
APPENDIX J

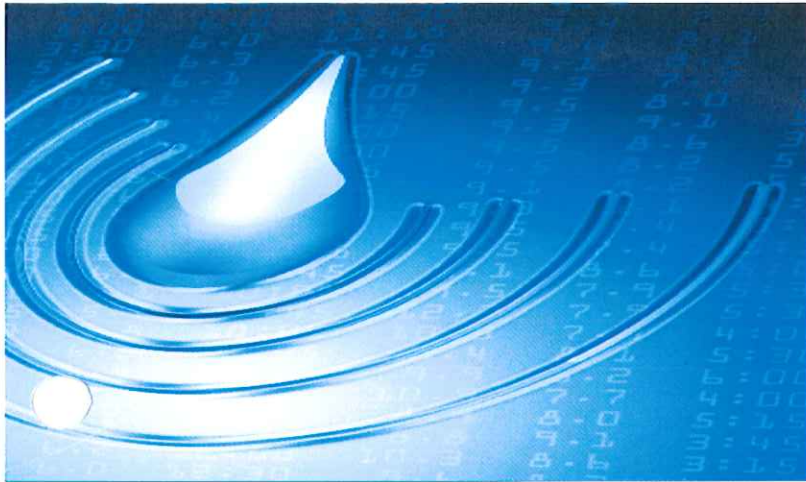
ADS Flow Monitoring Report



FLOWVIEW™

UNDERGROUND INTELLIGENCE®

FOR ENHANCED COLLECTION SYSTEM PERFORMANCE



ADS ENVIRONMENTAL SERVICES®

Pare Corporation

Johnston, RI

Flow Monitoring Study

September – December 2008



ADS ENVIRONMENTAL SERVICES

A Division of ADS LLC

211 Gay Street
Manchester, NH 03103
www.adsenv.com

December 31, 2008

Armando Ricci, P.E.
Pare Corporation
8 Blackstone Valley Place
Lincoln, RI 02865

Dear Mr. Ricci,

ADS is pleased to submit the final report for the Johnston, RI Temporary Flow Monitoring Study. Data beginning Thursday, September 25, 2008 through Monday, December 01, 2008 includes depth, velocity and quantity hydrographs as well as scattergraphs, longtables and 15-minute data in Excel format.

In addition, we would be happy to further explain any details about the report that may seem unclear. Should you have any questions or comments, please contact the Project Manager, Michael Armes at 603-625-1212 or me at 845-268-1201 ext. 222.

Thank you for choosing ADS products and services to meet your flow monitoring needs.

Sincerely,
ADS ENVIRONMENTAL SERVICES

Rodianne Cadet
Data Manager

ADS LLC

Accusonic
ADS Environmental Services
Hydra-Stop

Introduction

Background

Pare Corporation entered into agreement with ADS Environmental Services to conduct flow monitoring at nineteen (19) metering locations and two (2) rain gauges located in Johnston, RI. The monitoring period began on Thursday, September 25, 2008 and ended on Monday, December 01, 2008. The objective of this study was to measure depth, velocity, and quantify flows.

Project Scope

The scope of this study involved using a temporary flow monitor to quantify wastewater flow at the designated locations. Specifically, the study included the following key components:

- Investigate the proposed flow-monitoring site for adequate hydraulic conditions.
- Flow monitor installation.
- Flow monitor confirmations and data collections.
- Flow data analysis.

Equipment and Methodology

Flow Quantification Methods

There are two main equations used to measure open channel flow: the Continuity Equation and the Manning Equation. The Continuity Equation, which is considered the most accurate, can be used if both depth of flow and velocity are available. In cases where velocity measurements are not available or not practical to obtain, the Manning Equation can be used to estimate velocity from the depth data based on certain physical characteristics of the pipe (i.e. the slope and roughness of the pipe being measured). However, the Manning equation assumes uniform, steady flow hydraulic conditions with non-varying roughness, which are typically invalid assumptions in most sanitary sewers. The Continuity Equation was used exclusively for this study.

Continuity Equation

The Continuity Equation states that the flow quantity (Q) is equal to the wetted area (A) multiplied by the average velocity (V) of the flow.

$$Q = A * V$$

This equation is applicable in a variety of conditions including backwater, surcharge, and reverse flow. Most modern flow monitoring equipment, including the ADS Models, measure both depth and velocity and therefore use the Continuity Equation to calculate flow quantities.

Flow Monitoring Equipment

The monitor selected for this project was the ADS Model 1502EM flow monitor. This flow monitor is an area velocity flow monitor that uses both the Continuity and Manning's equations to measure flow.

The ADS Model 1502EM flow monitor consists of data acquisition sensors and a battery-powered microcomputer. The microcomputer includes a processor unit, data storage, and an on-board clock to control and synchronize the sensor recordings. The monitor was programmed to acquire and store depth of flow and velocity readings at 15-minute intervals.

Three types of data acquisition sensors are available for the Model 1502EM flow monitor. The primary depth measurement device is the ADS quad-redundant ultrasonic level sensor. This sensor uses four independent ultrasonic transceivers in pairs to measure the distance from the face of the transceiver housing to the water surface (air range) with up to four transceiver pairs, of the available ones, active at one time. The elapsed time between transmitting and receiving the ultrasonic waves is used to calculate the air range between the sensor and flow surface based on the speed of sound in air. Sensors in the transceiver housing measure temperature, which is used to compensate the ultrasonic signal travel time. The speed of sound will vary with temperature. Since the ultrasonic level sensor is mounted out of the flow, it creates no disturbance to normal flow patterns and does not affect site hydraulics.

Redundant flow depth data can be provided by a pressure depth sensor, and is independent from the ultrasonic level sensor. This sensor uses a piezo-resistive crystal to determine the difference between hydrostatic and atmospheric pressure. The pressure sensor is temperature compensated and vented to the atmosphere through a desiccant filled breather tube. Pressure depth sensors are typically used in large size channels and applications where surcharging is anticipated. Its streamlined shape minimizes flow distortion.

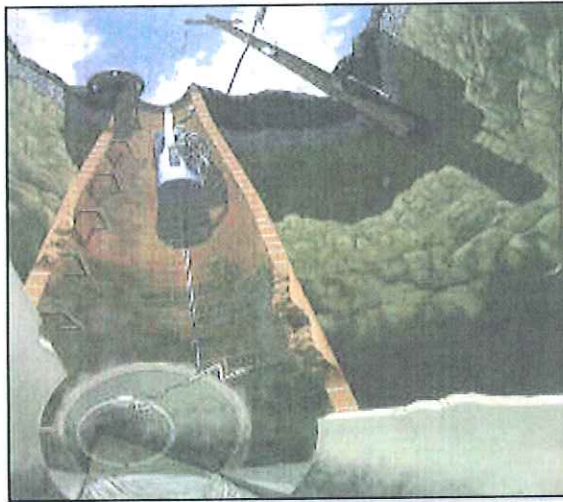
Velocity is measured using the ADS V-3 digital Doppler velocity sensor. This sensor measures velocity in the cross-sectional area of flow. An ultrasonic carrier is transmitted upstream into the flow, and is reflected by suspended particles, air bubbles, or organic matter with a frequency shift proportional to the velocity of the reflecting objects. The reflected signal is received by the sensor and processed using digital spectrum analysis to determine the peak flow velocity. Collected peak velocity information is filtered and processed using field confirmation information and proprietary software to determine the average velocity, which is used to calculate flow quantities. The sensor's small profile, measuring 1.5 inches by 1.15 inches by 0.50 inches thick, minimizes the affects on flow patterns and site hydraulics.

Installation

Installation of flow monitoring equipment typically proceeds in four steps. First, the site is investigated for safety and to determine physical and hydraulic suitability for the flow monitoring equipment. Second, the equipment is physically installed at the selected location. Third, the monitor is tested to assure proper operation of the velocity and depth of flow sensors and verify that the monitor clock is operational and synchronized to the master computer clock. Fourth, the depth and velocity sensors are confirmed and line confirmations are performed. A typical flow monitor installation is shown in Figure 2.1.

The installations depicted in Figures 2.1 are typical for circular or oval pipes up to approximately 104-inches in diameter or height. In installations into pipes 42-inches or less in diameter, depth and velocity sensors are mounted on an expandable stainless steel ring and installed one to two pipe diameters upstream of the pipe/manhole connection in the incoming sewer pipe. This reduces the affects of turbulence and backwater caused by the connection. In pipes larger than 42 inches in diameter, a special installation is made using two sections of the ring installed one to two feet upstream of the pipe/manhole connection; one bolted to the crown of the pipe for the depth sensor, and the other bolted to the bottom of the pipe (bolts are usually placed just above the water line) to hold the velocity sensor.

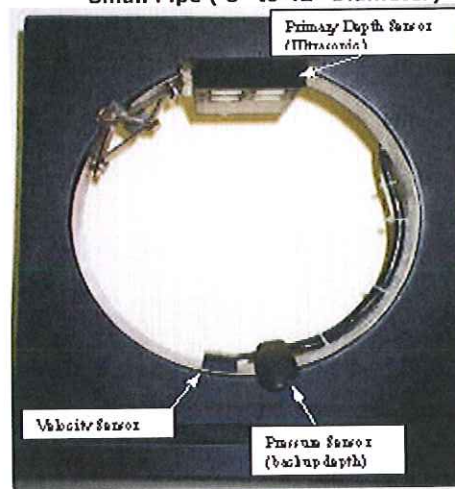
Figure 2.1 Typical Installation



Large Pipe (> 42" Diameter)



Small Pipe (8" to 42" Diameter)



Data Collection, Confirmation, and Quality Assurance

During the monitoring period, field crews visit each monitoring location to retrieve data, verify proper monitor operation, and document field conditions. The following quality assurance steps are taken to assure the integrity of the data collected:

- **Measure Power Supply:** The monitor is powered by a dry cell battery pack. Power levels are recorded and battery packs replaced, if necessary. A separate battery provides back-up power to memory, which allows the primary battery to be replaced without the loss of data.
- **Perform Pipe Line Confirmations and Confirm Depth and Velocity:** Once equipment and sensor installation is accomplished, a member of the field crew descends into the manhole to perform a field measurement of flow rate, depth and velocity to confirm they are in agreement with the monitor. Since the ADS V-3 velocity sensor measures peak velocity in the wetted cross-sectional area of flow, velocity profiles are also taken to develop a relationship between peak and average velocity in lines that meet the hydraulic criteria.
- **Measure Silt Level:** During site confirmation, a member of the field crew descends into the manhole and measures and records the depth of silt at the bottom of the pipe. This data is used to compute the true area of flow.
- **Confirm Monitor Synchronization:** The field crew checks the flow monitor's clock for accuracy.

- **Upload and Review Data:** Data collected by the monitor is uploaded and reviewed for comparison with previous data. All readings are checked for consistency and screened for deviations in the flow patterns, which indicate system anomalies or equipment failure.

Data Analysis and Presentation

Data Analysis

A flow monitor is typically programmed to collect data at either 15-minute or 5-minute intervals throughout the monitoring period. The monitor stores raw data consisting of (1) the air range (distance from sensor to top of flow) for each active ultrasonic depth sensor pair and (2) the peak velocity. If the monitor is equipped with a pressure sensor, then a depth reading from this sensor may also be stored. When the field personnel collects the data, the air range is converted to depth data based on the pipe height and physical offset (distance from the top of the pipe to the surface of the ultrasonic sensor). The data is imported into ADS's proprietary software and is examined by a data analyst to verify its integrity. The data analyst also reviews the daily field reports and site visit records to identify conditions that would affect the collected data.

Velocity profiles and the line confirmation data developed by the field personnel are reviewed by the data analyst to identify inconsistencies and verify data integrity. Velocity profiles are reviewed and an average to peak velocity ratio is calculated for the site. This ratio is used in converting the peak velocity measured by the sensor to the average velocity used in the Continuity equation. The data analyst selects which ultrasonic pairs and/or depth sensor entity will be used to calculate the final depth information. Silt levels present at each site visit are reviewed and representative silt levels established.

Selections for the above parameters can be constant or can change during the monitoring period. While the data analysis process is described in a linear manner, it often requires an iterative approach to accurately complete.

Data Presentation

This type of flow monitoring project generates a large volume of data. To facilitate review of the data, results have been provided in graphical and tabular formats. The flow data is presented graphically in the form of scattergraphs and hydrographs. Tables are provided in daily average format. These tables show the flow rate for each day, along with the daily minimum and maximums, the times they were observed, the total daily flow, and total flow for the month (or monitoring period). The following explanation of terms may aid in interpretation of the tables and hydrographs.

DEPTH - Final calculated depth measurement (in inches)

QUANTITY - Final calculated flow rate (in MGD)

VELOCITY - Final calculated flow velocity (in feet per second)

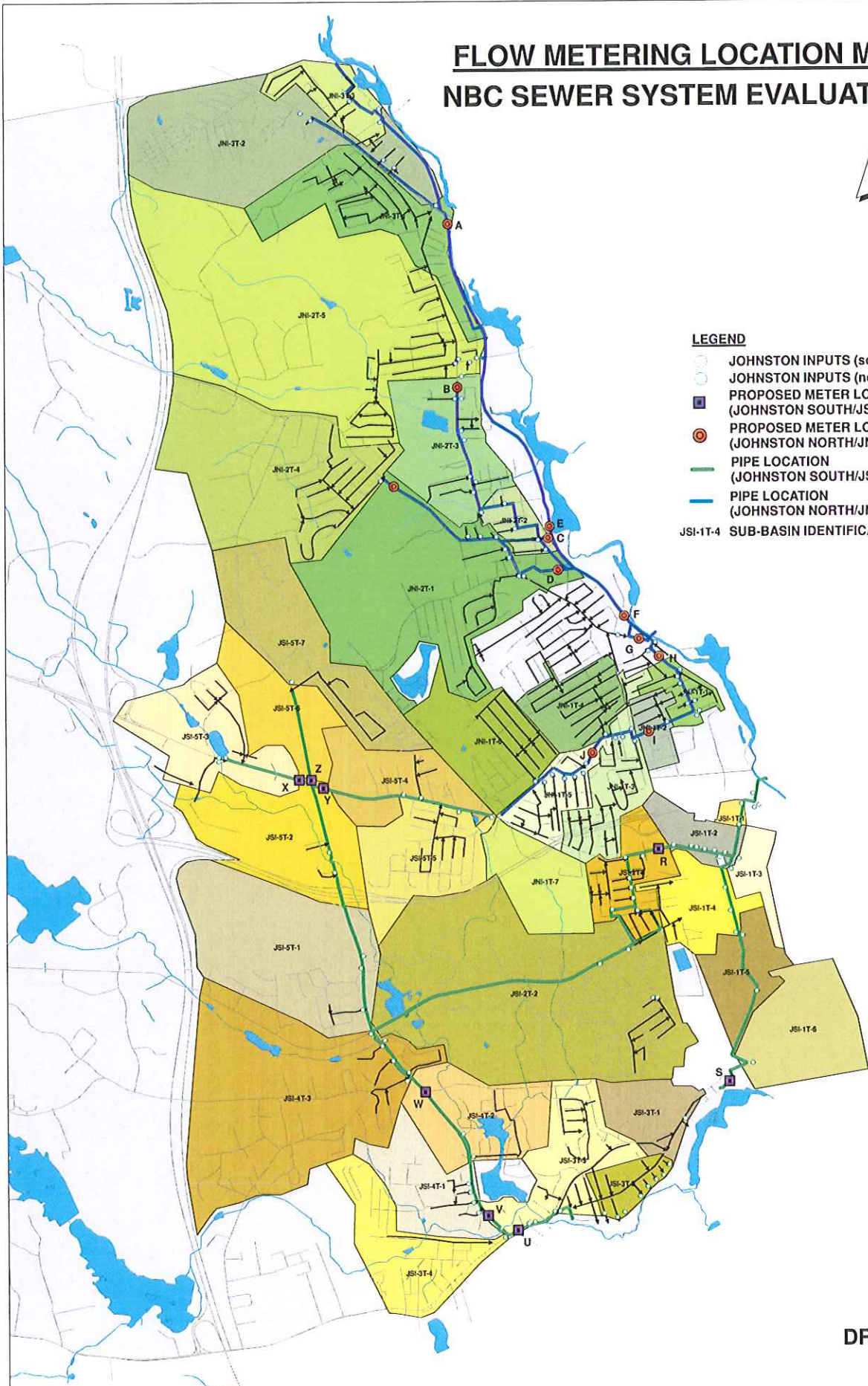
REPORT TOTAL - Total volume of flow recorded for the indicated time period (in MG)

FLOW METERING LOCATION MAP NBC SEWER SYSTEM EVALUATION



LEGEND

- JOHNSTON INPUTS (south)
 - JOHNSTON INPUTS (north)
 - PROPOSED METER LOCATION (JOHNSTON SOUTH/JSI)
 - PROPOSED METER LOCATION (JOHNSTON NORTH/JNI)
 - PIPE LOCATION (JOHNSTON SOUTH/JSI)
 - PIPE LOCATION (JOHNSTON NORTH/JNI)
- JSI-1T-4 SUB-BASIN IDENTIFICATION



DRAFT



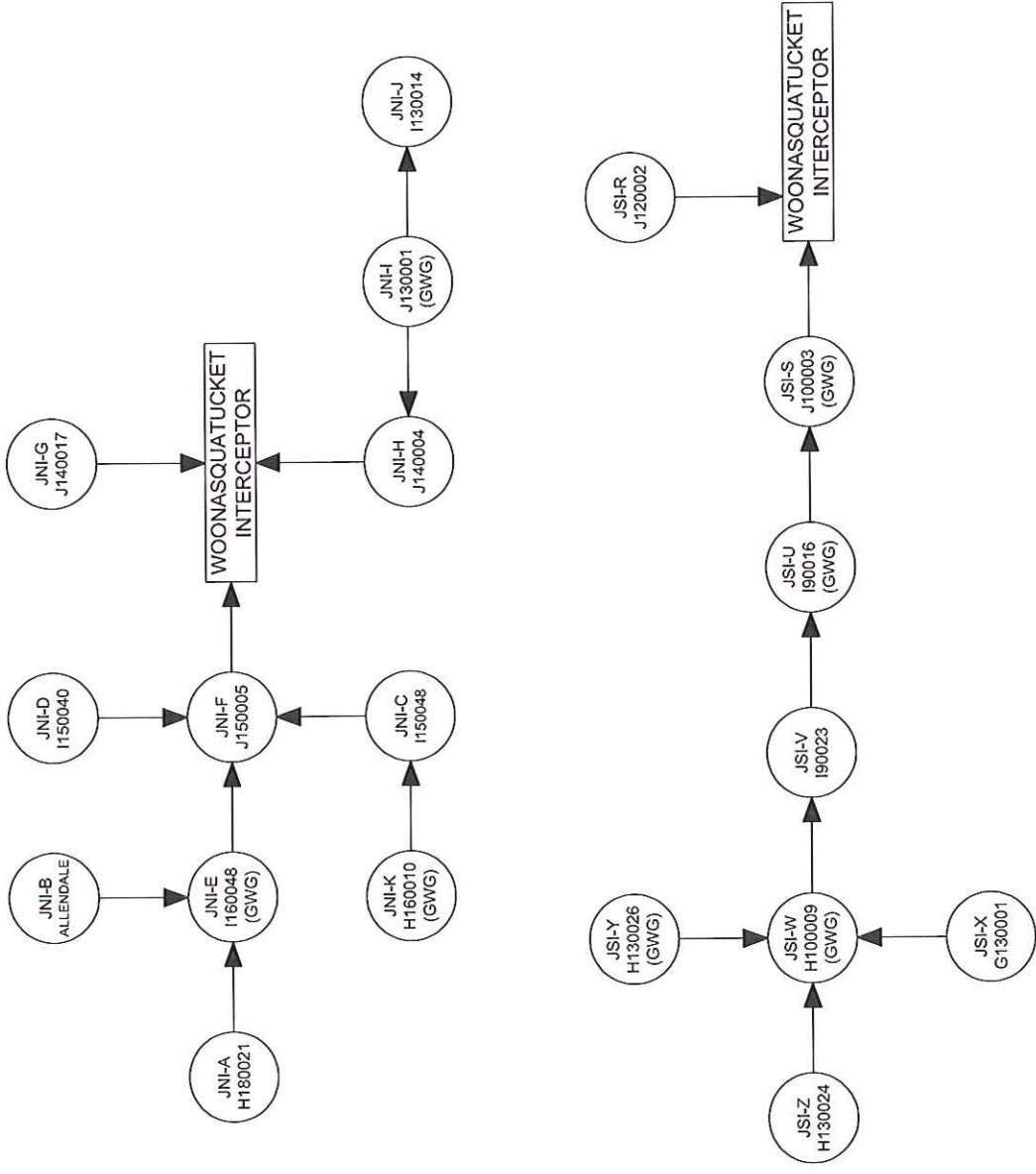
SEPTEMBER 2, 2008

**NARRAGANSETT
 BAY
 COMMISSION**

**JOHNSTON
 SEWER SYSTEM
 EVALUATION
 SURVEY**

Scale: NONE

Figure No. 1
**SYSTEM FLOW
 DIAGRAM**



Site Commentary

Site Information

JC_JNI-A	
Pipe Dimensions (in.)	Circular (17.50 in H)
Silt (in.)	0.00"

Overview

A review of the [hydrograph](#) and [scattergraph](#) for JC_JNI-A indicate this location functioned mostly in free-flow conditions for the monitoring period of Thursday, September 25, 2008 to Monday, December 01, 2008 . Flow depth and velocity measurements recorded by the flow monitor are consistent with field confirmations conducted to date and support the relative accuracy of the flow monitor at this location.

[Daily longtables](#) displaying final quantities are also provided.

Observations

Average flow depth, velocity, and quantity data observed during Thursday, September 25, 2008 to Monday, December 01, 2008 , along with observed minimum and maximum data, are provided in the following table.

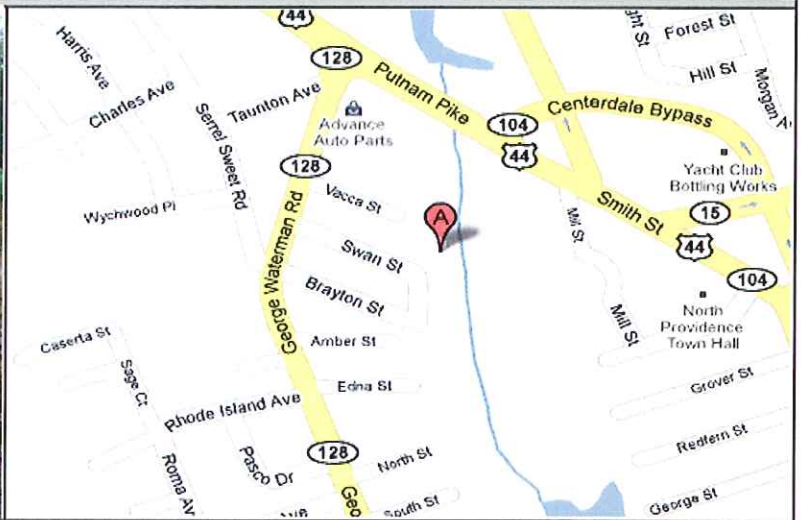
Observed Flow Conditions			
Item	Depth (in)	Velocity (ft/s)	Quantity (MGD)
Average	2.17	1.96	0.162
Minimum	1.00	1.06	0.030
Maximum	7.57	3.19	0.955
Time of Minimum	10/18/2008 4:30 AM	9/26/2008 4:00 AM	10/19/2008 3:30 AM
Time of Maximum	9/27/2008 3:30 PM	11/15/2008 5:30 PM	9/26/2008 10:45 AM

Please note the minimum and maximum flow rate recorded in this table may vary from those recorded on the daily and weekly tabular data. The minimum and maximum rates recorded on the daily and weekly tabular data are absolute verses average fifteen minute data.

Based upon the quality and consistency of the observed flow depth and velocity data, the Continuity equation was used to calculate flow rate and quantities during the monitoring period. Graphical data reports are based on an hourly average.

a division of ADS LLC.

Name:	JC_JNI-A	Meter Type:	1501	Monitor S/N:	10041	Manhole #:	H180021
Address / Location:	21 Vacca Street in Easement 100 Yards Down			Map Page #:	N/A		
Access:	Drive	Type of System:	Sanitary	Pipe Height:	17.5 Inches		
				Pipe Width:	17.5 Inches		
				Phone Number:	N/A		



Investigation Information:			Manhole Information:		
Date/Time of Investigation:	September 24, 2008	7:00 AM	Manhole Depth:	6 Feet	8 Inches
Site Hydraulics:	GOOD		Manhole Material / Condition:	Precast	Good
Upstream Input: (L/S, P/S)			Active Drop Connections?		
Upstream Manhole:	POOR FLOW TO SLOW		Pipe Material / Condition:	PVC	Good
Downstream Manhole:	BOLTED		Mini System Character:	Residential	
Depth of Flow (Wet Dof):	3	+/- 0.25	Access Pole #:	N/A	
Range (Air Dof):	13"	+/- 0.25	Distance From Manhole:	N/A Feet	
Peak Velocity:	2.1	fps	Road Cut Length:	N/A Feet	
Silt:	0	Inches	Trench Length:	N/A Feet	

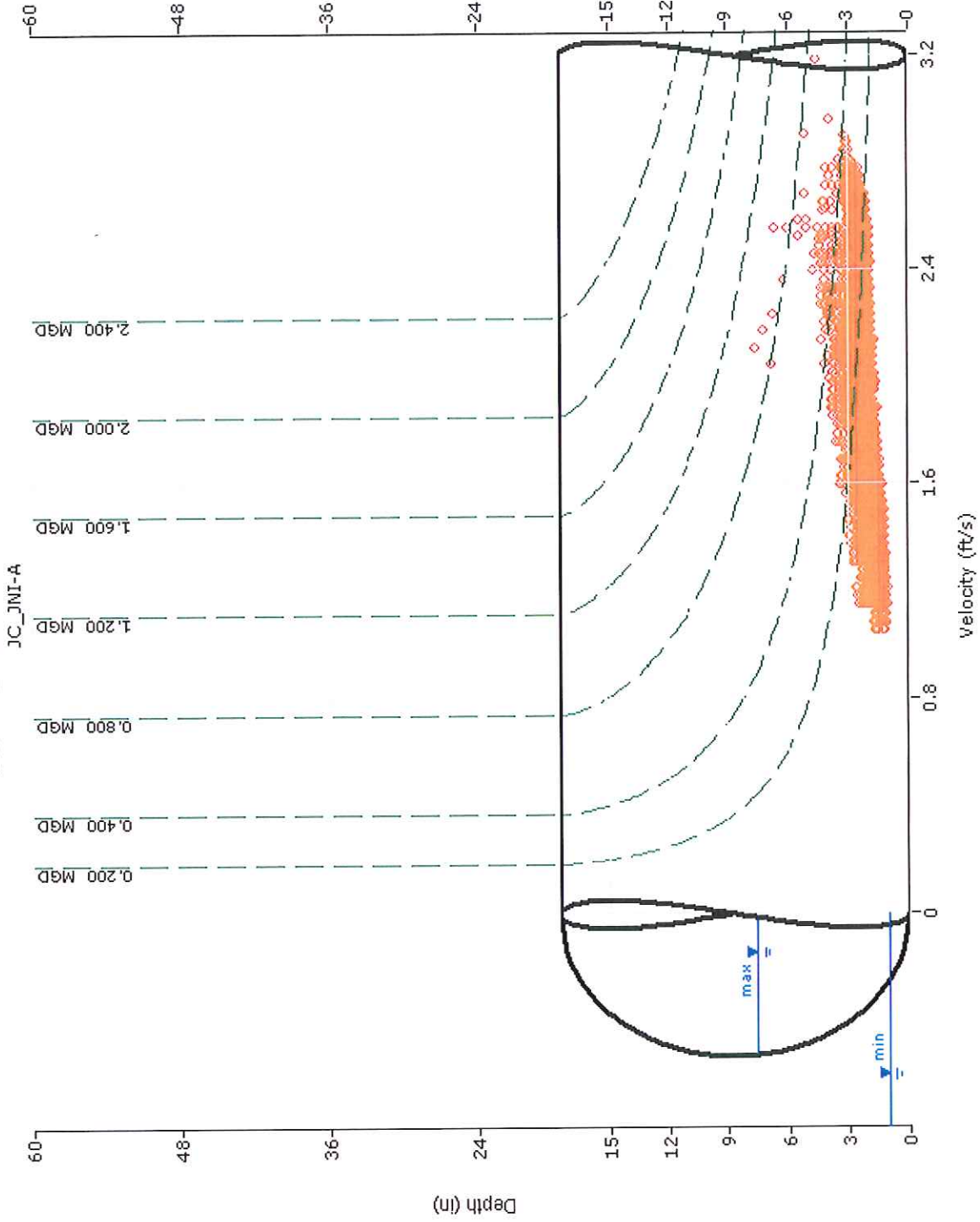
Other Information:
N 41° 51' 27.3" W 71° 29' 14.9"



Installation Information		Backup	Yes	No	?	Distance
Installation Type:	Doppler Standard Ring and Crank Installation	Trunk	x			
Sensors / Devices:	Ultra, Velocity, Pressure (Non I.S.)	Lift/Pump Station		x		
Surcharge Height:	0 Feet	WWTP		x		
Rain Gauge Zone:	RG-2	Other		x		

