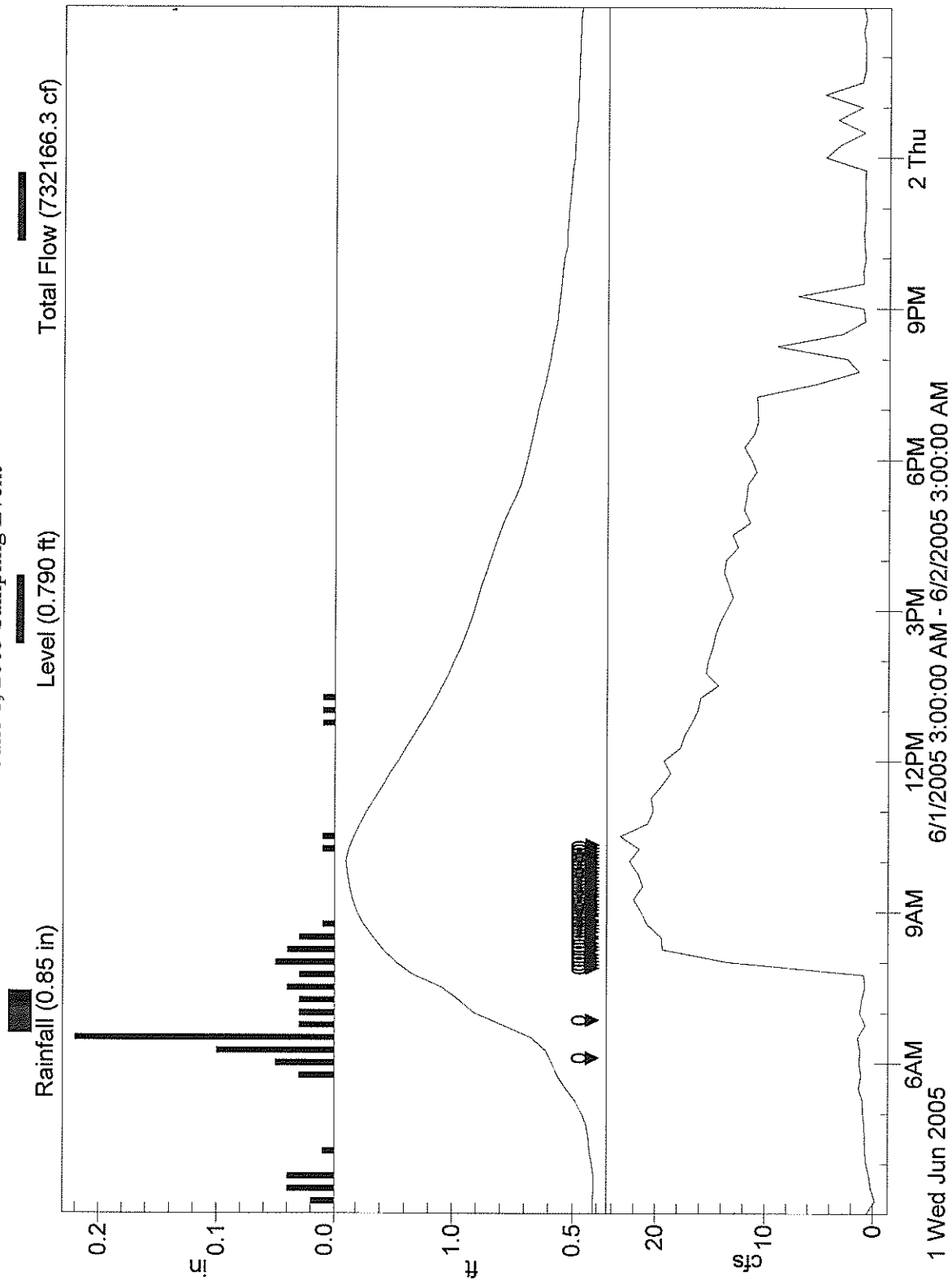
Six Mile Creek Sampling Station

June 1, 2005 Sampling Event



Soldier Creek Sampling Station

June 1, 2005 Sampling Event



GRAPHICAL RESULTS

SAMPLE EVENT NO. 13

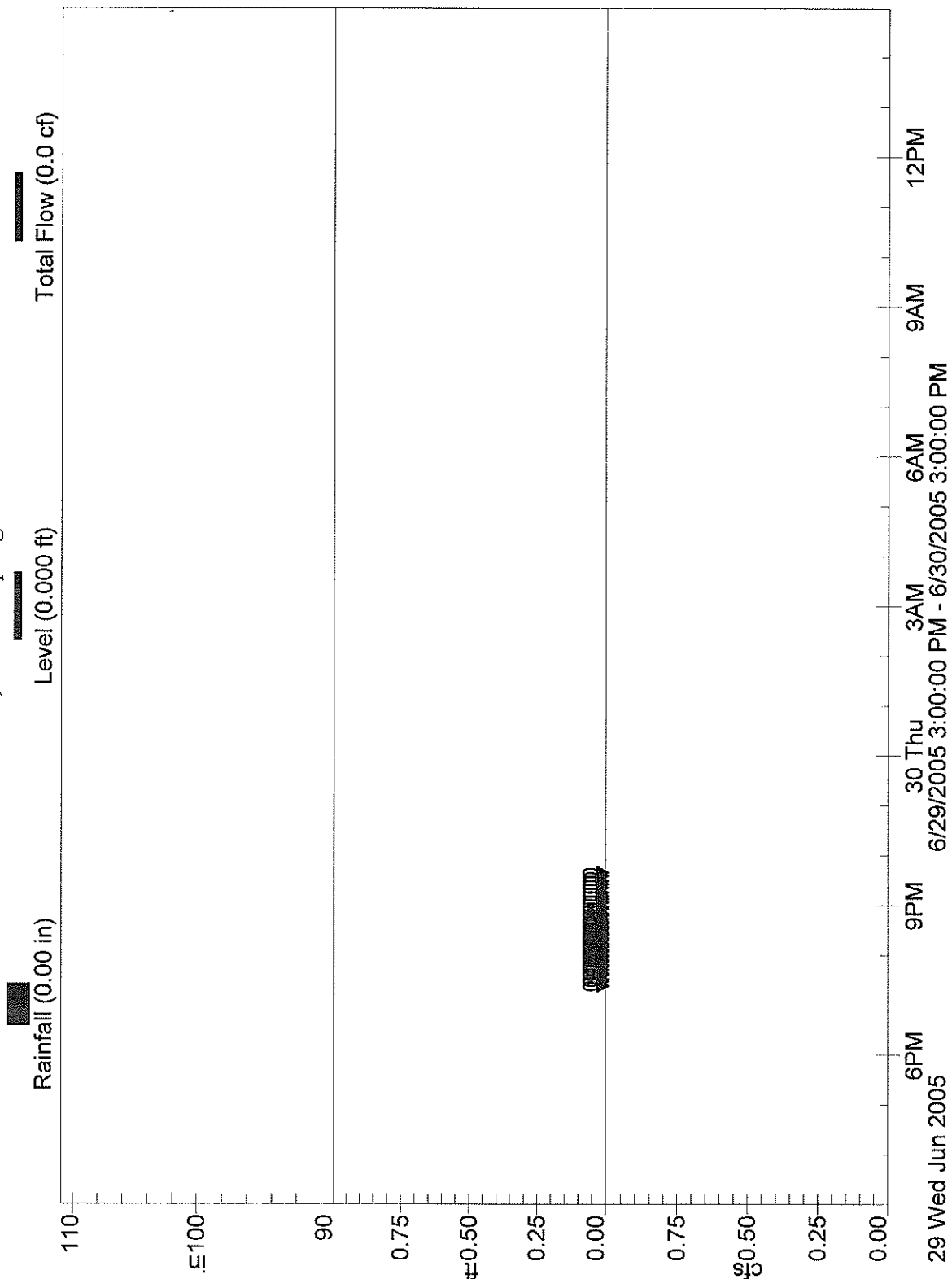
June 29, 2005

STATIONS SAMPLED:

GEE CREEK
HOWELL CREEK
SIX MILE CREEK
SOLARY CANAL

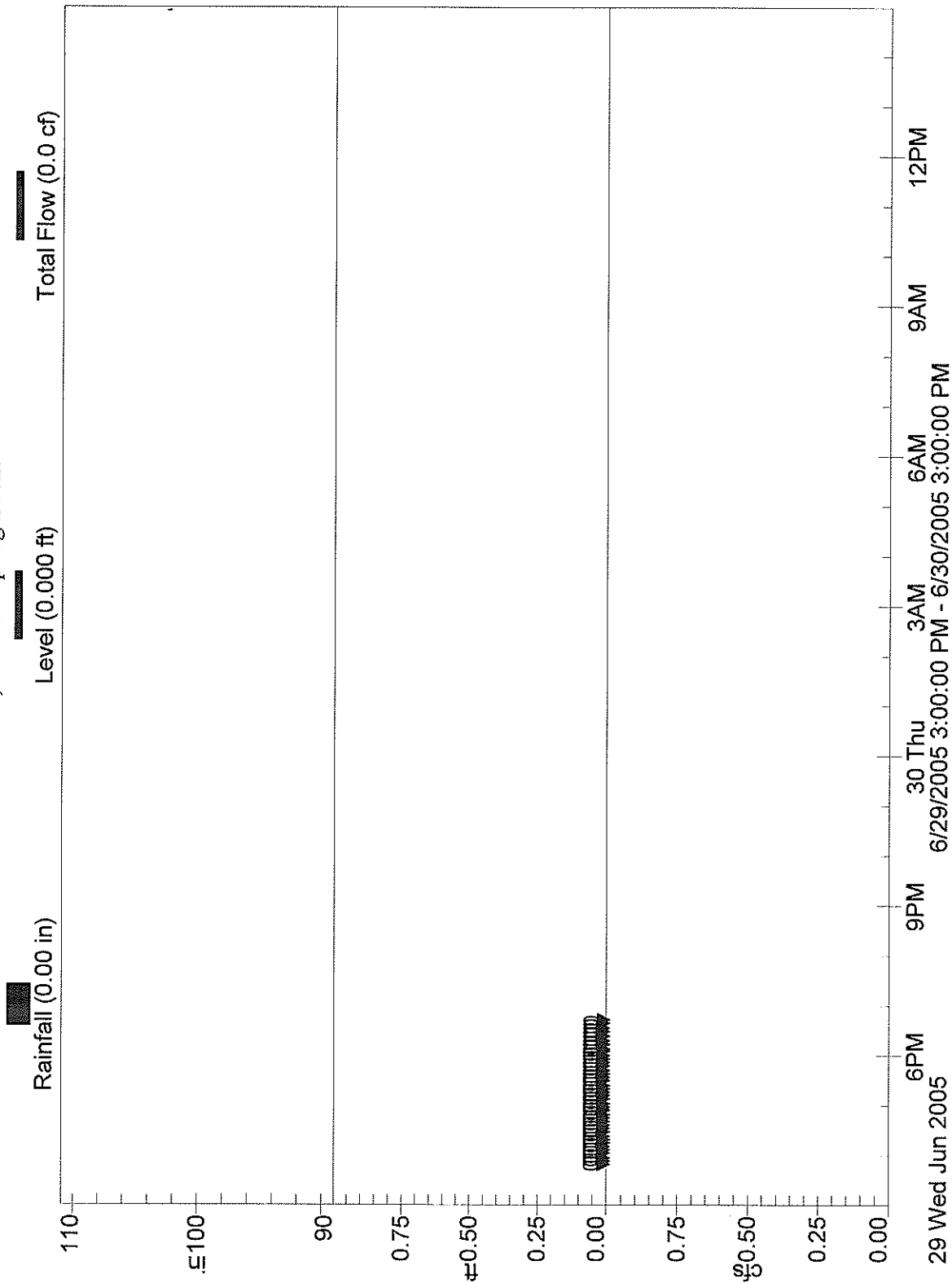
Gee Creek Sampling Station

June 29, 2005 Sampling Event



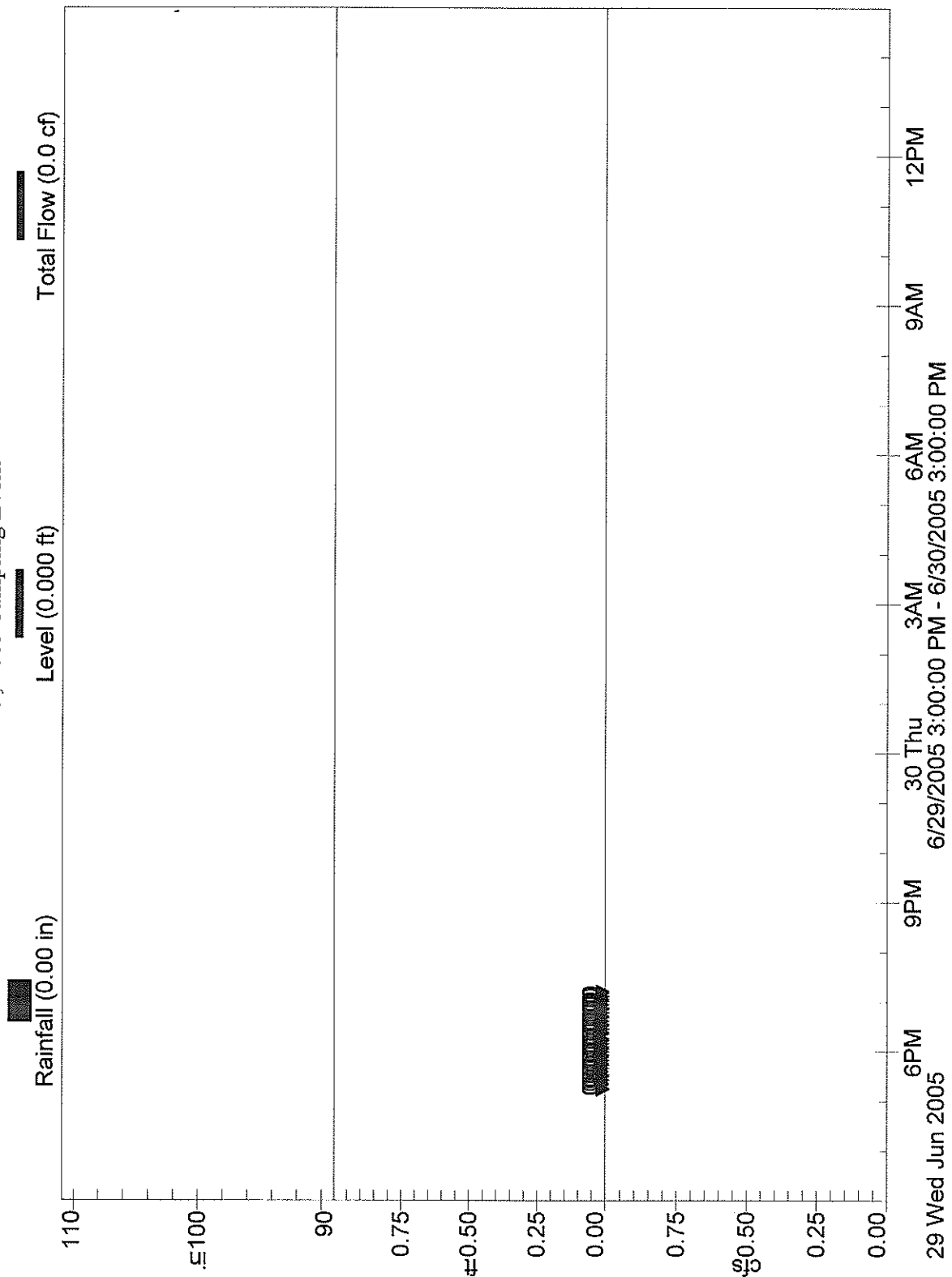
Howell Creek Sampling Station

June 29, 2005 Sampling Event



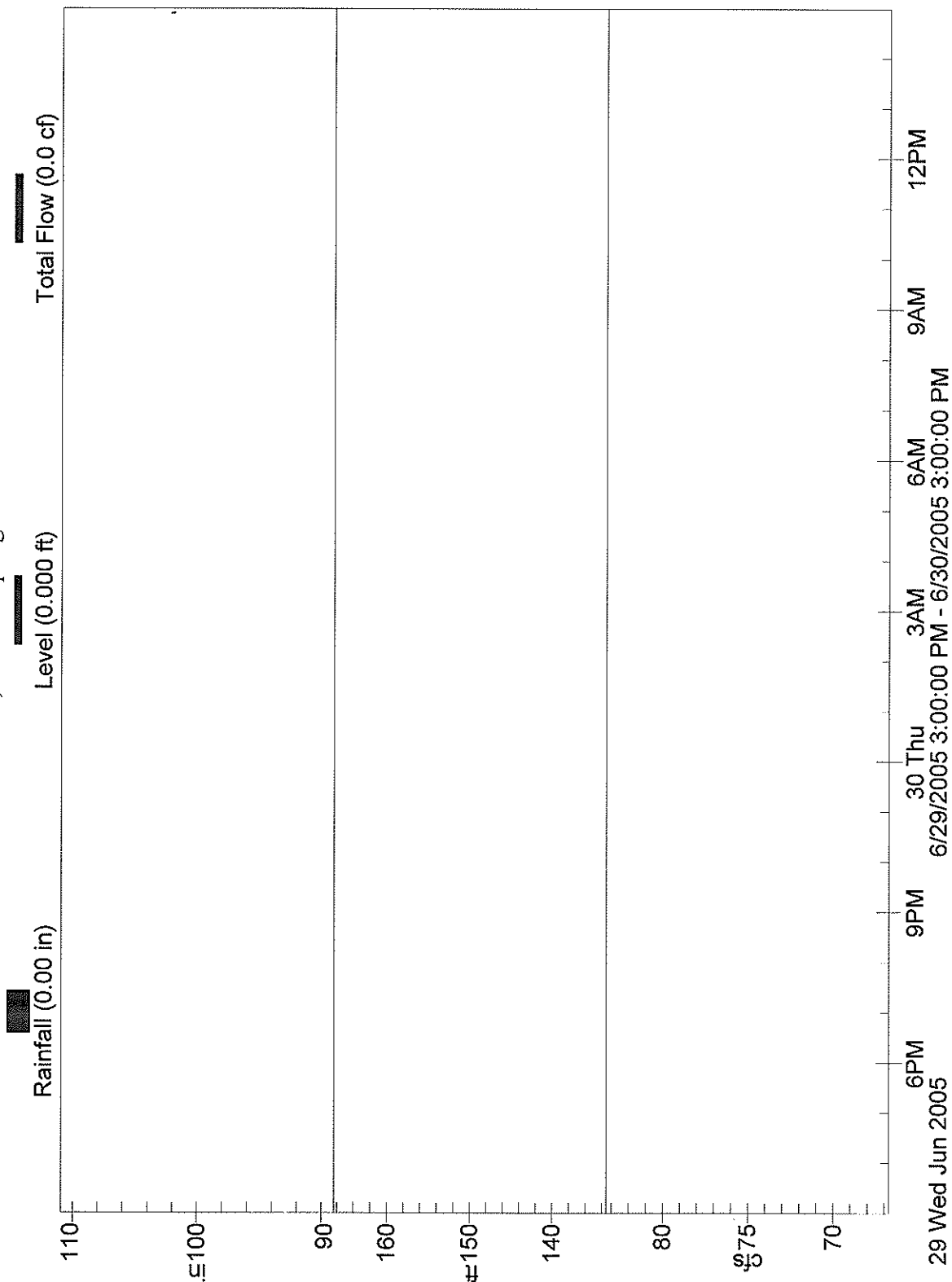
Six Mile Creek Sampling Station

June 29, 2005 Sampling Event



Solary Canal Sampling Station

June 29, 2005 Sampling Event



GRAPHICAL RESULTS

SAMPLE EVENT NO. 14

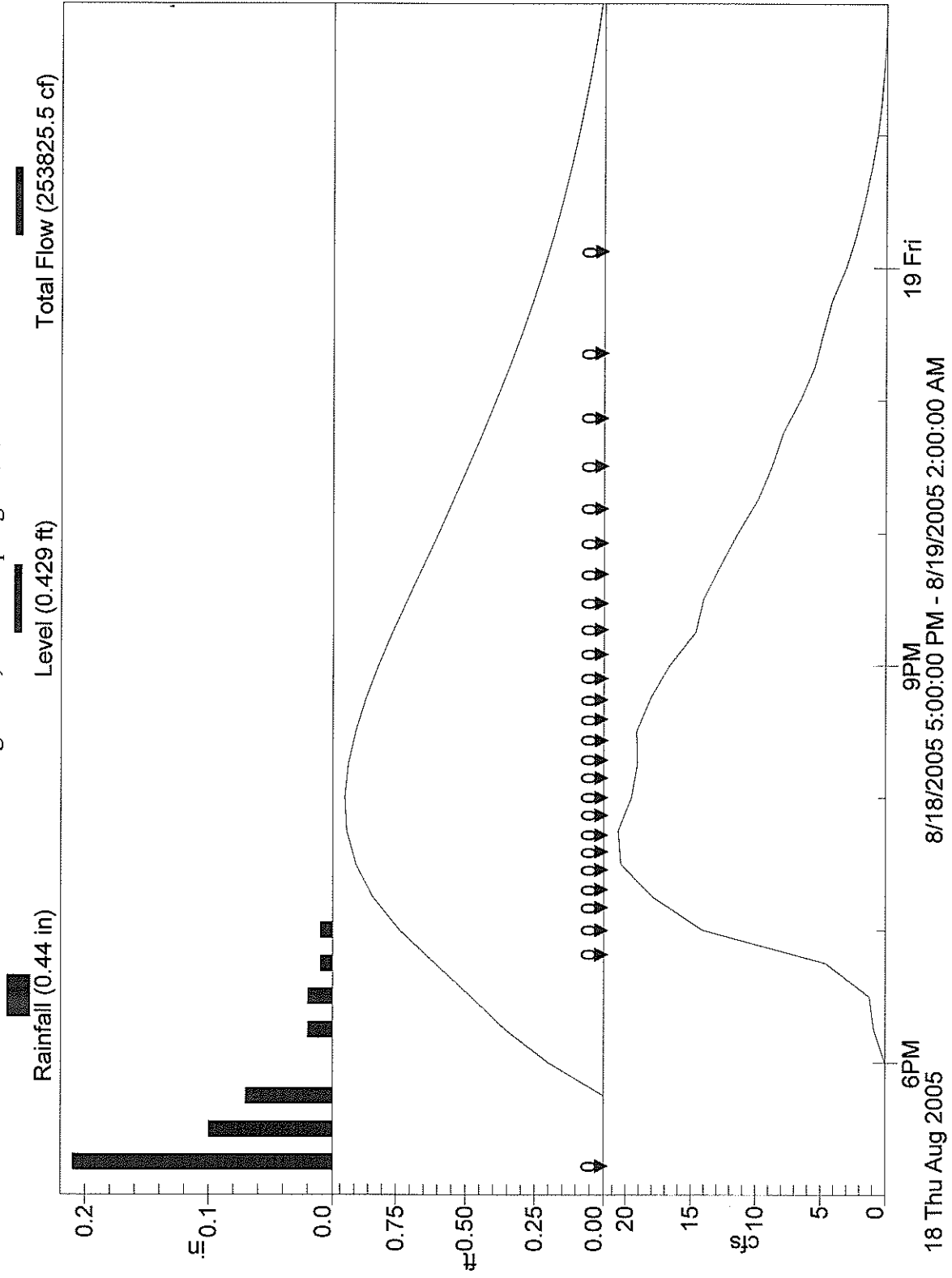
August 18, 2005

STATIONS SAMPLED:

