



**MONITORING AND RECORDKEEPING REPORT  
WASTEWATER TREATMENT PLANTS**

**Louisville and Jefferson County  
Metropolitan Sewer District**

**Submitted September 30, 2008  
Revised October 31, 2008**

## **PURPOSE AND SCOPE**

In December, 2006, MSD received a Clean Water Act Section 308 Information Request from the US Environmental Protection Agency Region 4 (EPA). Among other things, this request included a requirement for MSD to provide wastewater treatment plant flow records from January 2001 through November 2006, including average day and daily peak flows for all MSD's wastewater treatment plants. MSD's response in January 2007 provided that data. There were gaps in the data, however, that resulted from a variety of problems, including loss of telemetry system server connectivity for records that were stored electronically, paper recording charts that were damaged by flooding of the plant's records storage areas, improperly labeled paper recording charts that could not be definitely attributed to a plant or a time period etc.

In March 2007, EPA repeated the request for the missing data or an explanation why the data was not available and what MSD was doing to modify data collection practices to assure that similar gaps in data would not occur. The March 2007 letter also requested, among other things, additional monitoring be implemented at the Jeffersontown WWTP.

The March 2007 request resulted in a protracted period of discussion and negotiation between MSD, EPA, and the Kentucky Department of Environmental Protection (KDEP). An interim letter describing MSD's actions to expand flow and event monitoring at the Jeffersontown WWTP was sent by MSD in February 2008.

Continued discussions and negotiations have continued since the February 2008 response. Over the course of these negotiations, EPA and KDEP have requested that additional actions be taken and documentation be provided relative to WWTP record keeping and retention. The purpose of this report is to respond to the EPA/KDEP requests.

## **INFORMATION REQUESTED**

The following describes the information requested, and MSD's commitments to provide the requested information.

MSD hereby agrees to immediately provide continuous flow monitoring at its WWTPs where required by its KPDES permits and to maintain records of such flow monitoring for a minimum of three (3) years in accordance with its KPDES permits.

By September 30, 2008, MSD shall submit to the EPA/KDEP a Monitoring and Recordkeeping Report, that includes in detail the following:

- (1) The actions MSD has taken since October 12, 2006, at each WWTP to remedy any problems in complying with these KPDES monitoring and recordkeeping requirements;
- (2) A description of the specific actions it currently and regularly performs at each WWTP to insure that such continuous flow monitoring and record keeping will occur; and

- (3) A representative sample of flow monitoring records from several WWTPs to exemplify compliance with these KPDES permit requirements.

Each of these three issues will be responded to in the following sections.

### **RESPONSE TO ITEM (1)**

#### **The actions MSD has taken since October 12, 2006, at each WWTP to remedy any problems in complying with these KPDES monitoring and recordkeeping requirements**

MSD has enhanced the wastewater treatment plants (WWTPs) data collection program, eliminating the opportunity for paper chart problems. Each of the WWTPs have been fitted with equipment and re-configured to collect, transmit via the SCADA System and store the flow data electronically in the Plant Information (PI) Server. Attachment 1 provides documentation of the date that each existing WWTP currently in service was removed from its previous form of data collection device.

PLCs have been programmed to use the instantaneous flow rate and calculate flow. The flow is then totalized over the 24 hour period from midnight to midnight. To prevent the flow readings from being lost in the event of a communication failure with the SCADA System, tags have been established in the PLCs to hold flow data for a 24-hour period until communications have been restored and the data can be captured in both the PI Server data base and the iHistorian data base. Within both of these systems, tags are set to gather the following information:

1. Instantaneous flow (MGD or gpd)
2. Current accumulated total flow (MG or Gallons, depending on the size of the plant); and
3. Previous day flow total (MG or Gallons).

The PI Server is housed at the Morris Forman WWTP. This server is powered through the Morris Forman WWTP main power supply that is served by power from two separate Louisville Gas & Electric (LG&E) substations. Switching between power feeds is performed through the LG&E central control system using remote operated switches that do not rely on repair crew availability. The computer system at the Morris Forman WWTP is connected to an uninterruptible power supply (UPS) that provides up to four hours of service if power is lost to the Morris Forman WWTP. SCADA systems at the WWTPs are also powered through UPS systems. The UPS service provided for power outages ranges from 15 minutes to 2 hours, depending on the loads on the UPS, and whether the plant has a standby generator on-site, or if stand-by generation is provided by one of MSD's portable generators.

A full back up of the PI Server is automatically performed every Sunday. Incremental back-ups are automatically performed Monday through Saturday. The back-up files are stored on two separate servers. These files back-up a complete image of the PI server in the event that a full system restore would be required.

## **RESPONSE TO ITEM (2)**

### **A description of the specific actions it currently and regularly performs at each WWTP to insure that such continuous flow monitoring and record keeping will occur**

MSD has and continues to implement a system and data quality assurance program. The quality assurance and control measures on the electronic data capture procedures have the objective of eliminating electronic data loss for unnecessarily long time periods. Those measures being employed are described below.

1. Flow metering technology utilized by MSD is being standardized, such that if a standard meter fails, additional meters will be available for timely repair and/or replacement.
2. Flow meter failures at both the WWTP influent and effluent locations are detected and transmitted via SCADA to the Morris Forman WWTP Computer Room, which will reduce the risk of losing flow data. MSD Controls Group staff will be notified immediately to correct the problem.
3. Interface failures between the PI Server and the Human Machine Interface (HMI) are detected through a programmed alarm system. In the event of a failure, an alarm will be sent to the Morris Forman WWTP Computer Room. Computer Room staff will notify the on-call operating personnel that a failure occurred. MSD Controls Group staff will be notified immediately to correct the problem.
4. Emails are system-generated daily and automatically sent to the Process Supervisors and the Maintenance Supervisors. These emails contain the previous day flow totals at each WWTP as a daily reminder to review and validate WWTP performance.

Each active WWTP has its own set of HMI graphic screens to assist in plant operation. Regional plants with complex flow paths may have several screens that are used for daily monitoring and operation of the plants. All these screens are available to operators, process supervisors and any other MSD employee with security rights to view MSDOPERATIONS on the MSD network. Regardless of the number of screens available for plant operation, each plant has at least one way to display three vital pieces of flow information. The data displayed on the HMI screens is detailed below.

1. Instantaneous flow (MGD or gpd);
2. Current accumulated total flow since 12:01 AM (MG or Gallons, depending on the size of the plant); and
3. Previous day flow total (MG or Gallons).

Attachment 2 contains screen shots of HMI graphics from three regional and three small WWTPs depicting this information. This flow data is illustrated on each screen as follows:

- For the West County WWTP (Attachment 2, Page 1), the instantaneous flow rate in MGD is displayed on the left side of the overall plant schematic screen. Part of this is visible on the example provided. Totalized flow in MG for the current day and for the previous day are accessed through a screen pop-up on the overall schematic. This pop-up screen shows the current date with totalized flows from midnight up to the current time for both influent channels and the effluent channel. Totalized flow from the previous day, along with the current day, is also indicated for all three measurement points.
- For the Floyd's Fork WWTP (Attachment 2, Page 2), instantaneous flow rates and totalized flows are viewed from the unit process screen for "Clarifiers". In the example provided, the effluent flume in the lower right corner of the page gives the instantaneous flow. Just above that, the totalized flows for the current and previous days (with dates indicated) are shown.
- For the Jeffersontown WWTP (Attachment 2, Page 4), the flow totalizer screen is also a pop-up screen accessed from the overall plant schematic. This screen also shows totalized flow for the current day, with the date indicated, for a number of flow measurement points. The screen also shows the previous day totalized flow for the same flow measurement points. The "noise" in the control system, resulting from stray blips from the level sensors, has been corrected.
- For the Small WWTPs, the instantaneous and totalized flows are shown on the plant overview screen. Examples of overview screens from three representative small plants, including the Chenoweth Hills, Hunting Creek North, and Silver Heights WWTPs are provided (Attachment 2, Pages 5-7). The 13 additional small WWTPs have similar overview screens.
- In addition to instantaneous flow rate and totalized flows, it is also useful to be able to view trend plots of flow rates. With this, all the functionality offered by paper charts is provided electronically. Trend charts for all plants are accessed through the MSD OPERATIONS page titled STP TOTALIZER PAGE (Attachment 2, Page 8). Screen captures of these pages are included (Attachment 2, Pages 9-14). Clicking on the chart indicated for any plant will bring up a pop-up window that displays a trend chart for flows. This chart can be scrolled forward and backward to view flow trends over different time periods as defined by the user. MSD is developing a trending application that will allow viewing of trends over a longer duration than is visible on the initial pop-up screen. The final six screen captures in Attachment 2 illustrate the trend charts for the six plants previously described.

### **RESPONSE TO ITEM (3)**

#### **A representative sample of flow monitoring records from several WWTPs to exemplify compliance with these KPDES permit requirements.**

As described in the discussion for Item 1, WWTP flow data is now stored in the PI Server. The PI Server is structured as a data base, with information extracted by a variety of interface programs. For custom reports, exporting data to Microsoft Excel provides a convenient reporting tool. Attachment 3 provides an Excel spreadsheet report of WWTP daily and peak flow data for the six plants referenced in Attachment 2. This data represents six months of data, collected in the PI server beginning March 1, 2008, through August 31, 2008.

### **REMAINING VULNERABILITIES**

MSD has implemented an electronic data gathering, storage and retrieval system that is fully automated, with a high level of equipment and back-up processes to ensure continuous data capture and storage. The systems for providing uninterrupted power to the SCADA system, the storage in PI and the backup in iHistorian illustrate MSD's commitment to continued improvement in this area of responsibility.

Despite MSD's best efforts, some vulnerabilities remain however, as illustrated by the events of September 14, 2008, and the weeks following. On September 14, at approximately 11:00 A.M., the Louisville area was subject to sustained hurricane-force winds with measured wind velocities of over 75 mph. This event resulted in the largest loss of electrical service in LG&E's history, with almost two-thirds of the Louisville Metro area without power at the peak of the outage. All power did not drop out at once - this event was progressive in nature. Some power was restored and was then lost again over the entire week. As LG&E crews worked to restore power, they continued to uncover damages that required some circuits to be shut back down after initial restoration.

MSD crews mobilized immediately, and began an emergency response effort that included the deployment of MSD's full fleet of portable generators, and the rental or loan of any generators MSD could find in the area, including some generators that came from as far away as West Virginia. Deployment of generators to WWTPs was hampered by wide-spread road closures due to downed trees and power lines. Power was restored to the last WWTP, Hunting Creek North, at approximately 9:00 PM on September 16, 2008, by a 300KW rented portable generator. Due to the unprecedented county-wide damage, restoring power to some of the WWTPs took longer than the UPS systems could support, resulting in some loss of data due to loss of power to the SCADA systems.

A more serious problem occurred as a result of the loss of communication systems from MSD's cellular phone system network. MSD's SCADA system relies on cell phone service from Verizon and Sprint, with the specific carrier depending on the location and availability of service in the area. Signals from both cell phone providers route to the Morris Forman WWTP through an AT&T hard-wire land line. As a result of the storm taking down utility poles county-wide,



AT&T lost parts of its hard wire system, and did not have the ability to re-route service due to the widespread outages. This unprecedented loss of AT&T land line service took MSD's SCADA out of service for several days. Even though the system was fully powered and sending signals through Verizon and Sprint, the signals could not get to the PI server.

AT&T's land-line service to Morris Forman WWTP was restored shortly after midnight on September 17, 2008, and MSD's SCADA system was fully functional shortly thereafter. MSD is studying this surprising system vulnerability, and exploring with AT&T and its cellular providers how this can be prevented in the future.

## **SUMMARY**

In response to data collection and retention issues, MSD has implemented an automated, fully electronic flow data collection, retention and retrieval system. The system includes back-up systems where available, and includes a series of alarms to warn of any loss of data transfer into the PI system. The following activities were completed by October 31, 2008:

1. Eliminated the "noise" in the Jeffersontown WWTP control system that incorrectly shows small flows in the Storm Flow line. The respective Plant Flow Totalizer screen has been updated in Attachment 2, page 4.
2. Determined application of the flowmeter labeled "Total Plant Flow" on the original Attachment 1. Further investigation revealed that this particular tag is actually an influent meter. An additional effluent meter was added on July 17, 2008. Prior to this date, a calculation was performed to sum the three influent meters, currently listed on Attachment 1, to calculate an effluent total. After July 17, effluent volume/rates were obtained from the flow meter on the actual effluent line after UV disinfection. A new diagram depicting these flow meters as a component is provided now in Attachment 2, page 3.
3. Modified Attachment 1 to show the five flow meters with PI Server tags in operation at the Jeffersontown WWTP. The respective Plant Flow Totalizer screen has been updated in Attachment 2, page 4.
4. Modified the WWTP flow trending application to display flows over an adjustable length of time as defined by the user. Also re-programmed each effluent flow chart axis to match the limits of the flowmeter installed at that location. The revised screen shots have been submitted in Attachment 2, pages 9-14.
5. Addressed flow measurement problems pertaining to the Jeffersontown WWTP. The issues were (1) peaks and drops in trend chart, (2) high peak ratios on 4/7 and 7/23, and (3) ten days with total flow greater than peak flow. Problem number 1 is attributed to the fact that the effluent is pumped, and at low flow the pumps shut off until the well refills. Similarly, as flows increase, a large pump may kick on and cause a very high short term peak. Problem number 2 may be due to pump starts, or maintenance work being done on the pumps or the flowmeters. We are continuing to investigate, but have not been able to definitively solve this. Problem number 3 is likely due to the way that flow was

measured prior to the installation of the effluent flow meter on July 17, 2008. Prior to installation of the effluent flow meter the three influent flow meters (Plant 1, Plant 2, and Storm Flow) were summed to calculate total flows. The entire spreadsheet was built based on the flow summing approach (to get a full 6-months of data from the same source). While the approach of summing meters is commonly performed and is thought to have been accurate for total flow, the peak flows were not captured accurately. To remedy this, we now use the effluent flow meter to determine the peak rate and total flow. The table sent with the previous submittal has been modified. The corrected calculated values before July 17, 2008, and the effluent meter readings after that date are now provided in Attachment 3, page 3.

