

EAST GOSHEN MUNICIPAL AUTHORITY

December 10, 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. November 12, 2012

4. APPROVAL OF INVOICES

a. Pennoni #527785	\$	6,344.75
b. Pennoni #527786	\$	747.00
c. Pennoni #527787	\$	2,366.50
d. Gawthrop Greenwood #103561	\$	1,121.00

5. LIAISON REPORTS
6. FINANCIAL REPORTS
 - a. November 2012 Report

7. OLD BUSINESS

8. GOALS
 - a. November Goals

9. NEW BUSINESS
 - a. Authorize execution of Hershey's Mill Village sewer easement
 - b. Consider Pennoni Assoc. Inc. as Authority Engineer

10. CAPACITY REQUESTS
 - a. Consider New Kent Apartment request for sewage flow for 12 unit apartment

11. SEWER REPORTS
 - a. Director of Public Works Report
 - b. Pennoni Engineer's Report
 - c. Big Fish Environmental Inc Report with DMR's
 - d. East Goshen Township Flows for November 2012

12. ANY OTHER MATTER

13. CORRESPONDENCE AND REPORTS OF INTEREST

14. PUBLIC COMMENT

15. ADJOURNMENT

Reminder – NEWSLETTER ARTICLE SUBMISSION DUE DATES:

Article Due Date

Website Posting Date

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

The East Goshen Township Municipal Authority held their regularly scheduled meeting on Monday, November 12, 2012 at 7:00 pm at the East Goshen Township building. Members in attendance were: Chairman Dana Pizarro, Vice Chairman Fran Beck, Jack Yahraes, Kevin Cummings and Joe McCawley. Also in attendance were: Rick Smith (Township Manager), Dan Barbato and Tim Daily (Pennoni), Bob Adams (MA Attorney), Scott Towler (BFES).

COMMON ACRONYMS:

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

Call to Order & Pledge of Allegiance

Dana called the meeting to order at 7:00 pm 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

1. The Authority members reviewed the SBR Operating Procedures revised November 9, 2012 by Big Fish Environmental Services, Inc.
2. The Authority members reviewed the Ridley Creek Sewage Treatment Plant (RCSTP) Operations Review – Interim Report dated November 9, 2012 provided by Dan Barbato and Tim Daily of Pennoni. The following is an Executive Summary:
The purpose of this report is to provide a discussion of the recent phosphorous and total suspended solids exceedances in the Ridley Creek Sewage Treatment Plant (RCSTP) effluent and how these exceedances will be controlled in the future. The review was completed by the design engineer, Tim Daily P.E., and the plant operator Scott A. Towler, P.E. It involved on-site review of operations at the plant, review of operator reports and data, and meetings with Township staff. A table of exceedances and their likely causes are provided in Section 1.
In an attempt to improve SBR performance, the operator reduced the SBR biomass (aka “mixed liquor”). When the biomass was reduced, enhanced phosphorous (bio-P) removal was greatly reduced. The quantity of alum being fed, at that time, was not sufficient to adequately reduce the remaining phosphorous below the discharge limit. Analytical measurements were not available to identify that the effluent phosphorous concentrations were above the discharge limit. Malfunctions within the alum feed system complicated the issue and led to high effluent suspend solids.

1 The SBR biomass has since been increased and bio-P removal has returned. Daily effluent
2 phosphorous testing has been initiated. The alum chemical feed system has been repaired and is
3 adjusted to maintain the correct feed dosage. The plant effluent is currently within the discharge
4 permit limits.

5
6 Additional work going forward includes the installation of an alum backpressure valve to
7 improve chemical fee pump performance and a field trial of substituting polyaluminum chloride
8 for alum with the goal of reducing overall chemical costs.

9
10 Dan – The Municipal Authority members’ comments can be detached from this report so it can
11 be used for a report to the DEP. The influent data has changed but more data has to be collected.

12 Tim – The basis of the design was 270 parts/million of BOD which is consistent with areas in the
13 age of East Goshen homes, about 25-30 years old.

14 Kevin did search throughout the country and feels this is the normal.

15 Dan – They also looked at loading.

16 Kevin feels it can’t change from 200 to 800 in such a short time.

17 Tim spoke to others who do have these fluctuations from day to day, but they also have a lot of
18 restaurants.

19 Scott did testing over 3 days and feels the mass loadings are normal. He feels aeration may help.

20 Joe asked if a sample can be taken from a manhole that is further away from the plant.

21 Kevin feels the manhole just before the plant would give a good reading. He wants more data
22 collection before changes are made in the plant.

23 Dana commented that the plant was meeting permit in May & June, but when sludge processing
24 started is when the numbers changed.

25 Scott mentioned that in March-April 100 million gallons of sludge were processed.

26 Dana asked about the rate of decant. Scott reported that #3 SBR accepts wastewater with 5am to
27 8am, the first sweep of flow. They run extra cycles at off hours to minimize the decant. In the
28 PM, amounts drop off significantly. They can’t go over 70 gallons/minute. He reported that
29 they should receive sampler replacement parts by the end of the week.

30 Kevin doesn’t want to add another chemical until the phosphorous is figured out. He is in favor
31 of installing automated machines to make the work easier.

32 Scott commented that DO is monitored 24/7 and backed up every month.

33 Tim explained some of the positive changes over the past few months. He feels the plant is well
34 run.

35 Dana’s understanding of the interim report is to be able to talk to the DEP. He mentioned some
36 items that he felt needed to be amended.

37 Scott pointed out that there is a table of individual sampling trends which shows results of
38 significant events, like the 2 major storms on Labor Day and Hurricane Sandy. There was no
39 break through during Sandy.

40 Joe mentioned the future work on page 11. He would like to see an estimate of future work.

41 Bob suggested including the data about Sandy in the interim report.

42 Scott mentioned that sampling should start on Monday Nov. 19th when the machinery parts are
43 received and everything is ready.

44 The report will be updated and sent to the Authority members.

1 **Approval of Minutes**

2 The Chairman noted that the minutes of the October 8, 2012 meeting were approved as
3 corrected.

4
5 **Approval of Invoices**

6 1. Joe moved to approve payment of 5 Pennoni invoices:

7	#524282	\$10,097.00
8	#524283	\$ 1,723.75
9	#524284	\$ 2,229.75
10	#524285	\$ 3,762.50
11	#524287	\$ 519.00

12 Jack seconded the motion. The motion passed unanimously.

13 2. Kevin moved to approve payment of the 2 William Wood Co. LLC invoices, totaling
14 \$1,500.00. Joe seconded the motion. Rick mentioned these were for easements. The motion
15 passed unanimously.

16
17 **Liaison Reports**

18 None

19
20 **Financial Reports**

21 1. Jon Altshul, CFO, provided reports with the following comment: For October
22 expenses were \$14,085.50 and revenues were \$3.33 with a difference of \$14,082.17. The fund
23 balance is now \$37,050.81. Fran mentioned that Lockwood Chase is spelled wrong.

24
25 **Old Business**

26 None

27
28 **Goals**

29 Kevin will attend the West Goshen meeting in December.

30
31 **New Business**

32 1. Proposed Budget for 2013 – Kevin moved to approve the proposed budget for 2013 as
33 presented by Jon Altshul. Fran seconded the motion. The motion passed unanimously.

34 2. Proposal from Maillie, Falconiero & Co LLP for 2012 Audit. Joe moved to approve the
35 proposal dated November 5, 2012. Jack seconded the motion. The motion passed unanimously.

36 3. Pennoni – Joe made a motion to approve the additional \$5,000 contract supplement to
37 cover anticipated work for the remainder of 2012 as requested by Pennoni Associates. Fran
38 seconded the motion. The motion passed unanimously.

39 4. Gawthrop Greenwood, PC – Kevin made a motion to approve the hourly rate increase to
40 \$200 per hour starting January 2013 as requested by Gawthrop Greenwood. Joe seconded the
41 motion. Bob pointed out that there has been no increase since 2009. The motion passed
42 unanimously.

43
44
45 **Capacity Requests**

46 None

1 **Sewer Reports**

- 2 1. **Mark Miller, Director of Public Works**, provided the following report for October:
3 Meters - Have been read on a daily basis with no problems to report.
4 CC Collection: During the height of Hurricane Sandy, the #2 pump went out at the
5 Hershey Mill Pump Station. Crews replaced the pump as soon as we realized the pump
6 could not be put back on line. The wet well was one foot from the top and, if we did not
7 replace the pump, sewage would have overflowed. Lenni Electric sent out an electrician
8 to assist the crew. Once the pump was up and running, it took approximately 3 hours to
9 catch up with the flow. The station that overflowed during the storm was the Ashbridge
10 Pumping Station. DEP was notified of the overflow. Routine maintenance was
11 performed during the month at each station. We received a dozen requests for laterals
12 during the month.
13 RC Collection: We had no problems to report for the month. The Hunt Country pump
14 station's control center needs to be replaced. In order to reduce costs, we will be taking
15 the controls from the Reserve pump station and install them at the Hunt Country station.
16 We are checking to see if we can use the pumps as well.
17 RC Plant: The new flow meter has been installed. Lenni has ordered the electrical
18 cutoffs for the wet well. In order to reduce costs, the repair work will be done at night.
19 We also will be installing an 8" spool and valve so bypass pumping can be done in the
20 event of a pump failure. We did experience power outage at the plant which lasted 4
21 days due to the hurricane.
22 Lockwood Plant: We are still waiting on PECO to shut down the power.
23 Alarms: We responded to multiple alarms during the month ranging from generators
24 running to a high level alarm. All alarms were cleared and all stations put back in
25 service.
26 PA One Calls: We received 112 PA One calls for the month of October.
27 Total rainfall at the plant was 5.97" during Hurricane Sandy; 24 hour influent flow 10/29-
28 10/30 was 1.113MGD.

- 29
30 2. **Dan Barbato, Pennoni**, provided the engineer's report:
31 Invoices: Invoices with summaries are provided under separate cover.
32 Ridley Creek Sewage Treatment Plant (RCSTP) – Pennoni is working closely with the
33 Plant Operator to prepare a report on issues with phosphorous in the RCSTP plant
34 effluent. The report is provided under separate cover. Pennoni assisted with the RCSTP
35 open house and attended the event.
36 MS4 Submission – DEP requested accurate mapping showing streams and outfalls. We
37 obtained GIS map layers from Chester County and created a new working map showing
38 roads, streams and parcels. We will respond to DEP comments by the end of November.
39 Hershey's Mill PS Diversion & Reserve PD Elimination – We finalized and submitted
40 the Hershey's Mill PS Water Quality Management Permit Amendment application to
41 DEP on October 23, 2012.
42 We finalized and submitted the Reserve PS Closure Plan to DEP on October 17, 2012.
43 We met with the Army Corps of Engineers (ACOE) at the Reserve PS Elimination site on
44 October 18, 2012 for a bog turtle habitat screening. ACOE determined the site is not
45 considered a bog turtle habitat, and they issued a clearance letter. DEP subsequently
46 issued the GP-5 "Utility Line Stream Crossing" permit for the project; however, the

1 permit does not allow any construction between March 1 and June 15 because the Ridley
2 Creek tributary is a protected water use for trout stocking. Since we are planning for
3 construction to fall within this timeframe, we will coordinate with PA Fish and Boat
4 Commission to obtain a waiver from this requirement.

5 We performed a field stake-out of the proposed Reserve PS sewer alignment for the
6 adjacent homeowner to visualize the sewer locations on his property. Due to concerns
7 from the homeowner, we revised the plans to re-align a portion of the gravity sewer. We
8 also observed exploratory excavations by the Public Works Dept. around the existing
9 pump station building to identify the exact location of the existing force main and its
10 impact on our revised sewer alignment.