GEE CREEK
HOWELL CREEK
SOLARY CANAL

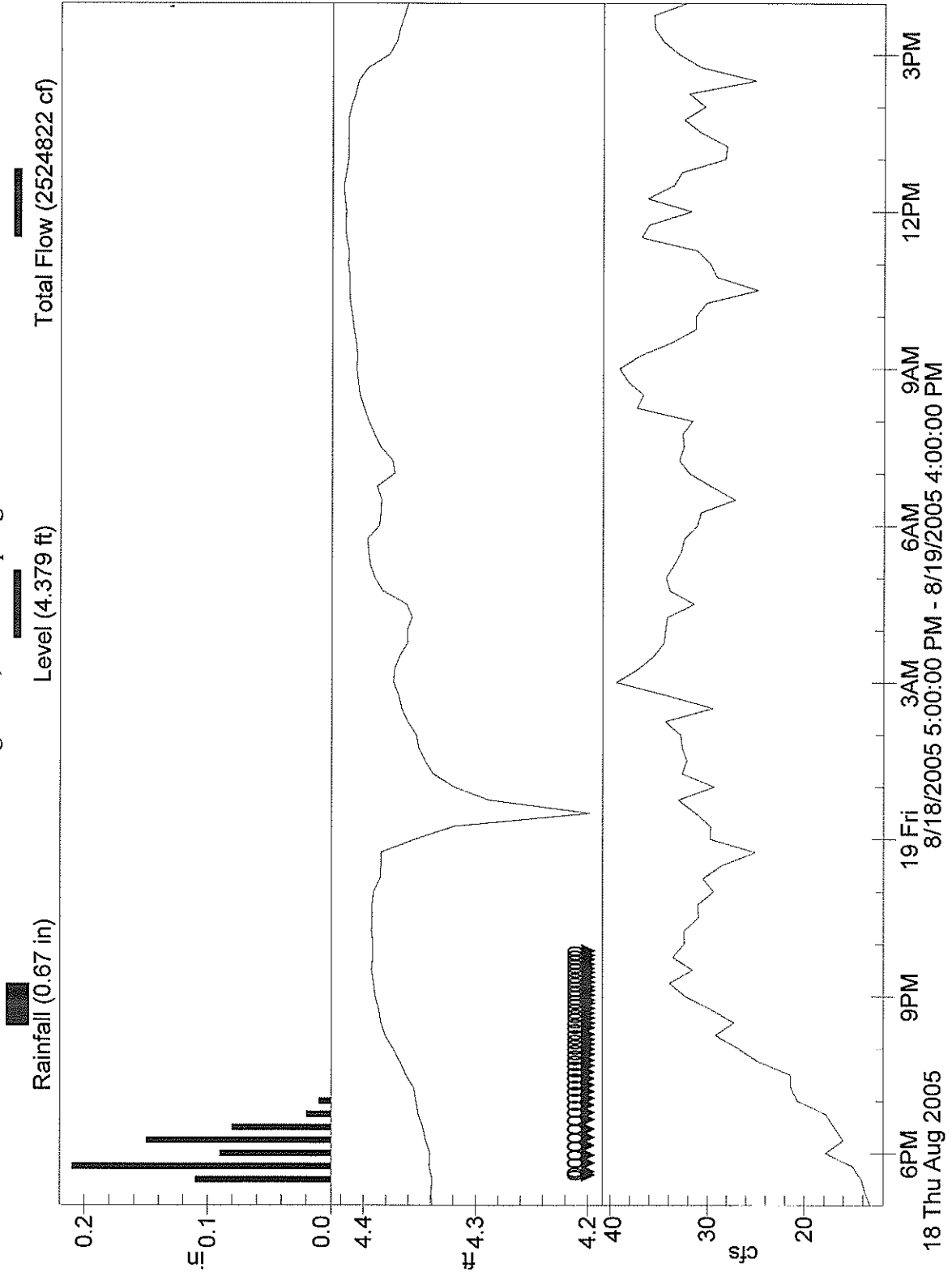
Gee Creek Sampling Station

August 18, 2005 Sampling Event



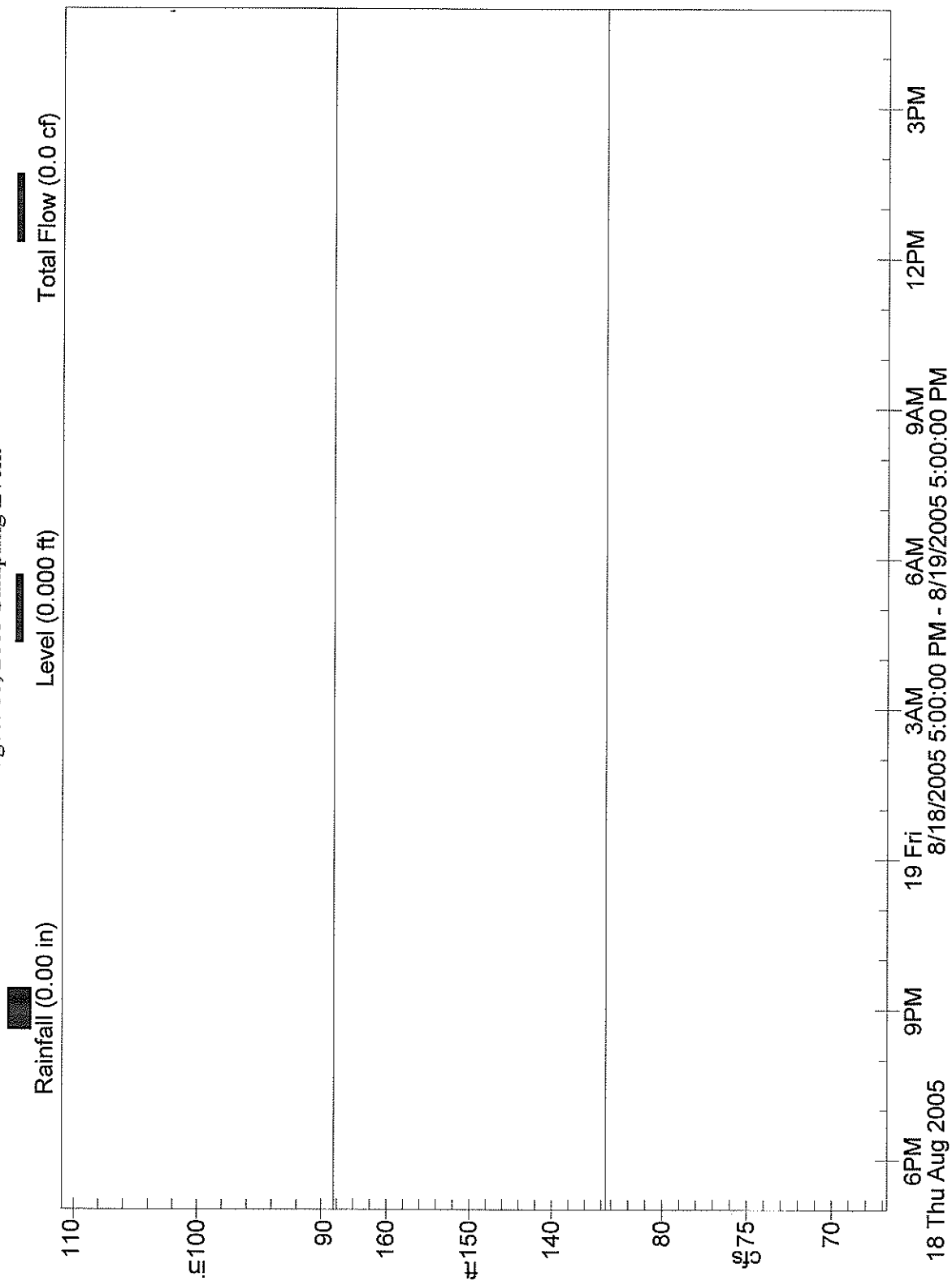
Howell Creek Sampling Station

August 18, 2005 Sampling Event



Solary Canal Sampling Station

August 18, 2005 Sampling Event



GRAPHICAL RESULTS

SAMPLE EVENT NO. 15

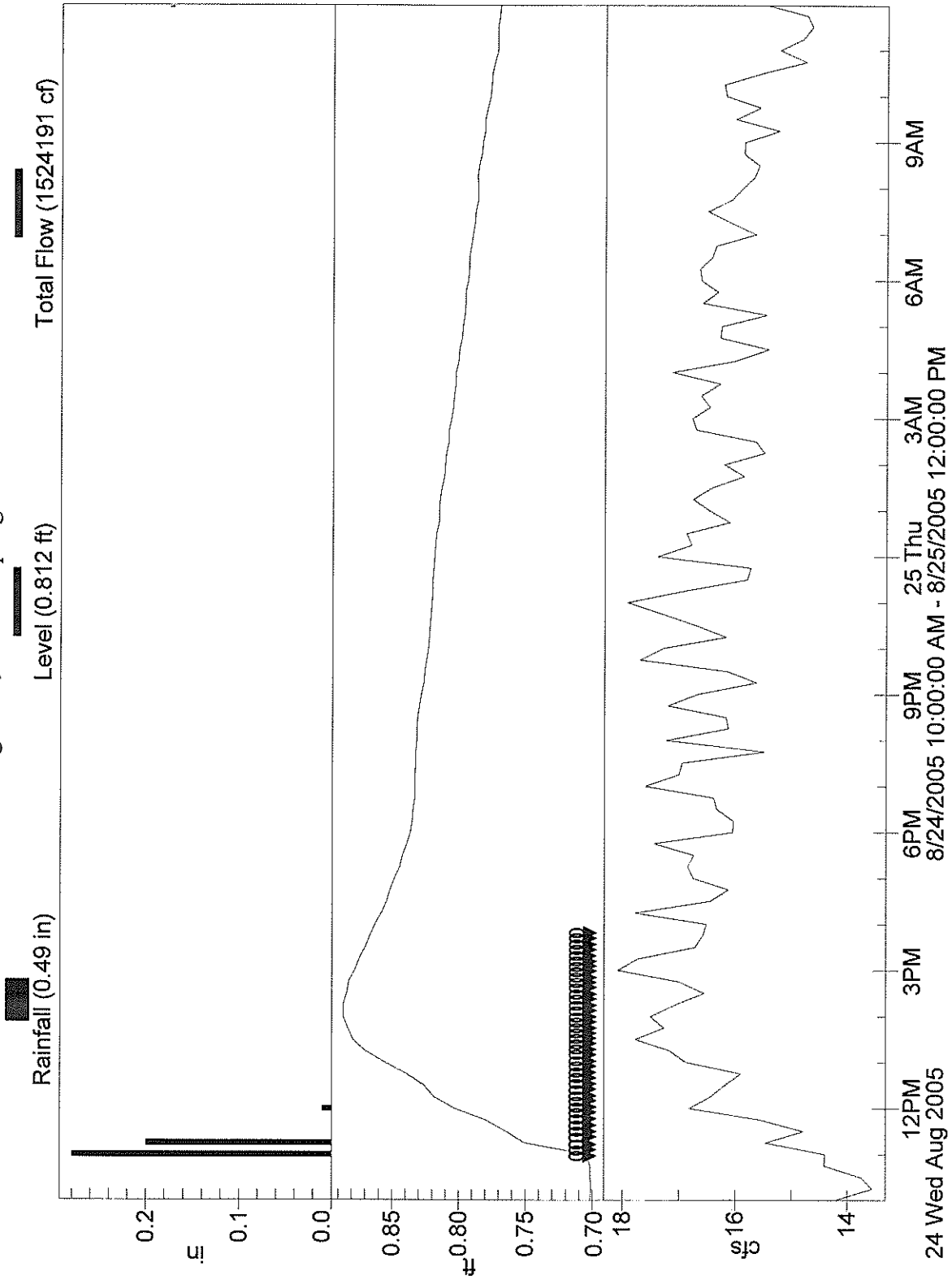
August 24, 2005

STATIONS SAMPLED:

SIX MILE CREEK

Six Mile Creek Sampling Station

August 24, 2005 Sampling Event



GRAPHICAL RESULTS

SAMPLE EVENT NO. 16

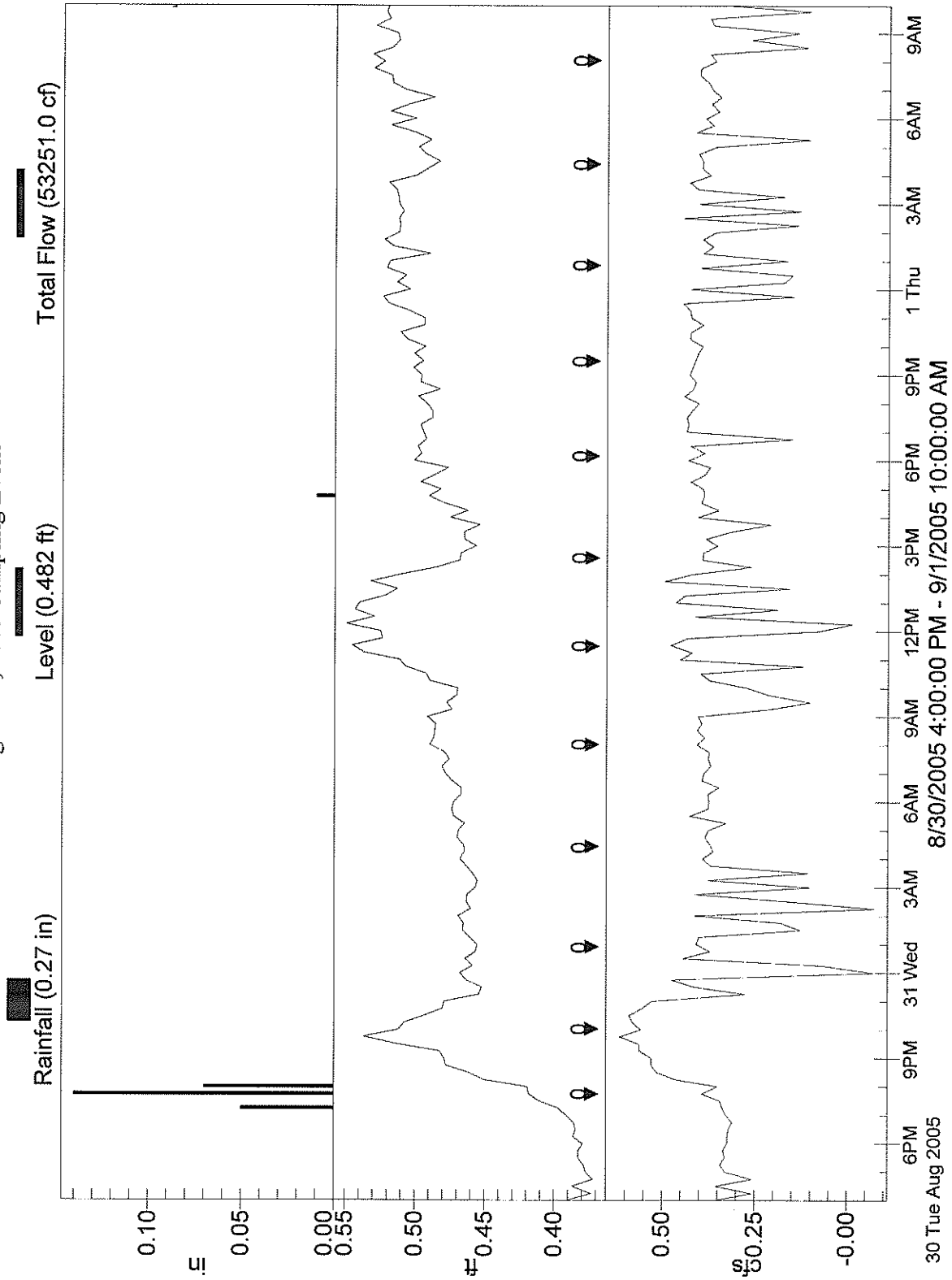
August 30, 2005

STATIONS SAMPLED:

SOLDIER CREEK

Soldier Creek Sampling Station

August 30, 2005 Sampling Event



30 Tue Aug 2005

GRAPHICAL RESULTS

SAMPLE EVENT NO. 17

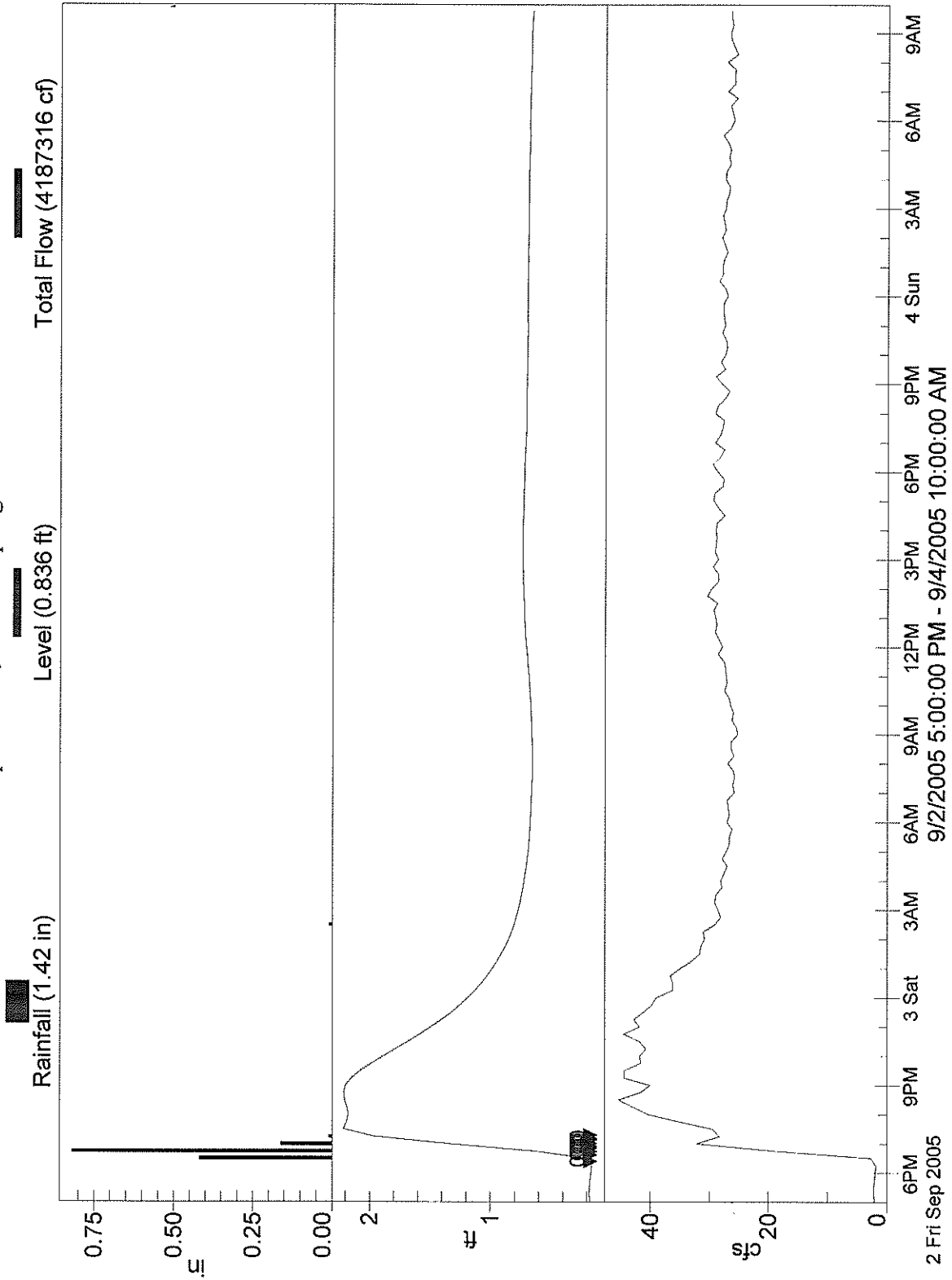
September 2, 2005

STATIONS SAMPLED:

GEE CREEK
HOWELL CREEK
SIX MILE CREEK
SOLDIER CREEK

Gee Creek Sampling Station

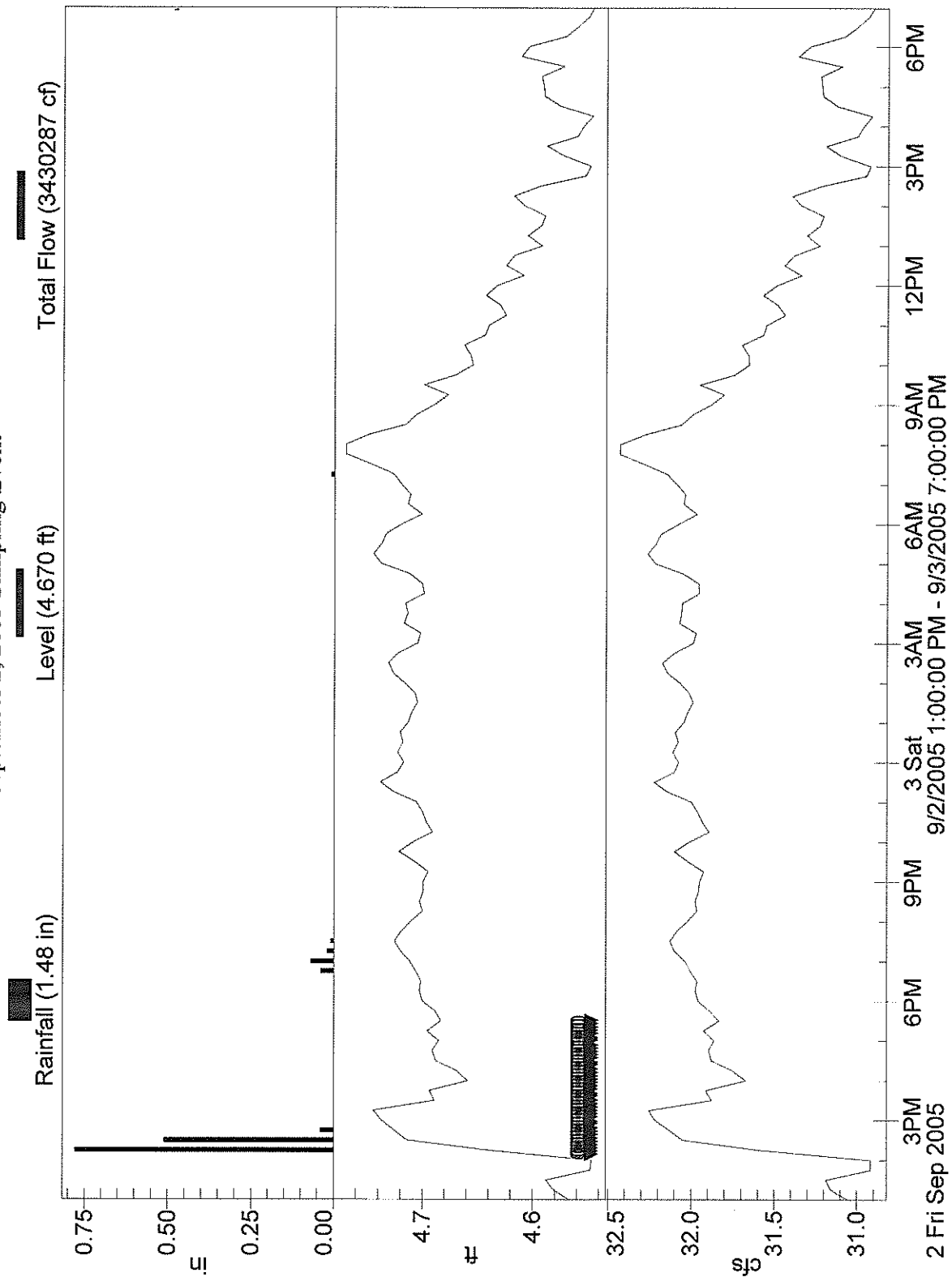
September 2, 2005 Sampling Event



2 Fri Sep 2005

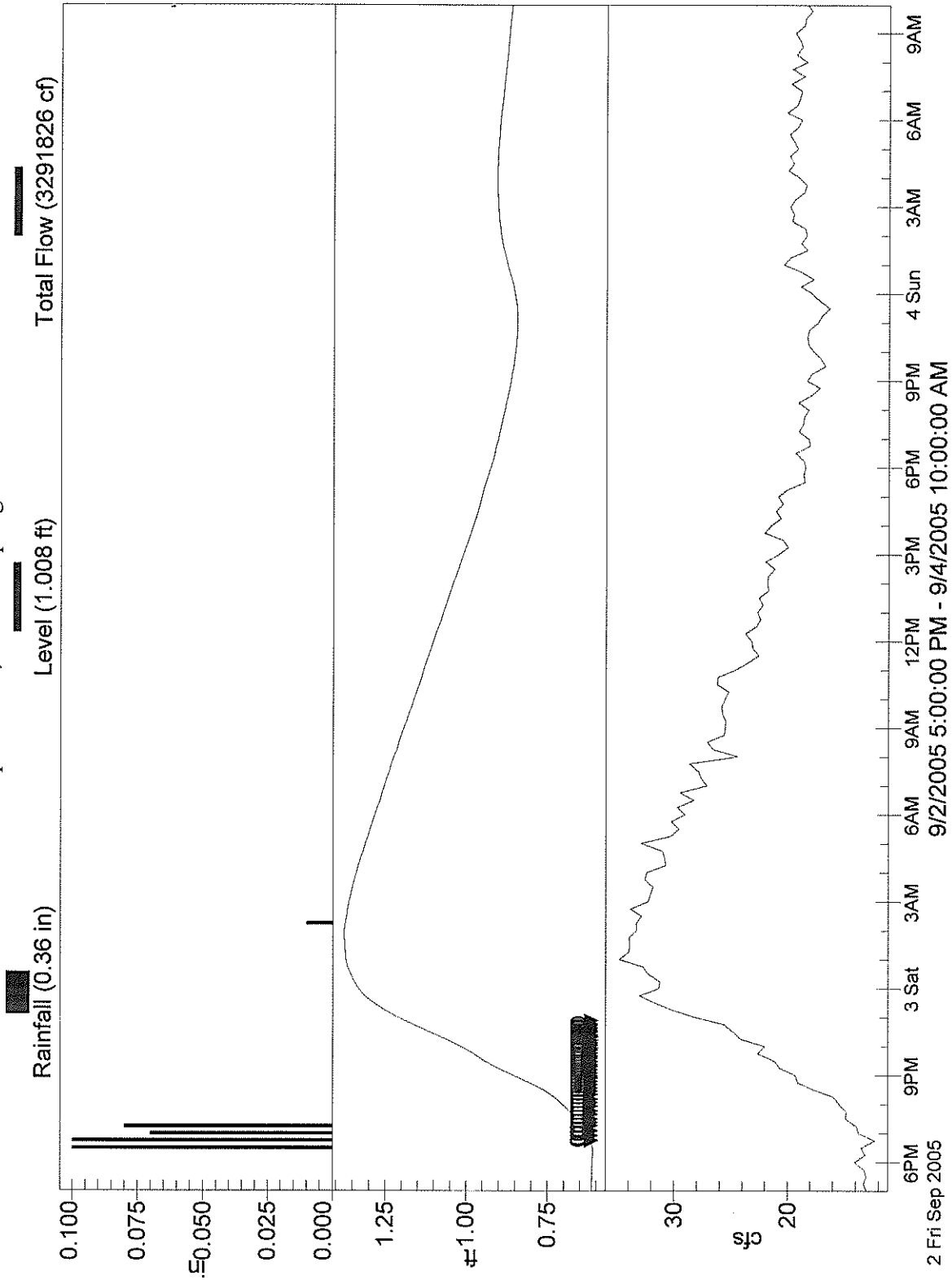
Howell Creek Sampling Station

September 2, 2005 Sampling Event



Six Mile Creek Sampling Station

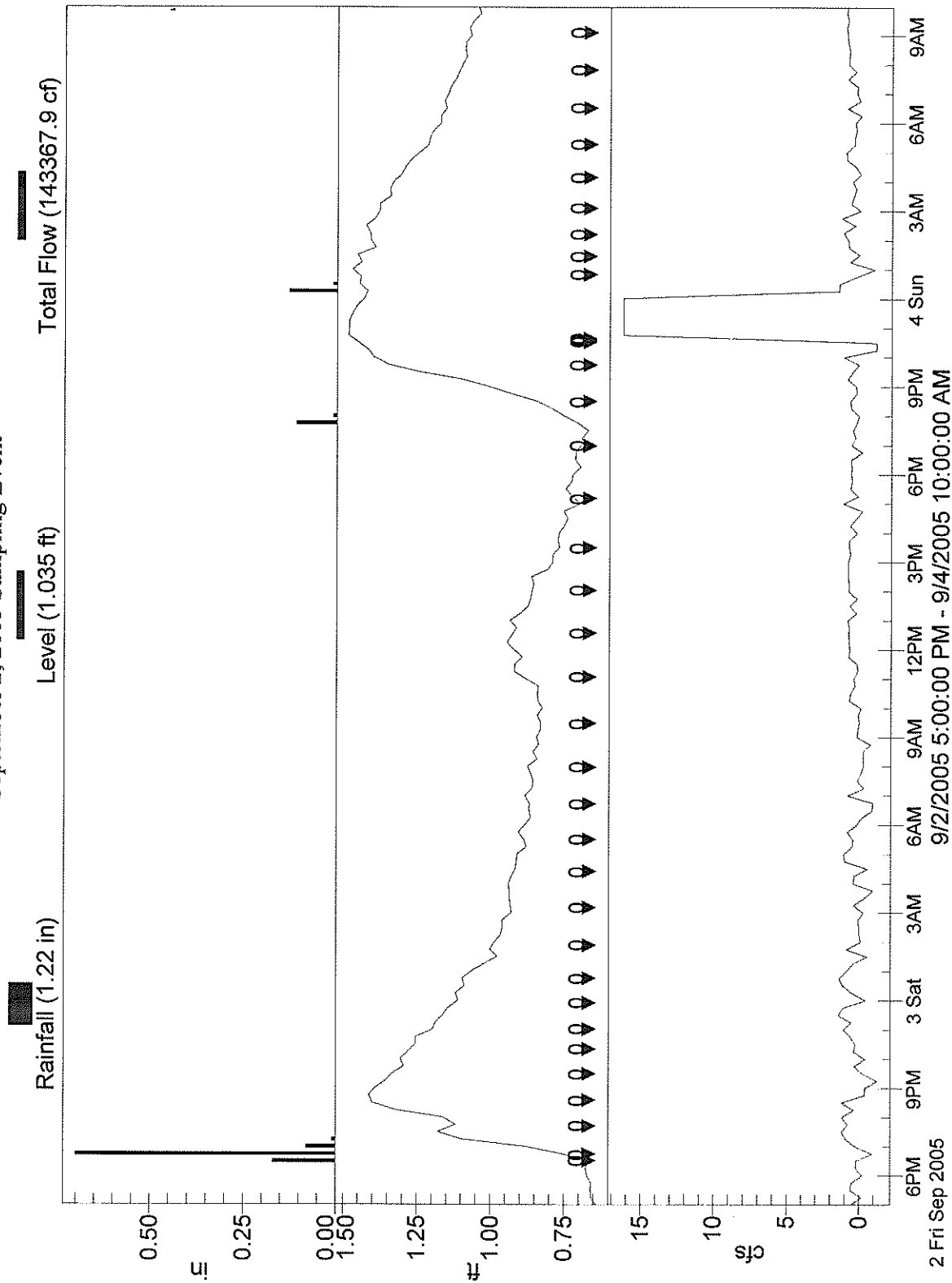
September 2, 2005 Sampling Event



2 Fri Sep 2005

Soldier Creek Sampling Station

September 2, 2005 Sampling Event



GRAPHICAL RESULTS

SAMPLE EVENT NO. 18

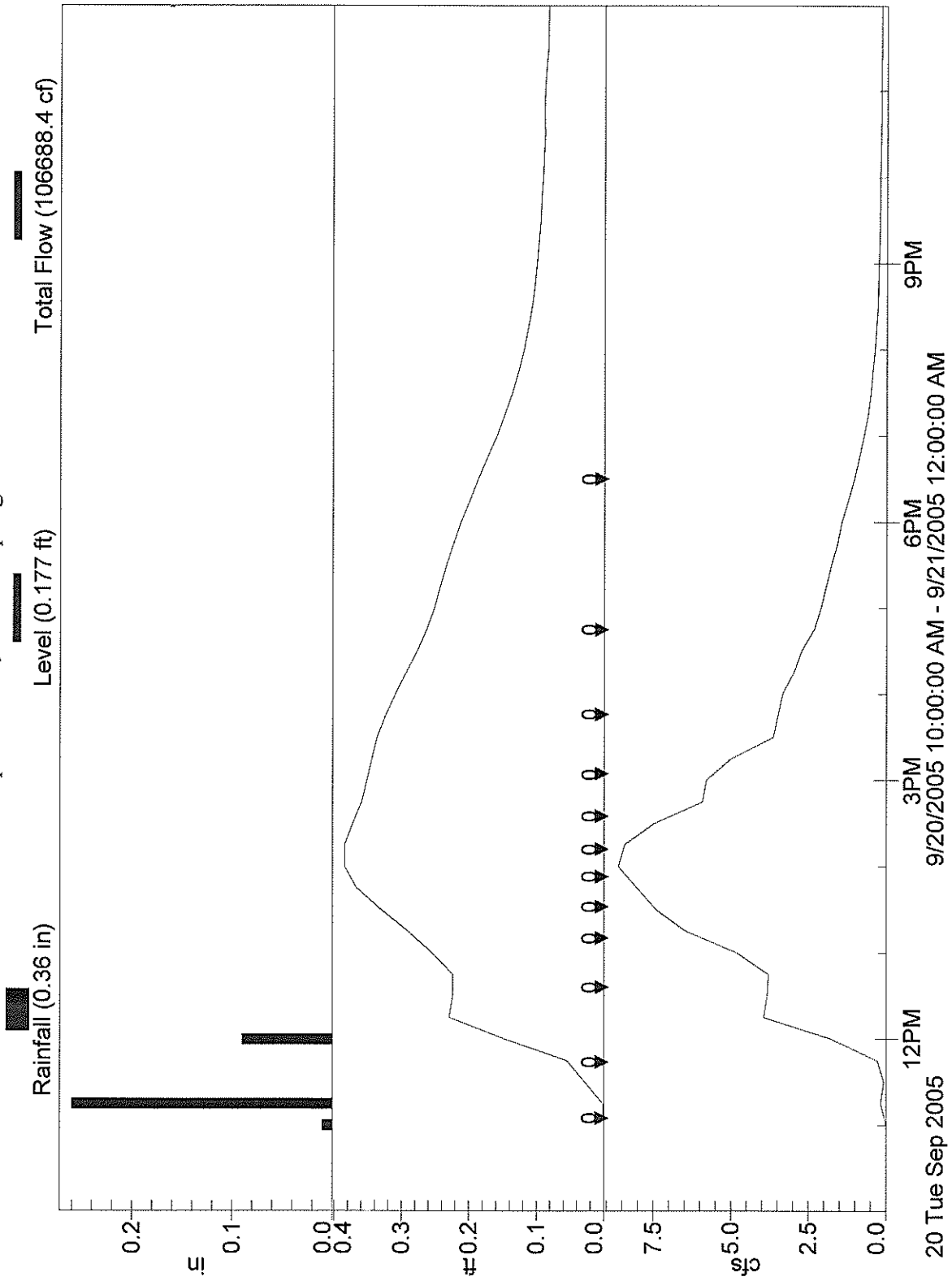
September 20, 2005

STATIONS SAMPLED:

GEE CREEK
HOWELL CREEK
SIX MILE CREEK
SOLARY CANAL
SOLDIER CREEK

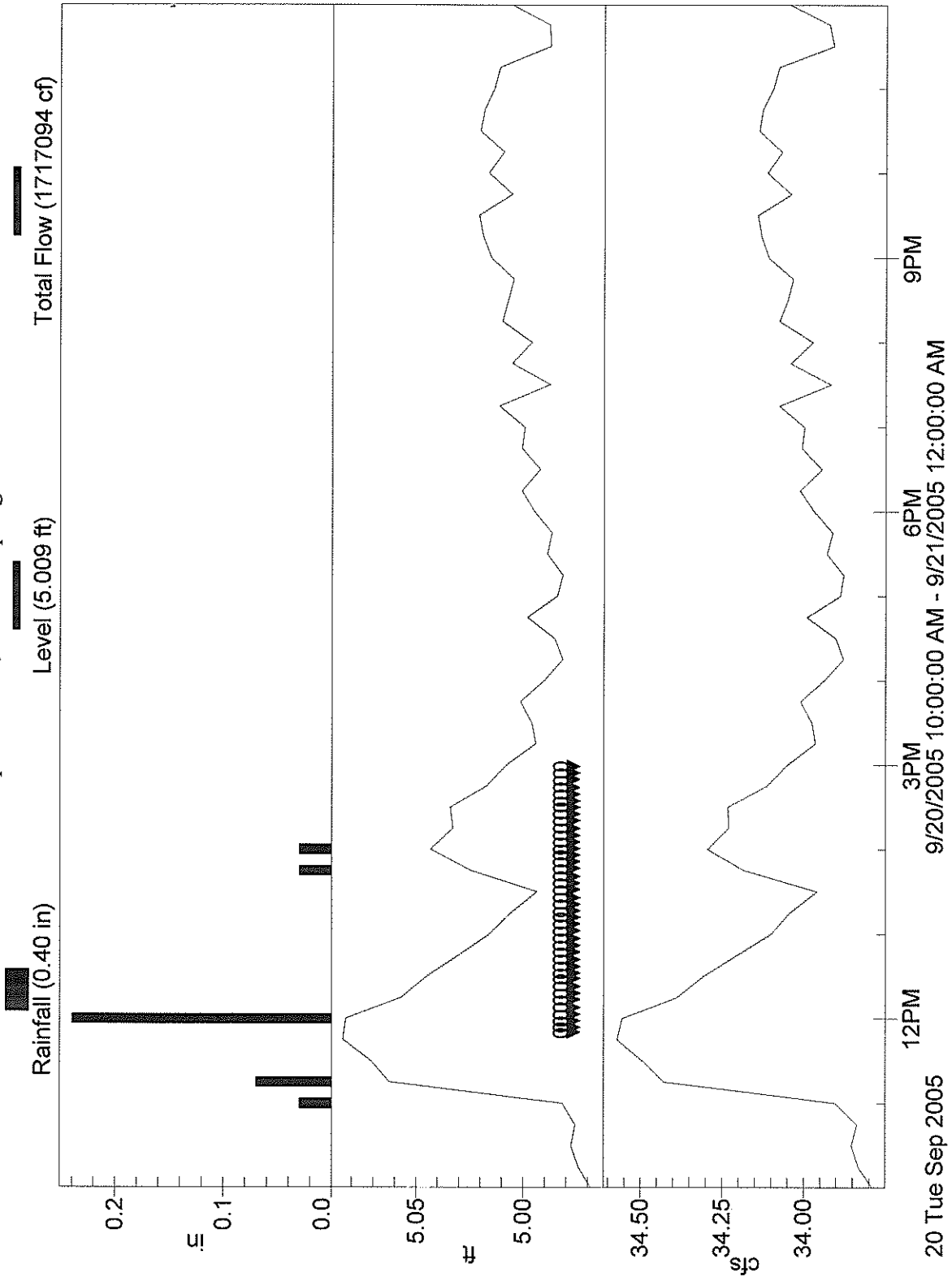
Gee Creek Sampling Station

September 20, 2005 Sampling Event



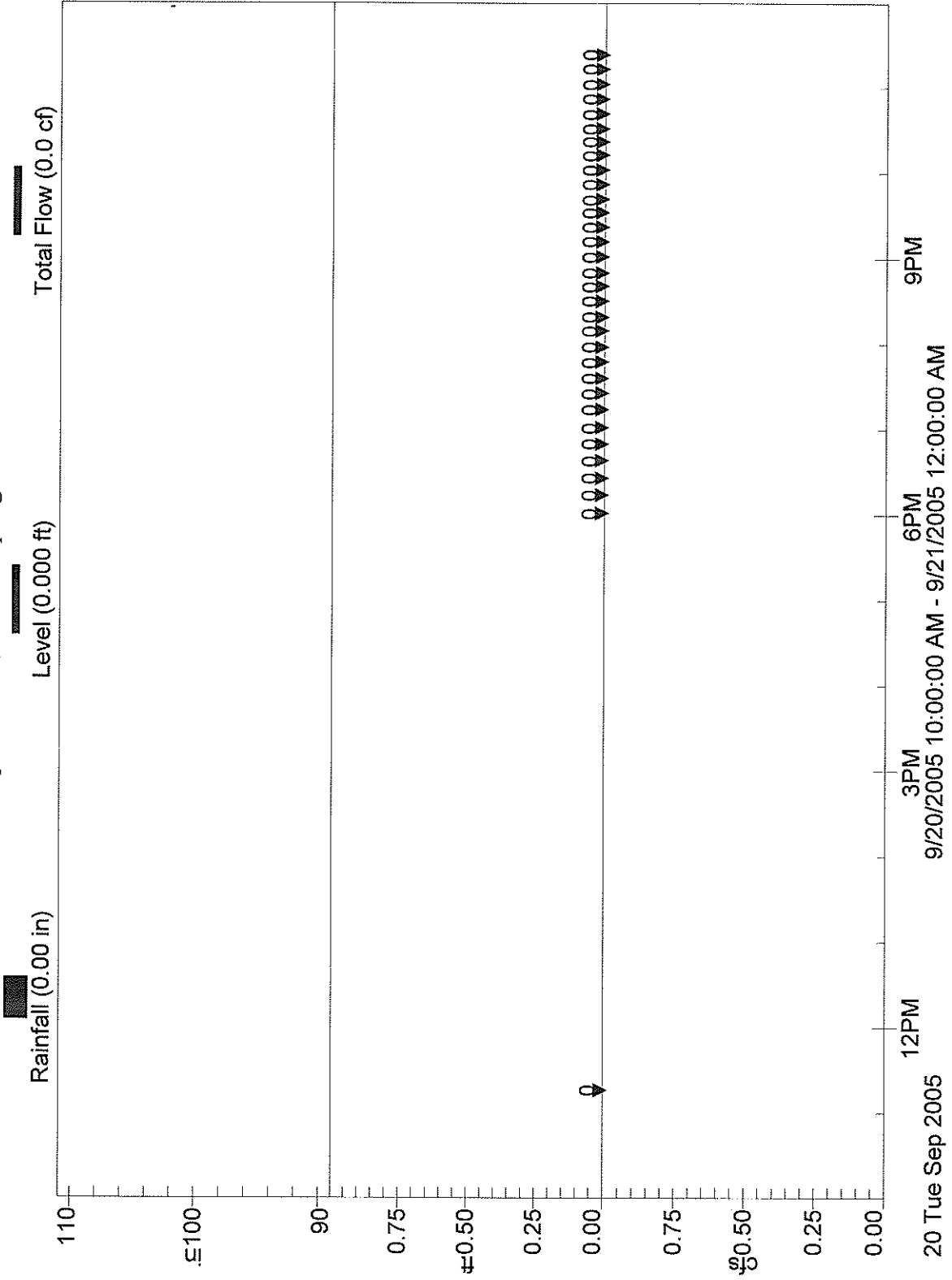
Howell Creek Sampling Station

September 20, 2005 Sampling Event



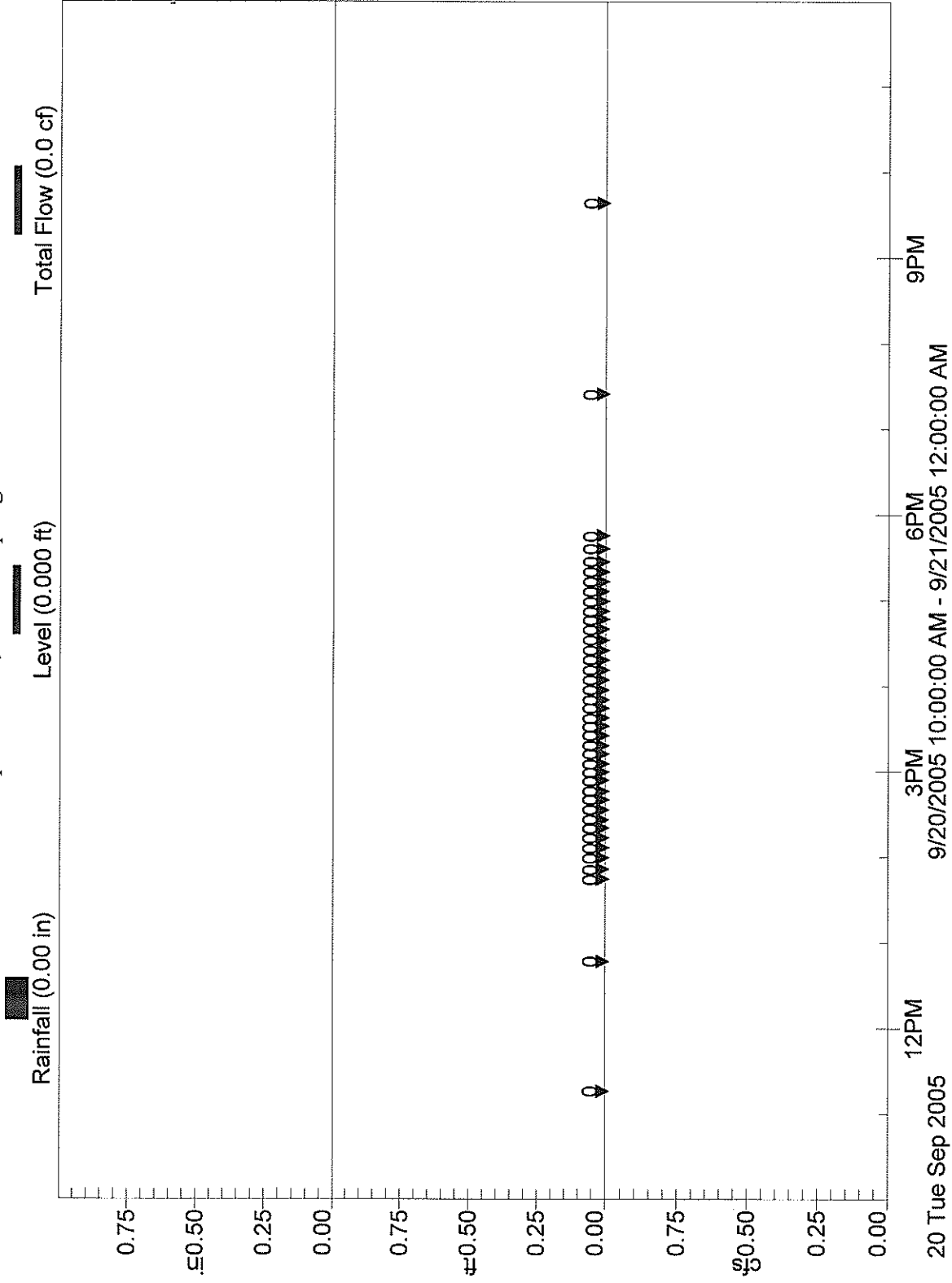
Six Mile Creek Sampling Station

September 20, 2005 Sampling Event



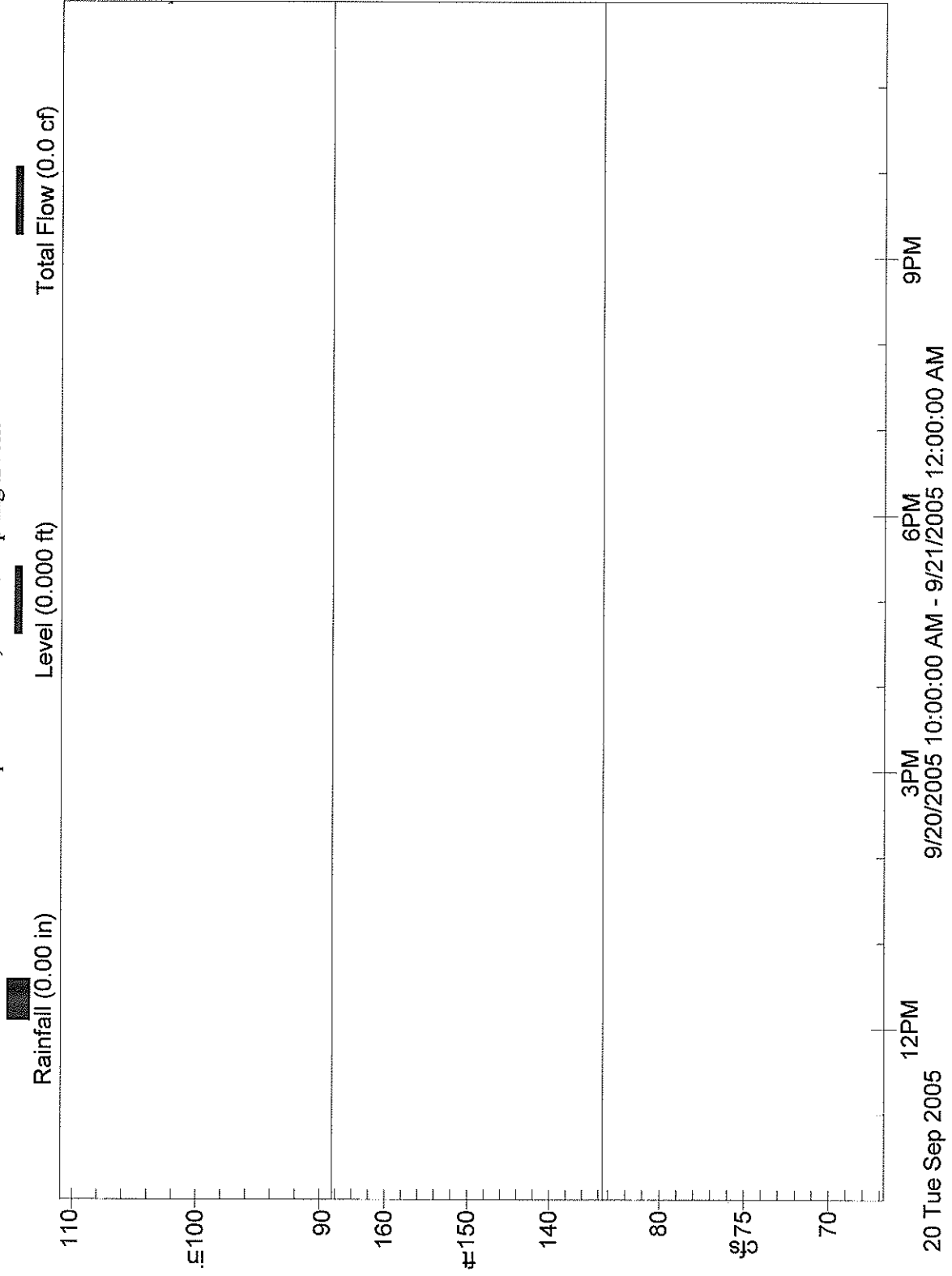
Soldier Creek Sampling Station

September 20, 2005 Sampling Event