6. Evaluated the communications system for potential improvements in vulnerability revealed during the September 14, 2008, Hurricane Ike wind storm could be eliminated. The problem encountered was due to a loss of the AT&T land line that transmits the signals from our cell-phone telemetry to the Morris Forman WWTP computer room. MSD is in the process of applying for participation in the Telecommunications Service Priority (TSP) System through the National Communication system (NCS). This service, if approved, will allow our circuit to have a higher priority put on it in case of a disaster which would have communication service restored much sooner than we currently experience.



## **ATTACHMENT 1**

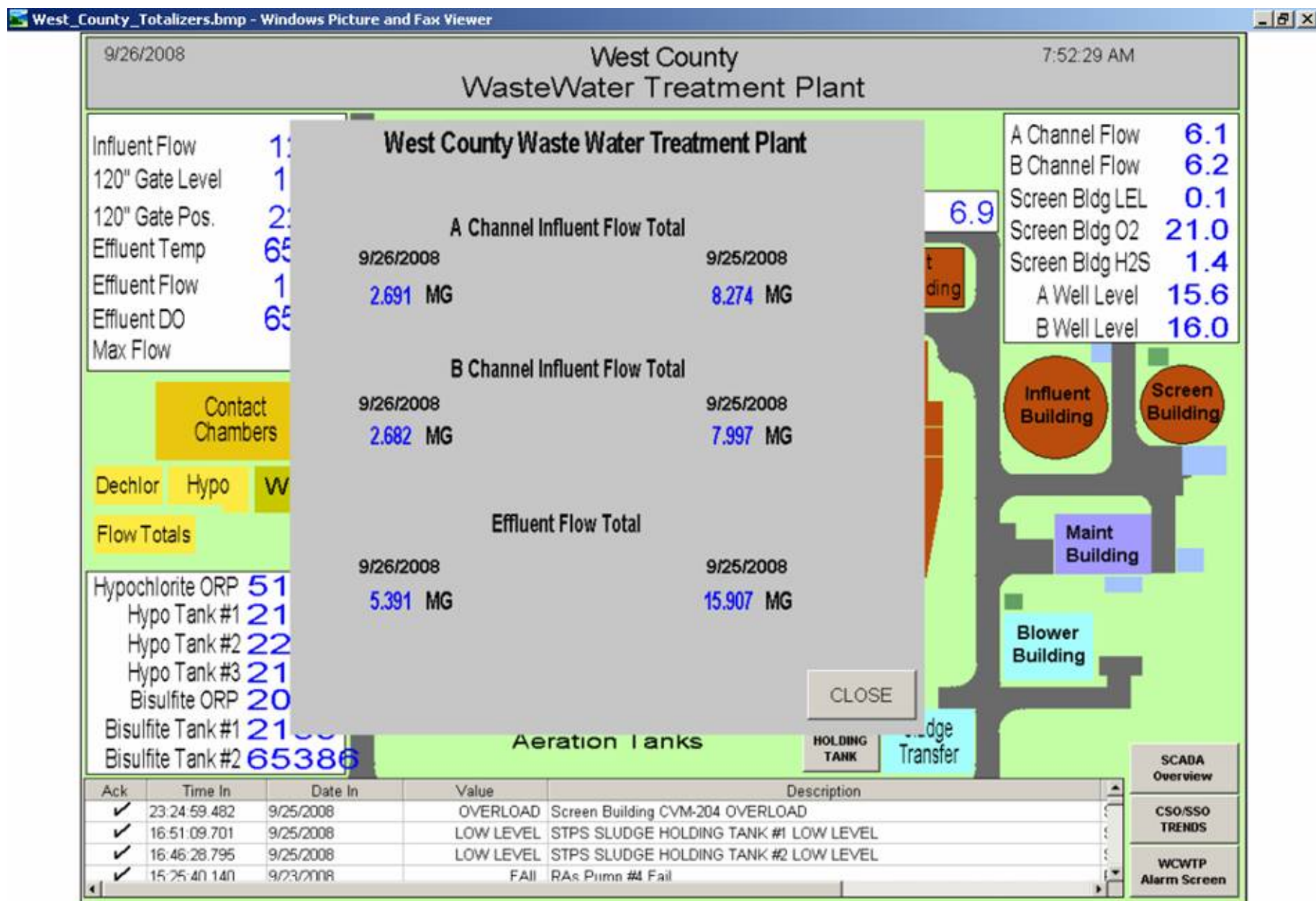
**WWTP conversion to electronic flow recording**

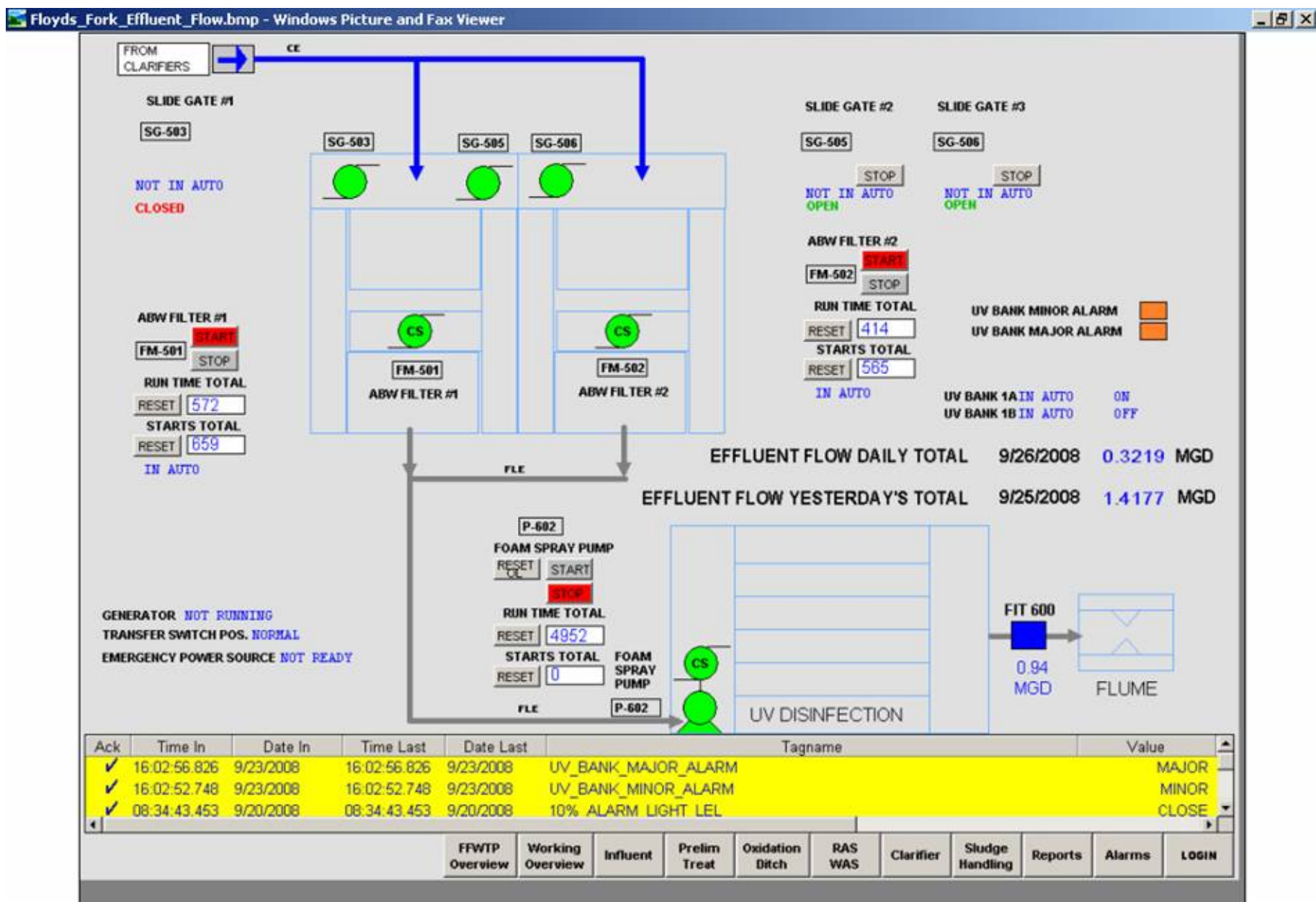
**Attachment 1**  
**Wastewater Treatment Plant Remote Monitoring of Flows**

	WWTP Name	KPDES Permit	Date PI Interface Created
Active WWTPs	1 Bancroft	KY0039021	Effluent 10/25/2006
	2 Chenoweth Run (aka Lake Forest)	KY0042226	Influent 7/25/05
	Chenoweth Run (aka Lake Forest)	KY0042226	Effluent 7/28/05
	3 Berrytown	KY0036501	Effluent 1/8/2007
	4 Cedar Creek	KY0098540	Influent 1/13/2004
	Cedar Creek	KY0098540	Effluent 1/13/2004
	5 Chenoweth Hills	KY0029459	Effluent 5/22/2007
	6 Floyds Fork	KY0102784	Influent 7/22/2007
	Floyds Fork	KY0102784	Effluent 10/4/2006
	7 Glenview Bluff	KY0044261	Effluent 1/9/2008
	8 Hite Creek	KY0022420	Influent 10/6/2006
	Hite Creek	KY0022420	Effluent 7/22/2007
	9 Hunting Creek North	KY0029106	Effluent 1/10/2007
	10 Hunting Creek South	KY0029114	Effluent 1/9/2007
	Jeffersontown	KY0025194	F1 - New Plant Flow 1/13/2004
	Jeffersontown	KY0025194	F2 - Old Plant Flow 1/13/2004
	Jeffersontown	KY0025194	F3 - Storm Flow 1/13/2004
	Jeffersontown	KY0025194	F4 - Blended Flow 4/3/2007
	Jeffersontown	KY0025194	F5 - Effluent Flow 7/17/2008
	12 Ken Carla	KY0022497	Effluent 10/31/2007
	13 Lake of the Woods	KY0044342	Effluent 9/20/2007
Inactive WWTPs	14 McNeely Lake	KY0029416	Effluent 3/7/2007
	15 Shadowwood	KY0031810	Effluent 1/9/2007
	16 Silver Heights	KY0028801	Effluent 5/31/2007
	17 Starview	KY0031712	Effluent 1/19/2007
	18 Timberlake	KY0043087	Effluent 10/24/2006
	19 West County	KY0078956	Influent 1/24/2007
	West County	KY0078956	Effluent 3/31/2005
	20 Yorktown	KY0036323	Effluent 3/19/2007
	1 Fern Hill	KY0033758	WWTP Eliminated 9/27/2005
	2 Nottingham Hills	KY0029483	WWTP Eliminated 9/30/2006
	3 Polo Fields	KY0093441	WWTP Eliminated 12/18/2006
	4 Watterson Woods	KY0035211	WWTP Eliminated 12/14/2006
	5 Glenview Acres	KY0022462	WWTP Eliminated 9/6/2007
	6 Ky Correction for Women	KY0039004	MSD Terminated Operations 9/30/07

## **ATTACHMENT 2**

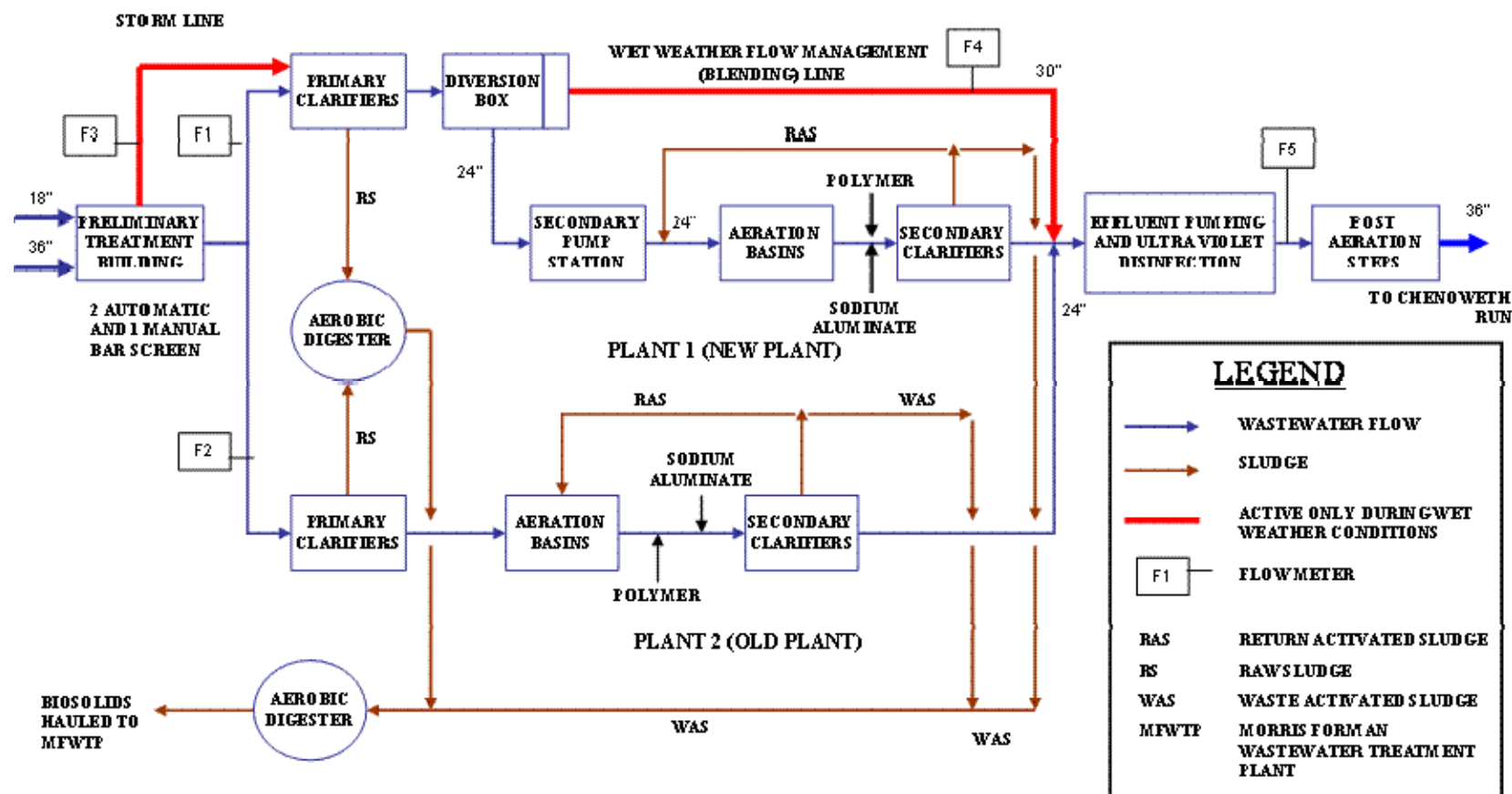
**Screen captures from HMI pages displaying totalized flows**



