

EAST GOSHEN MUNICIPAL AUTHORITY

April 9, 2012

Monday 7:00 PM

1. CALL TO ORDER/PLEDGE OF ALLEGIANCE/MOMENT OF SILENCE
 - a. Ask if anyone will be taping the meeting?
2. CHAIRMAN'S REPORT/OTHER MEMBERS REPORTS
3. APPROVAL OF MINUTES
 - a. March 12, 2012
4. APPROVAL OF INVOICES

a. Pennoni #501139	\$	1,366.00
b. Pennoni #501140	\$	472.50
c. Pennoni #501141	\$	1,422.00
d. Pennoni #501142	\$	1,210.00
e. Pennoni #501143	\$	442.75
f. Pennoni #501144	\$	3,319.00
g. Gawthrop Greenwood #97574	\$	1,083.00
5. LIAISON REPORTS
6. FINANCIAL REPORTS
 - a. RCSTP Budget
7. OLD BUSINESS
8. GOALS
 - a. March Goals
9. NEW BUSINESS
10. CAPACITY REQUESTS - none
11. SEWER REPORTS
 - a. Director of Public Works Report
 - b. Pennoni Report – Inspection Report
 - c. Pennoni Engineer's Report
 - d. Big Fish Environmental Inc Report with DMR's
 - e. East Goshen Township Flows for March 2012
12. ANY OTHER MATTER
13. CORRESPONDENCE AND REPORTS OF INTEREST
 - a. Letter to residents about a filed Zoning Hearing Board application.
 - b. Consent Order & Agreement Semi-Annual Corrective Action Status Report #07
14. PUBLIC COMMENT
15. ADJOURNMENT

Meetings & Dates of Importance

April 11, 2012	Conservancy Board	7:00 PM
April 12, 2012	Historical Commission	7:00 PM
April 12, 2012	Farmers Market	3-5:00 PM
April 14, 2012	Keep E.Goshen Beautiful	8:30 AM
April 17, 2012	BOS – CU Hearing Camp K9	7:00 PM
April 19, 2012	W.C. Area Council of Gov.	7:00 PM
April 24, 2012	General Primary	
April 25, 2012	Friends of East Goshen	7:00 PM

Reminder – NEWSLETTER ARTICLE SUBMISSION DUE DATES:

Article Due Date

May 2, 2012

Website Posting Date

July 1, 2012

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45

draft
EAST GOSHEN TOWNSHIP MUNICIPAL AUTHORITY
MEETING MINUTES
March 12, 2012

The East Goshen Township Municipal Authority held their regularly scheduled meeting on Monday, March 12, 2012 at 7:00pm at the East Goshen Township building. Members in attendance were: Chairman Dana Pizarro, Joe McCawley, Jack Yahraes, Fran Beck, and Kevin Cummings. Also in attendance were: Rick Smith (Township Manager), Dan Barbato (Pennoni), Scott Towler, and Walter Wujcik (Conservancy Board).

Call to Order & Pledge of Allegiance

Dana called the meeting to order at 7:00pm and led those present in the Pledge of Allegiance. There was a moment of silence to remember the troops. Dana asked if anyone would be recording the meeting and there was no response.

Chairman's Report/Other Members' Reports

Jack attended the West Goshen Municipal Authority meeting. They had a survey done of Goose Creek where 50 is good, however, it had 30. Since there were questions about the way the survey was done, they will have another one done.

Approval of Minutes

The Chairman noted that the minutes of the February 20, 2012 meeting were approved as corrected.

Approval of Invoices

Joe moved to approve payment of the following invoices:

- a. Pennoni #497664, \$5,930.50
- b. Pennoni #497666, \$1,731.75
- c. Pennoni #497667, \$ 275.00

Fran seconded the motion. Jack mentioned that there was no Township Manager's signoff. In answer to Dana's question, Dan confirmed that there is one more, small invoice to come for Lockwood. Dana noted that this will finish under budget. There was no further discussion. The motion passed unanimously.

Liaison Reports –

Conservancy Board – Walter reported that the Board will concentrate on the reforested area at Paoli Pike and Line Road. They want to name it, change the orange fencing to black, and have wood chips put around the trees.

Historical Commission – Jack reported for Ellen Carmody. Living History Day will be Saturday, June 2. They are getting new signs for the historic area. They are working on social media. The Plank House is lighted. 5-6 members of the Commission went to National History Day as judges. The Plank House and Blacksmith Shop have a security system.

1 **Financial Reports** – There were no financial reports in the packets. Rick will make sure they
2 are included next month.

3
4 **Old Business**

5 1. Contract Execution – The contract for the Lockwood Chase Sanitary Sewer Diversion was
6 awarded to SJM Construction. Rick reported that their insurance and bonds are good. Joe
7 moved to execute the SJM contract for the Lockwood Chase Sanitary Sewer Diversion. Fran
8 seconded the motion. There was no further discussion. The motion passed unanimously.

9
10 **Goals**

- 11 1. Newsletter - Kevin prepared the article for the spring newsletter.
12 2. Joe will attend the June 6th West Goshen meeting and Dana will attend the
13 September meeting.

14
15 **New Business**

16 None

17
18 **Capacity Requests**

19 None.

20
21 **Sewer Reports**

- 22 a. Mark Miller, Director of Public Works Report:
23 • They are assisting Scott Towler on an as-needed basis. They worked with the
24 representative from Alfa Laval on getting the Centrifuge back in service. A bearing
25 went out on the unit which required pulling the center of the unit apart.
26 • They are in the process of gathering data on the PECO service coming into the plant.
27 Mark will have a report on the findings next month.
28 • Sue Smith and Mark have been gathering data for the Chapter 94.
29 • Since the last meeting there have been 12 alarms and 16 dig notifications.

- 30
31 b. **Pennoni** – Dan gave the following report:

32 Invoices - with summaries were provided under separate cover.

33 Ridley Creek Sewage Treatment Plant –

- 34 • They reviewed correspondence from DEP including the NPPDES permit and NOV
35 response letter to DEP, and provided edits. Matt McAloon performed a thorough
36 inspection of the plant over several days and provided a summary of the existing
37 conditions. The report is provided under separate cover. Design Engineer Tim Daily
38 is scheduled to meet Scott Towler at the plant to review current operations and clarify
39 the intent of the design. Dan Barbato is in frequent contact with Scott Towler for
40 coordination. The new NPDES permit went into effect on March 1st.

41
42 I/I Metering Project

- 43 • No change since the last report. The Township continues to meter flows at selected
44 locations. Temporary meters are in operation at locations as recommended. Upon
45 receipt of tributary connection data from the Township, Pennoni will review
46 permanent meter data (particularly in the Chester Creek Service Area), make

1 recommendations for 2012 temporary metering, and identify potential I&I problem
2 areas.

3
4 Ridley Creek Consent Order

- 5 • The final report is in progress and will be submitted to DEP before the end of the
6 month. Reports after this date will continue to be prepared semi-annually but will be
7 for internal Authority use only.
8

9 LCSTP Elimination

- 10 • Bids were received on February 15, 2012. SJM Construction Company, Inc. of
11 Spring House, PA was awarded the contract with a total bid (conditionally including
12 the Add Item) of \$178,179.20.
13 • SJM contract paperwork was received in our office on March 7th.
14 • The current schedule is:
15 Receipt of Contractor Bonding and Insurance (10days) = 3/7/12
16 Contract Execution = 3/12/12
17 Notice to Proceed = 3/13/12
18 Construction (120 days) = approx 3/13/12 – 7/10/12
19

20 Hershey Mill PS Diversion, Reserve PS Elimination Planning

- 21 • Based upon the comments and responses from the Township on our proposed
22 construction methodologies and sewer re-alignments, we are in the process of
23 assembling plan sets and permitting applications. A separate plan set will be prepared
24 for each diversion. The current intent is to bid the Reserve PS and Marydell PS
25 diversions in one solicitation since they are nearly identical construction scopes: open
26 cut sewer construction with one jack & bore location each. The HMPS diversion will
27 be a separate solicitation since it will be a different construction methodology,
28 directional drilling.
29

30 Marydell PS Elimination Planning

- 31 • We have performed a PA One Call and have coordinated field markout and
32 acquisition of utility plans with the various utility companies. We have also received
33 subsurface drilling data for the adjacent groundwater monitoring wells, and rock
34 appears to be much deeper than the proposed work, so all excavation is planned to be
35 unclassified. Based upon the utility and subsurface information, we are finalizing
36 plans and preparing permitting applications.
37

38 Applebrook Spray Irrigation NPDES Permit Renewal

- 39 • The NPDES discharge permit was issued by DEP on February 21st.
40

41 Annual Chapter 94 Reports

- 42 • The annual updates to the Chapter 94 report are in progress. Reports are due by the
43 end of this month. Similar to last year, we will meet with the Township to review
44 developments and changes over the past year.
45

1 **c. Big Fish Environmental Services, Inc.** Scott Towler gave the following report on
2 plant operations from February 22 to March 8, 2012:
3 Sequencing batch reactors (SBRs) numbered 2, 3, and 4 were evaluated using chemical
4 and physical test methods. Sample collection and testing for each SBR to determine the
5 mixed liquor suspended solids (MLSS) concentrations, pH, total alkalinity, COD,
6 settleability, ammonia as nitrogen, nitrite as nitrogen, sludge volume index (SVI), F:M
7 ratio, depth of clear water as measured from the water surface during settle, idle and
8 static fill phases.
9

10 Data gathered was used to implement adjustments to the treatment processes to reduce
11 solids carryover from the SBRs into the post flow equalization tanks and outfall. These
12 adjustments included reducing the velocity of the flow rate from the SBRs during the
13 decant phase, adjusting low water levels (LWL), reducing sludge wasting rates, manual
14 decants to remove “clean” water and dissolved oxygen set points. During the two week
15 period, approximately 2 pallets of soda ash was added to the SBRs and aerated sludge
16 holding tanks to increase the pH and total alkalinity concentrations within a pH range of
17 greater than 7.1 standard units and total alkalinity of greater than 200 mg/L as Ca CO₃.
18

19 Daily sample collection for the influent, final effluent pre-disc filter and final effluent
20 outfall was conducted to monitor the outfall discharge for compliance with the NPDES
21 permit. It is anticipated total suspended solids (TSS) and fecal chloroform concentrations
22 may exceed the discharge permit limitations during the month of February. Present final
23 effluent water quality indicates compliance with the new NPDES permit limitations that
24 became effective March 1, 2012 should be achieved. The aluminum sulfate chemical
25 feed system is off line and is planned to be placed in service on an as needed basis to
26 enhance total phosphorus removal.
27

28 Solids processing was delayed as a result of excessive temperature for the rear bearing.
29 The bearing was replaced on March 2nd and the centrifuge was placed in service during
30 the afternoon and evening. Two (2) dumpsters of dewatered solids were removed from
31 the facility on March 5th, a third dumpster removed on March 7th and two (2) dumpster
32 scheduled for March 9th. Approximately 25,000 to 30,000 gallons of liquid sludge at
33 1.7% total solids fills one dumpster. The centrifuge is operating at a maximum sludge
34 feed rate of 30 gpm operating on a machine load of 43%.
35

36 The corrective action plan was implemented with a few adjustments to reflect the current
37 condition of the facility upon commencing operation. The foam concentration remains
38 excessive on SBR number and efforts to reduce and remove the foam are ongoing. Foam
39 concentrations o SBRs 3 and 4 are significant, however, sludge settleability has improved
40 resulting in “clear water” decants. Continued operation monitoring and adjustments are
41 planned during March to restore the SBRs to the original intended design performance.
42

43 Discussion: Kevin asked for a spreadsheet with a comparison to permit levels. They
44 discussed the readings on the current report. Scott wants to add composite going into
45 filters onto the report. Some filters may have to be replaced. Scott explained the

1 cleaning process. Scott mentioned that they will have to do a sludge management report
2 under the new permit.

3
4 d. Township Flows for 1st Quarter were under 1 million to West Goshen.

5
6 **Any Other Matter - None**

7
8 **Correspondence and Reports of Interest**

9 1. Rick provided the Authority members with a copy of the letter to the DEP as an FYI.

10
11 **Public Comment** – None

12
13 **Adjournment**

14 There being no further business, Joe moved to adjourn the meeting. Fran seconded the motion.
15 The motion passed unanimously. The meeting was adjourned at 8:15pm.

16
17 Respectfully submitted,

18
19
20 Ruth Kiefer
21 Recording Secretary



INVOICE

Newark, DE
302-655-4451 Fax: 302-654-2895

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 # : 501139
Invoice Date : 03/28/2012
Project : EGMA1105
Project Name : LCSTP Final Design & Permitting

For Services Rendered through: 03/18/2012

Phase : 7 -- Bid Assistance

Respond to bidder questions, review bids, prepare bid tab, notify low bidder, check low bidder references and documentation. Prepare award letter, review insurance and bond requirements.

Total Phase : 7 -- Bid Assistance

Labor : 1,366.00
Expense : 0.00
Phase Total : 1,366.00

Amount Due This Invoice

1,366.00

Fee : 77,800.00
Prior Billings : 57,682.88
Current Billings : 1,366.00
Total Billings : 59,048.88

Phase : 7 -- Bid Assistance

Labor Class	Hours/Units	Rate	Amount
Authority Engineer	1.25	110.00	137.50
Project Engineer	10.50	93.00	976.50
Engineering Technician II	3.50	72.00	252.00
Labor Total:	15.25		1,366.00

Total Phase : 7 -- Bid Assistance

Labor : \$1,366.00
Expense : \$0.00

Total Project : EGMA1105 -- LCSTP Final Design & Permitting

Labor : \$1,366.00
Expense : \$0.00

OKRS

7424 7475

East Goshen Municipal Authority
EGMA1105 Invoice Summary.xlsx
Invoice Date 12-27-2011

Project: EGMA1105
Pennoni Job No.: LCSTP Final Design & Permitting
Invoice No: 501139
Invoice Period: 2/13/2012 to 3/18/2012
Initial Authorization: \$ 77,800.00 **Date:** 5/5/2011
Contract Amount: \$ 77,800.00
Previously Invoiced: \$ 57,682.88
Current Invoice: \$ 1,366.00
Invoiced to Date (\$): \$ 59,048.88
Invoiced to Date (%): 76%
Remaining Budget (\$): \$ 18,751.12
Remaining Budget (%): 24%

Budget by Phase:

Phase No. ****
**LCSTP Final
Design &
Permitting**
Phase Name:
Phase Budget: \$ 77,800.00
Previously Invoiced: \$ 57,682.88
Current Invoice: \$ 1,366.00
Invoiced to Date (\$): \$ 59,048.88
Invoiced to Date (%): 76%
Remaining Budget (\$): \$ 18,751.12
Remaining Budget (%): 24%

Comments: Respond to bidder questions, review bids, prepare bid tab,
notify low bidder, check low bidder references and documentation.
Prepare award letter, review insurance and bond requirements.