Additional Site Information / Comments:
PRESS SN 79045 PO 1.5

SCATTERGRAPH REPORT



Flow Monitor
JC_JNI-A

Nominal Diameter
18-in

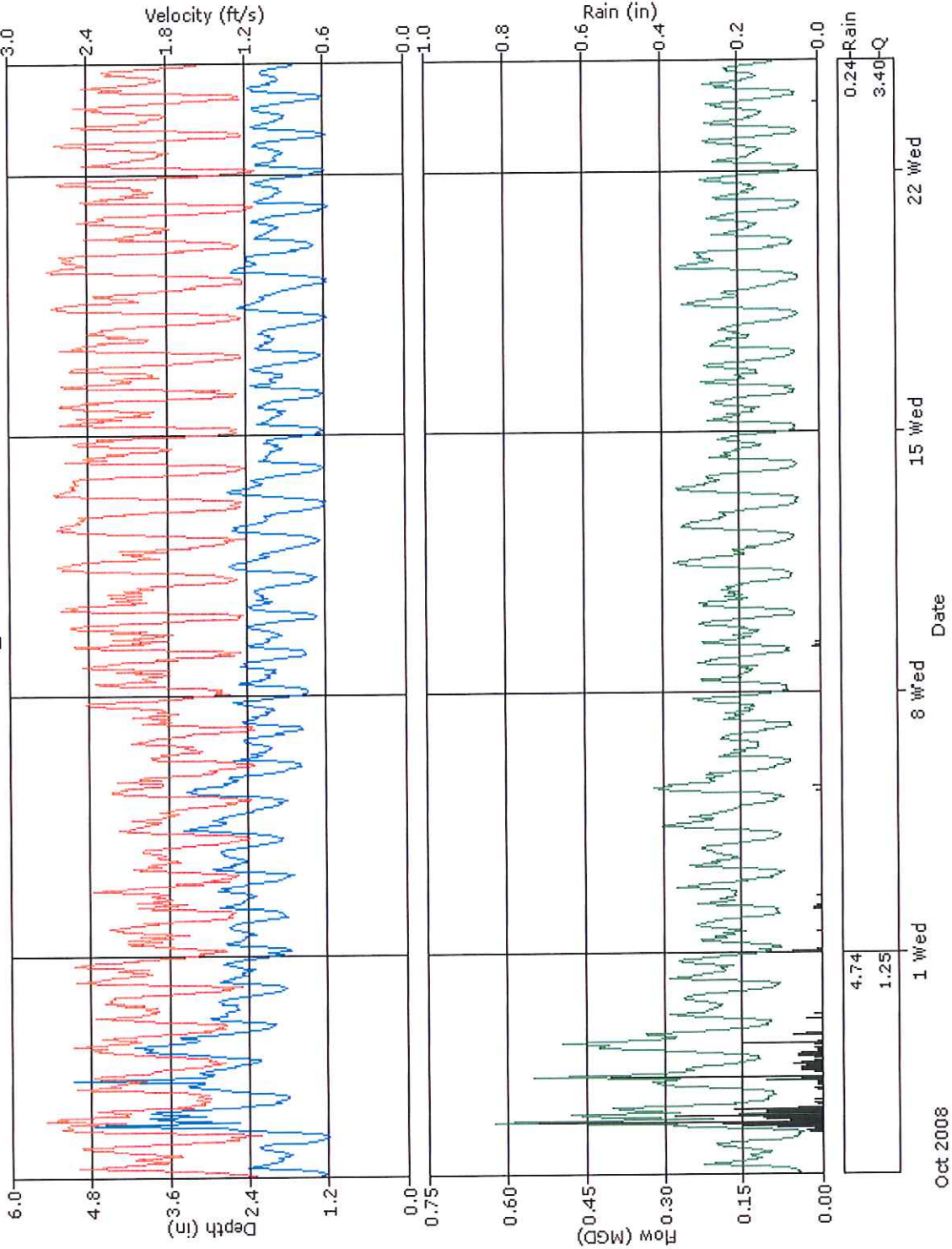
Report Period
9/25/2008
To
12/1/2008

Legend

- Depth - Velocity
- ISO-QTM
- Silt
- Min-Max Depth

HYDROGRAPH REPORT

JC_JNI-A



Flow Monitor
JC_JNI-A

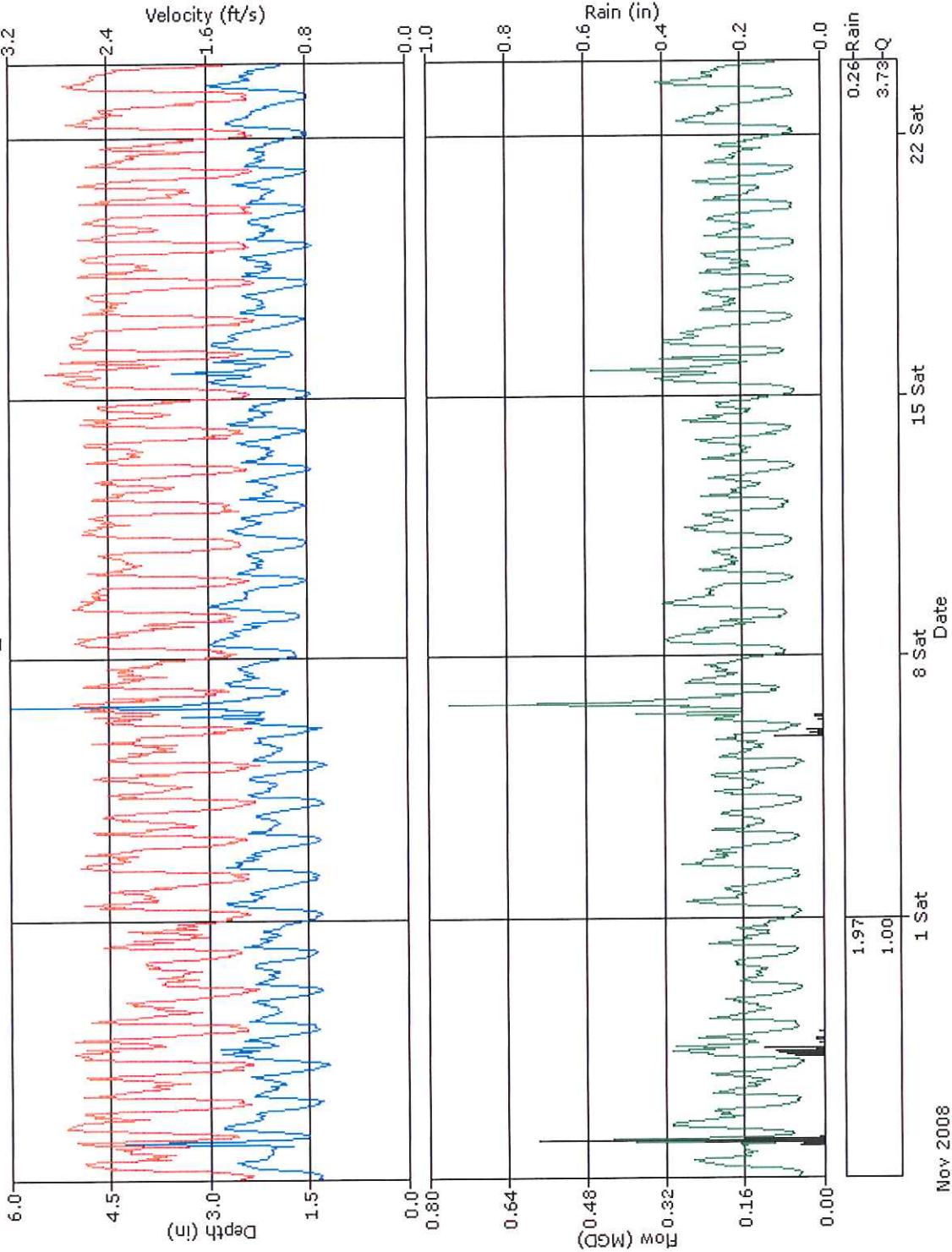


Report Period
9/25/2008
To
10/24/2008

- Legend**
- Depth
 - Silt
 - Velocity
 - Quantity
 - Rain

HYDROGRAPH REPORT

JC_JNI-A



Flow Monitor
JC_JNI-A



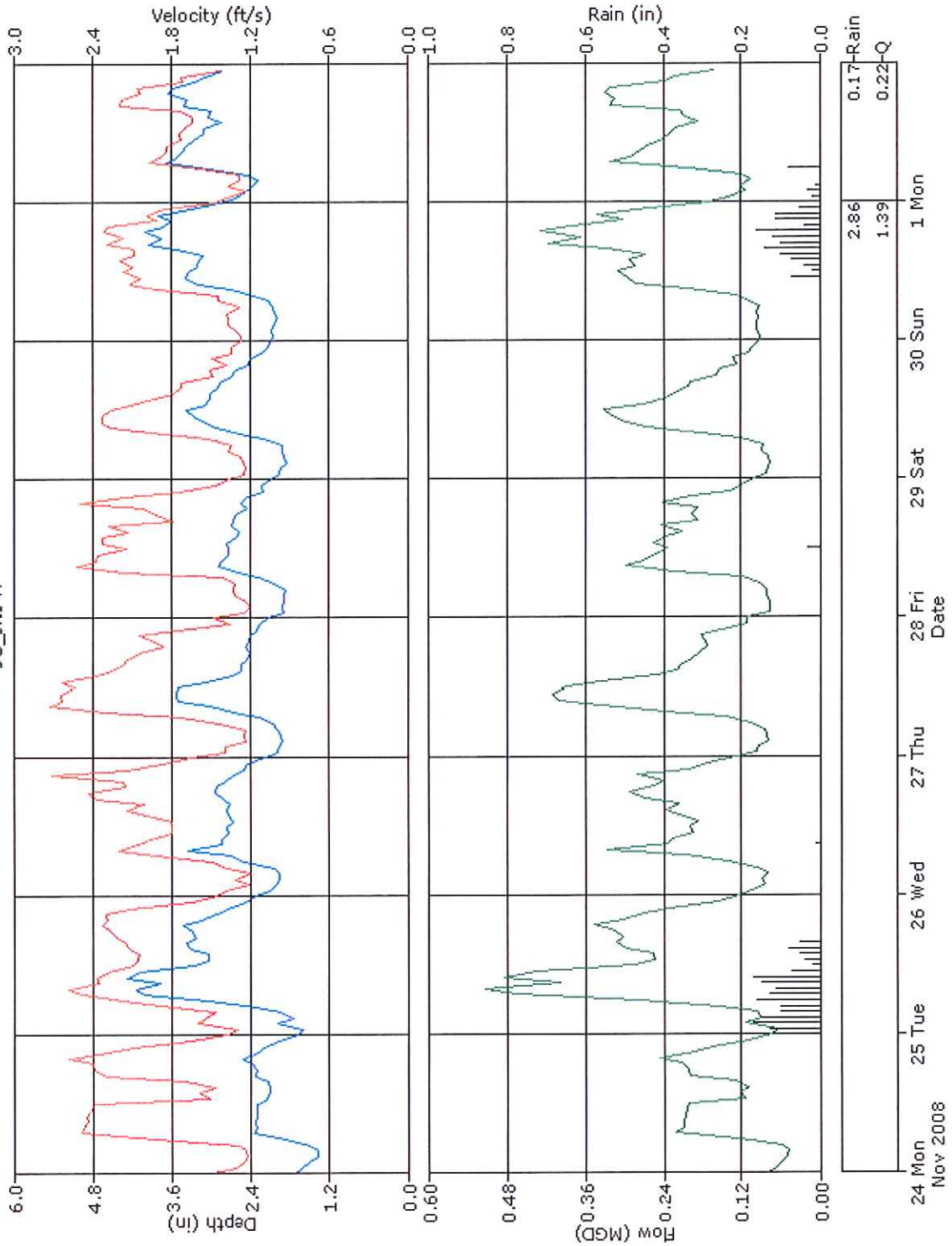
Report Period
10/25/2008
to
11/23/2008

Legend

- Depth
- Silt
- Velocity
- Quantity
- Rain

HYDROGRAPH REPORT

JC_JNI-A



Flow Monitor
JC_JNI-A

Nominal Diameter
18-in

Report Period
11/24/2008
To
12/1/2008

Legend

- Depth
- Silt
- Velocity
- Quantity
- Rain



Narragansett Bay

Daily Tabular Report For The Period 9/25/2008 - 12/1/2008

JC_JNI-A, Pipe Height: 18"

Daily Tabular Report

Depth (in) Velocity (ft/s) Quantity (MGD - Total MG) Rain (in)

Date	Depth					Velocity					Quantity					Rain	
	Time	Min	Time	Max	Avg	Time	Min	Time	Max	Avg	Time	Min	Time	Max	Avg	Total	Total
9/25/2008	04:15	1.15	07:30	2.65	1.85	02:00	1.09	19:45	2.89	1.89	02:15	0.037	07:30	0.244	0.122	0.122	
9/26/2008	03:30	1.11	10:45	6.61	2.73	04:00	1.06	13:15	2.82	2.04	04:15	0.032	10:45	0.955	0.255	0.255	2.91
9/27/2008	05:00	1.75	15:30	7.57	2.79	02:45	1.38	10:45	2.75	1.93	08:30	0.083	15:30	0.945	0.229	0.229	1.06
9/28/2008	04:30	2.08	13:00	4.28	3.11	02:45	1.32	11:15	2.66	1.94	03:15	0.102	12:45	0.531	0.267	0.267	0.71
9/29/2008	04:15	1.95	07:30	3.07	2.56	03:30	1.33	21:15	2.72	1.94	04:15	0.089	08:45	0.323	0.196	0.196	0.06
9/30/2008	03:15	1.73	20:30	3.04	2.39	03:30	1.22	08:15	2.75	2.00	04:00	0.074	20:30	0.333	0.183	0.183	
10/1/2008	03:15	1.64	08:15	2.96	2.35	03:45	1.31	17:15	2.56	1.85	03:15	0.071	17:45	0.280	0.164	0.164	0.10
10/2/2008	01:15	1.69	07:15	3.18	2.37	01:45	1.15	18:00	2.62	1.76	01:45	0.064	18:00	0.312	0.159	0.159	0.06
10/3/2008	04:00	1.65	08:00	3.12	2.44	04:15	1.15	19:45	2.18	1.74	04:15	0.064	08:00	0.271	0.166	0.166	
10/4/2008	02:45	1.73	10:00	3.48	2.55	03:30	1.15	16:30	2.27	1.75	02:45	0.067	11:30	0.326	0.179	0.179	
10/5/2008	23:45	1.67	11:15	3.52	2.49	04:45	1.09	17:00	2.66	1.73	04:45	0.059	11:15	0.348	0.173	0.173	0.03
10/6/2008	02:30	1.51	07:45	2.81	2.11	03:45	1.06	11:30	2.37	1.66	04:15	0.051	07:45	0.237	0.127	0.127	
10/7/2008	02:30	1.47	20:00	2.68	2.10	03:45	1.06	21:00	2.66	1.78	03:45	0.048	20:00	0.271	0.137	0.137	
10/8/2008	01:15	1.41	07:45	2.68	2.04	01:30	1.22	18:15	2.75	1.91	03:00	0.051	07:30	0.267	0.141	0.141	
10/9/2008	03:15	1.44	07:45	2.58	1.97	09:45	1.15	07:45	2.69	1.95	04:15	0.053	07:45	0.266	0.138	0.138	0.04
10/10/2008	03:15	1.26	09:00	2.54	1.97	04:30	1.15	07:15	2.62	1.95	03:15	0.041	09:00	0.255	0.138	0.138	
10/11/2008	04:30	1.21	12:30	2.90	2.00	04:30	1.17	09:00	2.72	1.96	04:30	0.038	12:30	0.312	0.145	0.145	
10/12/2008	04:30	1.22	09:45	2.83	1.94	05:15	1.09	13:00	2.72	2.08	03:45	0.039	10:00	0.273	0.148	0.148	
10/13/2008	03:30	1.08	11:15	3.27	1.95	02:15	1.15	09:30	2.69	2.07	03:30	0.034	11:15	0.322	0.151	0.151	
10/14/2008	02:45	1.20	07:30	2.39	1.82	03:15	1.09	07:45	2.75	1.97	03:15	0.036	07:45	0.235	0.125	0.125	
10/15/2008	04:30	1.12	07:45	2.60	1.82	04:30	1.09	20:15	2.69	2.03	04:30	0.032	07:45	0.266	0.129	0.129	
10/16/2008	04:15	1.16	19:45	2.45	1.85	03:00	1.15	08:45	2.69	1.98	03:00	0.036	08:45	0.246	0.129	0.129	
10/17/2008	04:30	1.17	08:45	2.40	1.87	03:45	1.12	07:00	2.66	2.01	04:30	0.036	08:45	0.226	0.133	0.133	
10/18/2008	04:30	1.00	11:45	2.57	1.89	03:45	1.18	11:15	2.75	1.98	04:30	0.030	10:15	0.268	0.137	0.137	
10/19/2008	03:30	1.04	11:30	2.81	1.97	02:15	1.12	10:45	2.81	2.06	03:30	0.030	10:45	0.313	0.154	0.154	
10/20/2008	03:30	1.30	18:30	2.51	1.91	04:00	1.09	07:30	2.66	1.91	03:30	0.042	18:30	0.247	0.129	0.129	
10/21/2008	04:45	1.07	19:30	2.41	1.83	03:45	1.08	19:30	2.75	1.94	03:45	0.031	19:30	0.246	0.126	0.126	
10/22/2008	04:30	1.13	07:45	2.45	1.83	02:45	1.09	20:30	2.66	1.91	04:30	0.034	07:45	0.240	0.123	0.123	
10/23/2008	02:15	1.08	08:45	2.49	1.84	02:00	1.09	18:45	2.69	1.90	02:15	0.032	08:45	0.241	0.124	0.124	0.01
10/24/2008	02:45	1.10	09:15	2.59	1.87	05:15	1.12	09:00	2.78	1.87	02:45	0.034	09:15	0.269	0.124	0.124	
10/25/2008	04:30	1.23	10:15	2.72	1.94	03:45	1.15	10:15	2.76	1.96	03:45	0.039	10:15	0.295	0.139	0.139	0.11
10/26/2008	06:30	1.45	01:30	5.02	2.29	05:30	1.22	01:00	2.78	2.26	05:30	0.053	01:30	0.663	0.203	0.203	1.23
10/27/2008	04:45	1.19	07:45	2.49	1.91	02:00	1.15	18:30	2.72	1.97	02:15	0.043	07:45	0.247	0.135	0.135	
10/28/2008	03:15	1.13	13:00	3.25	2.03	04:15	1.15	10:30	2.80	2.09	04:15	0.038	10:30	0.379	0.160	0.160	0.63
10/29/2008	05:00	1.26	07:45	2.58	1.92	02:15	1.22	07:15	2.66	1.87	02:15	0.044	07:45	0.260	0.128	0.128	
10/30/2008	03:00	1.26	07:45	2.50	1.92	03:45	1.15	11:30	2.56	1.77	04:15	0.041	20:45	0.207	0.119	0.119	
10/31/2008	04:15	1.25	07:15	2.56	1.90	04:15	1.22	07:30	2.62	1.80	04:15	0.042	07:30	0.253	0.120	0.120	
11/1/2008	05:15	1.21	11:30	3.04	2.00	04:30	1.15	10:30	2.72	1.92	05:15	0.039	11:30	0.321	0.142	0.142	
11/2/2008	05:45	1.29	10:30	2.95	2.04	04:15	1.22	10:30	2.78	2.06	04:15	0.047	10:30	0.335	0.168	0.168	
11/3/2008	04:15	1.19	08:30	2.62	1.90	05:00	1.18	08:30	2.69	1.92	04:15	0.039	08:30	0.272	0.130	0.130	
11/4/2008	03:30	1.18	10:45	2.63	1.93	05:15	1.15	20:00	2.69	1.91	05:15	0.040	20:00	0.261	0.133	0.133	
11/5/2008	04:00	1.19	22:15	2.47	1.89	04:00	1.15	19:30	2.66	1.93	04:00	0.037	21:00	0.232	0.130	0.130	0.16

Date	Depth					Velocity					Quantity					Rain	
	Time	Min	Time	Max	Avg	Time	Min	Time	Max	Avg	Time	Min	Time	Max	Avg	Total	Total
11/6/2008	04:45	1.22	18:15	7.17	2.41	05:00	1.15	21:45	2.76	2.08	04:45	0.040	18:15	0.906	0.212	0.212	0.10
11/7/2008	03:45	1.77	09:00	3.01	2.30	02:15	1.34	08:30	2.69	2.08	04:45	0.081	09:00	0.325	0.180	0.180	
11/8/2008	05:15	1.58	10:15	3.10	2.33	04:30	1.34	10:30	2.80	2.06	04:00	0.069	11:00	0.356	0.188	0.188	
11/9/2008	03:30	1.54	10:45	3.18	2.24	04:00	1.34	11:00	2.78	2.17	03:30	0.066	11:00	0.371	0.187	0.187	
11/10/2008	03:15	1.46	07:15	2.66	2.10	03:30	1.22	12:00	2.69	2.02	03:30	0.055	07:15	0.269	0.156	0.156	
11/11/2008	04:00	1.43	11:00	2.97	2.13	02:15	1.18	11:00	2.77	2.12	02:15	0.050	11:00	0.335	0.170	0.170	
11/12/2008	03:15	1.44	07:45	2.67	2.00	01:30	1.22	08:00	2.69	2.02	04:00	0.057	07:45	0.259	0.145	0.145	
11/13/2008	03:00	1.40	20:00	2.70	2.02	02:30	1.22	07:15	2.69	2.04	02:30	0.049	20:00	0.284	0.150	0.150	
11/14/2008	03:30	1.47	08:00	2.96	2.11	03:45	1.22	08:00	2.79	2.03	03:45	0.056	08:00	0.336	0.157	0.157	
11/15/2008	02:45	1.38	17:30	4.55	2.26	04:30	1.18	17:30	3.19	2.16	03:00	0.049	17:30	0.712	0.197	0.197	
11/16/2008	04:45	1.62	00:45	3.18	2.40	04:30	1.25	00:45	2.90	2.29	05:30	0.065	00:45	0.388	0.217	0.217	
11/17/2008	03:15	1.44	08:00	2.84	2.07	03:15	1.12	07:15	2.72	2.11	03:15	0.047	08:00	0.298	0.160	0.160	
11/18/2008	03:45	1.44	20:00	2.69	2.03	03:00	1.15	07:45	2.72	2.07	03:45	0.049	20:00	0.276	0.154	0.154	
11/19/2008	03:45	1.37	18:45	2.61	2.00	04:15	1.15	19:15	2.75	2.10	04:15	0.046	07:15	0.248	0.152	0.152	
11/20/2008	03:45	1.44	19:15	2.77	2.03	04:15	1.15	18:30	2.78	1.94	04:15	0.050	19:00	0.296	0.144	0.144	
11/21/2008	04:30	1.41	18:30	2.58	2.02	03:00	1.15	19:15	2.66	1.96	04:30	0.047	07:45	0.253	0.143	0.143	
11/22/2008	02:30	1.40	10:30	2.92	2.08	02:00	1.18	10:30	2.82	2.04	02:30	0.048	10:30	0.333	0.161	0.161	
11/23/2008	05:30	1.40	10:30	3.05	2.12	03:30	1.15	11:15	2.88	2.06	03:45	0.048	11:30	0.362	0.169	0.169	
11/24/2008	04:45	1.31	07:45	2.92	2.06	02:15	1.15	20:00	2.75	1.93	03:00	0.044	07:45	0.319	0.147	0.147	
11/25/2008	03:30	1.51	08:30	5.13	2.99	01:15	1.18	08:30	2.91	2.04	01:15	0.056	08:30	0.768	0.271	0.271	1.69
11/26/2008	03:45	1.84	08:15	4.18	2.59	02:15	1.15	21:15	2.78	1.87	04:00	0.075	08:15	0.519	0.195	0.195	0.01
11/27/2008	03:30	1.85	11:30	3.88	2.51	01:30	1.15	10:15	2.85	1.95	03:30	0.072	11:30	0.490	0.199	0.199	
11/28/2008	01:30	1.75	09:00	3.07	2.40	01:30	1.15	16:15	2.78	1.86	01:30	0.065	09:00	0.342	0.175	0.175	0.03
11/29/2008	03:45	1.80	12:15	4.02	2.51	01:00	1.15	09:30	2.72	1.64	05:15	0.072	12:15	0.455	0.168	0.168	
11/30/2008	01:15	1.94	19:45	4.12	2.94	01:30	1.15	19:45	2.42	1.82	06:00	0.081	19:45	0.470	0.236	0.236	1.13
12/1/2008	04:45	2.23	07:15	3.80	3.06	02:45	1.15	17:15	2.46	1.69	04:30	0.095	17:15	0.401	0.223	0.223	0.17

Report Summary For The Period 9/25/2008 - 12/1/2008

Depth (in) : D Velocity (ft/s) : V Quantity (MGD - Total MG) : Q Rain (in) : Rain

	D	V	Q	Rain
Report Total			11.004	10.24
Report Avg	2.17	1.96	0.162	

Site Commentary

Site Information

JC_JNI-B	
Pipe Dimensions	Circular (10.00 in H)
Silt	0.00"

Overview

A review of the [hydrograph](#) and [scattergraph](#) for JC_JNI-B indicate this location functioned under typical open channel flow conditions during the monitoring period of Thursday, September 25, 2008 to Monday, December 01, 2008 . Flow depth and velocity measurements recorded by the flow monitor are consistent with field confirmations conducted to date and support the relative accuracy of the flow monitor at this location.

[Daily longtables](#) displaying final quantities are also provided.

Observations

Average flow depth, velocity, and quantity data observed during Thursday, September 25, 2008 to Monday, December 01, 2008 , along with observed minimum and maximum data, are provided in the following table.

Observed Flow Conditions			
Item	Depth (in)	Velocity (ft/s)	Quantity (MGD)
Average	3.07	1.44	0.137
Minimum	1.87	0.74	0.035
Maximum	5.57	2.23	0.450
Time of Minimum	9/25/2008 4:15 AM	10/25/2008 2:30 AM	9/25/2008 4:15 AM
Time of Maximum	9/27/2008 3:30 PM	9/27/2008 3:30 PM	9/27/2008 3:30 PM

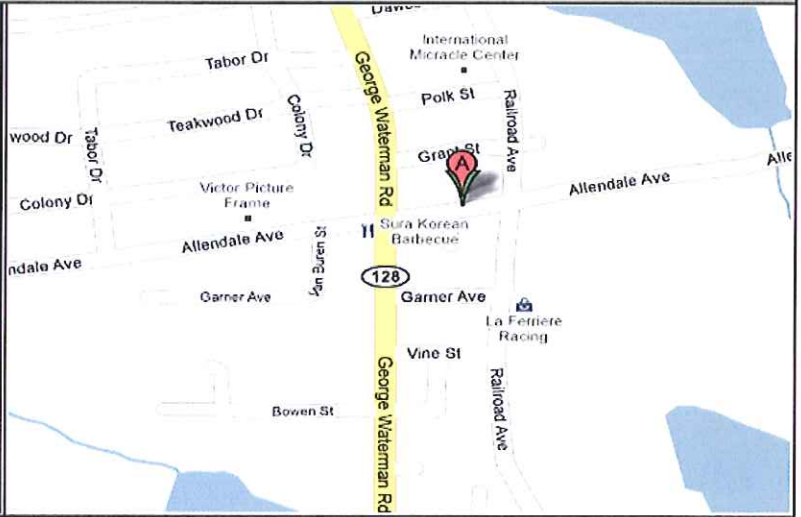
Please note the minimum and maximum flow rate recorded in this table may vary from those recorded on the daily and weekly tabular data. The minimum and maximum rates recorded on the daily and weekly tabular data are absolute verses average fifteen minute data.

Based upon the quality and consistency of the observed flow depth and velocity data, the Continuity equation was used to calculate flow rate and quantities during the monitoring period.

Graphical data reports are based on an hourly average.

a division of ADS LLC.

Name:	JC_JNI-B	Meter Type:	1502 EM	Monitor S/N:	8953	Manhole #:	JNI-B
Address / Location:	78 Allendale Avenue			Map Page #:	N/A		
Access:	Drive	Type of System:	Sanitary	Pipe Height:	10 Inches		
				Pipe Width:	10 Inches		
				Phone Number:	N/A		



Investigation Information:			Manhole Information:		
Date/Time of Investigation:	September 24, 2008	9:59 AM	Manhole Depth:	11 Feet	6 Inches
Site Hydraulics:	GOOD		Manhole Material / Condition:	Block	Good
Upstream Input: (L/S, P/S)			Active Drop Connections?		
Team Manhole:	POOR SIDE PIPE		Pipe Material / Condition:	ACP	Good
Downstream Manhole:	POOR FAST FLOW		Mini System Character:	RESIDENTIAL	
Depth of Flow (Wet Dof):	3	+/- 0.25	Access Pole #:	N/A	
Range (Air Dof):	5.5	+/- 0.25	Distance From Manhole:	N/A Feet	
Peak Velocity:	2	fps	Road Cut Length:	N/A Feet	
Silt:	0 Inches		Trench Length:	N/A Feet	

Other Information:
N 41° 51' 0.6" W 71° 29' 8.6"

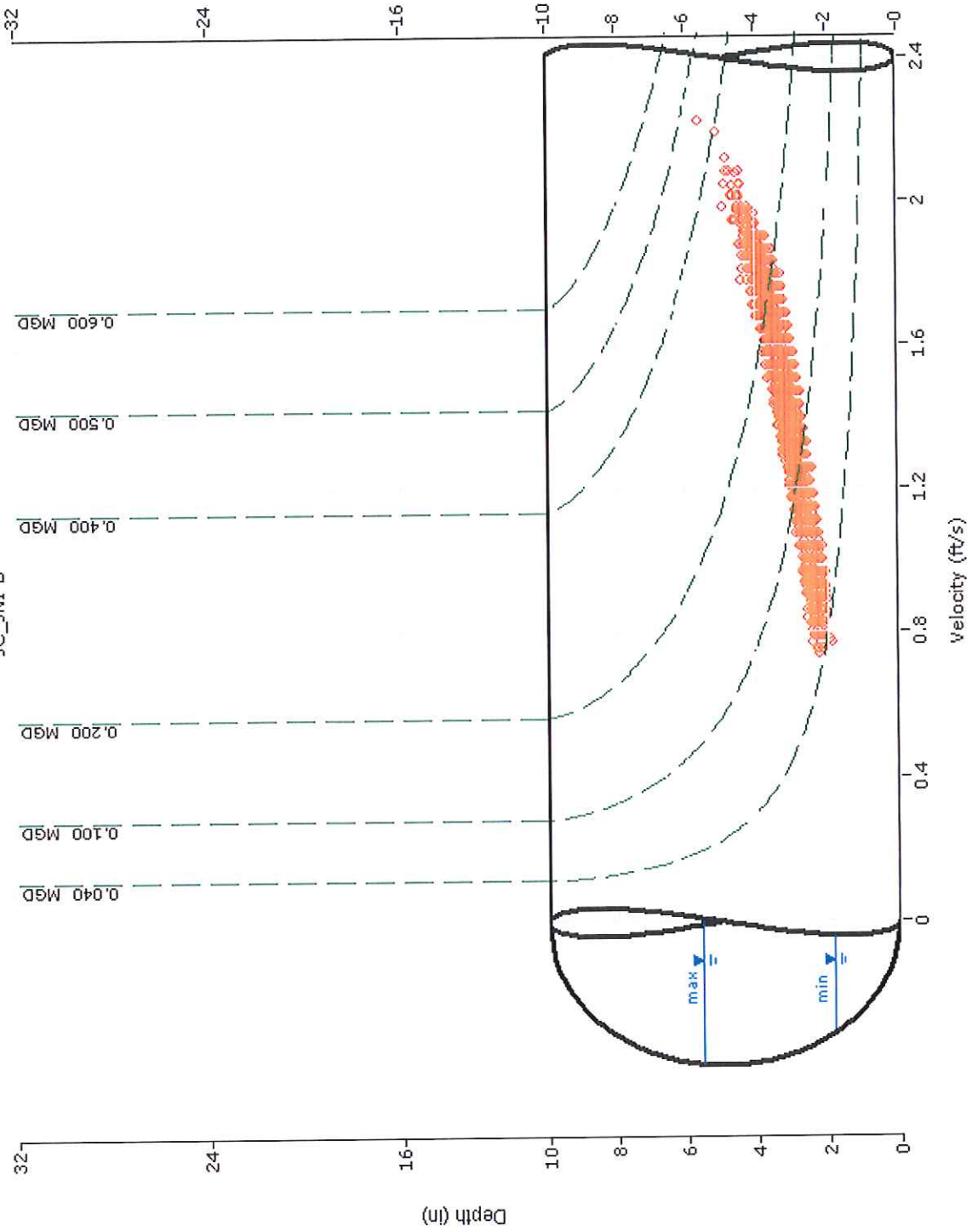


Installation Information		Backup	Yes	No	?	Distance
Installation Type:	Doppler Standard Ring and Crank Installation	Trunk		x		
Sensors / Devices:	Ultra, Velocity, Pressure (Non I.S.)	Lift/Pump Station		x		
Surcharge Height:	0 Feet	WWTP		x		
Rain Gauge Zone:	RG-2	Other		x		

Additional Site Information / Comments:

PRESS SN 79043 PO 1.5

SCATTERGRAPH REPORT
JC_JNI-B



Flow Monitor
JC_JNI-B

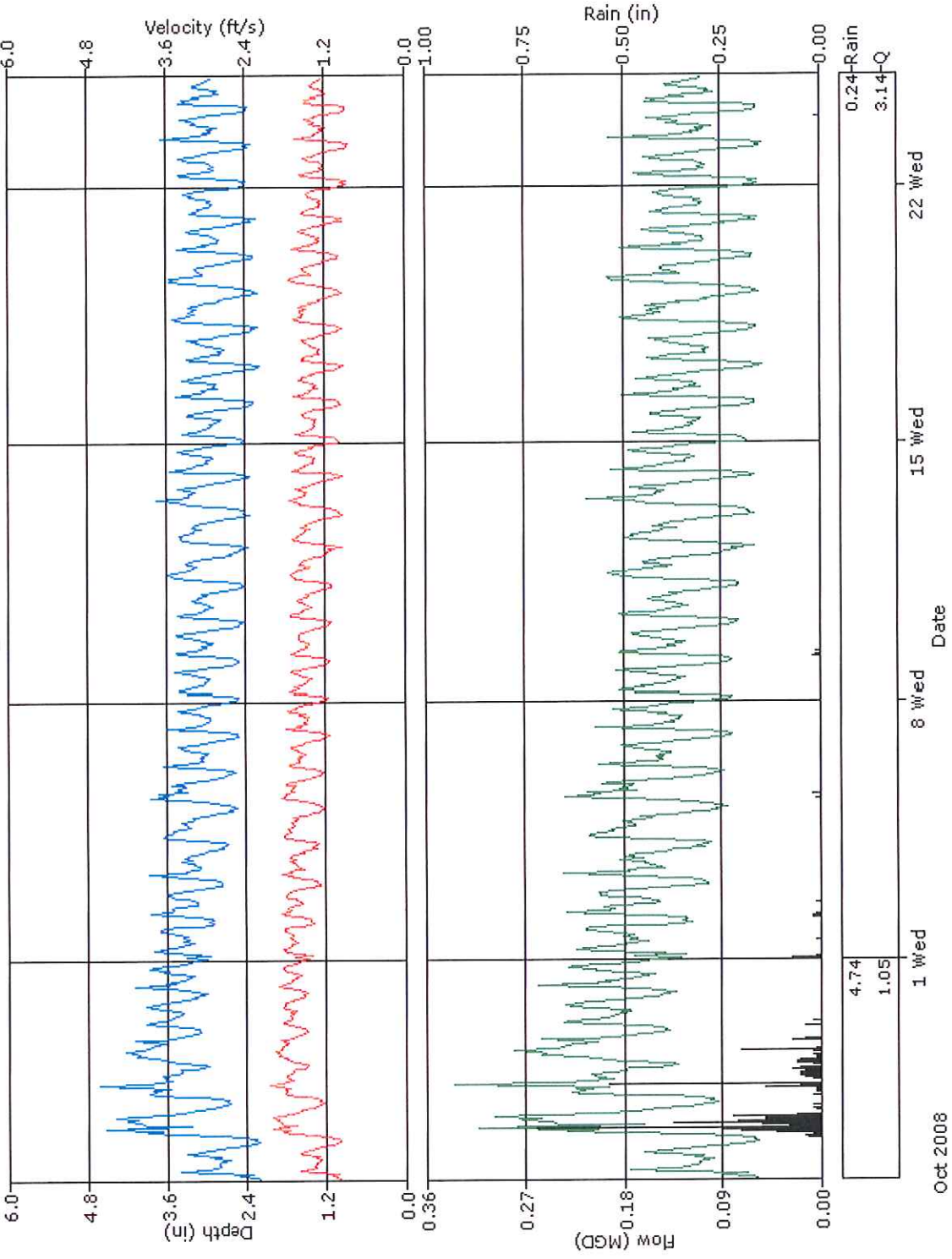
Nominal Diameter
10-in

Report Period
9/25/2008
To
12/1/2008

- Legend**
- Depth - Velocity
 - - - Iso-Q™
 - - - Silt
 - ▼ Min-Max Depth

HYDROGRAPH REPORT

JC_JNI-B



Flow Monitor
JC_JNI-B

Nominal Diameter
10-in

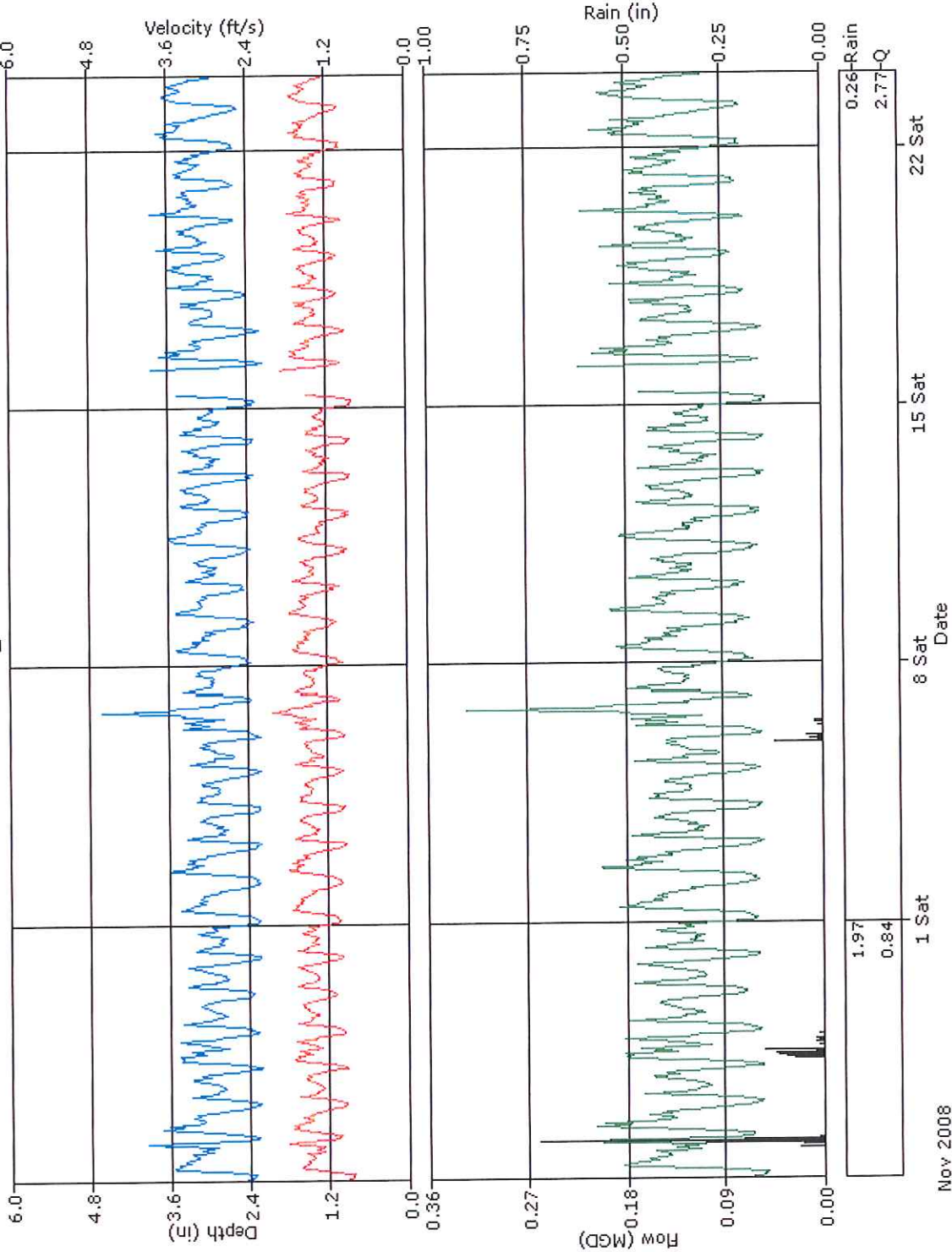
Report Period
9/25/2008
To
10/24/2008

Legend

- Depth
- Silt
- Velocity
- Quantity
- Rain

HYDROGRAPH REPORT

JC_JNI-B



Flow Monitor
JC_JNI-B

Nominal Diameter
10-in

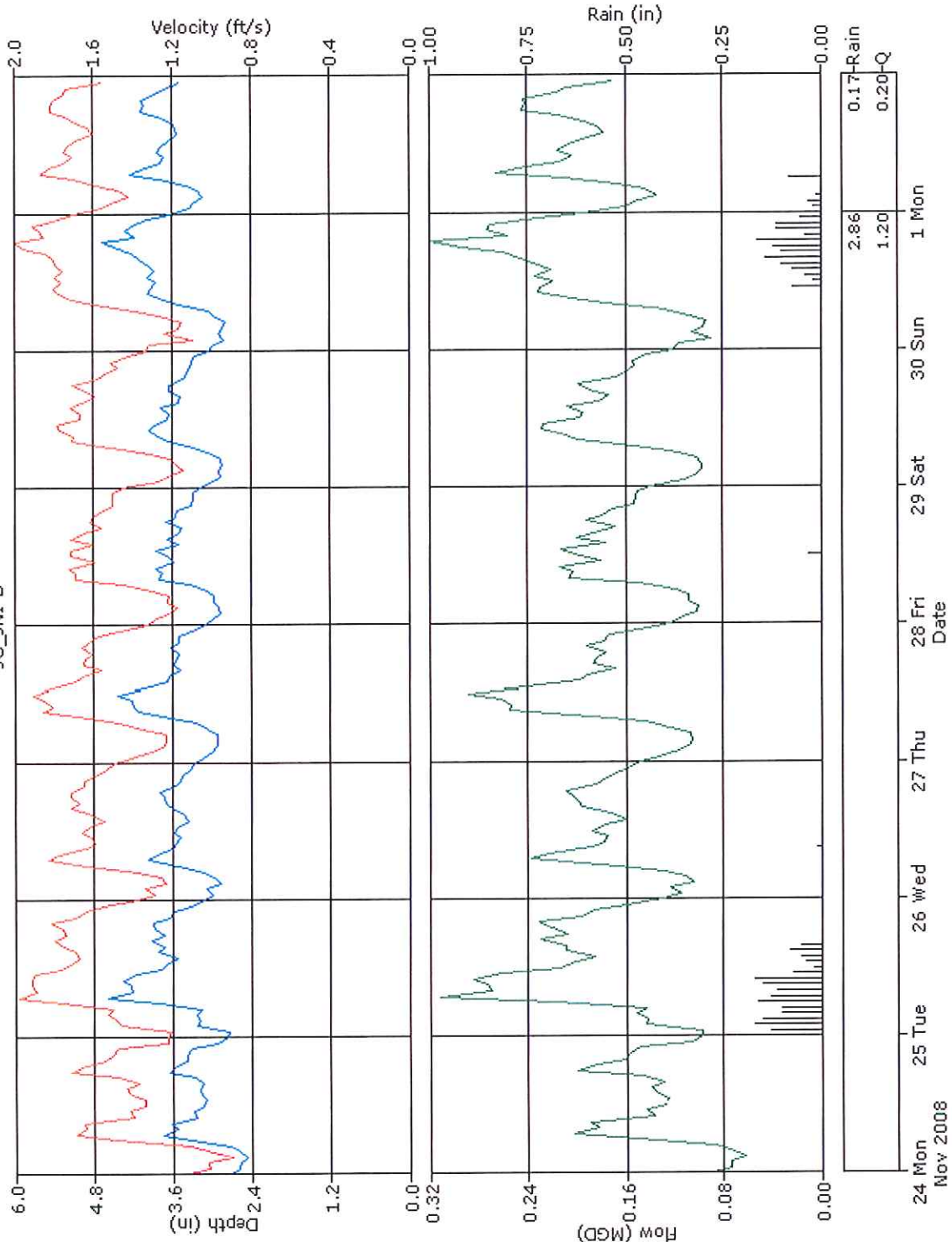
Report Period
10/25/2008
To
11/23/2008

Legend

- Depth
- Silt
- Velocity
- Quantity
- Rain

HYDROGRAPH REPORT

JC_JNI-B



Flow Monitor
JC_JNI-B

Nominal Diameter
10-in

Report Period
11/24/2008
To
12/1/2008

Legend

- Depth
- Silt
- Velocity
- Quantity
- Rain

Narragansett Bay

Daily Tabular Report For The Period 9/25/2008 - 12/1/2008

JC_JNI-B, Pipe Height: 10"

