

**EAST GOSHEN MUNICIPAL AUTHORITY**

**September 12, 2011**

**Monday, 7:00 PM**

**1. CALL TO ORDER/PLEDGE OF ALLEGIANCE/MOMENT OF SILENCE**

- a. Ask if anyone will be taping the meeting?

**2. RIDLEY CREEK REPORTS**

- a. Brickhouse Environmental Project Manager Report
- b. Pennoni Engineers Report
- c. Miller Environmental, Inc. Monthly Operations Report
- d. Cost Summary Report
- e. Change Orders – None
- f. Scott Towler – Hurricane Irene Report
- g. Miller Environmental – Earthquake Report

**3. RIDLEY CREEK INVOICES**

- a. Brickhouse Environmental \$ 12,765.00

**4. CHAIRMAN'S REPORT/OTHER MEMBERS REPORTS**

**5. APPROVAL OF MINUTES**

- a. August 8, 2011
- b. August 18, 2011

**6. APPROVAL OF INVOICES**

- a. Pennoni #480795 \$ 467.50
- b. Pennoni #480796 \$ 10,195.91
- c. Pennoni #480797 \$ 2,624.50

**7. LIAISON REPORTS**

**8. FINANCIAL REPORTS**

- a. August Report

**9. OLD BUSINESS**

**10. GOALS**

- a. 2011 Goals

**11. NEW BUSINESS**

**12. CAPACITY REQUESTS - none**

**13. SEWER REPORTS**

- a. Director of Public Works Report
- b. East Goshen Township Flows for August 2011

**14. ANY OTHER MATTER**

15. CORRESPONDENCE AND REPORTS OF INTEREST

16. PUBLIC COMMENT

17. ADJOURNMENT

18. EXECUTIVE SESSION – LEGAL

none

19. ADJOURNMENT

*Reminder* – NEWSLETTER ARTICLE SUBMISSION DUE DATES:

**Article Due Date**

**Delivery date**

November 9, 2011- Dana

January 1, 2011

## **East Goshen Township Municipal Authority**

### **Ridley Creek Sewage Treatment Plant Upgrade and Expansion Project**

#### **Project Manager's August/September 2011 Report**

##### **Executive Summary**

###### Construction Close-out

During the period of August through September 12, 2011, the RCSTP Upgrade and Expansion Project attained final close-out.

On August 8, 2011, a mediation hearing was conducted between Clinger Corporation and The Municipal Authority to resolve the outstanding claim of additional expenses for which Clinger Corporation claims compensation. No resolution to the matter was resolved on August 8<sup>th</sup>, however, continued discussions between the Municipal Authority and Clinger Corporation resulted in a settlement agreement executed and dated by both parties on August 22, 2011.

Clinger Corporation was confirmed as providing all documents as required for final project close-out. The contract and closed and release of remaining contract retainage was issued on August 18, 2011.

Worth & Company continues to resolve identified equipment malfunctions considered as warranty items. During the month, the following issues were resolved:

- Exhaust fan for centrifuge sludge dewatering building
- Flocc tank mixer
- Centrifuge sludge dewatering polymer system controller "B" requires additional outputs.
- Alum feed pump MP-32 was confirmed to alternating from operating in automatic mode through the Siemens SBR control panel on several occasions. Correspondence of the malfunction has been reported to ICI and Watson Marlow with no resolution to date.

The Authority has proposed to address using the remaining minor punch list item listed below in exchange for Worth & Company to furnish and install a new influent flow magnetic meter that is watertight. The minor punch list items include;

- Top soil, final grading and seed are required around the sludge holding tanks.
- Touch up paint is required on sludge holding tank hand rails
- Touch up paint on aeration tank piping on the sludge holding tanks.
- Screen building seam at cast-in-place concrete and block water requires water proofing on exterior of building.
- Removal of the silt fence

# **East Goshen Township Municipal Authority**

## **Ridley Creek Sewage Treatment Plant Upgrade and Expansion Project**

### SBR Operations Status

At an onsite meeting on August 31, 2011 with Miller Environmental, Inc.(MEI), facility operation and maintenance provider, to review operations and maintenance of the treatment plant. The Authority provided MEI with a log sheets and schedules for use in recording per pertinent information related to equipment operation and monitoring the treatment process. In addition, MEI was requested to provide the Authority a sampling plan detailing hoe MEI will monitor the treatment process for total phosphorus removal to ensure compliance with the NPDES permit. This sampling and monitoring plan shall provide the Authority plan for which MEI will implement to optimize biological process and chemical usage for managing cost effective and efficient operation of the overall treatment process.

The wastewater treatment remains in compliance with the NPDES permit. The plant operator has included the use of magnesium hydroxide, as slurry, for use in maintaining the pH and alkalinity within the SBRs. Aluminum sulfate is presently added at a rate of 25% pump speed for a period of 10 minutes during the mix fill phase. The present consumption for 3 SBRs is approximately 11.8 gallons per cycle for 47.2 gallons per SBR (141.6 gallons per day).

The SBR treatment process is functioning as original design intended. The treatment cycle has been returned to a 6 hour with the appropriate influent loading rates. Mixed liquor suspended solids settleability within the SBRs has improved contributing to the overall effluent quality and excellent clarity.

During August 27<sup>th</sup> and 28<sup>th</sup>, RCSTP experienced considerable rainfall and influent wastewater flows resulting for Hurricane Irene. A total of 6.92 inches of rainfall was recorded at the facility with the effluent flow display a maximum flow rate of 2,500 gpm (3.60 MGD) flowing through the effluent collection box for several hours. A summary of events is included as a separate attachment.

The 14-day SBR performance test and demonstration, summarized as a sampling event, has been postponed indefinitely.

The current NPDES permit expires on September 30, 2011. Dave Wolfinger, PA DEP, explained that the currently NPDES discharge permit has been administratively extended through October. e calls to PADEP to allow the plant operator to demonstrate a minimum of two consecutive months of compliance with the phosphorus discharge limits is being pursued. Coordination of an inspection of the facility by PADEP prior to implementation of new discharge limits is recommended.

The RCSTP Upgrade and Expansion Project construction activities and contracts are complete. Final project close-out for Clinger Corporation and Worth & Company has been provided by the Municipal Authority. The August/September 2011 Project Manager's Report marks the conclusion of the project and Project Management agreement with Brickhouse Environmental, Inc.

Respectfully Submitted,

Scott A. Towler, PE, SEO, LO



**MEMORANDUM**

**TO:** East Goshen Municipal Authority Board  
Rick Smith, Township Manager

**FROM:** Daniel Barbato, P.E.  
Authority Engineer

**DATE:** September 7, 2011

**SUBJECT:** Engineer's Report

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**RCSTP Upgrade and Expansion**

- Construction phase services are complete.
- A breakdown of effort expended over the past month by Pennoni is provided with the invoice detail under separate cover.
- Worth and Company and Clinger Corporation have completed their punchlist with the exception of a few warranty items.
- Pennoni participated in the mediation process for the Clinger Corporation claims.

**I/I Metering Project**

- The Township continues to meter flows at selected locations. Meters are in operation in at locations as recommended. Significant progress is being made to reduce infiltration and inflow.

**Ridley Creek Consent Order**

- The next report is due by the end of this month. We have started compiling meter data for the report.

**LCSTP Elimination**

- Samples of the sludge in both ponds show that the material is non-hazardous.
- Design plans were submitted to the Chester County Conservation District on September 6. CCCD will forward the application to DEP following their review and approval.
- Required backfill quantities for both ponds were estimated. Lime quantities for soil stabilization were estimated.

**Hershey Mill PS Diversion, Reserve PS Elimination Planning**

- Both pump stations will be decommissioned and sewage diverted into the East Goshen Ridley Creek gravity sewer system.
- Field recon was started to verify manhole locations and existing infrastructure.
- The surveying task list was generated and boundary research is in progress.

**Marydell PS Elimination Planning**

- The report for the Act 537 Plan Revision was submitted to DEP in April. No comments have been received from DEP at the time of this report.
- The required 60-day public notice for the project was posted on June 24. This public notice period has expired. No public comments were received.
- Resolutions for adoption were provided to the Township Manager.
- West Goshen is expected to adopt resolutions on September 14.
- Once the resolutions are received, we will send the final documents and report to DEP for review. DEP has 120 days for review.

**Applebrook Spray Irrigation NPDES Permit Renewal**

- The NPDES discharge permit was submitted to DEP on June 15. DEP sent a letter confirming that the application is administratively complete and is undergoing technical review.

**Chapter 94 Reports**

- DEP provided several comments on the Ridley Creek Chapter 94 Report. Pennoni responded to the comments and we are awaiting confirmation from DEP that the response satisfies their inquiry.



320 S. 17<sup>th</sup> Street  
Reading, PA 19602-2209  
Telephone: (610) 376-9162  
Facsimilie: (610) 376-9164  
Email: [info@miller-env.com](mailto:info@miller-env.com)  
[www.miller-env.com](http://www.miller-env.com)

Mr. Rick Smith  
Township Manager  
East Goshen Township  
1580 Paoli Pike  
West Chester, PA 19380-6199

Re: East Goshen Wastewater Treatment Plants- Lochwood & Ridley Creek  
September, 2011- Monthly Operation and Maintenance Report

Dear Mr. Smith:

Miller Environmental, Inc. is pleased to report on Operations and Maintenance activities for the month of August, 2011.

**Routine Operation and Maintenance Activities**

- Daily sampling, testing, and inspections for permit compliance.
- Routine daily testing for process optimization.
- Microscopic exams are good/ filaments diminishing

**Non-Routine Operations and Maintenance Activities**

- Alarm responses dropping.
- Flow signals being modified.
- SBR Basins being inspected.
- High flows led to basin splashing

**Summary of Influent Flow- Ridley Creek to be e mailed 9/9**

- AVERAGE: . mgd
- MAXIMUM: . mgd

**Summary of Lochwood Chase Flow to be e mailed 9/9**

- AVERAGE: . mgd
- MAXIMUM: . mgd

**Permit Compliance**

- Ridley had no eDMR exceedences.
- Lochwood had no edmr exceedences.

Thank you,

MILLER ENVIRONMENTAL INC.

William Ronyack

Operations Manager

(SENT VIA EMAIL)

CC: Mark Miller, Director of Public Works  
Scott Stump, MEI  
Dean Miller, MEI  
File





### Pennsylvania Department of Environment Protection Discharge Monitoring Report (DMR)

**FACILITY:** LOCHWOOD CHASE STP & SPRAY SYS  
**PERMITTEE:** EAST GOSHEN TWP MUNI AUTH CHESTER CNTY  
**ADDRESS:** 1580 PACQUI PIKE  
 WEST CHESTER, PA 19380-5107

**PERMIT NUMBER:** 1580430  
**OUTFALL:** 001  
**MONITORING PERIOD:** From: 2011-07-01 To: 2011-07-31

**REGION:** EP SE Right Of  
**COUNTY:** Chester  
**CITY:** WEST CHESTER  
**NO DISCHARGE FROM SITE:** ( )

Parameter	Quantity or Loading		Units	Quality or Concentration		Units	No. Ex.	Frequency of Analysis	Sample Type
	Value	Value		Value	Value				
pH	Sample Measurement	****		7.11	7.11	S.U.	0	1/month	Grab
Parameter Code: 00400 Stage Code: 1	Permit Requirement	****		6.0 Minimum	9.0 Maximum			1/month	Grab
Total Suspended Solids	Sample Measurement	****		117	350	mg/L	1	1/month	Grab
Parameter Code: 00530 Stage Code: 1	Permit Requirement	****		Average Monthly	Weekly Average			1/month	Grab
Total Nitrogen	Sample Measurement	****		17.9	17.9	mg/L	0	1/month	Grab
Parameter Code: 00600 Stage Code: 1	Permit Requirement	****		Report Average Monthly	Report Instantaneous Maximum			1/month	Grab
Flow (mgd)	Sample Measurement	.0209	MGD	****	****		0	Continuous	Recorded
Parameter Code: 50050 Stage Code: G	Permit Requirement	Average Monthly		****	****			Continuous	Recorded
Fecal Coliform	Sample Measurement	****		40	****	CFU/100 mL	0	1/month	Grab
Parameter Code: 74055 Stage Code: 1	Permit Requirement	****		Geometric Mean	****			1/month	Grab
CBOD5	Sample Measurement	****		12	12	mg/L	0	1/month	Grab
Parameter Code: 80082 Stage Code: 1	Permit Requirement	****		Average Monthly	Weekly Average			1/month	Grab

**Name/Title of Principal Executive Officer Or Authorized Agent** \_\_\_\_\_  
**Signature of Principal Executive Officer Or Authorized Agent** \_\_\_\_\_  
**Telephone No** \_\_\_\_\_  
**Date** 2011-08-23

**Report all violations during the reporting period on a Non-Compliance Reporting Form, as an attachment to your eDMR submission.**

**GENERAL REPORT COMMENT:**

TSS was exceeded due to undetermined reasons and sampling oversight.

**PARAMETER SPECIFIC COMMENTS:**

**Pennsylvania Department of Environment Protection Discharge Monitoring Report (DMR)**

**FACILITY:** RIDLEY CREEK STP  
**PERMITTEE:** EAST GOSHEN TWP MUNI AUTH CHESTER CNTY  
**ADDRESS:** 1751 TOWNE DR  
 WEST CHESTER, PA 19380

**PERMIT NUMBER:** PA0050504  
**MONITORING PERIOD:** From: 2011-07-01 To: 2011-07-31  
**REGION:** EP SE Rgnl Off  
**COUNTY:** Chester  
**CITY:** WEST CHESTER

**NO DISCHARGE FROM SITE:** ( )

Parameter	Quantity or Loading		Units	Quality or Concentration		Units	No. Ex.	Frequency of Analysis	Sample Type
	Value	Value		Value	Value				
Dissolved Oxygen	Sample Measurement	*****		5.4	6.89		0	1/day	Grab
Parameter Code: 00300	Permit Requirement	*****		5.0	Report				
Stage Code: 1	Sample Measurement	*****		Instantaneous Minimum	Average Monthly			1/day	Grab
pH	Permit Requirement	*****		7.1	*****		0	1/day	Grab
Parameter Code: 00400	Sample Measurement	*****		6.0	Instantaneous Maximum			1/day	Grab
Stage Code: 1	Permit Requirement	*****		Instantaneous Minimum	Instantaneous Maximum				
Total Suspended Solids	Sample Measurement	8.365	lbs/day	4	4		0	1/week	24-Hr Composite
Parameter Code: 00530	Permit Requirement	100		30	45			1/week	24-Hr Composite
Stage Code: 1	Sample Measurement	Average Monthly		Average Monthly	Weekly Average				
Ammonia-Nitrogen	Permit Requirement	6.055	lbs/day	*****	*****		0	1/week	24-Hr Composite
Parameter Code: 00610	Sample Measurement	13		4.0	*****			1/week	24-Hr Composite
Stage Code: 1	Permit Requirement	Average Monthly		Average Monthly	*****				
Flow (mgd)	Sample Measurement	.2425	MGD	*****	*****		0	Continuous	Metered
Parameter Code: 50050	Permit Requirement	Report		*****	*****			Continuous	Metered
Stage Code: 1	Sample Measurement	Average Monthly		*****	*****				
Fecal Coliform	Permit Requirement	*****		10	10	CFU/100 mL	0	1/week	Grab
Parameter Code: 74055	Sample Measurement	*****		200	Geometric Mean			1/week	Grab
Stage Code: 1	Permit Requirement	*****		Instantaneous Minimum	Instantaneous Maximum				
CBOD5	Sample Measurement	6.273	lbs/day	*****	3		0	1/week	24-Hr Composite
Parameter Code: 80082	Permit Requirement	33		10	15			1/week	24-Hr Composite
Stage Code: 1	Sample Measurement	Average Monthly		Average Monthly	Weekly Average				
	Permit Requirement	Weekly Average		*****	*****				

I certify under penalty of law that this document was prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations. See 18 Pa. C.S. § 4904 (relating to unsworn falsification).

**Name/Title of Principal Executive Officer Or Authorized Agent**

**Signature of Principal Executive Officer Or Authorized Agent**

**Telephone No**

**Date**

Report all violations during the reporting period on a Non-Compliance Reporting Form, as an attachment to your eDMR submission.

**Pennsylvania Department of Environment Protection Discharge Monitoring Report (DMR)**

**FACILITY:** RIDLEY CREEK STP  
**PERMITTEE:** EAST GOSHEN TWP MUNI AUTH CHESTER CNTY  
**ADDRESS:** 1751 TOWNE DR WEST CHESTER, PA 19380  
**PERMIT NUMBER:** PA0050504  
**REGION:** EP SE Rpln Off  
**COUNTY:** Chester  
**CITY:** WEST CHESTER  
**MONITORING PERIOD:** From: 2011-07-01 To: 2011-07-31  
**NO DISCHARGE FROM SITE:**

Parameter	Quantity or Loading		Units	Quality or Concentration		Value	Units	No. Ex.	Frequency of Analysis	Sample Type
	Value	Units		Value	Units					
Dissolved Oxygen	Sample	*****	*****	5.4	6.89	*****	mg/L	0	1/day	Grab
Parameter Code: 00300	Permit Requirement	*****	*****	Instantaneous Minimum	Report	*****			1/day	Grab
Stage Code: 1	Sample	*****	*****	7.1	*****	7.4	S.U.	0	1/day	Grab
pH	Measurement	*****	*****	Instantaneous Minimum	*****	Instantaneous Maximum			1/day	Grab
Parameter Code: 00400	Permit Requirement	*****	*****	Instantaneous Minimum	*****	Instantaneous Maximum			1/day	Grab
Stage Code: 1	Sample	*****	*****	*****	4	4	mg/L	0	1/week	Composite
Total Suspended Solids	Measurement	*****	*****	*****	30	45	mg/L		1/week	Composite
Parameter Code: 00530	Permit Requirement	*****	*****	*****	Average Monthly	Weekly Average			1/week	Composite
Stage Code: 1	Sample	*****	*****	*****	2.962	*****	mg/L	0	1/week	Composite
Ammonia-Nitrogen	Measurement	*****	*****	*****	4.0	*****			1/week	Composite
Parameter Code: 00610	Permit Requirement	*****	*****	*****	Average Monthly	*****			1/week	Composite
Stage Code: 1	Sample	*****	*****	*****	*****	*****			Continuous	Metered
Flow (mgd)	Measurement	.2425	.482	*****	*****	*****			Continuous	Metered
Parameter Code: 50050	Permit Requirement	*****	*****	*****	*****	*****			Continuous	Metered
Stage Code: 1	Sample	*****	*****	*****	*****	*****			1/week	Grab
Fecal Coliform	Measurement	*****	*****	*****	10	*****	CFU/100 mL	0	1/week	Grab
Parameter Code: 74055	Permit Requirement	*****	*****	*****	200	*****			1/week	Grab
Stage Code: 1	Sample	*****	*****	*****	Geometric Mean	*****			1/week	Grab
COD5	Measurement	*****	*****	*****	3	3	mg/L	0	1/week	Composite
Parameter Code: 80082	Permit Requirement	*****	*****	*****	10	45			1/week	Composite
Stage Code: 1	Sample	*****	*****	*****	Average Monthly	Weekly Average			1/week	Composite

**Name/Title of Principal Executive Officer Or Authorized Agent** \_\_\_\_\_  
**Signature of Principal Executive Officer Or Authorized Agent** \_\_\_\_\_  
**Telephone No** \_\_\_\_\_  
**Date** 2011-08-23

Report all violations during the reporting period on a Non-Compliance Reporting Form, as an attachment to your eDMR submission.