11 Marydell PS Elimination –

12 DEP approved the Pump Station Closure Plan on October 2, 2012.

13 Once the easement from the shopping center is obtained, all third party approvals and
14 permits will be in place and the project can be put out to bid.

15 Hershey's Mill Muffin Monster

16 We received shop drawings from the Muffin Monster supplier, which we are currently
17 reviewing.

- 18
19 3. **Big Fish Environmental Services, Inc.**, Scott Towler presented a written report. The
20 following is a summary:

21 Treatment Process Operation

22 During September, there was one exceedance of the final effluent discharge limitations
23 for outfalls 001 and 002. The total phosphorus concentration for both outfalls 001 and
24 002 was reported as 1.81 mg/L as compared to the discharge limitation of 0.5 mg/L.

25 SBRs 1, 3 and 4 were in service during September. SBR#2 remains out of service.

26 During the first week of September there was considerable rainfall that resulted in an
27 increase in the influent hydraulic loadings rates.

28 Daily monitoring of the influent, post equalization and final effluent grab samples fo pH,
29 alkalinity and total phosphorus is ongoing.

30 During October, the Neptune diaphragm pump used to add aluminum sulfate to the flocc
31 tank mixer was rebuilt, tested and determined to be oversized for the current final effluent
32 flow rates.

33 The Township Staff installed the influent flow meter upstream of the screening building.
34 This low data can be used for the PA DEP Chapter 94 reporting as well as measuring and
35 trending the volume of internal recycle wastewater.

36 On October 29, 2012, Hurricane Sandy arrived in the area. Approximately 5.97 inches of
37 rainfall was measured at the facility during a 24-hour period. Excessive volumes of
38 water were measured at the influent wastewater SBR meter. The 24-hour volumes from

39 10/18 to 10/31 were:

Oct. 28, 2012	298,464 gallons
Oct. 29, 2012	1,423,760 gallons
Oct. 30, 2012	497,408 gallons
Oct. 31, 2012	376,932 gallons

43 24 hour compliance samples were collected on 10/31 and 11/1.

44 SBR 2 was removed from service early 11/2.

45 During October, the centrifuge dewatering system was placed in service.

1 During the month sludge wasting and decanting of the sludge holding tanks was ongoing.
2 No supernatant was decanted from the sludge holding tanks. pH and alkalinity were
3 monitored 5 times per week and total solids once per week.
4 Sludge holding tank #1 was off line and empty during the month.
5 Sludge holding tank #2 began the month as 1.04% total solids and ended the month at
6 .94% total solids. Tank level at the beginning of the month was 12.07 ft. and at the end
7 of the month was 15.08 ft.
8

9 **Adjournment**

10 There being no further business, Joe moved to adjourn the meeting. Fran seconded the motion.
11 The motion passed unanimously. The meeting was adjourned at 8:50pm.
12

13 Respectfully submitted,
14

15
16 Ruth Kiefer
17 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 #: 527785
 Invoice Date: 11/19/2012
 Project: EGMA1107
 Project Name: HersheyMill & Reserve PS Div Des Per

For Services Rendered through: 11/4/2012

Reserve PS bog turtle habitat screening field meeting with Army Corps of Engineers, R. Smith, and M. Miller; field meetings with R. Smith and M. Miller regarding revising alignment of Reserve PS sewer and Hershey Mill PS connection to existing manhole in Cornwallis Dr.; field observation during Reserve PS excavations to locate existing force main route. Revised plans for both projects based upon meetings and field observations. Finalized and submitted Reserve PS Closure Plan and Hershey Mill PS WQM Permit Amendment application to PADEP.

Phase : 1 -- Design

Total Phase : 1 -- Design

Labor :	2,364.00
Expense :	0.00
Phase Total :	2,364.00

Phase : 2 -- Sewer Stakeout and Easements

Total Phase : 2 -- Sewer Stakeout and Easements

Labor :	2,666.25
Expense :	0.00
Phase Total :	2,666.25

Phase : 3 -- Property Boundary Survey Allocation

Total Phase : 3 -- Property Boundary Survey Allocation

Labor :	291.50
Expense :	0.00
Phase Total :	291.50

Phase : 5 -- Water Quality Mgmt Part 2 Permit

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

Labor :	1,023.00
Expense :	0.00
Phase Total :	1,023.00

Amount Due This Invoice

\$6,344.75

Fee :	60,200.00
Prior Billings :	40,243.50
Current Billings :	6,344.75
Total Billings :	46,588.25

ok PS 12/7/12

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

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Phase : 1 -- Design

Labor Class	Hours/Units	Rate	Amount
Project Engineer	6.25	93.00	581.25
Associate Engineer	14.25	83.00	1,182.75
Technical Specialist	1.00	75.00	75.00
Graduate Engineer	7.50	70.00	525.00
Labor Total:	29.00		2,364.00

Total Phase : 1 -- Design	Labor :	\$2,364.00
	Expense :	\$0.00

Phase : 2 -- Sewer Stakeout and Easements

Labor Class	Hours/Units	Rate	Amount
Authority Engineer	1.50	110.00	165.00
Project Engineer	18.00	93.00	1,674.00
Associate Engineer	5.75	83.00	477.25
Graduate Engineer	5.00	70.00	350.00
Labor Total:	30.25		2,666.25

Total Phase : 2 -- Sewer Stakeout and Easements	Labor :	\$2,666.25
	Expense :	\$0.00

Phase : 3 -- Property Boundary Survey Allocation

Labor Class	Hours/Units	Rate	Amount
Survey Technician	5.50	53.00	291.50
Labor Total:	5.50		291.50

Total Phase : 3 -- Property Boundary Survey Allocation	Labor :	\$291.50
	Expense :	\$0.00

Phase : 5 -- Water Quality Mgmt Part 2 Permit

Labor Class	Hours/Units	Rate	Amount
Project Engineer	11.00	93.00	1,023.00
Labor Total:	11.00		1,023.00

Total Phase : 5 -- Water Quality Mgmt Part 2 Permit	Labor :	\$1,023.00
	Expense :	\$0.00

Total Project : EGMA1107 -- HersheyMill & Reserve PS Div Des Per	Labor :	\$6,344.75
	Expense :	\$0.00

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

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Project Code: EGMA1107
 Project Name: HersheyMill & Reserve PS Div Des Per
 Budget Level: Phase
 Information thru Date: 11/4/2012 11:59:59PM

****	0.00	0.0000	0.00
1	23,164.25	0.0000	0.00
2	9,059.75	0.0000	0.00
3	882.50	0.0000	0.00
3A	0.00	0.0000	0.00
3B	0.00	0.0000	0.00
4	3,606.50	0.0000	0.00
5	6,015.00	0.0000	0.00
6	3,860.25	0.0000	0.00
7	0.00	0.0000	0.00
8	0.00	0.0000	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
 EGMA1107 Invoice Summary
 Invoice Date 11/19/2012

Project: EGMA1107
Pennoni Job No.: Hershey Mill & Reserve PS Div Des Per
Invoice No: 527785
Invoice Period: 10/15/2012 to 11/4/2012
Initial Authorization: \$ 60,200.00 **Date:** 7/7/2011
Contract Amount: \$ 60,200.00
Previously Invoiced: \$ 40,243.50
Current Invoice: \$ 6,344.75
Invoiced to Date (\$): \$ 46,588.25
Invoiced to Date (%): 77%
Remaining Budget (\$): \$ 13,611.75
Remaining Budget (%): 23%

Budget by Phase:
Phase No. ****
Phase Name: Hershey Mill & Reserve
Phase Budget: \$ 60,200.00
Previously Invoiced: \$ 40,243.50
Current Invoice: \$ 6,344.75
Invoiced to Date (\$): \$ 46,588.25
Invoiced to Date (%): 77%
Remaining Budget (\$): \$ 13,611.75
Remaining Budget (%): 23%

Comments: Reserve PS bog turtle habitat screening field meeting with Army Corps of Engineers, R. Smith, and M. Miller; field meetings with R. Smith and M. Miller regarding revising alignment of Reserve PS sewer and Hershey Mill PS connection to existing manhole in Cornwallis Dr.; field observation during Reserve PS excavations to locate existing force main route. Revised plans for both projects based upon meetings and field observations. Finalized and submitted Reserve PS Closure Plan and Hershey Mill PS WQMP Permit Amendment application to PADEP.



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 #: 527786
Invoice Date: 11/19/2012
Project: EGMA1109
Project Name: Marydell Pump Station Diversion

For Services Rendered through: 11/4/2012

Prepared Bid Plan set including plan revisions for jack and bore design.

Phase : 1 -- Design

Total Phase : 1 -- Design

Labor : 747.00
Expense : 0.00
Phase Total : 747.00

Amount Due This Invoice

Fee : 45,100.00
Prior Billings : 19,279.50
Current Billings : 747.00
Total Billings : 20,026.50

\$747.00

Phase : 1 -- Design

Labor Class	Hours/Units	Rate	Amount
Associate Engineer	9.00	83.00	747.00
Labor Total:	9.00		747.00

Total Phase : 1 -- Design

Labor : \$747.00
Expense : \$0.00

Total Project : EGMA1109 -- Marydell Pump Station Diversion

Labor : \$747.00
Expense : \$0.00

OK RS 12/7/12

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Project Code: EGMA1109
Project Name: Marydell Pump Station Diversion
Budget Level: Phase
Information thru Date: 11/4/2012 11:59:59PM

****	0.00	0.0000	0.00
1	11,752.75	0.0000	0.00
2	1,549.25	0.0000	0.00
3	3,055.75	0.0000	0.00
4	3,668.75	0.0000	0.00
5	0.00	0.0000	0.00
6	0.00	0.0000	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
EGMA 1109 Invoice Summary
Invoice Date 11/19/2012

Project: EGMA1109
Pennoni Job No.: Marydell Pump Station Diversion
Invoice No: 527786
Invoice Period: 10/15/2012 to 11/4/2012
Initial Authorization: \$ 45,100.00 **Date:** 2/22/2012
Contract Amount: \$ 45,100.00
Previously Invoiced: \$ 19,279.50
Current Invoice: \$ 747.00
Invoiced to Date (\$): \$ 20,026.50
Invoiced to Date (%): 44%
Remaining Budget (\$): \$ 25,073.50
Remaining Budget (%): 56%

Budget by Phase:
Phase No. ****
Phase Name: Marydell Pump
Station Diversion
Phase Budget: \$ 45,100.00
Previously Invoiced: \$ 19,279.50
Current Invoice: \$ 747.00
Invoiced to Date (\$): \$ 20,026.50
Invoiced to Date (%): 44%
Remaining Budget (\$): \$ 25,073.50
Remaining Budget (%): 56%

Comments: Prepared Bid Plan set including plan revisions for jack and bore design.



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 # : 527787
Invoice Date : 11/19/2012
Project : EGMA1201
Project Name : 2012 General Services

For Services Rendered through: 11/4/2012

RCSTP operations review. Operations meetings with Township and Operator, and draft interim operations report.

Phase : **** -- Professional Services

Total Phase : **** -- Professional Services

Labor : 2,366.50
Expense : 0.00
Phase Total : 2,366.50

Amount Due This Invoice

\$2,366.50

Fee : 15,000.00
Prior Billings : 7,071.25
Current Billings : 2,366.50
Total Billings : 9,437.75

Phase : **** -- Professional Services

Labor Class	Hours/Units	Rate	Amount
Authority Engineer	8.25	110.00	907.50
Senior Engineer	13.50	105.00	1,417.50
Associate Engineer	0.50	83.00	41.50
Labor Total:	22.25		2,366.50

Total Phase : **** -- Professional Services

Labor : \$2,366.50
Expense : \$0.00

Total Project : EGMA1201 -- 2012 General Services

Labor : \$2,366.50
Expense : \$0.00

OIC RS 12/7/12

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Project Code: EGMA1201

Project Name: 2012 General Services

Budget Level: Phase

Information thru Date: 11/4/2012 11:59:59PM

****	9,437.75	0.0000	0.00
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INVOICES DUE ON RECEIPT. Invoices outstanding over 30 days will have a Service Charge of 1 1/2% per month.