INVOICE

Newark, DE
302-655-4451 Fax: 302-654-2895

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 # : 501140
Invoice Date : 03/28/2012
Project : EGMA1107
Project Name : HersheyMill & Reserve PS Div Des Per

For Services Rendered through: 03/18/2012

Phase : 1 -- Design

Begin permit/construction plan set for the Reserve PS diversion.

Total Phase : 1 -- Design

Labor : 472.50
Expense : 0.00
Phase Total : 472.50

Amount Due This Invoice

472.50

Fee : 60,200.00
Prior Billings : 7,880.00
Current Billings : 472.50
Total Billings : 8,352.50

Phase : 1 -- Design

Labor Class	Hours/Units	Rate	Amount
Project Engineer	1.25	93.00	116.25
Project Engineer	0.50	90.00	45.00
Associate Engineer	3.75	83.00	311.25
Labor Total:	5.50		472.50

Total Phase : 1 -- Design

Labor : \$472.50
Expense : \$0.00

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

Labor : \$472.50
Expense : \$0.00

OK TRS

7427-1000

East Goshen Municipal Authority
EGMA1107 Invoice Summary.xlsx
Invoice Date 12-27-2011

Project: EGMA1107
Pennoni Job No.: Hershey Mill & Reserve PS Div Des Per
Invoice No: 501140
Invoice Period: 12/12/2011 to 3/18/2012
Initial Authorization: \$ 60,200.00 **Date:** 7/7/2011
Contract Amount: \$ 60,200.00
Previously Invoiced: \$ 7,880.00
Current Invoice: \$ 472.50
Invoiced to Date (\$): \$ 8,352.50
Invoiced to Date (%): 14%
Remaining Budget (\$): \$ 51,847.50
Remaining Budget (%): 86%

Budget by Phase:

Phase No. ****
Phase Name: Hershey Mill & Reserve
Phase Budget: \$ 60,200.00
Previously Invoiced: \$ 7,880.00
Current Invoice: \$ 472.50
Invoiced to Date (\$): \$ 8,352.50
Invoiced to Date (%): 14%
Remaining Budget (\$): \$ 51,847.50
Remaining Budget (%): 86%

Comments: Begin permit/construction plan set for the Reserve PS diversion.



INVOICE

Newark, DE
302-655-4451 Fax: 302-654-2895

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 # : 501141
Invoice Date : 03/28/2012
Project : EGMA1109
Project Name : Marydell Pump Station Diversion

For Services Rendered through: 03/18/2012

Review geotech data, continue permit/construction plan preparation, began preparation of HOP application.

Phase : 1 -- Design

Total Phase : 1 -- Design

Labor :	1,096.50
Expense :	0.00
Phase Total :	1,096.50

Phase : 4 -- PennDOT Highway Occupancy Permits

Total Phase : 4 -- PennDOT Highway Occupancy Permits

Labor :	325.50
Expense :	0.00
Phase Total :	325.50

Amount Due This Invoice

\$1,422.00

Fee :	45,100.00
Prior Billings :	4,074.25
Current Billings :	1,422.00
Total Billings :	5,496.25

OK RS

7425-1000

Continued on next page...

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

...Continued from previous page

Phase : 1 -- Design

Labor Class	<i>Hours/ Units</i>	<i>Rate</i>	<i>Amount</i>
Project Engineer	1.75	93.00	162.75
Associate Engineer	11.25	83.00	933.75
Labor Total:	13.00		1,096.50

Total Phase : 1 -- Design

Labor : \$1,096.50
Expense : \$0.00

Phase : 4 -- PennDOT Highway Occupancy Permits

Labor Class	<i>Hours/ Units</i>	<i>Rate</i>	<i>Amount</i>
Project Engineer	3.50	93.00	325.50
Labor Total:	3.50		325.50

Total Phase : 4 -- PennDOT Highway Occupancy Permits

Labor : \$325.50
Expense : \$0.00

Total Project : EGMA1109 -- Marydell Pump Station Diversion

Labor : \$1,422.00
Expense : \$0.00

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

East Goshen Municipal Authority
EGMA1109 Invoice Summary.xlsx

Invoice Date 12-27-2011

Project: EGMA1109
Pennoni Job No.: Marydell Pump Station Diversion
Invoice No: 501141
Invoice Period: 2/13/2012 to 3/18/2012
Initial Authorization: \$ 45,100.00 **Date:** 2/22/2012
Contract Amount: \$ 45,100.00
Previously Invoiced: \$ 4,074.25
Current Invoice: \$ 1,422.00
Invoiced to Date (\$): \$ 5,496.25
Invoiced to Date (%): 12%
Remaining Budget (\$): \$ 39,603.75
Remaining Budget (%): 88%

Budget by Phase:

Phase No. ****
Phase Name: Marydell Pump
Station Diversion
Phase Budget: \$ 45,100.00
Previously Invoiced: \$ 4,072.25
Current Invoice: \$ 1,422.00
Invoiced to Date (\$): \$ 5,494.25
Invoiced to Date (%): 12%
Remaining Budget (\$): \$ 39,605.75
Remaining Budget (%): 88%

Comments: Review geotech data, continue permit/construction plan preparation,
began preparation of HOP application.



INVOICE

Newark, DE
302-655-4451 Fax: 302-654-2895

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 #: 501142
Invoice Date: 03/28/2012
Project: EGMA1201
Project Name: 2012 General Services

For Services Rendered through: 03/18/2012

February and March monthly reports. Review MA packet for February and March and attend MA meetings.

Phase : **** -- Professional Services

Total Phase : **** -- Professional Services

Labor :	1,210.00
Expense :	0.00
Phase Total :	1,210.00

Amount Due This Invoice

\$1,210.00

Fee :	10,000.00
Prior Billings :	275.00
Current Billings :	1,210.00
Total Billings :	1,485.00

Phase : **** -- Professional Services

Labor Class	Hours/ Units	Rate	Amount
Authority Engineer	11.00	110.00	1,210.00
Labor Total:	11.00		1,210.00

Total Phase : **** -- Professional Services

Labor :	\$1,210.00
Expense :	\$0.00

Total Project : EGMA1201 - 2012 General Services

Labor :	\$1,210.00
Expense :	\$0.00

OK TRS

7424 3130

East Goshen Municipal Authority
EGMA1201 Invoice Summary.xlsx
Invoice Date 12-27-2011

Project: EGMA1201
Pennoni Job No.: 2012 General Services
Invoice No: 501142
Invoice Period: 2/13/2012 to 3/18/2012
Initial Authorization: \$ 10,000.00 **Date:** 2/22/2012
Contract Amount: \$ 10,000.00
Previously Invoiced: \$ 275.00
Current Invoice: \$ 1,210.00
Invoiced to Date (\$): \$ 1,485.00
Invoiced to Date (%): 15%
Remaining Budget (\$): \$ 8,515.00
Remaining Budget (%): 85%

Budget by Phase:

Phase No. ****
Phase Name: 2012 General Services
Phase Budget: \$ 10,000.00
Previously Invoiced: \$ 275.00
Current Invoice: \$ 1,210.00
Invoiced to Date (\$): \$ 1,485.00
Invoiced to Date (%): 15%
Remaining Budget (\$): \$ 8,515.00
Remaining Budget (%): 85%

Comments: February and March monthly reports.
Review MA packet for February and March and attend MA meetings.



INVOICE
Newark, DE
302-655-4451 Fax: 302-654-2895

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 # : 501143
Invoice Date : 03/28/2012
Project : EGMA1202
Project Name : 2012 COA and I&I Reports

For Services Rendered through: 03/18/2012

Review sewer rehab information from February MA meeting. Develop list of data needs. Begin flow data charts.

Phase : ** -- Professional Services**

Total Phase : ** -- Professional Services**

Labor : 442.75
Expense : 0.00
Phase Total : 442.75

Amount Due This Invoice

\$442.75

Fee : 13,000.00
Prior Billings : 0.00
Current Billings : 442.75
Total Billings : 442.75

Phase : ** -- Professional Services**

Labor Class	Hours/Units	Rate	Amount
Authority Engineer	0.50	110.00	55.00
Project Engineer	1.75	93.00	162.75
Technical Specialist	3.00	75.00	225.00
Labor Total:	5.25		442.75

Total Phase : ** -- Professional Services**

Labor : \$442.75
Expense : \$0.00

Total Project : EGMA1202 -- 2012 COA and I&I Reports

Labor : \$442.75
Expense : \$0.00

OK RS

7424 3130

East Goshen Municipal Authority
 EGMA1202 Invoice Summary.xlsx
 Invoice Date 12-27-2011

Project: EGMA1202
Pennoni Job No.: 2012 COA and I&I Reports
Invoice No: 501143
Invoice Period: N/A to 3/18/2012
Initial Authorization: \$ 13,000.00 **Date:** 2/22/2012
Contract Amount: \$ 13,000.00
Previously Invoiced: \$ -
Current Invoice: \$ 442.75
Invoiced to Date (\$): \$ 442.75
Invoiced to Date (%): 3%
Remaining Budget (\$): \$ 12,557.25
Remaining Budget (%): 97%

Budget by Phase:

Phase No.	****
Phase Name:	2012 COA and I&I Reports
Phase Budget:	\$ 13,000.00
Previously Invoiced:	\$ -
Current Invoice:	\$ 442.75
Invoiced to Date (\$):	\$ 442.75
Invoiced to Date (%):	3%
Remaining Budget (\$):	\$ 12,557.25
Remaining Budget (%):	97%

Comments: Review sewer rehab information from February MA meeting.
 Develop list of data needs. Begin flow data charts.



INVOICE

Newark, DE
302-655-4451 Fax: 302-654-2895

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 # : 501144
Invoice Date : 03/28/2012
Project : EGMA1203
Project Name : 2011 Chapter 94

For Services Rendered through: 03/18/2012

Review new DEP template for Chapter 94 reports. Coordination of data gathering. Assemble eDMRs from DEP website. Begin preparation of reports. Trips to East Goshen to gather and pick up data. Chapter 94 Work Session meeting at DEP office.

Phase : **** -- Professional Services

Total Phase : **** -- Professional Services

Labor : 3,319.00
Expense : 0.00
Phase Total : 3,319.00

Amount Due This Invoice

\$3,319.00

Fee : 14,000.00
Prior Billings : 0.00
Current Billings : 3,319.00
Total Billings : 3,319.00

Phase : **** -- Professional Services

Labor

Class	Hours/ Units	Rate	Amount
Authority Engineer	0.50	110.00	55.00
Project Engineer	10.50	93.00	976.50
Technical Specialist	30.50	75.00	2,287.50
Labor Total:	41.50		3,319.00

Total Phase : **** -- Professional Services

Labor : \$3,319.00
Expense : \$0.00

Total Project : EGMA1203 -- 2011 Chapter 94

Labor : \$3,319.00
Expense : \$0.00

o/c 125

7424 3130

East Goshen Municipal Authority
EGMA1204 Invoice Summary.xlsx
Invoice Date 12-27-2011

Project: EGMA1204
Pennoni Job No.: Lockwood Chase Construction Phase S
Invoice No: 501145
Invoice Period: N/A to 3/18/2012
Initial Authorization: \$ 16,000.00 **Date:** 2/22/2012
Contract Amount: \$ 16,000.00
Previously Invoiced: \$ -
Current Invoice: \$ 920.25
Invoiced to Date (\$): \$ 920.25
Invoiced to Date (%): 6%
Remaining Budget (\$): \$ 15,079.75
Remaining Budget (%): 94%

Budget by Phase:
Phase No. ****
Phase Name: Construction Phase S
Phase Budget: \$ 16,000.00
Previously Invoiced: \$ -
Current Invoice: \$ 920.25
Invoiced to Date (\$): \$ 920.25
Invoiced to Date (%): 6%
Remaining Budget (\$): \$ 15,079.75
Remaining Budget (%): 94%

Comments: Contract paperwork for SJM, set up pre-construction meeting, request submittals from Contractor. Preparation of survey control point files and CAD files for Contractor.



Gawthrop Greenwood, PC
Attorneys at Law

17 East Gay Street, Suite 100 | (p) 610-696-8225
West Chester, PA 19381-0562 | (f) 610-344-0922
gglaw@gawthrop.com | www.gawthrop.com

PS

APPROVED BY: _____
DATE PAID: _____
CHECK #: _____
CHARGED TO: 5429 3140

East Goshen Municipal Authority
1580 Paoli Pike
West Chester PA 19380

Page: 1
02/29/2012
Client No: 6604-01M
Invoice No. 97574

General Authority Services

Fees

		Hours		
02/07/2012	RFA			
	Draft opinion letter auditors, Maillie Falconiero regarding year-end audit as of 12/31/11.	1.00		
02/17/2012	RFA			
	Review Pennoni bid tabulation and letter of recommendation for successful LCSTP bidder.	0.60		
02/20/2012	RFA			
	Review packet for meeting of 2/20; attend regular meeting of Authority.	3.20		
02/24/2012	RFA			
	Review award letter to SJM Const. Co. for Lockwood Chase diversion project.	0.30		
02/29/2012	RFA			
	Review proposed letter to DEP regarding corrective action at RCSTP; Message to Scott Towler, Dan Barbato, Rick Smith and Mark Miller in response to DEP.	0.60		
	For Current Services Rendered	5.70		1,083.00

Recapitulation

<u>Timekeeper</u>	<u>Hours</u>	<u>Hourly Rate</u>	<u>Total</u>
Robert F. Adams	5.70	\$190.00	\$1,083.00

Previous Balance \$1,825.68

Total Current Charges 1,083.00

02/24/2012 Cost Expense Payment -1.68
02/24/2012 Fee Payment -1,824.00

East Goshen Municipal Authority

Page: 2
02/29/2012

Client No: 6604-01M
Invoice No. 97574

General Authority Services

Total Payments	<u>-1,825.68</u>
Balance Due	<u>\$1,083.00</u>

To ensure proper credit, please write client number on
your check when returning payment. Thank You.
A finance charge of 1.25% per month (15% annually) may be
charged on balances not paid 60 days after the invoice date.