**PARAMETER SPECIFIC COMMENTS:**

**EAST GOSHEN MUNICIPAL AUTHORITY  
RIDLEY CREEK EXPANSION PROJECT  
SUMMARY**

September 8, 2011

Includes bills paid at 8/8/11 and 8/18/11 meetings

Name	Budget or Contract amt.	This Month	To Date	Balance on Budget or Contract	% of work completed
<b>RECEIPTS</b>					
Bond	\$9,500,000.00	\$0.00	\$9,500,000.00		
Pennoni (rechargeable)	\$0.00	\$0.00	\$0.00		
Grant	\$464,195.00	\$0.00	\$464,195.00		
Insurance Refund	\$15,059.00	\$15,059.00	\$15,059.00		
<b>RECEIPTS TOTAL</b>	<b>\$9,979,254.00</b>	<b>\$15,059.00</b>	<b>\$9,979,254.00</b>		
<b>EXPENSES</b>					
Borrowing costs	\$52,250.00	\$0.00	\$52,250.00	\$0.00	100.00%
Worth	\$7,865,400.00		\$7,895,659.91	-\$30,259.91	100.38%
change orders (included in the above)	\$30,289.91	↑	\$0.00	\$30,289.91	0.00%
Clinger	\$974,000.00	\$56,535.60	\$1,007,313.24	-\$33,313.24	103.42%
change orders (included in the above)	\$33,313.24	↑	\$0.00	\$33,313.24	0.00%
TVSS Units	\$16,059.00		\$16,059.00	\$0.00	100.00%
Settlement	\$212,500.00	\$212,500.00	\$212,500.00	\$0.00	100.00%
Pennoni (Inspection) (05)	\$136,200.00	\$0.00	\$136,197.62	\$2.38	100.00%
Pennoni (Continued Services) (10)	\$208,795.00	\$0.00	\$208,778.97	\$16.03	99.99%
Pennoni (Precast) (11)	\$1,222.50	\$375.00	\$1,222.50	\$0.00	100.00%
Pennoni (EC Response) (50) New	\$11,362.50	\$0.00	\$11,362.50	\$0.00	100.00%
Pennoni (Rechargeable) (06)	\$20,000.00	\$0.00	\$19,997.18	\$2.82	99.99%
Brickhouse	\$175,000.00	\$6,785.00	\$257,730.25	-\$82,730.25	147.27%
<b>Extras</b>					
Capital	\$204,361.85	\$4,460.00	\$186,443.21	\$17,918.64	91.23%
Capital (Identified but not paid)	\$26,500.00	\$0.00	\$0.00	\$26,500.00	0.00%
Trailer, Phone, Porta Pot & Internet	\$12,000.00	\$0.00	\$11,825.18	\$174.82	98.54%
<b>EXPENSES TOTAL</b>	<b>\$9,979,254.00</b>	<b>\$280,655.60</b>	<b>\$10,017,339.56</b>	<b>-\$38,085.56</b>	<b>100.38%</b>

We have identified \$10,000 in potential extras

We filed a \$16,059 claim for the damaged TVSS units and received \$15,059.

EAST GOSHEN MUNICIPAL AUTHORITY  
 RIDLEY CREEK CAPITAL EXPANSION PROJECT  
 DETAIL  
 September 8, 2011

Date	Amount	Subtotals	Name	Description
<b>Worth</b>				
2/9/2009	\$561,150.00		Worth & Company	Application #1
3/9/2009	\$480,825.00		Worth & Company	Application #2
4/9/2009	\$768,780.00		Worth & Company	Application #3
5/8/2009	\$125,352.90		Worth & Company	Application #4
5/31/2009	\$485,103.12		Worth & Company	Application #5
6/30/2009	\$267,975.00		Worth & Company	Application #6
7/31/2009	\$138,217.50		Worth & Company	Application #7
8/31/2009	\$679,793.40		Worth & Company	Application #8
9/30/2009	\$504,310.98		Worth & Company	Application #9
9/30/2009	\$222,861.55		Worth & Company	Application #10 (5% retainage)
10/31/2009	\$724,089.05		Worth & Company	Application #11
11/30/2009	\$379,360.17		Worth & Company	Application # 12
12/31/2009	\$374,772.62		Worth & Company	Application #13
1/31/2010	\$207,881.86		Worth & Company	Application # 14
2/28/2010	\$69,077.35		Worth & Company	Application # 15
3/31/2010	\$75,857.50		Worth & Company	Application # 16
4/30/2010	\$170,263.75		Worth & Company	Application # 17
5/31/2010	\$178,290.62		Worth & Company	Application #18
6/30/2010	\$299,633.25		Worth & Company	Application #19
7/30/2010	\$426,170.00		Worth & Company	Application #20
8/31/2010	\$227,050.00		Worth & Company	Application #21
9/30/2010	\$54,520.50		Worth & Company	Application 22
10/31/2010	\$224,000.00		Worth & Company	Application #23
11/30/2011	\$125,000.00		Worth & Company	Application #24
5/20/2011	\$100,000.00		Worth & Company	Application # 25
5/20/2011	\$25,323.79		Worth & Company	Application # 25 Final
	\$7,895,659.91	\$7,895,659.91		
<b>Clinger</b>				
4/9/2009	\$22,152.64		Clinger	Application #1
5/8/2009	\$15,714.77		Clinger	Application #2
5/31/2009	\$77,973.43		Clinger	Application #3
6/30/2009	\$12,567.46		Clinger	Application #4
8/30/2009	\$10,855.98		Clinger	Application #5
9/30/2009	\$111,255.75		Clinger	Application #6
10/31/2009	\$59,344.83		Clinger	Application #7
11/30/2009	\$145,354.05		Clinger	Application # 8
12/31/2009	\$94,727.00		Clinger	Application # 9
1/31/2010	\$139,092.94		Clinger	Application #10
2/28/2010	\$58,514.64		Clinger	Application #11

Date	Amount	Subtotals	Name	Description
2/28/2010	\$41,530.78		Clinger	Application #12 (5% retainage)
	\$13,575.79		Clinger	Application #13
5/2/2010	\$34,539.38		Clinger	Application # 14
6/30/2010	\$40,633.52		Clinger	Application #15
8/1/2010	\$42,347.24		Clinger	Application # 16
8/31/2010	\$30,597.44		Clinger	Application #17
5/12/2011	\$16,059.00		Clinger	TVSS units CO 5
8/8/2011	\$56,535.60		Clinger	Application #18 Final
	\$1,023,372.24	\$1,023,372.24	Clinger	Settlement
	\$212,500.00		Clinger	Settlement
<b>Pennoni Inspection 05</b>				
?	\$712.50		PENNONI ASSOCIATES INC.	RCSTP EXP.PROJ. SERV. THRU ?
10/30/2008	\$943.50		PENNONI ASSOCIATES INC.	RCSTP EXP.PROJ. SERV. THRU 10/19/08
12/5/2008	\$18,115.98		PENNONI ASSOCIATES INC.	RCSTP EXP.PROJ. SERV. THRU 11/30/08
1/15/2009	\$12,929.00		PENNONI ASSOCIATES INC.	RCSTP EXP.PROJ. SERV. THRU 12/28/08
2/5/2009	\$13,352.50		PENNONI ASSOCIATES INC.	RCSTP EXP.PROJ. SERV. THRU 1/25/09
3/19/2009	\$31,288.00		PENNONI ASSOCIATES INC.	RCSTP EXP.PROJ. SERV. THRU 3/1/09
4/8/2009	\$29,010.46		PENNONI ASSOCIATES INC.	RCSTP EXP.PROJ. SERV. THRU 3/29/09
5/6/2009	\$22,436.46		PENNONI ASSOCIATES INC.	RCSTP EXP.PROJ. SERV. THRU 4/26/09
6/26/2009	\$7,409.22		PENNONI ASSOCIATES INC.	RCSTP EXP.PROJ. SERV. THRU 5/31/2009
	\$136,197.62	\$136,197.62		
<b>Pennoni Continued Services 10</b>				
12/30/2009	\$16,482.50		PENNONI ASSOCIATES INC.	RCSTP EXP PROJ SERV THRU 12/31/09
1/29/2010	\$24,224.58		PENNONI ASSOCIATES INC.	RCSTP EXP PROJ SERV THRU 1/17/10
2/23/2010	\$13,057.00		PENNONI ASSOCIATES INC.	RCSTP EXP PROJ SERV THRU 2/14/10
4/1/2010	\$19,543.40		PENNONI ASSOCIATES INC.	
5/5/2010	\$18,810.50		PENNONI ASSOCIATES INC.	Through 4/18/2010
5/25/2010	\$19,287.50		PENNONI ASSOCIATES INC.	Through 5/16/2010
6/29/2010	\$17,901.25		PENNONI ASSOCIATES INC.	Through 6/20/10
7/29/2010	\$17,302.63		PENNONI ASSOCIATES INC.	Through 7/18/2010
8/26/2010	\$12,393.25		PENNONI ASSOCIATES INC.	Through 8/15/2010
9/29/2001	\$12,521.81		PENNONI ASSOCIATES INC.	through 9/19/2010
10/27/2010	\$12,326.15		PENNONI ASSOCIATES INC.	Through 10/17/2010
11/23/2010	\$4,097.75		PENNONI ASSOCIATES INC.	through 11/7/2010
12/22/2010	\$8,722.35		PENNONI ASSOCIATES INC.	thru 12/12/10
2/3/2011	\$3,615.50		PENNONI ASSOCIATES INC.	Thru 1/16/11
3/2/2011	\$3,127.00		PENNONI ASSOCIATES INC.	Thru 2/13
4/29/2011	\$4,188.30		PENNONI ASSOCIATES INC.	Thru 4/17
5/31/2011	\$1,177.50		PENNONI ASSOCIATES INC.	Thru 5/15
	\$208,778.97	\$208,778.97		
<b>Pennoni Inspection (Precast) 11</b>				
7/11/2011	\$847.50		PENNONI ASSOCIATES INC.	Thru 6/19
7/28/2011	\$375.00		PENNONI ASSOCIATES INC.	Thru 7/17
	\$1,222.50	\$1,222.50		



Date	Amount	Subtotals	Name	Description
<b>Pennoni (EC Response) (50)</b>				
2/3/2011	\$6,380.00		PENNONI ASSOCIATES INC.	Thru 1/16/11
3/2/2011	\$3,610.00		PENNONI ASSOCIATES INC.	Thru 2/13/11
4/29/2011	\$1,372.50		PENNONI ASSOCIATES INC.	thru 4/17
	\$11,362.50	\$11,362.50		
<b>Pennoni Rechargeable 06</b>				
2/5/2009	\$2,840.50		PENNONI ASSOCIATES INC.	RCSTP EXP.PROJ. SERV. THRU 1/25/09
3/19/2009	\$4,934.75		PENNONI ASSOCIATES INC.	RCSTP EXP.PROJ. SERV. THRU 3/1/09
4/8/2009	\$3,777.00		PENNONI ASSOCIATES INC.	RCSTP EXP.PROJ. SERV. THRU 3/29/09
5/6/2009	\$1,409.50		PENNONI ASSOCIATES INC.	RCSTP EXP.PROJ. SERV. THRU 4/26/09
6/26/2009	\$3,507.43		PENNONI ASSOCIATES INC.	RCSTP EXP.PROJ. SERV. THRU 5/31/09
7/29/2009	\$3,528.00		PENNONI ASSOCIATES INC.	RCSTP EXP.PROJ. SERV. THRU 7/19/09
	\$19,997.18	\$19,997.18		
<b>Brickhouse</b>				
5/12/2009	\$2,127.50		BRICKHOUSE	Apr-09
6/1/2009	\$8,452.50		BRICKHOUSE	May-09
7/1/2009	\$7,791.25		BRICKHOUSE	Jun-09
8/3/2009	\$9,315.00		BRICKHOUSE	Jul-09
9/1/2009	\$7,762.50		BRICKHOUSE	Aug-09
10/1/2009	\$7,417.50		BRICKHOUSE	Sep-09
11/2/2009	\$7,072.50		BRICKHOUSE	Oct-09
12/1/2009	\$7,963.75		BRICKHOUSE	Nov-09
1/4/2010	\$7,762.50		BRICKHOUSE	Dec-09
2/1/2010	\$7,618.75		BRICKHOUSE	Jan-10
3/1/2010	\$7,417.50		BRICKHOUSE	Feb-10
4/1/2010	\$10,005.00		BRICKHOUSE	Mar-10
5/3/2010	\$11,931.25		BRICKHOUSE	Apr-10
6/1/2010	\$10,321.25		BRICKHOUSE	May-10
7/1/2010	\$11,845.00		BRICKHOUSE	Jun-10
8/2/2010	\$14,911.25		BRICKHOUSE	Jul-10
9/1/2010	\$14,087.50		BRICKHOUSE	Aug-10
10/1/2010	\$10,695.00		BRICKHOUSE	Sep-10
10/1/2010	\$6,785.00		BRICKHOUSE	Clinger Matter
11/1/2010	\$8,826.25		BRICKHOUSE	Oct-10
11/1/2010	\$571.50		BRICKHOUSE	Clinger Matter
12/1/2010	\$9,947.50		BRICKHOUSE	Nov-10
1/3/2011	\$15,640.00		BRICKHOUSE	Dec-10
2/1/2011	\$11,241.25		BRICKHOUSE	11-Jan
3/1/2011	\$6,670.00		BRICKHOUSE	Feb-11
4/1/2011	\$5,750.00		BRICKHOUSE	Mar-11
5/2/2011	\$4,686.25		BRICKHOUSE	Apr-11
6/1/2011	\$10,810.00		BRICKHOUSE	May-11
7/1/2011	\$5,520.00		BRICKHOUSE	Jun-11
8/1/2011	\$6,785.00		BRICKHOUSE	Jul-11

Date	Amount	Subtotals	Name	Description
	\$257,730.25	\$257,730.25		

**Extras - Capital - Paid**

12/22/2008	\$44.88		EAST GOSHEN TOWNSHIP	REIMBURSE GEN.FUND FOR OFFICE DEPOT
12/31/2008	\$88.00		FASTSIGNS	RED ON WHITE ALUM. SIGNS
1/12/2009	\$177.00		FASTSIGNS	SIGNS - PLEASE AVOID TOWNE DR....
12/1/2008	\$36.00		GREAT VALLEY LOCKSHOP	KEYS FOR CONTRACTOR
12/8/2008	\$160.80		GREAT VALLEY LOCKSHOP	PADLOCKS, REKEY CYLINDERS & KEYS
12/29/2008	\$474.82		HANSON AGGREGATES INC	36.95 TONS SUBBASE AGGREGATE
12/31/2008	\$908.00		HANSON AGGREGATES INC	70.86 TONS SUBGRADE 2 AGGREGATE
12/15/2008	\$2,089.39		LENNI ELECTRIC CORPORAT	TEMP SERV. FOR TRAILER - RIDLEY CRK
12/31/2008	\$120.00		LENNI ELECTRIC CORPORAT	SEWER PLANT - GUY WIRE RELOCATE
12/29/2008	\$7,865.00		MACANGA INC.	TRUCK & TRACKHOE RENTAL 12/5-12/18
12/1/2008	\$2,466.00		PATTERSON, MICHAEL J.	MATERIALS & LABOR - SPLIT RAIL FENCE
12/1/2008	\$4,907.72		PIPE XPRESS INC.	COPPER TUBING, BRASS COMP. COUPLING
12/15/2008	\$813.74		PIPE XPRESS INC.	BURIAL HYDRANT, BRASS CURB STOP, &
12/29/2008	\$129.00		RAM-T CORPORATION	2 FT. SILT FENCE
12/1/2008	\$1,183.00		RANSOME RENTAL COMPAN	CATERPILLAR - TRUCK LOADER RENTAL
12/8/2008	\$3,960.00		RANSOME RENTAL COMPAN	CATERPILLAR RENTAL 11/13-11/25/08
12/29/2008	\$908.00		RANSOME RENTAL COMPAN	CATERPILLAR RENTAL 12/15 - 12/18/08
12/31/2008	\$1,044.85		RANSOME RENTAL COMPAN	CATERPILLAR RENTAL 12/15-12/16/08
12/8/2008	\$119.95		SAFETY SOLUTIONS INC.	MEDICAL SUPPLIES
12/1/2008	\$635.60		US MUNICIPAL SUPPLY INC.	CUSTOM SIGNS - RIDLEY CREEK TREATMT
12/31/2008	\$157.50		GAWTHROP GREENWOOD	LEGAL
1/31/2009	\$936.50		GAWTHROP GREENWOOD	LEGAL
3/19/2009	\$1,246.64		HAMMOND & MCCMLLOY	WATER SERVICE
3/31/2009	\$1,254.00		GAWTHROP GREENWOOD	LEGAL
4/2/2009	\$274.21		PIPE XPRESS INC.	YARD HYDRANT #2
4/2/2009	\$1,910.28		HAMMOND & MCCMLLOY	WATER PIPING
5/11/2009	\$158.69		US MUNICIPAL SUPPLY INC.	3 SIGNS
4/30/2009	\$264.86		LENNI ELECTRIC CORPORAT	WIRED HOT WATER HEATER
5/31/2009	\$133.00		GAWTHROP GREENWOOD	LEGAL
6/30/2009	\$304.00		GAWTHROP GREENWOOD	LEGAL
7/17/2009	\$1,481.00		EAST GOSHEN TOWNSHIP	BLOWER MOTOR (REPAIRED AND KEPT AS A SPARE)
9/10/2009	\$254.85		AGWAY	TREE STAKES AND PEAT MOSS
8/25/2009	\$1,855.00		HARMONY HILL NURSERIES	16 TREES
8/31/2009	\$836.00		GAWTHROP GREENWOOD	2 MONTH LEGAL
11/19/2009	\$314.00		VIMCO	SEALER FOR FLOORS
10/31/2009	\$285.00		GAWTHROP GREENWOOD	LEGAL
12/31/2010	\$1,414.97		L/B water	YARD HYDRANT #2
12/18/2009	\$443.48		Grainger	Hose Reel 1 inch
12/18/2009	\$267.98		Grainger	Hose Reel 3/4 inch
2/2/2010	\$789.45		Fisher Scientific	Lab Equipment
2/28/2010	\$57.00		GAWTHROP GREENWOOD	LEGAL
3/15/2010	\$103.96		Matthews Ford	Van rental
3/31/2010	\$275.50		Grainger	Hose