East Goshen Municipal Authority
EGMA1201 Invoice Summary
Invoice Date 11/19/2012

Project: EGMA1201
Pennoni Job No.: 2012 General Services
Invoice No: 527787
Invoice Period: 10/15/2012 to 11/4/2012
Initial Authorization: \$ 10,000.00 **Date:** 2/22/2012
Contract Amount: \$ 15,000.00
Previously Invoiced: \$ 7,071.25
Current Invoice: \$ 2,366.50
Invoiced to Date (\$): \$ 9,437.75
Invoiced to Date (%): 63%
Remaining Budget (\$): \$ 5,562.25
Remaining Budget (%): 37%

Budget by Phase:
Phase No. ****
Phase Name: 2012 General Services
Phase Budget: \$ 15,000.00
Previously Invoiced: \$ 7,071.25
Current Invoice: \$ 2,366.50
Invoiced to Date (\$): \$ 9,437.75
Invoiced to Date (%): 63%
Remaining Budget (\$): \$ 5,562.25
Remaining Budget (%): 37%

Comments: RCSTP operations review. Operations meetings with Township and Operator, and draft interim operations report.



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

East Goshen Municipal Authority
1580 Paoli Pike
West Chester PA 19380

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10/31/2012
Client No: 6604-01M
Invoice No. 103561

General Authority Services

		<u>Fees</u>	<u>Hours</u>	
10/02/2012	RFA	Review messages from R Smith and M Ellis regarding plans and descriptions for Reserve P.S. and Hershey's Mill easements.	0.90	
	RFA	Review letter from M Ellis regarding status report.	0.30	
10/03/2012	RFA	Review message from R Smith regarding extinguishment and revision of Hershey's Mill existing easement as part of diversion project; Message to same regarding easement document revision.	0.70	
10/04/2012	RFA	Review Pennoni Assoc. semi-annual sewer system status report.	0.40	
10/08/2012	RFA	Review packet for Authority meeting of 10/8; attend regular meeting of Municipal Authority.	3.00	
10/23/2012	RFA	Review message from M Ellis regarding Hershey's Mill easement to be abandoned; review message from R Smith regarding Hershey's Mill diversion easement.	0.60	
		For Current Services Rendered	5.90	1,121.00
		Recapitulation	<u>Hours</u>	<u>Hourly Rate</u>
	Timekeeper		5.90	\$190.00
	Robert F. Adams			\$1,121.00
		Previous Balance		\$1,273.00
		Total Current Charges		1,121.00
10/15/2012		Fee Payment		-1,273.00

OK RS
11/15/12

East Goshen Municipal Authority

General Authority Services

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10/31/2012

Client No: 6604-01M

Invoice No. 103561

Balance Due

\$1,121.00

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.

Memo

To: Municipal Authority
From: Jon Altshul
Re: MA November Financial Report
Date: December 5, 2012

The Municipal Authority recorded \$18,832.00 in expenses and \$41,069.24 in revenues (primarily from a \$41,066 transfer from the sewer operating fund) in the month of November, a difference of \$22,237.24. The fund balance is now \$59,276.05.

Note that the beginning of the month fund balance for November that is provided in the attached financial report is \$12 less than was reported to you as a month end fund balance in last month's report. This is due to a wire transfer fee that had not been recorded when we did last month's report.

Also, please be aware that we are in the process of moving the Municipal Authority's bank account with Beneficial (which has a balance of \$33,193.71) to DNB First Bank as, beginning January 1, Beneficial will begin charging a monthly maintenance fee that will exceed any interest income on all its municipal accounts.

Finally, please be advised that we will be processing the 4th quarter administrative overhead chargeback to the Municipal Authority in the amount of \$8,391.94 later this week. That charge will show up in the final 2012 financial report next month.

EAST GOSHEN TOWNSHIP
 1580 PAOLI PIKE
 WEST CHESTER, PA
 Municipal Authority
 NOVEMBER 2012

Account Title	Acct #	Annual Budget	Month To Date Actual	Year To Date Actual
MUNICIPAL AUTHORITY BEGINNING FUND BALANCE				
			37,038.81	*See Last Page
RCSTP BUDGET				
REVENUE				
INTEREST EARNED - RCSTP EXPANSION	07341 1020	0.00	2.86	72.91
GRANT REVENUE	07392 0800	0.00	0.00	0.00
TOTAL REVENUE		0.00	2.86	72.91
EXPENSES				
R.C.-CAP. PROJ.-ENGINEER	07424 7451	0.00	0.00	0.00
R.C. CAP EXPANSION GEN'L CONTRACTOR	07424 7452	0.00	0.00	0.00
R.C. CAP EXPANSION - ELECTRICAL	07424 7453	0.00	0.00	1,228.08
R.C. CAP EXP CONTINGENCY CAPITAL	07424 7454	0.00	0.00	0.00
R.C. CAP EXP CONTINGENCY ONGOING	07424 7455	0.00	0.00	0.00
R.C. CAP EXP ADDITIONAL CONTINGENCY	07424 7456	0.00	0.00	0.00
TRANSFER TO AUTHORITY CAP FUND	07492 0990	0.00	0.00	0.00
TOTAL EXPENSES		0.00	0.00	1,228.08
RCSTP NET RESULT		0.00	2.86	(1,155.17)

EAST GOSHEN TOWNSHIP
 1580 PAOLI PIKE
 WEST CHESTER, PA
 Municipal Authority
 NOVEMBER 2012

Account Title	Acct #	Annual Budget	Month To Date Actual	Year To Date Actual
OPERATING BUDGET				
REVENUE				
INTEREST EARNINGS	07341 1000	0.00	0.38	21.25
C.C. TAPPING FEES	07364 1100	2,000.00	0.00	0.00
R.C.TAPPING FEES	07364 1110	2,000.00	0.00	4,000.00
CONNECTION FEES - SEWER	07364 1130	0.00	0.00	845.64
MISCELLANEOUS REVENUE	07380 1000	1,000.00	0.00	423.36
TRANSFER FROM SEWER OPERATING	07392 0500	125,000.00	41,066.00	71,766.00
TOTAL REVENUE		130,000.00	41,066.38	77,056.25
EXPENSES				
ADMINISTRATIVE WAGES	07424 1400	37,669.00	0.00	25,175.82
MISCELLANEOUS EXPENSE	07424 3000	4,162.00	0.00	950.00
MUNIC.AUTH.-AUDITING	07424 3110	8,843.00	0.00	7,900.00
ENGINEERING SERVICES	07424 3130	37,066.00	5,992.25	31,696.50
LEGAL SERVICES	07424 3140	12,485.00	0.00	6,043.68
M.C.-DVRFA-DEBT SERVICE	07471 1000	19,600.00	0.00	0.00
M.C.-DVRFA-INTEREST PAYMN	07472 1000	6,981.00	0.00	0.00
TOTAL EXPENSES		126,806.00	5,992.25	71,766.00
OPERATING NET RESULT		3,194.00	35,074.13	5,290.25

EAST GOSHEN TOWNSHIP
 1580 PAOLI PIKE
 WEST CHESTER, PA
 Municipal Authority
 NOVEMBER 2012

Account Title	Acct #	Annual Budget	Month To Date		Year To Date	
			Actual		Actual	
CAPITAL BUDGET						
REVENUE						
LOAN PROCEEDS-SEWER PROJECT	07392 0804	0.00	0.00		0.00	0.00
TRANSFER FROM SEWER CAP RESERVE	07392 0900	828,000.00	0.00		400,000.00	400,000.00
TOTAL REVENUE		828,000.00	0.00		400,000.00	400,000.00
EXPENSES						
MARYDELL PUMP STATION - ENGINEER	07425 1000	51,764.00	1,723.75		17,215.25	17,215.25
MARYDELL PUMP STATION - CONSTRUCTION	07425 2000	170,000.00	0.00		0.00	0.00
LOCHWOOD ABANDONMENT ENGINEER	07424 7475	37,553.00	519.00		44,111.30	44,111.30
LOCHWOOD ABANDONMENT CONSTRUCTION	07424 7476	411,000.00	0.00		177,281.48	177,281.48
LOCHWOOD ELIMINATION PHASE 2	07424 7477	0.00	0.00		104,504.99	104,504.99
HERSHEY MILL STATION - ENGINEER	07426 1000	29,069.00	5,048.50		21,473.50	21,473.50
HERSHEY MILL STATION - CONSTRUCTION	07426 2000	46,000.00	0.00		0.00	0.00
RESERVE PUMP STATION - ENGINEER	07427 1000	29,069.00	5,548.50		18,523.75	18,523.75
RESERVE PUMP STATION - CONSTRUCTION	07427 2000	93,000.00	0.00		0.00	0.00
RESERVOIR PUMP STATION - ENGINEER	07428 1000	0.00	0.00		358.25	358.25
RESERVOIR PUMP STATION CONSTRUCTION	07428 2000	0.00	0.00		0.00	0.00
TOTAL EXPENSES		867,455.00	12,839.75		383,468.52	383,468.52
CAPITAL NET RESULT		(39,455.00)	(12,839.75)		16,531.48	16,531.48
MUNICIPAL AUTHORITY ENDING FUND BALANCE			59,276.05			

*The beginning fund balance for November is \$12.00 less than the reported ending fund balance for October due to a wire transfer entered on November 16th in the amount of \$12.00

MGRP18 run by BRIAN 9 : 31 AM

Acct #	Per	Src Trx #	Debits	Credits	Beg/End Bal	Date	Check/Ref #	ID #	Name/Description
			16.04	37.29	-21.25				
07341-1020					0.00				
	1201	31222		0.40		02/07/12	INTEREST		INTEREST EARNED JAN. 2012 7105.1000
		31223		7.80		02/07/12	INTEREST		INTEREST EARNED JAN. 2012 7109.2000
		31270		0.05		02/09/12	INTEREST		INTEREST EARNED JAN.2012 7105.1500
			0.00	8.25	-8.25				
	1202	31656		0.30		03/14/12	INTEREST		INTEREST EARNED FEB. 2012 7105.1000
		31657		7.30		03/14/12	INTEREST		INTEREST EARNED FEB. 2012 7109.2000
			0.00	7.60	-15.85				
	1203	31931		0.15		04/04/12	INTEREST		INTEREST EARNED MARCH 2012 7105.1000
		31932		9.54		04/04/12	INTEREST		INTEREST EARNED MARCH 2012 7109.2000
			0.00	9.69	-25.54				
	1204	32294		0.14		05/02/12	INTEREST		INTEREST EARNED APRIL 2012 7105.1000
		32295		9.52		05/02/12	INTEREST		INTEREST EARNED APRIL 2012 7109.2000
			0.00	9.66	-35.20				
	1205	32710		0.14		06/05/12	INTEREST		INTEREST EARNED MAY 2012 7105.1000
		32711		9.55		06/05/12	INTEREST		INTEREST EARNED MAY 2012 7109.2000
			0.00	9.69	-44.89				
	1206	33107		0.15		07/03/12	INTEREST		INTEREST EARNED JUNE 2012 7105.1000
		33108		9.52		07/03/12	INTEREST		INTEREST EARNED JUNE 2012 7109.2000
			0.00	9.67	-54.56				
	1207	33555		0.14		08/06/12	INTEREST		INTEREST EARNED JULY 2012 7105.1000
		33556		6.34		08/06/12	INTEREST		INTEREST EARNED JULY 2012 7109.2000
			0.00	6.48	-61.04				
	1208	33970		0.15		09/04/12	INTEREST		INTEREST EARNED AUGUST 2012 7105.1000