EAST GOSHEN TOWNSHIP
 1580 PAOLI PIKE
 WEST CHESTER, PA
 Municipal Authority
 March 2012
 RCSTP BUDGET

Account Title	Acct #	Annual Budget	M-T-D	Y-T-D
REVENUE				
INTEREST EARNED - RCSTP EXPANSION	07341 1020			16
GRANT REVENUE	07392 0800			
TOTAL REVENUE				16
EXPENSES				
R.C.-CAP. PROJ.-ENGINEER	07424 7451			
R.C. CAP EXPANSION GEN'L CONTRACTOR	07424 7452			
R.C. CAP EXPANSION - ELECTRICAL	07424 7453			
R.C. CAP EXP CONTINGENCY CAPITAL	07424 7454			
R.C. CAP EXP CONTINGENCY ONGOING	07424 7455			
R.C. CAP EXP ADDITIONAL CONTINGENCY	07424 7456			
TRANSFER TO AUTHORITY CAP FUND	07492 0990			
TOTAL EXPENSES				0
NET RESULT				16

EAST GOSHEN TOWNSHIP
Municipal Authority
March 2012
OPERATING BUDGET

Account Title	Acct #	Annual Budget	M-T-D	Y-T-D
REVENUE				
INTEREST EARNINGS	07341 1000			1
C.C. TAPPING FEES	07364 1100	2,000		
R.C.TAPPING FEES	07364 1110	2,000		
CONNECTION FEES - SEWER	07364 1130		282	846
MISCELLANEOUS REVENUE	07380 1000	1,000	141	423
TRANSFER FROM SEWER OPERATING	07392 0500	125,000	15,700	30,700
TOTAL REVENUE		130,000	16,123	31,970
EXPENSES				
ADMINISTRATIVE WAGES	07424 1400	37,669	8,392	8,392
MISCELLANEOUS EXPENSE	07424 3000	4,162		950
MUNIC.AUTH.-AUDITING	07424 3110	8,843		
ENGINEERING SERVICES	07424 3130	37,066	1,183	1,403
LEGAL SERVICES	07424 3140	12,485		1,826
M.C.-DVRFA-DEBT SERVICE	07471 1000	19,600		
M.C.-DVRFA-INTEREST PAYMN	07472 1000	6,981		
TOTAL EXPENSES		126,806	9,574	12,570
NET RESULT		3,194	6,549	19,400

EAST GOSHEN TOWNSHIP
Municipal Authority
March 2012
CAPITAL BUDGET

Account Title	Acct #	Annual Budget	M-T-D	Y-T-D
REVENUE				
LOAN PROCEEDS-SEWER PROJECT	07392 0804			
TOTAL REVENUE				0
EXPENSES				
MARYDELL PUMP STATION - ENGINEER	07425 1000	51,764	810	810
MARYDELL PUMP STATION -CONSTRUCTION	07425 2000	170,000		
LOCHWOOD ABANDONMENT ENGINEER	07424 7475	37,553	7,441	14,356
LOCHWOOD ABANDONMENT CONSTRUCTION	07424 7476	411,000		
HERSHEY MILL STATION - ENGINEER	07426 1000	29,069	2,337	2,337
HERSHEY MILL STATION - CONSTRUCTION	07426 2000	46,000		
RESERVE PUMP STATION - ENGINEER	07427 1000	29,069	605	605
RESERVE PUMP STATION - CONSTRUCTION	07427 2000	93,000		
RESERVOIR PUMP STATION - ENGINEER	07428 1000			
RESERVOIR PUMP STATION CONSTRUCTION	07428 2000			
TOTAL EXPENSES		867,455	11,192	18,107
NET RESULT		(867,455)	(11,192)	(18,107)

APRIL 2012
EAST GOSHEN MUNICIPAL AUTHORITY GOALS

ON-GOING

1. Submit an article for each newsletter.
 - a. Need by 2/8/12 - Kevin - Completed
 - b. Need by 5/2/12 -Jack
 - c. Need by 8/1/12
 - d. Need by 11/7/12
 - e. February 2013
2. Attend West Goshen Meetings quarterly – more often if needed.
 - a. 1st Quarter (March) - Jack
 - b. 2nd Quarter (June) - Joe
 - c. 3rd Quarter (September) - Dana
 - d. 4th Quarter (December) - Kevin
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 – Have tour in September

PROJECTS

1. Lockwood
 - a. Bid – Bid awarded 2/20 – Contract executed 3/12
 - b. Pipe Installation - Notice to proceed issued 3/20
 - c. Abandon Plant
2. Marydell Pump Station
 - a. Design/Permit
 - b. Bid
 - c. Pipe Installation
 - d. Abandon Pump Station
3. Hershey Mill Pump station
 - a. Design/Permit
 - b. Bid
 - c. Pipe Installation
4. Reserve Pump station
 - a. Design/Permit
 - b. Bid
 - c. Pipe Installation
 - d. Abandon Pump Station

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

April 4, 2012

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

During the month of March, we were busy with lateral repairs and working with Scott Towler performing maintenance at the plant. Scott has done an excellent job turning the plant around.

We met with Dan Ellis to discuss the final Chapter 94 report; we decided to continue with the metering of the sewer system. We are going to begin monitoring the Chester Creek system. During our meeting we discussed metering at the plant as we currently have a portable meter out in the wet lands. The reason for this meter is to get actual plant flow since the current meter is on the pump discharge side of the plant. Currently we are reading the backwash from the filters and centraite from the centrifuge.

I would recommend purchasing a permanent meter. I have asked Allied Control to take a look at the manhole where we would like to install the meter and submit a quote.

Aqua Waste Water had to be utilized to clean SBR#1 as there was over a foot of grit throughout the tank. Worth has been notified of some problems with the decanter in the SBR, plus they need to install some additional brackets on the pump glide system.

Meters: Were read on a daily basis, no problems to report. In the next two weeks we will be relocating the portable meters.

C.C. Collection: We had to excavate two sewer laterals due to root penetration. Once the laterals were excavated a new trap and cleanout were installed. The pumping stations were visited on a daily basis where routine maintenance was performed.

R.C. Collection: The Hunt Country pumping station was visited on a routine basis for basic maintenance. We are going to continue to use augmentation to break down the grease.

Alarms: We received 18 alarms for the month; several were due to a tree that came down on Morstein Road causing a power outage at the Barkway Pumping Station.

PA One Call: We had 35 PA One calls for the Month of March.

The Public Works Department were notified of 7 sewer lateral blockages for the Month of March, all were cleared with the exception of the two that had to be Dug.



PENNONI ASSOCIATES INC.
CONSULTING ENGINEERS

121 Continental Drive, Suite 207

Newark, DE 19713

Tel: 302 - 655 - 4451

Fax: 302 - 654 - 2895

LETTER OF TRANSMITTAL

TO: East Goshen Township
1580 Paoli Pike
West Chester, PA 19380
610-692-7171

DATE	March 6, 2012	JOB NO.	EGOS 1201
ATTENTION	Rick Smith, Township Manager		
RE:	RCSTP Inspection Report		

WE ARE SENDING YOU Attached Under separate cover via UPS the following items:

Shop Drawings Prints Plans Samples Specifications
 Copy of Letter Change Order _____

LIST OF ITEMS TRANSMITTED			
COPIES	DATE	NO:	DESCRIPTION
1	03/05/12		Memorandum on the RCSTP Inspection Report
1			CD - Ridley Creek WWTP Inspection (March 2012)

THESE ARE TRANSMITTED as checked below:

For approval Approved as submitted Resubmit _____ copies for approval
 For your use Approved as noted Submit _____ copies for distribution
 As requested Returned for corrections Return _____ corrected prints
 For review and comment _____
 FOR BIDS DUE _____ PRINTS RETURNED AFTER LOAN TO US

REMARKS If you have any questions or comments, please let me know.

COPY TO _____

SIGNED: Daniel Barbato, P.E.

If enclosures are not as noted, kindly notify us at once.

RECEIVED
BY: _____
MAR 07 2012



MEMORANDUM

TO: Rick Smith, Township Manager

FROM: Daniel Barbato, P.E.
East Goshen Township Municipal Authority Engineer

DATE: March 5, 2012

SUBJECT: RCSTP Inspection Report

As requested, Pennoni completed an inspection of the Ridley Creek Sewage Treatment Plant (RCSTP) in order to document existing conditions under Miller Environmental's operation of the plant.

Matt McAloon was at the plant on February 22, 23 and 29. Part of this time was spent with Scott Towler. Matt's observations are included as attached. Also included is a CD with digital photos taken by Matt during his site visits.

RECEIVED
BY: _____

MAR 07 2012

East Goshen Township

Ridley Creek Sewage Treatment Plant

Plant Inspection - February 22, 23, and 29, 2012

Inspection and Notes completed by Matt McAloon

Onsite as requested by the Township to document the condition, housekeeping, overall operations and maintenance of the plant and process testing done at the WWTP by the plant operator.

Screen Building

- The exhaust fan is running constantly, even when the light to the building are shut off
- Evidence of mold / discoloration on the ceiling
- Building is clean and well organized
- The JWC Screen unit auger is constantly running and washing
- The seal tight flexible conduit to both the upstream and downstream level transducers is not connected / secured to the level transducer unit
- Upstream level transducer unit is reading 0.96' (cannot verify if it is properly calibrated) but it appears to be working
- The slide bypass gate is all the way down (closed) and the main channel slide gate is ½ open (reading 17" on the sight glass level)
- Downstream level transducer unit face is too cloudy & dirty to read
- The exhaust fan in the lower level of the screen building is turned off or not working
- During my time on site the JWC screen unit auger started making high pitched whining / grinding noise and at Scott Towler's direction one of the operators opened up the access panels on the screen unit and reported that the brushes were dry and had dry caked-on bits of rags
- Eric Dickerson from Watermark was on site on February 29, 2012 to work on JWC screen unit. He reported that the panel had been reset to the factory defaults which caused the screen to run constantly. He reduced the wash time and reset the water differential settings.

Influent Pump Station

- Minimal grease and debris were floating on top of wet well
- Sampler line tangle with floats and is very close to influent pump P-13
- Strain reliever / Kellum grip for influent pump P-13 was not connected

Meter Pit

- 3 inches of standing water was in the Meter Pit
- East Goshen Public Works reported that the meter was recently replaced by Worth & Co.

Treatment Building

1. Alum Tank & Chemical Feed Systems
 - Scott Towler and Mark Miller reported very high Alum use (could not verify during site visit)
 - Alum tank currently reading 5.93'
 - Evidence of leaking Alum and excessive corrosion on the mounting bracket for SBR # 2 Alum Feed MOV (CV-32)
 - The chemical feed control panel is off

- ME-34 (Polymer Injection System) is off, cannot verify it was filled with mineral oil prior to shut down. The condition of this system should be checked
 - Both Watson Marlow pump are energized and set to 64.5 RPMs and in auto but apparently not running at the time of inspection
 - An additional (not part of original construction) chemical feed system was installed with barrels of sodium bisulfate (dechlorinating agent) tapped into the injection port of the Polymer Static mixer (ME-41), valve to injection port shut is off and pump is not on or energized
 - High pressure Alum Feed Pump (MP-33) and VFD (MP-33VFD) are not energized.
2. UV System / structure
- 1 rack of UV lights in Bank # 1 were missing (Scott Towler & Mark Miller report that the UV bank short circuited and was shipped to Siemens to be rebuilt)
 - Both banks of UV lights are on
 - Flow reading at UV control panel: 0.03 MGD
 - Some solids and floc were visible in the UV discharge weir
 - Scott Towler washed and scrubbed UV discharge weir while I was onsite
3. Disk Filters
- Dain valves to both disk filers open 1/8 to 1/4 of the way, constantly draining back to the head of the plant
 - Disk filters are very dirty and do not appear to have been thoroughly drained and cleaned recently
 - Drive chains appear to be looser than specified by Aqua Aerobics
 - Filter are backwashing (set off by high level float) almost every decant
 - Filter 1: total time in backwash 88166.8 min & total sludge wasting 5816.2 min
 - Filter 2: could not read total time in backwash, total sludge wasting 5798.9 min
 - On top of the filter platform when the filter feed pumps turned on, large amounts of solids were coming into the filters
 - Drained filter # 1, excessive sludge was on the bottom of the filter tank
 - It appears that both filters need to be taken out of service, drained and cleaned and run through extended clean / backwash per O & M manual
 - Scott Towler worked on cleaning filters and set up a sampler on the influent side of filter # 1 (filter on SBR side of Building).
4. Blower Room / Utility Water System
- All blowers, except blower # 3, are running at about 4 inches of water on the suction site, blower # 3 is running at 1 inch of water
 - Cannot verify when the blowers were greased, oil changed, or serviced, but all blowers appear to be properly working
 - Blower # 3 running at 9 psi discharge pressure, Blower # 2 running at 9 psi of discharge pressure, Blower # 1 running at 4.5 psi of discharge pressure (SBR Tank # 1 is off line / used as a sludge holding tank)
 - Utility water system running between 35 and 70 psi. Both bladder tanks are online
 - The Township reports that the utility water system has not been flushed from the yard hydrant outside the door to the treatment building's electrical room
 - An additional PVC line tapped into the domestic water line in the blower room and runs though the wall to a newly installed domestic water yard hydrant penetrating through the roof of the treatment building for use at the SBR tanks, no check valve visible

5. Control / Electrical Room

- Control room is neat and well organized
- Not all of the hour meter readings on the analog hour meters match the digital readings show on the Siemens SBR control panel . The operator's logs should be checked to ensure the correct hour meters readings were recorded and the inaccurate gauges should be adjusted.
- Scott Towler was making adjustments to the lower and upper water levels in SBRs, the anoxic multiplier, and the duration in minutes in the react and aerated fill cycles
- None of the MCC are tripped or locked out, and not of the VFDs are showing unusual faults

6. SBR Tanks

- When onsite on February 22,2010 the max water level in the tanks was set to 22.4' , the level was changes to 22.83' by Scott Towler;
- Observed the sampling and testing of SBR #3 - sampled at 6:37am. Sample was taken at the end of the react cycle (92mins out of 100 mins).