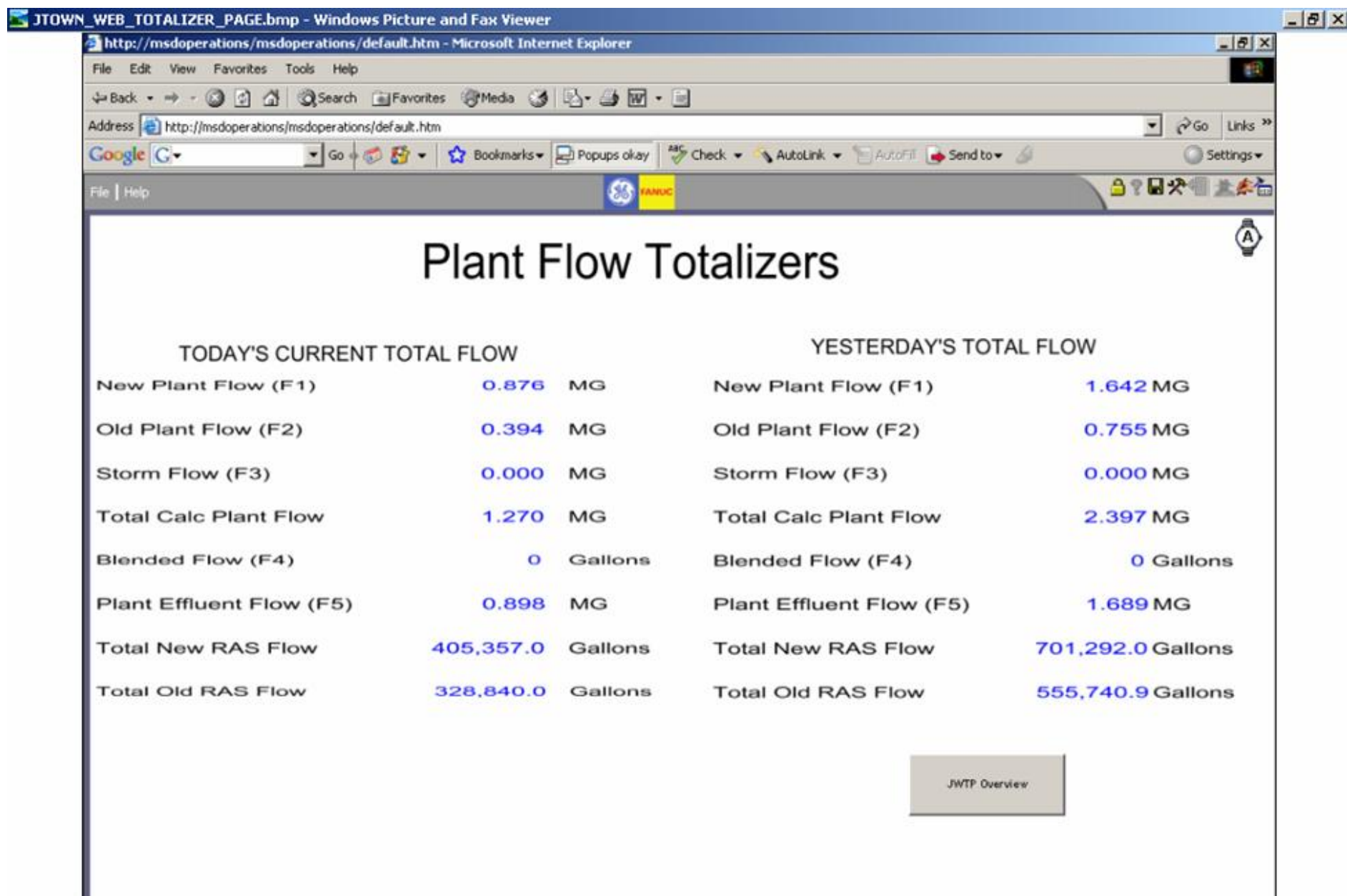




## Jeffersontown Wastewater Treatment Plant







CHENOWETH\_HILLS\_STP.bmp - Windows Picture and Fax Viewer

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CHENOWETH HILLS S.T.P.  
CENTRALJ. Porter  
( 525 )Pager 523-9957  
Mobile 239-7695M. Brazel  
( 556 )Pager 741-3488  
Mobile 342-4490

EFF. FLOW 0.056 MGD

FLOW TOTAL MILLION GALLONS  
9/29/2008 0.03 09/28/2008 0.07

		TODAY		YESTERDAY	
STATUS		STARTS	RUNTIME	STARTS	RUNTIME
PUMP #1	STOPPED	31	0.9 HRS	71	2.2 HRS
PUMP #2	STOPPED	35	1.3 HRS	77	3.3 HRS
BLOWER #1	RUNNING	15	7.7 HRS	21	16.9 HRS
BLOWER #2	O/S	1	0.0 HRS	0	0.0 HRS
BLOWER #3	RUNNING	8	9.4 HRS	11	18.7 HRS
BLOWER #4	RUNNING	0	12.7 HRS	0	24.0 HRS
GRINDER #1	RUNNING NORMAL	0	12.7 HRS	0	24.0 HRS

SCADA  
OverviewCENTRAL  
Overview

North\_Hunting\_Creek.bmp - Windows Picture and Fax Viewer

# HUNTING CREEK NORTH STP 291 EAST

J. Kessel (523) Pager 342-8890 Mobile 648-5984

K. Slaughter (316) Pager 455-6491 Mobile 648-8005

FLOW 245.28 GPM

INTRUSION CLEAR

9/26/2008 FLOW TOTAL 43595.11 GALLONS 09/25/2008 212436.39

	STATUS	TODAY STARTS	TODAY RUNTIME	YESTERDAY STARTS	YESTERDAY RUNTIME
AER. BLOWER #1	O/S	0	0.0 HRS	0	0.0 HRS
AER. BLOWER #2	RUNNING	0	7.9 HRS	1	22.6 HRS
AER. BLOWER #3	RUNNING	0	7.9 HRS	1	22.6 HRS
DIGESTER BLOWER	O/S	0	0.0 HRS	7	0.0 HRS
RETURN BLOWER #1	O/S	0	0.0 HRS	0	0.0 HRS
RETURN BLOWER #2	RUNNING	0	7.9 HRS	1	22.4 HRS
COLLECTOR #1	STOPPED	0	0.0 HRS	0	0.0 HRS
COLLECTOR #2	RUNNING	0	7.9 HRS	1	24.0 HRS
COLLECTOR #3	STOPPED	0	0.0 HRS	0	0.0 HRS
COLLECTOR #4	RUNNING	0	0.0 HRS	0	7.9 HRS

START START

	Ack	Time In	Date In	Alarm Extension Field1	Status	Value	Description
1							
2							
3							
4							

Total Alarms: 0 Filter: Area In "NHCR" Sort: Time In, Descending Run

SCADA Overview EAST Overview



Silver\_Heights\_STP.bmp - Windows Picture and Fax Viewer



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# SILVER HEIGHTS STP WEST

PUMP #1 STOPPED NORMAL

PUMP #2 STOPPED NORMAL

PUMP #3 STOPPED NORMAL

AEREATOR #1 STOPPED

AEREATOR #2 STOPPED

AEREATOR #3 STOPPED BLOWER #1 STOPPED

AEREATOR #4 RUNNING BLOWER #2 RUNNING

COLLECTOR #1 RUNNING RAS #1 STOPPED

COLLECTOR #2 RUNNING RAS #2 RUNNING

K. Ries            Pager 342-9541  
( 408 )            Mobile 396-7543

J. Heacock        Pager 342-3818  
( 571 )            Mobile 475-7500

WET WELL LVL 3.86 FT

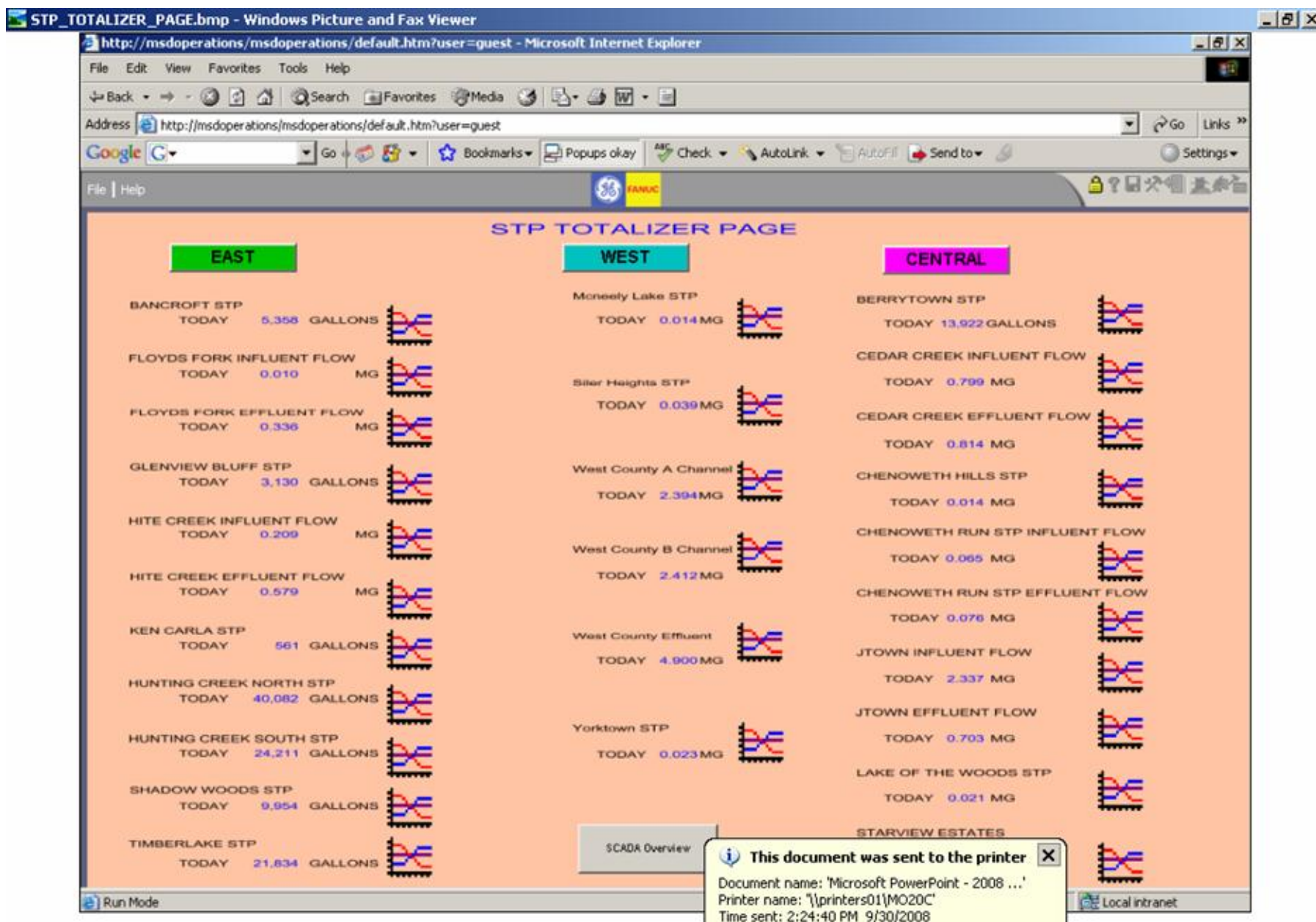
	TODAY		YESTERDAY	
	STARTS	RUNTIME	STARTS	RUNTIME
PUMP #1	83	3.2 HRS	254	13.1 HRS
PUMP #2	0	0.0 HRS	0	0.0 HRS
PUMP #3	0	0.0 HRS	0	0.0 HRS
AEREATOR #1	3	7.3 HRS	6	22.3 HRS
AEREATOR #2	2	7.3 HRS	7	22.4 HRS
AEREATOR #3	3	6.3 HRS	9	20.8 HRS
AEREATOR #4	3	6.7 HRS	8	21.3 HRS
COLLECTOR #1	0	7.9 HRS	0	24.0 HRS
COLLECTOR #2	0	7.9 HRS	0	24.0 HRS
BLOWER #1	0	0.0 HRS	0	0.0 HRS
BLOWER #2	0	7.9 HRS	0	24.0 HRS
RAS #1	9	6.3 HRS	33	19.4 HRS
RAS #2	14	4.8 HRS	42	15.1 HRS