MGRP18 run by BRIAN 9 : 31 AM

Acct #	Per	Src	Trx #	Debits	Credits	Beg/End Bal	Date	Check/Ref #	ID #	Name/Description
07341-1020	1208	JE	34005		2.76		09/06/12	INTEREST		INTEREST EARNED AUGUST 2012
			34115	0.15			09/14/12	REVERSE		07 FUND - CONSTRUCTION ACCTS. REVERSE TRX.33970 DUPLICATE ENTRY
				0.15	2.91	-63.80				
1209			34399		0.14		10/02/12	INTEREST		INTEREST EARNED SEPTEMBER 2012 7105.1000
			34400		3.08		10/02/12	INTEREST		INTEREST EARNED SEPTEMBER 2012 7109.2000
				0.00	3.22	-67.02				
1210			34817		3.03		11/05/12	INTEREST		INTEREST EARNED OCTOBER 2012 07 CONSTRUCTION FUND
				0.00	3.03	-70.05				
1211			35182		2.86		12/04/12	INTEREST		INTEREST EARNED NOVEMBER 2012 7105.1000 & 7109.2000
				0.00	2.86	-72.91				
				0.15	73.06	-72.91				
07364-1110			R.C.TAPPING FEES			0.00				
	1205	RE	32596		2,000.00		05/25/12	32596 1		TAP IN FEE FOR 1636 MANLEY RD
				0.00	2,000.00	-2,000.00				
	1206		32779		2,000.00		06/11/12	32779 1		TAP IN FEE FOR 913 SORRELL HIL R.C.TAPPING FEES
				0.00	2,000.00	-4,000.00				
				0.00	4,000.00	-4,000.00				
07364-1130			CONNECTION FEES - SEWER			0.00				
	1202	CR	31243		423.00		02/08/12	197	6576	1 JACOBS, ROBERT & CHERYL
			31437		423.00		02/27/12	2103	6575	1 STOFFLET, MICHAEL
		JE	31244	141.12			02/08/12	PINE ROCK		ANNUAL PINE ROCK INSTALLMENT
			31438	141.12			02/27/12	PINE ROCK		ANNUAL PINE ROCK INSTALLMENT
				282.24	846.00	-563.76				
	1203	CR	31489		423.00		03/01/12	730	6574	1 GEORGE SMITH & CHRISTINA CONLE
		JE	31490	141.12			03/01/12	PINE ROCK		ANNUAL PINE ROCK INSTALLMENT
				141.12	423.00	-845.64				
				423.36	1,269.00	-845.64				
07380-1000			MISCELLANEOUS REVENUE			0.00				
	1202		31244		141.12		02/08/12	PINE ROCK		ANNUAL PINE ROCK INSTALLMENT

MGRP18 run by BRIAN 9 : 31 AM

Acct #	Per	Src Trx #	Debits	Credits	Beg/End Bal	Date	Check/Ref #	ID #	Name/Description
07380-1000	1202	JE 31438		141.12		02/27/12	PINE ROCK		ANNUAL PINE ROCK INSTALLMENT
			0.00	282.24	-282.24				
	1203	31490		141.12		03/01/12	PINE ROCK		ANNUAL PINE ROCK INSTALLMENT
			0.00	141.12	-423.36				
			0.00	423.36	-423.36				
07392-0500		TRANSFER FROM SEWER OPERATING			0.00				
	1202	31428		15,000.00		02/24/12	XFER		XFER FROM 5100.1000 TO 7100.1000
			0.00	15,000.00	-15,000.00				
	1203	31612		15,700.00		03/13/12	XFER		XFER FROM 5100.1000 TO 7100.1000 TO COVER MA EXP.
			0.00	15,700.00	-30,700.00				
	1211	34980		41,066.00		11/19/12	DEPOSIT		DEPOSIT FUNDS FROM SEWER OPERATING TO MA OPERATING
			0.00	41,066.00	-71,766.00				
			0.00	71,766.00	-71,766.00				
07392-0900		TRANSFER FROM SEWER CAP RESERVE			0.00				
	1204	32045		100,000.00		04/12/12	XFER		XFER \$ FROM SEWER CAP.RESERVE TO MUN.AUTHORITY GEN.ACCT.
			0.00	100,000.00	-100,000.00				
	1206	32839		100,000.00		06/15/12	XFER		XFER FUNDS TO MA FROM SEWER CAPITAL RES. 5/14/12
			0.00	100,000.00	-200,000.00				
	1207	33176		100,000.00		07/11/12	XFER		XFER \$ FROM SEWER CAPITAL RESERVE TO MA OPERATING
			0.00	100,000.00	-300,000.00				
	1208	33682		100,000.00		08/14/12	XFER		XFER \$ TO MA FROM SEWER CAP. RESERVE
			0.00	100,000.00	-400,000.00				
			0.00	400,000.00	-400,000.00				
07424-1400		ADMINISTRATIVE WAGES			0.00				
	1203	CD 31601	8,391.94			03/13/12	2085	425	EAST GOSHEN TOWNSHIP 1ST QTR.2012 MUNICIPAL AUTHORITY EXPENSES
			8,391.94	0.00	8,391.94				

MGRP18 run by BRIAN 9 : 31 AM

Acct #	Per	Src Trx #	Debits	Credits	Beg/End Bal	Date	Check/Ref #	ID #	Name/Description
07424-1400	1206	CD 32849	8,391.94			06/15/12	2094	425	EAST GOSHEN TOWNSHIP 2ND QTR 2012 MUNICIPAL AUTHORITY EXPENSES
			8,391.94	0.00	16,783.88				
	1209	34047	8,391.94			09/10/12	2135	425	EAST GOSHEN TOWNSHIP 3RD QTR.2012 MUNICIPAL AUTHORITY EXPENSES
			8,391.94	0.00	25,175.82				
			25,175.82	0.00	25,175.82				
07424-3000		MISCELLANEOUS EXPENSE			0.00				
	1201	30772	950.00			01/06/12	2081	2132	PENNSYLVANIA MUNICIPAL AUTHORITIES ASSOC 2012 ACTIVE MEMBERSHIP DUES
			950.00	0.00	950.00				
			950.00	0.00	950.00				
07424-3110		MUNIC.AUTH.-AUDITING			0.00				
	1207	33171	7,900.00			07/11/12	2103	808	MAILLIE FALCONIERO & CO. EXAMINATION OF FINANCIAL STATEME DECEMBER 31, 2011
			7,900.00	0.00	7,900.00				
			7,900.00	0.00	7,900.00				
07424-3130		ENGINEERING SERVICES			0.00				
	1202	31393	220.00			02/22/12	2084	1052	PENNONI ASSOCIATES INC. SERV.THRU 1/15/12 2011 ANNUAL SE
			220.00	0.00	220.00				
	1203	31608	1,182.50			03/13/12	2086	1052	PENNONI ASSOCIATES INC. SERVICES THRU 12/11/12 2011 ANN SERVICES
			1,182.50	0.00	1,402.50				
	1204	32043	4,971.75			04/12/12	2088	1052	PENNONI ASSOCIATES INC. SERVICES THRU 3/18/12 2012 GEN.S
			4,971.75	0.00	6,374.25				
	1205	32450	14,501.00			05/15/12	2090	1052	PENNONI ASSOCIATES INC. SERVICE THRU 4/15/12 2011 CHAP.9
			14,501.00	0.00	20,875.25				
	1206	32809	289.75			06/14/12	2092	1052	PENNONI ASSOCIATES INC. SERVICES THRU 5/13/12 GENERAL SE

MGRP18 run by BRIAN 9 : 31 AM

Acct #	Per	Src Trx #	Debits	Credits	Beg/End Bal	Date	Check/Ref #	ID #	Name/Description
			289.75	0.00	21,165.00				
1207		33171	1,142.00			07/11/12	2104	1052	PENNONI ASSOCIATES INC. SERVICE THRU 6/17/12 -GENERAL SE
			1,142.00	0.00	22,307.00				
1208		33676	670.50			08/14/12	2131	1052	PENNONI ASSOCIATES INC. SERVICES THRU 7/15/12 -2012 GENE SERVICES
			670.50	0.00	22,977.50				
1209		34048	448.50			09/11/12	2136	1052	PENNONI ASSOCIATES INC. SERVICES THRU 8/12/12 -2011 CHAP
			448.50	0.00	23,426.00				
1210		34509	2,278.25			10/11/12	2141	1052	PENNONI ASSOCIATES INC. SERV.RENDERED THRU 9/16/12- 2011 CHAPTER 94
			2,278.25	0.00	25,704.25				
1211		34923	5,992.25			11/14/12	2144	1052	PENNONI ASSOCIATES INC. SERVICES THRU 10/14/12 2012 GEN SERVICE
			5,992.25	0.00	31,696.50				
			31,696.50	0.00	31,696.50				
07424-3140		LEGAL SERVICES			0.00				
1202		31393	1,825.68			02/22/12	2083	528	GAWTHROP GREENWOOD & HALSTED LEGAL SERV. 12/12/11 - GEN.AUTH.
			1,825.68	0.00	1,825.68				
1204		32043	1,083.00			04/12/12	2087	528	GAWTHROP GREENWOOD & HALSTED LEGAL SERVICE 2/7-2/29/12 GEN.AU
			1,083.00	0.00	2,908.68				
1205		32450	703.00			05/15/12	2089	528	GAWTHROP GREENWOOD & HALSTED LEGAL SERV. 3/12-3/21/12 GEN.AUT
			703.00	0.00	3,611.68				
1207		33171	684.00			07/11/12	2102	528	GAWTHROP GREENWOOD & HALSTED LEGAL SERV. 5/14/12 - GENERAL AU
			684.00	0.00	4,295.68				
1208		33676	475.00			08/14/12	2130	528	GAWTHROP GREENWOOD & HALSTED LEGAL SERV. 7/9/12 - GEN.AUTHORI
			475.00	0.00	4,770.68				
1210		34509	1,273.00			10/11/12	2140	528	GAWTHROP GREENWOOD & HALSTED LEGAL SERVICE 9/7-9/24/12 GEN.AU