Date	Amount	Subtotals	Name	Description
3/31/2010	\$247.00		GAWTHROP GREENWOOD	LEGAL
4/7/2010	\$70.15		GREAT VALLEY LOCKSHOP	6 locks
4/14/2010	\$641.98		Grainger	Shelving
4/15/2010	\$1,127.48		Continental Fire & Safety	3" & 1.75" Hose
4/16/2010	\$28.58		Grainger	Phone
3/17/2010	\$1,092.01		Water Pollution Biology	Michael Geradi - Talk
2/22/2010	\$1,104.50		McNichols	Safety Grating
5/5/2010	\$1,078.38		HAMMOND & MCCMLOSY	WATER LINE OFFICE
5/5/2010	\$270.10		HAMMOND & MCCMLOSY	Hose fitting in storage room
5/3/2010	\$2,329.17		Fisher Scientific	DESICCATOR & OVEN
5/12/2010	\$1,485.63		USA Blue book	FURNACE
5/21/2010	\$456.81		Marco	beakers
4/29/2010	\$258.00		Marco	3 10Lb dry Chem FX
5/9/2010	\$142.47		Staples	office equipment
5/31/2010	\$1,862.00		GAWTHROP GREENWOOD	Legal
5/15/2010	\$38,937.70		Aqua Washwater Mgt	Sludge from DAVCO
6/30/2010	\$126.63		PIPE XPRESS INC.	pipe
6/15/2010	\$204.40		GREAT VALLEY LOCKSHOP	locks
6/8/2010	\$150.00		O'Rourke and Sons	Bend counter tops
6/29/2010	\$615.00		PENNONI	Soda Ash
7/20/2010	\$99.99		Office Depot	Printer
7/16/2010	\$50.39		Office Depot	Printer cartridge
7/27/2010	\$649.00		Newtown Office Supply	Desk
7/31/2010	\$589.00		GAWTHROP GREENWOOD	Legal
6/29/2010	\$193.93		Fastenal	Chain
6/29/2010	\$1,019.00		LENNI ELECTRIC CORPORAT	Lights
7/12/2010	\$328.70		HAMMOND & MCCMLOSY	sink
7/15/2010	\$154.23		Hach	cable
7/16/2010	\$347.26		Hach	Combo
8/8/2010	\$1,599.97		Northern	Air Compressor
8/31/2010	\$1,310.00		GAWTHROP GREENWOOD	LEGAL
8/3/2010	\$43.27		Office Depot	White board
8/3/2010	\$37.08		Office Depot	White board
8/31/2010	\$2,623.51		PIPE XPRESS INC.	pipe
9/1/2010	\$465.02		PIPE XPRESS INC.	pipe
8/25/2010	\$357.50		Main Line Concrete	Concrete
9/30/2010	\$1,242.50		GAWTHROP GREENWOOD	LEGAL
10/7/2010	\$665.00		O'Rourke and Sons	AC stand
10/18/2010	\$2,531.00		Biosenski	Dumpster
10/13/2010	(\$105.00)		Power Pro	pallet credit
10/5/2010	\$2,073.90		Power Pro	block and pallet charge
10/27/2010	\$17.50		Power Pro	Re-bar
10/18/2010	\$577.93		Martin Limestone	Stone
10/18/2010	\$296.35		Martin Limestone	Stone
10/18/2010	\$299.83		Martin Limestone	Stone
10/20/2010	\$270.75		VIMCO	concrete products

Date	Amount	Subtotals	Name	Description
10/20/2010	\$608.00		RANSOME RENTAL COMPAN	Cat rental
10/25/2010	\$1,984.00		RANSOME RENTAL COMPAN	Rental
10/5/2010	\$571.88		Yerkes	PL Survey
10/23/2010	\$212.40		Grainger	Door Parts
9/20/2010	\$88.32		Yale Electric	Parts
9/21/2010	\$114.76		Yale Electric	Parts
9/17/2010	\$450.00		Steven Bahmatka	Wall Sign
9/7/2010	\$4,190.00		M&S Service	Alarm system
9/10/2010	\$851.22		HAMMOND & MCCMLOSY	HW heater
8/25/2010	\$337.50		Main Line Concrete	side walks
9/1/2010	\$465.02		PIPE XPRESS INC.	Roof Drains
9/7/2010	\$86.25		PIPE XPRESS INC.	Water supply
9/14/2010	\$388.60		EAST GOSHEN TOWNSHIP	Reimburse GF for Gutter Parts
11/18/2010	\$2,474.04		Fastenal	SS chain for lifting pumps
11/30/2011	\$171.00		GAWTHROP GREENWOOD	Legal Clinger
11/30/2011	\$720.00		GAWTHROP GREENWOOD	Legal
10/27/2010	\$17.50		Power Pro	Re bar
10/18/2010	\$1,464.80		Silvi	Concrete ( 3 invoices)
11/2/2010	\$1,125.21		Reilly and Sons	Fuel
1/31/2011	\$2,592.50		GAWTHROP GREENWOOD	Legal
1/31/2011	\$171.00		GAWTHROP GREENWOOD	Legal
12/22/2011	\$655.00		EnQuip	Filter
1/17/2011	\$2,031.00		Faddis Concrete	concrete bollards
12/22/2011	\$2,598.00		RANSOME RENTAL COMPAN	Restoration of parking area
2/28/2011	\$32.94		UPS Store	Ship DO probe
2/28/2011	\$385.00		GAWTHROP GREENWOOD	Legal
11/5/2011	\$1,828.36		Highway	Blacktop
11/5/2011	\$1,841.53		Highway	Blacktop
11/18/2011	\$260.42		Highway	Blacktop
11/18/2010	\$1,147.06		Highway	Blacktop
11/5/2010	\$3,136.40		Independence	Blacktop
11/5/2011	\$4,202.99		Independence	Blacktop
4/30/2010	\$3,628.97		Glasgow	Blacktop
3/31/2011	\$442.07		GAWTHROP GREENWOOD	Legal
4/7/2011	\$708.00		RANSOME RENTAL COMPAN	Restoration of parking area
4/11/2011	\$423.00		RANSOME RENTAL COMPAN	Restoration of parking area
4/18/2011	\$370.00		Fisher & Son	Restoration of parking area
4/30/2011	\$1,184.69		LENNI ELECTRIC CORPORATI	Weel pump
5/31/2011	\$1,747.50		PENNONI	Special meeting
5/20/2011	\$6,169.22		Aqua Wastwater Mgt	Clean SBR 2
4/30/2011	\$105.00		GAWTHROP GREENWOOD	Legal
4/21/2011	\$3,450.00		HAMMOND & MCCMLOSY	Well Pump
5/17/2011	\$1,004.67		HAMMOND & MCCMLOSY	Well Pump
6/23/2011	\$2,839.39		Ryerson	Stainless steel pipe for hoists
7/10/2011	\$1,968.46		Grainger	SS Cable for hoists
5/20/2011	\$6,169.22		Aqua Wastwater Mgt	Pump SBR 2



## MEMO

335 Commerce Drive, Suite 300  
Ft. Washington, PA 19034  
Phone: 215-367.2500  
FAX: 215-367.1000

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Date: September 7, 2011 No. of Pages: 2

To: Mark Miller, Director of Public Works  
East Goshen Township Municipal Authority

Cc: Rick Smith, Township Manager

From: Scott A. Towler

Subject: RCSTP SBR Operation during Hurricane Irene

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Mark,

On August 27<sup>th</sup> and 28<sup>th</sup>, Hurricane Irene produced considerable rainfall that impacted operation of the SBRs and overall treatment processes. Included in this memorandum is a summary of observations and actions implemented during the storm.

### Conditions

- Total rainfall recorded at the treatment plant was 6.92 inches.
- Excessive wastewater volumes resulted in the first filled decant at approximately 9:56 PM.
- The last recorded filled decant occurred on August 28<sup>th</sup> at 12:25 PM.
- The maximum recorded effluent flow rate was 2,500 gpm (equivalent to 3.60 MGD).

### Operation Adjustments

- The lower knife valves located on each SBR effluent pipe was fully opened. This allowed for the average design decant flow rate of 2,604 gpm.
  - The knife valves were partially closed to slow decant flow rates when poor sludge settleability was occurring earlier during the year.
- Aluminum sulfate chemical feed to SBRs was turned off.
  - Objective was to prevent alum tank from entering low level alarm.
- The minimum aeration time was decreased from 180 minutes to 90 minutes.
  - Objective was to reduce aeration cycle times to decrease transition time to settle phase.
- The filter feed pumps were placed in hand mode at an average of 75% speed.
  - Objective was to prevent the final effluent EQ basins from overflowing into the sludge holding tanks.
- UV disinfection system set point to automatically activate the second UV bank was adjusted from 1.5 MGD to 1.0MGD.
  - Objective was to provide for disinfection of effluent flowing across the top of the UV lamp racks.
- The influent flow meter vault was partially filled with water.
  - A portable trash pump was placed in the vault to remove rainwater.

## Observations

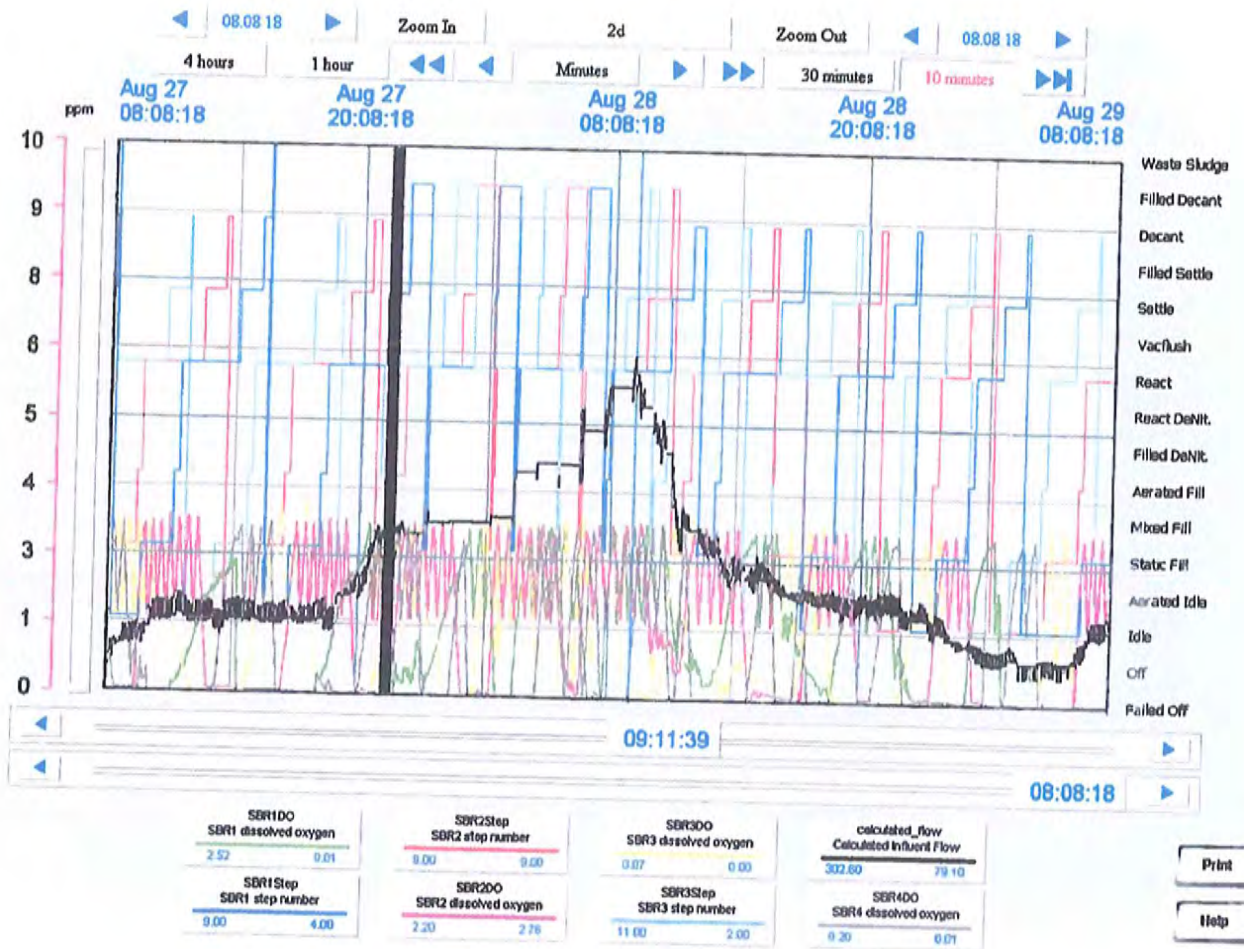
- The bypass bar screen required monitoring and cleaning to prevent the influent flow channels from overflowing.
- SBR water levels of 23.83 feet or greater result in the SBR contents overflowing upon the adjacent treatment building roof.
- The SBR status print out description "Idle-Fildec T.O. indicates that the SBR is in a filled decant within a few minutes of entering the settle phase. This appears to be an "atypical" event indicating that another SBR is not available to accept flow. This event occurred for less than 4 minutes until influent wastewater flow could be diverted to a SBR as a filled settle phase.
- A total 12.20 minutes of filled decant, settle or Idle-Fildec occurred during the storm.
- Total effluent flow for recorded for 8/27/2011 was 1.381 MGD. For comparison purposes, the flows are provided for the 4 days surrounding the storm event:
  - Friday, 8/26/2011                      24-hr flow was:                      0.324 MGD
  - Saturday, 8/27/2011                      24-hr flow was:                      1.381 MGD
  - Sunday, 8/28/2011                      24-hr flow was:                      1.118 MGD
  - Monday, 8/29/2011                      24-hr flow was:                      0.401 MGD
- The final effluent clarity was very good during the majority of the storm event. It is estimated that during a period of 8 hours (4:00 AM to 12:00 PM), the effluent contained visible solids. Clarity was regained during the afternoon of Sunday, August 28, 2011.
- Dave Wolfinger, PADEP, was notified approximately 11:55 PM that the facility was experienced an overflow or partially treated wastewater.

August 27 and 28, 2011

Ridlet Creek Sewage Treatment Plant

Initial Time of Event	Tank Level	SBR	Event	Ending Time of Event	Event Time, minutes	Calculated % of Design Flow (at 0.75 MGD)	Equivalent Flow Rate, MGD	Equivalent Flow Rate, gpm	Comments
21:56:15	21.04	No. 1	Filled Decant	22:56:16	60.02		0.75	1440	
23:05:22	23.82	No. 4	Filled Decant	0:05:23	60.02				
0:05:24	23.83	No. 3	Filled Settle	1:05:26	36.02	159.2%	1.194	1,719	
1:05:26	22.88	No. 3	Filled Decant	2:01:12	60.02	159.2%	1.194	1,719	
2:07:14	21.74	No. 1	Filled Settle		6.03	164.1%	1.231	1,772	SBR No. 1 - Entered Settle mode at 21:01:12
2:07:14	21.74	No. 1	Filled Settle		6.03	164.1%	1.231	1,772	
2:07:14	21.74	No. 1	Filled Decant	3:05:23	60.02	164.1%	1.231	1,772	
3:07:15	21.80	No. 1	Idle-Fildec T.O., Anoxic Static Fill		7.07	164.1%	1.231	1,772	
3:14:19	23.01	No. 1	Aerated Fill		0.02	206.2%	1.547	2,227	
3:14:20	23.81	No. 4	Filled Settle		8.97	206.2%	1.547	2,227	SBR No. 4 - Entered Settle mode at 3:05:23
3:14:21	22.45	No. 4	Filled Decant		60.02	206.2%	1.547	2,227	
4:14:22	23.02	No. 4	Idle-Fildec T.O., Anoxic Static Fill	14:17:45	3.38	206.2%	1.547	2,227	
4:17:47	23.59	No. 3	Filled Settle		12.37	214.4%	1.608	2,316	SBR No. 3 - Entered Settle mode at 4:05:25
4:17:47	22.62	No. 3	Filled decant		22.62	214.4%	1.608	2,316	
5:17:48	22.62	No. 3	Idle-Fildec T.O., Anoxic Static Fill	5:17:47	3.90	214.4%	1.608	2,316	
5:21:43	23.42	No. 2	Filled Settle		14.50	213.6%	1.602	2,307	
5:21:43	23.42	No. 2	Filled Decant	6:21:44	60.02	213.6%	1.602	2,307	
6:21:44	22.00	No. 2	Idle-Fildec T.O., Anoxic Static Fill		4.67	213.6%	1.602	2,307	SBR No. 1 - Entered Settle mode at 4:05:25
6:30:08	23.27	No. 1	Filled Settle	6:26:24	15.82	245.0%	1.838	2,646	
6:30:08	20.88	No. 1	Filled Decant	7:30:09	60.02	245.0%	1.838	2,646	
7:30:09	20.88	No. 1	Idle-Fildec T.O., Anoxic Static Fill	7:33:24	3.25	247.4%	1.856	2,672	
7:46:53	23.25	No. 4	Filled Settle		29.15	284.5%	2.134	3,073	SBR No. 4 - Entered Settle mode at 7:17:45
8:21:42	19.14	No. 4	Filled Decant	8:46:55	60.02	284.5%	2.134	3,073	
8:46:55	19.23	No. 4	Idle-Fildec T.O., Anoxic Static Fill	8:48:24	1.48	284.5%	2.134	3,073	
9:21:43	22.13	No. 3	Filled Decant		24.72	267.2%	2.004	2,886	SBR No. 3 - Entered Settle mode at 8:21:42 (60 minutes of settle)
9:47:23	21.22	No. 2	Filled Decant	10:08:09	20.77	225.2%	1.689	2,432	SBR 2 achieved 60 minutes of settle before entering the filled decant mode
11:01:18	21.58	No. 1	Filled Decant	11:25:33	24.25	155.1%	1.163	1,675	SBR 1 achieved 60 minutes of settle before entering the filled decant mode
12:25:59	19.52	No. 4	Filled Decant		6.83	130.3%	0.977	1,407	SBR 4 achieved 60 minutes of settle before entering the filled decant mode
15:42:40						99.0%	0.743	1,069	
12:33:09						58.6%	0.440	633	
					732.01	minutes			
					12.20	hours			

Additional notes: Intermediate flow meter maintained a max. reading of 2100 gpm. The final effluent flow meter maintained a max. reading of 2,500 gpm (equivalent to a rate 3.60 MGD).