EFF. FLOW 0.26 MGD

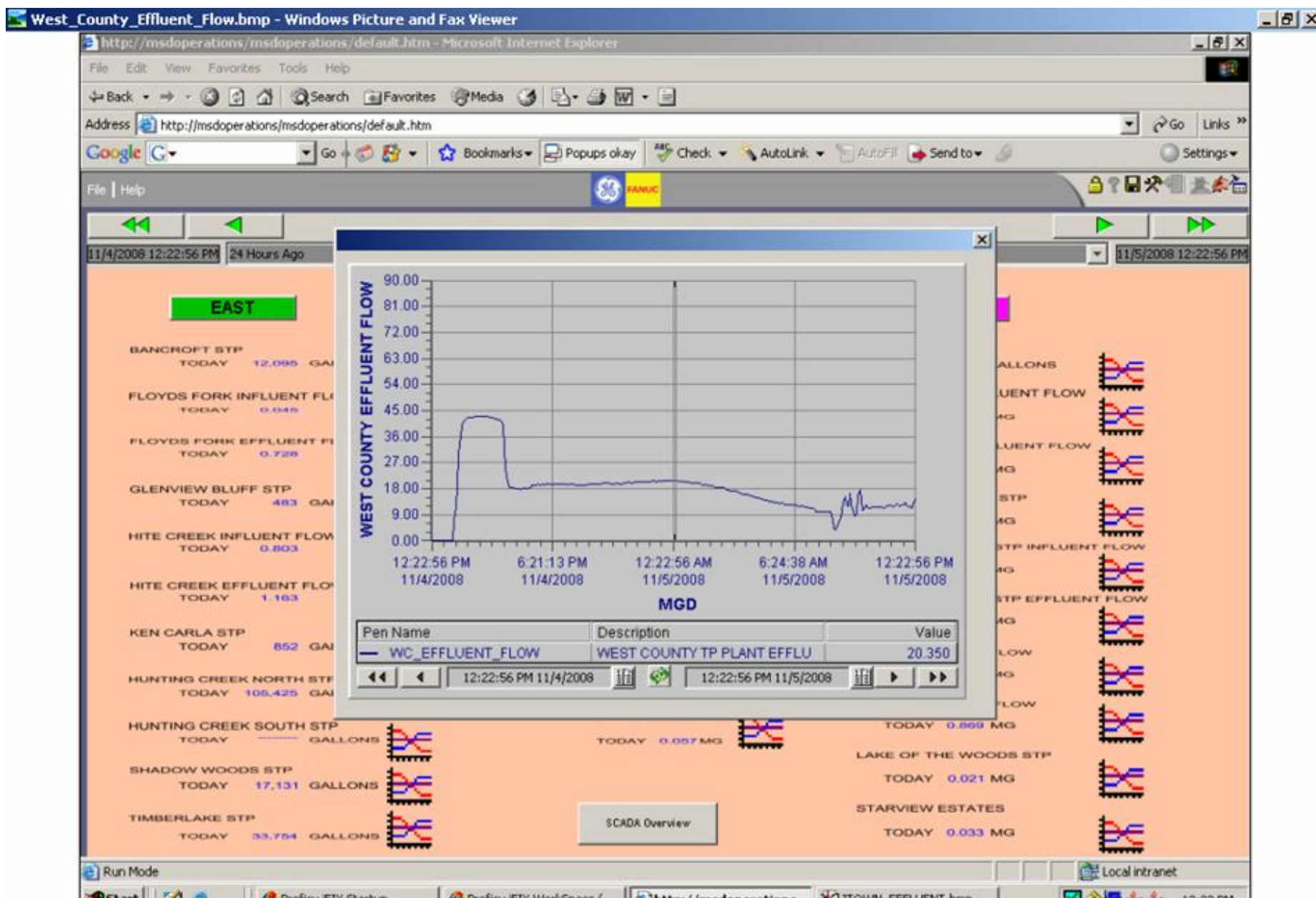
FLOW TOTAL    MILLION GALLONS

9/26/2008 0.046    09/25/2008 0.197

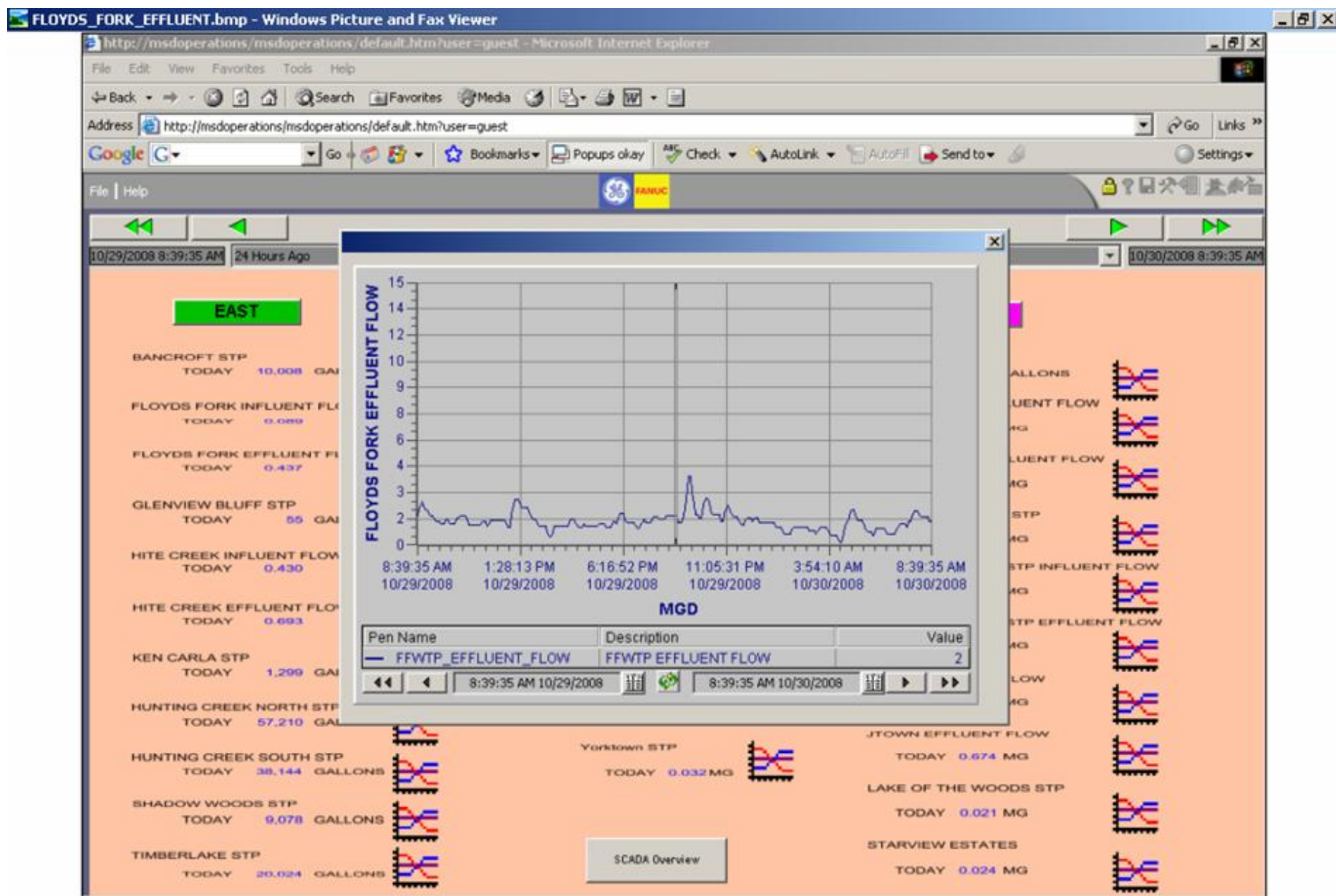
SCADA  
OverviewWEST  
Overview

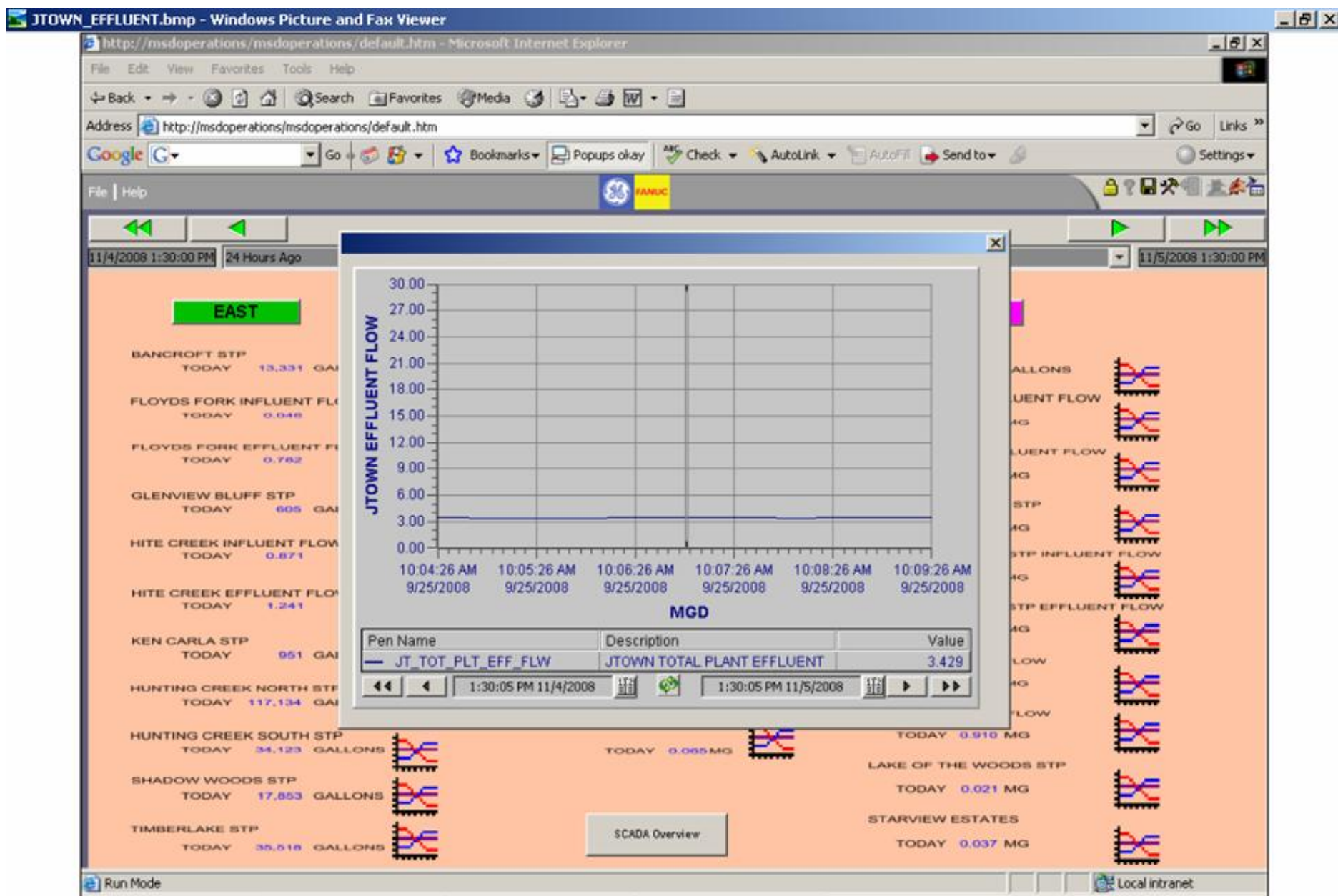


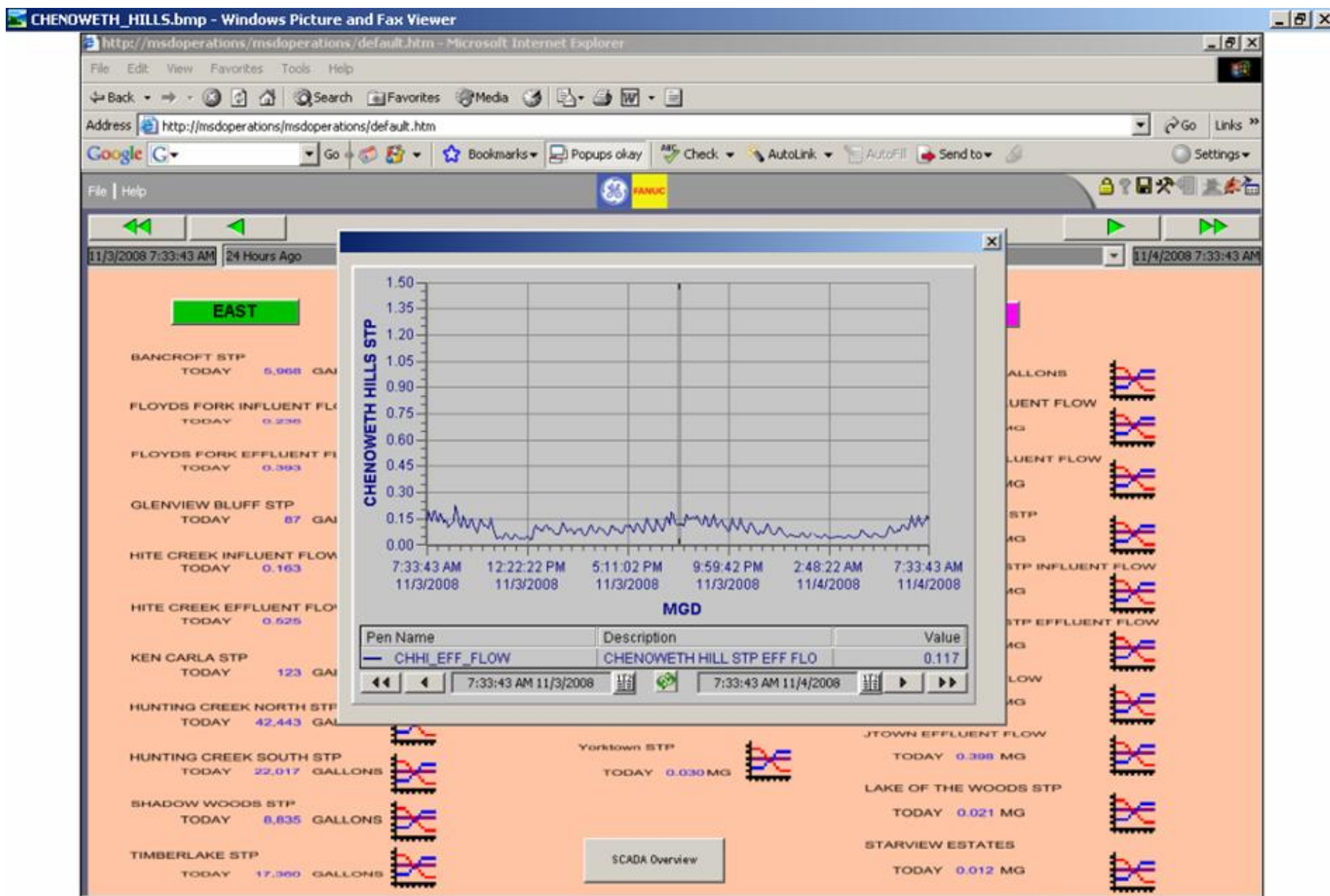




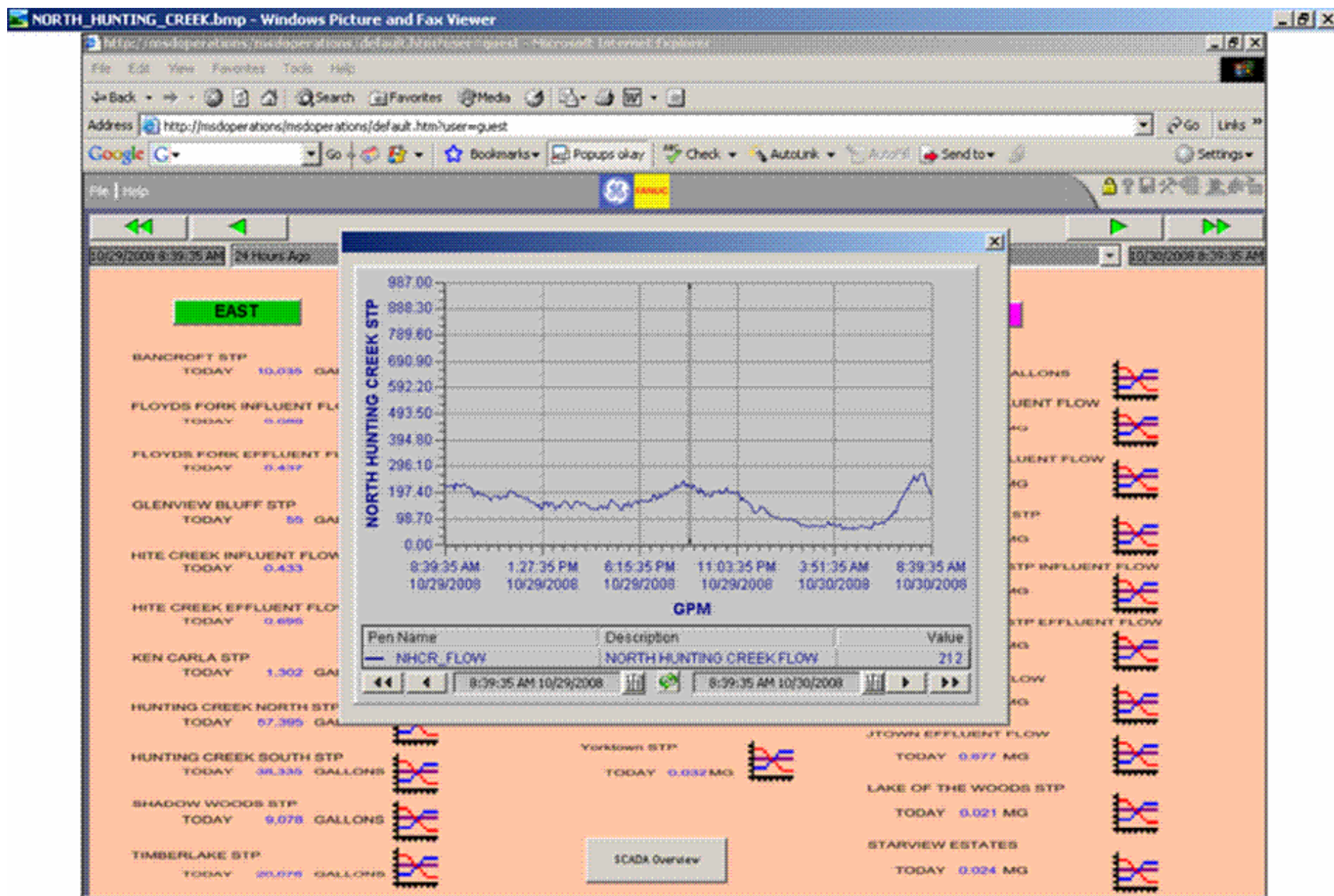


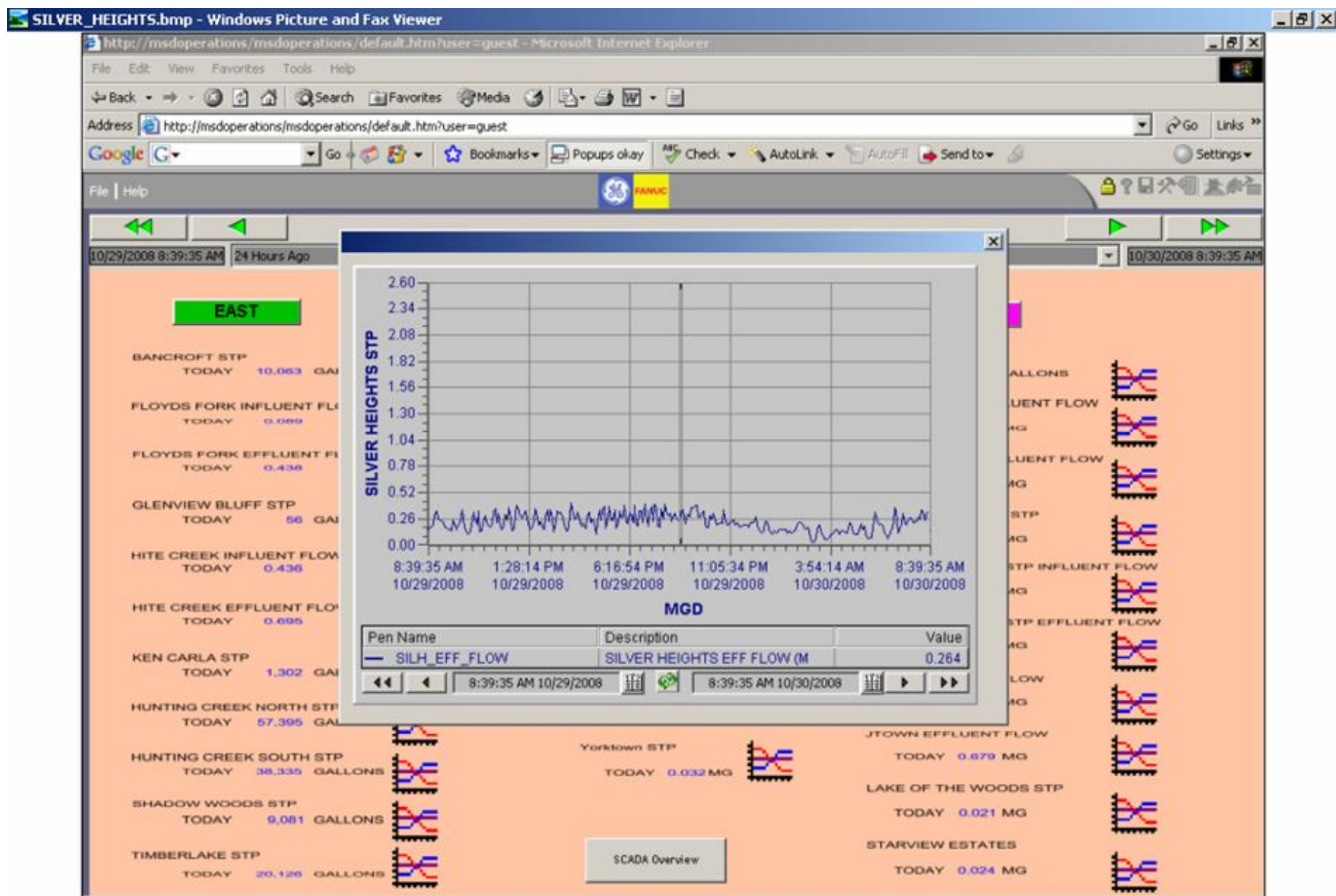












## **ATTACHMENT 3**

### **Examples of daily and peak flow data from WWTPs**



## WEST COUNTY WASTEWATER TREATMENT PLANT (DEREK R GUTHRIE WATER QUALITY TREATMENT CENTER)

	Total MG	Peak MGD		Total MG	Peak MGD		Total MG	Peak MGD		Total MG	Peak MGD		Total MG	Peak MGD		Total MG	Peak MGD
March 1, 2008	27.4	39	April 1, 2008	43.8	56	May 1, 2008	19.6	32	June 1, 2008	18.9	31	July 1, 2008	16.2	22	August 1, 2008	20.5	33
March 2, 2008	26.8	40	April 2, 2008	35.1	45	May 2, 2008	24.9	57	June 2, 2008	18.8	31	July 2, 2008	16.0	21	August 2, 2008	18.2	29
March 3, 2008	24.9	39	April 3, 2008	36.0	57	May 3, 2008	62.1	74	June 3, 2008	21.7	31	July 3, 2008	16.4	20	August 3, 2008	17.1	23
March 4, 2008	71.9	82	April 4, 2008	78.6	90	May 4, 2008	39.9	65	June 4, 2008	21.2	32	July 4, 2008	18.1	28	August 4, 2008	17.3	23
March 5, 2008	75.2	81	April 5, 2008	73.4	81	May 5, 2008	27.7	43	June 5, 2008	19.7	31	July 5, 2008	20.3	29	August 5, 2008	15.5	23
March 6, 2008	52.6	75	April 6, 2008	56.5	67	May 6, 2008	25.2	34	June 6, 2008	18.7	31	July 6, 2008	17.6	28	August 6, 2008	17.7	23
March 7, 2008	36.8	42	April 7, 2008	46.1	82	May 7, 2008	24.5	34	June 7, 2008	18.6	28	July 7, 2008	18.7	28	August 7, 2008	18.7	43
March 8, 2008	36.7	43	April 8, 2008	34.4	43	May 8, 2008	38.1	60	June 8, 2008	17.5	28	July 8, 2008	17.9	28	August 8, 2008	16.8	23
March 9, 2008	37.4	78	April 9, 2008	30.6	36	May 9, 2008	39.3	55	June 9, 2008	17.5	21	July 9, 2008	19.3	29	August 9, 2008	16.5	26
March 10, 2008	47.9	65	April 10, 2008	29.0	34	May 10, 2008	31.1	42	June 10, 2008	17.6	23	July 10, 2008	17.6	27	August 10, 2008	16.1	21
March 11, 2008	50.6	65	April 11, 2008	39.2	55	May 11, 2008	36.4	51	June 11, 2008	16.7	20	July 11, 2008	17.2	27	August 11, 2008	16.2	22
March 12, 2008	43.5	56	April 12, 2008	35.8	45	May 12, 2008	37.3	51	June 12, 2008	17.7	28	July 12, 2008	17.6	26	August 12, 2008	16.5	22
March 13, 2008	38.0	47	April 13, 2008	30.4	41	May 13, 2008	31.1	38	June 13, 2008	19.0	30	July 13, 2008	21.2	37	August 13, 2008	16.3	23