Solary Canal Sampling Station

September 20, 2005 Sampling Event



GRAPHICAL RESULTS

SAMPLE EVENT NO. 19

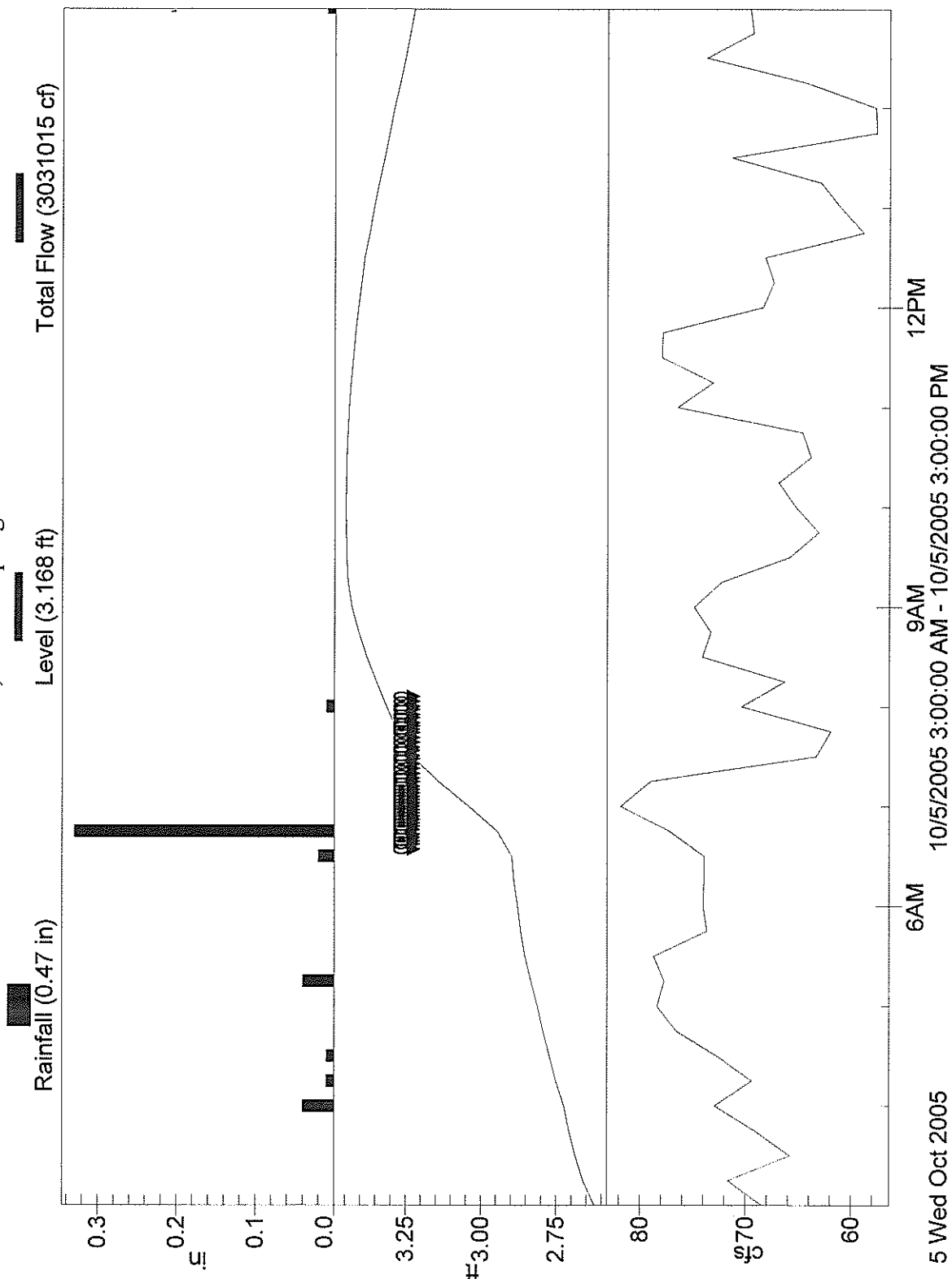
October 5, 2005

STATIONS SAMPLED:

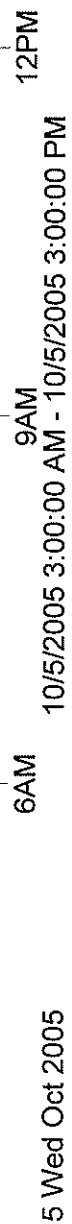
GEE CREEK
SIX MILE CREEK

Gee Creek Sampling Station

October 5, 2005 Sampling Event



October 5, 2005 Sampling Event



GRAPHICAL RESULTS

SAMPLE EVENT NO. 20

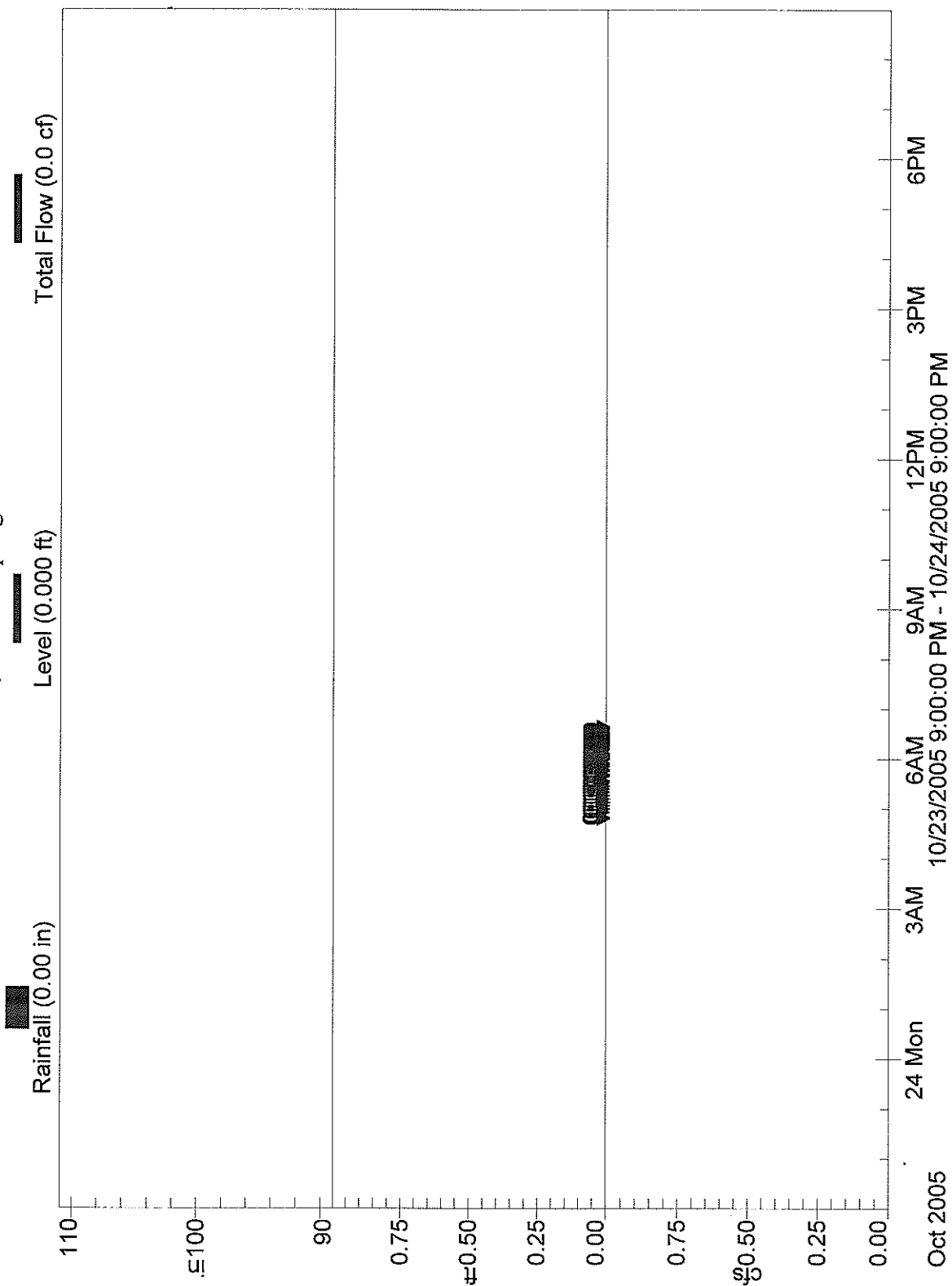
October 23, 2005

STATIONS SAMPLED:

SIX MILE CREEK
SOLDIER CREEK

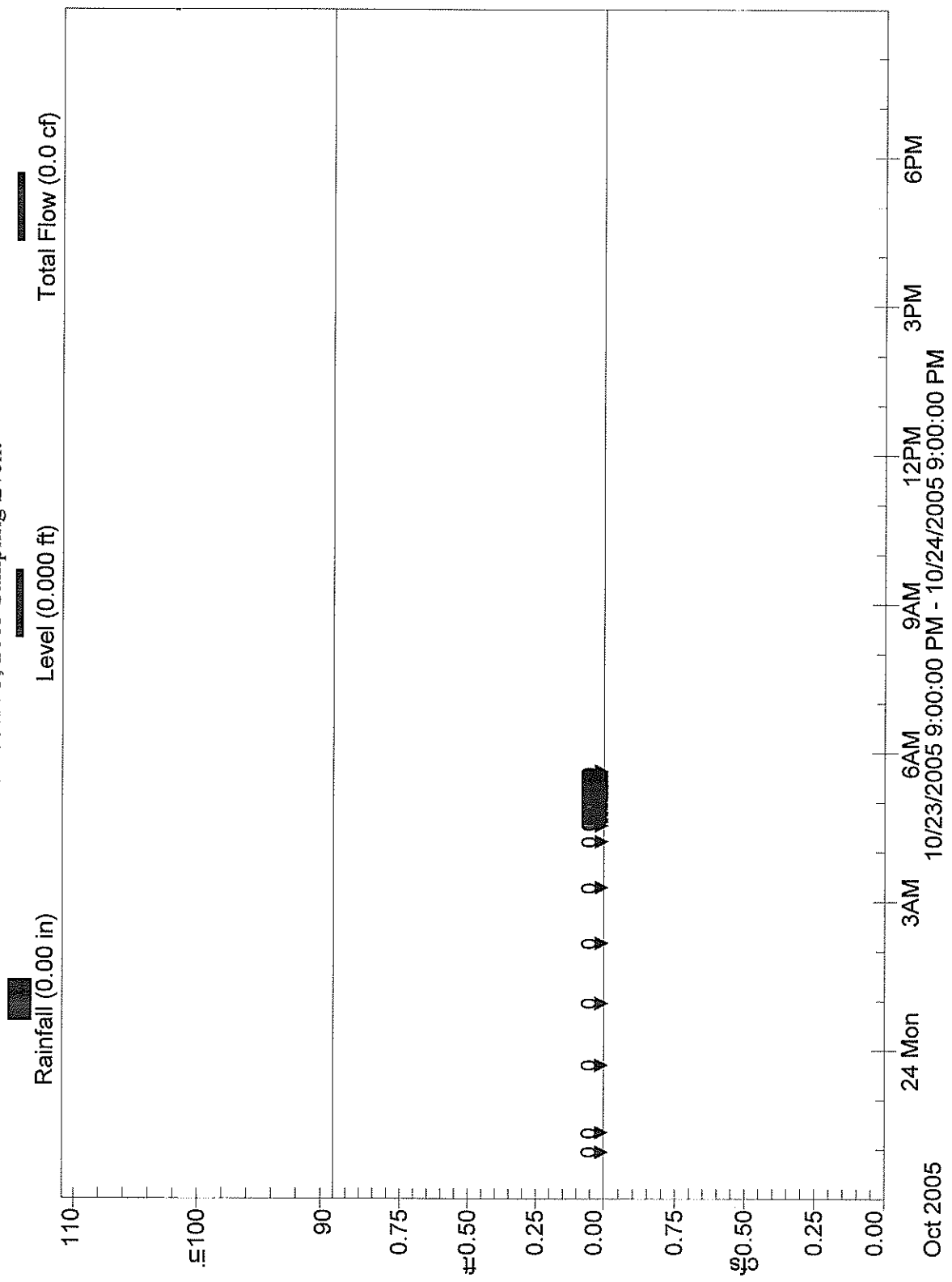
Six Mile Creek Sampling Station

October 23, 2005 Sampling Event



Soldier Creek Sampling Station

October 23, 2005 Sampling Event



GRAPHICAL RESULTS

SAMPLE EVENT NO. 21

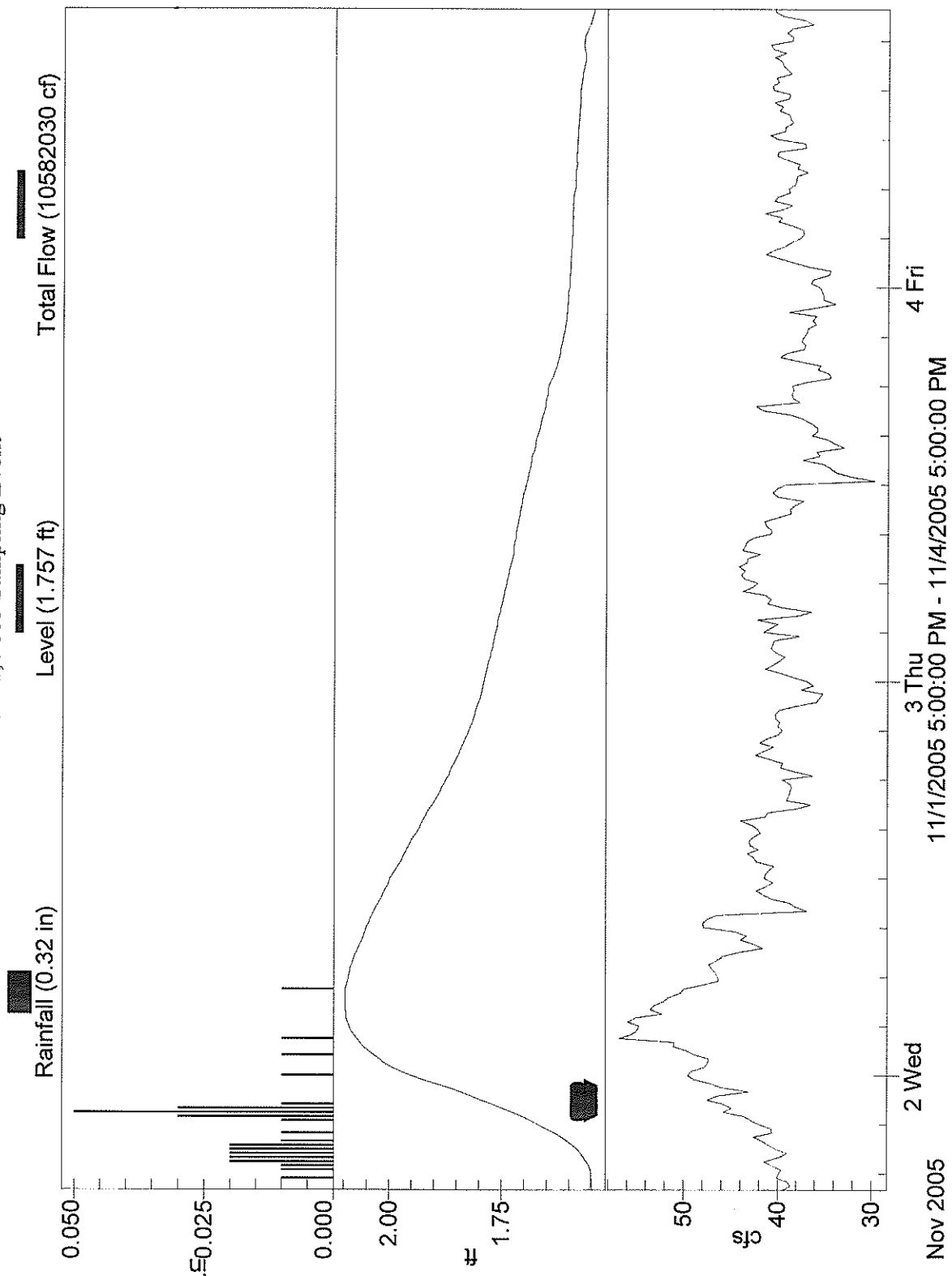
November 1, 2005

STATIONS SAMPLED:

SIX MILE CREEK
SOLARY CANAL
SOLDIER CREEK

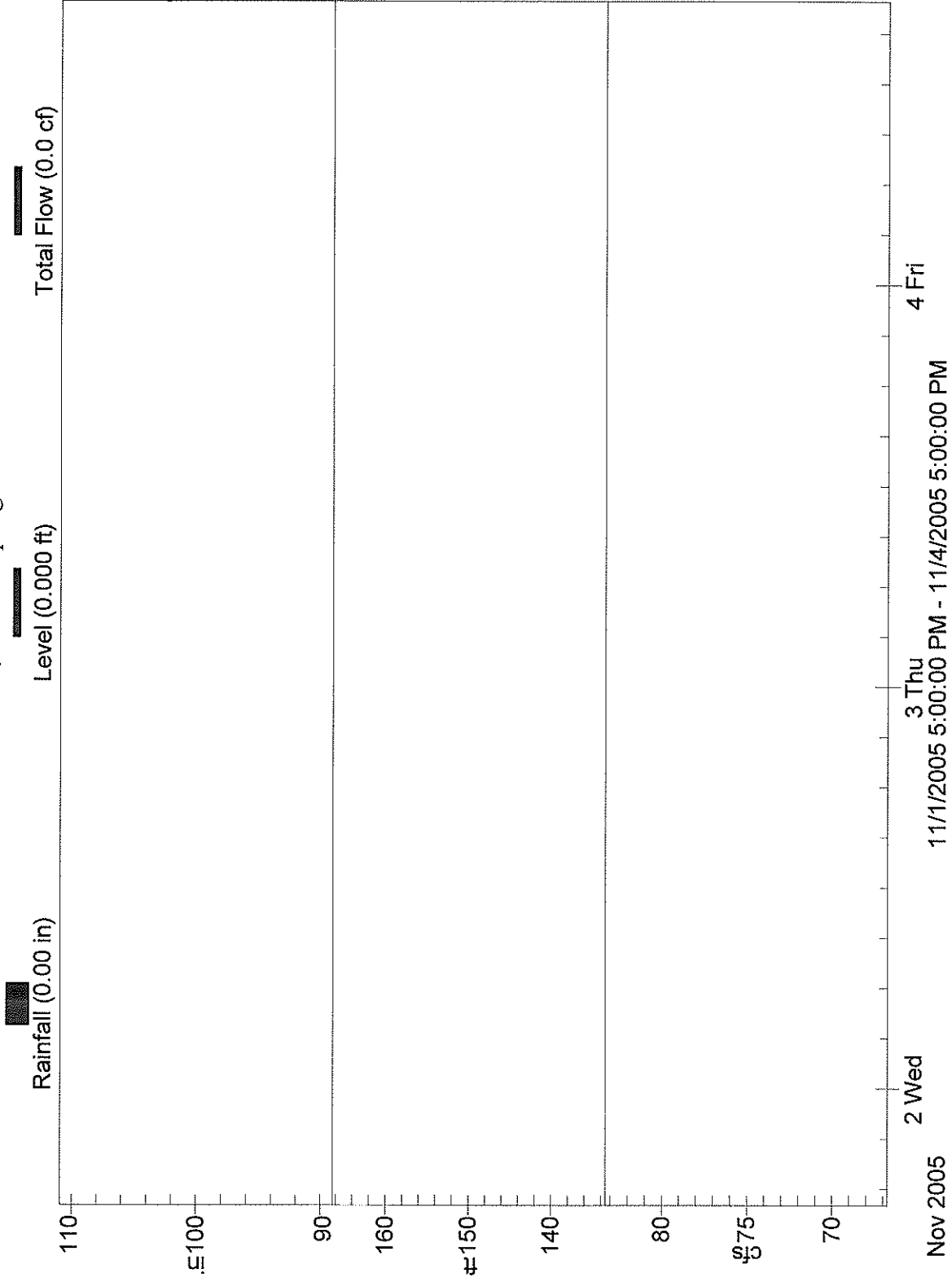
Six Mile Creek Sampling Station

November 1, 2005 Sampling Event



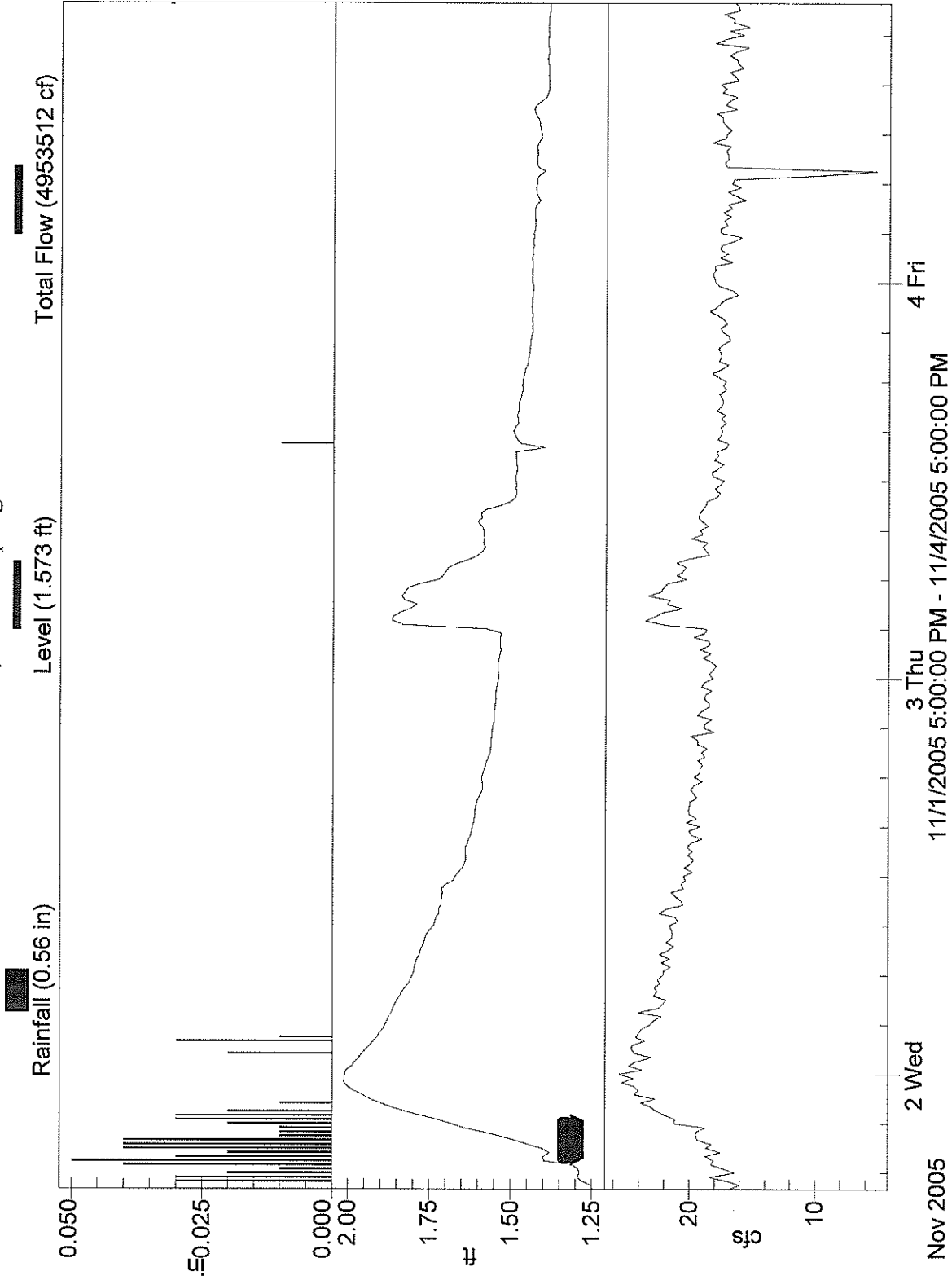
Solary Canal Sampling Station

November 1, 2005 Sampling Event



Soldier Creek Sampling Station

November 1, 2005 Sampling Event



GRAPHICAL RESULTS

SAMPLE EVENT NO. 22

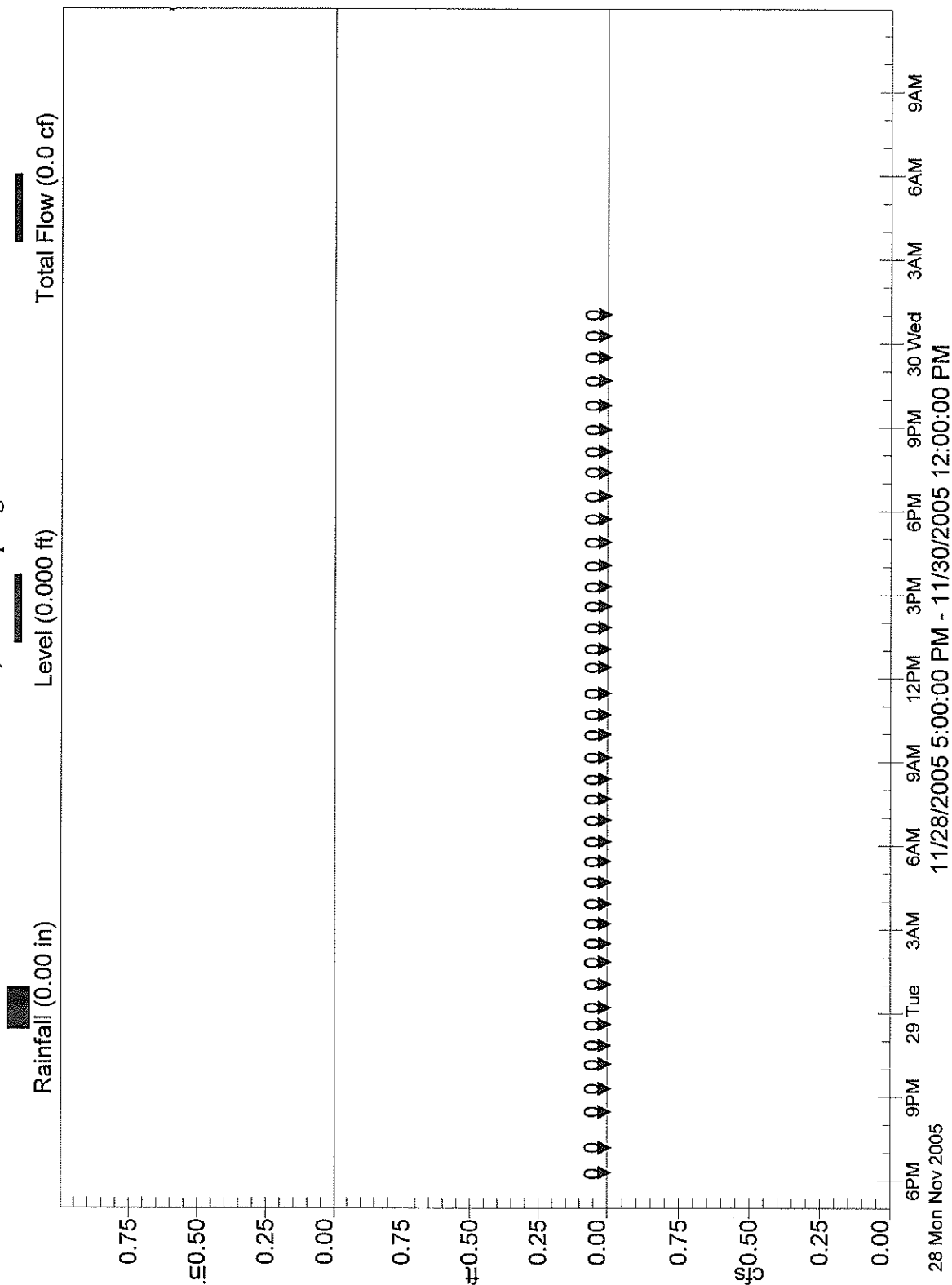
November 28, 2005

STATIONS SAMPLED:

SOLARY CANAL
SOLDIER CREEK

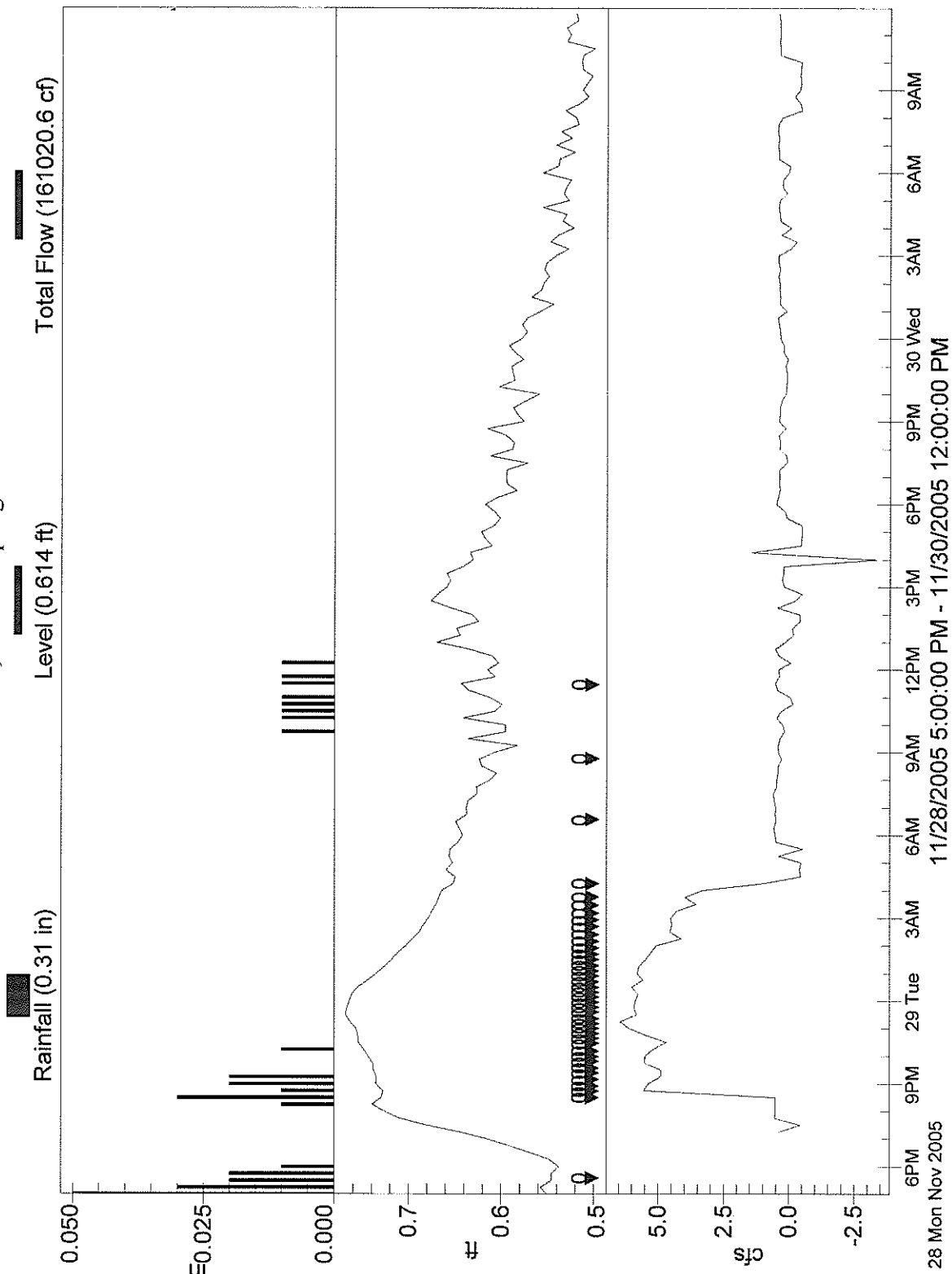
Solary Canal Sampling Station

November 28, 2005 Sampling Event



Soldier Creek Sampling Station

November 28, 2005 Sampling Event



GRAPHICAL RESULTS

SAMPLE EVENT NO. 23

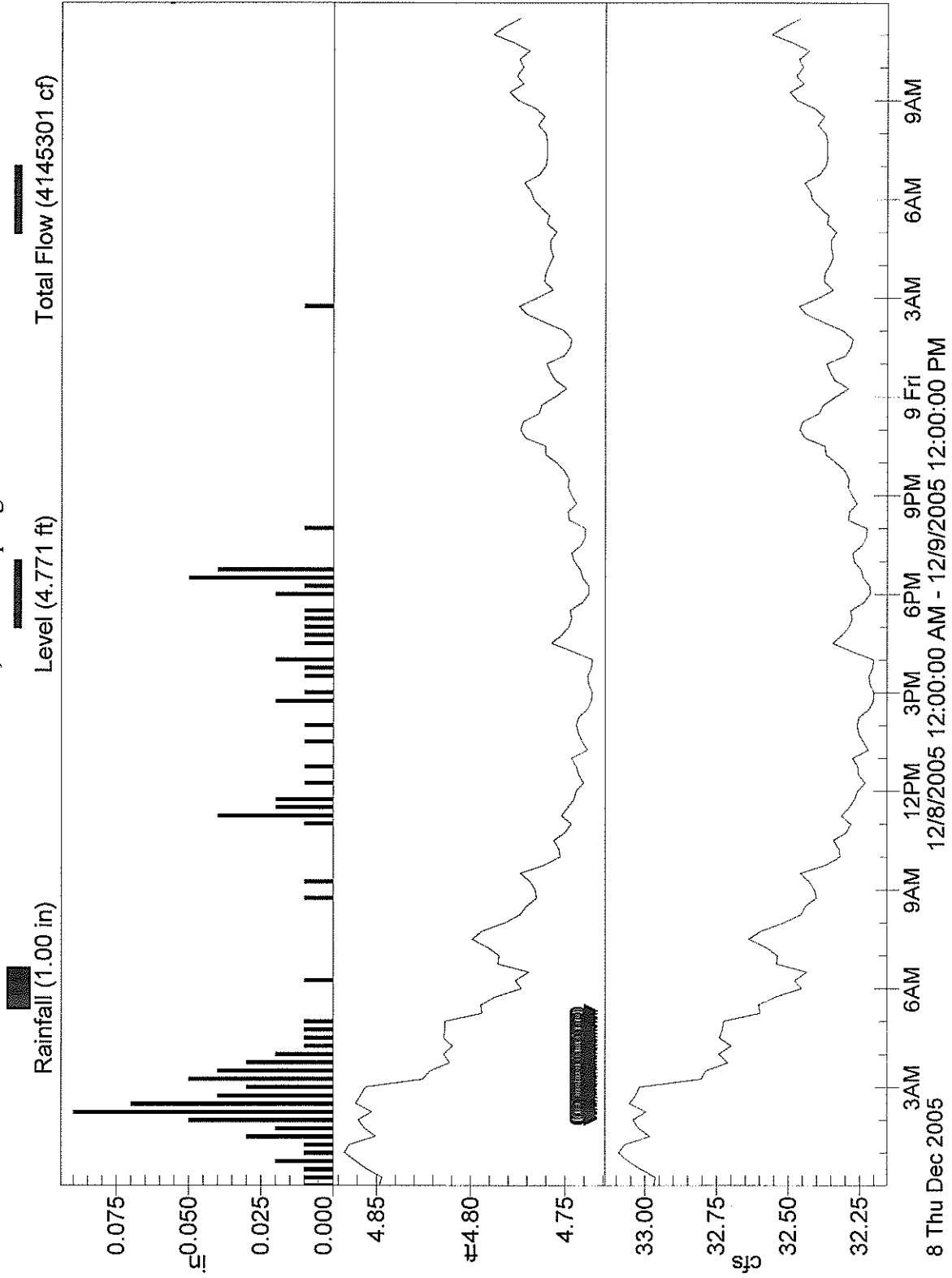
December 8, 2005

STATIONS SAMPLED:

HOWELL CREEK
SOLARY CANAL

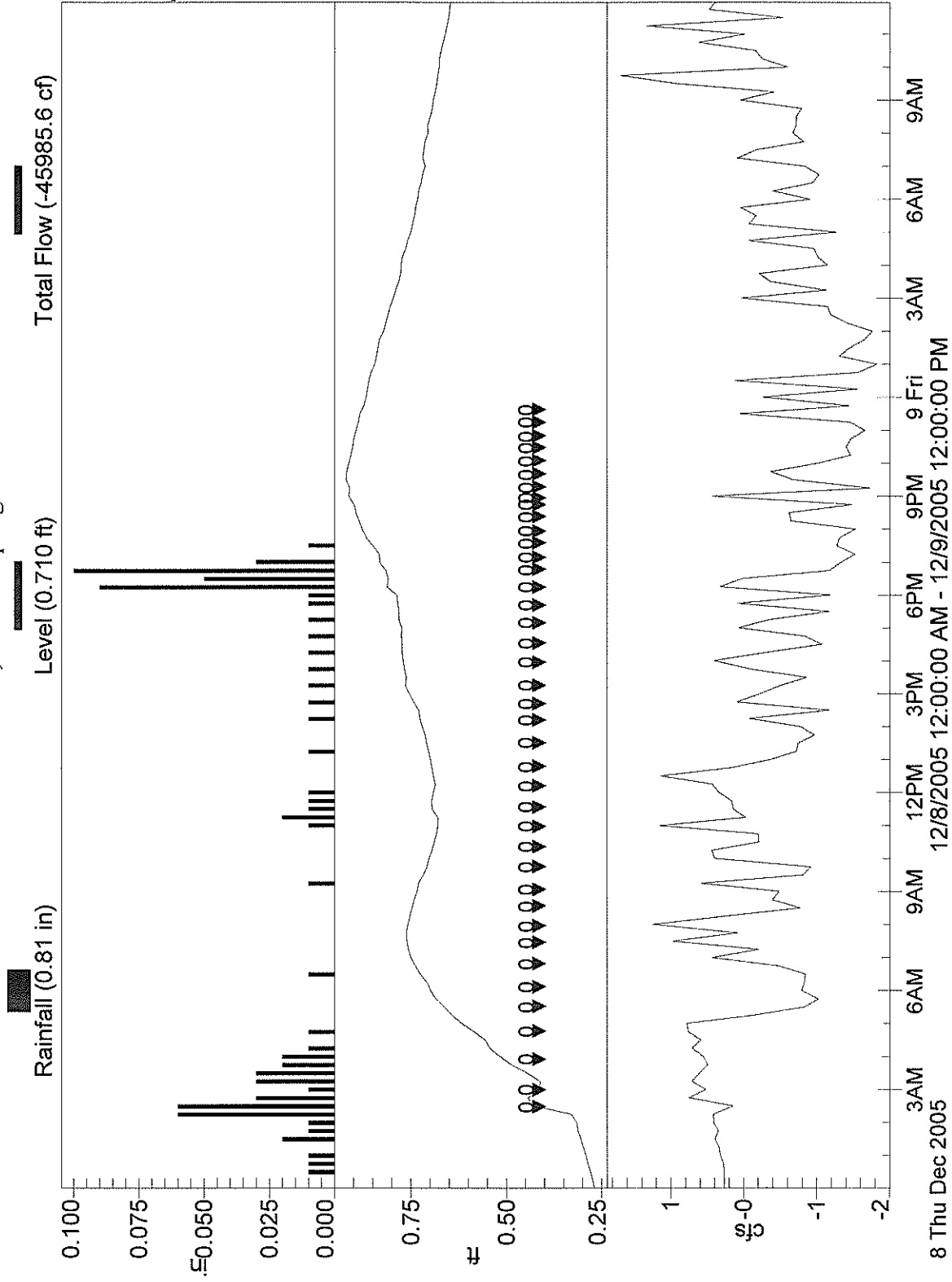
Howell Creek Sampling Station

December 8, 2005 Sampling Event



Solary Canal Sampling Station

December 8, 2005 Sampling Event



GRAPHICAL RESULTS

SAMPLE EVENT NO. 24

February 03, 2006

STATIONS SAMPLED:

SIX MILE CREEK

Six Mile Creek Sampling Station

February 3, 2006 Sampling Event