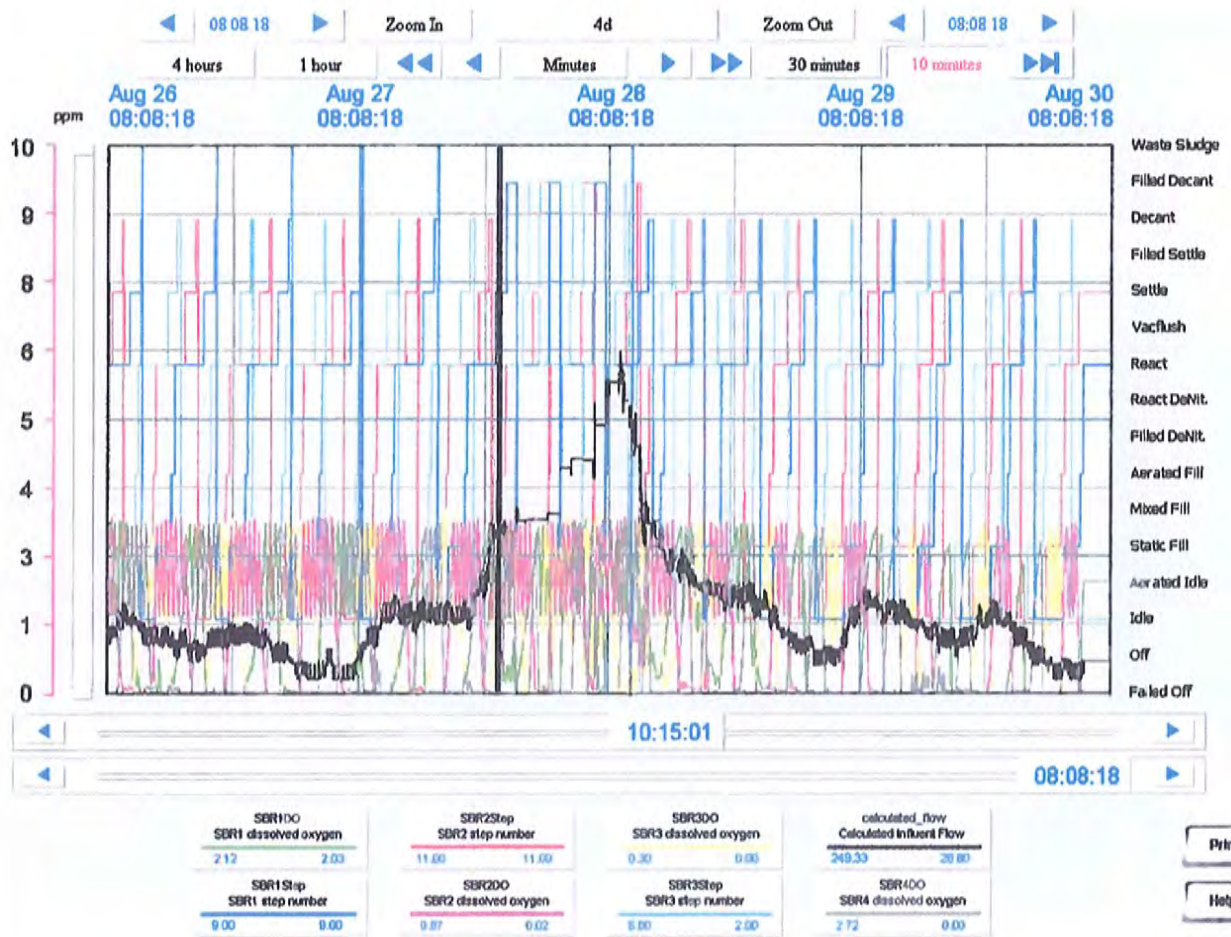


August 28, 2011

calculated flow to SBR 5

302.8 % At 9:11:39





Calculated Flow to SBRs Profile

Before and After Hurricane Irene which occurred on 8-27 & 8-28, 2011



August 17, 2011 Valley Creek, 20 MWs

06:50:17	Bank 1 19.32	Bank 2 20.07	Bank 3 20.57	Bank 4 18.80	3.11.28
	15.00 minutes react. 88				
06:51:19	Bank 1 19.51	Bank 2 20.09	Bank 3 20.59	Bank 4 18.86	3.11.28
	react. 85			71.00 minutes anoxic static fill, 80%	
06:52:11	Bank 1 19.50	Bank 2 20.07	Bank 3 20.47	Bank 4 19.02	3.11.28
			60.00 minutes decant, 100		
06:53:26	Bank 1 19.52	Bank 2 20.09	Bank 3 20.59	Bank 4 19.02	3.11.28
			7.5 minutes fill, 100		
06:54:25	Bank 1 19.52	Bank 2 20.09	Bank 3 20.59	Bank 4 19.02	3.11.28
			8.00 minutes waste sludge, 150		
06:55:26	Bank 1 19.51	Bank 2 20.09	Bank 3 20.59	Bank 4 19.02	3.11.28
			react. 86		
06:56:15	Bank 1 19.50	Bank 2 20.07	Bank 3 20.80	Bank 4 19.06	3.11.28
			75.00 minutes anox mixed fill, 100		
06:57:15	Bank 1 19.51	Bank 2 20.09	Bank 3 20.80	Bank 4 19.31	3.11.28
			105.00 minutes react. 88		
06:58:15	Bank 1 19.51	Bank 2 20.06	Bank 3 20.80	Bank 4 19.85	3.11.28
			45.00 minutes Aerated fill, 100		
06:59:15	Bank 1 19.50	Bank 2 20.06	Bank 3 20.80	Bank 4 19.63	3.11.28
			15.00 minutes react. 88		
07:00:15	Bank 1 19.50	Bank 2 20.06	Bank 3 20.80	Bank 4 19.63	3.11.28
			90.00 minutes anoxic static fill, 100		
07:01:15	Bank 1 19.50	Bank 2 20.06	Bank 3 20.80	Bank 4 19.63	3.11.28
			10.00 minutes decant, 100		
07:02:25	Bank 1 19.51	Bank 2 20.06	Bank 3 20.80	Bank 4 19.80	3.11.28
			5.00 minutes fill, 100		
07:03:27	Bank 1 19.51	Bank 2 20.06	Bank 3 20.80	Bank 4 19.80	3.11.28
			8.00 minutes waste sludge, 160		
07:04:17	Bank 1 19.52	Bank 2 20.07	Bank 3 20.80	Bank 4 19.80	3.11.28
			75.00 minutes react. 88		
07:05:17	Bank 1 19.50	Bank 2 20.08	Bank 3 20.80	Bank 4 19.80	3.11.28
	75.00 minutes react. 88				
07:06:17	Bank 1 19.50	Bank 2 20.08	Bank 3 20.80	Bank 4 19.80	3.11.28
	react. 88				
07:07:17	Bank 1 19.50	Bank 2 20.08	Bank 3 20.80	Bank 4 19.80	3.11.28
			45.00 minutes react. 88		
07:08:17	Bank 1 19.50	Bank 2 20.08	Bank 3 20.80	Bank 4 19.80	3.11.28
			15.00 minutes react. 88		
07:09:17	Bank 1 19.50	Bank 2 20.08	Bank 3 20.80	Bank 4 19.80	3.11.28
			15.00 minutes react. 88		

runoff 27, 2011. Ridley Creek, 99, 33075

Time	Flow (cfs)	Flow (MGD)	Flow (MGD)	Flow (MGD)	Flow (MGD)	Flow (MGD)
						83.10 minutes anoxic static fill, M2
07:56:15	19.50'	19.50'	19.20'	19.70'	19.41'	3 42.9%
						60.00 minutes decant, M9
08:00:22	19.00'	19.00'	19.25'	19.70'	19.01'	3 44.3%
						4.12 minutes idle, M10 waste sludge, M60
08:03:22	18.80'	19.00'	19.00'	19.00'	19.01'	3 44.1%
						3.00 minutes idle, M45
08:06:15	18.85'	19.00'	19.00'	19.70'	19.00'	3 44.5%
						45.00 minutes anoxic static fill, M2
08:09:15	18.95'	19.00'	19.00'	19.00'	19.00'	3 44.5%
						165.00 minutes anoxic static fill, M2
08:11:15	18.85'	20.60'	19.70'	19.70'	19.70'	3 59.4%
						45.00 minutes aerated fill, M8
08:14:15	18.95'	21.00'	19.70'	19.70'	19.70'	3 56.1%
						5.00 minutes react, M2
						83.58 minutes anoxic static fill, M2
08:41:15	19.27'	19.20'	19.70'	19.70'	19.70'	3 56.1%
						60.00 minutes decant, M9
08:47:15	19.46'	21.05'	19.70'	19.70'	19.00'	3 59.4%
						6.33 minutes idle, M10
08:51:26	19.46'	21.00'	19.70'	19.70'	19.00'	3 59.4%
						9.02 minutes waste sludge, M60
08:59:40	19.47'	21.00'	19.70'	19.70'	18.84'	3 58.2%
						5.00 minutes idle, M45
09:11:15	20.00'	21.05'	19.70'	19.70'	19.00'	3 70.9%
						45.00 minutes anoxic static fill, M2
09:16:15	20.17'	21.00'	19.70'	19.70'	19.00'	3 65.0%
						165.00 minutes anoxic static fill, M2
09:41:15	21.60'	21.00'	19.70'	19.70'	19.00'	3 74.0%
						45.00 minutes aerated fill, M8
09:46:15	21.90'	21.00'	19.70'	19.70'	19.00'	3 73.0%
						5.00 minutes react, M2
09:51:15	21.90'	21.00'	19.70'	19.70'	19.00'	3 73.0%
						165.00 minutes anoxic static fill, M2
10:01:15	21.90'	21.00'	19.70'	19.70'	19.00'	3 73.0%
						165.00 minutes anoxic static fill, M2

August 17, 2011 Ridley Creek, PA 19000

11:31:03	tank 1 21.85'	tank 2 21.86'	4.00 minutes tank 3 18.99' idle, 010	tank 4 19.40'	0.86, 1%
11:41:00	tank 1 21.85'	tank 2 21.86'	0.00 minutes tank 3 18.99' waste sludge, 060 idle, 065	tank 4 19.40'	0.86, 1%
11:51:15	tank 1 21.85'	tank 2 21.86'	tank 3 18.99'	45.00 minutes tank 4 20.21'	0.68, 5%
12:01:15	tank 1 21.86'	tank 2 21.89'	tank 3 18.99'	anoxic aeration fill, 090 settling, 091	0.89, 0%
12:01:15	tank 1 21.85'	tank 2 21.85'	tank 3 18.99'	45.00 minutes tank 4 21.44'	0.68, 5%
12:11:17	tank 1 21.85'	tank 2 21.85'	tank 3 18.99'	aerated fill, 080 15.00 minutes tank 4 21.99'	0.66, 0%
12:11:17	tank 1 21.85'	tank 2 21.85'	tank 3 18.99'	react, 080 95.10 minutes anoxic static fill, 082	
12:11:19	tank 1 21.85'	tank 2 21.85'	tank 3 19.77'	60.00 minutes react, 080 settling, 080	0.66, 0%
12:24:36	tank 1 21.85'	tank 2 19.00'	tank 3 19.77'	13.35 minutes idle, 010	0.73, 9%
12:26:17	tank 1 21.85'	tank 2 19.00'	tank 3 19.77'	0.00 minutes waste sludge, 060 idle, 065	0.70, 5%
12:44:19	tank 1 21.84'	tank 2 18.31'	45.00 minutes tank 3 20.19'	anoxic aeration fill, 090 tank 4 21.96'	0.74, 2%
12:55:15	tank 1 21.85'	tank 2 18.91'	105.00 minutes react, 080 settling, 081	tank 3 20.15'	0.68, 5%
13:06:15	tank 1 21.84'	tank 2 18.91'	45.00 minutes tank 3 21.57'	anoxic aeration fill, 090 aerated fill, 080	0.41, 7%
14:01:15	tank 1 21.85'	tank 2 18.92'	15.00 minutes tank 3 21.99'	react, 080 tank 4 21.96'	0.75,
14:01:15	tank 1 21.85'	tank 2 18.92'	76.63 minutes anoxic static fill, 082		
14:05:15	tank 1 21.89'	tank 2 19.35'	60.00 minutes react, 080 settling, 080	tank 3 21.96'	0.68, 5%
14:17:10	tank 1 18.99'	tank 2 19.94'	0.00 minutes idle, 010	tank 3 21.77'	0.64, 0%
14:18:00	tank 1 18.99'	tank 2 19.94'	0.00 minutes waste sludge, 060 idle, 065	tank 3 21.77'	0.64, 0%

August 27, 2011 Ridley Creek, PA WWP

15:21:00	bank 1 18.87 <sup>+</sup> idle, M45	bank 2 19.70 <sup>+</sup>	bank 3 21.19 <sup>+</sup>	bank 4 21.95 <sup>+</sup>	\$ 64.3%
		45.00 minutes			
15:37:15	bank 1 18.88 <sup>+</sup>	bank 2 20.13 <sup>+</sup> aerated fill, M9	bank 3 21.96 <sup>+</sup>	bank 4 21.97 <sup>+</sup>	\$ 64.3%
		15.00 minutes			
15:41:15	bank 1 18.87 <sup>+</sup>	bank 2 20.58 <sup>+</sup>	bank 3 21.77 <sup>+</sup>	bank 4 21.95 <sup>+</sup> settle, M31	\$ 64.3%
		15.00 minutes			
16:11:15	bank 1 18.88 <sup>+</sup>	bank 2 21.38 <sup>+</sup> aerated fill, M8	bank 3 21.95 <sup>+</sup>	bank 4 21.75 <sup>+</sup>	\$ 70.6%
		15.00 minutes			
16:26:15	bank 1 18.88 <sup>+</sup>	bank 2 21.91 <sup>+</sup> react, M2	bank 3 21.97 <sup>+</sup>	bank 4 21.95 <sup>+</sup>	\$ 81.7%
	55.25 minutes: aerobic static fill, M28				
16:41:15	bank 1 19.30 <sup>+</sup>	bank 2 21.44 <sup>+</sup>	bank 3 21.10 <sup>+</sup>	bank 4 21.95 <sup>+</sup> decant, M39	\$ 76.7%
		25.12 minutes			
16:56:24	bank 1 19.50 <sup>+</sup>	bank 2 21.80 <sup>+</sup>	bank 3 21.79 <sup>+</sup>	bank 4 19.00 <sup>+</sup> idle, M10	\$ 64.3%
		0.22 minutes			
17:06:27	bank 1 19.90 <sup>+</sup>	bank 2 21.88 <sup>+</sup>	bank 3 21.90 <sup>+</sup>	bank 4 19.00 <sup>+</sup> waste sludge, M68	\$ 64.3%
	45.00 minutes				
17:11:15	bank 1 20.89 <sup>+</sup> aerated fill, M9	bank 2 21.89 <sup>+</sup>	bank 3 21.97 <sup>+</sup>	bank 4 18.87 <sup>+</sup>	\$ 65.2%
		5.00 minutes			
17:13:23	bank 1 20.89 <sup>+</sup>	bank 2 21.97 <sup>+</sup>	bank 3 21.77 <sup>+</sup>	bank 4 18.87 <sup>+</sup> idle, M45	\$ 65.2%
		15.00 minutes			
17:26:15	bank 1 20.49 <sup>+</sup>	bank 2 21.97 <sup>+</sup>	bank 3 21.96 <sup>+</sup> settle, M31	bank 4 18.86 <sup>+</sup>	\$ 65.2%
	45.00 minutes				
17:56:15	bank 1 21.38 <sup>+</sup> aerated fill, M9	bank 2 21.91 <sup>+</sup>	bank 3 21.99 <sup>+</sup>	bank 4 18.87 <sup>+</sup>	\$ 76.9%
	15.00 minutes				
18:11:15	bank 1 21.86 <sup>+</sup> react, M2	bank 2 21.54 <sup>+</sup>	bank 3 21.70 <sup>+</sup>	bank 4 18.98 <sup>+</sup>	\$ 70.7%
				70.87 minutes: aerobic static fill, M28	
18:41:17	bank 1 21.37 <sup>+</sup>	bank 2 21.11 <sup>+</sup>	bank 3 21.39 <sup>+</sup> decant, M39	bank 4 19.56 <sup>+</sup>	\$ 75.7%
		2.70 minutes			
18:44:15	bank 1 21.37 <sup>+</sup>	bank 2 21.11 <sup>+</sup>	bank 3 21.37 <sup>+</sup> idle, M10	bank 4 19.56 <sup>+</sup>	\$ 75.7%
		40.82 minutes			
18:58:49	bank 1 21.37 <sup>+</sup>	bank 2 21.11 <sup>+</sup>	bank 3 21.39 <sup>+</sup> waste sludge, M68	bank 4 19.56 <sup>+</sup>	\$ 75.7%
				45.00 minutes	
19:03:45	bank 1 21.37 <sup>+</sup>	bank 2 21.11 <sup>+</sup>	bank 3 21.37 <sup>+</sup>	bank 4 19.56 <sup>+</sup> aerated fill, M9	\$ 75.7%















Aug 29, 2011

10/15/11

12:22:00	tank 1 22.62'	tank 2 22.43'	tank 3 22.80'	[redacted] 21.81'	\$ 130.58
				anoxic static fill, M1	
12:30:13	tank 1 22.60'	tank 2 22.45'	tank 3 22.82'	[redacted] 21.82'	\$ 131.18
				30.50 minutes	
12:42:25	tank 1 22.41'	tank 2 22.38'	60.00 minutes tank 3 22.87'	tank 4 20.90'	\$ 117.16
			decant, M2		
13:21:11	tank 1 22.60'	tank 2 22.40'	19.07 minutes tank 3 20.99'	tank 4 21.89'	\$ 121.28
			[redacted]		
13:22:16	tank 1 22.40'	tank 2 22.40'	0.02 minutes tank 3 18.99'	tank 4 21.89'	\$ 121.28
			waste sludge, M2		
13:22:17	tank 1 22.40'	tank 2 22.40'	0.02 minutes tank 3 18.99'	tank 4 21.89'	\$ 121.28
			[redacted]		
13:36:59	tank 1 22.61'	tank 2 22.40'	33.58 minutes tank 3 18.89'	tank 4 22.11'	\$ 120.98
				anoxic static fill, M2	
13:39:23	tank 1 22.40'	tank 2 22.42'	58.10 minutes tank 3 18.90'	tank 4 22.20'	\$ 122.18
			settle, M2		
13:42:04	tank 1 22.61'	tank 2 22.43'	5.00 minutes tank 3 18.91'	tank 4 22.41'	\$ 123.98
			react, M2		
13:43:05	tank 1 22.42'	tank 2 22.40'	90.00 minutes tank 3 18.31'	tank 4 22.41'	\$ 122.98
			anoxic static fill, M2		
13:44:20	tank 1 22.40'	tank 2 22.29'	27.32 minutes tank 3 20.44'	tank 4 22.42'	\$ 123.78
			anoxic static fill, M2		
14:02:23	tank 1 22.39'	tank 2 22.40'	60.00 minutes tank 3 21.63'	tank 4 22.43'	\$ 122.18
			decant, M2		
14:52:29	tank 1 22.38'	tank 2 19.38'	39.00 minutes tank 3 22.20'	tank 4 22.44'	\$ 117.98
			anoxic static fill, M2		
14:52:40	tank 1 22.38'	tank 2 18.99'	16.38 minutes tank 3 22.18'	tank 4 22.43'	\$ 121.78
			idle, M1		
14:53:24	tank 1 22.20'	tank 2 18.99'	0.02 minutes tank 3 22.20'	tank 4 22.47'	\$ 122.78
			waste sludge, M2		
15:07:00	tank 1 22.39'	tank 2 18.90'	4.27 minutes tank 3 22.40'	tank 4 22.49'	\$ 113.00
			react, M2		
15:08:12	tank 1 22.40'	tank 2 19.40'	14.00 minutes tank 3 22.50'	tank 4 22.50'	\$ 113.00
			anoxic static fill, M2		