Daily Tabular Report

Depth (in) Velocity (ft/s) Quantity (MGD - Total MG) Rain (in)

Date	Depth					Velocity					Quantity					Rain	
	Time	Min	Time	Max	Avg	Time	Min	Time	Max	Avg	Time	Min	Time	Max	Avg	Total	Total
9/25/2008	04:15	1.87	07:30	4.25	2.79	04:15	0.77	08:30	1.98	1.33	04:15	0.035	08:30	0.279	0.111	0.111	
9/26/2008	04:00	2.05	10:45	4.80	3.39	02:00	0.94	14:45	2.12	1.60	02:45	0.050	14:45	0.354	0.180	0.180	2.91
9/27/2008	05:15	2.54	15:30	5.57	3.42	03:30	1.19	15:30	2.23	1.64	03:45	0.085	15:30	0.450	0.180	0.180	1.06
9/28/2008	05:30	2.90	20:15	4.41	3.64	03:00	1.44	12:45	2.05	1.76	05:30	0.122	12:45	0.307	0.206	0.206	0.71
9/29/2008	04:15	2.91	07:45	4.06	3.49	02:45	1.37	07:45	1.94	1.70	02:45	0.117	07:45	0.261	0.188	0.188	0.06
9/30/2008	03:15	2.90	07:15	4.46	3.43	04:00	1.37	07:15	2.02	1.69	03:00	0.127	07:15	0.307	0.183	0.183	
10/1/2008	04:00	2.82	07:00	3.89	3.36	03:45	1.33	08:45	1.91	1.69	04:00	0.112	08:45	0.240	0.177	0.177	0.10
10/2/2008	00:45	2.74	07:00	3.98	3.29	00:45	1.22	07:00	1.94	1.65	00:45	0.098	07:00	0.255	0.188	0.188	0.06
10/3/2008	03:15	2.68	08:30	4.36	3.15	02:30	1.15	08:30	1.98	1.59	02:30	0.089	08:30	0.293	0.153	0.153	
10/4/2008	03:15	2.53	10:15	3.75	3.16	05:15	1.22	10:00	1.91	1.60	05:15	0.087	10:00	0.229	0.156	0.156	
10/5/2008	05:15	2.40	10:00	4.04	3.15	04:30	1.08	10:00	1.91	1.57	04:30	0.070	10:00	0.254	0.154	0.154	0.03
10/6/2008	03:30	2.40	07:15	3.93	3.05	03:00	1.12	07:15	1.84	1.54	03:30	0.073	07:15	0.236	0.142	0.142	
10/7/2008	04:45	2.39	07:45	3.75	3.01	03:30	1.01	19:30	1.91	1.51	03:30	0.068	19:30	0.226	0.138	0.138	
10/8/2008	03:00	2.38	19:00	3.64	3.01	03:30	1.01	07:00	1.80	1.50	03:30	0.068	19:00	0.209	0.136	0.136	
10/9/2008	05:00	2.38	20:00	3.58	3.00	01:15	1.01	07:15	1.76	1.46	01:15	0.066	08:30	0.197	0.132	0.132	0.04
10/10/2008	04:00	2.34	08:45	3.66	2.95	02:30	1.01	07:15	1.80	1.46	02:30	0.065	08:45	0.211	0.129	0.129	
10/11/2008	03:45	2.26	12:15	3.69	3.01	03:45	0.94	10:00	1.80	1.43	03:45	0.056	12:15	0.208	0.132	0.132	
10/12/2008	03:00	2.24	08:45	3.53	2.97	05:45	0.86	08:45	1.76	1.40	05:45	0.052	08:45	0.197	0.126	0.126	
10/13/2008	02:30	2.21	12:15	4.38	3.02	02:45	0.90	12:15	1.94	1.39	04:30	0.055	12:15	0.289	0.130	0.130	
10/14/2008	03:15	2.22	07:00	3.62	2.98	03:15	0.90	07:00	1.76	1.39	03:15	0.052	07:00	0.203	0.126	0.126	
10/15/2008	03:15	2.28	07:15	3.53	2.90	02:45	0.86	07:15	1.73	1.35	03:15	0.052	07:15	0.192	0.117	0.117	
10/16/2008	04:15	2.10	18:45	3.58	2.86	02:30	0.86	07:45	1.73	1.34	02:45	0.048	18:30	0.192	0.115	0.115	
10/17/2008	03:15	2.08	06:45	3.50	2.84	03:45	0.86	08:45	1.69	1.33	03:45	0.046	08:45	0.186	0.112	0.112	
10/18/2008	05:30	2.14	10:45	3.61	2.91	04:45	0.86	10:15	1.69	1.36	03:45	0.051	10:45	0.190	0.120	0.120	
10/19/2008	03:00	2.14	12:45	3.72	2.90	03:15	0.86	09:45	1.80	1.36	03:15	0.049	12:45	0.215	0.120	0.120	
10/20/2008	02:45	2.19	07:00	3.56	2.85	01:45	0.94	08:45	1.80	1.35	01:45	0.054	08:45	0.201	0.115	0.115	
10/21/2008	01:45	2.21	18:30	3.42	2.89	01:15	0.86	09:00	1.62	1.30	02:30	0.052	18:30	0.165	0.112	0.112	
10/22/2008	04:00	2.24	08:00	3.58	2.93	02:15	0.79	08:15	1.69	1.25	04:00	0.047	08:15	0.189	0.111	0.111	
10/23/2008	04:00	2.24	07:00	3.79	2.94	02:45	0.76	07:00	1.76	1.25	02:45	0.046	07:00	0.216	0.111	0.111	0.01
10/24/2008	03:30	2.24	07:45	3.48	2.91	00:30	0.79	07:15	1.58	1.24	02:45	0.048	17:45	0.172	0.109	0.109	
10/25/2008	04:30	2.22	10:00	3.76	3.01	02:30	0.74	10:00	1.76	1.31	02:30	0.044	10:00	0.214	0.122	0.122	0.11
10/26/2008	05:00	2.06	01:15	4.13	3.07	05:00	0.93	01:15	1.90	1.45	05:00	0.049	01:15	0.261	0.139	0.139	1.23
10/27/2008	04:00	2.14	19:30	3.58	2.83	03:15	0.83	07:30	1.76	1.32	03:15	0.050	19:30	0.192	0.112	0.112	
10/28/2008	03:45	2.08	19:45	3.76	2.93	02:15	0.76	08:30	1.76	1.39	02:15	0.041	19:45	0.213	0.125	0.125	0.63
10/29/2008	02:15	2.15	07:15	3.58	2.83	02:00	0.90	07:00	1.76	1.36	02:15	0.052	07:15	0.200	0.115	0.115	
10/30/2008	04:00	2.14	20:15	3.55	2.83	02:30	0.94	07:00	1.76	1.39	03:00	0.053	20:15	0.198	0.116	0.116	
10/31/2008	02:00	2.15	07:00	3.42	2.78	03:00	0.90	07:00	1.76	1.36	03:00	0.051	07:00	0.188	0.112	0.112	
11/1/2008	02:30	2.12	09:00	3.60	2.85	03:30	0.94	09:00	1.80	1.42	03:30	0.052	09:00	0.206	0.122	0.122	
11/2/2008	03:15	2.14	11:00	3.75	2.89	03:15	0.90	11:00	1.91	1.42	03:15	0.050	11:00	0.230	0.125	0.125	
11/3/2008	01:45	2.07	08:00	3.58	2.77	05:00	0.79	08:00	1.80	1.37	05:00	0.044	08:00	0.204	0.113	0.113	
11/4/2008	05:00	2.11	08:30	3.41	2.78	05:00	0.79	11:45	1.80	1.37	05:00	0.043	11:45	0.191	0.114	0.114	
11/5/2008	03:15	2.15	08:00	3.59	2.78	04:30	0.83	08:00	1.80	1.35	04:30	0.046	08:00	0.205	0.111	0.111	0.18

Date	Depth					Velocity					Quantity					Rain	
	Time	Min	Time	Max	Avg	Time	Min	Time	Max	Avg	Time	Min	Time	Max	Avg	Total	Total
11/6/2008	02:15	2.08	18:15	6.09	3.04	03:45	0.79	18:15	2.20	1.46	03:45	0.046	18:15	0.396	0.141	0.141	0.10
11/7/2008	04:00	2.27	07:15	3.81	2.90	04:00	0.90	07:15	1.76	1.40	04:00	0.054	07:15	0.202	0.121	0.121	
11/8/2008	04:30	2.26	10:30	3.59	2.94	02:00	0.79	09:15	1.76	1.43	02:00	0.048	09:45	0.197	0.127	0.127	
11/9/2008	05:00	2.28	10:45	3.65	2.92	03:45	0.94	11:00	1.84	1.45	03:45	0.057	10:45	0.209	0.128	0.128	
11/10/2008	03:30	2.29	08:00	3.46	2.90	04:30	0.79	07:00	1.76	1.39	04:30	0.049	07:00	0.188	0.120	0.120	
11/11/2008	02:15	2.25	09:30	3.80	3.00	02:15	0.79	12:00	1.74	1.28	02:15	0.047	09:30	0.208	0.116	0.116	
11/12/2008	04:00	2.24	08:00	3.58	2.97	02:15	0.79	08:15	1.69	1.29	04:00	0.047	08:15	0.189	0.116	0.116	
11/13/2008	04:00	2.24	08:00	3.45	2.94	02:45	0.76	07:15	1.62	1.24	02:45	0.046	07:15	0.174	0.110	0.110	
11/14/2008	03:30	2.24	07:45	3.48	2.91	02:45	0.79	07:15	1.58	1.24	02:45	0.048	07:15	0.170	0.108	0.108	
11/15/2008	04:00	2.08	08:30	3.61	2.80	03:00	0.76	08:30	1.62	1.00	04:00	0.040	08:30	0.186	0.076	0.028	
11/16/2008	05:30	2.06	01:15	4.07	3.03	05:30	0.90	01:00	1.91	1.45	05:30	0.047	01:15	0.254	0.135	0.128	
11/17/2008	03:45	2.06	18:30	3.57	2.90	04:00	0.79	20:15	1.82	1.37	04:00	0.044	20:15	0.195	0.120	0.120	
11/18/2008	03:15	2.32	19:45	3.75	3.05	03:45	0.91	19:45	1.78	1.40	03:45	0.058	19:45	0.215	0.130	0.130	
11/19/2008	04:00	2.52	07:45	3.82	3.15	03:30	0.91	07:30	1.70	1.38	04:00	0.063	07:45	0.209	0.133	0.133	
11/20/2008	02:45	2.53	07:00	3.94	3.17	02:45	0.84	07:15	1.82	1.41	02:45	0.059	07:00	0.230	0.139	0.139	
11/21/2008	03:30	2.52	07:00	3.64	3.13	04:00	0.91	07:00	1.68	1.39	04:00	0.065	07:00	0.195	0.134	0.134	
11/22/2008	02:15	2.50	08:45	3.93	3.20	05:15	0.91	12:00	1.82	1.41	02:45	0.065	12:00	0.228	0.142	0.142	
11/23/2008	03:30	2.36	13:00	3.85	3.19	03:30	0.84	11:30	1.85	1.41	03:30	0.053	11:30	0.227	0.141	0.141	
11/24/2008	03:15	2.40	07:00	3.90	3.15	03:15	0.77	07:00	1.75	1.37	03:15	0.051	07:00	0.223	0.134	0.134	
11/25/2008	01:00	2.56	07:15	4.89	3.67	01:00	0.99	07:00	2.02	1.68	01:00	0.071	07:15	0.340	0.202	0.202	1.69
11/26/2008	03:00	2.86	08:00	4.11	3.44	04:15	1.14	07:45	1.92	1.57	04:15	0.096	08:00	0.262	0.170	0.170	0.01
11/27/2008	05:30	2.77	12:15	4.54	3.51	05:30	1.08	12:00	2.02	1.57	05:30	0.086	12:00	0.310	0.178	0.178	
11/28/2008	02:45	2.71	13:00	3.98	3.39	02:45	1.11	08:30	1.78	1.50	02:45	0.086	10:00	0.227	0.161	0.161	0.03
11/29/2008	03:15	2.70	11:30	4.18	3.38	03:15	0.98	11:30	1.99	1.51	03:15	0.075	11:30	0.277	0.162	0.162	
11/30/2008	05:00	2.71	19:30	4.85	3.67	05:00	1.01	18:45	2.09	1.62	05:00	0.078	19:30	0.348	0.198	0.198	1.13
12/1/2008	03:45	3.07	07:00	4.44	3.68	03:45	1.38	07:00	2.02	1.68	03:45	0.126	07:00	0.305	0.199	0.199	0.17

Report Summary For The Period 9/25/2008 - 12/1/2008

Depth (in) : D Velocity (ft/s) : V Quantity (MGD - Total MG) : Q Rain (in) : Rain

	D	V	Q	Rain
Report Total			9.202	10.24
Report Avg	3.07	1.44	0.137	

Site Commentary

Site Information

JC_JNI-C	
Pipe Dimensions (in.)	Circular (12.00 in H)
Silt (in.)	0.00"

Overview

A review of the [hydrograph](#) and [scattergraph](#) for JC_JNI-C indicate this location functioned mostly in free-flow conditions for the monitoring period of Thursday, September 25, 2008 to Monday, December 01, 2008 . Flow depth and velocity measurements recorded by the flow monitor are consistent with field confirmations conducted to date and support the relative accuracy of the flow monitor at this location.

[Daily longtables](#) displaying final quantities are also provided.

Observations

Average flow depth, velocity, and quantity data observed during Thursday, September 25, 2008 to Monday, December 01, 2008 , along with observed minimum and maximum data, are provided in the following table.

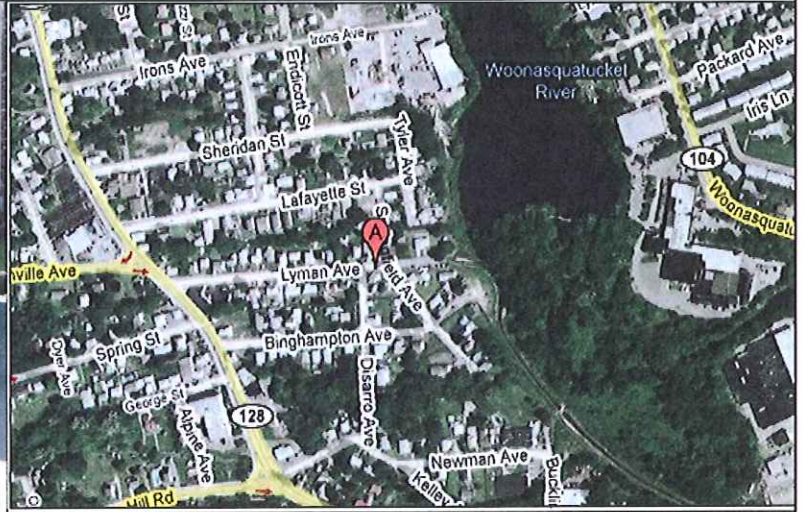
Observed Flow Conditions			
Item	Depth (in)	Velocity (ft/s)	Quantity (MGD)
Average	2.02	6.12	0.349
Minimum	1.39	4.79	0.166
Maximum	2.76	7.58	0.663
Time of Minimum	9/25/2008 3:45 AM	10/12/2008 4:45 AM	9/25/2008 3:45 AM
Time of Maximum	9/26/2008 6:30 PM	9/29/2008 7:30 AM	9/26/2008 6:30 PM

Please note the minimum and maximum flow rate recorded in this table may vary from those recorded on the daily and weekly tabular data. The minimum and maximum rates recorded on the daily and weekly tabular data are absolute verses average fifteen minute data.

Based upon the quality and consistency of the observed flow depth and velocity data, the Continuity equation was used to calculate flow rate and quantities during the monitoring period. Graphical data reports are based on an hourly average.

a division of ADS LLC.

Name:	JC JNI-C	Meter Type:	1502 RL	Monitor S/N:	8912	Manhole #:	JNI-C
Address / Location:	57 Lyman Avenue			Map Page #:	N/A		
Access:	Drive	Type of System:	Sanitary	Pipe Height:	12 Inches		
				Pipe Width:	12 Inches		
				Phone Number:	N/A		



Investigation Information:			Manhole Information:		
Date/Time of Investigation:	September 18, 2008	9:10 AM	Manhole Depth:	15 Feet	8 Inches
Site Hydraulics:	FAST FLOW		Manhole Material / Condition:	Brick	Precast
			Active Drop Connections?		
Upstream Input: (L/S, P/S)	N/A		Pipe Material / Condition:	PVC	Good
Upstream Manhole:	POOR VELOCITY		Mini System Character:	Residential	
Downstream Manhole:	BOLTED NO ACCESS		Telephone Information:		
Depth of Flow (Wet Dof):	2 +/-	0.38	Access Pole #:	N/A	
Range (Air Dof):	8.5 +/-	0.38	Distance From Manhole:	N/A Feet	
Peak Velocity:	4.4 fps		Road Cut Length:	N/A Feet	
Silt:	0 Inches		Trench Length:	N/A Feet	

Other Information:

N 41° 50' 20.6" W 71° 28' 44.7"

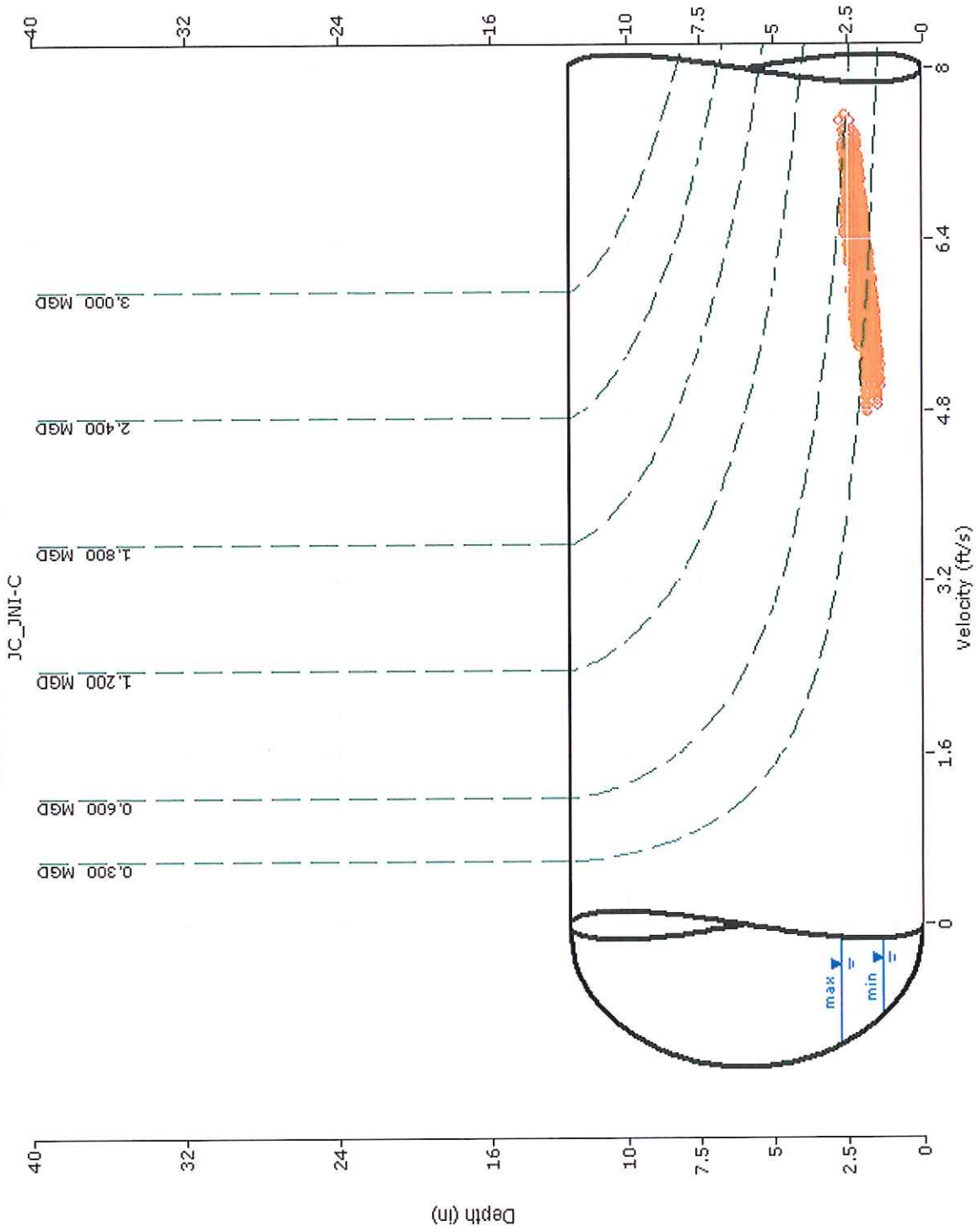


Installation Information		Backup	Yes	No	?	Distance
Installation Type:	Doppler Standard Ring and Crank Installation	Trunk		x		
Sensors / Devices:	Ultra, Velocity, Pressure (Non I.S.)	Lift/Pump Station		x		
Surcharge Height:	0 Feet	WWTP		x		
Rain Gauge Zone:	RG-2	Other		x		

Additional Site Information / Comments:

PRESS SN 79717 PO 1.5"

SCATTERGRAPH REPORT



Flow Monitor
JC_JNI-C

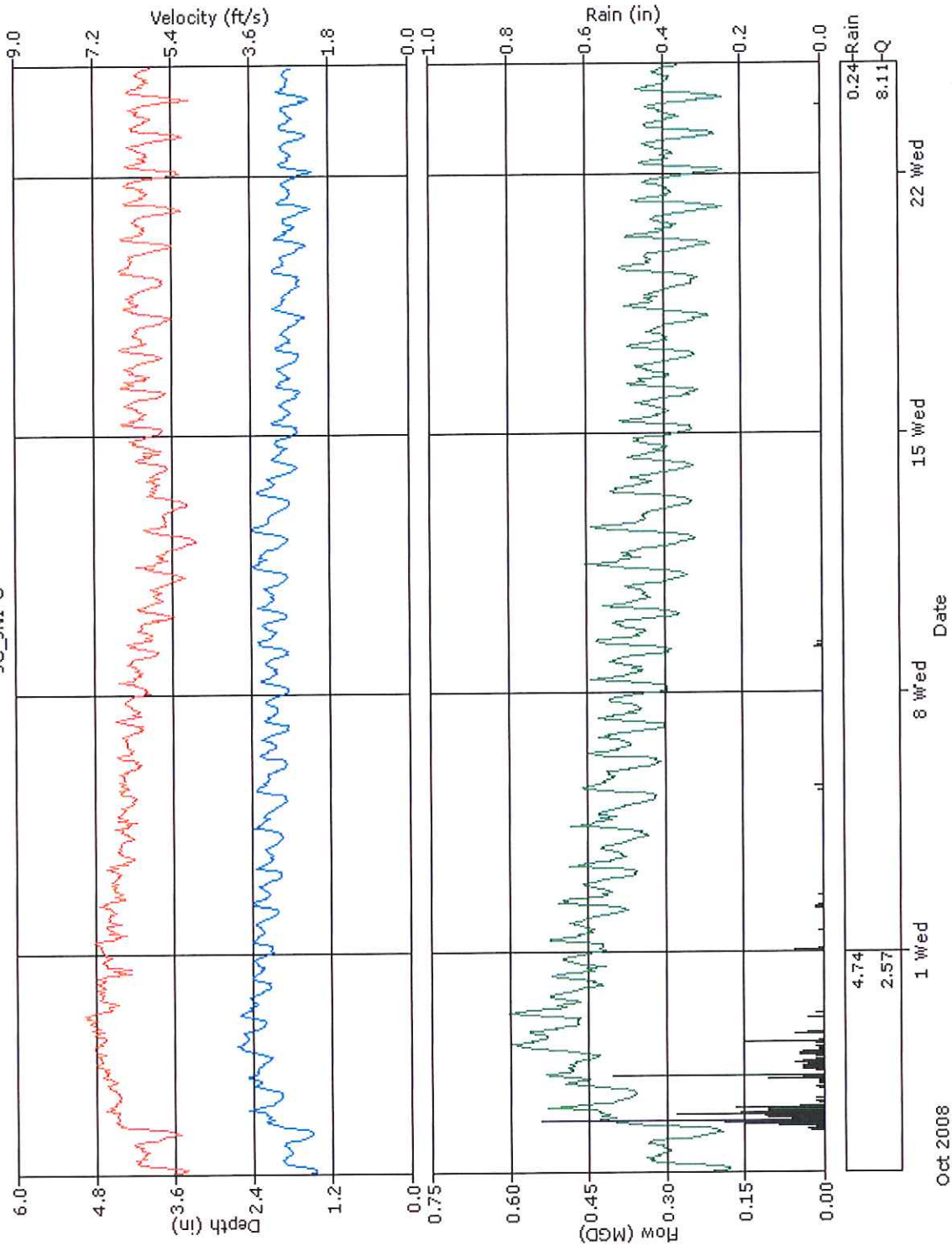
Nominal Diameter
12-in

Report Period
9/25/2008
To
12/1/2008

Legend
○ Depth - Velocity
- - - ISO-Q™
- - - Silt
▼ Min-Max Depth

HYDROGRAPH REPORT

JC_JNI-C



Flow Monitor
JC_JNI-C

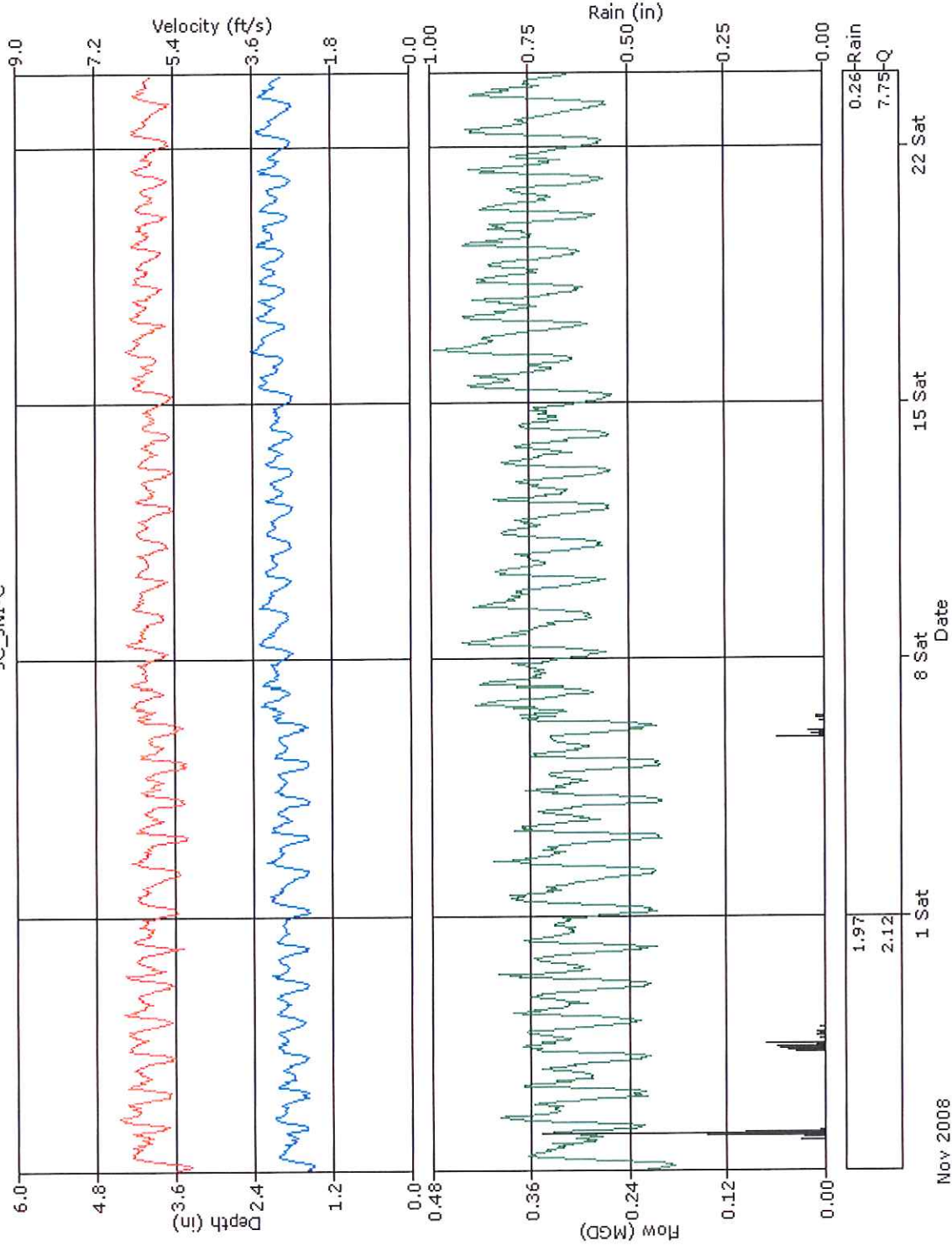


Report Period
9/25/2008
To
10/24/2008

- Legend**
- Depth
 - Silt
 - Velocity
 - Quantity
 - Rain

HYDROGRAPH REPORT

JC_JNI-C



Flow Monitor
JC_JNI-C

Nominal Diameter
12-in

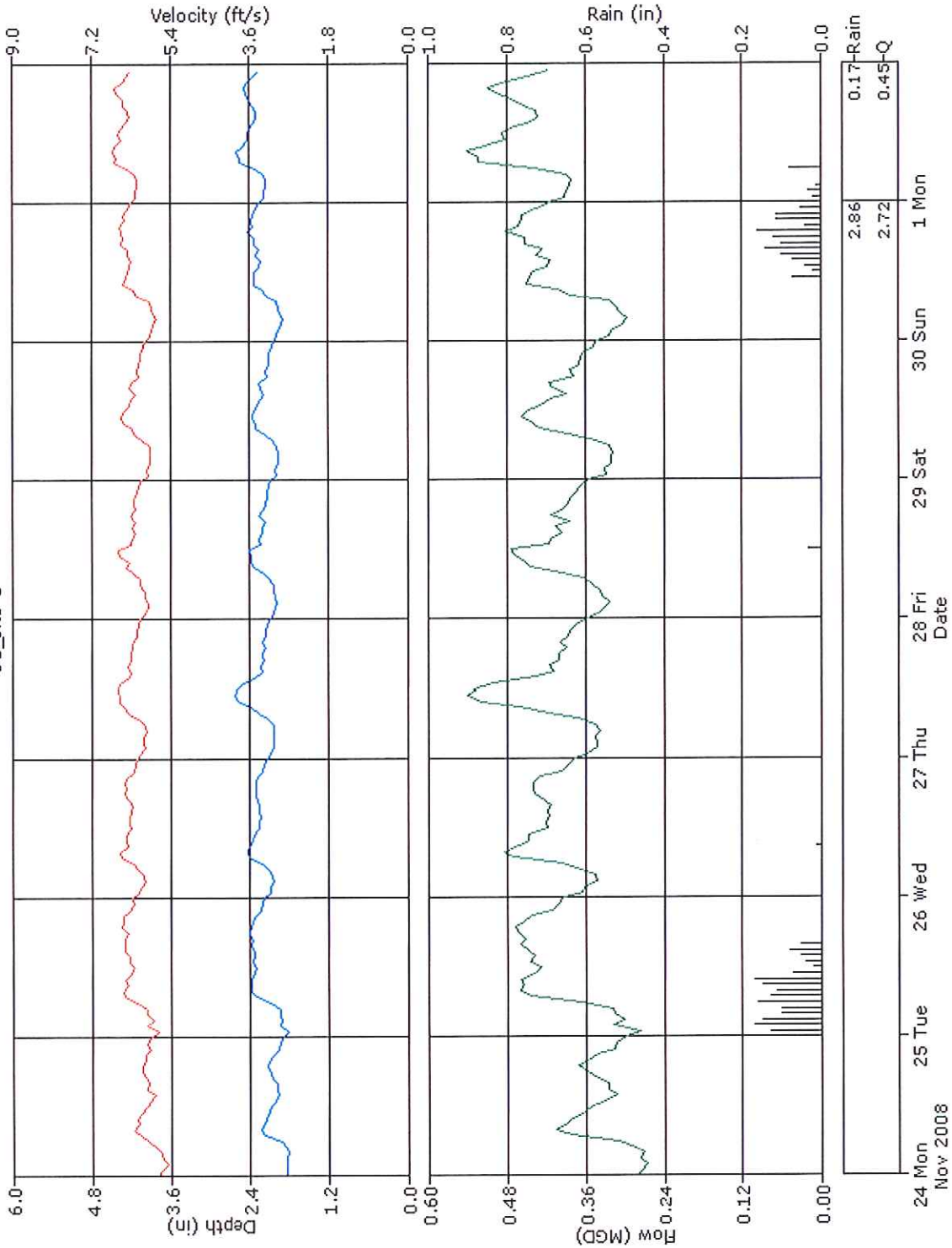
Report Period
10/25/2008
to
11/23/2008

Legend

- Depth
- Silt
- Velocity
- Quantity
- Rain

HYDROGRAPH REPORT

JC_JNI-C



Flow Monitor
JC_JNI-C

Nominal Diameter
12-in

Report Period
11/24/2008
To
12/1/2008

Legend

- Depth
- Silt
- Velocity
- Quantity
- Rain

Narragansett Bay

Daily Tabular Report For The Period 9/25/2008 - 12/1/2008

JC_JNI-C, Pipe Height: 12"