MGRP18 run by BRIAN 9 : 31 AM

Acct #	Per	Src Trx #	Debits	Credits	Beg/End Bal	Date	Check/Ref #	ID #	Name/Description
			1,273.00	0.00	6,043.68				
			6,043.68	0.00	6,043.68				
07424-7453	R.C. CAP EXPANSION - ELECTRICAL				0.00				
1206	32809	1,228.08				06/14/12	2091	2696	CLINGER CORP., WM. H. REPAIR TANK MIXER CONTROL CIRCUI FAULT
			1,228.08	0.00	1,228.08				
			1,228.08	0.00	1,228.08				
07424-7475	LOCHWOOD ABANDONMENT ENGINEER				0.00				
1202	31393	2,600.00				02/22/12	2082	2911	EARTHCORE SERVICES LLC MOBILIZATION, ATV RIG, AUGER PRO LOCKWOOD ENGINEERING
			4,315.00			02/22/12	2084	1052	PENNONI ASSOCIATES INC. SERV. THRU 1/15/12 LCSTP FINAL D
	***	6,915.00	0.00	***					
			6,915.00	0.00	6,915.00				
1203	31608	7,440.50				03/13/12	2086	1052	PENNONI ASSOCIATES INC. SERVICES THRU 12/11/12 LCSTP FI DESIGN
			7,440.50	0.00	14,355.50				
1204	32043	1,366.00				04/12/12	2088	1052	PENNONI ASSOCIATES INC. SERVICES THRU 3/18/12 LOCHWOOD
			1,366.00	0.00	15,721.50				
1205	32450	4,124.25				05/15/12	2090	1052	PENNONI ASSOCIATES INC. SERVICES THRU 4/15/12 LCSTP
			4,124.25	0.00	19,845.75				
1206	32809	7,527.25				06/14/12	2092	1052	PENNONI ASSOCIATES INC. SERVICES THRU 5/31/12 TO ACCOMADATE INCREASE IN FLOW TO P
			7,527.25	0.00	27,373.00				
1207	33171	7,009.25				07/11/12	2104	1052	PENNONI ASSOCIATES INC. SERVICE THRU 6/17/12 - LOCHWOOD CHASE PHASE S
			7,009.25	0.00	34,382.25				
1208	33676	3,725.25				08/14/12	2131	1052	PENNONI ASSOCIATES INC. SERVICES THRU 7/15/12 -LOCHWOOD CONSTRUCTION PHASE S
			3,725.25	0.00	38,107.50				

MGRP18 run by BRIAN 9 : 32 AM

Acct #	Per	Src Trx #	Debits	Credits	Beg/End Bal	Date	Check/Ref #	ID #	Name/Description
07424-7475	1209 CD	34048	3,985.80			09/11/12	2136	1052	PENNONI ASSOCIATES INC. SERVICES THRU 8/12/12 - HERSH.MI PUMP STATION MUFFIN MONSTER
			3,985.80	0.00	42,093.30				
1210		34509	1,499.00			10/11/12	2141	1052	PENNONI ASSOCIATES INC. SERV.RENDERED THRU 9/16/12 -HM P STATION
			1,499.00	0.00	43,592.30				
1211		34923	519.00			11/14/12	2144	1052	PENNONI ASSOCIATES INC. SERVICES THRU 10/14/12 HERSHY M PS MUFFIN MONSTER
			519.00	0.00	44,111.30				
			44,111.30	0.00	44,111.30				
07424-7476	LOCHWOOD	ABANDONMENT CONSTRUCTION			0.00				
1206		32809	105,473.97			06/14/12	2093	2947	SJM CONSTRUCTION CO. INC. APPLICATION 1 OF CONTRACT
			105,473.97	0.00	105,473.97				
1207		33171	3,826.04			07/11/12	2101	425	EAST GOSHEN TOWNSHIP REIMBURSE GEN.FUND RE: LOCHWOOD PLANT CLOSING - LABOR COSTS AS O 6/30/12
			42,086.94			07/11/12	2105	2947	SJM CONSTRUCTION CO. INC. APPLICATION #2 - LOCHWOOD CONTRA
		***	45,912.98	0.00	***				
		33173	3,954.36			07/11/12	2106	425	EAST GOSHEN TOWNSHIP REIMBURSE GEN.FUND RE: LOCHWOOD PLANT CLOSING - REGULAR TIME LAB
		33327	15,120.00			07/23/12	2113	800	MACANGA INC. HAUL FILL OUT OF WESTTOWN WAY 18 TONS
		33415	432.00			07/27/12	2116	489	FISHER & SON COMPANY INC 6 BAGS COMMERCIAL SEED MIX
			123.00			07/27/12	2117	61396	HAULER, JACK L. REIMBURSE -1/2 DOG FENCE REPAIR
		***	555.00	0.00	***				
	JE	33635		3,826.04		08/13/12	RECLASS		RECLASS CK.#'S 2101 & 2106 TO LOCHWOOD ELIMINATION PHASE 2
				3,954.36		08/13/12	RECLASS		RECLASS CK.#'S 2101 & 2106 TO LOCHWOOD ELIMINATION PHASE 2
		***	0.00	7,780.40	***				
			65,542.34	7,780.40	163,235.91				
1209 CD		34048	13,632.57			09/11/12	2137	2947	SJM CONSTRUCTION CO. INC. APPLICATION #3 - LOCHWOOD CHASE

MGRP18 run by BRIAN 9 : 32 AM

Acct #	Per	Src Trx #	Debits	Credits	Beg/End Bal	Date	Check/Ref #	ID #	Name/Description
07424-7476	1209	CD 34234	413.00			09/24/12	2139	1876	RANSOME RENTAL COMPANY LP EQUIP.RENTAL 9/5-9/7/12 STANDARD TRACK
			14,045.57	0.00	177,281.48				
			185,061.88	7,780.40	177,281.48				
07424-7477	LOCHWOOD	ELIMINATION PHASE 2			0.00				
	1206	33040	352.68			06/29/12	2095	765	LENNI ELECTRIC CORPORATION SET UP TEMPORARY PUMP - LOCHWOOD
			450.00			06/29/12	2096	2342	POWERPRO EQUIPMENT 50 HYDRATED WHITE - LOCHWOOD PLA CLOSURE
			4,780.00			06/29/12	2097	550	XYLEM DEWATERING SOLUTIONS INC. (GODWIN) GODWIN SUBMERSIBLE PUMP & CONTRO PANEL, HEAVY DUTY LAYFLAT HOSE
		***	5,582.68	0.00	***				
			5,582.68	0.00	5,582.68				
1207		33128	42.50			07/05/12	2100	1065	PETTY CASH TOLLS - TO AND FROM GODWIN PUMPS LOCHWOOD ELIMINATION
		33209	123.87			07/13/12	2107	2936	A ANCHOR TOILETS PORTABLE PORTABLE TOILET RENTAL 6/25-7/24
			4,640.85			07/13/12	2108	827	MARTIN LIMESTONE INC. 95.91 TONS MAG LIMESTONE
			390.00			07/13/12	2109	2342	POWERPRO EQUIPMENT 20 2200 M 95 DUST MA, 40 HYDRATE WHITE LI
			1,265.00			07/13/12	2110	1876	RANSOME RENTAL COMPANY LP RENTAL - STANDARD TRACK - 6/20/1 6/25/12
			1,574.61			07/13/12	2111	1161	REILLY & SONS INC 259.4 GALLONS DIESEL - LOCHWOOD
			256.80			07/13/12	2112	550	XYLEM DEWATERING SOLUTIONS INC. (GODWIN) MALE AND FEMALE ADAPTORS, FEMALE CAM & GROOVE & MALE ADAPTOR
		***	8,251.13	0.00	***				
		33327	3,638.00			07/23/12	2114	1876	RANSOME RENTAL COMPANY LP ARTICULATED TRUCK RENTAL 6/26-6/
			5,941.45			07/23/12	2115	550	XYLEM DEWATERING SOLUTIONS INC. (GODWIN) 3" X 50' HEAVY DUTY LAYFLAT HOSE
		***	9,579.45	0.00	***				
		33415	174.82			07/27/12	2118	638	HOME DEPOT CREDIT SERVICES TARP & SIGNS - LOCHWOOD
			1,985.24			07/27/12	2119	827	MARTIN LIMESTONE INC. 72.56 TONS MAG LIMESTONE BULK
			423.00			07/27/12	2120	1087	PIPE XPRESS INC. 12X20 PE DBL WALL PIPE

MGRP18 run by BRIAN 9 : 32 AM

Acct #	Per	Src Trx #	Debits	Credits	Beg/End Bal	Date	Check/Ref #	ID #	Name/Description
07424-7477	1207 CD	33415	18,797.00			07/27/12	2121	1876	RANSOME RENTAL COMPANY LP D5 STANDARD TRUCK RENTAL 6/25/12 7/23/12
		***	21,380.06	0.00	***				
	JE	33635	3,826.04			08/13/12	RECLASS		RECLASS CK.#'S 2101 & 2106 TO LOCHWOOD ELIMINATION PHASE 2
			3,954.36			08/13/12	RECLASS		RECLASS CK.#'S 2101 & 2106 TO LOCHWOOD ELIMINATION PHASE 2
		***	7,780.40	0.00	***				
			47,033.54	0.00	52,616.22				
1208 CD	33513		384.00			08/03/12	2122	489	FISHER & SON COMPANY INC 8 BAGS BUILDERS MIX/THROW & GROW GRASS SEED
			661.50			08/03/12	2123	1849	HICKS BROTHERS LLC 147 SMALL BALES OF STRAW
			271.15			08/03/12	2124	739	KNOX EQUIPMENT COMPANY TOWABLE STRAW MULCHER RENT 7/23/
			3,378.00			08/03/12	2125	1876	RANSOME RENTAL COMPANY LP STANDARD TRACK RENTAL 7/2-7/30/1
			1,368.05			08/03/12	2126	1161	REILLY & SONS INC 186.8 GALLONS DIESEL
		***	6,062.70	0.00	***				
		33667	675.00			08/14/12	2127	827	MARTIN LIMESTONE INC. 48.18 TONS AASHTO #1
		33676	43,397.75			08/14/12	2129	425	EAST GOSHEN TOWNSHIP REIMBURSE GEN.FUND RE: LOCHWOOD PLANT CLOSING - LABOR COSTS AS O 8/12/12
		33827	381.82			08/22/12	2132	598	HANSON AGGREGATES PENNSYLVANIA LLC 34.87 TONS STONE
			123.50			08/22/12	2133	765	LENNI ELECTRIC CORPORATION DISCONNECT FRO STATION SHUTDOWN
		***	505.32	0.00	***				
		33946	1,148.00			08/31/12	2134	1876	RANSOME RENTAL COMPANY LP BULL DOZER RENTAL 7/18-7/30/12
			51,788.77	0.00	104,404.99				
1209	34095		100.00			09/13/12	2138	739	KNOX EQUIPMENT COMPANY STRAW MULCHER RENTAL 9/6/12
			100.00	0.00	104,504.99				
			104,504.99	0.00	104,504.99				
07425-1000	MARYDELL	PUMP STATION - ENGINEER			0.00				
	1203	31608	810.00			03/13/12	2086	1052	PENNONI ASSOCIATES INC. SERVICES THRU 12/11/12 MARYDELL
			810.00	0.00	810.00				

MGRP18 run by BRIAN 9 : 32 AM

Acct #	Per	Src Trx #	Debits	Credits	Beg/End Bal	Date	Check/Ref #	ID #	Name/Description
07425-1000	1204	CD 32043	1,422.00			04/12/12	2088	1052	PENNONI ASSOCIATES INC. SERVICES THRU 3/18/12 MARYDELL P
			1,422.00	0.00	2,232.00				
	1206	32809	320.50			06/14/12	2092	1052	PENNONI ASSOCIATES INC. SERVICES THRU 5/13/12 MARYDELL
			320.50	0.00	2,552.50				
	1207	33171	707.25			07/11/12	2104	1052	PENNONI ASSOCIATES INC. SERVICE THRU 6/17/12 - MARYDELL
			707.25	0.00	3,259.75				
	1208	33667	1,100.00			08/14/12	2128	1248	SHAINLINE EXCAVATING INC HYDRO EXCAVATOR RENTAL 7/18/12
		33676	2,976.25			08/14/12	2131	1052	PENNONI ASSOCIATES INC. SERVICES THRU 7/15/12 - MARYDELL
			4,076.25	0.00	7,336.00				
	1209	34048	6,890.75			09/11/12	2136	1052	PENNONI ASSOCIATES INC. SERVICES THRU 8/12/12 - MARYDELL
			6,890.75	0.00	14,226.75				
	1210	34509	1,164.75			10/11/12	2141	1052	PENNONI ASSOCIATES INC. SERV.RENDERED THRU 9/16/12 MARYD PUMP STATION
		34540	100.00			10/15/12	2142	2960	COMMONWEALTH OF PENNSYLVANIA PERMIT FEE
			1,264.75	0.00	15,491.50				
	1211	34923	1,723.75			11/14/12	2144	1052	PENNONI ASSOCIATES INC. SERVICES THROUGH 10/14/12 -MARYD
			1,723.75	0.00	17,215.25				
			17,215.25	0.00	17,215.25				
07426-1000		HERSHEY MILL STATION - ENGINEER			0.00				
	1203	31608	2,336.75			03/13/12	2086	1052	PENNONI ASSOCIATES INC. SERVICES THRU 12/11/12 HERSHEY
			2,336.75	0.00	2,336.75				
	1205	32450	2,917.50			05/15/12	2090	1052	PENNONI ASSOCIATES INC. SERVICE THRU 4/15/12 HERSHEY MIL
			2,917.50	0.00	5,254.25				
	1206	32809	498.50			06/14/12	2092	1052	PENNONI ASSOCIATES INC. SERVICES THRU 5/13/12 HERSHEY MI
		33047	250.00			06/29/12	2099	263	CHESTER COUNTY CONSERVATION DISTRICT PERMIT FEE HM PS PROJECT
			748.50	0.00	6,002.75				