Aug 29, 2011

16:00:00 - 16:05:00

Time	Tank 1	Tank 2	Tank 3	Tank 4	Notes
15:42:40	22.37'	20.79'	22.45'	20.40'	95.00 minutes anon mixed fill, M9
16:00:13	22.37'	21.60'	22.43'	22.40'	60.00 minutes decant, M3
16:22:29	9.83'	22.21'	22.17'	22.42'	160.33 minutes settle, M3
16:23:45	18.98'	22.49'	22.45'	22.42'	15.53 minutes idle, M10
16:23:46	18.98'	22.39'	22.49'	22.42'	0.02 minutes waste sludge, M60 idle, M9
16:25:34	18.89'	22.40'	22.46'	22.43'	43.23 minutes aerated fill, M8
16:25:55	18.89'	22.40'	22.46'	22.43'	0.02 minutes react, M2
16:25:55	18.89'	22.40'	22.46'	22.43'	0.15 minutes anoxic static fill, M2
17:10:55	20.71'	22.36'	22.46'	22.41'	45.00 minutes anon mixed fill, M9
17:26:24	21.41'	22.37'	22.45'	22.41'	60.00 minutes decant, M3
17:34:26	21.56'	22.36'	22.42'	19.76'	156.75 minutes settle, M2
17:37:00	21.72'	22.38'	22.43'	18.98'	16.60 minutes idle, M10
17:39:01	21.72'	22.38'	22.43'	18.98'	0.02 minutes waste sludge, M60
17:39:46	21.72'	22.37'	22.43'	18.98'	0.02 minutes idle, M5
17:53:24	22.29'	22.37'	22.42'	18.98'	47.48 minutes aerated fill, M8
17:54:59	22.42'	22.38'	22.42'	18.98'	1.50 minutes react, M2
18:03:00	22.42'	22.38'	22.42'	18.98'	16.97 minutes anoxic static fill, M2
18:04:00	22.42'	22.38'	22.42'	18.98'	60.00 minutes decant, M3
18:04:00	22.42'	22.38'	22.42'	18.98'	45.00 minutes

App. 29. 2011

08:40:00	tank 1 22.43'	tank 2 22.60'	tank 3 21.12'	tank 4 20.59'	\$ 96.5%
					anox aixed fill, M0
10:00:20	tank 1 22.43'	tank 2 22.35'	tank 3 19.90'	tank 4 20.79'	\$ 79.0%
		no. 50 minutes settle, M31	16.37 minutes tank 3 19.00'		
10:50:46	tank 1 22.43'	tank 2 22.39'	tank 3 19.00'	tank 4 20.98'	\$ 96.0%
			idle, M10		
10:50:47	tank 1 22.43'	tank 2 22.34'	tank 3 19.00'	tank 4 20.98'	\$ 96.0%
			8.02 minutes waste sludge, M00 idle, M05		
19:27:00	tank 1 22.41'	tank 2 22.32'	tank 3 18.91'	tank 4 22.19'	\$ 89.1%
				45.00 minutes aerated fill, M8	
19:30:12	tank 1 22.41'	tank 2 22.32'	tank 3 18.91'	tank 4 22.40'	\$ 94.8%
				5.22 minutes react, M2	
19:30:14	tank 1 22.41'	tank 2 22.32'	tank 3 18.91'	tank 4 22.40'	\$ 94.8%
			39.45 minutes anoxic static fill, M22		
19:40:25	tank 1 22.42'	tank 2 22.30'	tank 3 19.02'	tank 4 22.45'	\$ 94.8%
		68.00 minutes decant, M39			
20:04:20	tank 1 22.40'	tank 2 18.99'	tank 3 20.22'	tank 4 22.43'	\$ 93.8%
		17.95 minutes idle, M13			
20:04:23	tank 1 22.40'	tank 2 18.99'	tank 3 20.23'	tank 4 22.43'	\$ 99.0%
		0.22 minutes waste sludge, M00 idle, M05			
20:15:14	tank 1 22.41'	tank 2 18.87'	tank 3 20.15'	tank 4 22.45'	\$ 99.0%
			45.00 minutes anox aixed fill, M0		
20:20:26	tank 1 22.39'	tank 2 18.89'	tank 3 21.06'	tank 4 22.43'	\$ 83.3%
	153.42 minutes settle, M31				
21:00:14	tank 1 22.38'	tank 2 18.90'	tank 3 20.25'	tank 4 22.43'	\$ 86.1%
			45.00 minutes aerated fill, M8		
21:04:00	tank 1 22.22'	tank 2 19.90'	tank 3 20.42'	tank 4 22.43'	\$ 86.0%
		2.90 minutes react, M2			
21:04:05	tank 1 22.38'	tank 2 18.90'	tank 3 20.42'	tank 4 22.43'	\$ 86.0%
		30.77 minutes anoxic static fill, M22			
21:04:26	tank 1 22.38'	tank 2 19.60'	tank 3 22.04'	tank 4 22.42'	\$ 78.1%
	00.00 minutes decant, M39				
21:11:11	tank 1 21.76'	tank 2 19.70'	tank 3 21.04'	tank 4 22.42'	\$ 80.1%
			130.97 minutes settle, M31		
21:11:10	tank 1 19.00'	tank 2 18.10'	tank 3 21.04'	tank 4 22.42'	\$ 87.0%
	5.03 minutes idle, M10				

Aug 29, 2011

21:42:07	0.02 minutes tank 1 19.00' waste sludge, M60 idle, M45	tank 2 20.17'	tank 3 20.40'	tank 4 22.42'	S 83.8%
21:48:09	45.00 minutes tank 1 18.90'	tank 2 20.20' anaerobic fill, M9	tank 3 21.43'	tank 4 22.20'	S 77.5%
21:54:11	tank 1 18.90'	tank 2 21.60'	tank 3 21.42'	50.00 minutes tank 4 22.41' decant, M39	S 67.3%
22:00:09	tank 1 18.00'	45.00 minutes tank 2 21.72' aerobic fill, M8	tank 3 22.15'	tank 4 22.05'	S 74.2%
22:07:02	tank 1 18.90'	tank 2 22.10'	tank 3 22.42'	15.50 minutes tank 4 18.99' idle, M10	S 71.8%
22:13:53	tank 1 18.90'	tank 2 22.10'	tank 3 22.42'	0.02 minutes tank 4 18.99' waste sludge, M60 idle, M45	S 71.8%
22:18:09	tank 1 18.90'	15.00 minutes tank 2 22.09' react, M5	tank 3 22.43'	tank 4 18.96'	S 71.8%
22:24:29	64.70 minutes anaerobic static fill, M22	tank 2 22.10'	118.27 minutes tank 3 22.41' settling, M31	tank 4 18.91'	S 66.0%
22:33:03	45.00 minute tank 1 20.20' anaerobic fill, M9	tank 2 22.04'	tank 3 22.40'	tank 4 18.91'	S 28.6%





September 1, 2011

320 S. 17<sup>th</sup> Street  
Reading, PA 19602-2209  
Telephone: (610) 376-9162  
Facsimile: (610) 376-9164  
E-mail: info@miller-env.com  
www.miller-env.com

RECEIVED  
BY: \_\_\_\_\_

Attn: Township Manager  
East Goshen Township  
1580 Paoli Pike  
West Chester, PA 19380-6199

**RE: Inspection of Facilities**

Dear Mr. Smith:

Recent events have been some of the most unique experiences recorded. On Tuesday, August 23, the region recorded a significant earthquake, something most of us have never experienced in our lifetime. As your water/wastewater partner and the operator of your facilities, these assets are vital to your community. Obviously, the integrity of these structures is critical to our performance. We therefore have conducted an inspection of the facilities to ascertain if there are potential problems that may have resulted from the earthquake. As this was predominantly a visual inspection, we do not know for certain if there was any subsurface damage to buried tankage, however, if there was we would have expected there to be volumetric losses in the vessels and probable residual indications of flow losses. Our inspection also included a monitoring of all pressurized lines for potential pressure losses. It appears to our staff that there was no resultant damage to your facilities. With the continuation of aftershocks, we will continue to monitor and if the situation changes, we will immediately notify you.

The weekend of August 27-28 then brought another challenge with Hurricane Irene and its impacts. While the wet weather flows created significant problems, the infrastructure has handled the flow and storm impacts without any apparent damages.

MEI values its clients and hopes that this information assists you in your asset assessments. If we can be of additional service, please contact us.

Sincerely,

**MILLER ENVIRONMENTAL, INC.**



James P. Hopkins, PE  
Director, Client Services

Cc: MEI Files



**Brickhouse  
Environmental**  
*Consultants and Engineers*

East Goshen Municipal Authority  
1580 Paoli Pike  
West Chester, PA 19380

Invoice number 6119  
Date 9/1/2011

Client ID: 548

Contract: 09.2532

E Goshen Twp-Ridley Creek Sewer

Scope of Work: Project No. 09-2532-0 E. Goshen/Ridley Creek Sewer Plant/WW Engineering

Attn: Mr. Rick Smith, Township Manager

SEE PROJECT ACCOMPLISHMENTS ATTACHED.

---

Professional Services Rendered Through the Month of August 2011.

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**Labor**

<u>Employee Type</u>	<u>Hours</u>	<u>Amount</u>
Project Manager	111.00	12,765.00
Labor Total	111.00	12,765.00

Reimbursable		<u>Amount</u>
	Expense Total	0.00
		0.00
	<b>Invoice Total</b>	<b><u><u>12,765.00</u></u></b>

OLC RS

9-8-11

515 South Franklin Street  
West Chester, PA 19382

Payment Terms: Net Thirty (30) Days; Credit Cards Accepted

**Phone** 610.692.5770  
**Fax** 610.692.8650



**PROJECT ACCOMPLISHMENTS  
EAST GOSHEN/RIDLEY CREEK SEWAGE TREATMENT PLAN  
UPGRADE/EXPANSION  
BE PROJECT NO. 09-2532-0  
AUGUST AND SEPTEMBER 2011 SERVICES**

- 1-Aug-11 On site at RCSTP to review effects of process modifications.  
  
Check the status of Alum fed pump MP-32. On Friday (7/29), the Siemens SBR panel displayed "not Auto" and on today's visit the display read "Auto." Reviewed email sent from Gary Roberts. Review of error messages with the plant operator is scheduled for 8/2 while on site correcting the sludge dewatering polymer system malfunction.
- 2-Aug-11 On site at RCSTP from 8:00 AM to 9:45 AM to meet with Matt McAloon to review the punch list for Clinger Corporation for consideration for final payment. Returned to site to assist with providing vendor information for the addition of a sand filter prior to the hydromatic utility water tanks.  
  
Returned to site at 1:45 PM through 5:15 PM. Coordinated with Ed from Gayle Corporation on the replacement of the "B" controller for the centrifuge sludge dewatering polymer system. Re-attached the discharge and pressure relief hoses previously disconnected and cleaned (7/29). Started the centrifuge to confirm operation of the polymer system remotely by means of the Alfa Laval centrifuge control system. Shut down equipment, washed down and secured facility upon departure.
- 3-Aug-11 Review mediation memorandums distributed from Steve McDonnell for comments.  
  
Review Clinger certified payroll. No available data for the end of 2010 and 2011. Sent an email to Dan Barbato requesting Pennomni locate the copies retained by the Engineer. Offer to visit the Philadelphia office to review the files.  
  
Preparing outline for the SOP for insertion of the details and procedures.  
  
Prepare draft July Project Manager Report.



**PROJECT ACCOMPLISHMENTS**  
**EAST GOSHEN/RIDLEY CREEK SEWAGE TREATMENT PLAN**  
**UPGRADE/EXPANSION**  
**BE PROJECT NO. 09-2532-0**  
**AUGUST AND SEPTEMBER 2011 SERVICES**

- 4-Aug-11 Complete and distribute month Project Manager Report.  
  
Telephone call with Dave Luongo regarding the influent flow meter.  
  
Telephone call with Dwayne from Worth & Co. regarding centrifuge sludge dewatering polymer system and conversation with Dave Luongo.  
  
Telephone conversation with Jeff Bush regarding polymer system, influent flow meter, SBR No. 2 pump impeller.  
  
Call to Mark Miller confirming receipt of the email that SBR No.2 motive pump is ready for pick up. Mark confirmed with Jeff Bush that his Staff can pick up the pump.  
  
Telephone conversation with Scott Stump. Sludge dewatering polymer system doesn't display the concentration and feed rate at the remote Alfa Laval panel.  
  
Coordinated with John Dezzi, Northeast Technical Sales to visit RCSTP on Monday, August 8th at 8:00 AM to assist with the flow proportioning operation of the influent composite samplers.
- 5-Aug-11 Visit to RCSTP to gather information for the sludge dewatering polymer system to coordinate a service visit from Gayle Corporation. Also check on progress towards settability improvement.  
  
Review files for Clinger mediation
- 8-Aug-11 On site at RCSTP to meet with John Dezzie, North East Technical, to program the composite samplers to work in conjunction with the final effluent and influent flow meters.  
  
On site at the Township Building, 9:00 AM-Noon and 1:00 PM to 3:00PM to attend and participate in the mediation hearing between the Authority and Clinger Corporation.  
  
Prepare for and attend monthly Authority meeting.



**PROJECT ACCOMPLISHMENTS  
EAST GOSHEN/RIDLEY CREEK SEWAGE TREATMENT PLAN  
UPGRADE/EXPANSION  
BE PROJECT NO. 09-2532-0  
AUGUST AND SEPTEMBER 2011 SERVICES**

- 16-Aug-11 Received telephone call from Scott Stump regarding SBR experiencing occasional filled decants. Mutual agreement to reduce the 80 minute settle time to 60 minutes as per the original design.

Gathered and reviewed the SBR cycle data, summarized the data, scanned the summary, supporting data and current set points to Dave Ripple and Paul Christiansen (Siemens) for evaluation and suggestions.

Responded to Gary Roberts email regarding the malfunctioning operation of alum feed pump MP-32.

Responded to Bob Dina's email regarding the label for ATS 1.

Send Dan Barbato an email regarding the status of the 35KV Clinger "as built record" drawing.

Sent Jeff Bush an email regarding the exhaust fan motor for the centrifuge dewatering building fan. Lenni Electric has suggested that the motor is overloading resulting in the blown fuses.

- 17-Aug-11 On site at RCSTP from 8:30 to 10:30 AM reviewing list of warranty items with Plant Operator. Followed up with information sent to Siemens for technical assistance as requested.

- 19-Aug-11 On site at RCSTP to check issue with SBR #2 decanter.

Follow up with Jeff Bush regarding outstanding items and warranty issues.

Draft a list of remaining items EGTMA should place on a calendar, including tentative schedule and priority ranking.

Work on SOP



**PROJECT ACCOMPLISHMENTS**  
**EAST GOSHEN/RIDLEY CREEK SEWAGE TREATMENT PLAN**  
**UPGRADE/EXPANSION**  
**BE PROJECT NO. 09-2532-0**  
**AUGUST AND SEPTEMBER 2011 SERVICES**

- 22-Aug-11 Visit RCSTP to review plant status, operation set points and overall functioning of equipment. Review influent and effluent sample data.  
  
Telephone message to Jeff Bush regarding floc tank mixer, centrifuge room exhaust fan, influent flow meter and composite samplers.
- 23-Aug-11 On site at RCSTP to meet with Mark Miller and review key plant operating issues with MEI replacement plant operators. Scott Stump is on disability leave due to an accident over the weekend damaging the ligaments and bones in his right ankle (not work related). Highlights of discussion with MEI included SBR 3 DO trend, SBR 3 blower "high pitch" noise, effluent sample data, composite samplers function in time sample mode, floc tank mixer out of service, sludge holding tank telescopic valves are functioning as designed, and removal of SBR 3 from service for the week of August 29th.  
  
Telephone call to Paul Mamic at ACS regarding the flow meter signals to the composite samplers. A date to correct the issue during the week of August 29th was discussed. Briefly discussed the influent flow meter issues.  
  
Telephone call to John Dezzi, Northeast technical Sales, regarding the composite samplers. Requested coordination to meet with ACS to address the composite sampler flow proportioned function.  
  
Telephone call to Jeff Bush regarding the floc tank mixer and centrifuge exhaust fan.  
  
Observed alum pump MP-32 functioning as intended and pumping alum to SBR 3.  
  
Update punch list provided by Mark Miller  
  
Email to Jeff Bush regarding outstanding issues and coordination of SBR 3 tank draining.
- 26-Aug-11 Work on SOP
- 29-Aug-11 Hours are from assisting with facility operation during major storm event on August 27 & 28, 2011



**PROJECT ACCOMPLISHMENTS  
EAST GOSHEN/RIDLEY CREEK SEWAGE TREATMENT PLAN  
UPGRADE/EXPANSION  
BE PROJECT NO. 09-2532-0  
AUGUST AND SEPTEMBER 2011 SERVICES**

- 30-Aug-11 On site at RCSTP for 1 hour.  
  
Work on SOP in preparation of meeting and "walk" through with EGTMA and MEI for 8/31
- 31-Aug-11 On site from 8:00 AM to 8:30 AM and 11:00 AM to 12:30 PM.  
  
Work on summary report for excessive rain fall event resulting from Hurricane Irene over August 27 and 28.
- 1-Sep-11 Conversation with Jeff Bush regarding influent flow meter and finalize out payment.  
  
Review and update SOP for omitted worksheets
- 2-Sep-11 Discussion with Jeff Bush on influent flow meter and final close-out.  
  
Update outstanding warranty issues list and provide to Jeff Bush  
  
Work on O&M quick reference folder for RCSTP
- 6-Sep-11 Review flow and laboratory data provided by plant operator. Status update from plant operator towards the SBR No. 3 draining and cleaning. Basin is off line, drained and ready for inspection.  
  
Complete summary memo and data compilation of SBR operation and events during Hurricane Irene.
- 7-Sep-11 On site meeting with Rick Harp, MEI, to collect comments and correction for log/bench sheets provided on August 31, 2011.  
  
Implement corrections and additions to log sheets.  
  
Provide telephone troubleshooting and operations support to plant operator during influent pump station failure. Contacted Mark Miller. Lenni Electric on site and discovered a faulty UPS on the Flygt pump control panel preventing the operation of the pumps in automatic and hand modes.  
  
Prepare August/September project manager report.



**PROJECT ACCOMPLISHMENTS  
EAST GOSHEN/RIDLEY CREEK SEWAGE TREATMENT PLAN  
UPGRADE/EXPANSION  
BE PROJECT NO. 09-2532-0  
AUGUST AND SEPTEMBER 2011 SERVICES**

- 8-Sep-11 Project Close-out items
- 9-Sep-11 Project Close-out items
- 10-Sep-11 Project Close-out items
- 12-Sep-11 Attend September Authority Meeting





# Brickhouse Environmental

East Goshen Township: Ridely Creek Sewer Plant Expansion Project Management Schedule Supplement

Brickhouse's contract for project management was originally anticipated to be completed week ending August 8, 2010 at 1,522 hours and \$175,030.

From April through October 2010, Brickhouse spent 100 hours on out of scope matters that were included in the total hours.

The duration was extended to week ending October 10, 2010 and attendance at the October 11, 2010 Authority meeting which then expended the original 1,522 hours.