Daily Tabular Report

Depth (in) Velocity (ft/s) Quantity (MGD - Total MG) Rain (in)

Date	Depth					Velocity					Quantity					Rain	
	Time	Min	Time	Max	Avg	Time	Min	Time	Max	Avg	Time	Min	Time	Max	Avg	Total	Total
9/25/2008	03:45	1.39	10:00	2.00	1.78	04:00	5.00	10:00	6.56	5.94	03:45	0.166	10:00	0.365	0.282	0.282	
9/26/2008	03:30	1.45	18:30	2.76	1.99	03:45	5.13	18:30	7.53	6.37	03:30	0.181	18:30	0.663	0.361	0.361	2.91
9/27/2008	04:00	1.94	15:45	2.70	2.22	01:30	6.53	15:45	7.31	6.83	04:00	0.353	15:45	0.625	0.444	0.444	1.06
9/28/2008	06:00	2.08	13:00	2.69	2.40	07:30	6.60	13:00	7.42	7.11	06:00	0.410	13:00	0.632	0.516	0.516	0.71
9/29/2008	05:00	2.16	09:30	2.63	2.37	16:45	6.43	07:30	7.68	7.09	05:00	0.438	08:00	0.622	0.505	0.505	0.06
9/30/2008	02:00	2.11	08:00	2.52	2.28	14:30	5.95	07:00	7.24	6.91	14:45	0.402	08:00	0.562	0.465	0.465	
10/1/2008	05:00	2.07	08:30	2.45	2.25	12:00	6.15	08:00	7.34	6.90	03:45	0.408	08:00	0.542	0.455	0.455	0.10
10/2/2008	03:00	1.99	09:45	2.42	2.19	11:30	6.12	07:30	7.17	6.77	03:00	0.369	07:30	0.518	0.430	0.430	0.06
10/3/2008	05:30	1.91	07:45	2.47	2.12	14:15	5.98	07:45	7.14	6.62	05:30	0.343	07:45	0.539	0.401	0.401	
10/4/2008	03:00	1.91	10:00	2.44	2.13	14:00	5.75	10:15	6.90	6.53	03:30	0.323	10:00	0.500	0.398	0.398	
10/5/2008	03:45	1.86	10:45	2.38	2.09	05:45	6.15	14:00	6.80	6.48	05:15	0.310	11:15	0.471	0.385	0.385	0.03
10/6/2008	01:45	1.85	19:15	2.35	2.07	13:15	5.92	09:00	6.87	6.40	03:30	0.300	09:00	0.455	0.375	0.375	
10/7/2008	03:00	1.81	08:15	2.26	2.04	11:15	5.92	08:15	6.77	6.33	03:30	0.292	08:15	0.450	0.362	0.362	
10/8/2008	01:45	1.78	08:45	2.51	2.05	04:30	5.75	08:45	7.18	6.23	01:45	0.272	08:45	0.554	0.359	0.359	
10/9/2008	02:45	1.82	10:00	2.35	2.08	23:15	5.47	07:45	6.60	6.02	04:15	0.271	09:45	0.457	0.355	0.355	0.04
10/10/2008	04:15	1.83	08:00	2.34	2.06	03:00	5.27	08:15	6.36	5.77	03:00	0.264	08:15	0.438	0.337	0.337	
10/11/2008	03:15	1.82	11:30	2.48	2.12	04:00	4.96	11:30	6.66	5.59	04:00	0.247	11:30	0.506	0.340	0.340	
10/12/2008	04:00	1.82	09:45	2.44	2.09	04:45	4.79	11:00	6.29	5.46	05:45	0.235	11:00	0.466	0.325	0.325	
10/13/2008	04:00	1.81	10:30	2.37	2.04	04:45	4.93	19:30	6.09	5.63	04:45	0.237	10:30	0.431	0.324	0.324	
10/14/2008	03:15	1.57	08:15	2.15	1.91	12:00	5.24	21:00	6.49	5.93	03:15	0.213	08:00	0.382	0.310	0.310	
10/15/2008	05:30	1.66	07:30	2.16	1.85	04:15	5.51	20:45	6.63	6.12	05:30	0.239	07:30	0.411	0.307	0.307	
10/16/2008	05:00	1.54	19:15	2.13	1.85	04:45	5.34	07:30	6.73	6.14	04:45	0.205	08:00	0.384	0.306	0.306	
10/17/2008	05:15	1.54	07:30	2.04	1.83	03:15	5.58	08:15	6.70	6.12	03:30	0.216	09:00	0.380	0.301	0.301	
10/18/2008	04:15	1.51	10:15	2.11	1.83	04:30	5.27	10:00	6.73	6.10	04:30	0.201	12:45	0.392	0.300	0.300	
10/19/2008	05:15	1.52	11:00	2.13	1.85	05:30	5.53	12:45	6.77	6.16	05:15	0.211	12:15	0.407	0.307	0.307	
10/20/2008	02:45	1.48	10:00	2.10	1.81	04:15	5.13	08:45	6.66	6.06	04:15	0.189	07:30	0.391	0.293	0.293	
10/21/2008	04:15	1.45	07:45	2.05	1.79	03:45	4.96	07:45	6.77	6.01	03:45	0.178	07:45	0.389	0.286	0.286	
10/22/2008	03:15	1.39	08:30	2.02	1.79	02:15	5.13	08:30	6.60	5.95	03:15	0.172	08:30	0.372	0.285	0.285	
10/23/2008	02:45	1.54	10:00	2.01	1.79	02:45	4.96	09:00	6.56	5.94	02:45	0.188	09:15	0.355	0.283	0.283	0.01
10/24/2008	03:30	1.48	08:00	2.01	1.78	03:30	4.86	07:45	6.60	5.94	03:30	0.175	08:00	0.368	0.282	0.282	
10/25/2008	04:15	1.41	11:00	2.06	1.80	04:45	4.93	10:45	6.55	5.93	04:15	0.169	10:45	0.378	0.286	0.286	0.11
10/26/2008	07:00	1.53	11:00	2.11	1.88	07:00	5.34	11:00	6.80	6.22	07:00	0.201	11:00	0.410	0.318	0.318	1.23
10/27/2008	04:15	1.51	19:45	2.15	1.82	04:45	5.30	09:45	6.65	6.04	04:15	0.198	19:45	0.403	0.295	0.295	
10/28/2008	04:45	1.53	10:30	2.15	1.87	04:45	5.17	18:15	6.56	6.08	04:45	0.195	10:30	0.399	0.309	0.309	0.63
10/29/2008	01:45	1.53	19:15	2.14	1.88	03:00	5.37	08:30	6.63	6.03	01:45	0.206	08:30	0.387	0.308	0.308	
10/30/2008	03:15	1.55	09:15	2.21	1.88	01:30	5.37	09:15	6.69	5.99	03:15	0.208	09:15	0.430	0.307	0.307	
10/31/2008	01:30	1.55	07:30	2.20	1.87	03:30	5.10	09:00	6.46	5.93	03:30	0.201	07:30	0.390	0.301	0.301	
11/1/2008	05:00	1.53	09:45	2.21	1.90	03:45	5.20	09:45	6.49	5.88	05:00	0.201	09:45	0.416	0.306	0.306	
11/2/2008	03:30	1.55	12:30	2.24	1.90	04:00	5.13	12:00	6.56	5.86	06:15	0.203	12:00	0.422	0.306	0.306	
11/3/2008	02:00	1.54	11:15	2.27	1.88	04:45	5.00	08:30	6.43	5.78	04:45	0.195	11:15	0.412	0.298	0.298	
11/4/2008	04:30	1.50	10:30	2.17	1.88	03:30	5.07	10:45	6.36	5.76	04:30	0.190	10:45	0.392	0.294	0.294	
11/5/2008	04:30	1.51	08:15	2.12	1.87	05:30	5.00	08:15	6.26	5.72	03:00	0.194	08:15	0.379	0.290	0.290	0.16

Date	Depth					Velocity					Quantity					Rain	
	Time	Min	Time	Max	Avg	Time	Min	Time	Max	Avg	Time	Min	Time	Max	Avg	Total	Total
11/6/2008	02:15	1.55	18:30	2.29	1.96	04:30	5.07	18:45	6.60	5.90	04:30	0.200	18:45	0.440	0.322	0.322	0.10
11/7/2008	04:45	1.82	07:45	2.33	2.04	02:15	5.61	08:15	6.46	6.03	03:00	0.275	07:45	0.443	0.347	0.347	
11/8/2008	04:15	1.89	10:30	2.38	2.06	04:15	5.32	10:30	6.57	6.03	04:15	0.233	10:30	0.471	0.352	0.352	
11/9/2008	04:45	1.85	10:00	2.33	2.06	05:30	5.47	10:00	6.47	6.03	05:30	0.276	10:00	0.449	0.352	0.352	
11/10/2008	04:45	1.79	09:45	2.26	2.03	04:30	5.41	09:00	6.39	5.96	04:30	0.261	09:00	0.417	0.340	0.340	
11/11/2008	04:00	1.81	10:30	2.25	2.02	02:15	5.44	10:30	6.39	5.97	05:00	0.266	10:30	0.421	0.339	0.339	
11/12/2008	04:30	1.79	07:45	2.29	1.99	02:30	5.30	08:00	6.36	5.89	02:30	0.253	07:45	0.426	0.327	0.327	
11/13/2008	03:15	1.79	18:15	2.25	2.01	03:15	5.27	08:15	6.36	5.89	03:15	0.249	19:00	0.411	0.331	0.331	
11/14/2008	03:15	1.78	10:15	2.19	1.99	03:45	5.41	09:15	6.36	5.87	03:15	0.256	10:15	0.393	0.326	0.326	
11/15/2008	04:00	1.78	11:00	2.42	2.07	05:45	5.30	11:00	6.49	5.95	05:45	0.252	11:00	0.475	0.350	0.350	
11/16/2008	04:15	1.89	11:45	2.52	2.17	06:00	5.68	11:45	6.66	6.13	04:15	0.292	11:45	0.516	0.384	0.384	
11/17/2008	03:45	1.88	08:30	2.39	2.12	04:15	5.51	08:30	6.47	6.05	04:15	0.283	08:30	0.464	0.369	0.369	
11/18/2008	04:15	1.88	09:00	2.39	2.11	03:00	5.61	07:30	6.46	6.04	04:15	0.285	09:00	0.453	0.364	0.364	
11/19/2008	03:30	1.90	07:45	2.43	2.12	04:30	5.51	08:45	6.44	6.04	04:30	0.287	07:45	0.473	0.368	0.368	
11/20/2008	03:45	1.84	07:30	2.35	2.07	03:45	5.47	09:00	6.32	5.95	03:45	0.270	07:30	0.440	0.348	0.348	
11/21/2008	03:30	1.79	09:15	2.38	2.05	02:30	5.41	09:15	6.46	5.94	02:30	0.260	09:15	0.461	0.343	0.343	
11/22/2008	02:45	1.79	10:00	2.35	2.06	04:30	5.37	10:00	6.43	5.96	02:45	0.260	10:00	0.451	0.349	0.349	
11/23/2008	03:45	1.79	11:30	2.34	2.03	03:45	5.34	11:30	6.41	5.93	03:45	0.252	11:30	0.446	0.340	0.340	
11/24/2008	00:45	1.78	08:30	2.27	2.01	02:45	5.37	08:30	6.43	5.90	04:15	0.260	08:30	0.429	0.331	0.331	
11/25/2008	01:00	1.81	19:00	2.53	2.22	01:00	5.56	07:15	6.66	6.26	01:00	0.267	19:00	0.520	0.407	0.407	1.69
11/26/2008	04:30	2.02	08:00	2.50	2.24	04:30	5.95	08:00	6.77	6.30	04:30	0.335	08:00	0.519	0.414	0.414	0.01
11/27/2008	05:15	2.00	11:15	2.63	2.22	05:15	5.91	12:00	6.77	6.25	05:15	0.328	11:15	0.552	0.407	0.407	
11/28/2008	03:00	1.95	10:00	2.46	2.16	03:00	5.83	11:00	6.63	6.20	03:00	0.314	12:15	0.486	0.388	0.388	0.03
11/29/2008	05:45	1.95	12:00	2.40	2.14	05:45	5.83	11:00	6.63	6.14	05:45	0.313	12:00	0.471	0.379	0.379	
11/30/2008	04:15	1.89	21:45	2.47	2.19	04:15	5.72	19:00	6.70	6.22	04:15	0.293	19:45	0.492	0.397	0.397	1.13
12/1/2008	04:00	2.13	09:00	2.65	2.36	04:00	6.12	07:30	6.90	6.44	04:00	0.372	09:00	0.556	0.455	0.455	0.17

Report Summary For The Period 9/25/2008 - 12/1/2008

Depth (in) : D Velocity (ft/s) : V Quantity (MGD - Total MG) : Q Rain (in) : Rain

	D	V	Q	Rain
Report Total			23.726	10.24
Report Avg	2.02	6.12	0.349	

Site Commentary

Site Information

JC_JNI-D	
Pipe Dimensions	Circular (10.00 in H)
Silt	0.00"

Overview

A review of the [hydrograph](#) and [scattergraph](#) for JC_JNI-D indicate this location functioned under typical open channel flow conditions during the monitoring period of Thursday, September 25, 2008 to Monday, December 01, 2008 . Flow depth and velocity measurements recorded by the flow monitor are consistent with field confirmations conducted to date and support the relative accuracy of the flow monitor at this location.

[Daily longtables](#) displaying final quantities are also provided.

Observations

Average flow depth, velocity, and quantity data observed during Thursday, September 25, 2008 to Monday, December 01, 2008 , along with observed minimum and maximum data, are provided in the following table.

Observed Flow Conditions			
Item	Depth (in)	Velocity (ft/s)	Quantity (MGD)
Average	2.29	3.35	0.207
Minimum	1.35	2.97	0.085
Maximum	3.35	5.71	0.588
Time of Minimum	11/4/2008 2:15 AM	11/4/2008 5:00 AM	11/4/2008 2:15 AM
Time of Maximum	9/27/2008 3:30 PM	9/28/2008 8:15 PM	9/27/2008 3:30 PM

Please note the minimum and maximum flow rate recorded in this table may vary from those recorded on the daily and weekly tabular data. The minimum and maximum rates recorded on the daily and weekly tabular data are absolute verses average fifteen minute data.

Based upon the quality and consistency of the observed flow depth and velocity data, the Continuity equation was used to calculate flow rate and quantities during the monitoring period.

Graphical data reports are based on an hourly average.

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Name:	JC_JNI-D	Meter Type:	1502 RL	Monitor S/N:	10073	Manhole #:	JNI-D
Address / Location:	34 Newman Avenue			Map Page #:	N/A		
Access:	Drive	Type of System:	Sanitary	Pipe Height:	10 Inches		
				Pipe Width:	10 Inches		
				Phone Number:	N/A		



Investigation Information:			Manhole Information:		
Date/Time of Investigation:	September 18, 2008	9:34 AM	Manhole Depth:	6 Feet	7.5 Inches
Site Hydraulics:	SOME CEMENT IN INVERT-SHOULD BE ABLE TO CLEAR		Manhole Material / Condition:	Precast	Fair
Upstream Input: (L/S, P/S)	N/A		Active Drop Connections?		
Upstream Manhole:	N/A		Pipe Material / Condition:	PVC	Good
Downstream Manhole:	INCLINE-VERY FAST FLOW		Mini System Character:	Residential	
Depth of Flow (Wet Dof):	2 +/- 0.25		Access Pole #:	N/A	
Range (Air Dof):	6.4 +/- 0.25		Distance From Manhole:	N/A Feet	
Peak Velocity:	3.27 fps		Road Cut Length:	N/A Feet	
Silt:	0 Inches		Trench Length:	N/A Feet	

Other Information:

N 41° 50' 13.7" W 71° 28' 44.6"

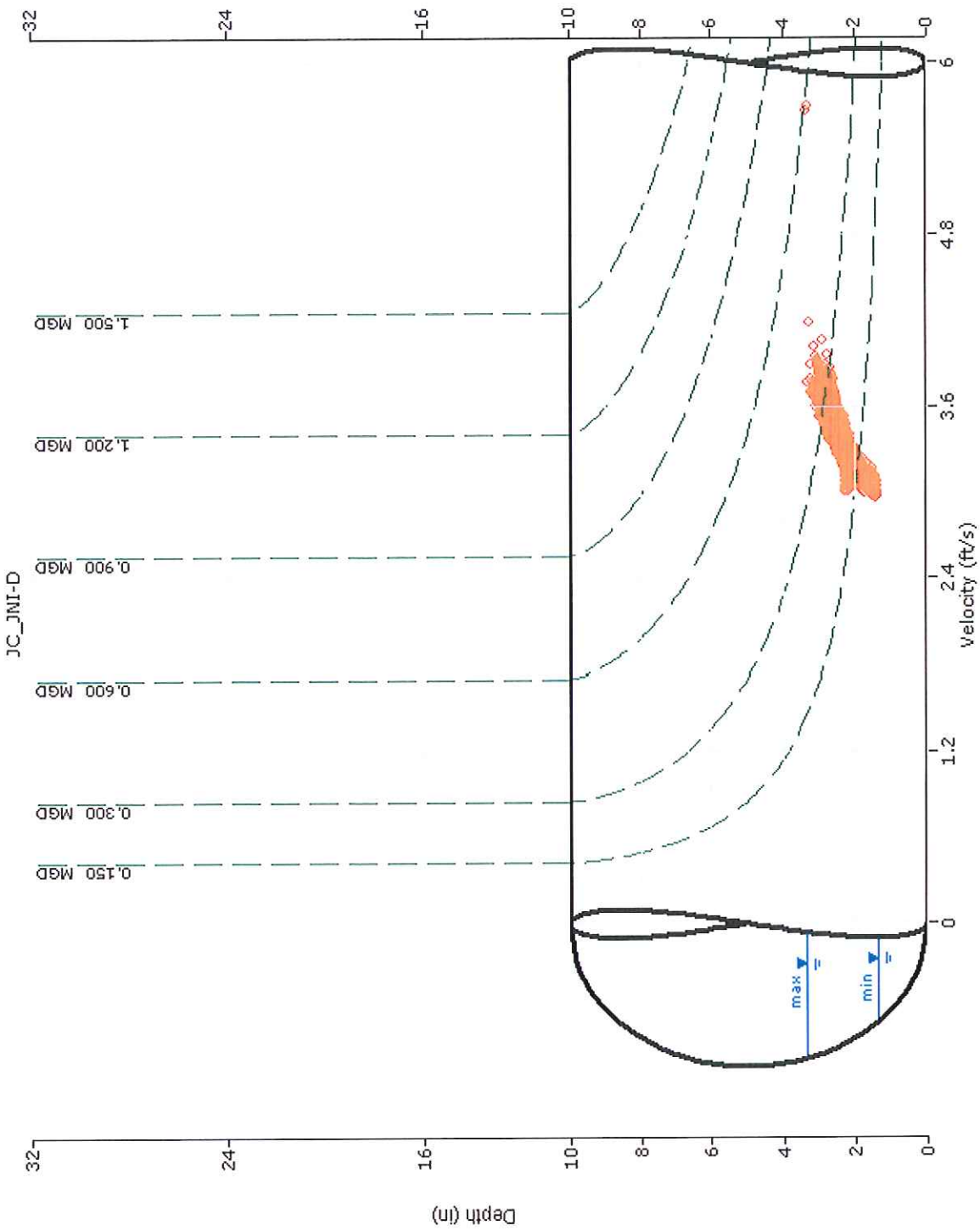


Installation Information		Backup	Yes	No	?	Distance
Installation Type:	Doppler Standard Ring and Crank Installation	Trunk		x		
Sensors / Devices:	Ultra, Velocity, Pressure (Non I.S.)	Lift/Pump Station		x		
Surcharge Height:	0 Feet	WWTP		x		
Rain Gauge Zone:	RG-2	Other		x		

Additional Site Information / Comments:

PERSS SN 79040 PO 1.6

SCATTERGRAPH REPORT



Flow Monitor
JC_JNI-D

Nominal Diameter
10-in

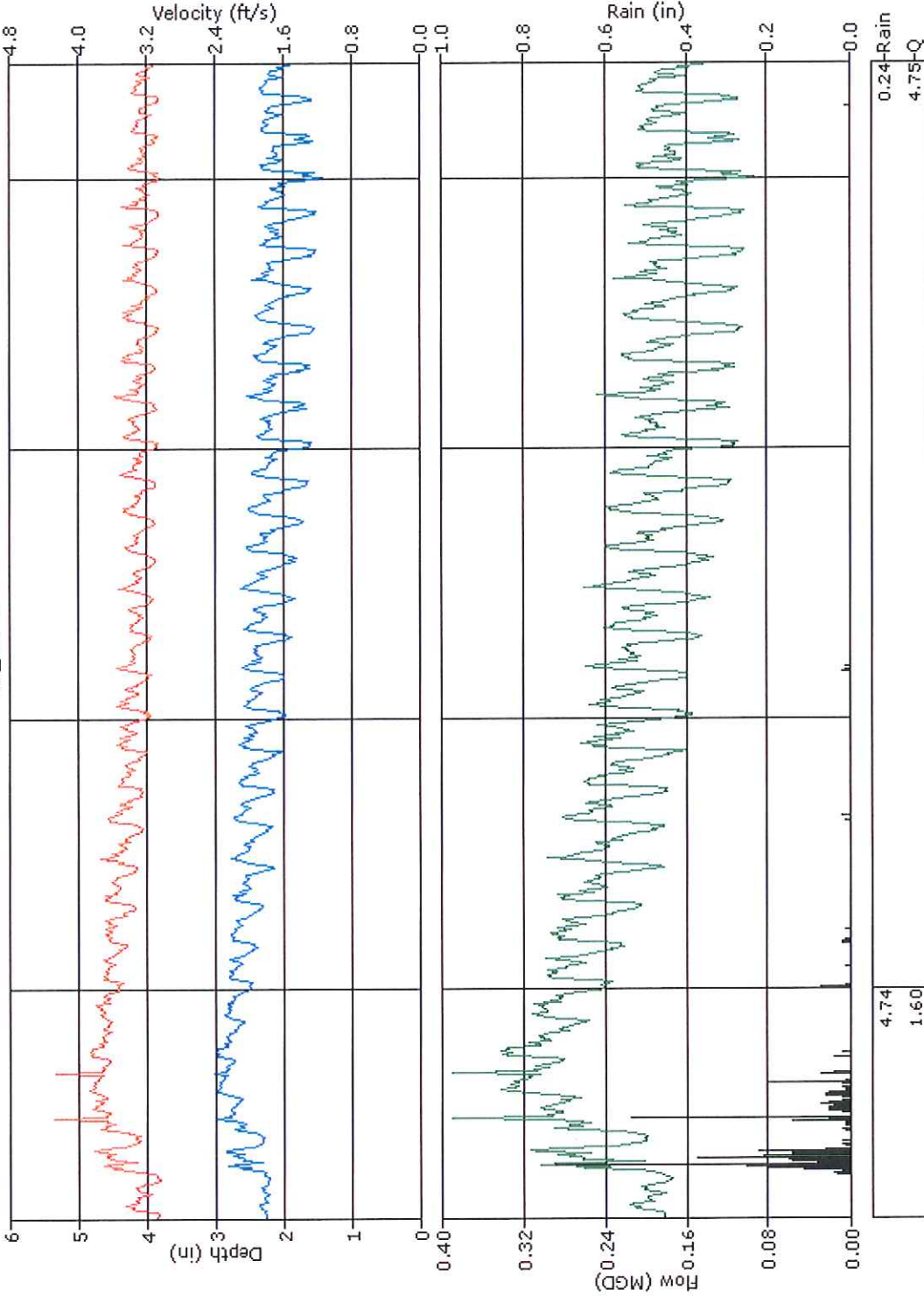
Report Period
9/25/2008
To
12/1/2008

Legend

- Depth - Velocity
- - - Iso-Q™
- ⋯ Silt
- ▾ Min-Max Depth

HYDROGRAPH REPORT

JC_JNI-D



Flow Monitor
JC_JNI-D

Nominal Diameter
10-in

Report Period
9/25/2008
To
10/24/2008

Legend

- Depth
- Silt
- Velocity
- Quantity
- Rain

HYDROGRAPH REPORT

JC_JNI-D

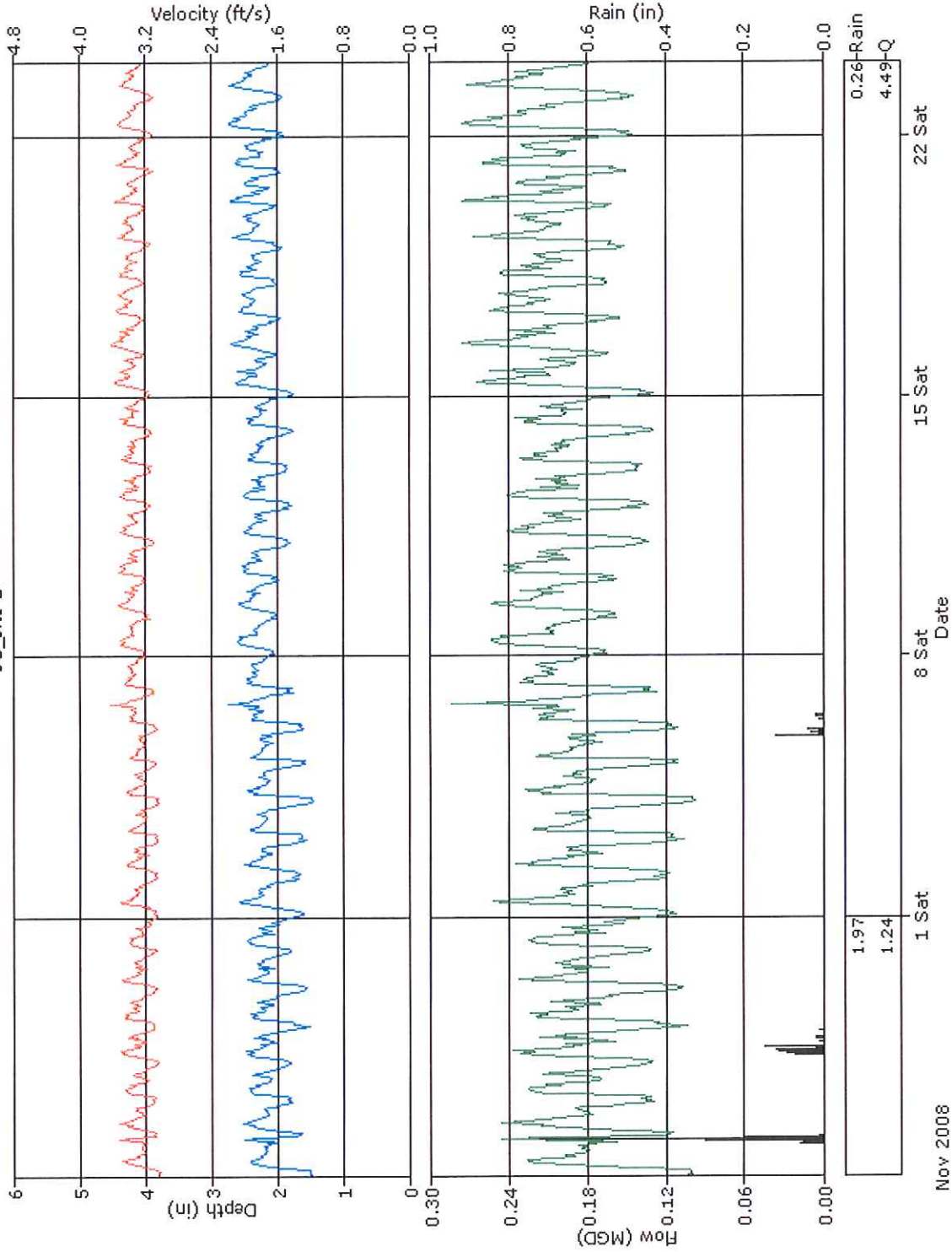
Flow Monitor
JC_JNI-D



Report Period
10/25/2008
To
11/23/2008

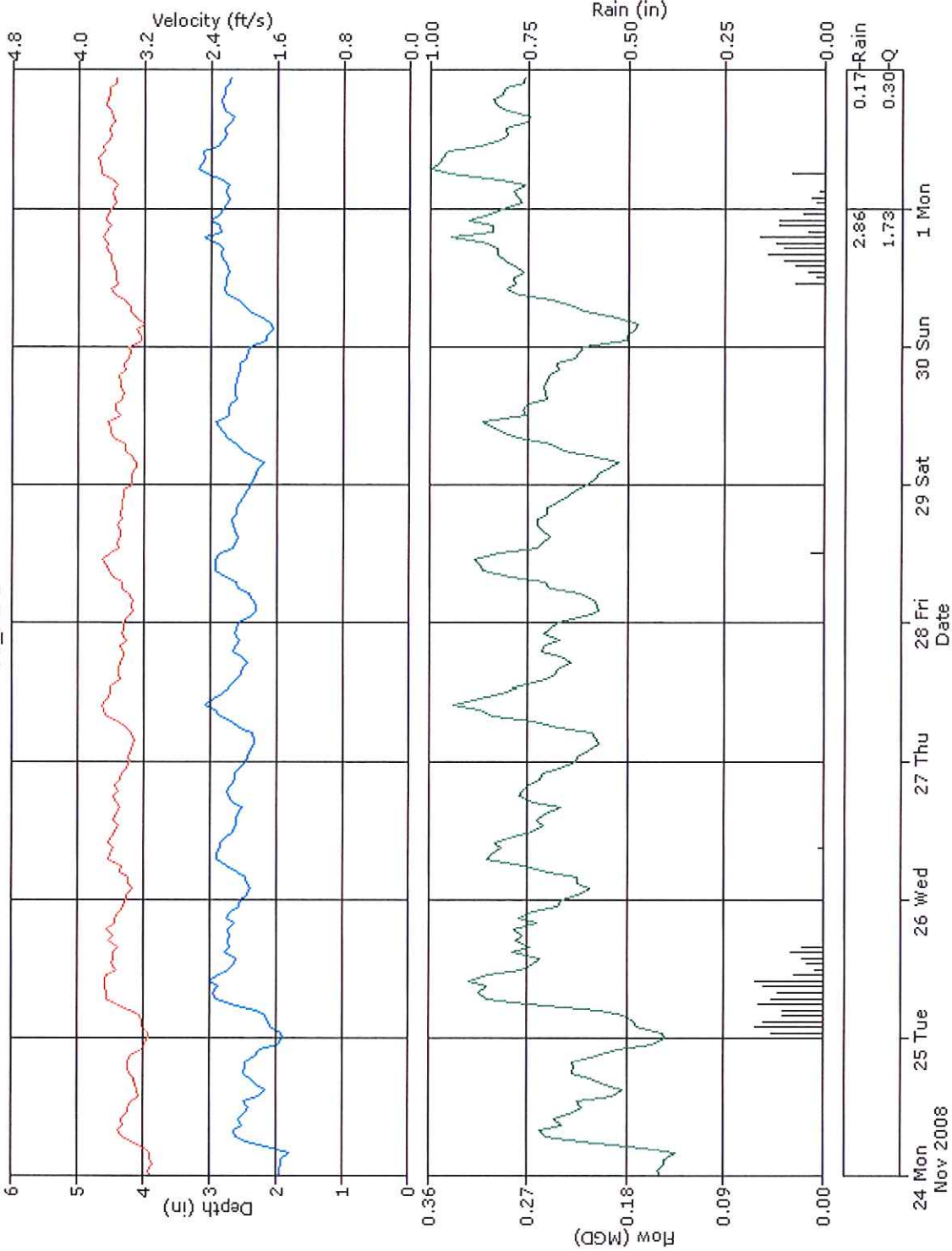
Legend

- Depth
- Silt
- Velocity
- Quantity
- Rain



HYDROGRAPH REPORT

JC_JNI-D



Flow Monitor
JC_JNI-D



Report Period
11/24/2008
To
12/1/2008

Legend

- Depth
- Silt
- Velocity
- Quantity
- Rain

Narragansett Bay

Daily Tabular Report For The Period 9/25/2008 - 12/1/2008

JC_JNI-D, Pipe Height: 10"

Daily Tabular Report

Depth (in) Velocity (ft/s) Quantity (MGD - Total MG) Rain (in)