MGRP18 run by BRIAN 9 : 32 AM

Acct #	Per	Src Trx #	Debits	Credits	Beg/End Bal	Date	Check/Ref #	ID #	Name/Description
07426-1000	1207	CD 33171	4,112.75			07/11/12	2104	1052	PENNONI ASSOCIATES INC. SERVICE THRU 6/17/12 - HERSHEY M
			4,112.75	0.00	10,115.50				
	1208	33676	2,924.25			08/14/12	2131	1052	PENNONI ASSOCIATES INC. SERVICES THRU 7/15/12 - H.MILL
			2,924.25	0.00	13,039.75				
	1210	34509	3,385.25			10/11/12	2141	1052	PENNONI ASSOCIATES INC. SERV.RENDERED THRU 9/16/12 HER.M
			3,385.25	0.00	16,425.00				
	1211	34923	5,048.50			11/14/12	2144	1052	PENNONI ASSOCIATES INC. SERVICES THRU 10/14/12 HERSHY M PS
			5,048.50	0.00	21,473.50				
			21,473.50	0.00	21,473.50				
07427-1000		RESERVE PUMP STATION - ENGINEER			0.00				
	1203	31608	605.00			03/13/12	2086	1052	PENNONI ASSOCIATES INC. SERVICES THRU 12/11/12 RESERVE
			605.00	0.00	605.00				
	1204	32043	472.50			04/12/12	2088	1052	PENNONI ASSOCIATES INC. SERVICES THRU 3/18/12 RESERVE PU
			472.50	0.00	1,077.50				
	1205	32450	2,917.50			05/15/12	2090	1052	PENNONI ASSOCIATES INC. SERVICE THRU 4/15/12 RESERVE PS
			2,917.50	0.00	3,995.00				
	1206	33047	250.00			06/29/12	2098	263	CHESTER COUNTY CONSERVATION DISTRICT PERMIT FEE RESERVE PS PROJECT
			250.00	0.00	4,245.00				
	1207	33171	1,062.50			07/11/12	2104	1052	PENNONI ASSOCIATES INC. SERVICE THRU 6/17/12 - RESERVE P STATION
			1,062.50	0.00	5,307.50				
	1208	33676	2,924.25			08/14/12	2131	1052	PENNONI ASSOCIATES INC. SERVICES THRU 7/15/12 - RESERVE
			2,924.25	0.00	8,231.75				
	1209	34048	358.25			09/11/12	2136	1052	PENNONI ASSOCIATES INC. SERVICES THRU 8/12/12 - HERS.MIL RESERVE PUMP PS
			358.25	0.00	8,590.00				

MGRP18 run by BRIAN 9 : 32 AM

Acct #	Per	Src Trx #	Debits	Credits	Beg/End Bal	Date	Check/Ref #	ID #	Name/Description
07427-1000	1210	CD 34509	3,385.25			10/11/12	2141	1052	PENNONI ASSOCIATES INC. SERV.RENDERED THRU 9/16/12 RESER
		34706	1,000.00			10/26/12	2143	1496	WILLIAM WOOD CO. REAL ESTATE APPRAISAL - PART OF PARCEL #53-2-20.39
			4,385.25	0.00	12,975.25				
1211		34923	5,048.50			11/14/12	2144	1052	PENNONI ASSOCIATES INC. SERVICES THRU 10/14/12 RESERVE
			500.00			11/14/12	2145	1496	WILLIAM WOOD CO. REAL ESTATE APPRAISAL - PROPOSED SEWER EASEMENT AREA
		***	5,548.50	0.00	***				
			5,548.50	0.00	18,523.75				
			18,523.75	0.00	18,523.75				
07428-1000		RESERVOIR PUMP STATION - ENGINEER			0.00				
	1209	34048	358.25			09/11/12	2136	1052	PENNONI ASSOCIATES INC. SERVICES THRU 8/12/12 - HERS.MIL RESERVE PUMP PS
			358.25	0.00	358.25				
			358.25	0.00	358.25				
Beg Bal		0.00	464,682.55	485,349.11	-20,666.56				

DECEMBER 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 - **Completed**
 - c. Need by 8/1/12 – Dana -**Completed**
 - d. Need by 11/7/12 – Joe- **Completed**
 - e. February 2013
2. Attend West Goshen Meetings quarterly – more often if needed.
 - a. 1st Quarter (March) – Jack - **Completed**
 - b. 2nd Quarter (June) – Joe – Not completed
 - c. 3rd Quarter (September) – **Dana Completed- Went to August Mtg**
 - d. 4th Quarter (December) - Kevin
3. Respond to capacity requests in 45 days or less.
Goshen Meadows
4. Implement I & I Plan
5. Conduct a sewer facilities tour after RCSTP construction is complete – Have tour in October (need to select a date) **October 20 - Completed**

PROJECTS

1. Lockwood
 - a. Bid – Bid awarded 2/20 – Contract executed 3/12
 - b. Pipe Installation - Notice to proceed issued 3/20, Pipe work completed. Restoration work in progress. **Pipe Project Closed out 9/5/12**
2. **Abandon Plant** – Treatment pond filled in. Currently pumping down the and filling in the storage lagoon. **Still need to finish filling in ponds and remove structure.**
3. Marydell Pump Station
 - a. Design/Permit – In Progress Submitted HOP to Penn DOT. HOP Received. All permits received. Waiting on easement from shopping center. Easement obtained **Completed**
 - b. Bid **Out for bid on 12/7. Open Bids Jan 9, 2013**
 - c. Pipe Installation
 - d. Abandon Pump Station
4. Hershey Mill Pump Station
 - a. Design/Permit – In Progress GP5 and CCCD approval letter issued. Working on easements. **Easements obtained and all permits in hand**
 - b. Bid
 - c. Pipe Installation
5. Reserve Pump Station - In Progress
 - a. Design/Permit - working on easements. **All permits obtained**
 - b. Bid
 - c. Pipe Installation
 - d. Abandon Pump Station

Prepared by/Return to:

Robert F. Adams, Esquire
P.O. Box 562
West Chester, PA 19381-0562

UPI # 53-2-25.3

**GRANT OF SANITARY SEWER FORCE MAIN EASEMENT
AND
EXTINGUISHMENT OF PREVIOUSLY GRANTED EASEMENT**

THIS INDENTURE is made this _____ day of _____, 2012, by and between **HERSHEY'S MILL HOMEOWNERS ASSOCIATION** (hereinafter "Grantor") and **EAST GOSHEN MUNICIPAL AUTHORITY**, a municipal corporation duly formed under the laws of the Commonwealth of Pennsylvania (hereinafter "Grantee").

WITNESSETH:

WHEREAS, Grantee has designed a sanitary sewer force main system to serve a portion of East Goshen Township as part of the Hershey's Mill Pump Station Diversion project which supplements and replaces a part of an existing easement created by the Grant of Sanitary Sewer Force Main Easement dated February 12, 2001 recorded in the office of the Recorder of Deeds of and for Chester County in Book 4898, page 0122; and

WHEREAS, the sanitary sewer force main system, as redesigned, requires the acquisition of an additional right-of-way at a certain location for installation of a sanitary sewer force main and ancillary sewer collection facilities (hereinafter collectively "Sewer Collection and Conveyance Facilities"); and

WHEREAS, the parties hereto have agreed to the grant of a sanitary sewer force main easement and right-of-way across Grantor's property in the open space of the Hershey's Mill community of East Goshen Township for these purposes; and

WHEREAS, Grantee intends hereby to extinguish a portion of the previous easement reserved to the Authority for the same purposes.

NOW, THEREFORE, Grantor, for and in consideration of the payment of One Dollar (\$1.00) and other good and valuable considerations, the receipt whereof is hereby acknowledged, does hereby grant and convey unto Grantee, its successors and assigns, a 20-foot wide perpetual easement and right-of-way for the construction, maintenance, repair and reconstruction of a sanitary sewer force main and other Sewer Collection and Conveyance Facilities over the

Hershey's Mill open space property of Grantor designated UPI # 53-2-25.3, as described and shown on the attached plan entitled "Proposed Easement for Proposed Sanitary Sewer Main" prepared by Pennoni Associates, Inc. on Exhibit 0025.03, dated 8/23/12, last revised 9/21/12, marked Exhibit "A," which easement is more particularly described by metes and bounds in Exhibit "B" attached hereto.

TO HAVE AND TO HOLD the said strip of land unto the said Grantee, its successors and assigns, forever as and for a sanitary sewer right-of-way.

AND, FURTHER, it is understood that Grantee may construct Sewer Collection and Conveyance Facilities upon and within the aforementioned strip of land, and also that Grantee shall be the owner of all such facilities as so constructed and shall have the right to perpetually enter upon the right-of-way to maintain, repair and reconstruct the Sewer Collection and Conveyance Facilities. It is understood that Grantee shall return the property to its former condition insofar as reasonably possible after the initial construction or any maintenance or reconstruction work.

IT IS UNDERSTOOD by the parties hereto that this is not a conveyance of a fee interest but, rather, a grant of right-of-way or easement for sanitary sewer purposes.

AND, in accepting the grant of the easement and right-of-way on Grantor's property, as set forth herein, Grantee agrees to and does hereby extinguish and relinquish a portion of the easement identified and reserved unto it in Book 4898, page 0122, as aforesaid, being only that limited portion described by metes and bounds in Exhibit "C" attached hereto.

IN WITNESS WHEREOF, Grantor has executed this indenture and Grantee has accepted the same the day and year first above written.

Attest:

HERSHEY'S MILL HOMEOWNERS ASSOCIATION

Carolyn C. Eagan
Carolyn C. Eagan
Secretary
Attest:

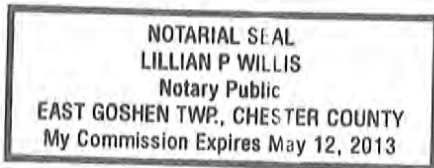
By: Harry W. Staller
Harry W. Staller
President - H.M.H.A.
EAST GOSHEN TOWNSHIP
MUNICIPAL AUTHORITY

By: _____

COMMONWEALTH OF PENNSYLVANIA:
COUNTY OF CHESTER : SS.