The Board subsequently approved Brickhouse Environmental to continue to serve the Authority's needs as requested on a T&M basis.

## Monthly Project Management Subtotals Beyond the Original Budget

Month	Project Subtotals		
	Pro. Mgt. Hours	Cumulative Hours	Cumulative Fees
October 2010	36.25	36.25	\$4,168.75
November 2010	86.50	122.75	\$14,116.25
December 2010	136.00	258.75	\$29,756.25
January - February 4, 2011	97.75	356.50	\$40,997.50
February - March 4, 2011	58.00	414.50	\$47,667.50
March - April 1, 2011	50.00	464.50	\$53,417.50
April 2 - April 30, 2011	40.75	505.25	\$58,103.75
May - June 3, 2011	94.00	599.25	\$68,913.75
June 6 - July 1, 2011	48.00	647.25	\$74,433.75
July 5 - July 29, 2011	59.00	706.25	\$81,218.75
August 1 - September 12, 2011	111.00	817.25	\$93,983.75

## Project Cumulating Totals

Project Management Hours	Fee
2,299.25	\$268,313.75

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**draft**  
**EAST GOSHEN TOWNSHIP MUNICIPAL AUTHORITY**  
**MEETING MINUTES**  
**August 8, 2011**

The East Goshen Township Municipal Authority held their regularly scheduled meeting on Monday August 8, 2011 at 7:00 p.m. at the East Goshen Township building. Members in attendance were: Chairman Joseph McCawley, Jack Yahraes, Fran Beck, Dana Pizarro and Kevin Cummings. Also in attendance were: Rick Smith, Township Manager; Dan Barbato from Pennoni; Scott Towler from Brickhouse Environmental; Walter Wujcik (Conservancy Board).

**COMMON ACRONYMS:**

<i>MA- Municipal Authority</i>	<i>I&amp;I – Inflow &amp; Infiltration</i>
<i>HC – Historical Commission</i>	<i>RCSTP – Ridley Creek Sewer Treatment Plant</i>
<i>PC – Planning Commission</i>	<i>LCSTP – Lockwood Chase Sewer Treatment Plant</i>
<i>CB – Conservancy Board</i>	<i>DEP – Department of Environmental Protection</i>
<i>PR – Park &amp; Recreation Board</i>	<i>EPA – Environmental protection Agency</i>
<i>BOS – Board of Supervisors</i>	<i>NPDES – National Pollutant Discharge Elimination System</i>
<i>SSO – Sanitary System Overflow</i>	<i>WAS – Waste Activated Sludge</i>

**1. CALL TO ORDER AND PLEDGE OF ALLEGIANCE**

Chairman Joe McCawley called the meeting to order at 7:00 p.m. and led those present in the Pledge of Allegiance. There was a moment of silence to remember our Armed Forces. Joe asked if anyone would be taping the meeting. There was no response.

**2. RIDLEY CREEK REPORTS**

**A. Brickhouse Report**

The RCSTP project moved closer to final closeout during July. Efforts focused on working with both contractors towards providing the remaining documentation and training required as part of project closeout as well as resolving equipment warranty issues.

On July 19, 2011, Clinger Corporation and their vendor, General Electric (GE), provided training for the operation and maintenance of the variable speed drives (vfds). There are a total eleven GE vfds employed throughout the treatment facility. These drives control the operation of key equipment including the influent pumps, disc filter feed pumps, and Siemens SBR blowers. In addition, GE provided programming and training for the power quality meter (PQM) located on the main electric service for the facility. The PQM continuously monitors and records incoming electric data such as line voltage, amperage and hertz.

Clinger Corporation submitted a request for final payment dated July 19, 2011 on the transmittal letter. On August 2, 2011, a final review of punch-list items for Clinger revealed a few outstanding items identified as:

- As built record drawing for the 35KW electric connection
- Missing label
- Missing Arc Flash set back distance indicators installed on the floor
- Acceptance of spare conduit caps by Owner.

Coordination with Clinger Corporation to resolve these issues immediately is in progress. Approval of final close-out is recommended contingent upon successful completion of the items identified.

1  
2 Worth & Company continues to resolve identified equipment malfunctions considered as  
3 warranty items. During the month, the following issues were resolved:

- 4 • Distribution conveyor motor problem corrected. Re-installed a  
5 disconnected lead wire on the load side of the motor starter.
- 6 • Centrifuge sludge dewatering system polymer system malfunction.  
7 Replaced the "B" controller for the polymer system.
- 8 • Alum feed pump MP-32. Reprogrammed the pump. The pump operates  
9 in automatic mode through the Siemens SBR control panel.

10 The remaining issues remain outstanding. With the exception of the influent flow meter  
11 and SBR number 2 motive pump, the remaining items are planned to be completed  
12 during September when conditions are suitable for establishing ground cover.

- 13 • Influent flow meter
- 14 • Repair of SBR number 2 motive pump
- 15 • Top soil, final grading and seed are required around the sludge holding  
16 tanks
- 17 • Touch up paint is required on sludge holding tank hand rails
- 18 • Touch up paint on aeration tank piping on the sludge holding tanks
- 19 • Screen building seam at cast-in-place concrete and block water requires  
20 water proofing on exterior of building
- 21 • Removal of the silt fence

22 On July 19, 2011, Chris Candy from Flygt (ITT Corporation) issued a revised price in the  
23 sum of \$2,509.00 for the repair to SBR number 2 motive pump. Flygt does not consider  
24 the impeller failure a warranty item; however, the local office was able to reduce the  
25 price. The repair cost will be paid by Worth & Company.

26  
27 On July 25, 2011, a meeting was held to discuss the pending mediation meeting with  
28 Clinger Corporation. The mediation meeting is scheduled for August 8, 2011 at 10:00am  
29 located at the East Goshen Township building.

30  
31 The wastewater treatment remains in compliance with the NPDES permit. The plant  
32 operator has included the use of magnesium hydroxide, as slurry for use in maintaining  
33 the pH and alkalinity within the SBRs. Sodium hypochlorite was briefly applied to the  
34 scum on the SBRs for a few days. Aluminum sulfate is presently added at a rate of 25%  
35 pump which is equivalent to around 1.25 gallons. Daily usage is estimated at 75 gallons  
36 per day.

37  
38 During July, the addition of aluminum sulfate to the SBRs during the pre-settle phase was  
39 intermittent. The aluminum sulfate system was returned to continuous operation during  
40 mid-July to assist with settleability and establish a baseline of effluent phosphorus  
41 concentrations for comparison against the new phosphorus discharge limit. The  
42 treatment facility remains in compliance with the NPDES permit dated September 1,  
43 2006.

44  
45 The SBR treatment process is functioning on a 6 hour and 20 minute treatment cycle as  
46 opposed to the design of 6 hours. The settleability has improved allowing for a decrease  
47 in settle time from 100 minutes to 80 minutes. Restoring the design time for 60 minutes  
48 of settle is progressing. The influent fill time was decreased from 140 minutes to 120  
49 minutes and the fill rate was restored to the design rate of 520 gpm. On site process

1 control monitoring has been useful towards adjusting the treatment process and restoring  
2 the original design set points.

3 The 14-day SBR performance test and demonstration, summarized as a sampling event,  
4 has been postponed indefinitely.

5 The current NPDES permit expires on September 30, 2011. Telephone calls to PADEP  
6 to allow the plant operator to demonstrate a minimum of two consecutive months of  
7 compliance with the phosphorus discharge limits is being pursued. Coordination of an  
8 inspection of the facility by PADEP prior to implementation of new discharge limits is  
9 recommended.

10 The project remains substantially complete with final closeout pending.

11  
12 Kevin asked for target levels to be added to the report. Rick asked Scott to supply DMRs  
13 each month, which come from Miller Environmental.

14  
15 **B. Pennoni** – Dan Barbato, reported the following:

16 **RCSTP Upgrade and Expansion**

- 17 • Construction phase services continue with punch list monitoring, review of  
18 operations and maintenance submittals and as-built plans, troubleshooting, and  
19 coordination with the Project Manager and the Township.
- 20
- 21 • A breakdown of effort expended over the past month by Pennoni is provided with  
22 the invoice detail under separate cover.
- 23
- 24 • Worth and Company and Clinger Corporation have completed their punch list with  
25 the exception of a few minor items. Paper and CAD as-builts, and electronic copies  
26 of O&M manuals were received from Worth. Clinger submitted O&Ms or as-builts  
27 in early July. Pennoni reviewed the Clinger documents and found them to be  
28 responsive to the contract requirements.
- 29
- 30 • A final punchlist review and verification is in progress.

31  
32 **I / I Metering Project**

- 33 • The Township continues to meter flows at selected locations. A new program for  
34 monitoring meter data is starting up. Meters are in operation in locations as  
35 recommended and two meters will be moved to new locations. Significant  
36 progress is being made to reduce infiltration and inflow.

37  
38 **Ridley Creek Consent Order**

- 39 • The next report is due in September. No comments were received from DEP on  
40 the March report.

41  
42 **LCSTP Elimination**

- 43 • DEP believes that sludge can be left in the ponds if properly handled and deemed  
44 non-hazardous. DEP will obtain confirmation from their Waste Management  
45 Division to confirm this determination. Pennoni is developing a closure plan for  
46 DEP review and comment. Elverson Borough abandoned a relatively similar  
47 lagoon in the past and was allowed to leave sludge in place. Samples of the  
48 sludge in both ponds will be collected and analyzed for TCLP parameters  
49 (hazardous characteristics).

- The proposed sewer route was staked and the Authority met with the affected property owners. Minor adjustments were made to the alignment. Easement documents are in progress.
- Utility research is complete and known utilities are being added to the design plans.

#### Hershey Mill PS Diversion, Reserve PS Elimination Planning

- DEP approved the pump station diversions on June 6. The Reserve pump station conveys sewage to Hershey Mill, which pumps to West Goshen. Both pump stations will be decommissioned and sewage diverted into the East Goshen Ridley Creek gravity sewer system.
- Base plan development is in progress.

#### Marydell PS Elimination Planning

- The report for the Act 537 Plan Revision was submitted to the DEP in April. No comments have been received from DEP at the time of this report.
- The required 60-day public notice for the project was posted on June 24.

#### Applebrook Spray Irrigation NPDES Permit Renewal

- The NPDES discharge permit was submitted to DEP on June 15. DEP sent a letter confirming that the application is administratively complete and is undergoing technical review.

#### Chapter 94 Reports

- DEP provided several comments on the Ridley creek Chapter 94 Report. Pennoni responded to the comments and we are awaiting confirmation from DEP that the response satisfies their inquiry.

#### C. Miller Environmental Report

Bill Ronyack reported the following for June 2011:

##### Routine Operation & Maintenance Activities

- Daily sampling, testing, and inspections for permit compliance
- Routine daily testing for process optimization
- Microscopic exams are good/filaments diminishing

##### Non-Routine Operations & Maintenance Activities

- Alarm responses dropping
- Quarterly well sampling scheduled for August
- Flow signals being modified
- Alum feed MP32 being adjusted
- Centrifuge/polymer system being adjusted

##### Summary of Influent Flow – Ridley Creek

- AVERAGE: .2716 mgd
- MAXIMUM: .7970 mgd

1           Summary of Lockwood Chase Flow

- 2           • Average                   .00963 mgd  
3           • Maximum                   .07040 mgd  
4

5           Permit Compliance

- 6           • Ridley had no eDMR exceedences  
7           • Lockwood had slightly elevated CBOD and solids.  
8

9           D. Cost Summary Report

10           Reviewed

11  
12           E. Change Orders

13           None  
14

15           **3. RCSTP INVOICES**

- 16           A. William H Clinger, Corp. App #18 - \$56,535.60 – Jack made a motion to pay  
17           pending township staff receipt of open items and obligations on the contract. Dana  
18           seconded the motion. There was no further discussion. The motion passed unanimously.  
19           B. William H Clinger Corp WO #2770 - \$2,890.00. No payment approval at this time.  
20           C. William H Clinger Corp WO #2775 - \$631.43. No payment approval at this time.  
21           D. Rumsey – Clinger - \$2,100.00. No payment approval at this time.  
22           E. Pennoni, WO #478472 - \$3,070.49. Fran moved to approve payment. Kevin  
23           seconded the motion. There was no further discussion. The motion passed unanimously.  
24           F. Brickhouse, Inv. #6059, \$6,785.00. Fran moved to approve payment. Jack seconded  
25           the motion. There was no further discussion. The motion passed unanimously.  
26           G. Gawthrop Greenwood, Inv #92289, \$2,070.05. Jack moved to approve payment.  
27           Fran seconded the motion. There was no further discussion. The motion passed  
28           unanimously.  
29

30           **4. CHAIRMAN’S REPORT**

31           None.  
32

33           **5. APPROVAL OF MINUTES**

- 34           A. Jack moved to approve the minutes of the July 11, 2011 meeting as corrected. Dana  
35           seconded the motion. The motion passed unanimously.  
36

37           **6. APPROVAL OF INVOICES**

- 38           A. Pennoni #478476, \$7,606.25. Kevin moved to approve payment. Fran seconded the  
39           motion. There was no further discussion. The motion passed unanimously.  
40           B. Pennoni #478475, \$282.50. Dana moved to approve payment. Kevin seconded the  
41           motion. There was no further discussion. The motion passed unanimously.  
42           C. Pennoni #478474, \$965.00. Kevin moved to approve payment. Dana seconded the  
43           motion. There was no further discussion. The motion passed unanimously.  
44           D. Gawthrop Greenwood, Inv #92288, \$399.00. Kevin moved to approve payment.  
45           Dana seconded the motion. There was no further discussion. The motion passed  
46           unanimously.  
47  
48  
49

1 **7. LIAISON REPORTS**

2 A. Conservancy Board – Walter reported that they are working on a long term plan to  
3 control invasives in Applebrook Park. They are working with Mark Gordon on the  
4 YMCA/Bank parking lot. In the Fall, the 3 trees that were removed will be replaced.  
5 Jack mentioned that, at Paoli Pike and Line Road, trees are dying. Walter said they had a  
6 professor from West Chester University inspect that area and there is a species that won't  
7 do well there, so they will consider another type of tree or move those trees to another  
8 location.  
9

10 **EXECUTIVE SESSION** – At 7:40 pm the Authority went into Executive Session to discuss a  
11 legal matter. At 8:10 pm they returned to the regular meeting.  
12

13 **8. FINANCIAL REPORTS**

14 Financial reports were reviewed.  
15

16 **9. OLD BUSINESS**

17 None  
18

19 **10. GOALS**

20 A. Newsletter – Dana will prepare an article for the next newsletter.  
21

22 **11. NEW BUSINESS**

23 A. Jack made a motion to authorize the execution of the Sewer Connection Agreement  
24 with George and Beverly Binn, 1404 Pine Rock Road. Fran seconded the motion. There  
25 was no further discussion. The motion passed unanimously. Jack will sign the  
26 agreement.  
27

28 **12. CAPACITY REQUESTS**

29 None  
30

31 **13. SEWER REPORTS**

32 Following is Mark Miller's report:

33 A. Meters – The meters were calibrated in July. The portable flow meters were read on  
34 a bi-weekly basis with no problems to report.  
35

36 B. C.C. Collection – The Pumping stations were visited on a daily basis with no  
37 problems to report. When there were problems last month at the Marydell station,  
38 they found that the collection line on Wilson Drive has deteriorated. They will be  
39 televising the lines next.  
40

41 C. Lockwood Plant – Minor repairs were done to the grinder. They did some work with  
42 the engineer to gather sludge for testing.  
43

44 D. R.C. Collection – The pumping station was checked on a daily basis with no  
45 problems to report.  
46

47 E. Ridley Plant – The public works department assisted the plant operator with spraying  
48 the foam on the tanks. Two weeks ago Scott Towler and Mark met with the plant  
49 operator to discuss the operation of the SBR. Scott reviewed the data and  
50 recommended that the operator consider changing aeration time on each SBR. They

1                   agreed that there would not be any changes to the operation unless all three agreed.  
2                   The changes have made a significant difference in the effluent.

3  
4                   F. Alarms – They responded to 25 alarms during the month of July.

5  
6                   G. PA One Calls – The Public Works Dept. responded to 130 PA One Calls.

7  
8                   **14. ANY OTHER MATTER**

9                   None

10  
11                   **15. CORRESPONDENCE**

12                   None

13  
14                   **16. PUBLIC COMMENT**

15                   None

16  
17                   **17. ADJOURNMENT**

18                   At 8:30 pm, the Authority went into Executive Session. At 8:30 pm they adjourned from  
19                   Executive Session and Jack moved to adjourn the regular meeting. Dana seconded the  
20                   motion. The meeting was adjourned at 8:30 p.m.

21  
22                   Respectfully submitted,

23  
24  
25                   Ruth Kiefer, Recording Secretary  
26



draft  
EAST GOSHEN TOWNSHIP MUNICIPAL AUTHORITY  
MEETING MINUTES  
August 18, 2011

The East Goshen Township Municipal Authority held a special meeting on Thursday August 18, 2011 at 7:00 p.m. at the East Goshen Township building. Members in attendance were: Chairman Joseph McCawley, Jack Yahraes, Fran Beck, Dana Pizarro and Kevin Cummings. Also in attendance were: Rick Smith, Township Manager; Scott Towler from Brickhouse Environmental; Carmen Battavio, Township Supervisor; and Stephen McDonnell, Esq.

**1. CALL TO ORDER AND PLEDGE OF ALLEGIANCE**

Chairman Joe McCawley called the meeting to order at 7:00 p.m. and led those present in the Pledge of Allegiance. There was a moment of silence to remember our Armed Forces. Joe asked if anyone would be taping the meeting. There was no response.

**2. ITEMS OF DISCUSSION**

A. ADR Options Invoice #1218, in the amount of \$2,390.00 for services rendered by Judge Abraham J Gafni (Ret) as Mediator on August 8, 2011. Jack moved to approve payment. Fran seconded the motion. There was no further discussion. The motion passed unanimously.

B. Mutual Release and Settlement Agreement between William H Clinger Corporation and East Goshen Municipal Authority – Steve reviewed the agreement with the Authority members. There was discussion about the wording in paragraph 10, the second paragraph, second line. It was decided to add the word “and” between “Contract” and “in the amount...” Rick stated that a check for \$56,000.00 was mailed to Clinger, which is their 5% retainage, and the final payment of \$212,500.00 will be sent by August 22, 2011. Steve commented that, if Worth & Co was to bring a claim against the Township, Clinger could not be included in that claim. Joe spoke with Worth and Pennoni and both said they would be willing to help financially with this claim. Kevin moved to accept the Mutual Release and Settlement Agreement as written with the minor change in Paragraph 10 to add “and”, and to authorize Joe to sign the agreement, and to pay the amount of \$212,500.00. Jack seconded the motion. There was no further discussion. The motion passed unanimously.

C. Open House – Jack reminded everyone that the Authority had planned to have an Open House at the Sewer Treatment Plant this fall. Since there are still items such as landscaping to be done, Mark Miller asked if it could be delayed until Spring of 2012. Everyone agreed.

**3. ADJOURNMENT**

There being no further business Jack moved to adjourn the meeting. Fran seconded the motion. The meeting was adjourned at 7:30 pm.