Test Results:

1. 30 minute settleometer test : 400 ML
 2. Ammonia: 0.087
 3. Nitrate: 0.02
 4. NO3: 2.29
 5. Reactive P: 3.46
- Observed the sampling and testing of SBR # 2 – sampled at 2:35pm. Sample was taken at the end of the react cycle. Level in the tank at time of sample was 22.23 feet. Settleometer test results:
 1. 30 min: 500 ML of clear water
 2. 60 min: 450 ML of clean water
 - Additional tests and samples were taken by Scott Towler and the Temp Operators and observed but not recorded. The results of these samples and test were recorded by Scott Towler and the Temp Operators.

7. General

- All of the knife gate valves, except for SBR tank # 4, are fully open
- There are trace amounts of discoloration at the link seals for the sludge wasting manifold, indicating a small leak
- Four 55 Gallon barrels of Micro C.G. are stored in the pipe galley, behind the electrical room. One of the barrels was tapped with a hand pump.
- Large pile of dead flies collecting under the bug zapper
- The exhaust fan above them UV system was shut off at the disconnect on the wall, turned the fan on and verified it work along with the motor activated louver in the pipe galley
- Empty chemical storage containers are stacked up inside and outside the treatment building in a less than well-organized manor
- The Apple Brook meter is shut off and reading 0 gallons

Centrifuge / Sludge Handing & EQ Tanks

- The centrifuge has 99.9 hours on the hour meter and the Moyno Grinder pump control panel has 326 hours on the control panel. One or both of the hour meters are broken and the centrifuge has been run for a limited time in the past year
- When I arrived on site Wednesday February 22, 2012 morning, a full dumpster was being removed from the site and a fresh dumpster was delivered

- During my February 22, 2012 visit, the old polymer totes were taken off site and replaced with a new polymer more appropriate for the age of the sludge in the digesters / holding tanks
- During my time on site February 22 and February 23, 2012, the centrifuge had an alarm (high bearing temperature). Scott Towler and the operators blew grease out of the bearings and repacked them. The problem continued. The centrifuge bearing will be scheduled for replacement. Cause of bearing failure could not be determined at this time.
- Since the time of construction completion a well line was added to feed water to centrifuge and polymer feed system and the public water was also connected to the centrifuge / polymer feed system
- The operators report that the sludge digesters are almost full and the % solids is around 2% in both digesters.

Existing Control Building

- The soda ash feed system is not currently working, feed water to mixing tank is shut off, and tank is close to overflowing
- Soda ash residue was on the floor, around the soda ash feed system and in the vicinity of the filter feed pumps
- The Watson Marlow soda ash pump is not working. It is not connected, and appears that the programming has been changed
- At the time of my site visit the blowers feeding air to the post EQ tanks were shut off
- No alarms were visible on the VFDs
- On my return visit to the site (February 29, 2011) a service rep from Water Mark was onsite working on the control panel for the JWC screen unit

Sludge Digesters / Post EQ tanks

- Clumps of solids were floating on the surface of both Post EQ Tanks
- The blowers to the Post EQ Tanks are shut off
- Dried solids are caked to the walls of the both the post EQ tanks and the sludge digesters
- The operator states that he is planning on draining and washing both Post EQ Tanks
- When observing a decant at the disk filters, the water from the post EQ tanks is very turbid and discolored at first and then clears up, indicating that a blanket of sludge is on the bottom of the post EQ tanks
- The telescoping valves for both sludge digesters / holding tanks are set to 75% open and are both showing 8" on the sight glass measuring gauges
- The operators are currently not decanting from the sludge digesters / holding tanks
- The sludge in the digesters is a chocolate milk color and only has minimal foam
- All of the air drops to the sludge digester / holding tanks appear to be working (one or two of the couplers for the air drops are leaking air)

Discharge Field / Ridley Creek

- Performed a visual inspection of the discharge manifold, the surrounding wetlands, and the tributary stream to Ridley Creek. During the visual inspection a large amount of dark black / brown solid sediments were observed throughout the wet lands and Ridley Creek and the tributary feeding Ridley Creek. The dark black brown sediment appeared to be solids discharged from the plant.
- On February 23 and 29, 2012 samples of the solids were collected and sent to a lab for testing to determine if they were discharge from the WWTP. Samples were taken at the following locations:



PENNONI ASSOCIATES INC.
CONSULTING ENGINEERS

1. 50 feet downstream in Ridley Creek from the tributary stream originating in the wetlands and fed by Ridley Creek's discharge
 2. At the confluence of Ridley Creek and the tributary stream
 3. In the tributary stream approximately one half of the way between the wetlands and the confluence with Ridley Creek.
 4. In the wet lands directly downstream of the discharge manifold pipes.
- Most of the solids deposits in the wetlands appeared to be 2 to 6 inches thick, depending on the location, and covered a wide area directly downstream of all of the visible discharge manifold pipes and the overflow inlet. The solids deposits collected from the tributary stream, the confluence, and Ridley Creek were collected from moderate to large "sand bars" along the banks of the streams. The solids deposits in these areas appeared to be deeper.

Sampling

- While onsite on February 23, 2012 I observed the testing lab ALS Environmental taking samples from the samplers at the influent pump station and the discharge weirs of the UV system. A third sampler was set up upstream of the influent weir in disk filter # 1, to sample discharge water from SBR /post EQ tanks. This sampler did not collect a large enough sample for the lab to use and was not collected on the 23rd.



MEMORANDUM

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

FROM: Daniel Barbato, P.E.
Authority Engineer

DATE: April 4, 2012

SUBJECT: Engineer's Report

Invoices

- Invoices with summaries are provided under separate cover.

Ridley Creek Sewage Treatment Plant (RCSTP)

- Pennoni design engineer Tim Daily met with Scott Towler at the plant on March 23 to review current operations and clarify the intent of the design. Dan Barbato has been in contact with Scott Towler for coordination. The new NPDES permit went into effect on March 1. Phosphorous effluent limits are currently being met without the use of alum, and nitrogen effluents limits are being met. The centrifuge was under near-continuous operation and the solids inventory being reduced to acceptable levels and age. The interior of SBR Unit #1 will be inspected by Matt McAloon on April 6, pending confirmation of available access by the operator. The plant is currently operating as intended by the design. Will inspect the plant again when the plant returns to a "normal" condition, and make a comparison of current conditions to the conditions encountered under the previous operator.

I/I Metering Project

- We analyzed flow data from the 11 permanent meters throughout the Chester Creek Service Area for the entirety of 2011. Instantaneous and hourly flows are not recorded on these meters, so we were only able to analyze the daily meter totalizer records. Only a rough flow analysis was performed since inflow peaks and continuous base flows are unknown. It appears the following two areas may have I/I problems based upon apparent excessive daily flows per tributary land area: (1) the southwest corner of East Goshen Township which is generally bounded by East Strasburg Road to the north, the reservoir to the east, and township borders to the south and west; (2) an area bounded by Paoli Pike to the north, North Chester Road to the east, East Strasburg Road to the south, and Ellis Lane to the west. We recommend the Township install four temporary meters in strategic locations within these subareas over the next six months to identify potential I/I sources.

Ridley Creek Consent Order

- The final report was submitted to DEP on March 29, 2012. Reports after this date will continue to be prepared semi-annually, but they will not be submitted to DEP semi-annually. They will be used for internal Authority use and Chapter 94 Annual Reporting only.

LCSTP Elimination

- A pre-construction meeting was held with the Township, Pennoni, the contractor, SJM Construction Company Inc., and the Chester County Conservation District (CCCD) on March 28, 2012. The contractor tentatively intends to start construction in mid-April and anticipates 30-60 days to complete the work. The required contract completion date is July 2, 2012.
- The contractor has provided construction submittals. We have reviewed the submittals, and we provided comments to the contractor. The contractor has also filled out the NPDES Co-Permittee Application and has forwarded it to the Township for signature and eventual submission to the CCCD.
- We prepared a Construction Issue set of plans and specifications to incorporate the various addenda into one set of plans and specifications. We also prepared a CAD file and survey control data and coordinates, which we forwarded to the contractor for his use in construction stakeout.

Hershey Mill PS Diversion and Reserve PS Elimination

- We have prepared draft plans and draft applications for DEP General Permits (GP) for Stream Crossings. We are coordinating with DEP regarding permit requirements for PNDI, bog turtle screenings, and wetland delineations since all utility stream crossings are proposed via trenchless technologies (directional drilling for the Hershey Mill PS Diversion and jack & bore for the Reserve PS Diversion). Once direction is received from DEP (and possibly the Army Corps of Engineers), we will finalize and submit the GP applications.

Marydell PS Elimination

- We have prepared draft plans and a draft PennDOT Highway Occupancy Permit (HOP) application. We are coordinating with PECO regarding mitigation of impacts to overhead utility poles given the proximity of the proposed sewer to the poles. The PECO coordination may impact the HOP application, such as modifications to the exact sewer location. Upon resolution of any such PECO issues, we will finalize and submit the HOP application.

Annual Chapter 94 Reports

- The Chapter 94 Reports for the Westtown Service Area and Lockwood Chase STP were prepared and submitted to DEP on March 30, 2012; DEP received them on April 2, 2012. Following receipt of all required information from the Township and operator, the

Chapter 94 Reports for the Ridley Creek STP and the West Goshen Service Area were prepared and delivered to DEP on April 4, 2012.

- A new influent metering and organic sampling location is needed at the Ridley Creek STP in order to satisfy DEP's new Chapter 94 requirements. We have discussed the best location with Public Works, and we will forward a recommendation letter to the Authority prior to the April 9, 2012 meeting.

BIG FISH ENVIRONMENTAL SERVICES, INC.

RECEIVED
BY: _____

APR - 9 2012

March 2012 - Ridley Creek and Lochwood Sewage Treatment Plant Operations Report

Executive Summary

Operations and Solids Dewatering/Disposal

Sequencing batch reactors (SBRs) numbered 2, 3 and 4 were in service treating wastewater. SBR number 1 was off line and serving as a sludge storage tank. During the month, process control testing continued to monitor the (MLSS) concentrations, pH, total alkalinity, chemical oxygen demand (COD), settleability, ammonia as nitrogen, nitrite as nitrogen, nitrate as nitrogen, sludge volume index (SVI), F:M ratio, depth of clear water as measured from the water.

The influent and effluent composite samples were regularly monitored for pH, total alkalinity, ammonia as nitrogen, COD and total phosphorus. Additional analysis of the effluent samples included nitrite, nitrate and reactive phosphorus. Clarity of the treated effluent was consistently very good during the month. During the month, one key operational set point was established. This operational set point is maintain the pH and total alkalinity concentrations in the SBRs at no less than 7.0 S.U. and 300 mg/L as CaCO₃. Maintaining these parameters within the minimum range contributed to improving the nitrification process, settleability and phosphorus removal. Effluent sample data for total phosphorus is reported as 0.28 mg/L without the addition of aluminum sulfate. The monthly average will be finalized upon receipt of the sample collected on March 29th and is anticipated to be close to the effluent limitation of 0.5 mg/L. The effluent discharge will achieve compliance with the CBOD₅, TSS, ammonia as nitrogen, fecal coliform, pH, dissolved oxygen for the month of March 2012. A draft summary is attached for review.

A summary of the influent and effluent sample data for the month of February 2012 is attached for review. The eDMR and supplemental reports for February 2012 have been prepared and submitted by representatives from MEI.

Solids Dewatering

During the period for February 22nd through March 31st, a total of 947,644 gallons of sludge were metered to have been processed through the centrifuge sludge dewatering unit. A total of 34 dumpsters of dewatered sludge at approximately 437 tons were land filled. Three hundred and eight two (382) man-hours were expended towards dewatering the sludge in SBR1, sludge holding tanks 1 & 2.