ON THIS, the 29th day of November, 2012, before me, a notary public, in and for the aforesaid County and Commonwealth, personally appeared Harry Staller, who acknowledged himself/herself to be the President of **HERSHEY'S MILL HOMEOWNERS ASSOCIATION**, and that he/she, as such, being authorized to do so, executed the foregoing instrument for the purposes therein contained by signing on behalf of the Association.

WITNESS my hand and notarial seal.



Lillian P. Willis

COMMONWEALTH OF PENNSYLVANIA:
COUNTY OF CHESTER : SS.

ON THIS, the 29th day of November, 2012, before me, a notary public, in and for the aforesaid County and Commonwealth, personally appeared _____, who acknowledged himself/herself to be the Chairman of **EAST GOSHEN MUNICIPAL AUTHORITY**, and that he/she, as such, being authorized to do so, executed the foregoing instrument for the purposes therein contained by signing on behalf of the Association.

WITNESS my hand and notarial seal.

Lillian P. Willis

DESCRIPTION OF
PROPOSED 20' WIDE EASEMENT FOR
PROPOSED SANITARY SEWER FORCE MAIN
(3,117 square feet)

ALL that certain 20' wide strip of land, situate in East Goshen Township, Chester County, Pennsylvania, being on a portion of land now or formerly of **Hersheys Mill Homeowners Association**, as shown on the plan titled, "Proposed Easement for Proposed Sanitary Sewer Main," prepared by Pennoni Associates Inc. on Exhibit 0025.03, dated 8/23/12, last revised 9/21/12, and being more particularly bound and described by PENNONI ASSOCIATES INC., as follows, to wit:

BEGINNING for the same at a point on the common line of lands now or formerly of Richard and Helen Shumaker with the lands now or formerly of Hersheys Mill Homeowners Association and a corner for lands now or formerly of John Shope, said point being the place of beginning, thence;

1. South 38° 47' 48" West, 20.13 feet along the line of the aforesaid lands of John Shope, to a point on the line of lands now or formerly of Hersheys Mill Homeowners Association, thence through the same;
2. North 44° 36' 49" West, 102.87 feet to a point, thence through the same;
3. South 78° 26' 29" West, 43.27 feet to a point, thence through the same;
4. North 11° 33' 31" West, 20.00 feet to a point, thence through the same;
5. North 78° 26' 29" East, 54.12 feet to a point on the line of lands now or formerly of the aforementioned Richard and Helen Shumaker, thence continuing;
6. South 44° 36' 49" East, 111.40 feet to the point and place of beginning and containing within these metes and bounds, 3,117 square feet or 0.07 acres of land, more or less.

Our project number: EGMA1107

August 23, 2012

Revised: September 21, 2012

DKH/SAS



**DESCRIPTION OF A PORTION OF A
SANITARY SEWER FORCE MAIN
EASEMENT TO BE ABANDONED**

ALL that certain 20 feet wide strip of land, situate in the Township of East Goshen, County of Chester, Commonwealth of Pennsylvania, being on a portion of land now or formerly of **Hershey's Mill**, being shown as the centerline of a 20 feet wide Sanitary Sewer Force Main as shown on the plan titled, "Sanitary Sewer Force Main Easement Plan," prepared for East Goshen Township, prepared by Yerkes Associates Inc. West Chester, Pennsylvania, dated June 20, 2000 and being more particularly bound and described by PENNONI ASSOCIATES INC., as follows, to wit:

BEGINNING at a point on the title line in the bed of Boot Road (S.R. 2020) in the intersection of the beds of Boot Road and Clover Lane, said point being located North 57°30'40" West, 145.09 feet from the common corner in Boot Road between the lands of Hershey's Mills to the northwest and lands of Meadow Brook Subdivision to the southeast, thence from said point of beginning along the centerline of the herein described 20 feet wide Sanitary Sewer Force Main Easement to be abandoned, leaving Boot Road and through lands of Hershey's Mill the following ten (10) courses and distances;

1. North 55° 16' 38" East, 26.17 feet to a point, thence continuing;
2. South 61° 43' 22" East, 143.44 feet to a point, thence continuing;
3. North 61° 57' 12" East, 1,268.79 feet to a point , thence continuing;
4. North 61° 00' 59" East, 630.85 feet to a point , thence continuing;
5. North 08° 46' 38" East, 194.64 feet to a point , thence continuing;
6. North 02° 16' 38" East, 316.40 feet to a point , thence continuing;
7. North 03° 46' 38" East, 148.97 feet to a point , thence continuing;
8. North 01° 01' 38" East, 175.64 feet to a point of curvature, thence continuing;
9. northerly 102.01 feet by the arc of a curve to the right having a radius of 140.00 feet (chord being North 21° 54' 08" East, 99.77 feet) to a point of tangency, thence;
10. North 42° 46' 38" East, 126.32 feet to the point, said point being at the limits of the easement to be abandoned. The total length of the easement to be abandoned is 3,133.23 linear feet as described herein.

This description is not based on an actual survey of the existing force main, but a modification of the current easement of record as described in Deed Book 4898, Page 0122, dated February 12, 2001.

Our project number: EGMA1107

October 14, 2012





PENNONI ASSOCIATES INC.
CONSULTING ENGINEERS

December 6, 2012

EGMA 1300

Rick Smith, Township Manager
East Goshen Township
1580 Paoli Pike
West Chester, PA 19380

Re: Fee Schedule for Year 2013 and Annual Services
East Goshen Township Municipal Authority
Chester County, Pennsylvania

Dear Rick:

Pennoni Associates Inc. is proud to serve East Goshen Municipal Authority as a client and we look forward to working with you in 2013. We have enjoyed the challenging projects this year and we cherish the relationships we have formed with the Authority, the Township, and the community. We respectfully request reappointment as Authority Engineer for 2013.

The proposed rates shown for 2013 are similar to the current rates with the exception of Project Engineer and Graduate Engineer. The Project Engineer rate is proposed to increase approximately 2 percent from \$93 to \$95 per hour and the Graduate Engineer rate by approximately 4 percent from \$70 to \$73 per hour.

While our company has many employee classifications, these are the classifications most frequently utilized in performing tasks for our municipal clients. We assign the most appropriate level staff competent to perform the work effort requested.

Authority Engineer.....	\$110/hr
Senior Engineer.....	\$105/hr
Project Engineer.....	\$95/hr
Staff Engineer	\$85/hr
Associate Engineer.....	\$83/hr
Graduate Engineer	\$73/hr
Engineering Technician II.....	\$72/hr
Engineering Technician I.....	\$65/hr

As part of our responsibilities to the Authority as the Appointed Engineer, we will provide the following professional services to the Authority:

- Participation in monthly meetings of the Authority Board
- Preparation of the semi-annual sewer report in March and September.
- Continuing support in I&I reduction with sewer meter data review and quarterly reports internal to the Authority.
- Preparation of the annual Chapter 94 Municipal Waste Load Management Report.
- Consultation on issues on behalf of the Authority

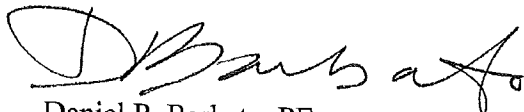
The estimated total fee for annual services is \$34,000, to be billed on an hourly basis at the above rates. We have allocated the budget as follows:

- | | |
|---|----------|
| • Monthly meetings and general consultation | \$10,000 |
| • Sewer and I&I reports | \$10,000 |
| • Chapter 94 reports | \$14,000 |

Similar to previous years, we will establish separate accounts for each project listed above and each project will be invoiced separately. Other projects outside of general services, as requested, will be proposed separately and at the approved rates schedule. We look forward to serving the Authority in 2013. If you have any questions, please feel free to contact me at (302) 655-4451.

Sincerely,

PENNONI ASSOCIATES INC.



Daniel P. Barbato, PE
Authority Engineer

Memorandum

East Goshen Township
1580 Paoli Pike
West Chester, PA 19380

Voice: 610-692-7171

Fax: 610-692-8950

E-mail: mgordon@eastgoshen.org

Date: 12/6/2012

To: Municipal Authority

From: Mark Gordon, Township Zoning Officer *mlb*

Re: New Kent Apartments / Land Development Application

Please review the Land Development plan for New Kent Apartments. The applicant has requested sewage flow allocation for the new 12 unit Apartment Building they propose to construct.

The Municipal Authority needs to approve the allocation and verify that the conveyance is adequate for the proposed flows. Once approved I will forward the Sewer Planning Module Exemption application to DEP.

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

December 7, 2012

To: Municipal Authority
From: Mark Miller
Re: November 2012 Monthly Report

- Meters:** Have been read on a daily basis with no problems to report. All the portable flow meters have been installed. They are being read on a weekly basis.
- C.C. Collection:** All pump stations were visited on a daily basis, routine maintenance was performed.
- R.C. Collection:** Hunt Country Pump Station was visited on a daily basis. No problems to report.
- R.C. Plant:** Routine maintenance was performed. The materials for the wet well disconnects have come in and Lenni Electric will schedule the install.
- Lockwood Plant:** PECO shut down the power to the Lockwood plant.
- Alarms:** We responded to a few alarms all were cleared and all stations put back in service.
- PA One Calls:** We received 73 PA One calls for the month of November.



MEMORANDUM

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

FROM: Daniel Barbato, P.E.
Authority Engineer

DATE: December 6, 2012

SUBJECT: Engineer's Report

Invoices

- Invoices with summaries are provided under separate cover.

Ridley Creek Sewage Treatment Plant (RCSTP)

- Pennoni submitted a final report to the Authority on troubleshooting phosphorous issues at RCSTP. The report was the result of collaboration between Pennoni, the plant operator, and the Municipal Authority Board, and it was sent to DEP with the Authority's cover letter and the Operator's SOP for the plant.

MS4 Submission

- DEP requested accurate mapping showing streams and outfalls.
- We obtained GIS map layers from Chester County and created a new working map showing roads, streams, and parcels. We updated the map which can be used by the Township for general mapping needs.
- We responded to DEP comments on December 5.

Hershey's Mill PS Diversion and Reserve PS Elimination

- DEP issued the Water Quality Management Permit for the Hershey's Mill PS Diversion on November 26, 2012. All permits are now in-place. We are coordinating with the Township to perform soil borings, including preparation of boring logs, for inclusion in the bid package for use by directional drillers in bidding. Following the borings, the bid package will be finalized and put out to bid.
- DEP approved the Reserve PS Closure Plan on November 19, 2012. All permits are now in-place; however, the GP-5 "Utility Line Stream Crossing" permit does not allow any construction between March 1 and June 15 because the Ridley Creek tributary is a protected water use for trout stocking. We are attempting to obtain a waiver from this requirement from PA Fish and Boat Commission.

EGMA 1200

- The Reserve PS plans have been fully revised for the re-aligned sewer to the north side of the pump station and further north of the Schroeder property. An informal plan re-submission was made to the Chester County Conservation District, and they determined that the revisions do not warrant a formal resubmission or re-review. An “FYI only” submission will also be made to DEP for their files.
- We revised the Reserve PS easement exhibits and legal descriptions for the two parcels affected by the sewer realignment.
- We are also coordinating with the Township to perform borings along the Reserve PS sewer alignment to identify any rock outcroppings. No boring logs or soil classifications are required for these borings.

Marydell PS Elimination

- We finalized the plans and specifications and solicited the project on PennBID on December 7, 2012. A non-mandatory pre-bid meeting is scheduled for December 19, 2012 at 10:00 a.m. at the Township building. Bids are due January 9, 2013 at 10:00 a.m. with the intent to award the project at the Authority meeting on January 14, 2013. Construction would likely begin in mid to late February, and the contract duration is 120 days.

Hershey's Mill Muffin Monster

- We received shop drawings from the Muffin Monster supplier, which we are currently reviewing.