Respectfully submitted,

Ruth Kiefer, Recording Secretary





**INVOICE**  
 Philadelphia, PA  
 215-222-3000 Fax: 215-222-3588

Remit Payment To:  
**Pennoni Associates Inc.**  
 P.O. Box 827328  
 Philadelphia, PA 19182-7328

East Goshen Municipal Authority  
 1580 Paoli Pike  
 West Chester, PA 19380-6199  
 Attention: Louis F. Smith, Twp Mgr.

Invoice # : 480795  
 Invoice Date : 08/25/2011  
 Project : EGMA1100  
 Project Name : 2011 Annual Services

For Services Rendered through: 08/14/2011

July Engineer's Report and Authority Meeting.

Phase : \*\*\*\* -- Professional Services

Total Phase : \*\*\*\* -- Professional Services

Labor :	467.50
Expense :	0.00
Phase Total :	467.50

**Amount Due This Invoice**

**\$467.50**

Fee :	10,022.50
Prior Billings :	9,555.00
Current Billings :	467.50
Total Billings :	10,022.50

Phase : \*\*\*\* -- Professional Services

Labor Class	Hours/Units	Rate	Amount
Authority Engineer	4.25	110.00	467.50
<b>Labor Total:</b>	<b>4.25</b>		<b>467.50</b>

Total Phase : \*\*\*\* -- Professional Services

Labor :	\$467.50
Expense :	\$0.00

Total Project : EGMA1100 -- 2011 Annual Services

Labor :	\$467.50
Expense :	\$0.00

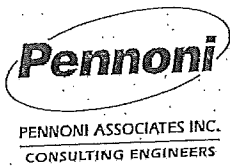
East Goshen Municipal Authority  
EGMA1100 Invoice Summary.xlsx  
Invoice Date 08-25-2011

**Project:** 2011 Annual Services  
**Pennoni Job No.:** EGMA 1100  
**Invoice No:** 480796  
**Invoice Period:** 7/18/2011 to 8/14/2011  
**Initial Authorization:** \$ 10,022.50 **Date:** 12/13/2010  
**Contract Amount:** \$ 10,022.50  
**Previously Invoiced:** \$ 9,555.00  
**Current Invoice:** \$ 467.50  
**Invoiced to Date (\$):** \$ 10,022.50  
**Invoiced to Date (%):** 100%  
**Remaining Budget (\$):** \$ -  
**Remaining Budget (%):** 0%

**Budget by Phase:**

**Phase No.** \*\*\*\*  
**Phase Name:** 2011 Annual Services  
**Phase Budget:** \$ 10,022.50  
**Previously Invoiced:** \$ 9,555.00  
**Current Invoice:** \$ 467.50  
**Invoiced to Date (\$):** \$ 10,022.50  
**Invoiced to Date (%):** 100%  
**Remaining Budget (\$):** \$ -  
**Remaining Budget (%):** 0%

**Comments:** July Engineer's Report & Authority Meeting.



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East Goshen Municipal Authority  
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 West Chester, PA 19380-6199  
 Attention: Louis F. Smith, Twp Mgr.

Invoice #: 480796  
 Invoice Date: 08/25/2011  
 Project: EGMA1105  
 Project Name: LCSTP Final Design & Permitting

For Services Rendered through: 08/14/2011

Meeting with DEP regarding NPDES and Stormwater permitting, incorporate DEP comments, easement preparation, grading plan, preliminary demolition plan, closure plan research, pre-application meeting with DEP and CCCD, draft stormwater report and permit application, and sludge sampling for TCLP parameters.

Phase : 1 -- Design	Labor :	3,677.50
Total Phase : 1 -- Design	Expense : -----	0.00
	Phase Total :	3,677.50
Phase : 3A -- LCSTP Easement & Boundary Surv Allo	Labor :	2,076.00
Total Phase : 3A -- LCSTP Easement & Boundary Surv Allo	Expense : -----	0.00
	Phase Total :	2,076.00
Phase : 4 -- NPDES (E&SPC) Permitting	Labor :	3,732.50
Total Phase : 4 -- NPDES (E&SPC) Permitting	Expense : -----	0.00
	Phase Total :	3,732.50
Phase : 5 -- Water Quality Mgmt Part 2 Permit	Labor :	625.00
Total Phase : 5 -- Water Quality Mgmt Part 2 Permit	Expense : -----	2.41
	Phase Total :	627.41
Phase : 6 -- Environmental	Labor :	82.50
Total Phase : 6 -- Environmental	Expense : -----	0.00
	Phase Total :	82.50
		\$10,195.91
<b>Amount Due This Invoice</b>		

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INVOICES DUE ON RECEIPT. Invoices outstanding over 30 days will have a Service Charge of 1 1/2% per month.

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Fee :	77,800.00
Prior Billings :	17,767.00
Current Billings :	10,195.91
Total Billings :	27,962.91

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INVOICES DUE ON RECEIPT. Invoices outstanding over 30 days will have a Service Charge of 1 1/2% per month.

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**Phase : 1 -- Design**

<u>Labor Class</u>	<u>Hours/ Units</u>	<u>Rate</u>	<u>Amount</u>
Authority Engineer	4.00	110.00	440.00
Project Engineer	7.75	90.00	697.50
Associate Engineer	31.75	80.00	2,540.00
<b>Labor Total:</b>	<b>43.50</b>		<b>3,677.50</b>

<b>Total Phase : 1 -- Design</b>	<b>Labor :</b>	<b>\$3,677.50</b>
	<b>Expense :</b>	<b>\$0.00</b>

**Phase : 3A -- LCSTP Easement & Boundary Surv Allo**

<u>Labor Class</u>	<u>Hours/ Units</u>	<u>Rate</u>	<u>Amount</u>
Senior Surveyor	6.50	87.00	565.50
Survey Technician	28.50	53.00	1,510.50
<b>Labor Total:</b>	<b>35.00</b>		<b>2,076.00</b>

<b>Total Phase : 3A -- LCSTP Easement &amp; Boundary Surv Allo</b>	<b>Labor :</b>	<b>\$2,076.00</b>
	<b>Expense :</b>	<b>\$0.00</b>

**Phase : 4 -- NPDES (E&SPC) Permitting**

<u>Labor Class</u>	<u>Hours/ Units</u>	<u>Rate</u>	<u>Amount</u>
Project Engineer	7.25	90.00	652.50
Associate Engineer	38.50	80.00	3,080.00
<b>Labor Total:</b>	<b>45.75</b>		<b>3,732.50</b>

<b>Total Phase : 4 -- NPDES (E&amp;SPC) Permitting</b>	<b>Labor :</b>	<b>\$3,732.50</b>
	<b>Expense :</b>	<b>\$0.00</b>

**Phase : 5 -- Water Quality Mgmt Part 2 Permit**

<u>Labor Class</u>	<u>Hours/ Units</u>	<u>Rate</u>	<u>Amount</u>
Project Engineer	5.50	90.00	495.00
Engineering Technician I	2.00	65.00	130.00
<b>Labor Total:</b>	<b>7.50</b>		<b>625.00</b>

**Expenses**

<u>Description</u>	<u>Units</u>	<u>Rate</u>	<u>Amount</u>
Miscellaneous Job Expense			2.41
<b>Expense Total:</b>			<b>\$2.41</b>

<b>Total Phase : 5 -- Water Quality Mgmt Part 2 Permit</b>	<b>Labor :</b>	<b>\$625.00</b>
	<b>Expense :</b>	<b>\$2.41</b>

**Phase : 6 -- Environmental**

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INVOICES DUE ON RECEIPT. Invoices outstanding over 30 days will have a Service Charge of 1 1/2% per month.

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## Phase : 6 -- Environmental

<u>Labor Class</u>	<u>Hours/ Units</u>	<u>Rate</u>	<u>Amount</u>
Authority Engineer	0.75	110.00	82.50
<b>Labor Total:</b>	<b>0.75</b>		<b>82.50</b>

## Total Phase : 6 -- Environmental

Labor : \$82.50  
Expense : \$0.00

## Total Project : EGMA1105 -- LCSTP Final Design &amp; Permitting

Labor : \$10,193.50  
Expense : \$2.41

INVOICES DUE ON RECEIPT. Invoices outstanding over 30 days will have a Service Charge of 1 1/2% per month.



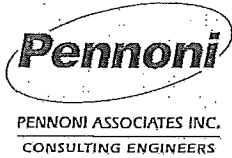
East Goshen Municipal Authority  
EGMA1105 Invoice Summary.xlsx  
Invoice Date 8-25-2011

**Project:** EGMA1105  
**Pennoni Job No.:** LCSTP Final Design & Permitting  
**Invoice No:** 480796  
**Invoice Period:** 7/18/2011 to 8/14/2011  
**Initial Authorization:** \$ 77,800.00 **Date:** 5/5/2011  
**Contract Amount:** \$ 77,800.00  
**Previously Invoiced:** \$ 17,767.00  
**Current Invoice:** \$ 10,195.91  
**Invoiced to Date (\$):** \$ 27,962.91  
**Invoiced to Date (%):** 36%  
**Remaining Budget (\$):** \$ 49,837.09  
**Remaining Budget (%):** 64%

**Budget by Phase:**

**Phase No.** \*\*\*\*\*  
**Reservoir Rd PS**  
**Phase Name:** **Cost Estimate**  
**Phase Budget:** \$ 77,800.00  
**Previously Invoiced:** \$ 17,767.00  
**Current Invoice:** \$ 10,195.91  
**Invoiced to Date (\$):** \$ 27,962.91  
**Invoiced to Date (%):** 36%  
**Remaining Budget (\$):** \$ 49,837.09  
**Remaining Budget (%):** 64%

**Comments:** Meeting with DEP regarding NPDES and Stormwater permitting, incorporate DEP comments, easement preparation, grading plan, preliminary demolition plan, closure plan research, pre-application meeting with DEP and CCCD, draft stormwater report and permit application, and sludge sampling for TCLP partners.



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East Goshen Municipal Authority  
 1580 Paoli Pike  
 West Chester, PA 19380-6199  
 Attention: Louis F. Smith, Twp Mgr.

Invoice # : 480797  
 Invoice Date : 08/25/2011  
 Project : EGMA1107  
 Project Name : HersheyMill & Reserve PS Div Des Per

For Services Rendered through: 08/14/2011

Field recon of sewer and manholes, base plan set up and formatting, develop surveying task list, review boundary plans and easements, create detail sheets and note sheets.

**Phase : 1 -- Design**

Total Phase : 1 -- Design

Labor :	2,537.50
Expense :	0.00
Phase Total :	2,537.50

**Phase : 3 -- Property Boundary Survey Allocation**

Total Phase : 3 -- Property Boundary Survey Allocation

Labor :	87.00
Expense :	0.00
Phase Total :	87.00

**Amount Due This Invoice**

\$2,624.50

Fee :	60,200.00
Prior Billings :	0.00
Current Billings :	2,624.50
Total Billings :	2,624.50

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INVOICES DUE ON RECEIPT. Invoices outstanding over 30 days will have a Service Charge of 1 1/2% per month.

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## Phase : 1 -- Design

<u>Labor Class</u>	<u>Hours/ Units</u>	<u>Rate</u>	<u>Amount</u>
Authority Engineer	2.00	110.00	220.00
Project Engineer	6.75	90.00	607.50
Associate Engineer	19.50	80.00	1,560.00
Technical Specialist	2.00	75.00	150.00
<b>Labor Total:</b>	<b>30.25</b>		<b>2,537.50</b>

Total Phase : 1 -- Design

Labor : \$2,537.50

Expense : \$0.00

## Phase : 3 -- Property Boundary Survey Allocation

<u>Labor Class</u>	<u>Hours/ Units</u>	<u>Rate</u>	<u>Amount</u>
Senior Surveyor	1.00	87.00	87.00
<b>Labor Total:</b>	<b>1.00</b>		<b>87.00</b>

Total Phase : 3 -- Property Boundary Survey Allocation

Labor : \$87.00

Expense : \$0.00

Total Project : EGMA1107 -- HersheyMill &amp; Reserve PS Div Des Per

Labor : \$2,624.50

Expense : \$0.00

INVOICES DUE ON RECEIPT. Invoices outstanding over 30 days will have a Service Charge of 1 1/2% per month.

**Project:** EGMA1107  
**Pennoni Job No.:** Hershey Mill & Reserve PS Div Des Per  
**Invoice No:** 480797  
**Invoice Period:** 7/18/2011 to 8/14/2011  
**Initial Authorization:** \$ 60,200.00 **Date:** 7/7/2011  
**Contract Amount:** \$ 60,200.00  
**Previously Invoiced:** \$ -  
**Current Invoice:** \$ 2,624.50  
**Invoiced to Date (\$):** \$ 2,624.50  
**Invoiced to Date (%):** 4%  
**Remaining Budget (\$):** \$ 57,575.50  
**Remaining Budget (%):** 96%

**Budget by Phase:**

**Phase No.** \*\*\*\*\*  
**Phase Name:** Hershey Mill & Reserve  
**Phase Budget:** \$ 60,200.00  
**Previously Invoiced:** \$ -  
**Current Invoice:** \$ 2,624.50  
**Invoiced to Date (\$):** \$ 2,624.50  
**Invoiced to Date (%):** 4%  
**Remaining Budget (\$):** \$ 57,575.50  
**Remaining Budget (%):** 96%

**Comments:** Field recon of sewer and manholes, base plan set up and formatting, develop surveying task list, review boundary plans and easements, create detail sheets and note sheets.

**2011  
EAST GOSHEN MUNICIPAL AUTHORITY GOALS  
SEPTEMBER REPORT**

ON-GOING

1. Submit an article for each newsletter.
  - a. **Need by 2/9/11 - Joe - Completed**
  - b. **Need by 5/4/11 - Fran - Completed**
  - c. **Need by 8/3/11 – Jack - Completed**
  - d. Need by 11/2/11 -Dana
  - e. February 2012 - Kevin
2. Attend West Goshen Meetings quarterly – more often if needed.
  - a. **1<sup>st</sup> Quarter (March) Jack**
  - b. **2<sup>nd</sup> Quarter (June) Fran**
  - c. 3<sup>rd</sup> Quarter (September) Dana
  - d. 4<sup>th</sup> Quarter (December) Joe
3. Respond to capacity requests in 45 days or less.
4. Implement I & I Plan
5. Conduct a sewer facilities tour after RCSTP construction is complete

RIDLEY CREEK PROJECT

1. Monitor construction.
2. Invite Board of Supervisors and all other ABC members to tour the plant.
3. **Open House at the RCSTP - The Authority agreed to have open house in 2012 after grass is fully established**
4. Have Siemens conduct a training session for Miller and Township Employees on the new SBR unit. (This would be in lieu of us going to the Siemens' facility in the mid-west.) Done

ACT 537 PLANNING

1. **Obtain Act 537 Plan approval for the Lockwood STP Abandonment Project. Completed 3/29/11**
2. **Obtain Act 537 Plan approval for the Greenhill PS Redirection and the Reserve PS Abandonment Project. Completed 6/11**
3. Obtain Act 537 Plan approval for the Marydell PS Abandonment project. Notice in Daily Local News for public comment 6/11. EGT Adopted resolution 830
4. Obtain construction permits, solicit bids and start construction of the Marydell PS Abandonment project.

EAST GOSHEN MUNICIPAL AUTHORITY  
EAST GOSHEN TOWNSHIP  
1580 PAOLI PIKE, WEST CHESTER, PA 19380-6199

September 9, 2011

To: Municipal Authority  
From: Mark Miller  
Re: August Monthly Report

**Meters:** Are being read on a daily basis. The portable flow meters were read on a bi-weekly schedule.

**C.C. Collection:** The Pumping stations were visited on a daily basis. All pumps were pulled and sent to Deckmens for repair as part of our routine maintenance. We had to replace the piping in the Hunt Country wet well; we also found a bad check valve which we had to replace.

During Hurricane Irene the Hershey Mill Pump Station was inundated when the water came over the dam and flooded the station. We had some high level alarms; however none of the wet wells carried over. The DEP was notified via a carryover report.

**Lochwood Plant:** No problems to report.

**R.C. Collection:** No problems to report.

**Ridley Plant:**

Wow what a month!! During Hurricane Irene 1.3 million went thru the plant. During the storm we had a couple bumps in the road; however the effluent was in compliance. We had two carry over's on SBR 3 and 4. The DEP was notified via phone and a carryover report was filed. Scott Towler was on hand during the storm, he was able to make some process changes to keep the plant in operation.

**Alarms:**

The alarm calls were off the charts for the month of August.

**PA One Calls:**

The Public Works Dept. responded to 120 PA One Calls.