Date	Depth					Velocity					Quantity					Rain	
	Time	Min	Time	Max	Avg	Time	Min	Time	Max	Avg	Time	Min	Time	Max	Avg	Total	Total
9/25/2008	16:45	2.17	06:45	2.46	2.28	03:45	3.03	06:45	3.51	3.23	16:00	0.175	06:45	0.236	0.195	0.195	
9/26/2008	02:00	2.16	10:45	3.13	2.48	01:00	3.02	11:15	4.07	3.43	02:00	0.171	10:45	0.380	0.237	0.237	2.91
9/27/2008	04:45	2.23	15:30	3.35	2.59	02:45	3.21	15:30	5.67	3.68	04:45	0.193	15:30	0.588	0.262	0.262	1.06
9/28/2008	04:00	2.56	20:15	3.33	2.83	02:30	3.54	20:15	5.71	3.77	04:45	0.254	20:15	0.587	0.311	0.311	0.71
9/29/2008	22:15	2.67	10:00	3.07	2.83	22:15	3.57	10:00	3.96	3.72	22:15	0.270	10:00	0.364	0.306	0.306	0.06
9/30/2008	23:45	2.52	14:45	2.99	2.72	23:30	3.44	14:45	3.86	3.67	23:30	0.241	14:45	0.343	0.286	0.286	
10/1/2008	00:30	2.41	19:45	2.92	2.64	04:15	3.35	06:15	3.80	3.61	00:30	0.224	19:45	0.324	0.269	0.269	0.10
10/2/2008	02:45	2.36	14:00	2.90	2.61	02:30	3.35	19:15	3.80	3.57	02:45	0.214	14:00	0.321	0.262	0.262	0.06
10/3/2008	03:45	2.30	18:45	2.81	2.53	01:15	3.25	10:15	3.80	3.52	03:45	0.201	18:45	0.306	0.248	0.248	
10/4/2008	03:00	2.09	09:45	2.82	2.48	03:15	3.21	09:45	3.82	3.47	03:00	0.176	09:45	0.312	0.238	0.238	
10/5/2008	05:15	2.10	12:00	2.92	2.47	03:30	3.18	11:15	3.79	3.43	04:45	0.172	12:00	0.317	0.234	0.234	0.03
10/6/2008	03:15	2.06	09:45	2.71	2.41	03:15	3.12	07:30	3.58	3.38	03:15	0.163	09:45	0.274	0.223	0.223	
10/7/2008	03:15	1.95	13:00	2.79	2.38	04:00	3.12	13:00	3.72	3.37	03:15	0.153	13:00	0.299	0.218	0.218	
10/8/2008	02:00	1.94	08:00	2.70	2.32	02:00	3.08	08:00	3.67	3.33	02:00	0.149	08:00	0.282	0.208	0.208	
10/9/2008	03:15	1.88	08:45	2.74	2.30	04:45	3.08	08:45	3.67	3.32	03:15	0.147	08:45	0.288	0.205	0.205	0.04
10/10/2008	03:00	1.75	08:00	2.59	2.26	04:45	3.08	19:15	3.57	3.28	03:00	0.131	19:15	0.255	0.197	0.197	
10/11/2008	02:00	1.69	09:15	2.80	2.22	03:15	3.05	09:15	3.82	3.27	02:45	0.123	09:15	0.309	0.193	0.193	
10/12/2008	02:00	1.63	11:15	2.68	2.18	02:30	3.05	10:30	3.51	3.26	06:00	0.116	11:15	0.267	0.186	0.186	
10/13/2008	01:45	1.60	09:30	2.72	2.14	02:15	3.05	09:30	3.69	3.27	01:45	0.112	09:30	0.286	0.183	0.183	
10/14/2008	02:30	1.54	09:30	2.57	2.10	01:00	3.05	08:00	3.58	3.27	02:30	0.106	09:30	0.253	0.178	0.178	
10/15/2008	05:15	1.52	08:15	2.47	2.09	00:45	3.05	07:30	3.54	3.28	02:00	0.103	07:30	0.235	0.177	0.177	
10/16/2008	04:30	1.57	09:00	2.56	2.12	01:30	3.05	08:15	3.63	3.27	04:30	0.109	08:15	0.252	0.180	0.180	
10/17/2008	02:45	1.45	14:45	2.60	2.09	02:15	3.05	09:00	3.55	3.26	02:45	0.096	14:45	0.246	0.176	0.176	
10/18/2008	03:30	1.45	12:15	2.49	2.06	00:30	3.05	10:30	3.54	3.26	03:30	0.097	11:00	0.239	0.173	0.173	
10/19/2008	02:00	1.53	10:45	2.58	2.06	01:45	3.05	10:15	3.61	3.25	02:00	0.105	10:15	0.257	0.172	0.172	
10/20/2008	03:15	1.41	07:30	2.44	2.01	04:45	3.03	08:00	3.54	3.23	03:15	0.092	07:30	0.232	0.165	0.165	
10/21/2008	04:15	1.39	07:30	2.41	1.98	00:15	3.05	08:00	3.54	3.20	04:15	0.091	07:30	0.230	0.161	0.161	
10/22/2008	01:15	1.40	09:00	2.38	1.98	01:30	2.98	08:15	3.54	3.21	01:30	0.089	08:15	0.220	0.161	0.161	
10/23/2008	05:00	1.48	07:15	2.44	2.06	00:15	3.05	07:15	3.49	3.22	05:00	0.100	07:15	0.232	0.171	0.171	0.01
10/24/2008	03:15	1.46	07:00	2.40	2.06	00:00	3.05	06:45	3.51	3.21	03:15	0.098	07:00	0.227	0.170	0.170	
10/25/2008	05:00	1.37	11:15	2.52	2.03	04:15	2.98	11:15	3.66	3.21	03:00	0.088	11:15	0.255	0.167	0.167	0.11
10/26/2008	05:30	1.46	11:45	2.84	2.15	03:30	3.05	01:30	3.80	3.28	05:30	0.099	11:45	0.306	0.185	0.185	1.23
10/27/2008	04:45	1.72	08:15	2.51	2.14	01:15	3.05	09:45	3.61	3.24	04:45	0.124	09:45	0.244	0.181	0.181	
10/28/2008	02:00	1.74	10:00	2.51	2.13	03:00	3.01	10:30	3.61	3.26	03:00	0.124	10:30	0.247	0.181	0.181	0.63
10/29/2008	02:15	1.43	08:45	2.47	2.06	00:15	3.05	07:30	3.54	3.26	02:15	0.094	08:45	0.236	0.172	0.172	
10/30/2008	02:45	1.41	08:45	2.51	2.07	01:00	3.03	07:45	3.54	3.25	02:45	0.095	08:45	0.245	0.173	0.173	
10/31/2008	02:30	1.54	10:30	2.53	2.12	00:45	3.05	08:30	3.51	3.22	02:30	0.107	10:30	0.244	0.178	0.178	
11/1/2008	03:00	1.49	10:45	2.67	2.12	00:15	3.05	09:30	3.54	3.24	03:00	0.101	10:45	0.263	0.179	0.179	
11/2/2008	05:00	1.48	09:45	2.58	2.08	05:00	3.02	09:45	3.54	3.23	05:00	0.099	09:45	0.255	0.173	0.173	
11/3/2008	02:45	1.43	08:45	2.50	2.05	03:45	3.05	08:30	3.51	3.20	02:45	0.094	08:45	0.237	0.169	0.169	
11/4/2008	02:15	1.35	11:30	2.58	2.05	05:00	2.97	10:15	3.54	3.22	02:15	0.085	10:15	0.253	0.171	0.171	
11/5/2008	03:45	1.49	08:45	2.45	2.08	03:15	3.02	09:15	3.48	3.22	03:45	0.103	09:15	0.233	0.173	0.173	0.16

Date	Depth					Velocity					Quantity					Rain	
	Time	Min	Time	Max	Avg	Time	Min	Time	Max	Avg	Time	Min	Time	Max	Avg	Total	Total
11/6/2008	06:30	1.50	18:00	2.86	2.13	04:15	3.05	18:00	3.67	3.27	06:30	0.103	18:00	0.305	0.183	0.183	0.10
11/7/2008	03:15	1.70	09:45	2.54	2.22	02:00	3.05	08:15	3.54	3.31	02:00	0.121	09:45	0.250	0.194	0.194	
11/8/2008	02:45	1.90	11:00	2.75	2.30	00:45	3.12	11:00	3.67	3.34	02:45	0.150	11:00	0.290	0.206	0.206	
11/9/2008	05:30	1.89	10:45	2.72	2.29	01:30	3.08	10:45	3.55	3.33	01:30	0.144	10:45	0.275	0.203	0.203	
11/10/2008	23:00	1.82	09:00	2.66	2.28	23:00	3.15	09:00	3.69	3.34	23:00	0.138	09:00	0.278	0.203	0.203	
11/11/2008	02:00	1.68	09:00	2.55	2.20	01:45	3.08	21:45	3.54	3.30	02:00	0.120	09:00	0.249	0.191	0.191	
11/12/2008	00:45	1.58	08:45	2.60	2.19	00:45	3.12	08:45	3.61	3.32	00:45	0.111	08:45	0.264	0.191	0.191	
11/13/2008	03:15	1.76	07:15	2.56	2.16	00:00	3.08	07:15	3.54	3.30	04:00	0.133	07:15	0.252	0.187	0.187	
11/14/2008	02:30	1.64	10:15	2.53	2.16	01:00	3.08	10:15	3.61	3.31	02:30	0.121	10:15	0.253	0.187	0.187	
11/15/2008	02:00	1.65	17:15	2.83	2.24	02:45	3.08	09:00	3.67	3.35	02:00	0.120	17:15	0.289	0.201	0.201	
11/16/2008	04:15	1.90	10:45	2.84	2.35	04:15	3.18	10:00	3.67	3.41	04:15	0.148	10:45	0.290	0.217	0.217	
11/17/2008	02:30	1.88	08:00	2.63	2.34	02:45	3.12	07:15	3.61	3.40	02:30	0.146	08:00	0.267	0.214	0.214	
11/18/2008	02:30	1.86	07:45	2.70	2.29	02:30	3.09	06:45	3.61	3.36	02:30	0.139	07:45	0.267	0.205	0.205	
11/19/2008	01:30	1.84	07:15	2.75	2.33	03:00	3.08	09:15	3.58	3.35	01:30	0.141	07:15	0.281	0.210	0.210	
11/20/2008	16:00	1.91	07:45	2.81	2.34	00:45	3.12	07:15	3.64	3.34	16:00	0.147	07:45	0.291	0.211	0.211	
11/21/2008	02:45	1.86	08:00	2.74	2.31	01:30	3.05	07:30	3.64	3.31	02:45	0.138	07:30	0.278	0.206	0.206	
11/22/2008	04:00	1.79	09:15	2.91	2.34	02:15	3.05	08:45	3.67	3.32	04:00	0.137	09:15	0.307	0.211	0.211	
11/23/2008	03:15	1.77	10:30	2.78	2.30	02:30	3.05	08:45	3.54	3.30	03:15	0.129	10:30	0.281	0.204	0.204	
11/24/2008	04:00	1.74	07:30	2.74	2.27	02:30	3.05	08:30	3.64	3.29	04:00	0.128	08:45	0.276	0.200	0.200	
11/25/2008	01:30	1.82	10:15	3.14	2.57	00:30	3.08	08:00	3.80	3.48	01:30	0.135	08:00	0.352	0.253	0.253	1.69
11/26/2008	02:00	2.35	07:30	3.00	2.64	01:45	3.28	07:30	3.71	3.50	01:45	0.208	07:30	0.330	0.260	0.260	0.01
11/27/2008	03:00	2.16	10:45	3.12	2.59	00:15	3.28	09:15	3.77	3.48	03:00	0.188	10:45	0.353	0.254	0.254	
11/28/2008	04:30	2.14	11:45	3.07	2.59	03:45	3.28	11:45	3.80	3.48	04:30	0.185	11:45	0.350	0.254	0.254	0.03
11/29/2008	04:45	2.07	10:00	2.98	2.56	04:15	3.21	09:00	3.71	3.45	04:15	0.171	10:00	0.323	0.246	0.246	
11/30/2008	03:15	1.96	19:15	3.19	2.63	04:15	3.15	20:00	3.80	3.50	03:15	0.160	19:15	0.359	0.261	0.261	1.13
12/1/2008	21:00	2.60	07:15	3.29	2.84	04:00	3.44	09:00	3.90	3.62	23:45	0.255	09:00	0.385	0.299	0.299	0.17

Report Summary For The Period 9/25/2008 - 12/1/2008

Depth (in) : D Velocity (ft/s) : V Quantity (MGD - Total MG) : Q Rain (in) : Rain

	D	V	Q	Rain
Report Total			14.096	10.24
Report Avg	2.29	3.35	0.207	

Site Commentary

Site Information

JC_JNI-E	
Pipe Dimensions	Elliptical (20.00 in H, 21.00 in W)
Silt	0.00"

Overview

A review of the [hydrograph](#) and [scattergraph](#) for JC_JNI-E indicate this location functioned under typical open channel flow conditions during the monitoring period of Thursday, September 25, 2008 to Monday, December 01, 2008 . Flow depth and velocity measurements recorded by the flow monitor are consistent with field confirmations conducted to date and support the relative accuracy of the flow monitor at this location.

[Daily longtables](#) displaying final quantities are also provided.

Observations

Average flow depth, velocity, and quantity data observed during Thursday, September 25, 2008 to Monday, December 01, 2008 , along with observed minimum and maximum data, are provided in the following table.

Observed Flow Conditions			
Item	Depth (in)	Velocity (ft/s)	Quantity (MGD)
Average	4.70	1.13	0.317
Minimum	2.72	0.45	0.069
Maximum	8.91	2.26	1.443
Time of Minimum	9/25/2008 4:45 AM	10/31/2008 4:15 AM	11/4/2008 6:15 AM
Time of Maximum	9/27/2008 4:00 PM	9/27/2008 4:00 PM	9/27/2008 4:00 PM

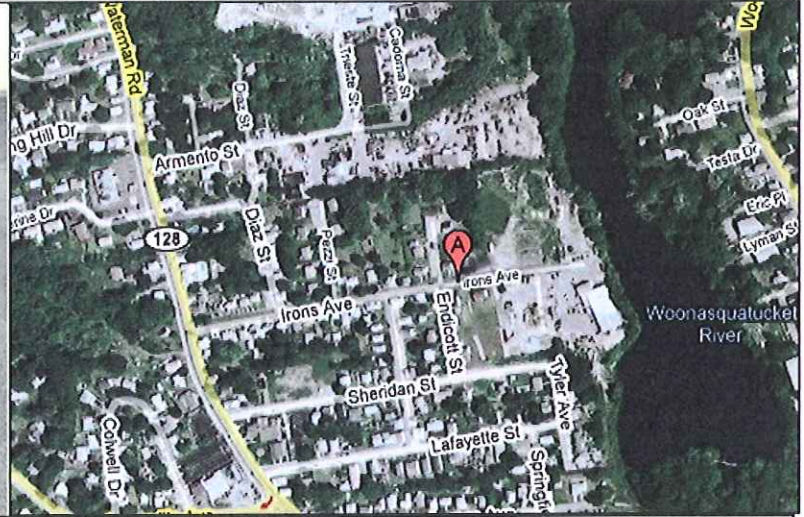
Please note the minimum and maximum flow rate recorded in this table may vary from those recorded on the daily and weekly tabular data. The minimum and maximum rates recorded on the daily and weekly tabular data are absolute verses average fifteen minute data.

Based upon the quality and consistency of the observed flow depth and velocity data, the Continuity equation was used to calculate flow rate and quantities during the monitoring period.

Graphical data reports are based on an hourly average.

a division of ADS LLC.

Name:	JC JNI-E	Meter Type:	1502 EM	Monitor S/N:	00 13	Manhole #:	JNI-E
Address / Location:	100 Irons Road in Parking Lot of DPW			Map Page #:	N/A		
Access:	Drive	Type of System:	Sanitary	Pipe Height:	20 Inches		
				Pipe Width:	21 Inches		
				Phone Number:	N/A		



Investigation Information:			Manhole Information:		
Date/Time of Investigation:	September 24, 2008	10:40 AM	Manhole Depth:	17 Feet	9 Inches
Site Hydraulics:	GOOD		Manhole Material / Condition:	Precast	Good
Upstream Input: (L/S, P/S)			Active Drop Connections?		
Upstream Manhole:	MAIN GATE- BAD TRAFFIC		Pipe Material / Condition:	PVC	Good
Downstream Manhole:	BOLTED		Mini System Character:	Commercial	
Depth of Flow (Wet Dof):	6	+/- 0.25	Access Pole #:	N/A	
Range (Air Dof):	13.5	+/- 0.25	Distance From Manhole:	N/A Feet	
Peak Velocity:	2	fps	Road Cut Length:	N/A Feet	
Silt:	0	Inches	Trench Length:	N/A Feet	

Other Information:
N 41° 50' 27.1" W 71° 28' 45.0"

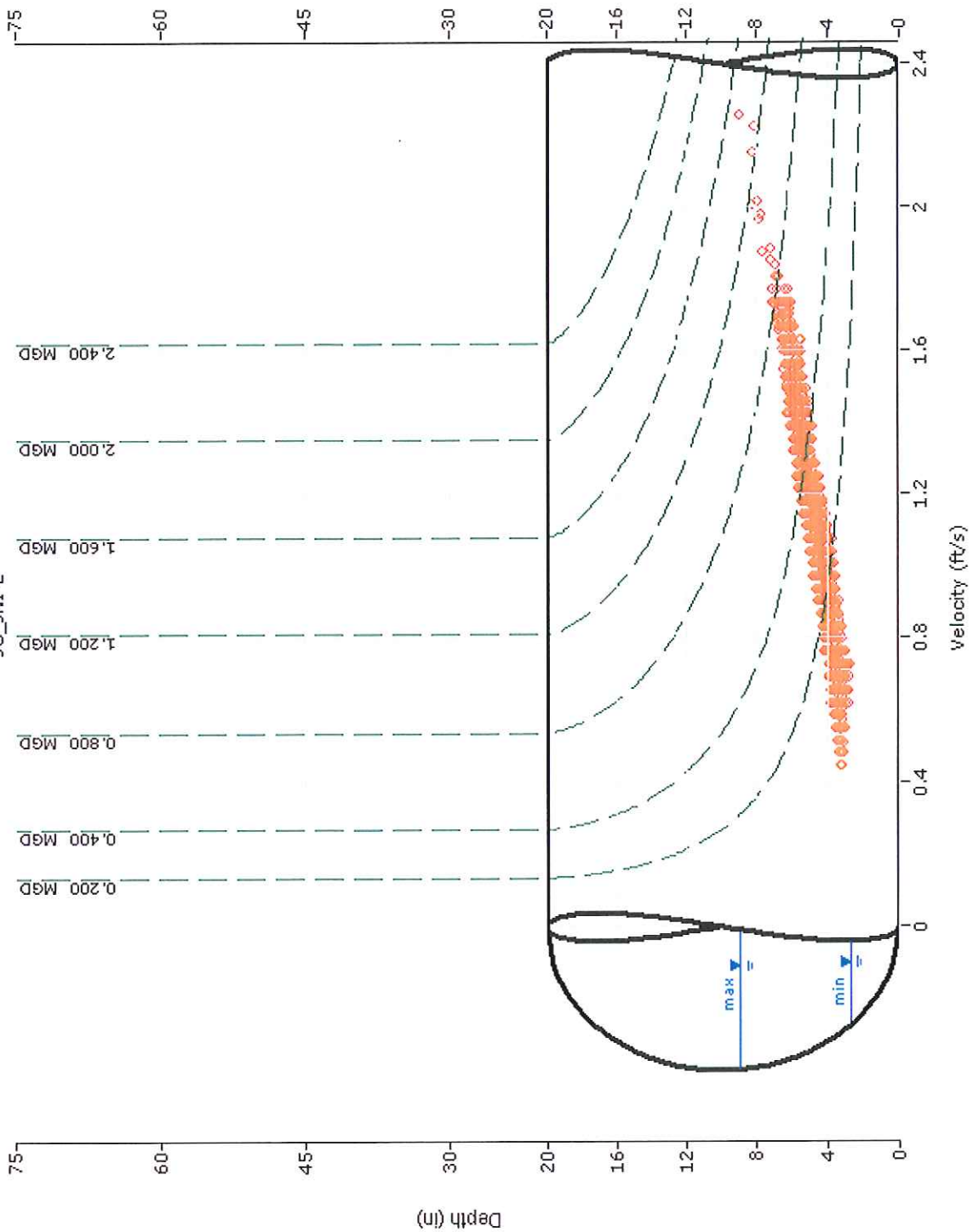


Installation Information		Backup	Yes	No	?	Distance
Installation Type:	Doppler Standard Ring and Crank Installation	Trunk		x		
Sensors / Devices:	Ultra, Velocity, Pressure (Non I.S.)	Lift/Pump Station		x		
Surcharge Height:	0 Feet	WWTP		x		
Rain Gauge Zone:	RG-2	Other		x		

Additional Site Information / Comments:
PRESS SN 79020 PO 1.5 GROUND WATER GAUGE

SCATTERGRAPH REPORT

JC_JNI-E



Flow Monitor
JC_JNI-E

Nominal Diameter
21-in

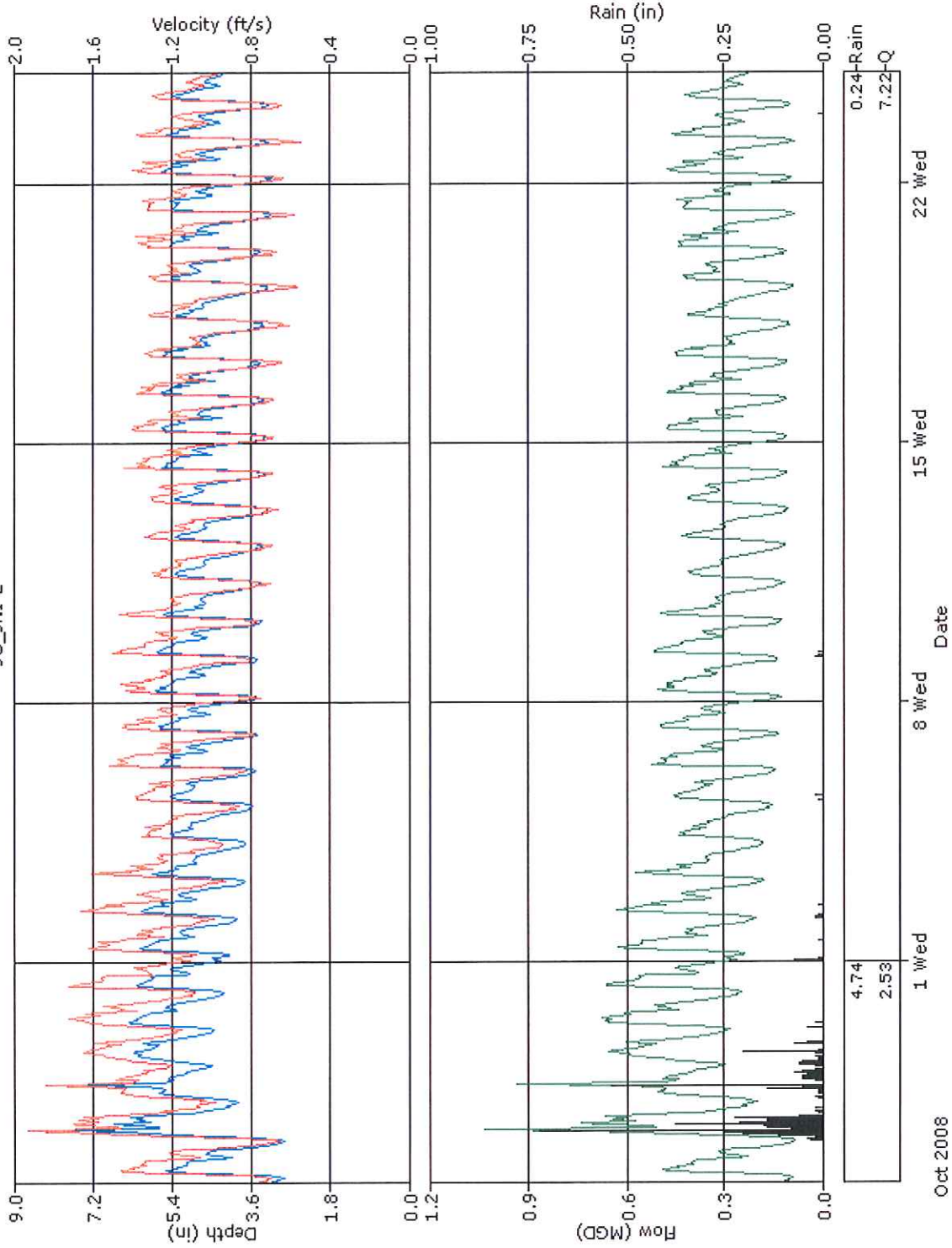
Report Period
9/25/2008
To
12/1/2008

Legend
 Depth - Velocity
 Iso-Q™
 Silt
 Min-Max Depth



HYDROGRAPH REPORT

JC_JNI-E



Flow Monitor
JC_JNI-E

Nominal Diameter
21-in

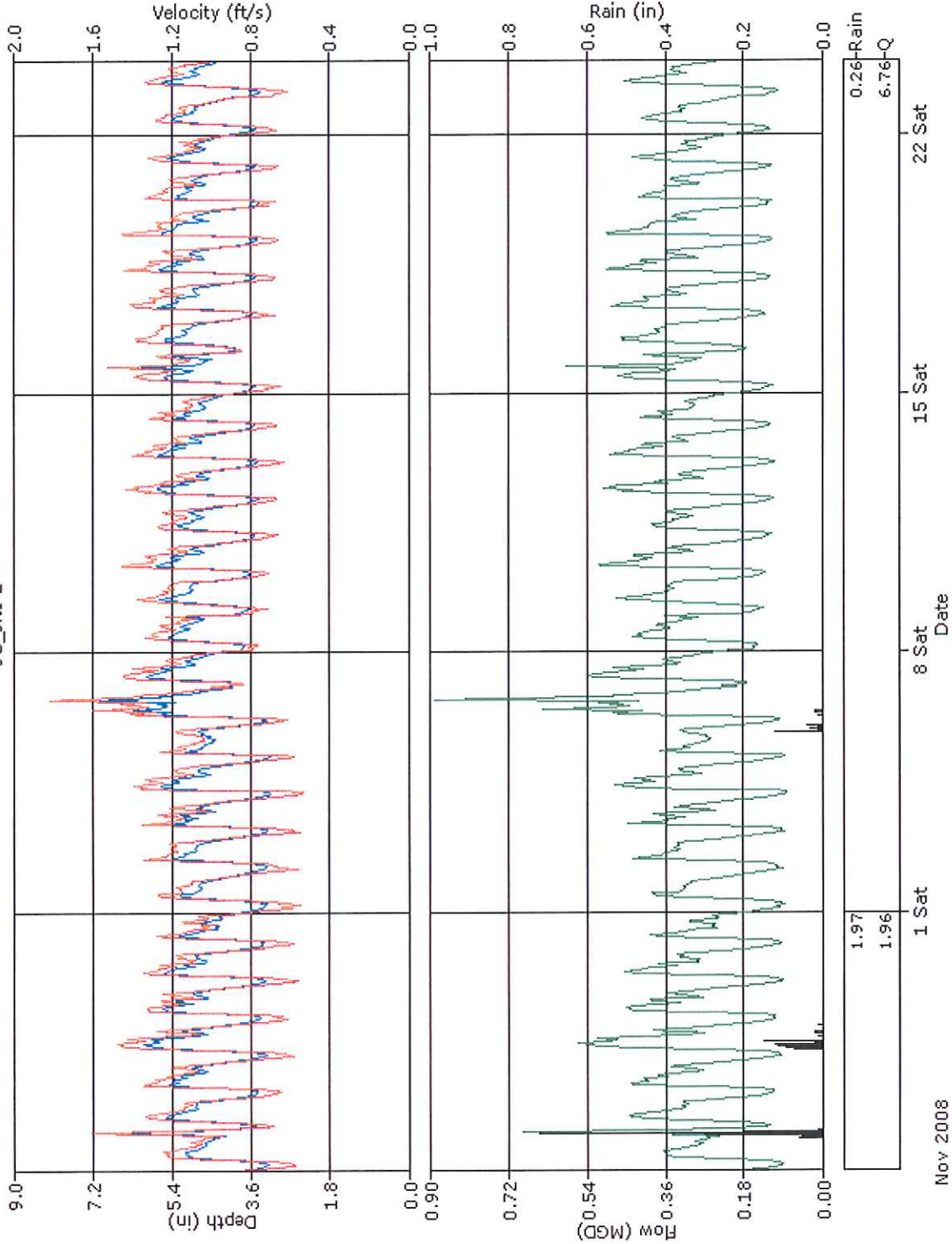
Report Period
9/25/2008
To
10/24/2008

Legend

- Depth
- Silt
- Velocity
- Quantity
- Rain

HYDROGRAPH REPORT

JC_JNI-E



Flow Monitor
JC_JNI-E

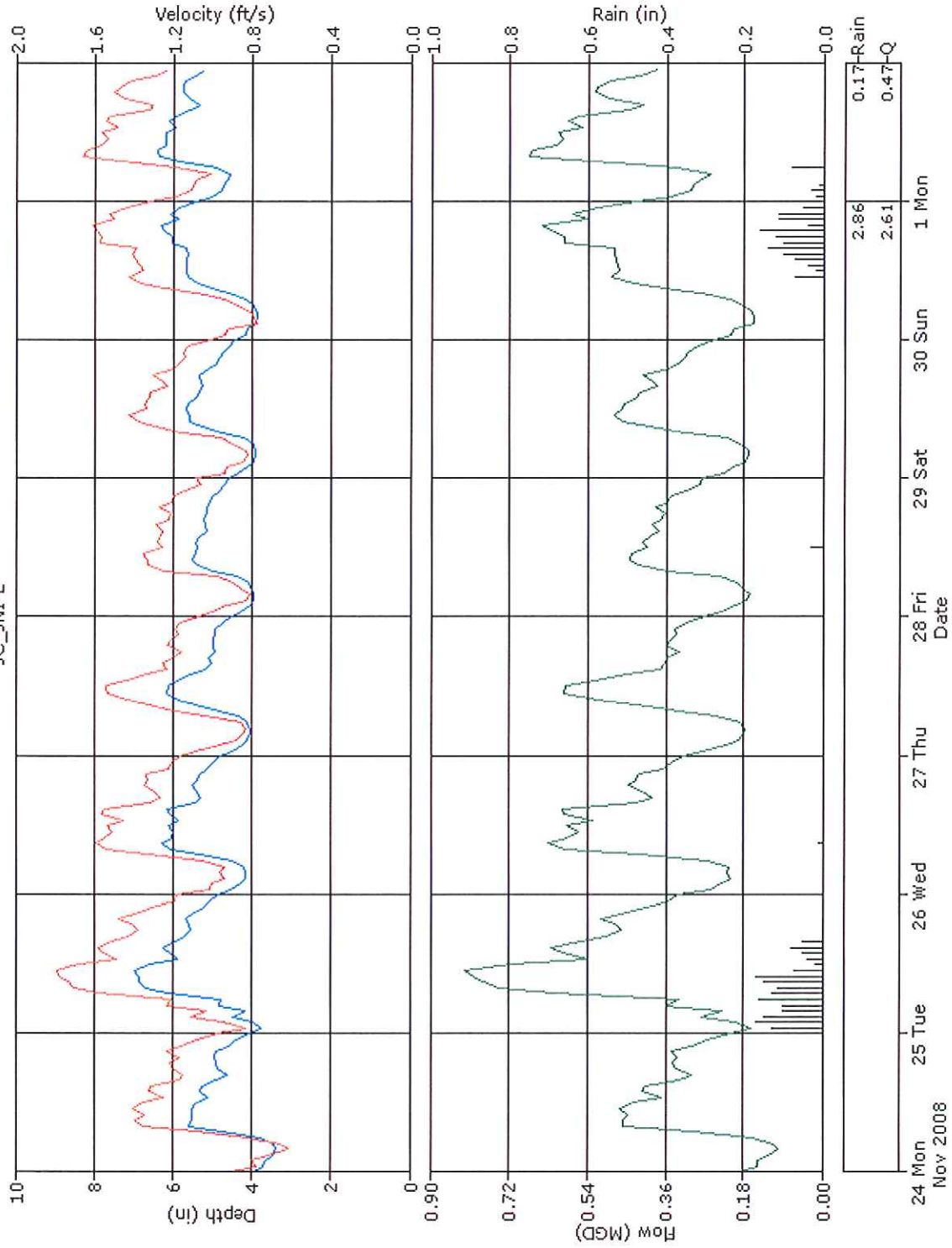
Nominal Diameter
21-in

Report Period
10/25/2008
To
11/23/2008

Legend
 — Depth
 — Silt
 — Velocity
 — Quantity
 — Rain

HYDROGRAPH REPORT

JC_JNI-E



Flow Monitor
JC_JNI-E

Nominal Diameter
21-in

Report Period
11/24/2008
To
12/1/2008

Legend

- Depth
- Silt
- Velocity
- Quantity
- Rain

Narragansett Bay

Daily Tabular Report For The Period 9/25/2008 - 12/1/2008

JC_JNI-E, Pipe Height: 21"

Daily Tabular Report

Depth (in) Velocity (ft/s) Quantity (MGD - Total MG) Rain (in)

Date	Depth					Velocity					Quantity					Rain	
	Time	Min	Time	Max	Avg	Time	Min	Time	Max	Avg	Time	Min	Time	Max	Avg	Total	Total
9/25/2008	04:45	2.72	09:00	5.91	4.30	05:45	0.63	09:00	1.57	1.12	05:45	0.079	09:00	0.573	0.281	0.281	
9/26/2008	04:45	2.78	11:15	8.21	5.08	04:00	0.63	11:00	2.02	1.31	04:00	0.079	11:15	1.151	0.438	0.438	2.91
9/27/2008	05:45	3.86	16:00	8.91	5.11	05:00	0.94	16:00	2.26	1.33	05:00	0.191	16:00	1.443	0.413	0.413	1.06
9/28/2008	05:00	4.47	14:00	6.57	5.51	04:30	1.15	13:30	1.74	1.44	04:30	0.285	13:30	0.716	0.483	0.483	0.71
9/29/2008	03:45	4.43	09:15	6.47	5.43	04:00	1.09	08:45	1.74	1.44	04:00	0.268	08:45	0.700	0.477	0.477	0.06
9/30/2008	04:15	4.18	09:15	6.31	5.23	02:30	1.01	08:15	1.74	1.37	02:30	0.239	09:15	0.698	0.433	0.433	
10/1/2008	06:00	4.10	09:00	6.34	5.13	05:00	1.01	08:45	1.71	1.34	05:00	0.223	09:00	0.688	0.413	0.413	0.10
10/2/2008	04:15	3.88	09:00	6.16	5.03	05:15	0.90	09:00	1.77	1.31	05:15	0.186	09:00	0.688	0.394	0.394	0.06
10/3/2008	04:15	3.68	09:00	6.02	4.79	04:45	0.87	09:15	1.64	1.24	04:45	0.166	09:15	0.603	0.349	0.349	
10/4/2008	04:45	3.62	12:15	5.57	4.62	02:00	0.87	10:45	1.46	1.18	04:45	0.165	12:15	0.469	0.311	0.311	
10/5/2008	05:30	3.47	12:45	5.59	4.57	03:30	0.80	11:30	1.50	1.16	03:30	0.146	11:30	0.492	0.306	0.306	0.03
10/6/2008	04:15	3.47	08:30	5.77	4.69	04:45	0.77	08:00	1.57	1.20	04:45	0.134	08:30	0.542	0.332	0.332	
10/7/2008	03:45	3.40	08:30	5.78	4.68	03:15	0.73	10:15	1.60	1.17	03:15	0.125	10:15	0.561	0.322	0.322	
10/8/2008	04:45	3.31	09:15	5.84	4.69	04:45	0.63	09:15	1.57	1.16	04:45	0.101	09:15	0.564	0.322	0.322	
10/9/2008	04:45	3.41	09:15	5.84	4.69	03:15	0.77	08:15	1.60	1.18	04:45	0.128	09:15	0.551	0.325	0.325	0.04
10/10/2008	03:45	3.35	09:45	5.69	4.49	03:45	0.73	09:45	1.60	1.12	03:45	0.119	09:45	0.556	0.290	0.290	
10/11/2008	06:00	3.36	11:45	5.46	4.40	05:45	0.66	12:00	1.36	1.06	05:45	0.110	12:00	0.440	0.267	0.267	
10/12/2008	06:00	3.21	11:15	5.54	4.35	03:45	0.63	10:30	1.43	1.05	06:00	0.096	11:15	0.472	0.261	0.261	
10/13/2008	05:15	3.17	12:00	5.50	4.36	03:30	0.63	13:00	1.39	1.06	05:45	0.095	12:00	0.449	0.267	0.267	
10/14/2008	04:30	3.19	08:45	5.80	4.57	04:30	0.63	08:45	1.55	1.11	04:30	0.095	08:45	0.553	0.298	0.298	
10/15/2008	04:00	3.23	08:30	5.72	4.56	04:30	0.59	09:00	1.50	1.10	04:30	0.093	09:00	0.492	0.296	0.296	
10/16/2008	04:30	3.22	09:15	5.71	4.62	05:15	0.63	16:00	1.46	1.08	04:30	0.102	09:30	0.497	0.296	0.296	
10/17/2008	04:30	3.34	08:15	5.76	4.57	05:00	0.59	10:30	1.53	1.05	05:00	0.097	10:30	0.520	0.280	0.280	
10/18/2008	06:15	3.23	12:30	5.35	4.37	04:15	0.56	11:30	1.46	1.02	04:15	0.090	11:30	0.460	0.255	0.255	
10/19/2008	05:45	3.18	12:30	5.62	4.40	05:15	0.55	13:15	1.39	1.03	06:45	0.085	13:15	0.457	0.263	0.263	
10/20/2008	04:30	3.35	08:30	5.72	4.52	04:45	0.59	10:00	1.43	1.09	04:45	0.100	10:00	0.471	0.287	0.287	
10/21/2008	05:00	3.07	13:00	5.51	4.48	04:30	0.56	09:15	1.43	1.08	04:30	0.082	10:30	0.466	0.284	0.284	
10/22/2008	04:45	3.03	08:45	5.68	4.47	05:15	0.49	10:15	1.44	1.07	05:15	0.070	08:45	0.494	0.281	0.281	
10/23/2008	04:45	3.14	08:45	5.61	4.41	04:15	0.49	08:45	1.39	1.03	04:45	0.073	08:45	0.474	0.266	0.266	0.01
10/24/2008	04:45	3.17	09:45	5.54	4.36	03:00	0.59	09:45	1.36	1.02	04:30	0.091	09:45	0.453	0.255	0.255	
10/25/2008	06:00	3.17	12:15	5.19	4.33	06:00	0.49	13:00	1.29	0.98	06:00	0.074	13:00	0.388	0.244	0.244	0.11
10/26/2008	06:45	3.42	02:15	6.87	4.82	05:45	0.66	02:15	1.68	1.12	06:45	0.111	02:15	0.756	0.323	0.323	1.23
10/27/2008	05:00	3.34	09:00	5.69	4.59	04:45	0.52	08:15	1.39	1.05	04:45	0.088	09:00	0.471	0.283	0.283	
10/28/2008	04:30	3.22	14:00	6.42	4.73	03:15	0.56	14:00	1.55	1.09	04:15	0.086	14:00	0.637	0.314	0.314	0.63
10/29/2008	05:00	3.31	11:00	5.66	4.62	02:30	0.56	09:00	1.43	1.05	05:00	0.095	09:00	0.469	0.286	0.286	
10/30/2008	04:00	3.24	08:45	5.71	4.54	04:30	0.49	08:45	1.39	1.04	04:30	0.077	08:45	0.485	0.278	0.278	
10/31/2008	03:15	3.24	08:45	5.33	4.28	04:15	0.45	09:00	1.32	0.98	04:15	0.071	09:00	0.415	0.237	0.237	
11/1/2008	06:15	3.20	12:30	5.28	4.33	05:15	0.49	12:30	1.39	0.98	05:45	0.075	12:30	0.435	0.244	0.244	
11/2/2008	06:15	3.19	12:00	5.57	4.40	04:45	0.49	11:45	1.50	1.02	04:45	0.079	11:45	0.501	0.261	0.261	
11/3/2008	05:15	3.13	09:30	5.63	4.47	04:45	0.49	10:00	1.50	1.02	05:15	0.072	10:00	0.508	0.268	0.268	
11/4/2008	05:45	3.10	11:45	5.79	4.51	06:15	0.45	11:30	1.50	1.05	06:15	0.069	11:30	0.511	0.283	0.283	
11/5/2008	06:00	3.05	09:15	5.22	4.30	06:00	0.52	09:15	1.32	1.00	06:00	0.074	09:15	0.407	0.243	0.243	0.16