March 14, 2008	36.5	47	April 14, 2008	29.6	41	May 14, 2008	36.6	53	June 14, 2008	21.9	31	July 14, 2008	17.8	28	August 14, 2008	16.7	22
March 15, 2008	42.4	63	April 15, 2008	26.2	33	May 15, 2008	41.8	82	June 15, 2008	17.9	30	July 15, 2008	17.3	28	August 15, 2008	16.7	22
March 16, 2008	45.9	62	April 16, 2008	25.6	31	May 16, 2008	78.4	84	June 16, 2008	18.8	30	July 16, 2008	17.2	28	August 16, 2008	16.1	26
March 17, 2008	36.0	45	April 17, 2008	23.7	32	May 17, 2008	47.2	70	June 17, 2008	17.7	28	July 17, 2008	16.1	26	August 17, 2008	15.7	27
March 18, 2008	48.8	78	April 18, 2008	22.9	30	May 18, 2008	36.1	43	June 18, 2008	17.2	27	July 18, 2008	16.3	26	August 18, 2008	15.0	21
March 19, 2008	65.3	86	April 19, 2008	22.8	30	May 19, 2008	30.6	43	June 19, 2008	16.9	27	July 19, 2008	16.8	27	August 19, 2008	15.5	20
March 20, 2008	73.8	83	April 20, 2008	22.5	30	May 20, 2008	28.9	36	June 20, 2008	18.5	29	July 20, 2008	16.3	28	August 20, 2008	16.2	21
March 21, 2008	62.6	80	April 21, 2008	21.3	30	May 21, 2008	26.1	34	June 21, 2008	19.0	29	July 21, 2008	18.3	29	August 21, 2008	15.3	20
March 22, 2008	39.4	45	April 22, 2008	22.2	55	May 22, 2008	23.3	33	June 22, 2008	18.2	28	July 22, 2008	17.4	23	August 22, 2008	16.1	22
March 23, 2008	32.7	41	April 23, 2008	19.9	32	May 23, 2008	22.5	42	June 23, 2008	18.0	29	July 23, 2008	17.0	22	August 23, 2008	15.4	26
March 24, 2008	30.0	37	April 24, 2008	20.4	31	May 24, 2008	21.4	32	June 24, 2008	16.6	29	July 24, 2008	16.5	23	August 24, 2008	15.1	27
March 25, 2008	27.9	34	April 25, 2008	20.0	30	May 25, 2008	19.7	31	June 25, 2008	16.8	28	July 25, 2008	16.6	21	August 25, 2008	16.5	21
March 26, 2008	26.6	34	April 26, 2008	22.8	31	May 26, 2008	20.6	32	June 26, 2008	16.5	21	July 26, 2008	16.3	21	August 26, 2008	16.4	28
March 27, 2008	50.5	80	April 27, 2008	21.6	31	May 27, 2008	20.9	32	June 27, 2008	16.9	21	July 27, 2008	16.0	23	August 27, 2008	16.6	28
March 28, 2008	58.6	78	April 28, 2008	22.5	53	May 28, 2008	21.1	32	June 28, 2008	19.4	29	July 28, 2008	17.0	22	August 28, 2008	16.1	22
March 29, 2008	43.0	54	April 29, 2008	20.3	32	May 29, 2008	19.8	31	June 29, 2008	18.0	27	July 29, 2008	17.0	22	August 29, 2008	15.7	21
March 30, 2008	35.1	42	April 30, 2008	19.9	32	May 30, 2008	19.5	30	June 30, 2008	17.0	22	July 30, 2008	17.3	23	August 30, 2008	16.0	21
March 31, 2008	33.5	46				May 31, 2008	19.8	29				July 31, 2008	25.7	33	August 31, 2008	15.3	20
															September 1, 2008	15.7	23