2008 FLOWMETERS

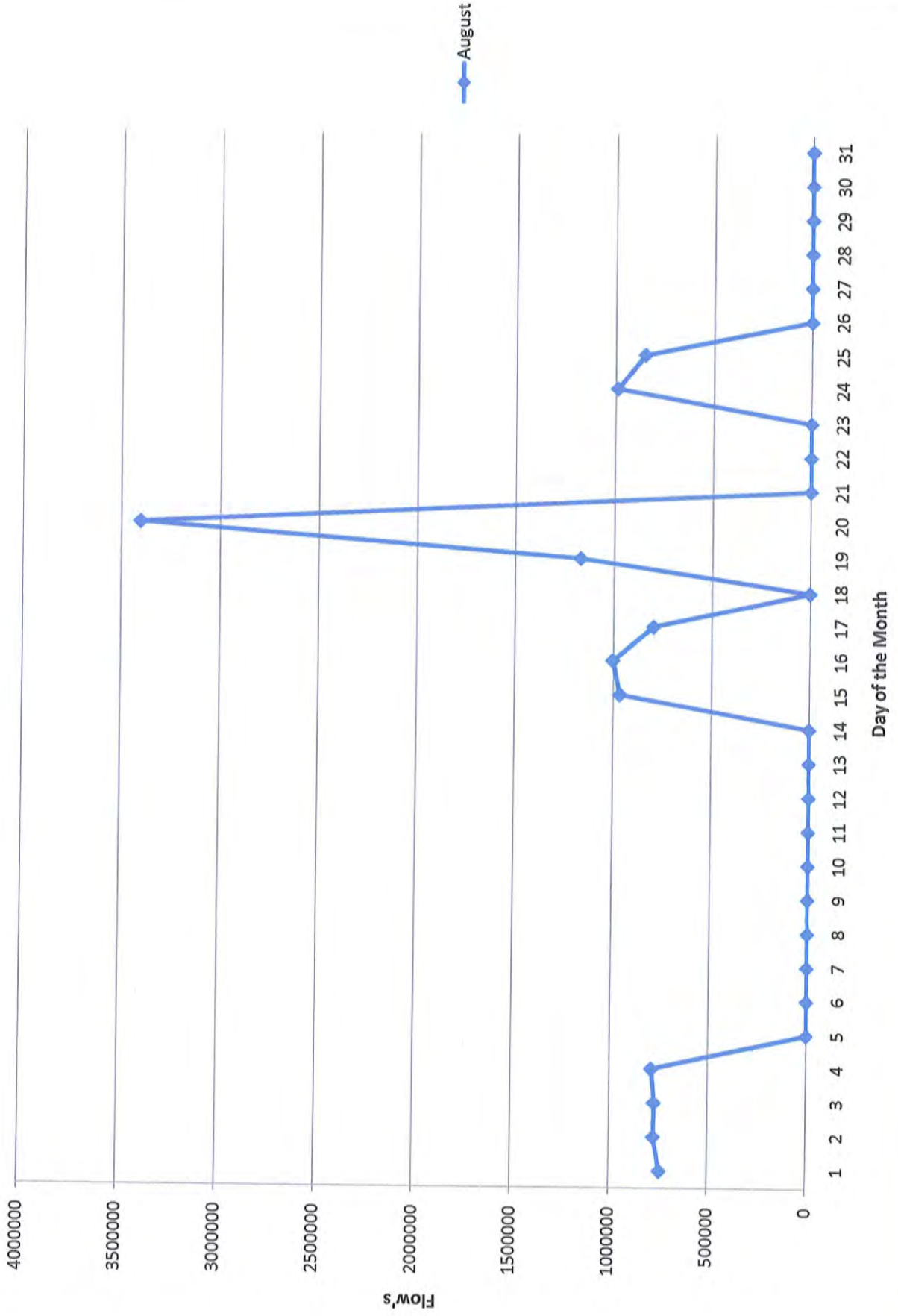
2011 AUGUST 3RD QUARTER- METERS FROM WEST GOSHEN - CC COLLECTION													
DATE	HERSHEY'S MILL		ASHBRIDGE		HICKS METER		RESERVOIR		SHERMAN		BARKWAY		
	READING	GPD	READING	GPD	READING	GPD	READING	GPD	READING	GPD	READING	GPD	
08/01/11					4,016,272	237,863	129,702,518	656,007					
08/02/11							129,774,360	718,420					
08/03/11	21,560,505	51,155	1,177,615	60,950			129,845,207	708,470	614,340	5,365	2,041,036	9,842	
08/04/11							129,918,087	728,800					
08/05/11													
08/06/11													
08/07/11													
08/08/11													
08/09/11													
08/10/11													
08/11/11	21,593,642	41,421	1,181,861	53,075					617,968	4,535	2,047,589	8,191	
08/12/11													
08/13/11													
08/14/11													
08/15/11													
08/16/11							130,670,245	683,780					
08/17/11							130,753,045	828,000					
08/18/11	21,628,372	49,614	1,186,962	72,871			130,827,553	745,080					
08/19/11							130,988,136	802,915					
08/20/11							131,229,018	1,338,217					
08/21/11													
08/22/11													
08/23/11													
08/24/11							131,308,324	264,353					
08/25/11	21,667,930	56,511	1,193,124	88,029			131,382,970	746,460					
08/26/11							131,458,892	759,220	626,670	6,703	2,062,313	10,264	
08/27/11													
08/28/11													
08/29/11													
08/30/11							131,880,420	843,056					
08/31/11							132,072,330	1,919,100					
		49,675		68,731		0		740,532		5,583		9,767	

## 2011 SUMMARY OF METER READINGS

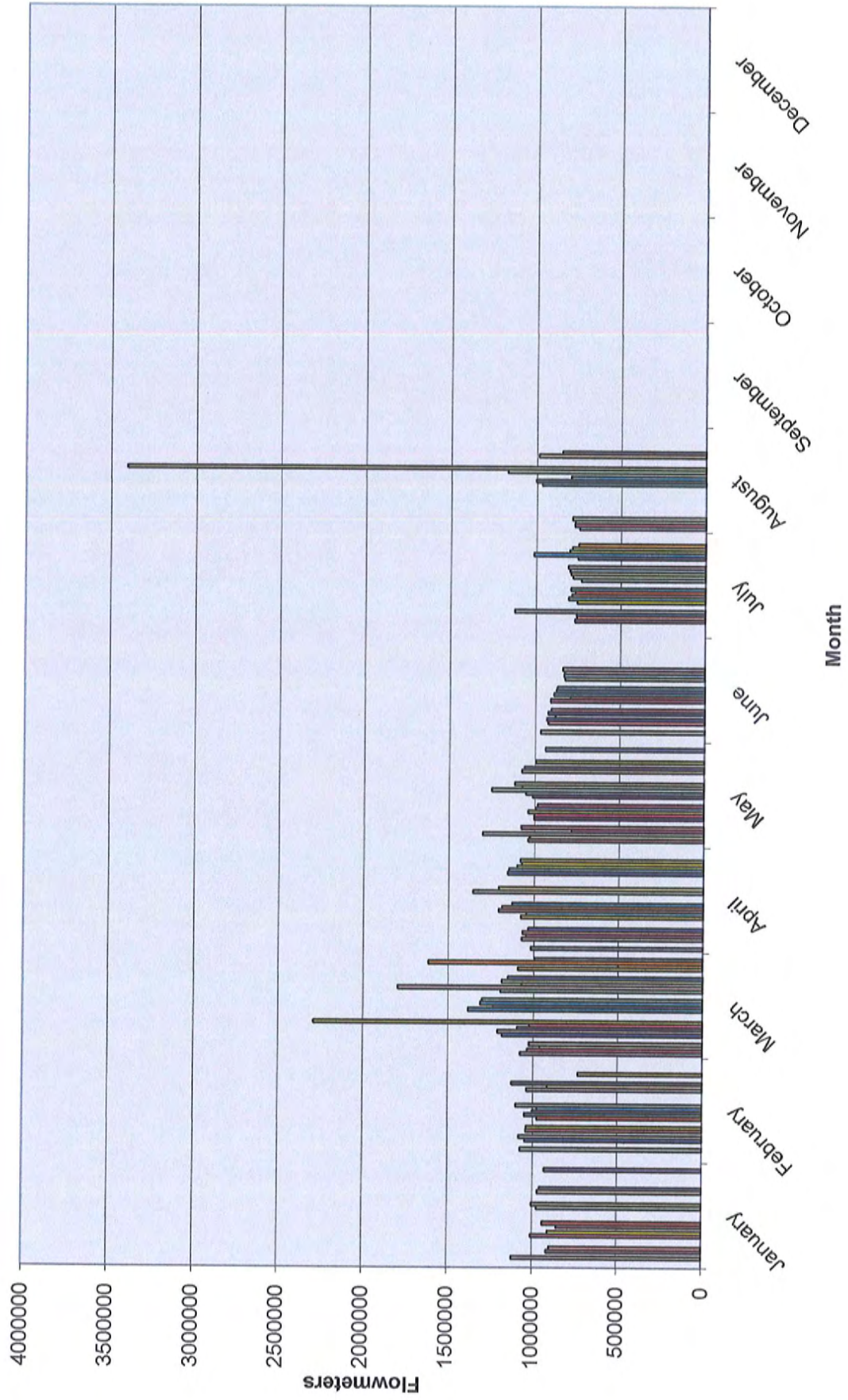
	WESTTOWN WAY	ELLIS LANE	PAOLI PIKE	WILSON DRIVE	SUMMIT	HERSHEY MILL	ASHBRIDGE	HICKS	RESERVOIR	SHERMAN	BARKWAY
JANUARY	1,081,404	97,651	47,105	57,700	20,400	53,493	62,585	278,133	701,586	5,463	11,131
FEBRUARY	1,292,596	149,342	63,312	71,587	20,400	58,624	77,370	309,956	793,370	5,474	11,651
MARCH	1,481,027	147,579	69,796	65,367	20,400	88,101	116,511	298,938	943,470	5,812	13,905
APRIL	1,413,164	162,664	70,023	64,082	20,400	72,199	105,867	359,818	911,601	5,832	12,076
MAY	1,333,439	153,742	74,669	62,324	20,400	66,543	93,515	339,305	880,112	6,280	11,889
JUNE	1,149,889	129,569	65,905	74,655	20,400	60,461	53,338	320,685	785,600	5,202	8,636
JULY	1,072,136	117,084	57,536	87,961	20,400	51,696	56,535	275,843	671,609	5,272	9,183
AUGUST	1,130,103	160,179	72,482	75,676	20,400	49,675	68,731	0	740,532	5,583	9,767
SEPTEMBER											
OCTOBER											
NOVEMBER											
DECEMBER											
<b>Total Flows</b>											
<b>Monthly Ave</b>	<b>1,244,220</b>	<b>139,726</b>	<b>65,104</b>	<b>69,919</b>	<b>20,400</b>	<b>62,599</b>	<b>79,307</b>	<b>272,835</b>	<b>803,485</b>	<b>5,615</b>	<b>11,030</b>

To  
West Goshen 969,471

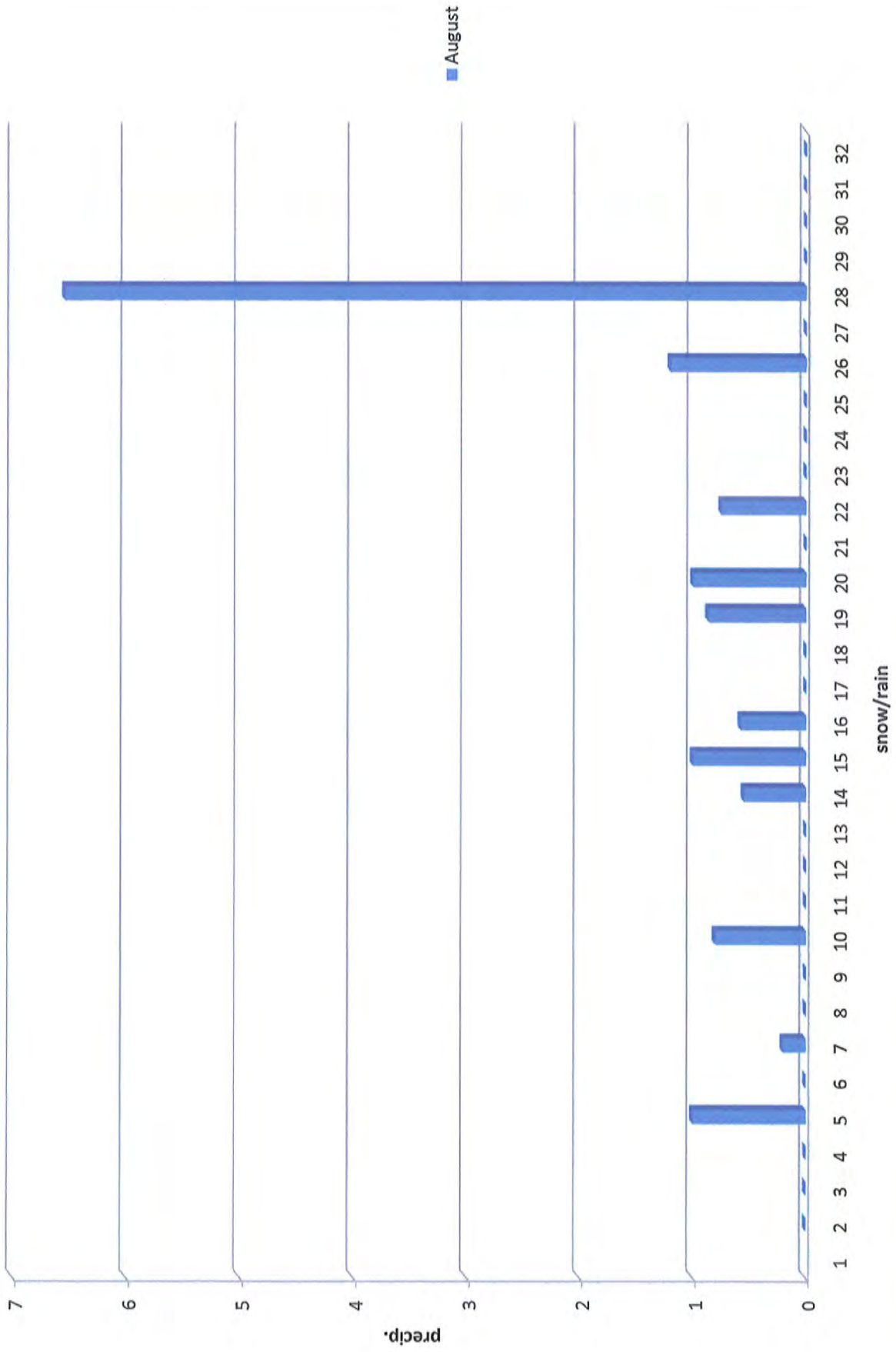
# Flowmeters August 2011



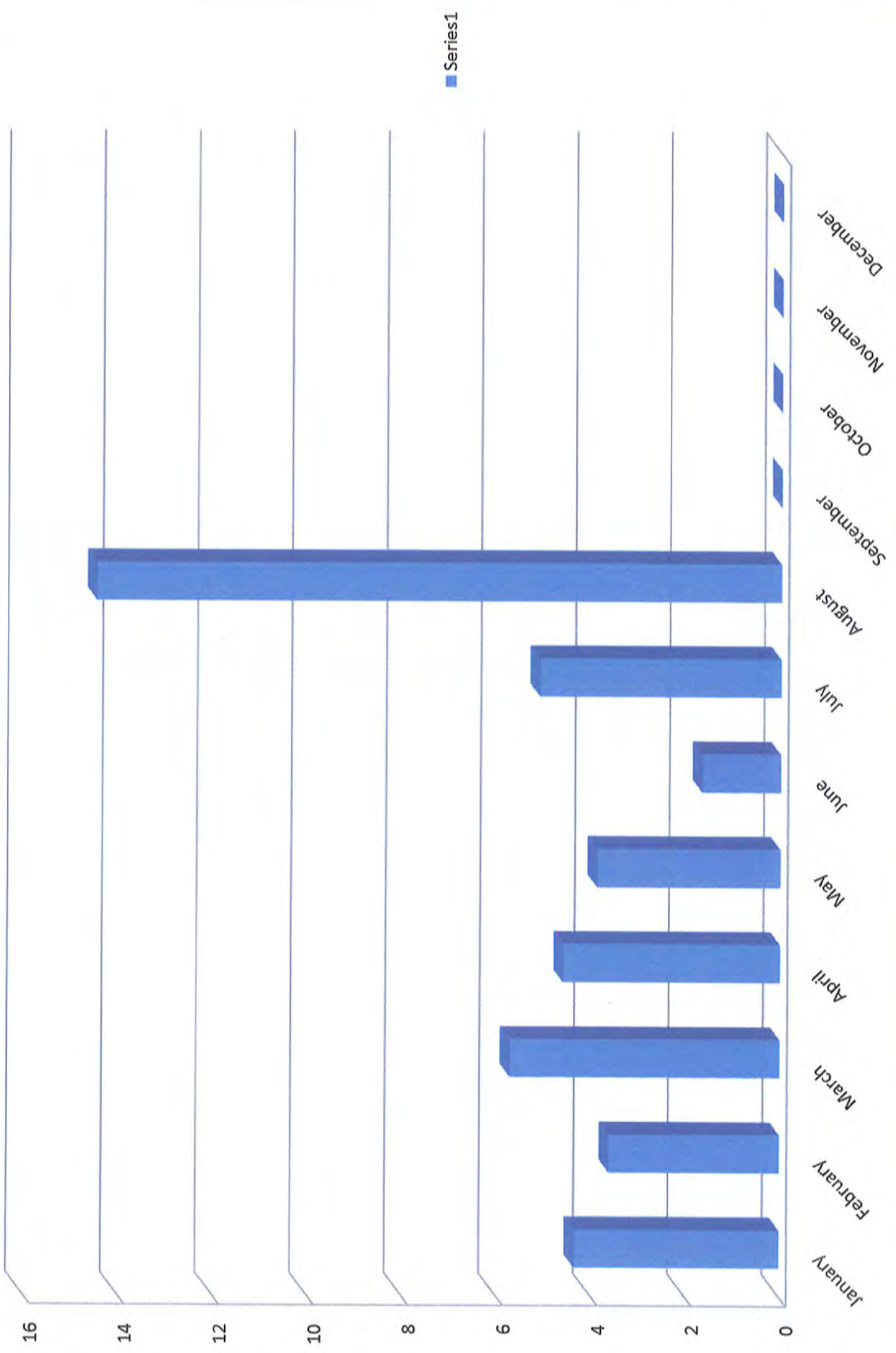
# Monthly Totals 2010 Jan-Dec



# August Precip. 14.49 - 2011



# 2011 Monthly Precipitation



# East Goshen Township Flows

## July 2011

Date	West Goshen Plant Flow mgd	West. Way Pump Station mgd	Ellis Lane Meter Pit mgd	Paoli Pike Meter Pit mgd	Wilson Drive Meter Pit mgd	West. Way Meter Pit mgd	Total East Goshen Flow mgd
1	4.124	1.368	0.110	0.062	0.070	0.969	0.727
2	3.807	1.293	0.111	0.062	0.070	0.970	0.727
3	3.771	1.289	0.110	0.063	0.071	0.969	0.725
4	3.896	1.338	0.111	0.062	0.070	0.970	0.727
5	3.760	1.383	0.110	0.060	0.110	1.041	0.761
6	4.053	1.409	0.110	0.063	0.110	1.039	0.756
7	4.163	1.436	0.161	0.060	0.080	1.061	0.760
8	5.503	1.573	0.116	0.066	0.066	1.101	0.853
9	4.288	1.415	0.116	0.067	0.066	1.102	0.853
10	4.282	1.421	0.116	0.066	0.066	1.101	0.853
11	3.650	1.433	0.113	0.063	0.128	1.062	0.758
12	4.132	1.403	0.114	0.068	0.048	1.062	0.832
13	3.992	1.404	0.112	0.064	0.083	1.049	0.790
14	4.199	1.383	0.114	0.061	0.077	1.031	0.779
15	3.819	1.323	0.111	0.061	0.049	0.962	0.741
16	4.059	1.297	0.111	0.062	0.050	0.963	0.740
17	4.067	1.360	0.111	0.061	0.049	0.962	0.741
18	3.485	1.325	0.108	0.060	0.087	1.044	0.789
19	4.133	1.392	0.109	0.049	0.094	1.025	0.773
20	4.059	1.393	0.110	0.049	0.089	1.064	0.816
21	4.223	1.398	0.112	0.050	0.170	0.970	0.638
22	4.004	1.351	0.113	0.057	0.038	1.028	0.820
23	3.966	1.315	0.114	0.058	0.039	1.029	0.818
24	4.054	1.405	0.113	0.057	0.038	1.028	0.820
25	4.139	1.373	0.151	0.077	0.121	1.371	1.022
26	4.139	1.373	0.131	0.067	0.119	1.191	0.874
27	4.139	1.373	0.106	0.057	0.083	1.011	0.765
28	3.890	1.389	0.103	0.057	0.092	0.931	0.679
29	3.733	1.295	0.112	0.064	0.065	0.982	0.741
30	3.741	1.311	0.113	0.065	0.066	0.983	0.739
31	4.044	1.359	0.112	0.064	0.065	0.982	0.741
1							
Total	125.31	42.58	3.56	1.90	2.43	32.05	24.16
Avg.	4.042	1.374	0.115	0.061	0.078	1.034	0.779

NOTES:

Used monthly average for plant flow and Westtown Way PS from 7/25 - 7/28