Date	Depth					Velocity					Quantity					Rain	
	Time	Min	Time	Max	Avg	Time	Min	Time	Max	Avg	Time	Min	Time	Max	Avg	Total	Total
11/6/2008	05:45	3.18	18:45	8.23	4.96	05:00	0.56	18:30	2.23	1.19	06:45	0.087	18:30	1.261	0.379	0.379	0.10
11/7/2008	05:00	3.81	09:30	6.07	4.94	03:30	0.77	08:15	1.57	1.18	03:45	0.153	08:15	0.574	0.347	0.347	
11/8/2008	06:00	3.70	10:45	5.64	4.72	06:15	0.66	10:45	1.36	1.10	06:15	0.130	10:45	0.465	0.303	0.303	
11/9/2008	05:30	3.62	11:45	5.68	4.67	05:30	0.63	10:00	1.39	1.10	05:30	0.114	11:45	0.482	0.299	0.299	
11/10/2008	04:00	3.55	09:15	5.84	4.73	05:30	0.66	09:00	1.53	1.11	05:30	0.119	09:15	0.551	0.312	0.312	
11/11/2008	05:00	3.43	11:45	5.39	4.53	05:00	0.63	11:45	1.32	1.06	05:00	0.106	11:45	0.425	0.276	0.276	
11/12/2008	04:15	3.33	11:00	5.79	4.66	04:30	0.63	10:45	1.50	1.09	04:30	0.105	10:45	0.530	0.299	0.299	
11/13/2008	04:15	3.37	08:30	5.83	4.68	03:45	0.56	08:00	1.46	1.09	03:45	0.093	08:00	0.517	0.302	0.302	
11/14/2008	04:00	3.49	08:30	5.43	4.49	05:15	0.59	08:00	1.32	1.04	05:15	0.104	08:30	0.429	0.268	0.268	
11/15/2008	05:45	3.45	18:00	6.78	4.68	05:45	0.56	18:00	1.67	1.10	05:45	0.095	18:00	0.739	0.307	0.307	
11/16/2008	05:45	3.86	10:30	5.76	4.89	04:30	0.77	10:30	1.50	1.18	05:45	0.153	10:30	0.528	0.340	0.340	
11/17/2008	04:45	3.52	08:15	5.81	4.73	03:00	0.63	10:00	1.50	1.13	03:00	0.117	08:15	0.509	0.316	0.316	
11/18/2008	04:00	3.47	09:15	5.73	4.71	04:00	0.52	08:30	1.53	1.10	04:00	0.090	08:30	0.519	0.309	0.309	
11/19/2008	05:15	3.36	08:30	5.76	4.69	05:15	0.49	08:30	1.53	1.10	05:15	0.080	08:30	0.540	0.306	0.306	
11/20/2008	05:00	3.37	10:00	5.59	4.56	05:45	0.59	09:00	1.43	1.08	05:45	0.106	08:00	0.454	0.286	0.286	
11/21/2008	03:45	3.41	10:30	5.60	4.56	02:45	0.56	09:15	1.36	1.03	02:45	0.097	10:30	0.460	0.273	0.273	
11/22/2008	05:00	3.46	11:30	5.50	4.53	05:15	0.63	10:30	1.36	1.02	05:15	0.110	11:30	0.437	0.267	0.267	
11/23/2008	05:15	3.31	11:15	5.71	4.52	06:15	0.52	10:15	1.43	1.04	06:15	0.087	11:15	0.485	0.275	0.275	
11/24/2008	04:30	3.30	08:30	5.78	4.64	04:45	0.56	08:45	1.46	1.10	04:45	0.093	08:45	0.498	0.303	0.303	
11/25/2008	01:30	3.64	09:15	7.09	5.52	01:15	0.80	10:30	1.84	1.39	01:45	0.149	11:15	0.843	0.487	0.487	1.69
11/26/2008	03:45	4.10	08:45	6.71	5.29	03:30	0.87	08:45	1.69	1.29	03:30	0.196	08:45	0.735	0.420	0.420	0.01
11/27/2008	05:30	3.94	11:30	6.24	4.95	05:30	0.73	11:45	1.60	1.18	05:30	0.151	11:45	0.621	0.348	0.348	
11/28/2008	04:30	3.88	09:45	5.63	4.84	04:45	0.73	10:30	1.50	1.14	04:45	0.151	10:30	0.502	0.322	0.322	0.03
11/29/2008	05:30	3.82	12:00	5.76	4.85	04:15	0.73	11:15	1.50	1.15	04:15	0.150	11:15	0.502	0.327	0.327	
11/30/2008	05:30	3.82	20:00	6.38	5.16	04:45	0.73	19:45	1.74	1.24	04:45	0.145	19:45	0.700	0.399	0.399	1.13
12/1/2008	05:00	4.48	09:00	6.48	5.57	05:00	0.94	09:30	1.77	1.37	05:00	0.233	09:30	0.726	0.473	0.473	0.17

Report Summary For The Period 9/25/2008 - 12/1/2008

Depth (in) : D Velocity (ft/s) : V Quantity (MGD - Total MG) : Q Rain (in) : Rain

	D	V	Q	Rain
Report Total			21.551	10.24
Report Avg	4.70	1.13	0.317	

Site Commentary

Site Information

JC_JNI-F	
Pipe Dimensions	Elliptical (23.00 in H, 23.50 in W)
Silt	0.00"

Overview

A review of the [hydrograph](#) and [scattergraph](#) for JC_JNI-F indicate this location functioned under typical open channel flow conditions during the monitoring period of Thursday, September 25, 2008 to Monday, December 01, 2008 . Flow depth and velocity measurements recorded by the flow monitor are consistent with field confirmations conducted to date and support the relative accuracy of the flow monitor at this location.

[Daily longtables](#) displaying final quantities are also provided.

Observations

Average flow depth, velocity, and quantity data observed during Thursday, September 25, 2008 to Monday, December 01, 2008 , along with observed minimum and maximum data, are provided in the following table.

Observed Flow Conditions			
Item	Depth (in)	Velocity (ft/s)	Quantity (MGD)
Average	7.51	1.63	0.907
Minimum	5.23	0.98	0.319
Maximum	11.19	2.63	2.415
Time of Minimum	9/25/2008 5:00 AM	9/25/2008 5:00 AM	9/25/2008 5:00 AM
Time of Maximum	9/27/2008 4:15 PM	9/27/2008 4:15 PM	9/27/2008 4:15 PM

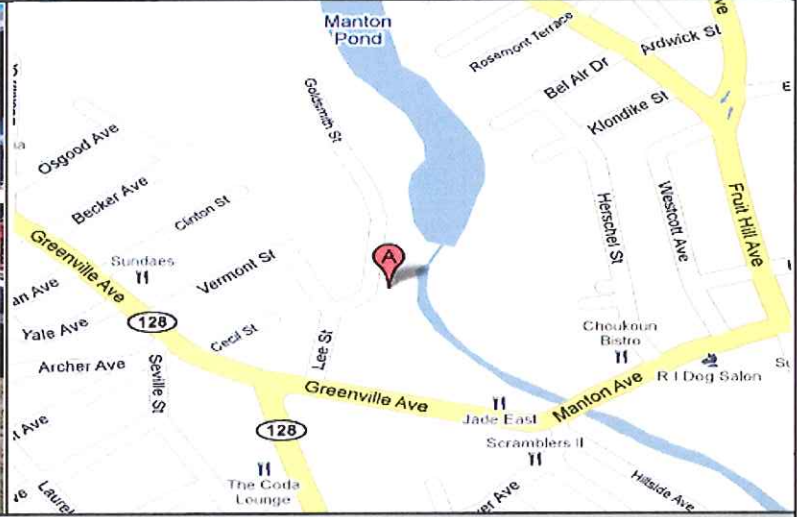
Please note the minimum and maximum flow rate recorded in this table may vary from those recorded on the daily and weekly tabular data. The minimum and maximum rates recorded on the daily and weekly tabular data are absolute verses average fifteen minute data.

Based upon the quality and consistency of the observed flow depth and velocity data, the Continuity equation was used to calculate flow rate and quantities during the monitoring period.

Graphical data reports are based on an hourly average.

a division of ADS LLC.

Name:	JC_JNI-F	Meter Type:	1502 EM	Monitor S/N:	9688	Manhole #:	JNI-F
Address / Location:	On Goldsmith Street at 200' NE of Lee Street, 100' before Walking Path - off the road to the right.			Map Page #:	N/A		
				Pipe Height:	23 Inches		
Access:	Drive	Type of System:	Sanitary	Pipe Width:	23.5 Inches		
				Phone Number:	N/A		



Investigation Information:			Manhole Information:		
Date/Time of Investigation:	September 24, 2008	9:13 AM	Manhole Depth:	17 Feet	
Site Hydraulics:	SMOOTH EVEN FLOW		Manhole Material / Condition:	P.C.	Good
Upstream Input: (L/S, P/S)	N/A		Active Drop Connections?		
Upstream Manhole:	N/A		Pipe Material / Condition:	PVC	Good
Downstream Manhole:	N/A		Mini System Character:	Residential	
Depth of Flow (Wet Dof):	8	+/- 0.25	Access Pole #:	N/A	
Range (Air Dof):	13.75	+/- 0.25	Distance From Manhole:	N/A Feet	
Peak Velocity:	1.92	fps	Road Cut Length:	N/A Feet	
Silt:	0	Inches	Trench Length:	N/A Feet	

Other Information:
 N 41° 50' 3.7" W 71° 28' 22.1"

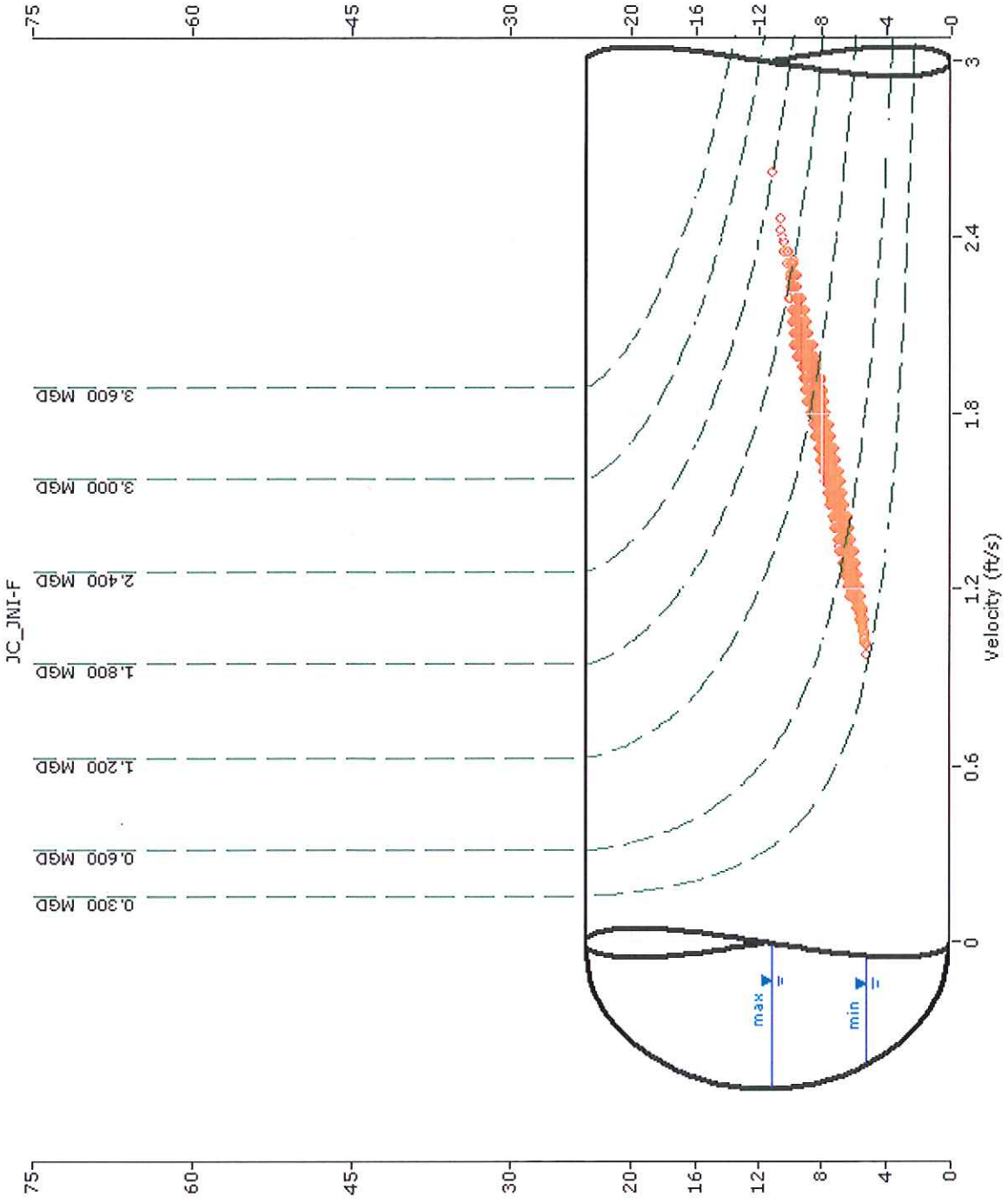


Installation Information		Backup	Yes	No	?	Distance
Installation Type:	Doppler Standard Ring and Crank Installation	Trunk	x			
Sensors / Devices:	Ultra, Velocity, Pressure (Non I.S.)	Lift/Pump Station		x		
Surcharge Height:	4 Feet	WWTP		x		
Rain Gauge Zone:	RG-2	Other		x		

Additional Site Information / Comments:

PRESS SN 75639 PO 1.25 WALLS ARE DAMP TO 4 FEET ABOVE INVERT

SCATTERGRAPH REPORT



Flow Monitor

JC_JNI-F

Nominal Diameter
24-in

Report Period

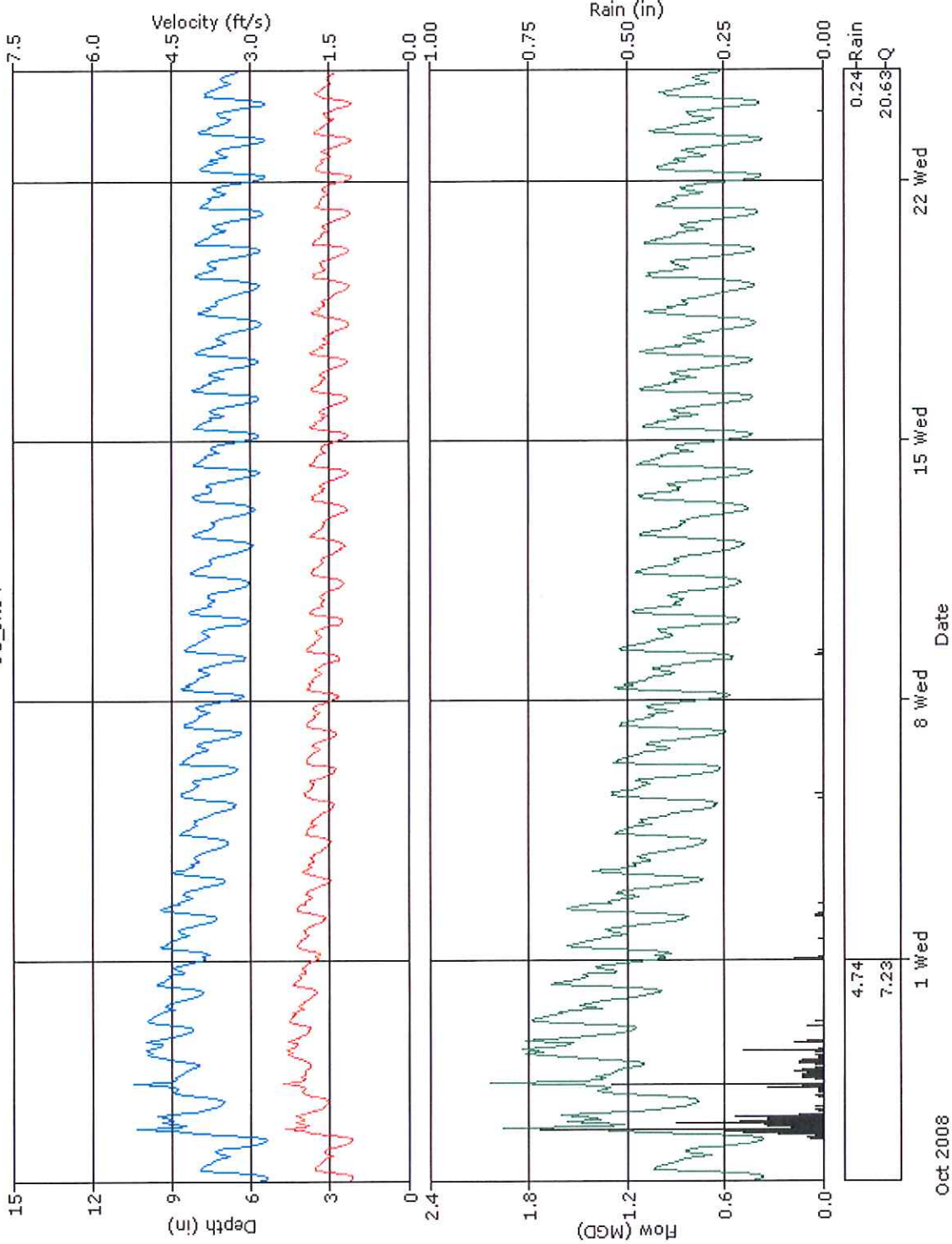
9/25/2008
To
12/1/2008

Legend

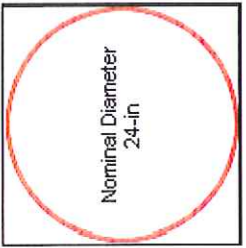
- Depth - Velocity
- - - Iso-Q™
- Silt
- ▼ Min-Max Depth

HYDROGRAPH REPORT

JC_JNI-F



Flow Monitor
JC_JNI-F



Report Period
9/25/2008
To
10/24/2008

Legend

- Depth
- Silt
- Velocity
- Quantity
- Rain



HYDROGRAPH REPORT

JC_JNI-F

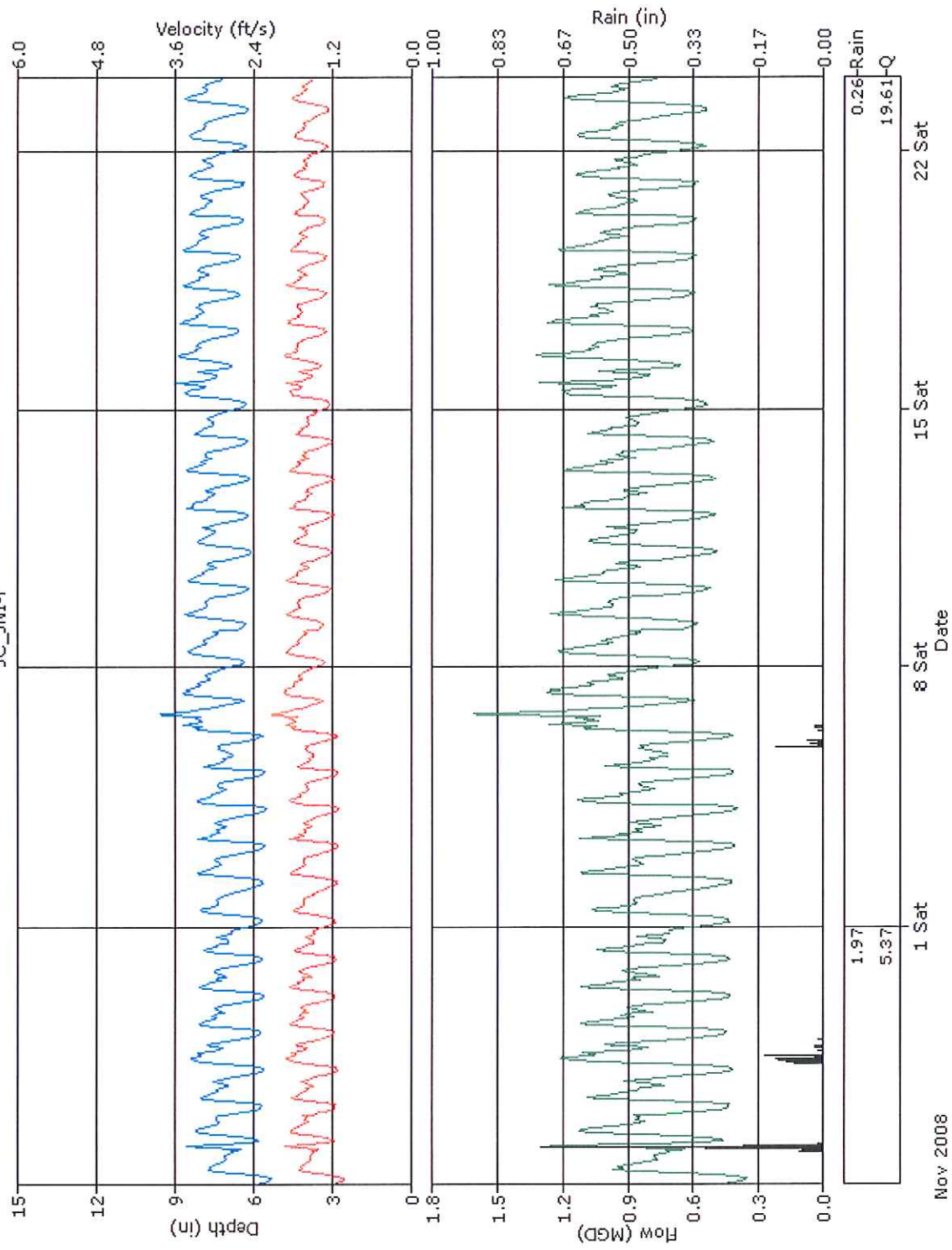
Flow Monitor
JC_JNI-F

Nominal Diameter
24-in

Report Period
10/25/2008
To
11/23/2008

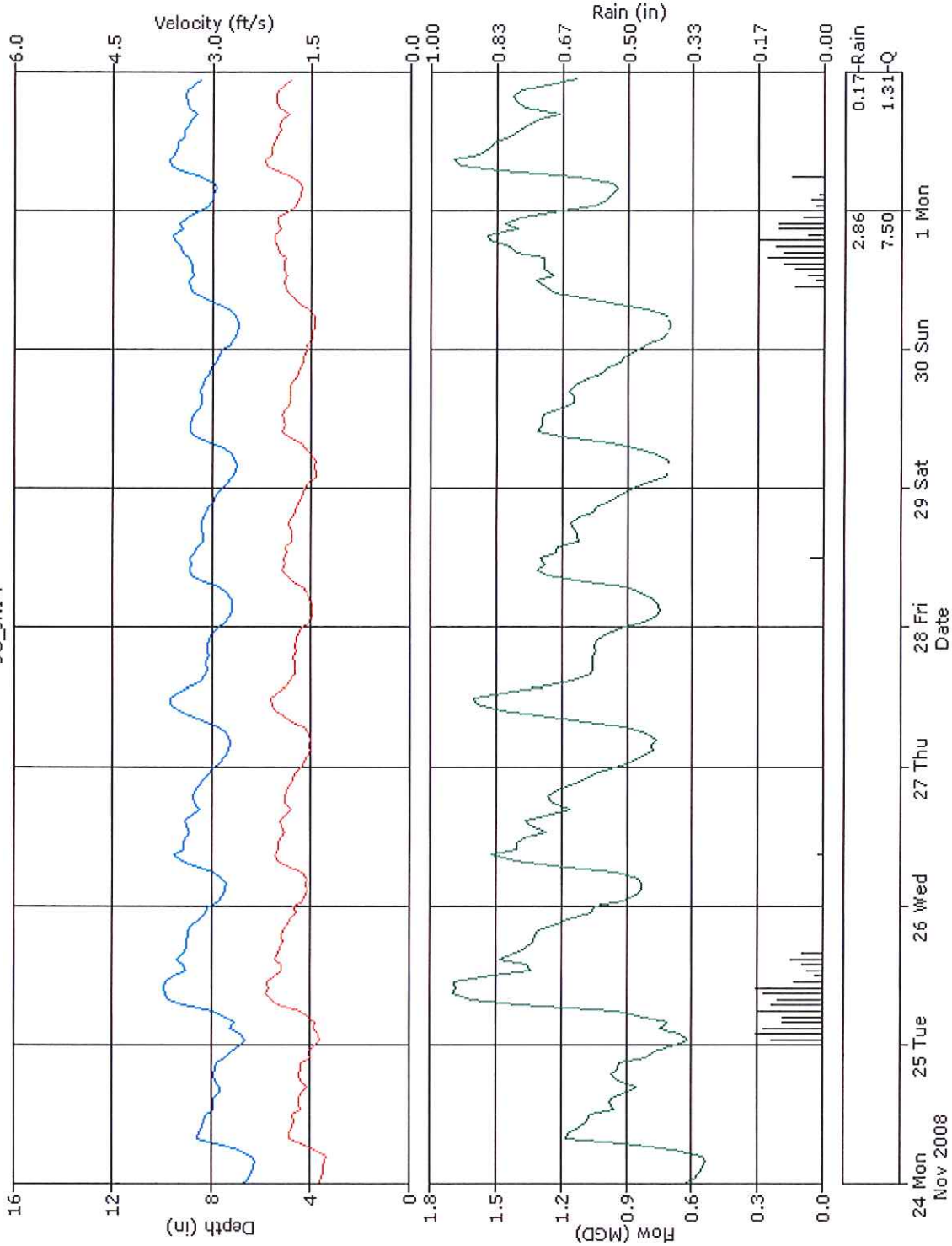
Legend

- Depth
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- Quantity
- Rain



HYDROGRAPH REPORT

JC_JNI-F



Flow Monitor
JC_JNI-F

Nominal Diameter
24-in

Report Period
11/24/2008
To
12/1/2008

Legend

- Depth
- Silt
- Velocity
- Quantity
- Rain

Narragansett Bay

Daily Tabular Report For The Period 9/25/2008 - 12/1/2008

JC_JNI-F, Pipe Height: 24"

Daily Tabular Report

Depth (in) Velocity (ft/s) Quantity (MGD - Total MG) Rain (in)

Date	Depth					Velocity					Quantity					Rain	
	Time	Min	Time	Max	Avg	Time	Min	Time	Max	Avg	Time	Min	Time	Max	Avg	Total	Total
9/25/2008	05:00	5.23	08:15	8.07	6.84	05:00	0.98	08:15	1.88	1.48	05:00	0.319	08:15	1.123	0.726	0.726	
9/26/2008	05:00	5.30	11:30	10.58	7.85	05:00	1.02	11:30	2.47	1.74	05:00	0.338	11:30	2.114	1.067	1.067	2.91
9/27/2008	05:15	6.92	16:15	11.19	8.33	04:00	1.53	16:15	2.63	1.88	04:45	0.754	16:15	2.416	1.193	1.193	1.06
9/28/2008	05:30	7.91	20:30	10.25	9.14	03:30	1.84	20:30	2.35	2.10	05:30	1.068	20:30	1.933	1.492	1.492	0.71
9/29/2008	04:45	8.15	09:30	10.03	9.05	05:30	1.84	07:45	2.27	2.06	05:30	1.125	09:30	1.806	1.442	1.442	0.06
9/30/2008	04:15	7.70	08:15	9.77	8.68	03:45	1.72	08:15	2.33	1.97	04:15	0.967	08:15	1.793	1.307	1.307	
10/1/2008	04:30	7.47	09:00	9.55	8.49	05:00	1.61	09:00	2.20	1.93	04:30	0.884	09:00	1.642	1.241	1.241	0.10
10/2/2008	04:15	7.26	09:15	9.49	8.32	04:00	1.53	10:00	2.18	1.88	04:00	0.791	10:00	1.616	1.180	1.180	0.06
10/3/2008	04:30	6.90	09:15	9.19	7.95	04:45	1.45	09:15	2.08	1.79	04:45	0.707	09:15	1.477	1.053	1.053	
10/4/2008	04:30	6.78	11:00	8.74	7.78	04:30	1.45	09:45	2.00	1.75	04:30	0.681	11:00	1.327	1.002	1.002	
10/5/2008	05:15	6.54	12:15	8.86	7.68	03:15	1.41	11:15	2.04	1.72	05:15	0.629	11:15	1.344	0.974	0.974	0.03
10/6/2008	04:45	6.50	08:30	8.74	7.67	04:15	1.37	08:45	2.00	1.71	04:45	0.607	08:45	1.329	0.965	0.965	
10/7/2008	04:00	6.32	08:30	8.62	7.58	02:30	1.37	08:30	2.00	1.70	04:00	0.583	08:30	1.304	0.942	0.942	
10/8/2008	04:30	6.20	09:15	8.71	7.52	04:30	1.29	09:00	2.00	1.67	04:30	0.536	09:00	1.318	0.920	0.920	
10/9/2008	05:00	6.14	08:45	8.62	7.48	02:15	1.29	08:30	1.96	1.66	05:00	0.529	08:45	1.277	0.909	0.909	0.04
10/10/2008	04:00	6.05	08:15	8.47	7.26	03:45	1.22	08:15	1.92	1.58	05:00	0.488	08:15	1.223	0.830	0.830	
10/11/2008	04:15	5.96	11:30	8.36	7.17	03:45	1.22	10:00	1.89	1.56	05:45	0.483	11:30	1.177	0.808	0.808	
10/12/2008	06:00	5.85	11:30	8.31	7.07	04:15	1.18	10:30	1.92	1.54	05:45	0.453	10:30	1.185	0.781	0.781	
10/13/2008	04:30	5.77	12:00	8.37	7.09	03:15	1.14	10:45	1.96	1.54	05:30	0.431	10:45	1.213	0.789	0.789	
10/14/2008	04:15	5.65	09:00	8.38	7.10	03:45	1.14	08:15	1.96	1.57	04:15	0.414	09:00	1.231	0.803	0.803	
10/15/2008	04:15	5.66	08:45	8.19	7.06	03:30	1.14	09:15	1.92	1.55	04:15	0.418	09:15	1.160	0.788	0.788	
10/16/2008	04:45	5.64	09:15	8.21	7.06	04:45	1.14	09:00	1.88	1.55	04:45	0.412	09:00	1.147	0.788	0.788	
10/17/2008	03:45	5.66	09:45	8.14	6.95	03:00	1.14	09:00	1.88	1.52	04:45	0.423	09:45	1.135	0.755	0.755	
10/18/2008	05:00	5.52	12:30	8.07	6.86	04:30	1.11	12:00	1.88	1.49	04:30	0.392	12:15	1.113	0.730	0.730	
10/19/2008	05:15	5.59	12:30	8.17	6.96	05:15	1.12	11:45	1.84	1.51	05:15	0.402	12:30	1.116	0.751	0.751	
10/20/2008	03:00	5.57	09:00	8.20	6.97	03:00	1.12	08:15	1.88	1.51	03:00	0.398	08:15	1.143	0.756	0.756	
10/21/2008	03:30	5.47	08:45	7.98	6.88	04:30	1.09	08:15	1.84	1.50	03:30	0.381	08:15	1.070	0.738	0.738	
10/22/2008	05:00	5.32	08:45	8.13	6.83	05:00	1.03	08:45	1.80	1.48	05:00	0.343	08:45	1.086	0.723	0.723	
10/23/2008	03:45	5.34	08:30	8.06	6.77	03:45	1.04	08:45	1.84	1.47	03:45	0.349	08:30	1.074	0.705	0.705	0.01
10/24/2008	04:30	5.40	10:15	7.88	6.74	03:45	1.08	10:15	1.84	1.46	03:45	0.373	10:15	1.063	0.697	0.697	
10/25/2008	05:00	5.27	10:30	7.97	6.69	05:00	1.01	10:15	1.76	1.43	05:00	0.333	10:30	1.034	0.678	0.678	0.11
10/26/2008	05:30	5.78	02:15	8.77	7.25	06:30	1.14	02:15	2.04	1.59	06:30	0.433	02:15	1.360	0.836	0.836	1.23
10/27/2008	05:15	5.64	09:15	8.08	6.97	03:45	1.14	09:00	1.88	1.52	05:00	0.417	09:00	1.121	0.756	0.756	
10/28/2008	03:45	5.58	14:00	8.55	7.17	03:45	1.12	10:00	1.96	1.57	03:45	0.399	10:45	1.263	0.823	0.823	0.63
10/29/2008	05:00	5.72	09:15	8.19	7.02	04:00	1.14	09:15	1.92	1.56	04:45	0.424	09:15	1.168	0.786	0.786	
10/30/2008	04:30	5.60	09:00	8.18	6.98	03:15	1.13	08:30	1.88	1.55	03:15	0.409	09:00	1.142	0.773	0.773	
10/31/2008	04:30	5.65	09:00	8.05	6.85	03:00	1.14	09:30	1.84	1.48	04:00	0.415	09:30	1.072	0.718	0.718	
11/1/2008	04:00	5.62	11:00	8.15	6.91	04:00	1.13	10:15	1.84	1.51	04:00	0.408	11:00	1.089	0.744	0.744	
11/2/2008	04:15	5.60	11:30	8.26	6.92	04:15	1.12	12:00	1.92	1.51	04:15	0.403	12:00	1.181	0.752	0.752	
11/3/2008	05:30	5.49	10:00	8.30	6.93	05:30	1.10	09:00	1.88	1.51	05:30	0.383	10:45	1.148	0.751	0.751	
11/4/2008	05:30	5.49	11:45	8.27	6.96	05:00	1.10	11:00	1.92	1.53	05:30	0.383	11:00	1.180	0.763	0.763	
11/5/2008	05:15	5.58	09:30	8.08	6.80	04:15	1.12	09:30	1.84	1.47	04:15	0.402	09:30	1.100	0.707	0.707	0.16

Date	Depth					Velocity					Quantity					Rain	
	Time	Min	Time	Max	Avg	Time	Min	Time	Max	Avg	Time	Min	Time	Max	Avg	Total	Total
11/6/2008	05:45	6.61	18:45	10.67	7.51	05:45	1.13	18:45	2.43	1.64	05:45	0.407	18:45	2.102	0.924	0.924	0.10
11/7/2008	04:30	6.35	09:45	8.87	7.60	03:30	1.33	09:30	1.96	1.67	04:45	0.580	09:45	1.328	0.929	0.929	
11/8/2008	04:00	6.35	11:00	8.72	7.50	04:00	1.29	10:45	1.96	1.64	04:00	0.554	11:00	1.272	0.897	0.897	
11/9/2008	04:30	6.30	11:15	8.73	7.46	04:45	1.29	10:45	1.96	1.63	04:45	0.548	10:45	1.299	0.886	0.886	
11/10/2008	04:15	6.18	09:30	8.65	7.44	04:45	1.21	09:15	1.96	1.59	04:45	0.501	09:15	1.274	0.862	0.862	
11/11/2008	03:45	6.06	10:00	8.22	7.30	04:00	1.17	11:30	1.84	1.54	04:00	0.474	11:30	1.114	0.814	0.814	
11/12/2008	04:30	6.11	08:30	8.66	7.45	03:00	1.18	08:30	1.88	1.55	04:30	0.477	08:30	1.234	0.840	0.840	
11/13/2008	03:30	6.12	09:45	8.60	7.46	02:45	1.18	08:15	1.92	1.56	03:30	0.478	08:45	1.247	0.853	0.853	
11/14/2008	04:15	6.18	08:00	8.34	7.36	03:15	1.18	08:00	1.80	1.52	04:15	0.484	08:00	1.125	0.811	0.811	
11/15/2008	04:15	6.27	18:15	9.21	7.59	02:30	1.22	18:00	2.00	1.58	04:00	0.514	18:00	1.405	0.889	0.889	
11/16/2008	05:30	6.81	10:45	8.97	7.92	04:30	1.37	11:45	2.04	1.68	05:30	0.647	11:45	1.396	0.986	0.986	
11/17/2008	05:00	6.58	08:45	8.92	7.79	02:45	1.29	08:45	1.96	1.65	05:00	0.582	08:45	1.338	0.949	0.949	
11/18/2008	03:15	6.54	09:30	8.84	7.75	03:15	1.25	08:30	1.92	1.62	03:15	0.560	09:30	1.295	0.928	0.928	
11/19/2008	04:30	6.48	09:15	8.76	7.72	04:15	1.25	09:30	1.88	1.61	04:15	0.557	09:30	1.240	0.917	0.917	
11/20/2008	04:00	6.41	08:00	8.58	7.56	02:30	1.25	10:15	1.88	1.58	02:30	0.550	10:15	1.217	0.870	0.870	
11/21/2008	04:30	6.32	09:15	8.52	7.49	05:00	1.24	09:00	1.86	1.57	05:00	0.530	09:00	1.183	0.856	0.856	
11/22/2008	04:45	6.25	11:45	8.58	7.47	03:00	1.22	10:15	1.82	1.55	04:15	0.520	10:15	1.162	0.844	0.844	
11/23/2008	05:00	6.18	11:45	8.72	7.43	03:15	1.18	10:45	1.86	1.55	03:15	0.494	11:45	1.220	0.842	0.842	
11/24/2008	04:15	6.19	08:30	8.69	7.49	05:30	1.22	08:45	1.84	1.57	05:30	0.523	08:45	1.214	0.858	0.858	
11/25/2008	01:45	6.51	09:15	10.05	8.57	01:15	1.29	09:00	2.27	1.82	01:30	0.574	11:00	1.759	1.212	1.212	1.89
11/26/2008	04:00	7.35	09:00	9.70	8.48	03:30	1.49	09:15	2.06	1.81	03:30	0.788	09:00	1.556	1.168	1.168	0.01
11/27/2008	05:15	7.18	11:30	9.75	8.22	03:30	1.45	10:45	2.16	1.75	05:30	0.741	12:45	1.628	1.084	1.084	
11/28/2008	04:15	7.13	09:45	9.12	8.08	03:45	1.41	10:00	1.96	1.72	04:15	0.710	12:15	1.357	1.037	1.037	0.03
11/29/2008	04:00	7.00	11:45	8.99	8.01	04:00	1.37	10:30	1.96	1.69	04:00	0.673	11:45	1.352	1.011	1.011	
11/30/2008	05:15	6.87	20:00	9.71	8.34	03:15	1.37	19:30	2.08	1.78	05:15	0.656	20:00	1.589	1.133	1.133	1.13
12/1/2008	05:00	7.79	09:00	9.83	8.82	05:00	1.62	08:00	2.27	1.93	05:00	0.922	08:00	1.748	1.309	1.309	0.17

Report Summary For The Period 9/25/2008 - 12/1/2008

Depth (in) : D Velocity (ft/s) : V Quantity (MGD - Total MG) : Q Rain (in) : Rain

	D	V	Q	Rain
Report Total			61.650	10.24
Report Avg	7.51	1.63	0.907	

Site Commentary

Site Information

JC_JNI-G	
Pipe Dimensions (in.)	Circular (12.00 in H)
Silt (in.)	0.00"

Overview

A review of the [hydrograph](#) and [scattergraph](#) for JC_JNI-G indicate this location functioned mostly in free-flow conditions for the monitoring period of Thursday, September 25, 2008 to Monday, December 01, 2008 . Flow depth and velocity measurements recorded by the flow monitor are consistent with field confirmations conducted to date and support the relative accuracy of the flow monitor at this location.