## FLOYD'S FORK WASTEWATER TREATMENT PLANT

	Total MG	Peak MGD		Total MG	Peak MGD		Total MG	Peak MGD		Total MG	Peak MGD		Total MG	Peak MGD		Total MG	Peak MGD
March 1, 2008	2.187	3.661	April 1, 2008	3.227	7.038	May 1, 2008	1.707	2.832	June 1, 2008	1.764	2.949	July 1, 2008	1.614	2.899	August 1, 2008	2.885	2.983
March 2, 2008	2.158	3.590	April 2, 2008	2.665	6.689	May 2, 2008	2.072	4.360	June 2, 2008	1.687	3.012	July 2, 2008	1.586	2.683	August 2, 2008	2.182	4.169
March 3, 2008	1.987	3.568	April 3, 2008	2.756	4.666	May 3, 2008	4.563	6.494	June 3, 2008	1.959	3.068	July 3, 2008	1.566	2.772	August 3, 2008	2.093	2.893
March 4, 2008	7.097	12.925	April 4, 2008	8.212	15.000	May 4, 2008	2.774	4.651	June 4, 2008	1.838	3.838	July 4, 2008	1.982	4.988	August 4, 2008	2.047	3.093
March 5, 2008	4.590	7.682	April 5, 2008	4.673	6.750	May 5, 2008	2.209	3.269	June 5, 2008	1.702	2.667	July 5, 2008	2.444	4.077	August 5, 2008	1.862	2.820
March 6, 2008	2.785	5.983	April 6, 2008	3.102	4.505	May 6, 2008	1.989	3.298	June 6, 2008	1.682	2.589	July 6, 2008	1.961	3.833	August 6, 2008	1.853	3.977
March 7, 2008	2.686	4.134	April 7, 2008	2.379	4.198	May 7, 2008	1.971	3.208	June 7, 2008	1.731	2.592	July 7, 2008	1.961	2.944	August 7, 2008	1.916	3.059
March 8, 2008	2.633	4.115	April 8, 2008	2.153	3.548	May 8, 2008	2.874	4.896	June 8, 2008	1.715	2.813	July 8, 2008	2.055	4.563	August 8, 2008	1.861	2.924
March 9, 2008	2.578	4.404	April 9, 2008	2.046	3.468	May 9, 2008	2.686	4.608	June 9, 2008	1.580	3.059	July 9, 2008	2.219	3.218	August 9, 2008	1.812	2.906
March 10, 2008	3.304	4.830	April 10, 2008	1.965	3.400	May 10, 2008	2.369	4.158	June 10, 2008	1.539	3.122	July 10, 2008	1.878	2.878	August 10, 2008	1.810	4.045
March 11, 2008	3.553	4.729	April 11, 2008	2.768	4.691	May 11, 2008	3.102	6.524	June 11, 2008	1.531	2.689	July 11, 2008	1.781	2.678	August 11, 2008	1.821	2.998
March 12, 2008	3.208	4.493	April 12, 2008	2.726	4.364	May 12, 2008	3.118	9.637	June 12, 2008	1.523	2.596	July 12, 2008	1.819	4.084	August 12, 2008	1.717	2.927
March 13, 2008	2.686	4.196	April 13, 2008	2.462	3.867	May 13, 2008	2.361	4.112	June 13, 2008	1.870	3.930	July 13, 2008	2.482	5.913	August 13, 2008	1.646	4.228
March 14, 2008	2.755	4.299	April 14, 2008	2.175	3.051	May 14, 2008	3.115	5.659	June 14, 2008	2.214	3.182	July 14, 2008	1.856	5.540	August 14, 2008	1.610	3.084
March 15, 2008	3.174	6.059	April 15, 2008	1.992	2.927	May 15, 2008	3.659	8.554	June 15, 2008	1.854	2.976	July 15, 2008	1.712	3.532	August 15, 2008	1.725	2.877
March 16, 2008	3.207	5.323	April 16, 2008	1.954	2.871	May 16, 2008	5.619	8.666	June 16, 2008	1.822	2.825	July 16, 2008	1.653	2.651	August 16, 2008	1.795	2.779
March 17, 2008	2.535	6.008	April 17, 2008	1.872	2.861	May 17, 2008	3.093	4.972	June 17, 2008	1.760	2.901	July 17, 2008	2.701	4.096	August 17, 2008	1.812	3.851
March 18, 2008	3.518	6.760	April 18, 2008	1.813	2.607	May 18, 2008	2.547	4.199	June 18, 2008	1.657	2.926	July 18, 2008	1.924	4.608	August 18, 2008	1.844	3.002
March 19, 2008	2.849	9.928	April 19, 2008	1.967	2.886	May 19, 2008	2.169	6.272	June 19, 2008	1.610	2.791	July 19, 2008	1.803	4.041	August 19, 2008	1.659	4.073
March 20, 2008	1.830	5.791	April 20, 2008	2.008	2.900	May 20, 2008	1.983	2.954	June 20, 2008	1.845	2.898	July 20, 2008	1.867	3.592	August 20, 2008	1.589	3.025
March 21, 2008	3.137	5.020	April 21, 2008	1.768	2.839	May 21, 2008	1.911	3.450	June 21, 2008	1.909	2.971	July 21, 2008	1.948	6.593	August 21, 2008	1.593	3.005
March 22, 2008	2.760	4.592	April 22, 2008	1.715	2.954	May 22, 2008	1.819	5.647	June 22, 2008	1.917	3.323	July 22, 2008	1.946	3.009	August 22, 2008	1.576	4.074
March 23, 2008	2.480	4.479	April 23, 2008	1.674	2.944	May 23, 2008	1.757	2.719	June 23, 2008	1.846	2.971	July 23, 2008	2.012	2.515	August 23, 2008	1.556	3.724
March 24, 2008	2.248	4.635	April 24, 2008	1.700	2.735	May 24, 2008	1.908	2.825	June 24, 2008	1.658	4.468	July 24, 2008	1.847	3.713	August 24, 2008	1.661	2.880
March 25, 2008	2.146	2.839	April 25, 2008	1.686	2.902	May 25, 2008	1.798	2.713	June 25, 2008	1.647	4.666	July 25, 2008	1.823	2.809	August 25, 2008	1.774	4.079
March 26, 2008	2.022	6.426	April 26, 2008	1.968	2.960	May 26, 2008	1.831	3.120	June 26, 2008	1.697	3.025	July 26, 2008	1.743	3.935	August 26, 2008	1.576	3.972
March 27, 2008	5.443	10.540	April 27, 2008	1.957	3.124	May 27, 2008	1.752	2.804	June 27, 2008	1.886	2.982	July 27, 2008	1.834	2.907	August 27, 2008	1.506	3.890
March 28, 2008	5.705	10.888	April 28, 2008	1.789	3.043	May 28, 2008	1.789	3.106	June 28, 2008	2.278	3.369	July 28, 2008	1.835	2.895	August 28, 2008	1.692	2.825
March 29, 2008	3.547	5.240	April 29, 2008	1.755	2.877	May 29, 2008	1.690	2.727	June 29, 2008	1.985	2.973	July 29, 2008	1.940	3.021	August 29, 2008	1.481	2.644
March 30, 2008	2.866	4.832	April 30, 2008	1.713	2.964	May 30, 2008	1.688	3.014	June 30, 2008	1.707	3.017	July 30, 2008	1.820	2.976	August 30, 2008	1.562	4.232
March 31, 2008	2.608	7.002				May 31, 2008	1.743	2.965				July 31, 2008	1.857	4.578	August 31, 2008	1.838	3.742

## JEFFERSONTOWN WASTEWATER TREATMENT PLANT

## New Effluent Flow meter

	Total MG	Peak MGD		Total MG	Peak MGD		Total MG	Peak MGD		Total MG	Peak MGD		Total MG	Peak MGD		Total MG	Peak MGD
March 1, 2008	4.462	5.538	April 1, 2008	6.662	8.863	May 1, 2008	2.902	4.068	June 1, 2008	2.791	4.134	July 1, 2008	2.854	3.848	August 1, 2008	3.76	5.12
March 2, 2008	4.425	5.381	April 2, 2008	5.467	6.688	May 2, 2008	3.826	8.587	June 2, 2008	2.804	3.835	July 2, 2008	2.853	3.727	August 2, 2008	3.33	7.14
March 3, 2008	4.447	8.157	April 3, 2008	5.770	16.778	May 3, 2008	8.033	12.916	June 3, 2008	4.114	6.353	July 3, 2008	2.855	3.621	August 3, 2008	3.04	7.11
March 4, 2008	5.649	18.313	April 4, 2008	16.831	19.569	May 4, 2008	5.201	6.502	June 4, 2008	4.145	4.449	July 4, 2008	4.984	14.593	August 4, 2008	2.75	7.34
March 5, 2008	8.701	14.670	April 5, 2008	11.519	14.468	May 5, 2008	4.427	5.244	June 5, 2008	3.443	3.934	July 5, 2008	5.769	12.231	August 5, 2008	3.29	8.51
March 6, 2008	10.914	8.876	April 6, 2008	7.945	9.548	May 6, 2008	3.869	4.970	June 6, 2008	3.034	3.870	July 6, 2008	4.260	4.817	August 6, 2008	3.52	8.56
March 7, 2008	7.472	7.041	April 7, 2008	6.314	28.787	May 7, 2008	3.830	6.350	June 7, 2008	2.865	3.989	July 7, 2008	3.528	6.071	August 7, 2008	3.52	7.33
March 8, 2008	5.999	7.208	April 8, 2008	5.573	6.374	May 8, 2008	6.452	10.845	June 8, 2008	2.625	3.782	July 8, 2008	3.349	4.299	August 8, 2008	3.27	18.58
March 9, 2008	5.914	8.662	April 9, 2008	4.954	5.740	May 9, 2008	5.782	6.917	June 9, 2008	2.647	3.792	July 9, 2008	3.454	5.088	August 9, 2008	2.82	7.40
March 10, 2008	6.175	10.363	April 10, 2008	4.367	5.327	May 10, 2008	4.900	5.984	June 10, 2008	2.651	3.648	July 10, 2008	3.182	3.991	August 10, 2008	2.75	7.87
March 11, 2008	9.778	9.081	April 11, 2008	5.610	8.308	May 11, 2008	6.259	9.024	June 11, 2008	2.585	3.576	July 11, 2008	2.917	3.837	August 11, 2008	2.79	8.22
March 12, 2008	7.195	7.899	April 12, 2008	5.403	6.719	May 12, 2008	5.821	7.514	June 12, 2008	2.594	3.583	July 12, 2008	2.857	3.803	August 12, 2008	2.85	18.59
March 13, 2008	6.016	7.002	April 13, 2008	5.003	6.186	May 13, 2008	5.262	5.934	June 13, 2008	2.593	7.296	July 13, 2008	3.322	4.626	August 13, 2008	3.00	4.28
March 14, 2008	6.151	8.103	April 14, 2008	4.491	5.376	May 14, 2008	6.696	10.999	June 14, 2008	3.732	5.738	July 14, 2008	2.955	3.987	August 14, 2008	3.19	8.99
March 15, 2008	6.645	9.271	April 15, 2008	4.147	5.061	May 15, 2008	8.139	18.337	June 15, 2008	3.108	4.120	July 15, 2008	2.952	3.801	August 15, 2008	3.58	8.31
March 16, 2008	6.513	7.958	April 16, 2008	3.913	4.921	May 16, 2008	12.136	17.792	June 16, 2008	3.319	5.218	July 16, 2008	2.710	3.515	August 16, 2008	3.70	4.47
March 17, 2008	5.825	6.340	April 17, 2008	3.692	4.831	May 17, 2008	6.928	8.371	June 17, 2008	3.122	4.314	July 17, 2008	3.150	3.716	August 17, 2008	3.12	8.11
March 18, 2008	7.706	12.564	April 18, 2008	3.470	4.573	May 18, 2008	5.761	7.070	June 18, 2008	2.662	5.389	July 18, 2008	2.410	3.808	August 18, 2008	3.08	14.74
March 19, 2008	14.446	18.195	April 19, 2008	3.526	4.821	May 19, 2008	5.109	5.833	June 19, 2008	3.009	5.996	July 19, 2008	2.407	3.995	August 19, 2008	3.15	5.02
March 20, 2008	11.086	14.274	April 20, 2008	3.524	4.817	May 20, 2008	4.562	5.483	June 20, 2008	3.040	6.758	July 20, 2008	2.368	4.137	August 20, 2008	2.82	18.22
March 21, 2008	7.686	9.021	April 21, 2008	3.288	4.393	May 21, 2008	3.993	5.144	June 21, 2008	4.871	4.945	July 21, 2008	2.413	19.263	August 21, 2008	2.25	2.81
March 22, 2008	6.070	7.326	April 22, 2008	3.209	4.313	May 22, 2008	3.652	4.739	June 22, 2008	3.605	5.779	July 22, 2008	5.041	19.021	August 22, 2008	1.87	2.81
March 23, 2008	5.043	6.387	April 23, 2008	3.115	4.132	May 23, 2008	3.337	4.291	June 23, 2008	3.530	4.582	July 23, 2008	2.604	18.542	August 23, 2008	1.78	3.00
March 24, 2008	4.714	5.682	April 24, 2008	3.025	4.029	May 24, 2008	3.293	4.646	June 24, 2008	3.282	4.188	July 24, 2008	2.501	17.025	August 24, 2008	1.89	6.50
March 25, 2008	4.421	5.349	April 25, 2008	3.017	4.174	May 25, 2008	3.099	4.407	June 25, 2008	2.961	3.910	July 25, 2008	2.278	3.860	August 25, 2008	2.00	3.24
March 26, 2008	4.140	5.694	April 26, 2008	3.503	5.373	May 26, 2008	2.986	4.387	June 26, 2008	2.901	6.123	July 26, 2008	2.231	3.812	August 26, 2008	2.13	3.14
March 27, 2008	9.853	13.136	April 27, 2008	3.241	4.544	May 27, 2008	2.886	4.073	June 27, 2008	3.263	4.914	July 27, 2008	2.145	3.760	August 27, 2008	2.13	7.54
March 28, 2008	10.739	14.594	April 28, 2008	3.216	4.262	May 28, 2008	3.351	4.347	June 28, 2008	3.777	5.470	July 28, 2008	2.132	10.616	August 28, 2008	2.37	3.24
March 29, 2008	7.335	8.799	April 29, 2008	3.101	4.098	May 29, 2008	3.345	4.046	June 29, 2008	3.600	4.709	July 29, 2008	2.658	8.487	August 29, 2008	2.11	19.02
March 30, 2008	5.739	7.008	April 30, 2008	2.951	4.167	May 30, 2008	3.010	3.925	June 30, 2008	3.164	4.123	July 30, 2008	2.891	19.600	August 30, 2008	2.24	6.97
March 31, 2008	5.570	6.870				May 31, 2008	2.890	4.128				July 31, 2008	3.303	9.403	August 31, 2008	2.15	6.74