Maintenance, Repairs and Warranty

SBR 1 requires one replacement decanter valve assembly – Worth & Co. informed
Centrifuge replacement parts – Worth & Co. to replace parts used for warranty repair
JWC fine screen has a failed UPS – Worth & Co. informed
JWC fine screen upstream transducer – replacement connection on order
SBR and Centrifuge MCC panel hours meters – Worth & Co. informed

Month of February 2012

East Goshen Township Municipal Authority
 Ridley Creek Sewage Treatment Plant Monthly Operations Report

Design Basis	Flow	BOD ₅		TSS		NH ₃ -N		TKN, mg/L		Phosphorus, Total, mg/L	
		mg/L	lbs/day	mg/L	lbs/day	mg/L	lbs/day	mg/L	lbs/day	mg/L	lbs/day
		MGD Average									
		335	2,098	320	2,001	32	200	48	301	9.1	57
Sample date											
February 1, 2012	267,984	222	496	160	358	25.8	58	46.5	104	5.61	13
February 8, 2012	322,928	275	741	310	895	25.8	69	48.2	130	8.06	22
February 15, 2012	321,392	334	895	947	2,538	25.8	69	70.8	190	11.1	30
February 23, 2012	442,416	183	675	1,240	4,575	25.8	95	186	686	59.6	220
February 29, 2012	308,720	287	739	528	1,359	25.8	66	50.1	129	6.4	16
Average	332,688	260	709	637	1933	26	72	80	248	18	60
Minimum	267,984	183	496	160	358	26	58	47	104	6	13
Maximum	442,416	334	895	1240	4575	26	95	186	686	60	220

Final Effluent - Out Fall 001												
NPDES Permit Discharge Limitations	Flow	CBOD ₅		TSS		NH ₃ -N		Fecal Cellform		pH		Dissolved Oxygen
		mg/L	lbs/month	mg/L	lbs/month	mg/L	lbs/month	Geo Mean	Geo Mean	Inst. Min	Inst. Max	Inst. Min
		MGD Average										
	0.75	20	125	21	131	7	44	200	1,000	6.0	9.0	5.0
	Instantaneous Maximum											
		40		62						Daily	Daily	Daily
Sample date												
February 1, 2012	223,510	3	6	4	7	0.2	0.4	10	1.0	7.72	7.72	6.84
February 8, 2012	225,183	11	21	71	133	0.35	0.7	10	1.0	7.07	7.07	7.22
February 15, 2012	228,972	3	6	22.2	42	2.81	5.4	10	1.0	6.40	6.40	7.74
February 23, 2012	228,812	15.4	29	84	160	2.58	4.9	0	0.0	7.29	7.29	7.01
February 29, 2012	230,296	2	4	5	10	0.326	0.6	1	0.0	7.26	7.26	8.05
Average	227,355	7	13	37	71	1.3	2.4	6	1	7.15	7.15	7.37
Minimum	223,510	2	4	4	7	0.2	0.4	0	0	6.40	6.40	6.84
Maximum	230,296	15	29	84	160	2.8	5.4	10	1	7.72	7.72	8.05

Month of March 2012

East Goshen Township Municipal Authority

Ridley Creek Sewage Treatment Plant Monthly Operations Report

DRAFT INCOMPLETE

Design Basis	Flow MGD Average	BOD ₅		TSS		NH ₃ -N		TKN, mg/L		Phosphorus, Total, mg/L	
		mg/L	lbs/day	mg/L	lbs/day	mg/L	lbs/day	mg/L	lbs/day	mg/L	lbs/day
Sample date		335	2,098	320	2,001	32	200	48	301	9.1	57
March 1, 2012	0.2680	398	890	396	885	25.8	58	36.9	82	4.3	10
March 8, 2012	0.3229	210	469	425	950	32	72	49	110	5.5	12
March 15, 2012	0.3214	193	431	255	570	31.3	70	44.9	100	5.6	13
March 22, 2012	0.3250										
March 29, 2012	0.3087										
Average	0.3092	267	597	359	802	30	66	44	97	5	11
Minimum	0.2680	193	431	255	570	26	58	37	82	4	10
Maximum	0.3250	398	890	425	950	32	72	49	110	6	13

Final Effluent - Out Fall 001											
NPDES Permit Discharge Limitations	Flow MGD Average	CBOD ₅		TSS		NH ₃ -N		Phosphorus, Total, mg/L		Facal Coliform	
		mg/L	lbs/month	mg/L	lbs/month	mg/L	lbs/month	mg/L	lbs/month	Geo Mean	Geo Mean
	Instantaneous Maximum	0.75	20	125	21	181	7	44	0.5	3	200
Sample date											
March 1, 2012	0.2420	3.2	6	5	10	0.10	0.20	0.10	0.20	1	0.0
March 8, 2012	0.2240	3.1	6	6	12	0.10	0.20	0.14	0.28	1	0.0
March 15, 2012	0.2200	2.8	6	5	10	0.21	0.42	0.28	0.57	1	0.0
March 22, 2012	0.2240										
March 29, 2012	0.2210										
Average	0.2262	3.0	6	5	11	0.14	0.28	0.17	0.35	1	0
Minimum	0.2200	2.8	6	5	10	0.10	0.20	0.10	0.20	1	0
Maximum	0.2420	3.2	6	6	12	0.21	0.42	0.28	0.57	1	0

2012 FLOWMETERS

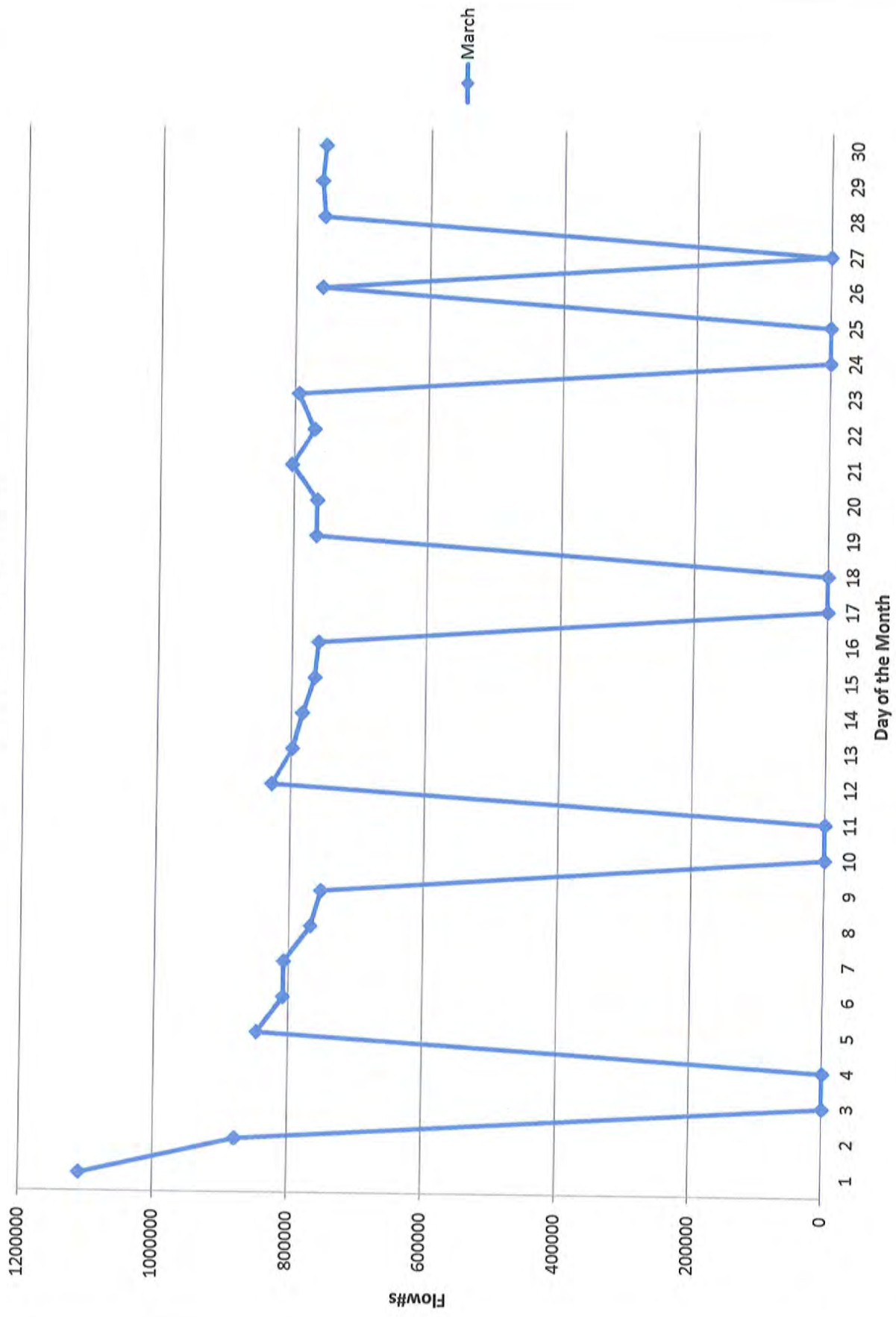
2012 MARCH 1ST QUARTER- METERS FROM WEST GOSHEN - CC COLLECTION													
DATE	HERSHEY'S MILL		ASHBRIDGE		HICKS METER		RESERVOIR		SHERMAN		BARKWAY		
	READING	GPD	READING	GPD	READING	GPD	READING	GPD	READING	GPD	READING	GPD	
3/1/2012	23,026,270	63,210	1,377,272	86,850	3,900,750	344,335			759,755	7,935	2,334,127	10,855	
3/2/2012													
3/3/2012													
3/4/2012													
3/5/2012					4,020,793	300,108							
3/6/2012					4,052,199	314,060							
3/7/2012					4,083,739	315,400							
3/8/2012	23,070,155	62,693	1,382,759	78,386	4,115,682	319,230			764,482	6,753	2,341,705	10,826	
3/9/2012					4,147,169	315,070							
3/10/2012													
3/11/2012													
3/12/2012					4,228,356	270,623							
3/13/2012					4,259,653	312,970							
3/14/2012					4,291,817	321,640							
3/15/2012					4,323,375	315,580							
3/16/2012	23,118,192	60,046	1,388,329	69,825	4,353,875	305,000			769,593	6,389	2,344,999	4,118	
3/17/2012													
3/18/2012													
3/19/2012					4,431,449	258,580							
3/20/2012	23,142,310	60,295	1,390,970	66,025	4,462,460	310,110			772,367	6,935	2,347,256	5,643	
3/21/2012					4,494,091	316,310							
3/22/2012	23,153,567	56,285	1,392,200	61,500	4,524,545	304,540			773,609	6,210	2,349,152	9,480	
3/23/2012					4,555,383	308,380							
3/24/2012													
3/25/2012													
3/26/2012					4,631,926	255,143							
3/27/2012													
3/28/2012					4,688,943	285,085							
3/29/2012	23,194,955	59,126	1,396,629	63,271	4,718,669	297,260			777,823	6,020	2,356,621	10,527	
3/30/2012					4,742,694	240,250							
3/31/2012													
		60,276		70,943		300,484		0		6,707		8,575	

2012 SUMMARY OF METER READINGS

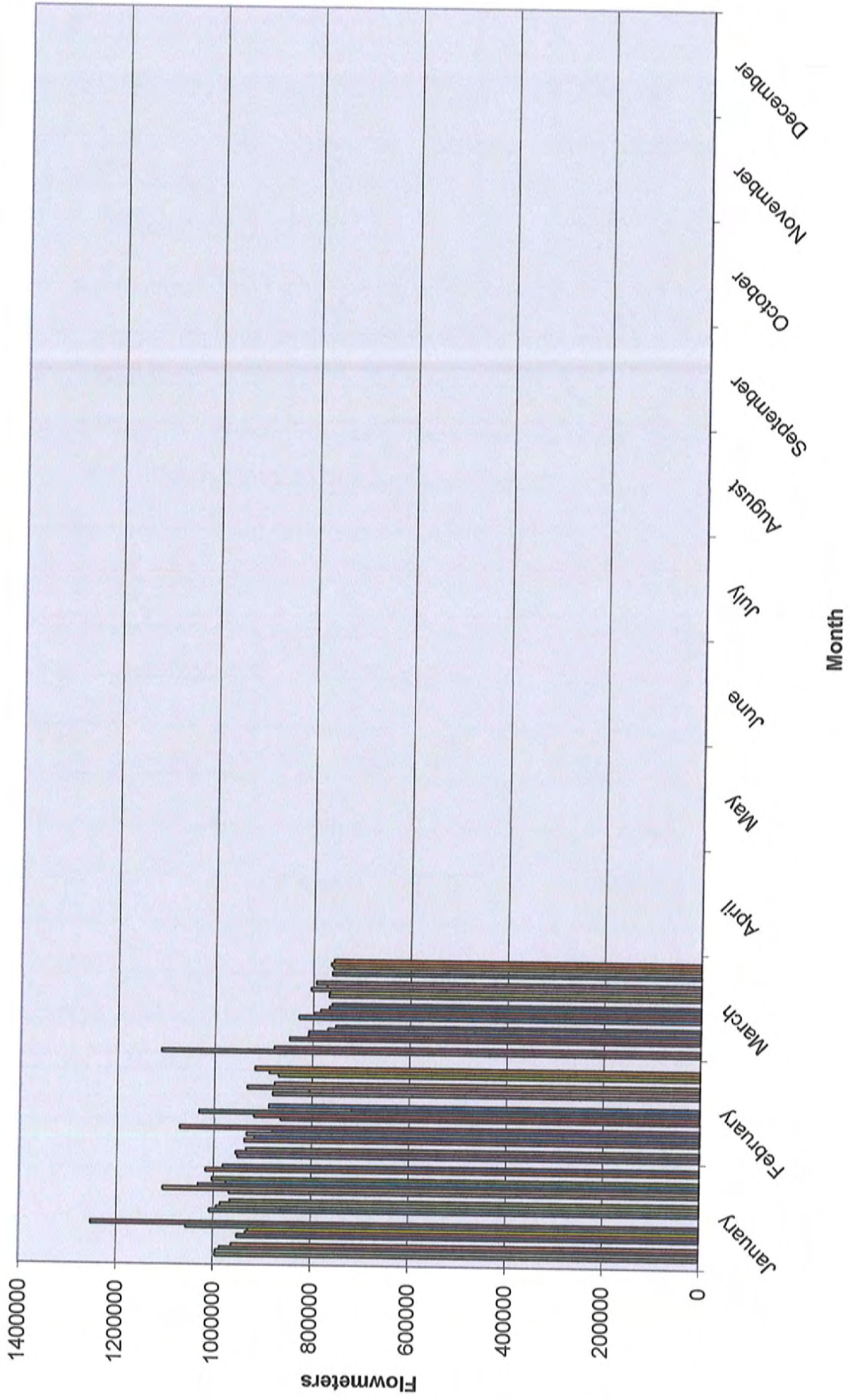
	WESTTOWN WAY	ELLIS LANE	PAOLI PIKE	WILSON DRIVE	SUMMIT	HERSHEY MILL	ASHBRIDGE	HICKS	RESERVOIR	SHERMAN	BARKWAY
JANUARY	1,296,433	152,585	69,729	69,440	20,400	73,086	90,225	67,846	909,322	6,922	12,327
FEBRUARY	1,172,663	140,579	61,074	65,911	20,400	63,555	73,939	295,466	1,019,637	6,561	11,350
MARCH	1,157,405	222,657	61,103	71,039	20,400	60,276	70,943	300,484	0	6,707	8,575
APRIL											
MAY											
JUNE											
JULY											
AUGUST											
SEPTEMBER											
OCTOBER											
NOVEMBER											
DECEMBER											
Total Flows											
Monthly Ave	1,208,834	171,940	63,969	68,797	20,400	65,639	78,369	221,265	642,986	6,730	10,751