[Daily longtables](#) displaying final quantities are also provided.

Observations

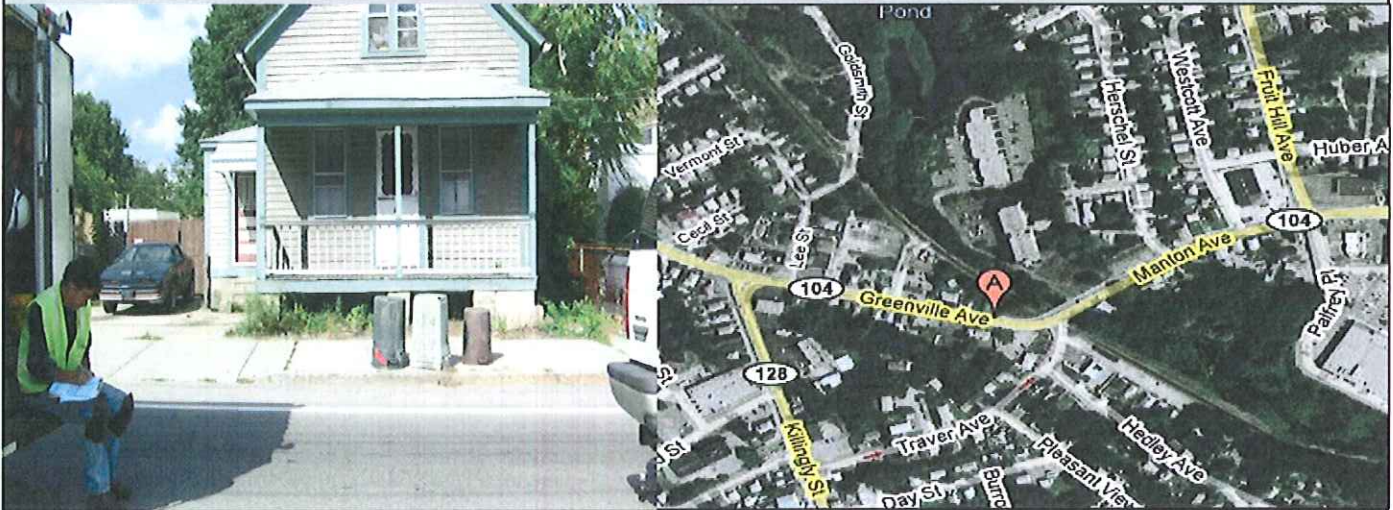
Average flow depth, velocity, and quantity data observed during Thursday, September 25, 2008 to Monday, December 01, 2008 , along with observed minimum and maximum data, are provided in the following table.

Observed Flow Conditions			
Item	Depth (in)	Velocity (ft/s)	Quantity (MGD)
Average	2.00	2.49	0.146
Minimum	1.36	0.79	0.028
Maximum	4.48	4.93	0.853
Time of Minimum	10/25/2008 4:45 AM	10/15/2008 4:15 AM	9/26/2008 3:30 AM
Time of Maximum	9/27/2008 3:30 PM	9/27/2008 3:30 PM	9/27/2008 3:30 PM

Please note the minimum and maximum flow rate recorded in this table may vary from those recorded on the daily and weekly tabular data. The minimum and maximum rates recorded on the daily and weekly tabular data are absolute verses average fifteen minute data.

Based upon the quality and consistency of the observed flow depth and velocity data, the Continuity equation was used to calculate flow rate and quantities during the monitoring period. Graphical data reports are based on an hourly average.

Site Name:	JC_JNI-G	Meter Type:	1502	Monitor S/N:	9958	Manhole #:	JNI-G
Address / Location:	13 Greenville Avenue ***NEED DETAIL WITH CRUISER)			Map Page #:	N/A		
				Pipe Height:	12 Inches		
Access:	Drive	Type of System:	Sanitary	Pipe Width:	12 Inches		
				Phone Number:	N/A		



Investigation Information:			Manhole Information:		
Date/Time of Investigation:	September 23, 2008	3:39 PM	Manhole Depth:	6 Feet	9 Inches
Site Hydraulics:	GOOD, LOW FLOW		Manhole Material / Condition:	Brick	Block
Upstream Input: (L/S, P/S)	N/A		Active Drop Connections?		
Upstream Manhole:	GOOD		Pipe Material / Condition:	ACP	
Downstream Manhole:	GOOD		Mini System Character:	Residential	
Depth of Flow (Wet Dof):	3 +/-	0.25	Access Pole #:	N/A	
Range (Air Dof):	7.5 +/-	0.25	Distance From Manhole:	N/A Feet	
Peak Velocity:	1.51	fps	Road Cut Length:	N/A Feet	
Silt:	0	Inches	Trench Length:	N/A Feet	

Other Information:

N 41 49' 58.1 W 71 28' 17.4"

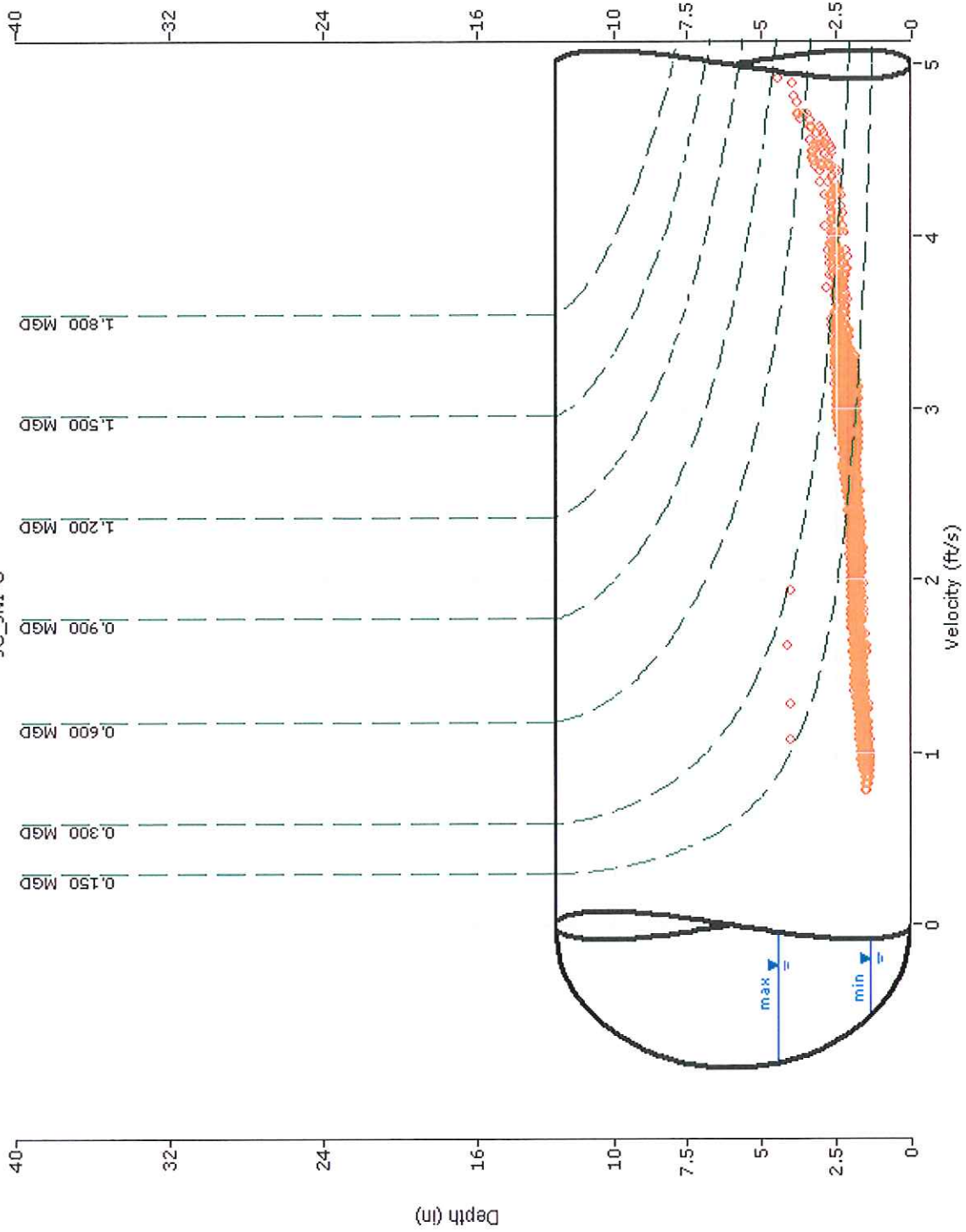


Installation Information		Backup	Yes	No	?	Distance
Installation Type:	Doppler Standard Ring and Crank Installation	Trunk		x		
Sensors / Devices:	Ultra, Velocity, Pressure (Non I.S.)	Lift/Pump Station		x		
Surcharge Height:	4 Feet	WWTP		x		
Rain Gauge Zone:	RG-2	Other		x		

Additional Site Information / Comments:

PRESS SN 77726 PO 1.5

SCATTERGRAPH REPORT
JC_JNI-G



Flow Monitor
JC_JNI-G

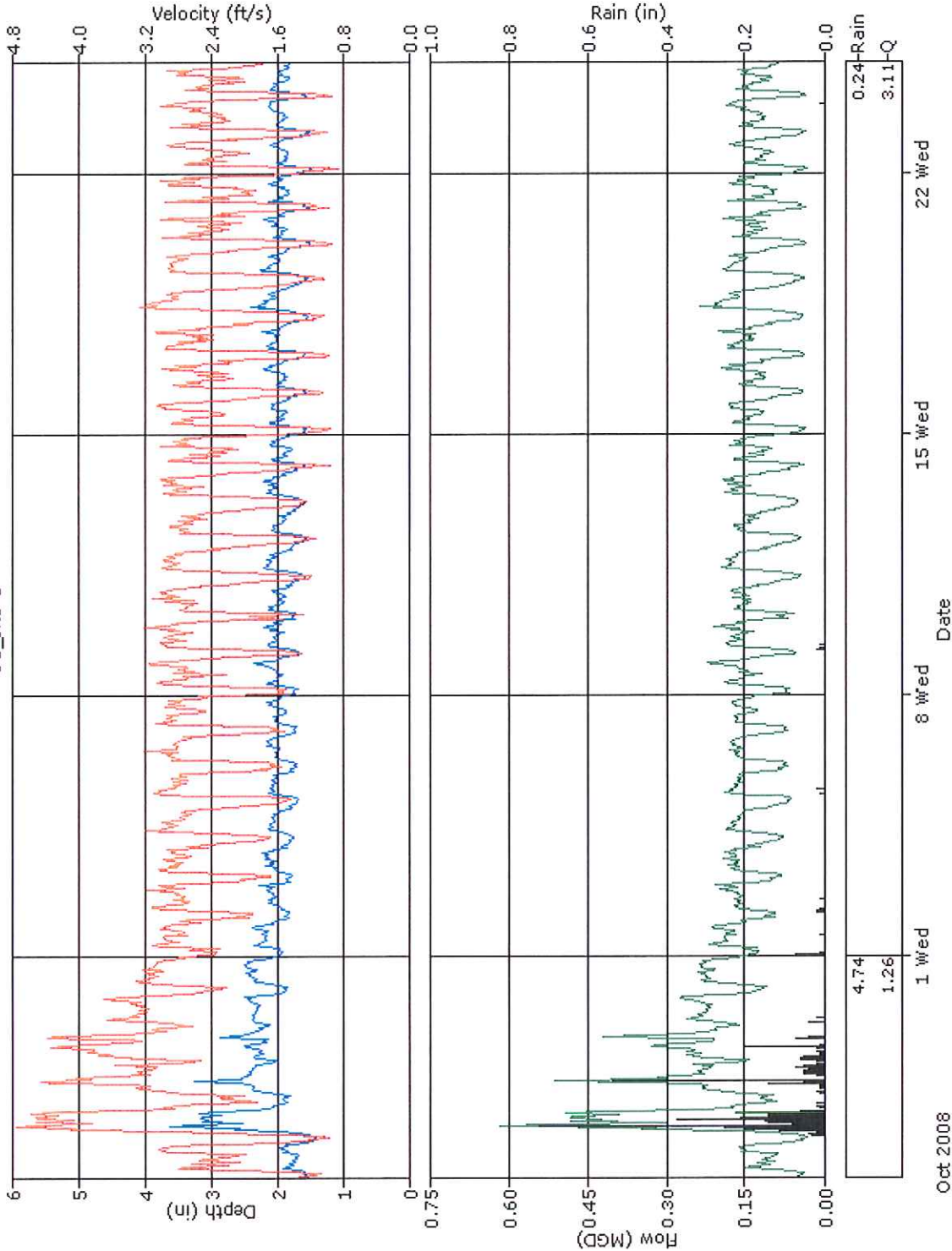
Nominal Diameter
12-in

Report Period
9/25/2008
To
12/1/2008

Legend
 ○ Depth - Velocity
 --- Iso-Q™
 - - - Silt
 ▽ Min-Max Depth

HYDROGRAPH REPORT

JC_JNI-G



Flow Monitor
JC_JNI-G

Nominal Diameter
12-in

Report Period
9/25/2008
To
10/24/2008

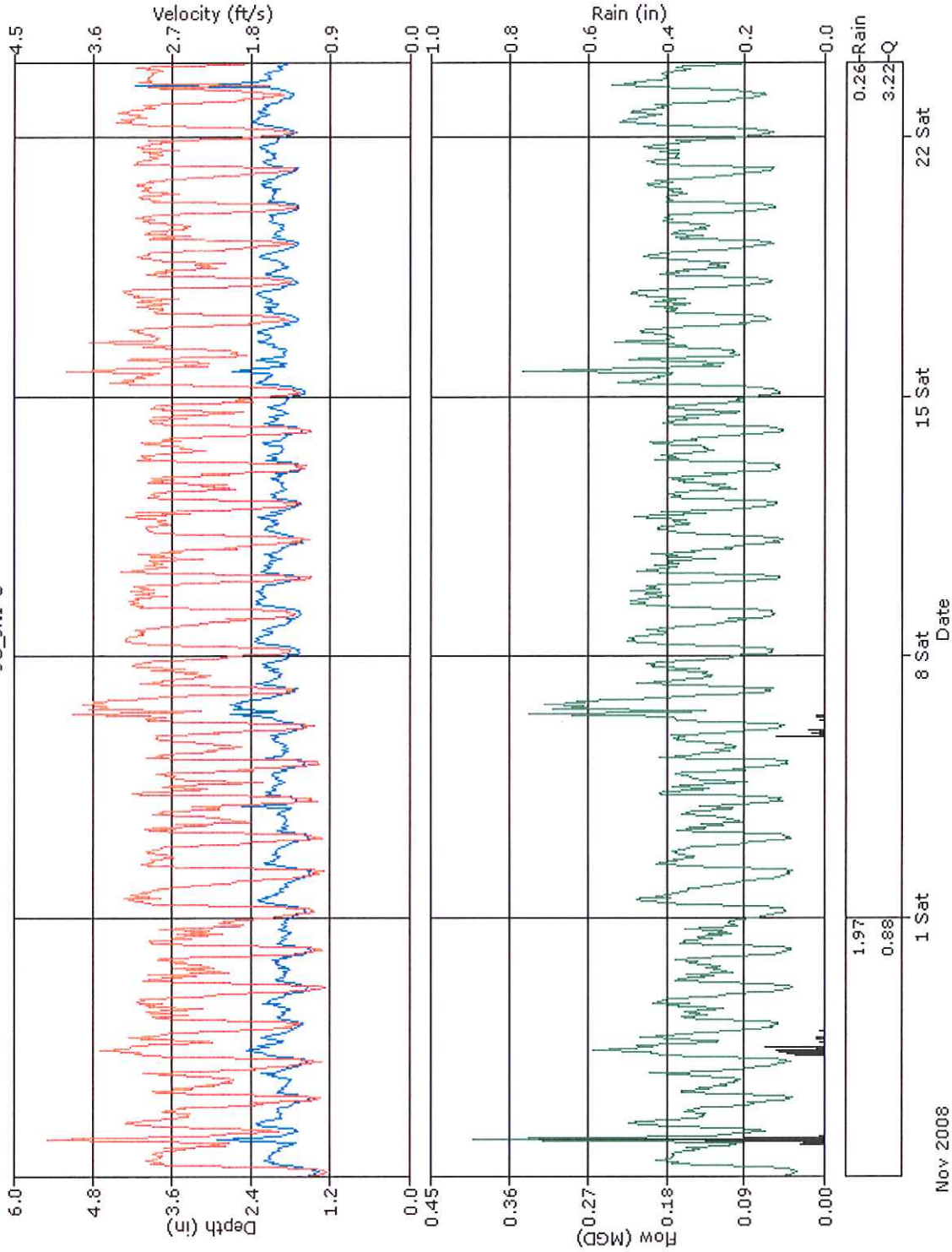
Legend

- Depth
- Silt
- Velocity
- Quantity
- Rain



HYDROGRAPH REPORT

JC_JNI-G



Flow Monitor
JC_JNI-G



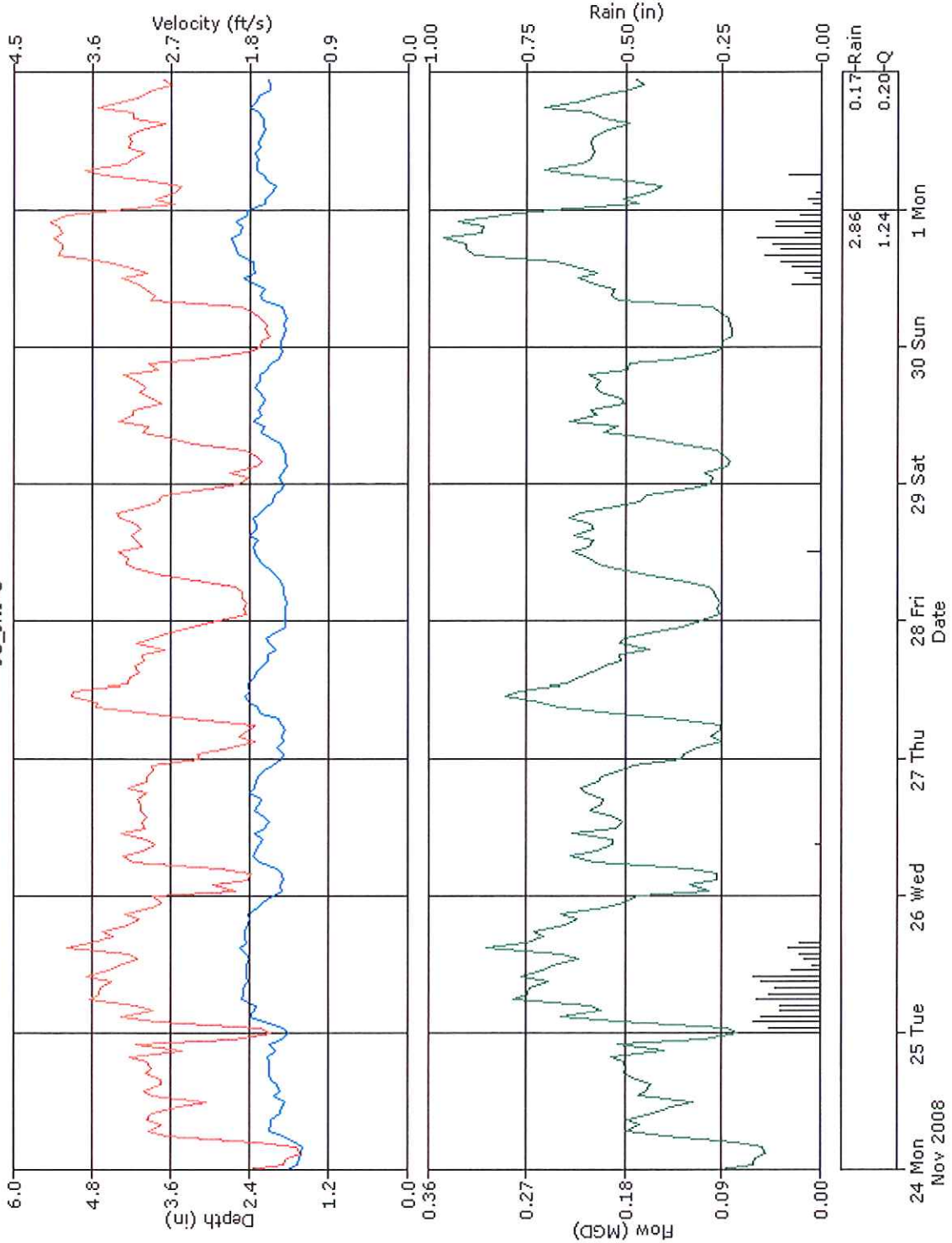
Report Period
10/25/2008
To
11/23/2008

Legend

- Depth
- Silt
- Velocity
- Quantity
- Rain

HYDROGRAPH REPORT

JC_JNI-G



Flow Monitor
JC_JNI-G

Nominal Diameter
12-in

Report Period
11/24/2008
To
12/1/2008

Legend

- Depth
- Silt
- Velocity
- Quantity
- Rain



Narragansett Bay

Daily Tabular Report For The Period 9/25/2008 - 12/1/2008

JC_JNI-G, Pipe Height: 12"

Daily Tabular Report

Depth (in) Velocity (ft/s) Quantity (MGD - Total MG) Rain (in)

Date	Depth					Velocity					Quantity					Rain	
	Time	Min	Time	Max	Avg	Time	Min	Time	Max	Avg	Time	Min	Time	Max	Avg	Total	Total
9/25/2008	04:00	1.45	17:30	2.28	1.74	04:00	0.90	17:30	4.14	2.21	04:00	0.031	17:30	0.278	0.104	0.104	
9/26/2008	03:30	1.38	10:30	3.99	2.39	03:30	0.86	10:30	4.90	3.20	03:30	0.028	10:30	0.724	0.274	0.274	2.91
9/27/2008	06:00	1.72	15:30	4.48	2.28	02:45	1.80	15:30	4.93	3.07	06:00	0.081	15:30	0.853	0.217	0.217	1.06
9/28/2008	05:15	1.99	20:15	3.81	2.32	05:15	2.48	20:15	4.72	3.54	05:15	0.137	20:15	0.654	0.247	0.247	0.71
9/29/2008	04:30	2.04	22:15	3.02	2.31	03:15	2.52	21:00	4.41	3.22	04:30	0.147	22:15	0.443	0.222	0.222	0.06
9/30/2008	04:15	1.77	13:45	2.57	2.24	04:15	1.91	07:15	3.46	2.93	04:15	0.089	17:45	0.261	0.196	0.196	
10/1/2008	05:30	1.82	07:45	2.65	2.14	03:15	1.91	10:00	3.38	2.77	05:30	0.096	07:45	0.268	0.172	0.172	0.10
10/2/2008	05:00	1.76	22:45	2.57	2.01	03:45	1.66	19:45	3.38	2.68	03:45	0.081	22:45	0.262	0.152	0.152	0.06
10/3/2008	05:30	1.70	19:15	2.35	2.00	04:00	1.44	07:45	3.31	2.60	04:00	0.065	15:45	0.215	0.147	0.147	
10/4/2008	05:15	1.68	10:30	2.35	1.96	05:15	1.51	09:15	3.35	2.56	05:15	0.065	10:30	0.224	0.141	0.141	
10/5/2008	03:15	1.63	13:00	2.23	1.92	06:00	1.33	10:15	3.31	2.43	05:15	0.058	10:45	0.211	0.131	0.131	0.03
10/6/2008	04:30	1.64	17:45	2.30	1.95	02:30	1.40	13:30	3.28	2.52	02:30	0.060	19:15	0.205	0.137	0.137	
10/7/2008	03:45	1.64	20:30	2.23	1.92	01:30	1.33	12:30	3.24	2.51	01:30	0.057	18:45	0.189	0.134	0.134	
10/8/2008	04:30	1.63	19:45	2.40	1.98	03:45	1.30	20:30	3.31	2.51	04:00	0.056	20:30	0.234	0.142	0.142	
10/9/2008	03:00	1.62	19:30	2.43	1.96	03:30	1.15	19:30	3.42	2.53	03:30	0.048	19:30	0.251	0.141	0.141	0.04
10/10/2008	05:00	1.62	09:00	2.19	1.91	04:45	1.19	17:15	3.31	2.49	04:45	0.050	14:45	0.198	0.132	0.132	
10/11/2008	05:00	1.51	10:45	2.39	1.91	05:00	1.04	10:45	3.31	2.37	05:00	0.039	10:45	0.238	0.128	0.128	
10/12/2008	05:30	1.51	12:00	2.24	1.83	03:45	1.01	15:00	3.13	2.26	03:45	0.038	12:00	0.202	0.115	0.115	
10/13/2008	05:30	1.46	17:45	2.38	1.91	05:30	1.04	19:30	3.35	2.33	05:30	0.037	19:30	0.236	0.127	0.127	
10/14/2008	05:15	1.52	18:30	2.23	1.88	04:00	0.83	12:00	3.10	2.30	04:00	0.032	17:00	0.184	0.121	0.121	
10/15/2008	05:00	1.50	08:45	2.17	1.89	04:15	0.79	19:30	3.38	2.26	04:15	0.031	19:30	0.204	0.121	0.121	
10/16/2008	03:30	1.52	21:30	2.64	1.89	03:00	0.86	21:30	3.89	2.22	03:00	0.033	21:30	0.322	0.119	0.119	
10/17/2008	05:00	1.50	19:15	2.33	1.93	03:45	0.86	19:45	3.20	2.31	03:45	0.034	19:15	0.217	0.128	0.128	
10/18/2008	04:30	1.49	10:45	2.50	1.95	05:30	0.94	13:45	3.38	2.34	05:30	0.036	10:45	0.256	0.134	0.134	
10/19/2008	05:00	1.50	11:00	2.45	1.91	04:15	0.86	11:00	3.24	2.26	04:15	0.033	11:00	0.241	0.124	0.124	
10/20/2008	03:15	1.46	19:15	2.28	1.89	03:30	0.86	20:00	3.24	2.19	03:30	0.031	19:15	0.206	0.117	0.117	
10/21/2008	02:15	1.47	22:45	2.52	1.87	02:45	0.83	22:45	3.68	2.13	02:45	0.031	22:45	0.285	0.113	0.113	
10/22/2008	03:00	1.45	08:00	2.40	1.84	03:30	0.83	21:15	3.38	2.12	03:30	0.029	21:15	0.239	0.109	0.109	
10/23/2008	04:15	1.43	23:45	2.35	1.89	05:00	0.86	23:45	3.37	2.18	05:00	0.033	23:45	0.236	0.118	0.118	0.01
10/24/2008	04:30	1.49	08:30	2.32	1.87	03:30	0.79	07:30	3.13	2.12	03:30	0.029	08:30	0.208	0.111	0.111	
10/25/2008	04:45	1.36	11:00	2.33	1.84	03:15	0.86	11:00	3.38	2.16	03:15	0.029	11:00	0.234	0.115	0.115	0.11
10/26/2008	06:15	1.63	01:30	3.28	2.05	06:45	1.22	01:30	4.54	2.63	06:15	0.052	01:30	0.510	0.161	0.161	1.23
10/27/2008	04:00	1.47	17:45	2.49	1.86	04:30	0.90	19:15	3.35	2.13	04:30	0.033	17:45	0.249	0.111	0.111	
10/28/2008	04:00	1.47	10:30	2.49	2.00	03:30	0.90	10:30	3.92	2.47	03:30	0.033	10:30	0.299	0.146	0.146	0.63
10/29/2008	03:30	1.54	15:30	2.48	1.90	05:00	1.15	15:30	3.38	2.43	03:30	0.047	15:30	0.256	0.129	0.129	
10/30/2008	01:45	1.49	18:45	2.22	1.85	03:00	0.90	07:00	3.20	2.22	03:00	0.035	16:00	0.204	0.115	0.115	
10/31/2008	04:15	1.47	17:45	2.11	1.82	03:00	0.90	17:15	3.24	2.10	03:00	0.033	09:45	0.175	0.105	0.105	
11/1/2008	05:15	1.52	12:30	2.39	1.92	05:15	0.90	12:30	3.44	2.33	05:15	0.034	12:30	0.248	0.128	0.128	
11/2/2008	05:00	1.47	12:00	2.41	1.88	06:15	0.90	10:00	3.35	2.29	06:15	0.032	11:45	0.240	0.123	0.123	
11/3/2008	03:30	1.48	13:00	2.15	1.82	06:00	0.86	08:15	3.17	2.15	06:00	0.032	18:15	0.185	0.109	0.109	
11/4/2008	05:00	1.60	00:15	4.12	1.99	04:00	0.97	13:30	3.66	2.24	04:00	0.042	13:30	0.285	0.126	0.126	
11/5/2008	04:30	1.49	22:00	2.42	1.88	04:30	0.90	22:00	3.31	2.18	04:30	0.033	22:00	0.242	0.115	0.115	0.16

Date	Depth					Velocity					Quantity					Rain	
	Time	Min	Time	Max	Avg	Time	Min	Time	Max	Avg	Time	Min	Time	Max	Avg	Total	Total
11/6/2008	06:00	1.54	11:45	3.06	2.13	05:15	1.01	12:00	4.64	2.64	05:45	0.039	12:00	0.468	0.177	0.177	0.10
11/7/2008	03:15	1.66	07:15	2.46	2.01	03:30	1.26	17:00	3.31	2.43	03:45	0.055	07:00	0.236	0.140	0.140	
11/8/2008	03:45	1.58	10:45	2.48	1.99	05:15	1.22	08:45	3.57	2.46	05:30	0.050	08:45	0.268	0.143	0.143	
11/9/2008	06:00	1.58	18:00	2.53	2.05	04:30	1.15	21:30	3.40	2.54	04:30	0.048	18:00	0.263	0.155	0.155	
11/10/2008	03:45	1.63	08:30	2.43	2.01	04:00	1.01	09:45	3.38	2.46	03:00	0.044	08:30	0.241	0.142	0.142	
11/11/2008	02:45	1.55	17:45	2.42	1.97	05:15	1.08	11:30	3.31	2.45	04:45	0.046	17:45	0.242	0.140	0.140	
11/12/2008	03:30	1.59	09:30	2.22	1.93	04:45	1.04	10:15	3.24	2.33	04:45	0.046	07:00	0.206	0.127	0.127	
11/13/2008	02:45	1.58	07:45	2.32	1.92	04:00	1.08	19:30	3.28	2.36	04:00	0.044	19:30	0.221	0.129	0.129	
11/14/2008	03:30	1.58	07:45	2.29	1.92	02:45	0.97	09:00	3.31	2.24	03:30	0.040	17:30	0.217	0.122	0.122	
11/15/2008	02:45	1.54	17:15	3.32	2.02	01:30	1.15	17:15	4.46	2.50	02:45	0.045	17:15	0.512	0.152	0.152	
11/16/2008	23:45	1.81	18:45	2.47	2.09	23:45	1.62	11:00	3.87	2.74	23:45	0.078	11:00	0.283	0.166	0.166	
11/17/2008	02:15	1.68	19:15	2.42	2.04	04:15	1.26	20:45	3.42	2.62	02:15	0.056	20:30	0.244	0.155	0.155	
11/18/2008	02:45	1.63	20:00	2.42	1.98	02:30	1.26	21:15	3.31	2.42	02:45	0.054	19:15	0.227	0.137	0.137	
11/19/2008	04:15	1.63	22:00	2.31	1.96	03:15	1.30	18:30	3.64	2.52	04:30	0.055	18:30	0.246	0.139	0.139	
11/20/2008	04:15	1.63	20:00	2.44	2.01	03:30	1.19	17:30	3.42	2.50	03:30	0.050	17:30	0.237	0.145	0.145	
11/21/2008	05:00	1.67	18:15	2.46	2.04	03:30	1.08	09:45	3.35	2.51	03:30	0.047	18:15	0.251	0.149	0.149	
11/22/2008	02:30	1.69	16:15	2.50	2.09	05:15	1.19	16:15	3.69	2.54	05:15	0.053	16:15	0.283	0.157	0.157	
11/23/2008	04:45	1.72	10:15	4.40	2.13	10:45	1.08	11:15	3.42	2.42	05:15	0.061	10:00	0.289	0.148	0.148	
11/24/2008	02:15	1.53	18:15	2.31	1.94	03:45	1.08	18:15	3.38	2.48	02:15	0.043	18:15	0.232	0.137	0.137	
11/25/2008	00:30	1.77	06:45	2.70	2.37	00:30	1.37	15:00	4.10	3.15	00:30	0.064	06:45	0.339	0.228	0.228	1.69
11/26/2008	04:45	1.84	18:15	2.47	2.18	04:45	1.62	07:15	3.46	2.81	04:45	0.080	11:30	0.244	0.180	0.180	0.01
11/27/2008	23:15	1.77	11:00	2.56	2.12	03:45	1.55	11:00	4.10	2.78	03:45	0.076	11:00	0.326	0.173	0.173	
11/28/2008	04:45	1.74	18:30	2.49	2.10	03:15	1.40	11:45	3.74	2.68	03:15	0.068	12:15	0.257	0.165	0.165	0.03
11/29/2008	04:15	1.82	17:00	2.51	2.09	05:00	1.48	11:30	3.53	2.57	05:00	0.072	11:30	0.250	0.156	0.156	
11/30/2008	05:30	1.79	12:45	3.18	2.26	03:00	1.40	22:45	4.28	2.92	03:00	0.068	16:45	0.358	0.206	0.206	1.13
12/1/2008	04:00	1.94	00:30	2.51	2.23	04:45	2.45	07:00	4.10	3.06	04:00	0.131	07:00	0.297	0.200	0.200	0.17

Report Summary For The Period 9/25/2008 - 12/1/2008

Depth (in) : D Velocity (ft/s) : V Quantity (MGD - Total MG) : Q Rain (in) : Rain

	D	V	Q	Rain
Report Total			9.927	10.24
Report Avg	2.00	2.49	0.146	

Site Commentary

Site Information

JC_JNI-H	
Pipe Dimensions	Circular (14.50 in H)
Silt	0.00"

Overview

A review of the [hydrograph](#) and [scattergraph](#) for JC_JNI-H indicate this location functioned under typical open channel flow conditions during the monitoring period of Thursday, September 25, 2008 to Monday, December 01, 2008 . Flow depth and velocity measurements recorded by the flow monitor are consistent with field confirmations conducted to date and support the relative accuracy of the flow monitor at this location.