Note: Data points prior through July 16, 2008, are calculated from adding the influent flow meter readings together for each timestep. Beginning July 17, 2008, the data points are taken from the effluent flow meter downstream from the UV disinfection unit.

## CHENOWETH HILLS WASTEWATER TREATMENT PLANT

	Total MG	Peak MGD		Total MG	Peak MGD		Total MG	Peak MGD		Total MG	Peak MGD		Total MG	Peak MGD		Total MG	Peak MGD
March 1, 2008	0.0758	0.1200	April 1, 2008	0.0931	0.1636	May 1, 2008	0.0582	0.1195	June 1, 2008	0.0639	0.1092	July 1, 2008	0.0622	0.1059	August 1, 2008	0.0886	0.1228
March 2, 2008	0.0795	0.1322	April 2, 2008	0.0973	0.1467	May 2, 2008	0.0913	0.2161	June 2, 2008	0.0639	0.1148	July 2, 2008	0.0603	0.1036	August 2, 2008	0.0717	0.1055
March 3, 2008	0.0745	0.1664	April 3, 2008	0.0838	0.2475	May 3, 2008	0.1849	0.2597	June 3, 2008	0.0599	0.1172	July 3, 2008	0.0623	0.1050	August 3, 2008	0.0691	0.1130
March 4, 2008	0.2729	0.3408	April 4, 2008	0.2956	0.3731	May 4, 2008	0.0993	0.1327	June 4, 2008	0.0690	0.1167	July 4, 2008	0.0663	0.2597	August 4, 2008	0.0687	0.1092
March 5, 2008	0.1602	0.2385	April 5, 2008	0.1817	0.2480	May 5, 2008	0.0728	0.1336	June 5, 2008	0.0657	0.1022	July 5, 2008	0.1132	0.2418	August 5, 2008	0.0600	0.1008
March 6, 2008	0.0999	0.1866	April 6, 2008	0.1113	0.1406	May 6, 2008	0.1748	1.5413	June 6, 2008	0.0587	0.0975	July 6, 2008	0.1167	0.1181	August 6, 2008	0.0627	0.1045
March 7, 2008	0.0886	0.1383	April 7, 2008	0.0763	0.1195	May 7, 2008	0.0681	0.1327	June 7, 2008	0.0597	0.1083	July 7, 2008	0.0786	0.1177	August 7, 2008	0.0624	0.1097
March 8, 2008	0.0889	0.1556	April 8, 2008	0.0696	0.1120	May 8, 2008	0.1098	0.2030	June 8, 2008	0.0628	0.1097	July 8, 2008	0.0701	0.1083	August 8, 2008	0.0610	0.1092
March 9, 2008	0.0943	0.1711	April 9, 2008	0.0693	0.1092	May 9, 2008	0.0934	0.1477	June 9, 2008	0.0632	0.1275	July 9, 2008	0.0664	0.1041	August 9, 2008	0.0526	0.0980
March 10, 2008	0.1193	0.2020	April 10, 2008	0.0664	0.1163	May 10, 2008	0.0793	0.1359	June 10, 2008	0.0518	0.1073	July 10, 2008	0.0648	0.0970	August 10, 2008	0.0608	0.1134
March 11, 2008	0.1093	0.1688	April 11, 2008	0.0821	0.1275	May 11, 2008	0.1169	0.2072	June 11, 2008	0.0584	0.1102	July 11, 2008	0.0602	0.1008	August 11, 2008	0.0636	0.1059
March 12, 2008	0.0974	0.1556	April 12, 2008	0.0801	0.1209	May 12, 2008	0.1012	0.1500	June 12, 2008	0.0581	0.1059	July 12, 2008	0.0596	0.1003	August 12, 2008	0.0560	0.1177
March 13, 2008	0.0854	0.1495	April 13, 2008	0.0797	0.1261	May 13, 2008	0.0752	0.1313	June 13, 2008	0.0553	0.1139	July 13, 2008	0.0642	0.1120	August 13, 2008	0.0535	0.1073
March 14, 2008	0.0916	0.1514	April 14, 2008	0.0678	0.1158	May 14, 2008	0.1123	0.1983	June 14, 2008	0.0680	0.1097	July 14, 2008	0.0694	0.1153	August 14, 2008	0.0587	0.1139
March 15, 2008	0.1115	0.1964	April 15, 2008	0.0635	0.1242	May 15, 2008	0.1380	0.2747	June 15, 2008	0.0694	0.1078	July 15, 2008	0.0626	0.1013	August 15, 2008	0.0605	3.8344
March 16, 2008	0.1088	0.1519	April 16, 2008	0.0630	0.1214	May 16, 2008	0.1797	0.2648	June 16, 2008	0.0646	0.1083	July 16, 2008	0.0595	0.1078	August 16, 2008	0.0620	0.1106
March 17, 2008	0.0830	0.1392	April 17, 2008	0.0621	0.1214	May 17, 2008	0.1211	0.1645	June 17, 2008	0.0621	0.1092	July 17, 2008	0.0599	0.1022	August 17, 2008	0.0662	0.1228
March 18, 2008	0.1189	0.2034	April 18, 2008	0.0611	0.1158	May 18, 2008	0.0918	0.1350	June 18, 2008	0.0602	0.1064	July 18, 2008	0.0586	0.1055	August 18, 2008	0.0685	0.1261
March 19, 2008	0.2605	0.3544	April 19, 2008	0.0726	0.1134	May 19, 2008	0.0711	0.1448	June 19, 2008	0.0552	0.1050	July 19, 2008	0.0597	0.1064	August 19, 2008	0.0582	0.1125
March 20, 2008	0.1749	0.2348	April 20, 2008	0.0733	0.2025	May 20, 2008	0.0718	0.1345	June 20, 2008	0.0529	0.1172	July 20, 2008	0.0633	0.1092	August 20, 2008	0.0591	0.1163
March 21, 2008	0.1060	0.1566	April 21, 2008	0.0715	0.1294	May 21, 2008	0.0713	0.1270	June 21, 2008	0.0714	0.1158	July 21, 2008	0.0652	0.1031	August 21, 2008	0.0575	0.1163
March 22, 2008	0.0902	0.1270	April 22, 2008	0.0635	0.1247	May 22, 2008	0.0665	0.1214	June 22, 2008	0.0671	0.1088	July 22, 2008	0.0610	0.1130	August 22, 2008	0.0647	0.1134
March 23, 2008	0.0852	0.1303	April 23, 2008	0.0610	0.1167	May 23, 2008	0.0625	0.1106	June 23, 2008	0.0637	0.1355	July 23, 2008	0.0643	0.1120	August 23, 2008	0.0591	0.1134
March 24, 2008	0.0773	0.1186	April 24, 2008	0.0592	0.1266	May 24, 2008	0.0618	0.1083	June 24, 2008	0.0580	0.0998	July 24, 2008	0.0637	0.1013	August 24, 2008	0.0694	0.1219
March 25, 2008	0.0712	0.1261	April 25, 2008	0.0577	0.1106	May 25, 2008	0.0631	0.1106	June 25, 2008	0.0568	0.1097	July 25, 2008	0.0610	0.0994	August 25, 2008	0.0681	0.1139
March 26, 2008	0.0666	0.1219	April 26, 2008	0.0729	0.1195	May 26, 2008	0.0652	0.1186	June 26, 2008	0.0628	0.1406	July 26, 2008	0.0613	0.1003	August 26, 2008	0.0578	0.1763
March 27, 2008	0.1162	0.2189	April 27, 2008	0.0711	0.1153	May 27, 2008	0.0664	0.1106	June 27, 2008	0.0661	0.1125	July 27, 2008	0.0636	0.1059	August 27, 2008	0.0586	0.1345
March 28, 2008	0.1576	0.2639	April 28, 2008	0.0647	0.1238	May 28, 2008	0.0520	0.1247	June 28, 2008	0.0649	0.1289	July 28, 2008	0.0642	0.1092	August 28, 2008	0.1098	1.5408
March 29, 2008	0.1292	0.1416	April 29, 2008	0.0631	0.1148	May 29, 2008	0.0639	0.1088	June 29, 2008	0.0850	0.1134	July 29, 2008	0.0612	0.1045	August 29, 2008	0.0586	0.1116
March 30, 2008	0.0742	0.1327	April 30, 2008	0.0599	0.1280	May 30, 2008	0.0606	0.1261	June 30, 2008	0.0658	0.1036	July 30, 2008	0.0631	0.1181	August 30, 2008	0.0692	0.1172
March 31, 2008	0.0676	0.1228				May 31, 2008	0.0621	0.1059				July 31, 2008	0.0655	0.1472	August 31, 2008	0.0677	0.1088