To
West Goshen 904,128

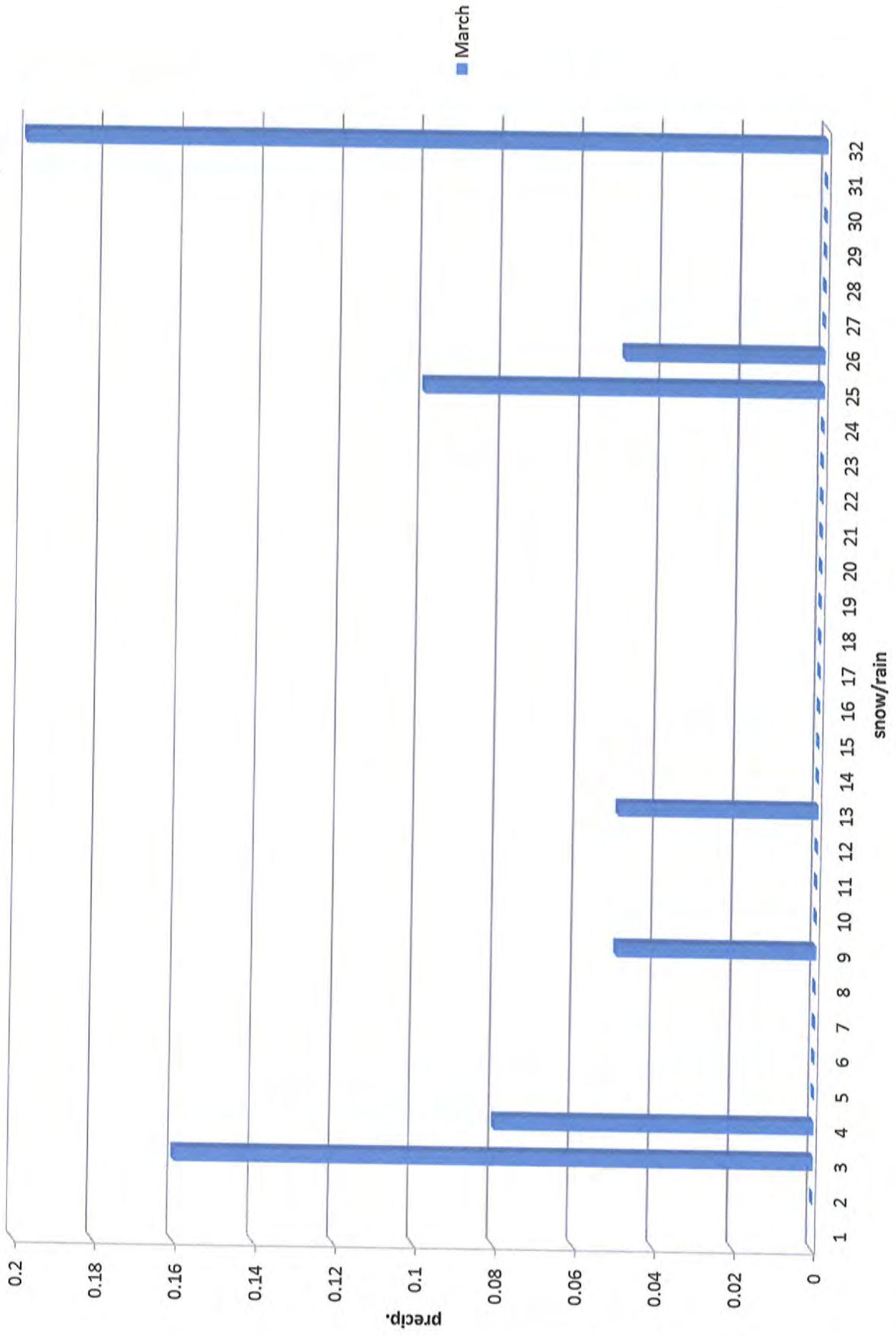
Flowermers March 2012



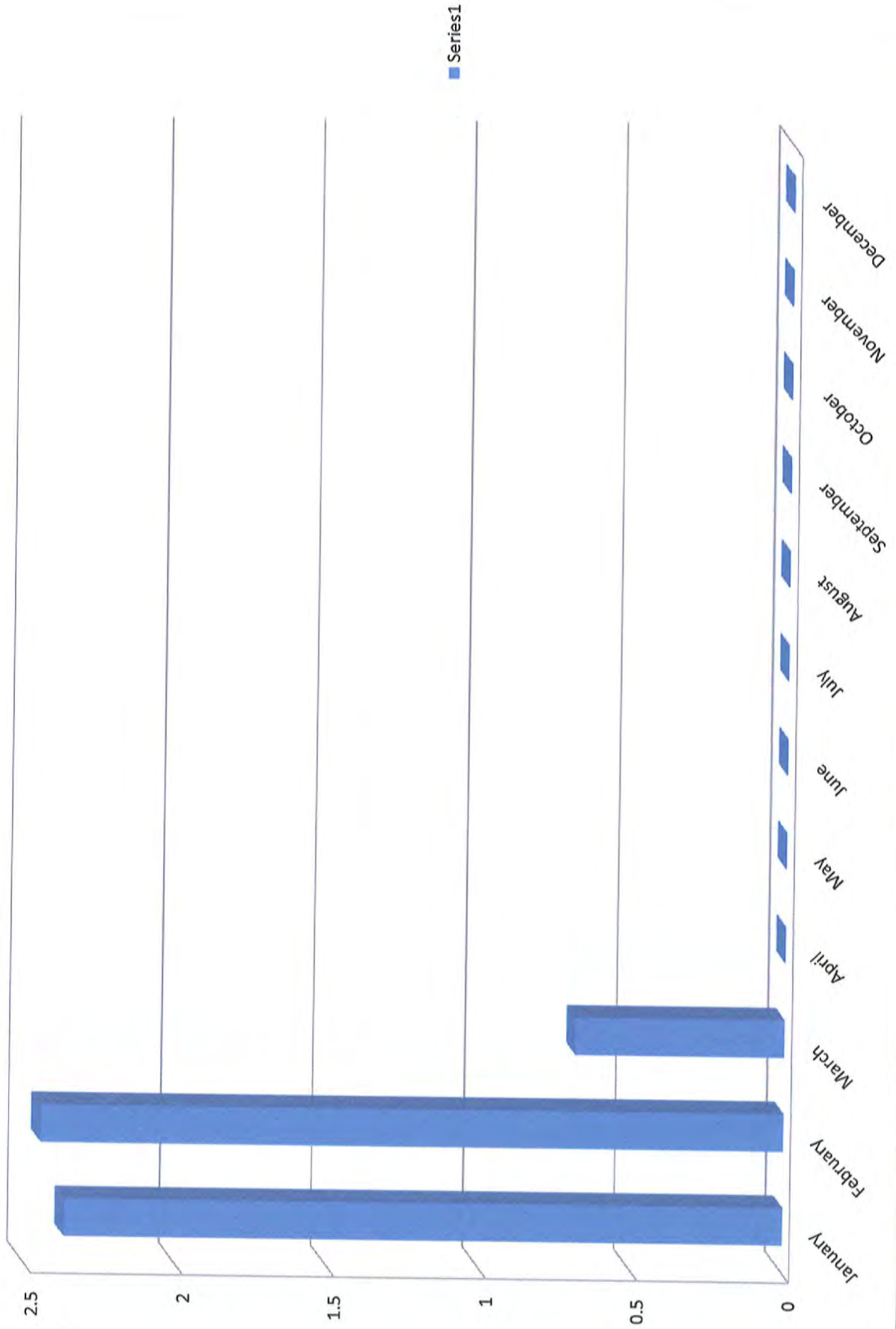
Monthly Totals 2012 Jan-Dec



March Precip. .69 - 2012



2012 Monthly Precipitation



BOARD OF SUPERVISORS

EAST GOSHEN TOWNSHIP

CHESTER COUNTY

1580 PAOLI PIKE, WEST CHESTER, PA 19380-6199

April 2, 2012

Dear Property Owner:

The purpose of this letter is to inform you that Mr. Anthony P. Renzi Jr., 219 Ellis Lane, West Chester, PA, 19380 has filed a Zoning Hearing Board Application requesting relief from the side yard setback requirements. Mr. Renzi proposes to build a garage on his property and is requesting 8 feet of relief from the 20 foot side yard setback requirement.

Pursuant to Township policy, property owners and residents within 1000 feet of the subject property are notified of Zoning Hearing Board applications.

This application is scheduled to be discussed during the meetings outlined below and is subject to change:

April 4, 2012 - Planning Commission meeting (workshop at 7 pm, formal meeting @ 7:30 pm)

May 1, 2012 - Board of Supervisors meeting (7:00 pm)

May 23, 2012 - Zoning Hearing Board (hearing @ 7:30 pm) **(Zoning Hearing)**

All meetings and hearings are held at the Township Building, are open to the public and are subject to change. The variance application is available for review during normal business hours. Please give me a call at 610-692-7171 or email me at mgordon@eastgoshen.org if you have any questions or need additional information.

Sincerely,



Mark A. Gordon
Township Zoning Officer

Cc: All Township Authorities, Boards and Commissions
Raymond D. McKeeman, Zoning Officer, West Goshen Township



PENNONI ASSOCIATES INC.
CONSULTING ENGINEERS

March 29, 2012

Certified Mail/Return Receipt Requested

EGMA1202

Jenifer Fields, P.E.
Regional Water Quality Manager
Pennsylvania Department of Environmental Protection
Southeast Regional Office
2 East Main Street
Norristown, PA 19401

RECEIVED
BY: _____

MAR 30 2012

Re: **Consent Order & Agreement**
Semi-Annual Corrective Action Status Report #07 (FINAL)
East Goshen Township Municipal Authority, Chester County, PA

Dear Ms. Fields:

The following Semi-Annual Corrective Action Status Report is required under the Consent Order & Agreement (CO&A) executed between the Department and the East Goshen Municipal Authority in December 2008. The Report is described in Corrective Action item 7 (Reporting) and is to be submitted to the Department by March 31 and September 30 of each year that the Consent Order and Agreement is in effect. The report is required to describe, in detail, the progress made towards achieving the milestone events listed in the Corrective Action section of the CO&A including all of the actions taken within the previous six-month period and those which will be taken in the subsequent six-month period.

This is the FINAL semi-annual report required as part of the CO&A. The Corrective Action component of the CO&A, which requires investigation and remediation of I/I within the Ridley Creek Collection System and is the subject of this semi-annual report, terminates on March 31, 2012.

1. **Corrective Action #1: Metering**

Flow metering shall take place in the following subbasins for a minimum of four months out of the year, with metering conducted for a minimum of 60 days in the fall and 60 days in the spring.

Refer to the enclosed Figure #1 for a map of previous and future meter locations.

Previous 6 Months:

Metering was performed from early October 2011 through March 12, 2012 at all of the following meters. The metering computer program failed prior to November 2011, and a number of the meters had to be reprogrammed and/or replaced thereafter, so much of the meter data is not valid for October and November 2011.

New Kent Meter (aka "Relocated Chester Road meter")

The New Kent meter remains located two manholes upstream of the original Chester Road meter location. The subbasin upstream of this meter has exhibited I/I problems over the past couple years, similar to those observed at the original Chester Road meter in 2008. Metering was conducted at upstream Saratoga and Tallmadge locations, and no notable I/I problems were observed. Refer to previous Semi-Annual CO&A Status Reports for detailed analysis of these two meters. Therefore, the I/I is occurring downstream of the Tallmadge and Saratoga locations and upstream of the New Kent meter location. The New Kent Apartment complex is a large portion of the collection system in this subject area, but the sewer system in the apartment complex was investigated in 2010-2011, and no leaks were found.

Flow rates from October 2011 through March 2012 were much more variable than in June 2011 through September 2011. The average flow was 195 gpm in November 2011 through January 2012. This is significantly higher, approx. 55 gpm (39%) higher, than in the summer of 2011. It is important to note that the summer 2011 average flow was almost twice as high as the previous six month average. The average flow decreased to 161 gpm from late January 2012 through March 12, 2012.

There is apparent inflow during storms at this meter; however, the majority of that inflow originates upstream of the Township Building meter. We estimate that 60-80% of the inflow originates upstream of the Township Building meter, while another 10-20% originates in the Goshen Village Shopping Center. Although inflow is continuing to occur, the instantaneous wet weather peak flows in the current metering period were less than in June-September 2011. However, the daily volume during wet weather is much higher in the current period. Therefore, we believe that a larger amount of I/I is entering the sewer system, but it is occurring over an extended period of time (several hours instead of 1-2 hours)

The significant infiltration problem in this subbasin also continues. The continuous base flow, which is considered to be primarily infiltration, averaged 94 gpm from late November 2011 through late January 2012. It decreased to 57 gpm, similar to the summer 2011 infiltration rate, from late January 2012 through March 12, 2012. This indicates that 35-48% of the New Kent flow is infiltration. We estimate that only 7-17% (4-16 gpm) of this continuous flow originates upstream of the Township Building meter, and none of it originates in the Goshen Village Shopping Center. Therefore, over 50 gpm of continuous flow is believed to be entering the sewer system between the Township Building meter and the New Kent meter. This continuous flow is assumed to be primarily infiltration, but it could also be inflow (from damaged manholes, manholes without watertight lids, etc.) since this sewer main crosses under and runs alongside a stream.

Flows remain elevated for 1-4 days after storm events. On numerous occasions, the peak instantaneous flow occurred the day after the storm event, and the daily flow volume that following day was also greater than the volume the day of the storm. This may substantiate our belief that water is entering the sewer system over an extended period of time, most likely due to rain-induced infiltration, sump pumps, and possibly inflow from manholes along the stream.

Investigations will be performed on the approx. 1,500 l.f. of sewer along the creek between

Paoli Pike (near the Township Building meter) and North Chester Road (near the New Kent meter) during the next six months. The New Kent and Township Building meters will remain in place to continue to monitor flows within the subbasin.

It should be noted that the design capacity of the sewer in this location is sufficient to convey the peak flows captured by the meter, including the instantaneous peaks during storm events.

Goshen Village Shopping Center

This meter is located a few manholes upstream of the New Kent meter. It meters all flows from the Goshen Village Shopping Center as well as some flows from the East Goshen Township municipal complex buildings. It does not meter any other tributary flows to the New Kent meter. Metering was initiated in this location to identify the source of the excessive infiltration observed at the New Kent meter.