[Daily longtables](#) displaying final quantities are also provided.

Observations

Average flow depth, velocity, and quantity data observed during Thursday, September 25, 2008 to Monday, December 01, 2008 , along with observed minimum and maximum data, are provided in the following table.

Observed Flow Conditions			
Item	Depth (in)	Velocity (ft/s)	Quantity (MGD)
Average	2.56	4.50	0.423
Minimum	1.17	2.52	0.074
Maximum	5.10	6.91	1.601
Time of Minimum	9/26/2008 4:45 AM	9/26/2008 2:45 AM	9/26/2008 4:45 AM
Time of Maximum	9/28/2008 8:45 PM	9/28/2008 8:30 PM	9/28/2008 8:45 PM

Please note the minimum and maximum flow rate recorded in this table may vary from those recorded on the daily and weekly tabular data. The minimum and maximum rates recorded on the daily and weekly tabular data are absolute verses average fifteen minute data.

Based upon the quality and consistency of the observed flow depth and velocity data, the Continuity equation was used to calculate flow rate and quantities during the monitoring period.

Graphical data reports are based on an hourly average.

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Site Name:	JC_JNI-H	Meter Type:	1502-RL	Monitor S/N:	10059	Manhole #:	JNI-H
Address / Location:	22 Hedley Avenue			Map Page #:	N/A		
				Pipe Height:	14.5 Inches		
Access:	Drive	Type of System:	Sanitary	Pipe Width:	14.5 Inches		
				Phone Number:	N/A		



Investigation Information:			Manhole Information:		
Date/Time of Investigation:	September 18, 2008	10:03 AM	Manhole Depth:	7 Feet	2 Inches
Site Hydraulics:	GOOD FAST FLOW		Manhole Material / Condition:	Brick	Precast
Upstream Input: (L/S, P/S)	N/A		Active Drop Connections?		
Upstream Manhole:	OK		Pipe Material / Condition:	PVC	Good
Downstream Manhole:	BEND		Mini System Character:	Residential	
Depth of Flow (Wet Dof):	3.5 +/-	0.25	Access Pole #:	N/A	
Range (Air Dof):	9.5 +/-	0.25	Distance From Manhole:	N/A Feet	
Peak Velocity:	4.4	fps	Road Cut Length:	N/A Feet	
Silt:	0	Inches	Trench Length:	N/A Feet	

Other Information:
N 41 49' 53.9" W 71 28' 11.5"

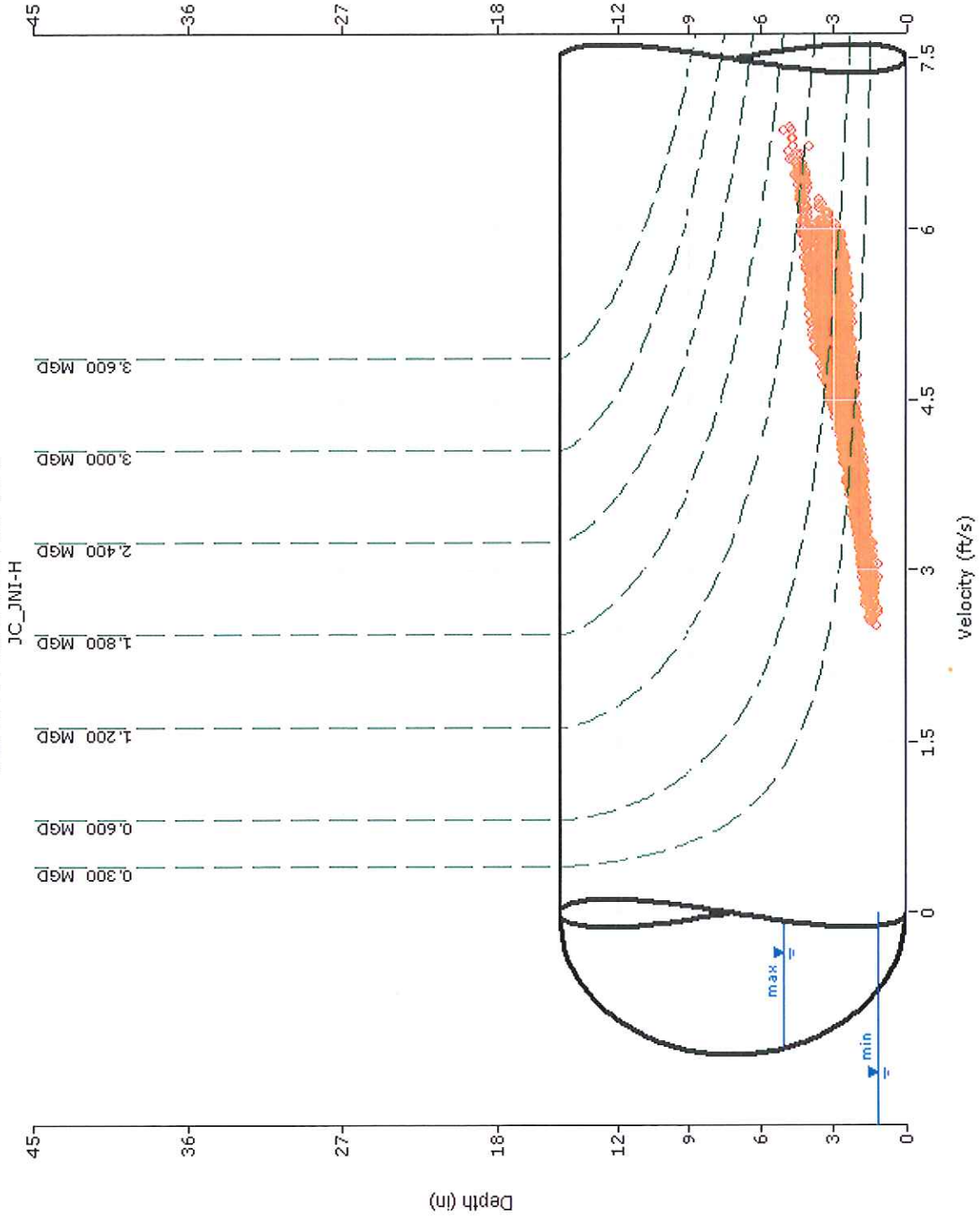


Installation Information		Backup	Yes	No	?	Distance
Installation Type:	Doppler Standard Ring and Crank Installation	Trunk		x		
Sensors / Devices:	Ultra, Velocity, Pressure (Non I.S.)	Lift/Pump Station		x		
Surcharge Height:	0 Feet	VVWTP		x		
Rain Gauge Zone:	RG-2	Other		x		

Additional Site Information / Comments:

PRESS SN 41190 PO 1.5

SCATTERGRAPH REPORT



Flow Monitor
JC_JNI-H

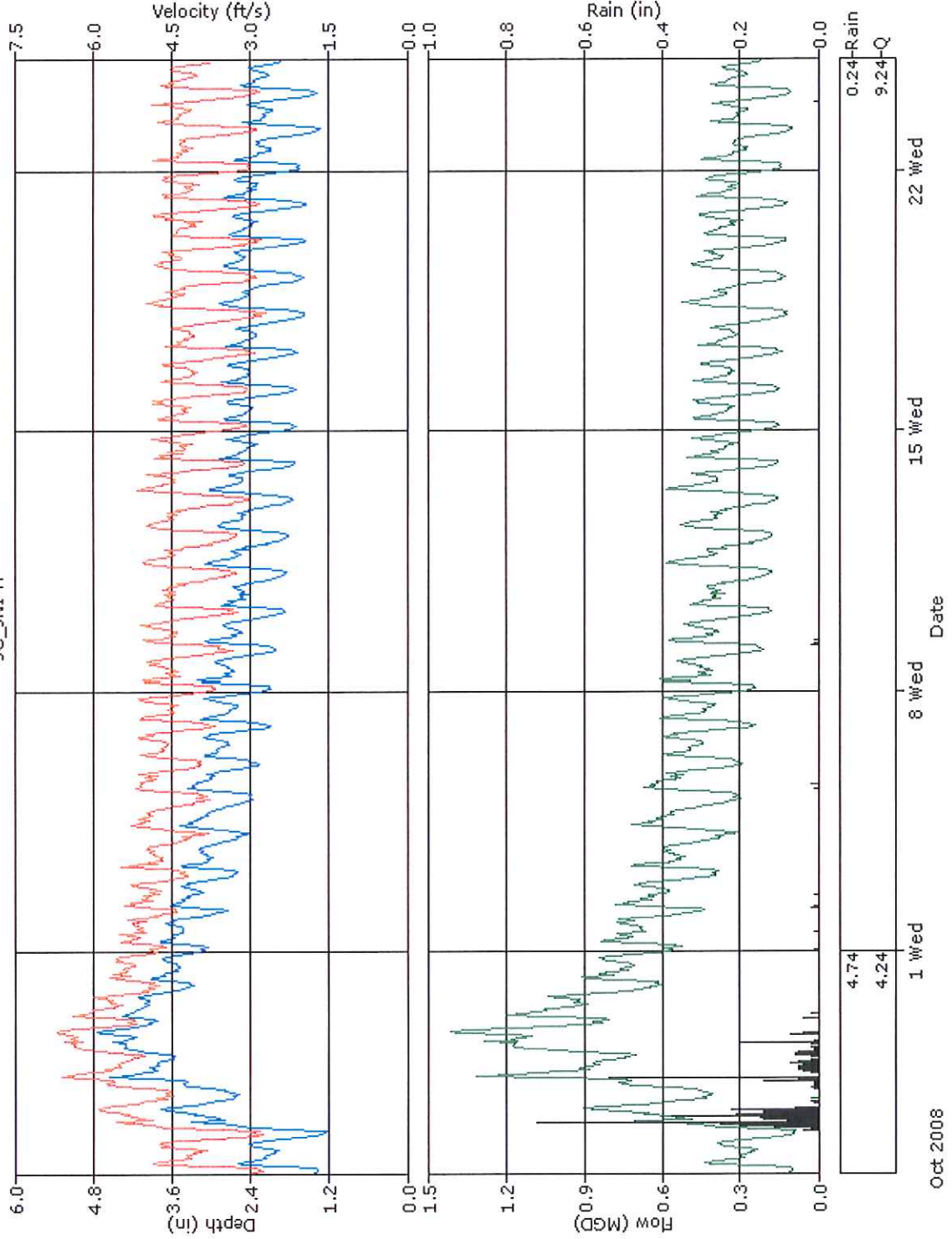
Nominal Diameter
15-in

Report Period
9/25/2008
To
12/1/2008

Legend
 ○ Depth - Velocity
 - - - Iso-Q™
 ····· Silt
 ——— Min-Max Depth

HYDROGRAPH REPORT

JC_JNI-H



Flow Monitor
JC_JNI-H



Report Period
9/25/2008
To
10/24/2008

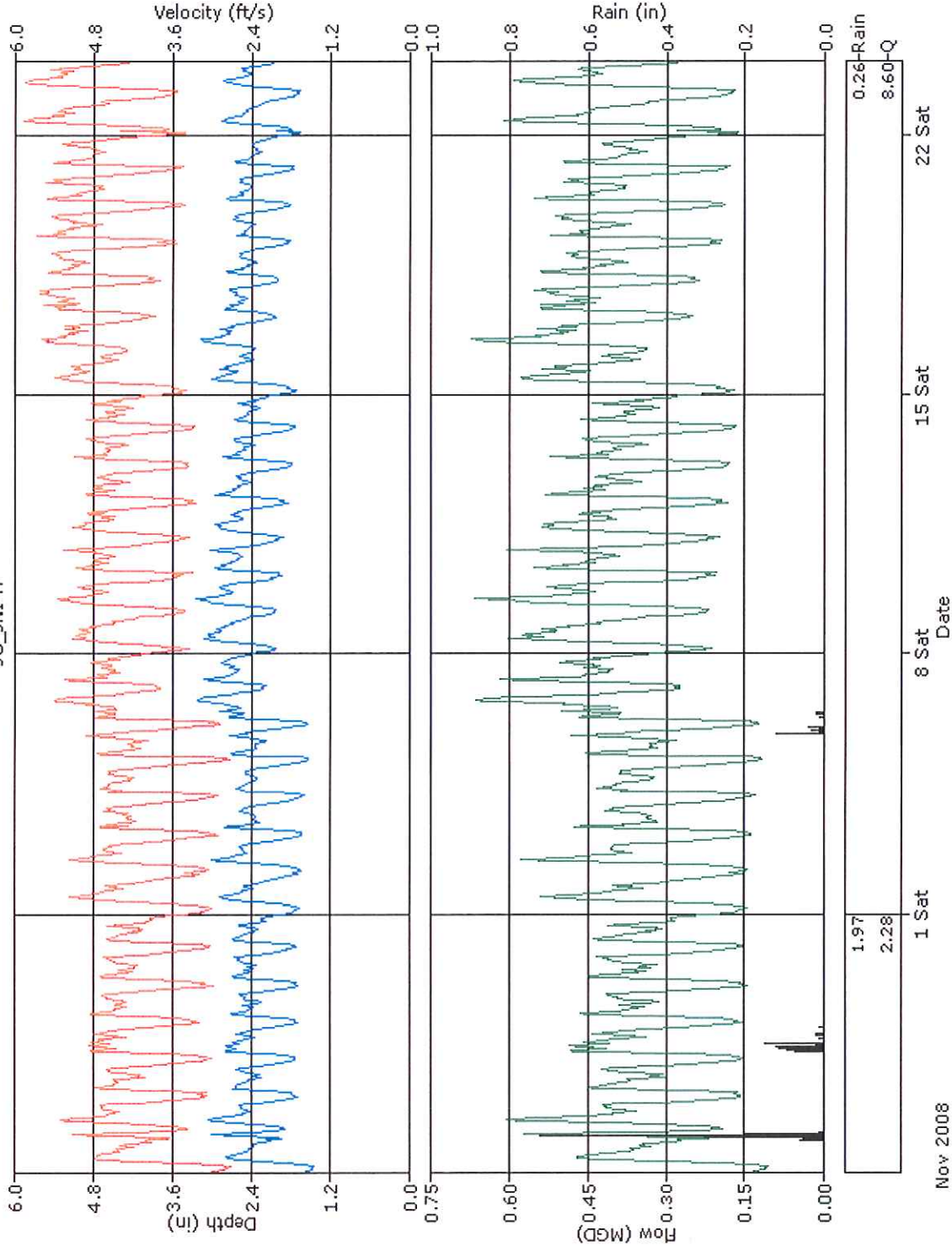
Legend

- Depth
- Silt
- Velocity
- Quantity
- Rain



HYDROGRAPH REPORT

JC_JNI-H



Flow Monitor
JC_JNI-H

Nominal Diameter
 15-in

Report Period
 10/25/2008
 To
 11/23/2008

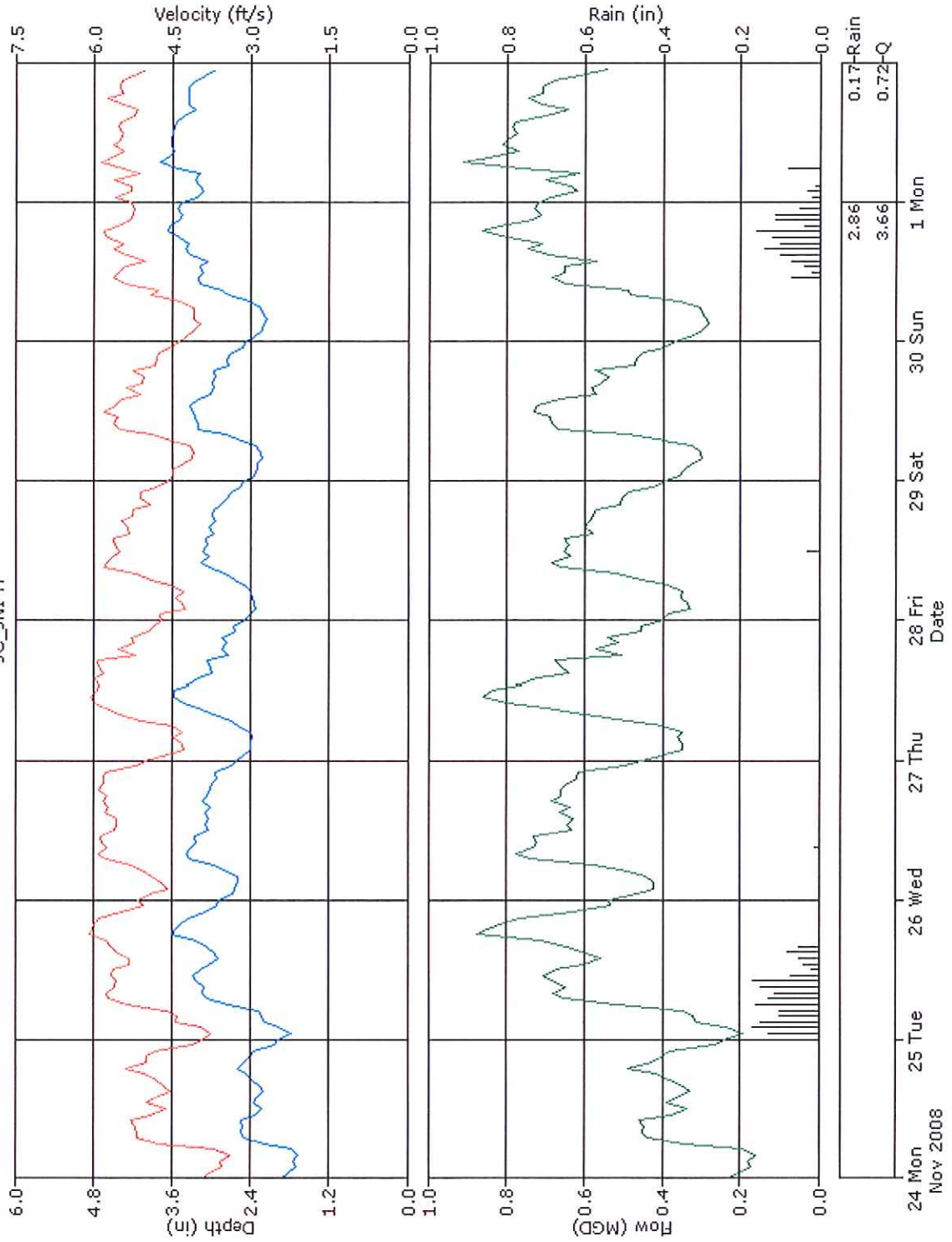
Legend

- Depth
- Silt
- Velocity
- Quantity
- Rain



HYDROGRAPH REPORT

JC_JNI-H



Flow Monitor
JC_JNI-H

Nominal Diameter
15-in

Report Period
11/24/2008
To
12/1/2008

Legend

- Depth
- Silt
- Velocity
- Quantity
- Rain

Narragansett Bay

Daily Tabular Report For The Period 9/25/2008 - 12/1/2008

JC_JNI-H, Pipe Height: 15"

Daily Tabular Report

Depth (in) Velocity (ft/s) Quantity (MGD - Total MG) Rain (in)

Date	Depth					Velocity					Quantity					Rain	
	Time	Min	Time	Max	Avg	Time	Min	Time	Max	Avg	Time	Min	Time	Max	Avg	Total	Total
9/25/2008	05:15	1.29	07:45	2.82	2.03	03:15	2.59	09:15	5.08	3.98	04:45	0.086	08:45	0.457	0.265	0.265	
9/26/2008	04:45	1.17	19:00	3.87	2.82	02:45	2.52	21:00	6.08	4.63	04:45	0.074	19:00	0.950	0.479	0.479	2.91
9/27/2008	04:30	2.45	16:00	4.74	3.39	04:30	4.32	16:00	6.88	5.40	04:30	0.359	16:00	1.448	0.736	0.736	1.06
9/28/2008	05:15	3.50	20:45	5.10	4.14	05:30	4.97	20:30	6.91	6.01	05:00	0.694	20:45	1.601	1.063	1.063	0.71
9/29/2008	23:30	3.64	07:30	4.47	4.03	23:00	4.93	08:15	6.55	5.66	23:45	0.721	07:30	1.243	0.954	0.954	0.06
9/30/2008	23:45	3.19	07:45	3.97	3.56	03:45	4.57	10:00	6.05	5.25	23:45	0.557	10:00	0.960	0.747	0.747	
10/1/2008	04:30	2.98	08:00	3.86	3.43	04:15	4.46	12:30	5.83	5.07	04:15	0.497	07:15	0.904	0.684	0.684	0.10
10/2/2008	03:15	2.72	07:00	3.70	3.23	02:30	4.21	07:30	5.80	4.89	03:15	0.406	07:30	0.842	0.605	0.605	0.06
10/3/2008	03:15	2.50	08:00	3.51	3.00	03:00	3.92	07:15	5.69	4.72	03:00	0.336	07:15	0.784	0.529	0.529	
10/4/2008	05:00	2.40	10:00	3.57	2.95	05:15	3.78	14:00	5.62	4.69	05:00	0.308	10:00	0.745	0.514	0.514	
10/5/2008	06:00	2.34	10:45	3.45	2.85	05:30	3.67	19:30	5.47	4.61	03:45	0.288	10:45	0.730	0.483	0.483	0.03
10/6/2008	02:30	2.24	07:15	3.18	2.75	03:00	3.74	08:15	5.44	4.58	03:00	0.275	08:15	0.650	0.455	0.455	
10/7/2008	03:45	2.04	07:30	3.24	2.66	03:45	3.49	20:15	5.47	4.49	03:45	0.222	07:30	0.662	0.427	0.427	
10/8/2008	04:30	2.01	08:45	3.24	2.63	02:30	3.38	07:45	5.33	4.40	02:30	0.211	08:30	0.657	0.412	0.412	
10/9/2008	03:30	1.93	08:15	3.15	2.55	02:00	3.28	09:00	5.33	4.38	02:00	0.195	09:00	0.604	0.395	0.395	0.04
10/10/2008	03:30	1.74	07:30	2.92	2.41	03:30	2.99	07:30	5.18	4.27	03:30	0.151	07:30	0.553	0.354	0.354	
10/11/2008	05:15	1.77	10:30	3.18	2.44	05:15	3.06	13:00	5.18	4.23	05:15	0.158	11:15	0.613	0.360	0.360	
10/12/2008	04:15	1.72	11:30	3.00	2.35	06:00	3.06	11:30	5.18	4.17	04:15	0.153	11:30	0.574	0.338	0.338	
10/13/2008	05:45	1.68	10:30	3.13	2.38	04:00	2.77	10:30	5.47	4.18	04:00	0.134	10:30	0.645	0.346	0.346	
10/14/2008	04:15	1.61	07:30	3.00	2.34	04:30	2.92	17:45	5.08	4.12	04:30	0.135	07:30	0.553	0.331	0.331	
10/15/2008	03:45	1.64	08:00	2.95	2.36	04:15	2.74	20:45	5.15	4.15	04:15	0.130	08:00	0.538	0.337	0.337	
10/16/2008	04:15	1.62	08:00	2.95	2.34	01:45	2.84	08:45	5.00	3.99	04:15	0.132	08:45	0.510	0.319	0.319	
10/17/2008	03:00	1.60	07:45	2.87	2.27	03:00	2.81	07:15	4.75	3.97	03:00	0.125	07:15	0.485	0.304	0.304	
10/18/2008	05:45	1.49	11:00	3.04	2.23	05:45	2.56	11:00	5.18	4.01	05:45	0.102	11:00	0.586	0.308	0.308	
10/19/2008	05:45	1.53	11:30	2.85	2.25	04:00	2.72	09:45	5.15	3.96	04:00	0.115	09:45	0.520	0.308	0.308	
10/20/2008	03:00	1.48	08:30	2.86	2.27	04:00	2.63	20:30	5.15	3.99	04:00	0.108	19:30	0.505	0.310	0.310	
10/21/2008	03:15	1.52	07:30	3.07	2.26	03:15	2.66	07:30	5.18	4.01	03:15	0.110	07:30	0.593	0.308	0.308	
10/22/2008	04:45	1.52	07:15	2.75	2.12	02:45	2.77	07:45	5.11	4.00	02:45	0.120	07:15	0.494	0.277	0.277	
10/23/2008	03:00	1.28	08:15	2.58	2.04	03:00	2.81	20:00	5.11	4.05	03:00	0.091	20:45	0.450	0.269	0.269	0.01
10/24/2008	03:45	1.30	07:30	2.73	2.06	04:30	2.63	17:45	5.00	3.96	03:45	0.094	07:30	0.463	0.268	0.268	
10/25/2008	05:15	1.31	10:15	2.93	2.15	04:45	2.56	10:15	5.11	3.89	05:15	0.086	10:15	0.547	0.284	0.284	0.11
10/26/2008	05:45	1.82	02:00	3.23	2.48	05:00	3.17	10:45	5.51	4.38	06:00	0.177	02:00	0.875	0.381	0.381	1.23
10/27/2008	02:45	1.62	08:00	2.91	2.30	02:45	2.84	08:00	5.08	4.08	02:45	0.129	08:00	0.539	0.320	0.320	
10/28/2008	04:15	1.63	08:00	2.96	2.37	01:45	2.84	07:30	5.15	4.23	04:45	0.132	11:15	0.544	0.347	0.347	0.63
10/29/2008	02:30	1.63	08:30	2.84	2.29	02:30	2.99	08:30	5.08	4.20	02:30	0.137	08:30	0.520	0.326	0.326	
10/30/2008	02:45	1.56	07:30	2.95	2.31	02:15	2.84	07:30	5.29	4.08	02:45	0.122	07:30	0.572	0.321	0.321	
10/31/2008	03:30	1.65	08:00	2.90	2.28	03:30	2.81	08:00	5.00	3.98	03:30	0.131	08:00	0.527	0.305	0.305	
11/1/2008	04:30	1.62	11:30	3.01	2.29	05:00	2.74	11:45	5.33	4.11	05:00	0.127	11:30	0.589	0.323	0.323	
11/2/2008	05:30	1.57	12:15	3.08	2.30	05:30	2.81	13:00	5.36	4.13	05:30	0.122	12:00	0.597	0.330	0.330	
11/3/2008	04:00	1.50	09:00	2.90	2.26	03:30	2.59	21:45	5.22	4.06	03:30	0.108	21:45	0.544	0.311	0.311	
11/4/2008	04:15	1.55	10:45	2.77	2.24	05:30	2.81	13:45	4.97	4.08	05:30	0.120	13:45	0.481	0.309	0.309	
11/5/2008	04:00	1.49	20:45	3.25	2.23	04:00	2.66	20:45	5.33	4.01	04:00	0.107	20:45	0.662	0.304	0.304	0.16

Date	Depth					Velocity					Quantity					Rain	
	Time	Min	Time	Max	Avg	Time	Min	Time	Max	Avg	Time	Min	Time	Max	Avg	Total	Total
11/6/2008	03:30	1.47	19:15	3.28	2.47	05:00	2.70	18:15	5.80	4.28	03:30	0.110	18:15	0.726	0.388	0.386	0.10
11/7/2008	04:15	2.09	08:30	3.25	2.83	02:30	3.46	08:30	5.60	4.45	02:30	0.236	08:30	0.696	0.415	0.415	
11/8/2008	03:30	1.97	10:00	3.22	2.83	04:45	3.28	11:30	5.54	4.42	04:45	0.200	10:00	0.645	0.416	0.416	
11/9/2008	05:15	1.91	12:15	3.32	2.82	05:15	3.24	12:00	5.58	4.44	05:15	0.188	12:15	0.710	0.417	0.417	
11/10/2008	03:00	1.84	19:15	3.60	2.53	05:00	3.13	19:15	5.94	4.41	04:15	0.176	19:15	0.853	0.395	0.395	
11/11/2008	04:45	1.88	11:00	3.08	2.51	04:00	3.20	18:45	5.40	4.40	04:00	0.188	11:15	0.579	0.387	0.387	
11/12/2008	02:00	1.78	08:30	3.10	2.44	02:00	3.13	08:30	5.44	4.31	02:00	0.163	08:30	0.631	0.366	0.366	
11/13/2008	03:00	1.69	08:00	2.94	2.37	03:00	3.13	08:15	5.54	4.32	03:00	0.151	08:15	0.576	0.352	0.352	
11/14/2008	03:30	1.66	08:30	2.81	2.28	04:45	3.10	08:00	5.15	4.22	04:45	0.154	08:30	0.517	0.323	0.323	
11/15/2008	02:30	1.66	11:15	3.14	2.45	03:45	3.20	11:15	5.54	4.54	03:45	0.152	11:15	0.656	0.392	0.392	
11/16/2008	05:45	2.26	13:00	3.31	2.71	05:30	4.10	13:00	5.68	4.93	05:30	0.304	13:00	0.724	0.479	0.479	
11/17/2008	02:00	1.97	08:15	2.91	2.51	03:00	3.60	20:45	5.90	4.96	03:00	0.228	08:15	0.610	0.432	0.432	
11/18/2008	04:15	1.88	08:00	2.89	2.41	02:00	3.49	21:15	5.98	4.88	02:00	0.206	08:00	0.583	0.402	0.402	
11/19/2008	04:45	1.76	18:45	2.83	2.37	03:30	3.28	07:45	5.94	4.82	03:30	0.170	07:45	0.592	0.392	0.392	
11/20/2008	03:00	1.74	08:30	2.90	2.37	03:00	3.13	08:00	5.87	4.68	03:00	0.158	08:00	0.609	0.381	0.381	
11/21/2008	04:00	1.69	07:45	2.78	2.24	03:15	3.20	07:45	5.80	4.60	04:00	0.160	07:45	0.576	0.344	0.344	
11/22/2008	02:15	1.58	10:30	2.97	2.28	02:30	3.24	10:15	6.05	4.74	02:15	0.146	10:30	0.647	0.370	0.370	
11/23/2008	06:00	1.61	12:30	2.91	2.26	03:15	3.20	13:45	6.01	4.74	06:00	0.145	13:45	0.632	0.367	0.367	
11/24/2008	04:45	1.80	10:00	2.88	2.22	03:15	3.17	22:00	5.69	4.59	03:15	0.147	19:00	0.523	0.341	0.341	
11/25/2008	01:00	1.70	18:15	4.02	2.89	01:00	3.56	18:15	6.73	5.27	01:00	0.174	18:15	1.129	0.575	0.575	1.69
11/26/2008	03:00	2.50	07:00	3.44	2.99	03:00	4.39	11:00	6.16	5.50	03:00	0.374	08:15	0.800	0.610	0.610	0.01
11/27/2008	03:30	2.30	12:00	3.61	2.87	02:30	4.10	11:00	6.26	5.27	05:45	0.317	11:00	0.901	0.560	0.560	
11/28/2008	02:45	2.19	10:45	3.23	2.78	06:00	4.03	09:30	6.12	5.08	02:45	0.296	09:30	0.728	0.512	0.512	0.03
11/29/2008	04:45	2.14	13:30	3.38	2.78	04:45	3.85	13:30	5.94	4.92	04:45	0.262	13:30	0.778	0.500	0.500	
11/30/2008	04:45	2.06	20:00	3.77	2.96	04:00	3.64	18:30	6.08	4.98	04:00	0.237	20:00	0.908	0.563	0.563	1.13
12/1/2008	23:15	2.91	07:30	3.87	3.39	23:30	4.90	07:30	6.05	5.44	23:30	0.530	07:30	0.962	0.719	0.719	0.17

Report Summary For The Period 9/25/2008 - 12/1/2008

Depth (in) : D Velocity (ft/s) : V Quantity (MGD - Total MG) : Q Rain (in) : Rain

	D	V	Q	Rain
Report Total			28.746	10.24
Report Avg	2.58	4.50	0.423	

Site Commentary

Site Information

JC_JNI-I	
Pipe Dimensions	Circular (11.00 in H)
Silt	0.00"

Overview

A review of the [hydrograph](#) and [scattergraph](#) for JC_JNI-I indicate this location functioned under typical open channel flow conditions during the monitoring period of Thursday, September 25, 2008 to Monday, December 01, 2008 . Flow depth and velocity measurements recorded by the flow monitor are consistent with field confirmations conducted to date and support the relative accuracy of the flow monitor at this location.

[Daily longtables](#) displaying final quantities are also provided.

Observations

Average flow depth, velocity, and quantity data observed during Thursday, September 25, 2008 to Monday, December 01, 2008 , along with observed minimum and maximum data, are provided in the following table.

Observed Flow Conditions			
Item	Depth (in)	Velocity (ft/s)	Quantity (MGD)
Average	4.91	2.13	0.418
Minimum	2.73	0.83	0.068
Maximum	8.88	4.14	1.361
Time of Minimum	9/26/2008 4:30 AM	9/25/2008 3:00 AM	9/26/2008 4:30 AM
Time of Maximum	9/28/2008 9:15 PM	9/29/2008 8:30 PM	9/28/2008 8:15 PM

Please note the minimum and maximum flow rate recorded in this table may vary from those recorded on the daily and weekly tabular data. The minimum and maximum rates recorded on the daily and weekly tabular data are absolute verses average fifteen minute data.

Based upon the quality and consistency of the observed flow depth and velocity data, the Continuity equation was used to calculate flow rate and quantities during the monitoring period.

Graphical data reports are based on an hourly average.