## HUNTING CREEK NORTH WASTEWATER TREATMENT PLANT

	Total Gallons	Peak GPM		Total Gallons	Peak GPM		Total Gallons	Peak GPM		Total Gallons	Peak GPM		Total Gallons	Peak GPM		Total Gallons	Peak GPM
March 1, 2008	355135.2	436.81	April 1, 2008	565080.0	536.59	May 1, 2008	288211.2	386.76	June 1, 2008	291757.0	357.11	July 1, 2008	263516.5	291.62	August 1, 2008	353828.8	308.92
March 2, 2008	364533.0	381.20	April 2, 2008	483305.6	485.93	May 2, 2008	428446.9	610.11	June 2, 2008	271067.7	336.10	July 2, 2008	259324.0	273.70	August 2, 2008	282918.3	351.24
March 3, 2008	370941.5	486.54	April 3, 2008	512600.6	1015.41	May 3, 2008	734683.6	1016.95	June 3, 2008	334304.6	435.26	July 3, 2008	253628.8	372.55	August 3, 2008	263013.9	319.42
March 4, 2008	998471.2	1017.57	April 4, 2008	577436.9	1015.72	May 4, 2008	455591.4	493.03	June 4, 2008	305545.2	345.99	July 4, 2008	274468.7	316.64	August 4, 2008	261257.3	431.56
March 5, 2008	630516.3	617.83	April 5, 2008	646810.9	567.17	May 5, 2008	388622.3	449.47	June 5, 2008	287712.0	317.87	July 5, 2008	281017.0	311.70	August 5, 2008	275029.0	492.72
March 6, 2008	501400.5	547.71	April 6, 2008	554391.5	553.89	May 6, 2008	368568.3	507.86	June 6, 2008	287562.7	327.45	July 6, 2008	264406.7	281.42	August 6, 2008	280568.2	297.80
March 7, 2008	478574.1	447.31	April 7, 2008	482813.9	479.13	May 7, 2008	376758.2	420.43	June 7, 2008	285362.6	352.16	July 7, 2008	261170.0	449.47	August 7, 2008	273435.0	558.52
March 8, 2008	457460.9	433.41	April 8, 2008	432306.9	480.67	May 8, 2008	432270.6	421.36	June 8, 2008	283195.4	316.95	July 8, 2008	282640.0	303.97	August 8, 2008	263447.4	565.93
March 9, 2008	461673.6	501.06	April 9, 2008	396915.0	472.64	May 9, 2008	398056.7	415.49	June 9, 2008	283075.4	329.00	July 9, 2008	276646.7	338.57	August 9, 2008	232676.9	269.68
March 10, 2008	477832.3	501.37	April 10, 2008	386033.1	492.72	May 10, 2008	377866.2	434.95	June 10, 2008	275802.2	299.34	July 10, 2008	279976.3	342.90	August 10, 2008	241229.9	283.89
March 11, 2008	531090.1	711.74	April 11, 2008	455066.1	505.39	May 11, 2008	462032.0	463.07	June 11, 2008	265747.0	302.43	July 11, 2008	263962.6	333.94	August 11, 2008	244108.1	283.58
March 12, 2008	510201.5	469.55	April 12, 2008	405978.4	377.80	May 12, 2008	411323.4	496.43	June 12, 2008	260587.3	312.62	July 12, 2008	260541.1	296.56	August 12, 2008	250198.6	532.88
March 13, 2008	492607.5	518.67	April 13, 2008	407193.3	553.58	May 13, 2008	377305.5	514.65	June 13, 2008	271806.4	321.58	July 13, 2008	269291.6	366.99	August 13, 2008	251836.8	280.50
March 14, 2008	477046.2	424.45	April 14, 2008	375632.0	414.57	May 14, 2008	497349.8	725.64	June 14, 2008	289018.6	333.32	July 14, 2008	294436.0	489.32	August 14, 2008	244099.7	298.41
March 15, 2008	488485.3	598.68	April 15, 2008	348293.9	428.16	May 15, 2008	517967.5	1016.03	June 15, 2008	285876.6	401.90	July 15, 2008	260251.6	403.14	August 15, 2008	251044.4	260.73
March 16, 2008	472051.6	472.33	April 16, 2008	355724.7	403.14	May 16, 2008	611929.4	608.56	June 16, 2008	289762.9	417.35	July 16, 2008	264228.4	316.64	August 16, 2008	242308.4	260.42
March 17, 2008	434362.3	556.05	April 17, 2008	338693.7	405.92	May 17, 2008	481722.1	471.71	June 17, 2008	289462.5	400.05	July 17, 2008	262484.3	282.97	August 17, 2008	235048.7	308.30
March 18, 2008	873009.9	1016.03	April 18, 2008	335387.2	354.33	May 18, 2008	434985.8	453.80	June 18, 2008	126772.9	317.57	July 18, 2008	249664.2	384.91	August 18, 2008	247277.9	322.20
March 19, 2008	1270728.5	1016.03	April 19, 2008	344134.1	363.29	May 19, 2008	410447.9	413.95	June 19, 2008	196859.8	351.24	July 19, 2008	264336.1	295.94	August 19, 2008	240388.1	264.74
March 20, 2008	829005.4	764.57	April 20, 2008	353055.4	380.89	May 20, 2008	377760.6	391.40	June 20, 2008	263553.5	292.54	July 20, 2008	260368.8	401.28	August 20, 2008	241318.3	309.84
March 21, 2008	595006.4	567.48	April 21, 2008	333387.4	409.62	May 21, 2008	367533.9	675.29	June 21, 2008	273976.0	322.20	July 21, 2008	277295.2	345.99	August 21, 2008	244872.8	319.73
March 22, 2008	539383.0	487.78	April 22, 2008	307598.8	361.12	May 22, 2008	343641.4	378.73	June 22, 2008	274949.9	344.75	July 22, 2008	277435.3	417.96	August 22, 2008	258766.4	277.41
March 23, 2008	480227.9	466.15	April 23, 2008	306859.4	489.94	May 23, 2008	330782.7	359.89	June 23, 2008	278303.9	554.81	July 23, 2008	275606.6	401.59	August 23, 2008	239489.1	288.53
March 24, 2008	420722.3	487.16	April 24, 2008	306619.7	414.26	May 24, 2008	327021.8	367.92	June 24, 2008	268655.4	368.23	July 24, 2008	275496.8	398.50	August 24, 2008	250445.4	350.00
March 25, 2008	417454.4	691.35	April 25, 2008	309610.0	593.74	May 25, 2008	308586.0	349.69	June 25, 2008	268216.7	345.68	July 25, 2008	267716.1	258.56	August 25, 2008	227830.1	446.69
March 26, 2008	393203.7	410.55	April 26, 2008	323213.3	369.46	May 26, 2008	322381.0	365.76	June 26, 2008	248000.3	410.24	July 26, 2008	244285.0	470.48	August 26, 2008	239919.1	267.21
March 27, 2008	849385.9	1016.64	April 27, 2008	317240.4	346.29	May 27, 2008	309295.9	346.60	June 27, 2008	283233.6	313.55	July 27, 2008	256258.6	288.22	August 27, 2008	228821.3	287.29
March 28, 2008	801558.4	1015.41	April 28, 2008	308089.4	396.34	May 28, 2008	289185.9	402.21	June 28, 2008	268282.1	318.18	July 28, 2008	252878.3	306.75	August 28, 2008	235117.4	326.83
March 29, 2008	592494.0	552.34	April 29, 2008	298810.9	360.20	May 29, 2008	288710.6	356.18	June 29, 2008	325407.8	383.06	July 29, 2008	272390.1	340.12	August 29, 2008	230699.7	275.55
March 30, 2008	541724.3	562.85	April 30, 2008	288211.2	357.72	May 30, 2008	289564.1	397.88	June 30, 2008	279580.3	359.27	July 30, 2008	270710.0	334.56	August 30, 2008	231373.3	256.09
March 31, 2008	552322.1	534.42				May 31, 2008	291262.5	341.66				July 31, 2008	266198.0	390.78	August 31, 2008	227144.9	292.54

## SILVER HEIGHTS WASTEWATER TREATMENT PLANT

	Total	Peak		Total	Peak		Total	Peak		Total	Peak		Total	Peak		Total	Peak
March 1, 2008	0.461298305	1.043639898	April 1, 2008	0.77688098	1.254320145	May 1, 2008	0.275071084	0.575913548	June 1, 2008	0.268039376	0.537681997	July 1, 2008	0.188306928	0.474233896	August 1, 2008	0.265594333	0.457151711
March 2, 2008	0.449836468	1.059095263	April 2, 2008	0.585598528	1.133118033	May 2, 2008	0.3742764	1.458492875	June 2, 2008	0.253956705	0.547443211	July 2, 2008	0.199231803	0.41729328	August 2, 2008	0.214955032	0.422173917
March 3, 2008	0.453021376	1.503232002	April 3, 2008	0.600801408	2.670514345	May 3, 2008	1.051950812	1.908323646	June 3, 2008	0.29662317	0.632040679	July 3, 2008	0.185389504	0.402651429	August 3, 2008	0.224692971	0.411599219
March 4, 2008	1.785848254	2.371169567	April 4, 2008	1.130000353	6.662864208	May 4, 2008	0.600545585	1.399111986	June 4, 2008	0.294804275	0.597062886	July 4, 2008	0.198578179	0.575913548	August 4, 2008	0.228700504	0.479927957
March 5, 2008	1.299095554	2.151541471	April 5, 2008	1.434134007	2.183145051	May 5, 2008	0.480505139	1.046080232	June 5, 2008	0.261590183	0.473420441	July 5, 2008	0.241829902	0.497823566	August 5, 2008	0.21817258	0.457965136
March 6, 2008	0.813250346	1.67974782	April 6, 2008	0.916973054	1.458492875	May 6, 2008	0.42758292	1.171349525	June 6, 2008	0.231131688	0.462845773	July 6, 2008	0.225936919	0.46772638	August 6, 2008	0.222886994	0.57428664
March 7, 2008	0.638117907	1.364134192	April 7, 2008	0.686468244	1.129864335	May 7, 2008	0.408920318	1.119289637	June 7, 2008	0.230030477	0.48399514	July 7, 2008	0.23190999	0.481554836	August 7, 2008	0.221814856	0.463659197
March 8, 2008	0.627903243	1.351119161	April 8, 2008	0.571788788	1.085938692	May 8, 2008	0.722405195	1.953876138	June 8, 2008	0.245822877	0.468539834	July 8, 2008	0.233442023	0.501077294	August 8, 2008	0.221363679	0.469353259
March 9, 2008	0.688176833	1.452798843	April 9, 2008	0.552768111	1.034692168	May 9, 2008	0.673715293	1.222596169	June 9, 2008	0.228323489	0.425427645	July 9, 2008	0.237539172	0.465286076	August 9, 2008	0.205987051	0.457965136
March 10, 2008	0.873456923	1.820472479	April 10, 2008	0.48610723	1.166468978	May 10, 2008	0.536042511	1.429209113	June 10, 2008	0.221173972	0.438442647	July 10, 2008	0.244195759	0.476674199	August 10, 2008	0.218200624	0.493756384
March 11, 2008	0.876711416	1.488590121	April 11, 2008	0.545558631	1.098953605	May 11, 2008	0.716527879	1.82779336	June 11, 2008	0.213062763	0.471793592	July 11, 2008	0.204989448	0.399397671	August 11, 2008	0.234246269	0.5165326
March 12, 2008	0.773143482	1.519500732	April 12, 2008	0.474456996	0.95009464	May 12, 2008	0.600544631	1.800949931	June 12, 2008	0.211917773	0.423800796	July 12, 2008	0.194905907	0.444136709	August 12, 2008	0.215332523	0.466912955
March 13, 2008	0.640794094	1.386910439	April 13, 2008	0.443657279	0.879325628	May 13, 2008	0.508164942	0.935452759	June 13, 2008	0.234177783	0.641801953	July 13, 2008	0.22430782	0.638548195	August 13, 2008	0.217872635	0.461218894
March 14, 2008	0.7019144	1.371455073	April 14, 2008	0.416661263	0.847601593	May 14, 2008	0.707101405	1.634195328	June 14, 2008	0.277403742	0.648309469	July 14, 2008	0.288620949	0.494569808	August 14, 2008	0.202091157	0.452271074
March 15, 2008	0.773442165	1.778987169	April 15, 2008	0.380908012	0.764630973	May 15, 2008	0.95748198	2.670514345	June 15, 2008	0.236311153	0.469353259	July 15, 2008	0.226328567	0.501890779	August 15, 2008	0.198919356	0.422173917
March 16, 2008	0.798861645	1.3259027	April 16, 2008	0.370422244	0.737787545	May 16, 2008	1.584800601	2.670514345	June 16, 2008	0.235666946	0.527920723	July 16, 2008	0.203424022	0.463659197	August 16, 2008	0.205314785	0.454711407
March 17, 2008	0.636934851	1.305566669	April 17, 2008	0.33978501	0.709317267	May 17, 2008	0.871048331	1.464187026	June 17, 2008	0.230562583	0.452271074	July 17, 2008	0.201551735	0.416479856	August 17, 2008	0.203781143	0.501077294
March 18, 2008	0.827055521	1.794442415	April 18, 2008	0.329174846	0.672712564	May 18, 2008	0.684175491	1.247812629	June 18, 2008	0.219683468	0.484808564	July 18, 2008	0.19042331	0.434375465	August 18, 2008	0.219436124	0.478301078
March 19, 2008	1.841855357	2.670514345	April 19, 2008	0.32950598	0.713384449	May 19, 2008	0.529568017	1.06274605	June 19, 2008	0.219677016	0.440882951	July 19, 2008	0.194398627	0.431935161	August 19, 2008	0.213954836	0.448203892
March 20, 2008	1.522840726	2.641230583	April 20, 2008	0.330936402	1.057468414	May 20, 2008	0.479298919	1.030624986	June 20, 2008	0.232838184	0.450644225	July 20, 2008	0.216687068	0.478301078	August 20, 2008	0.200550959	0.446577013
March 21, 2008	0.922708757	1.682188153	April 21, 2008	0.309584379	0.759750366	May 21, 2008	0.42980364	0.956602156	June 21, 2008	0.232830539	0.451457649	July 21, 2008	0.224077553	0.496196687	August 21, 2008	0.199255973	0.490502626
March 22, 2008	0.68388021	1.27872324	April 22, 2008	0.29948765	0.645869136	May 22, 2008	0.379768342	0.904542148	June 22, 2008	0.228711188	0.47504732	July 22, 2008	0.226906925	0.46609953	August 22, 2008	0.211285755	0.461218894
March 23, 2008	0.601575494	1.309633851	April 23, 2008	0.278790295	0.591368854	May 23, 2008	0.348110437	0.828892529	June 23, 2008	0.23183091	0.427867979	July 23, 2008	0.203619793	0.428681403	August 23, 2008	0.193335086	0.472607017
March 24, 2008	0.540689111	1.24618578	April 24, 2008	0.297776163	0.626346648	May 24, 2008	0.326464295	0.662137866	June 24, 2008	0.216371164	0.468539834	July 24, 2008	0.204315126	0.389636427	August 24, 2008	0.22443904	0.497010142
March 25, 2008	0.472578496	1.239678264	April 25, 2008	0.281715244	0.62309289	May 25, 2008	0.315540463	0.63041383	June 25, 2008	0.204116032	0.423800796	July 25, 2008	0.190854266	0.378248304	August 25, 2008	0.206462294	0.513278902
March 26, 2008	0.448560566	1.037132382	April 26, 2008	0.320728987	0.974497795	May 26, 2008	0.313802004	0.650749743	June 26, 2008	0.187526971	0.396957368	July 26, 2008	0.200950235	0.423800796	August 26, 2008	0.211336538	0.497010142
March 27, 2008	0.787017047	1.577254772	April 27, 2008	0.308847636	0.702809751	May 27, 2008	0.293958485	0.701182842	June 27, 2008	0.202359438	0.406718612	July 27, 2008	0.21590209	0.420547038	August 27, 2008	0.199716285	0.449017346
March 28, 2008	0.942402244	1.642329693	April 28, 2008	0.294727176	0.598689795	May 28, 2008	0.277273387	0.652376652	June 28, 2008	0.201947361	0.477487653	July 28, 2008	0.226700693	0.46772638	August 28, 2008	0.200916916	180.7638245
March 29, 2008	0.715874135	1.508926034	April 29, 2008	0.281606704	0.497010142	May 29, 2008	0.259497225	1.806644082	June 29, 2008	0.237885654	0.501890779	July 29, 2008	0.21383594	0.494569808	August 29, 2008	0.195066199	0.407532036
March 30, 2008	0.692524076	1.129864335	April 30, 2008	0.277237654	0.582421064	May 30, 2008	0.261828244	0.486435443	June 30, 2008	0.222079426	0.449017346	July 30, 2008	0.213684261	0.475860775	August 30, 2008	0.193484306	0.484808564
March 31, 2008	0.593932629					May 31, 2008	0.266198874	0.499450445				July 31, 2008	0.227711424	0.48399514	31-Aug-08 00:00:01	0.186161384	0.483181685