The average flow was 3 gpm from October 8, 2011 through November 16, 2011. Thereafter, the average flow was 14 gpm through March 2012. There is no continuous base flow. As a result, infiltration does not appear to be a problem in the shopping center sewer system. There were no apparent significant inflow occurrences during the storm events over this initial metering period either. Therefore, this meter will be removed.

It should be noted that the design capacity of the sewers in the vicinity is sufficient to convey the peak flows captured by the meter.

Township Building

This meter is located a few manholes upstream of the New Kent meter, in an access driveway at the East Goshen Township municipal building complex. It meters all flows to the New Kent meter except for flows from the Goshen Village Shopping Center, some Township municipal complex buildings, and the New Kent Apartment complex. Metering was initiated in the Township Building location to identify the source of the excessive infiltration observed at the New Kent meter.

The average flow was 18 gpm from October 8, 2011 through November 4, 2011. The average increased to 87 gpm from November 4, 2011 through March 1, 2012. The average flow then steadily decreased from March 2 through March 8, averaging 48 gpm.

There were significant inflow and infiltration problems at this location from November 2011 through January 2012. Extreme inflow occurred during storms of at least 0.75" precipitation. The instantaneous peaking factor was as high as 5.6 (during a 2.0" storm event on December 7, 2011), and the daily flow that day was double the daily average. Inflow and rain-induced infiltration appeared to continue for 2-3 days after large storm events. Continuous base flow averaged 16 gpm indicating a continuous infiltration problem, in addition to a rain-induced infiltration problem.

After mid-January 2012, flow rates became much more consistent and slowly decreased. There were no extreme peak instantaneous flows recorded. There was a 1.32" storm event on February 29, 2012, and the peak instantaneous flow rate was no higher than the peak on a dry

weather day. The continuous base flow also decreased dramatically after March 1, averaging only 4 gpm.

Investigations will be performed in select areas upstream of this meter within the next six months. Sump pumps are suspected to be a problem in this area.

It should be noted that the design capacity of the sewers in the vicinity is sufficient to convey the peak flows captured by the meter.

Line Road

This meter is located in the Ridley Creek Interceptor along Paoli Pike adjacent to Franklin Court. There was an average daily flow of 50 gpm (72,000 gpd) in October 2011, which is consistent with flows metered for the preceding nine months of 2011. The meter appears to have malfunctioned in November. The average metered flow then decreased to 3 gpm (4,500 gpd) in December 2011 through March 2012. The flow during this meter period varied widely from the anticipated flow of 39,000 gpd, based on the number of upstream connections. We question the accuracy of the meter data after November 2011 since the flows are dramatically less than the anticipated flow.

There was an average continuous base flow ranging between 0.0 and 3.7 gpm, which is slightly less than the base flow for the preceding nine months of 2011. As a result, dry weather infiltration does not appear to be a problem. However, this location remains susceptible to rain-induced infiltration and possibly slow, continuous inflow for several days after storm events. This meter will be removed since the New Kent subarea has been identified as the apparent primary source of significant I/I in the Ridley Creek Collection System and for utilization of this portable meter in initial I/I analyses within the Chester Creek Collection system.

It should be noted that the capacity of this sewer is sufficient to convey the peak flows captured by the meter, as evidenced by the level reading not exceeding 2/3 of the pipe diameter at any time during this metering period.

Ridley Creek STP Influent

This meter is located on the Ridley Creek Interceptor in the manhole immediately upstream of the Ridley Creek STP Influent Pump Station. It meters all influent flows to the STP except for the Hunt Country development. It does not meter the STP recycle/backwash flow either.

The meter malfunctioned from October 1, 2011 through mid-November. The average flow from mid-November through mid-December 2011 was 351 gpm (506,000 gpd). The average flow decreased from mid-December 2011 through March 11, 2012 to 172 gpm (248,000 gpd), which is approximately 10% less than over the summer of 2011.

There remains little to no continuous base flow so dry weather infiltration does not appear to be a problem. There has been no apparent dry weather infiltration at this location since August 2010. However, this is inconsistent with the meter data from the upstream New Kent meter where continuous base flows generally ranged between 57 to 94 gpm.

Inflow and rain-induced infiltration were a significant problem from August-November 2011, but flow rates and volumes during and after storm events were significantly less in December 2011 through March 11, 2012. For example, on November 12, 2012 during a 0.65" rainfall event, the flow rates were elevated (over 600 gpm) for 13 consecutive hours, and the daily volume exceeded 1,200,000 gpd. No significant repairs were made, but the reduced I/I is evidenced in four storms over 0.6" precipitation thereafter. In particular, there were two storm events exceeding 1.0" precipitation in 2012 (1.42" on January 12 and 1.32" on February 29), during which the flow rates were elevated for just three hours and one hour respectively, and daily volumes were only 405,000 gpd and 365,000 gpd respectively. It is possible that the flow data on November 12, 2012 was invalid due to aforementioned meter programming problems.

Some inflow and rain-induced infiltration still exists in the system. It is believed that the majority of that remaining I/I originates upstream of the New Kent meter as described in the New Kent Meter narrative above.

Lockwood Chase STP Influent

The temporary meter is located in the manhole immediately upstream of the Lockwood Chase Sewage Treatment Plant. It meters flow from the entire Lockwood Chase Development with the exception of the residence at 923 Dolphin Drive which connects to the sewer main downstream of this manhole.

The average flow of 17 gpm (24,900 gpd) is slightly less than in June-September 2011, although it is 10 gpm higher than in February-March 2011. There is little to no continuous base flow so dry weather infiltration does not appear to be a problem. However, it appears there is some rain-induced infiltration after storm events because flow rates and volumes become elevated a few days after storms. There were no significant inflow occurrences during this metering period.

This meter will be removed because construction is underway to close the treatment plant and construct a gravity sewer diversion to East Goshen Township's Chester Creek Collection System.

It should be noted that the design capacity of the sewers in the vicinity is sufficient to convey the peak flows captured by the meter.

Waterview

The temporary meter is located on the Chester Creek Interceptor behind the Waterview Swim Club, just north of West Chester Pike. The eastern section of the Chester Creek Service Area is tributary to this meter location.

The average flow was 136 gpm in October through mid-November 2011. There was a significant continuous base flow during this period averaging 37 gpm, likely due to infiltration from the extreme wet weather in September and October. The pipe then flowed nearly full for over one week in mid-November, possibly due to a downstream restriction.

Flow rates, including the continuous base flow and daily peaks, steadily decreased after the apparent restriction was eliminated in late November. From late January 2012 through March 12, 2012, during a period of fairly dry weather, the average flow was only 29 gpm, and there was no continuous base flow.

It appears there is no dry weather infiltration in the upstream sewer system. However, there seems to be a significant amount of rain-induced infiltration that occurs for a few days after storm events and may last up to one month during the wet season. Some inflow also appears to be occurring during storms, but the inflow does not appear to be significant.

Permanent Chester Creek Service Area Meters

Flow data from the 11 permanent meters throughout the Chester Creek Service Area were analyzed; six of the meters are in gravity interceptor sewers and five of the meters are on pump station discharge pipes. Instantaneous or hourly meter data is not recorded on these meters, so only a rough flow analysis can be performed since inflow peaks and continuous base flows are unknown. It appears the following two areas may have I/I problems and should be the initial focus areas of temporary metering over the next year: (1) the southwest corner of East Goshen Township which is generally bounded by East Strasburg Road to the north, the reservoir to the east, and township borders to the south and west; (2) an area bounded by Paoli Pike to the north, North Chester Road to the east, East Strasburg Road to the south, and Ellis Lane to the west.

Next 6 Months:

East Goshen Municipal Authority has found the temporary metering to be beneficial in identifying problems in the sewer systems. Although not required by the CO&A, the Authority will continue the temporary metering and flow analyses throughout its various sewer systems. Metering results and analyses will be utilized internally and for Chapter 94 Reporting but will no longer be reported semi-annually to DEP.

- Clean and calibrate all meters.
- Discontinue metering at the Goshen Village Shopping Center and the Line Road locations since there are no apparent major I/I problems.
- Discontinue metering at the Lockwood Chase STP Influent location since the plant is being closed and decommissioned.
- Continue metering at the Ridley Creek STP Influent location to monitor the impact of future upstream repairs at the Sewage Treatment Plant. This meter data is also beneficial for analysis in annual Chapter 94 Reports.
- Install a permanent meter immediately upstream of the Ridley Creek STP to monitor all influent flows from the Ridley Creek Collection System. The meter will be located so that it does not meter recycle/backwash flows from the STP.

- Continue metering at the New Kent and Township Building locations for use in combination with planned TV work to identify the source(s) of the excessive I/I in this subbasin and to evaluate the effectiveness of any repairs that may be performed.
- Continue metering at the Waterview location. Initiate metering on the Chester Creek Interceptor sewers in three other strategic locations to determine if I/I problems exist in the eastern, western/northern, and/or southern subbasins within the Chester Creek Service Area. The three other locations are: (1) just north of West Chester Pike below the dam to meter flows from the northern and western portions of the Chester Creek Service Area and from the interceptor alongside the reservoir; (2) near the intersection of Reservoir Road and East Strasburg Road to meter flows from a subarea west of Reservoir Road; and (3) at the Baldwin Drive Bridge to provide intermediate metering between the permanent Reservoir Road and Hicks Meters. If I/I problems are identified in any subbasins, the meters will be relocated in Fall 2012 to strategic locations within the subbasins of concern to pinpoint the specific location(s) of I/I.

2. **Corrective Action #2: Televising**

Televising and visual inspections shall take place on an ongoing, as-needed basis in order to discover areas of excessive I/I and to measure the effectiveness of I/I rehabilitation measures.

Previous 6 Months:

Ridley Creek Service Area

As stated in the March 2010 CO&A Status Report, the entire Ridley Creek Service Area has been televised. The Township has begun re-televising portions of the sewer system, although no televising was performed in the Ridley Creek Service Area in the past six months.

Numerous house laterals and cleanouts have been identified as defective and sources of I/I via visual inspections. The Township has been repairing the defective laterals and cleanouts for the property owners to ensure that the work is done properly.

Chester Creek Service Area

The majority of the Chester Creek Service Area has now been cleaned and televised. There is a significant amount of transite (asbestos cement) pipe in the collection system, and this pipe has been found to have many areas of defective pipe (cracked and missing crown of pipe). As a result, the Township continues to prioritize areas having asbestos cement pipe for televising. Approximately 42,000 l.f. of sewers were televised in the following areas over the past six months:

- Remainder of Marydell Farms Development that was not televised in the prior semi-annual reporting period
- Remainder of Milltown Development that was not televised in the prior semi-annual reporting period

- Remainder of Pin Oaks Development that was not televised in the prior semi-annual reporting period
- Remainder of the Hershey Mill Estates Development that was not televised in the prior semi-annual reporting period
- Manley Road
- Portions of the Grand Oak Development
- Supplee Valley

Leaks were found in Marydell Farms, Pin Oaks, Supplee Valley, and Hershey Mill Estates during the televising work.

Next 6 Months:

Ridley Creek Service Area

- Televis and visually inspect the area upstream of the New Kent meter location from Paoli Pike to N. Chester Road to identify possible sources of excessive I/I. The sewers will be inspected during dry weather conditions and again during wet weather.
- Televis sewers from Tallmadge Drive to Cornwallis Drive to identify possible sources of I/I observed at the Township Building meter.

Chester Creek Service Area

- All sewers tributary to the Ashbridge Pump Station – Margo Lane, Williams Way, Edith Road, Still Road, and the interceptor along Hunters Run Creek.
- Remainder of the Grand Oak Development

3. Corrective Action #3: System Hydraulic Characterization

The sanitary sewer collection system tributary to the Ridley Creek Sewage Treatment Plant shall be modeled and hydraulically evaluated in order to determine if any physical constraints exist which would not allow for the conveyance of peak wet weather flow.

- The System Hydraulic Characterization was completed and submitted to DEP in November 2009 as required by the CO&A.

4. Corrective Action #4: Rehabilitation

Areas within the collection system tributary to the Ridley Creek Sewage Treatment Plant which have been identified as needing rehabilitation, per the investigations mentioned above,

shall be rehabilitated.

Previous 6 Months:

Since most of the following rehabilitation work occurred in the Chester Creek Service Area, the improvements are generally not tributary to any current temporary meters.

- Cleaned 38,000 linear feet of sewers (throughout Ridley Creek and Chester Creek Service Areas)
- 2 point repairs in Milltown (Chester Creek Service Area)
- 6 point repairs in Supplee Valley, one of which was a large hole in a pipe with an estimated 70,000 gpd infiltration (Chester Creek Service Area)
- 6 point repairs and 3 main repairs in Hershey Mill Estates (Chester Creek Service Area)
- 1 excavated repair at Broad Street and West Chester Pike (Chester Creek Service Area)
- 1 excavated repair at Broad Street and Center Road (Chester Creek Service Area)
- Replaced 28 cleanout lids and cleanout riser pipes that had pulled out of lateral piping. Refer to attached lists of "2011 Sewer Cap Replacements/Stack Repairs" and "2012 Sewer Cap Replacements/Stack Repairs". (Ridley Creek, Chester Creek, and Lockwood Chase Service Areas)

Next 6 Months:

- Continue to conduct rehabilitation of sewers, manholes, and laterals as determined by ongoing investigations, including possible isolated cured-in-place pipe lining and replacement of cleanout caps and cleanout pipes that have pulled out of lateral piping.
- Maydell Farms will have approximately 30 manhole castings and lids replaced during paving, which is planned for Spring 2012.
- Replace the permanent Hicks Meter (Chester Creek Service Area)
- Repair the permanent Reservoir Road Meter (Chester Creek Service Area)

5. Corrective Action #5: Post-Rehabilitation Flow Metering

Flow metering shall take place in areas that have been rehabilitated in order to document the effectiveness of the rehabilitative work. The metering shall take place during both the fall and spring of the year.

There are four primary metering locations that can be used to evaluate the effectiveness of rehabilitation work over the course of the 3.5-year CO&A period. Those three metering locations are Achom Drive, Tegler, Ridley Creek STP Influent (as discussed previously in this report) in conjunction with the Ridley Creek STP permanent influent meter, and the Chester Road meter in conjunction with the New Kent meter.

Achom Drive

The following narrative regarding this meter remains from the previous CO&A Status Report #06 (dated September 29, 2011) to describe pre- vs. post-rehabilitation flows:

There has been a dramatic reduction of flows at Achom Drive from previous metering that was initiated at the location in Fall 2007. From October-December 2007, the average flow rate was 23 gpm. The average flow increased to 58 gpm in follow-up metering in February-April 2008. Daily instantaneous peak flows were regularly over 70 gpm in the October-December 2007 metering and over 150 gpm in the February-April 2008 metering. Infiltration was averaging 8 gpm.

In 2010 and early 2011, the Township replaced numerous damaged residential lateral caps and riser pipes in the upstream Bowtree Development. The Township also replaced all manhole lids in the Bowtree Development with lids with smaller leak-proof pick holes. The lateral and manhole lid problems had been visually observed by the Township to be significant sources of I/I.

Flows in the current metering period, which included a very wet period in August and September, are significantly decreased and much less variable than observed in 2007 and 2008, prior to rehabilitation. The average flow is now 12 gpm, and daily instantaneous peaks very rarely exceed 50 gpm. Little to no infiltration is present. There was one large inflow occurrence, which was during 6.5+ inches of precipitation during Hurricane Irene, when the flow peaked at 432 gpm, but the flow rate decreased quickly and returned to normal within 15 hours. There was only limited inflow during Tropical Storm Lee when the maximum instantaneous flow was 106 gpm, significantly less than large storms in 2008 and January 2011 when the flows peaked at 263 gpm and 204 gpm respectively.

Ridley Creek Interceptor

There were three temporary meters installed along the Ridley Creek interceptor at different times since 2007: Towne Drive meter, Tegler (aka Ridley Creek Interceptor) meter, and the current Ridley Creek STP Influent meter. Refer to the attached Figure 1 for specific meter locations. A permanent influent meter was also installed at the Ridley Creek STP during the course of the CO&A period.

It is estimated from the Towne Drive and Tegler meters (in conjunction with the Achom Drive meter) that there was an approximate average flow of 190,000-210,000 gpd in 2007 through mid-2010 at the location of the current Ridley Creek STP Influent temporary meter. The continuous base flow during that period, which is assumed to be primarily infiltration, averaged approximately 50 gpm.

The following notable repairs were made in the sewer system upstream of these meters between 2009 and 2011: replacement of over 120 lateral cleanout cap/stack repairs throughout the collection system, significant lateral repairs in the Clocktower Woods development, replacement of approximately 100 manhole lids in the Bowtree and Hunt Country developments with watertight lids, manhole grouting in the Clocktower Woods development, manhole grouting behind the Township building, and two spot liner repairs in sewer mains behind the Township building. There were also other repairs in areas not tributary to these meters.

As noted in the Ridley Creek STP Influent meter narrative above in Corrective Action #1, there is now little to no continuous base flow at this meter location (although this conflicts with upstream New Kent metering). However, the average flow is now 248,000 gpd, which is roughly 50,000 gpd greater than in 2007. Chapter 94 flow metering at the STP confirms this increase.

An isolated section of sewer upstream of the current New Kent meter is believed to be the source of this flow increase. That sewer section has seen a continuous base flow increase of approximately 45,000 gpd since 2009. Through the semi-annual metering and numerous visual and television inspections over the past couple years, this problem has been pinpointed to an approximately 1,500-foot length of sewer, where ongoing investigations and repair efforts will continue to be focused.

The repair and rehabilitation work during the CO&A period has generally stabilized flows throughout the remainder of the Ridley Creek service area since 2007.

Ridley Creek STP Expansion

One of the goals of the CO&A was to increase flexibility at the Ridley Creek STP during wet weather peak inflow events. It should be noted that this flexibility was achieved in the recent plant expansion from an average permitted capacity of 400,000 gpd to 750,000 gpd. The expansion was substantially completed in 2010.

Next 6 Months:

- Data from the permanent meters at Reservoir Road and Westtown Way will be reviewed to evaluate the effectiveness of the repairs in the Chester Creek Service Area.
- Data from the Ridley Creek Influent STP meter will continue to be reviewed to determine the effectiveness of repairs throughout the Ridley Creek Service Area.
- The temporary meter will remain in the New Kent location, as indicated in Corrective Action #1, to monitor any repairs that may be identified and performed in the upstream subbasin.

6. Corrective Action #6: House Lateral Investigation Program

The House Lateral Investigation Program ("HLIP") was implemented in conformance with the provisions of the HLIP contained in the February 28, 2008, letter from East Goshen.

Previous 6 Months:

- Continued to replace cleanout caps at no charge to property owners in the Ridley Creek, Chester Creek, and Lockwood Chase Service Areas upon request by property owners or observation by Public Works or Codes Department staff. Refer to attached lists of "2011 Sewer Cap Replacements/Stack Repairs" and "2012 Sewer Cap Replacements/Stack Repairs".
- Continued to repair defective laterals and cleanouts for the property owners to ensure that the work is done properly as indicated in Corrective Action #4. Refer to attached lists of "2011 Sewer Cap Replacements/Stack Repairs" and "2012 Sewer Cap Replacements/Stack Repairs".
- Re-occupancy inspections were performed at the sale of 109 residences and 7 commercial establishments throughout the Township looking for direct inflow from building sump pumps.
- The Township cleared 17 sewer lateral backups throughout the Township.

Next 6 Months:

- Continue to inspect sanitary sewer cleanouts/vents in conjunction with the televising efforts performed under Corrective Action #2.
- Continue Township policy regarding replacement of cleanouts, vent caps, and laterals.
- Continue re-occupancy inspections at the sale of property including looking for direct inflow from building sump pumps.
- Repair of defective laterals and cleanouts by the Township for property owners to ensure that the work is done properly.

7. Corrective Action #7: Reporting

East Goshen shall submit biannual status reports to the Department which shall describe the progress made towards achieving the milestone events listed in the Corrective Action section of the CO&A.

Previous 6 Months:

- Submitted Semi-Annual Report #06 on September 29, 2011.


Next 6 Months:

- Not applicable. This is the final semi-annual report required by the CO&A. However, the East Goshen Municipal Authority will continue the temporary metering and flow analyses throughout its various sewer systems. Metering results and analyses will be utilized internally and for Chapter 94 Reporting but will no longer be reported semi-annually to DEP.

If you should have any questions, please do not hesitate to contact me at (302) 655-4451.

Sincerely,

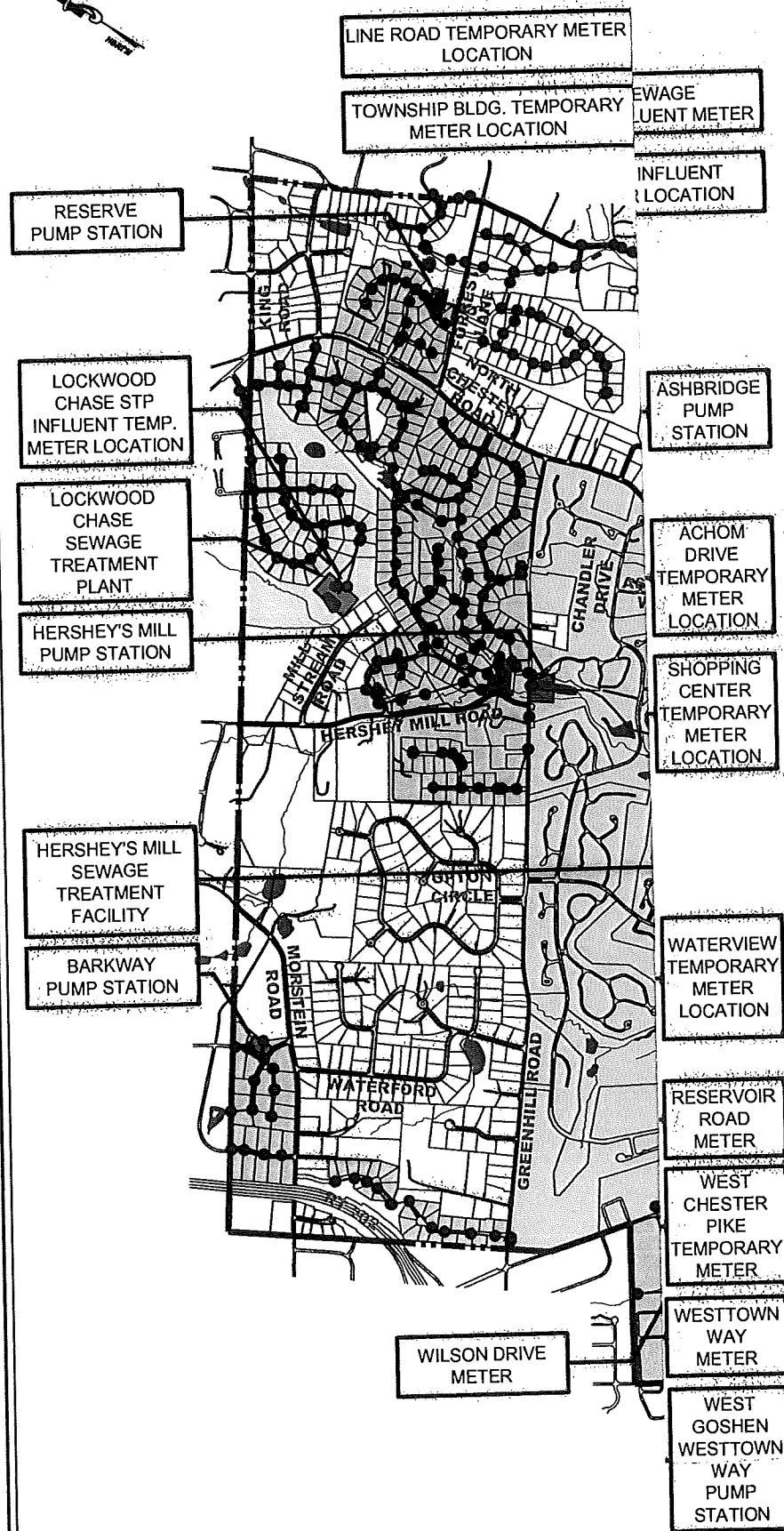
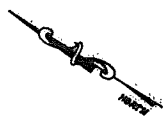
PENNONI ASSOCIATES INC.


Michael J. Ellis, P.E.
Project Engineer














Enclosures: Figure 1
2011 Sewer Cap Replacements/Stack Repairs
2012 Sewer Cap Replacements/Stack Repairs

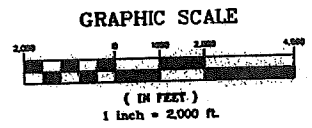
cc: Rick Smith, Township Manager
Mark Miller, Public Works Director
Robert F. Adams, Solicitor
Dan Barbato, Pennoni Associates Inc., Authority Engineer

P:\Projects\EGMA\COA Status Reports\CO&A Status Rpt 07 (Final).doc



LEGEND

-  RIDLEY CREEK STP SERVICE AREA
-  WESTTOWN SERVICE AREA
-  LOCKWOOD CHASE SERVICE AREA
-  HERSHEY'S MILL SERVICE AREA
-  WEST GOSHEN SERVICE AREA
-  PUMP STATION
-  SEWAGE TREATMENT FACILITY
-  SANITARY SEWER
-  SANITARY MANHOLE
-  PERMANENT WASTEWATER METER
-  PERMANENT METER USED IN INFILTRATION AND INFLOW (I/I) ABATEMENT PROGRAM
-  TEMPORARY METER LOCATION
-  TOWNSHIP BOUNDARY



THIS EXHIBIT IS FOR GRAPHICAL REPRESENTATION ONLY

PREPARED FOR EAST GOSHEN TOWNSHIP OF CHESTER COUNTY IN PENNSYLVANIA

MARCH 2012

EAST GOSHEN TOWNSHIP
CHESTER COUNTY, PENNSYLVANIA
FIGURE #1:
TOWNSHIP SEWER MAP

2011 Sewer Cap Replacements/Stack Repairs

Patricia Thibault – 1675 Bow Tree Drive - east goshen - Ridley Creek STP
610-334-1759

Melanie McHugh – 1730 Towne Drive - east goshen - Ridley Creek STP
484-887-8066

John Guthrie – 1217 Candytuft Lane - eastgoshen - Ridley Creek STP
610-647-7013

Nancy Russell – 1403 Heather Lane - West Goshen Service Area
610-696-1331

Kara Kim – 1204 Bell Flower Lane - Hershey Mill (West Goshen)
610-695-8290

Barbara Downing – 100 Shandon Place - East Goshen - Ridley Creek STP
610-889-3318

Dave Hewett – 1514 Allison Drive - East Goshen - Ridley Creek STP
610-431-3471

908 Dolphin Drive - Lockwood Chase STP

906 Dolphin Drive - Lockwood Chase STP

1624 Highland Ave. – 610-696-8446 - East Goshen - Ridley Creek Stp.

1612 Highland Ave. – fixed sewer cap - East Goshen Ridley Creek STP

1625 Christine Lane – fixed 2 caps - West Goshen Service Area

301 Joseph Drive – Amy Victor 610-696-3635 - West Goshen Service Area

201 Marie Road – White Chimney Dev. - West Goshen Service Area
Elizabeth Schostak

1307 Park Ave - West Goshen Service Area

1429 Hill Street - West Goshen Service Area

700 Sycamore Drive - West Goshen Service Area

802 Cedar Dr. - West Goshen Service Area

805 Cedar Drive - West Goshen Service Area

813 Cottonwood Drive - Lockwood Chase STP

813 Cottonwood Drive - Lockwood Chase STP

795 Trout Run Drive - Lockwood Chase STP

824 Cottonwood Drive - Lockwood Chase STP

829 Cottonwood Drive - Lockwood Chase STP

904 Dolphin Drive - Lockwood Chase STP

28 Edgewood Drive - West Goshen Service Area

407 Barker Drive - West Goshen Service Area

1755 Towne Drive - Lateral in the Ridley Plant - Ridley Creek STP

~~700 Sycamore Drive~~

2012 Sewer Cap Replacements/Stack Repairs

Martha Blackburn

1429 Linden Lane

610-430-1660 - done 2/2/12 Steve Biondi