Monthly Operations Report: November 2012

Treatment Process Operation

During October, there were no exceedances of the final effluent discharge limitations for outfall 001. There was no discharge from outfall 002. The monthly average total phosphorus concentration was reported as 0.44 mg/L as compared to the discharge limitation of 0.5 mg/L.

Sequencing batch reactors (SBRs) numbered 1, 3 and 4 were in service during the month of September. SBR No. 2 remains out of service. SBR No. 2 remains full of mixed liquor solution. The contents are mixed and aerated to prevent odors. After the SBR sludge wasting rates are lowered, transfer of the mixed liquor will be scheduled.

Addition of aluminum to the SBRs to assist with phosphorus removal continued. Operation of the actuator valves on the chemical feed lines to the SBRs was observed to remain in the open position when the valve should be closed. The intended design includes opening the valve when SBR enters the desired treatment phase then activating the pump to operate for the desired run time. When the SBR changes treatment phases, the valve closes. As a result, the valves remained opened during several treatment phases providing for insufficient of control of which SBR was receiving aluminum, volume of aluminum and chosen treatment phase. Gary Roberts from ICI, Siemens Jet Tech SBR process logic controller, was contact to resolve the issue. On November 19th, plant operators observed someone remotely reviewing the program logic. Gary Roberts reported that he remotely accessed the SBR program and did not observe any issues. On November 20th, the valves were observed to be closed when programmed to be closed (the valve issue appears to have been corrected).

Table 1 illustrates the downward trend of the final effluent total phosphorus concentrations prior to and after the valve operation issue was resolved.

Table 1	
Final Effluent: Outfall 001	
Sample Date	Total Phosphorus, mg/L
Nov. 1, 2012	0.54 mg/L
Nov. 13, 2012	0.93 mg/L
Nov. 20, 2012	0.70 mg/L
Nov. 24, 2012	0.18 mg/L



Nov. 25, 2012	0.16 mg/L
Nov, 27, 2012	0.35 mg/L
Nov 29, 2012	Data not available at time of report
Nov. 30, 2012	Data not available at time of report
Monthly Average To Date	0.48 mg/L

As requested by the Municipal Authority, the Interim report prepared by Pennoni Associates, Inc was completed on November 19th and was accompanied by the RCSTP SOP. The interim report and SOP were provided to Dave Wolfinger, PADEP.

Daily monitoring of the influent and final effluent 24-hour composites samples versus grab samples commenced. The location of the influent composite sampler used to determine the loadings from the community was hanged to the doghouse manhole within the facility fence line.

A grab sample of the final effluent flow equalization basin is analyzed daily for total phosphorus. Collection of centrate grab samples for total phosphorus analysis continued.

Process Monitoring On-Line Instrumentation:

As discussed during the November Authority meeting, two firms were contacted regarding available on-line instrumentation that can provide real time data to assist with process monitoring and control for phosphorus removal. Both systems are reported to provide real time phosphorus analysis that can be integrated into the chemical feed delivery systems to maintain efficient chemical use and desired phosphorus concentrations. The literature is attached with the report.

Presented below is a summary of the flow data for November 2012:

Flow data:

November 2012		
Flow Meter Location	Total Volume for Month, MGD	Average Daily Flow, gpd
Influent Wastewater to Screening Building	7.751	258,366
Influent Wastewater to SBRs	9.705	323,500
Internal Recycle	1.954	65,134
Treated Effluent to Disc Filters	9.411	313,684
Final Effluent Discharge	7.274	242,467
Applebrook Golf Course	0	0



Chemical Usage:

October 2012		
Chemical	Daily Average	Total Monthly
Soda Ash	270 lbs./day	8,100 pounds
Magnesium Hydroxide	0 gpd	0 gallons
Polyaluminum chloride solution	66 gpd	1,980 gallons
Polymer (centrifuge)	4.5*	32 gallons

**Seven (7) days of centrifuge operation*

Solids Dewatering and Disposal: November 2012

During the month, the centrifuge dewatering system was placed in service. Presented below is a summary of the solids processing activity:

October Sludge Dewatering Summary	
Gallons of sludge dewatered	103,731 gallons
Average Dewatered Total Solids, %	Not determined (data not available)
Wet Tons	21.41
Dry Tons	Not determined (data not available)
Number of dumpsters	2

During the month, sludge wasting and decanting of the sludge holding tanks was ongoing. No supernatant was decanted from the sludge holding tanks during sample collection. Process monitoring sampling and testing included pH, total alkalinity and total solids.

Sludge holding tank No. 1 was placed in service. The level at the beginning of the month was recorded as 1.67 feet and the level at the end of the month was 12.67 feet. The initial total solids concentration was 0.58% and ended the month as 0.60% total solids.

Sludge holding tank No. 2 began the month as 0.94% total solids and ended the month at 0.89% total solids. Tank level at the beginning of the month was 15.08 ft and at the end of the month was 7.09 ft.

Minor Repairs and Preventative Maintenance

- Utility water strainer cap required replacement. The Township replaced the strainer assembly.



- Technicians Flygt Corporation was on site to provide preventative maintenance for the SBR motive pumps. No maintenance was performed due to incorrect lifting hoists (and weather).
- The centrifuge remote control panel exhibited an alarm for a failed to open slide gate. Visual inspection noted the slide gate is functioning as intended. The alarm occurs after the machine is shut down suggesting there may be a small air leak to the slide gates.
- The influent composite sampler controller was returned to Hach Company for repair. This sampler is located at the influent wet well and used to determine the loadings (community and internal recycle) to the SBRs.

FINAL REPORT

Ridley Creek Sewage Treatment Plant Monthly Operations Report

Influent Wastewater											
Design Basis	Flow MGD Average	BOD ₅		TSS		NH ₄ -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
October 4, 2012	0.3690	341	1,049	82	252	39.7	122	49.9	154	6.8	21
October 11, 2012	0.2840	1140	2,700	900	2,132	62.7	149	97.9	232	28.7	68
October 18, 2012	0.2850	516	1,226	306	727	31.8	76	68.4	163	15.1	36
October 25, 2012	0.2750	166	381	64	147	40.8	936	49.6	114	6.9	16
October 31, 2012	0.3770	285	896	160	503	292	918	40.2	126	9.8	31
Average	0.3180	490	1251	302	752	167	440	61	158	13	34
Minimum	0.2750	166	381	64	147	32	76	40	114	7	16
Maximum	0.3770	1140	2700	900	2132	408	936	98	232	29	68

Final Effluent - Out Fall 001											
NPDES Permit Discharge Limitations	Flow MGD Average Instantaneous Maximum	CBOD ₅		TSS		NH ₄ -N		Phosphorus, Total, mg/L		Fecal Coliform	
		mg/L	lbs/month	mg/L	lbs/month	mg/L	lbs/month	mg/L	lbs/month	Geo Mean	Geo Mean
Sample Date		20	125	21	131	7	44	0.5	3	200	1,000
October 4, 2012	0.211	2.0	3.5	5	9	0.23	0.41	0.61	1.07	1	0.0000
October 11, 2012	0.206	2.0	3.4	11	19	0.10	0.17	0.29	0.50	1	0.0000
October 18, 2012	0.187	2.0	3.1	5	8	0.10	0.16	0.54	0.84	1	0.0000
October 25, 2012	0.202	2.0	3.4	5	8	0.10	0.17	0.33	0.56	1	0.0000
October 31, 2012	0.308	2.2	5.7	5	13	1.68	4.32	0.43	1.10	1	0.0000
Average	0.2228	2.0	4	6	11	0.442	1.04	0.44	0.81	1	0.0000
Minimum	0.1870	2.0	3	5	8	0.100	0.16	0.29	0.50	1	0.0000
Maximum	0.3080	2.2	6	11	19	1.680	4.32	0.61	1.10	1	0.0000

DRAFT REPORT

Ridley Creek Sewage Treatment Plant Monthly Operations Report

Influent Wastewater											
Design Basis	Flow MGD Average	BOD ₅		TSS		NH ₄ -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
		335	2,098	320	2,001	32	200	48	301	9.1	57
Sample Date											
November 1, 2012	0.2180	483	878	58	105	30.5	55	43.9	80	13.7	25
November 13, 2012	0.2260	385	726	324	611	37.7	71			6.4	12
November 20, 2012	0.2480	303	627	140	290						
November 27, 2012	0.2920										
Average	0.2460	390	744	174	335	34	63	44	80	10	18
Minimum	0.2180	303	627	58	105	31	55	44	80	6	12
Maximum	0.2920	483	878	324	611	38	71	44	80	14	25

Final Effluent - Out Fall 001											
NPDES Permit Discharge Limitations	Flow MGD Average 0.75 Instantaneous Maximum	CBOD ₅		TSS		NH ₄ -N		Phosphorus, Total, mg/L		Fecal Coliform	
		mg/L	lbs/month	mg/L	lbs/month	mg/L	lbs/month	mg/L	lbs/month	Geo Mean	Geo Mean
		20	125	21	131	7	44	0.5	3	200	1,000
Sample Date											
November 1, 2012	0.258	3.4	7.3	20	43	3.22	6.93	0.54	1.16	3	0.4771
November 13, 2012	0.241	2.0	4.0	6	12	0.20	0.40	0.93	1.87	1	0.0000
November 20, 2012	0.254	3.4	7.2	5	11		0.00	0.70	1.48	1	0.0000
November 24, 2012	0.262							0.18	0.39		
November 25, 2012	0.277							0.16	0.37		
November 27, 2012	0.260							0.35	0.76	1	0.0000
November 29, 2012	0.219										
November 30, 2012	0.2350										
Average	0.2508	2.9	6	10	22	1.710	2.44	0.48	1.01	2	0.1193
Minimum	0.2190	2.0	4	5	11	0.200	0.00	0.16	0.37	1	0.0000
Maximum	0.2770	3.4	7	20	43	3.220	6.93	0.93	1.87	3	0.4771

ChemScan® mini oP

ORTHO PHOSPHOROUS **New**

Mini Size
Mini Price
Mini Maintenance
Maxi Value!

The new single parameter in-line analyzer family from ASA Analytics utilizes years of ChemScan® experience and proven technology to provide reliable and accurate analysis of Water and Waste Water. This device has been designed from the ground up to reduce maintenance requirements, includes large ID sample tubing to minimize plugging and only needs quarterly reagent change out.

FEATURES

Automatic Analysis Utilizing
ChemScan's Proven VMO Method

Low Maintenance

Automatic Zeroing and Cleaning

Proven Sample Handling with
Large I.D. Flow Paths

Simple Field Adjustable
Calibration

Sample Blank to Eliminate
Background Interference

APPLICATIONS

Potable Water

Waste Water Effluent

CAPABILITIES

Automatic Analysis

Continuous Output

Multiple Data Communication
Interface Options

BENEFITS

High Reliability

Low Capital Cost

Low Operating Cost

EPA Recognized Analysis Method

SPECIFICATIONS

Range (as PO ₄ - P):	0.03 - 3.0 ppm (Std), 0.1 - 6.0 ppm
Accuracy:	2% of value or 2x detection limit (whichever greater)
Cycle Time:	5 minutes to 9999 minutes (field programmable)
Environment:	5 - 50 degrees C
Power:	100 - 240 VAC, 50 W
Enclosure:	NEMA 4x
Safety Approval:	CSA-US
Sample:	0.5 - 1 Liter/analysis, pressure 5 ft to 10 psi
Maintenance:	Reagent replacement every 3 months, pump kit yearly
Relay Contacts:	1 SPDT Concentration, 1 SPDT Programmable
Serial Interface:	Serial, RS-232, RTU
Analog Output:	Isolated 4-20 mA



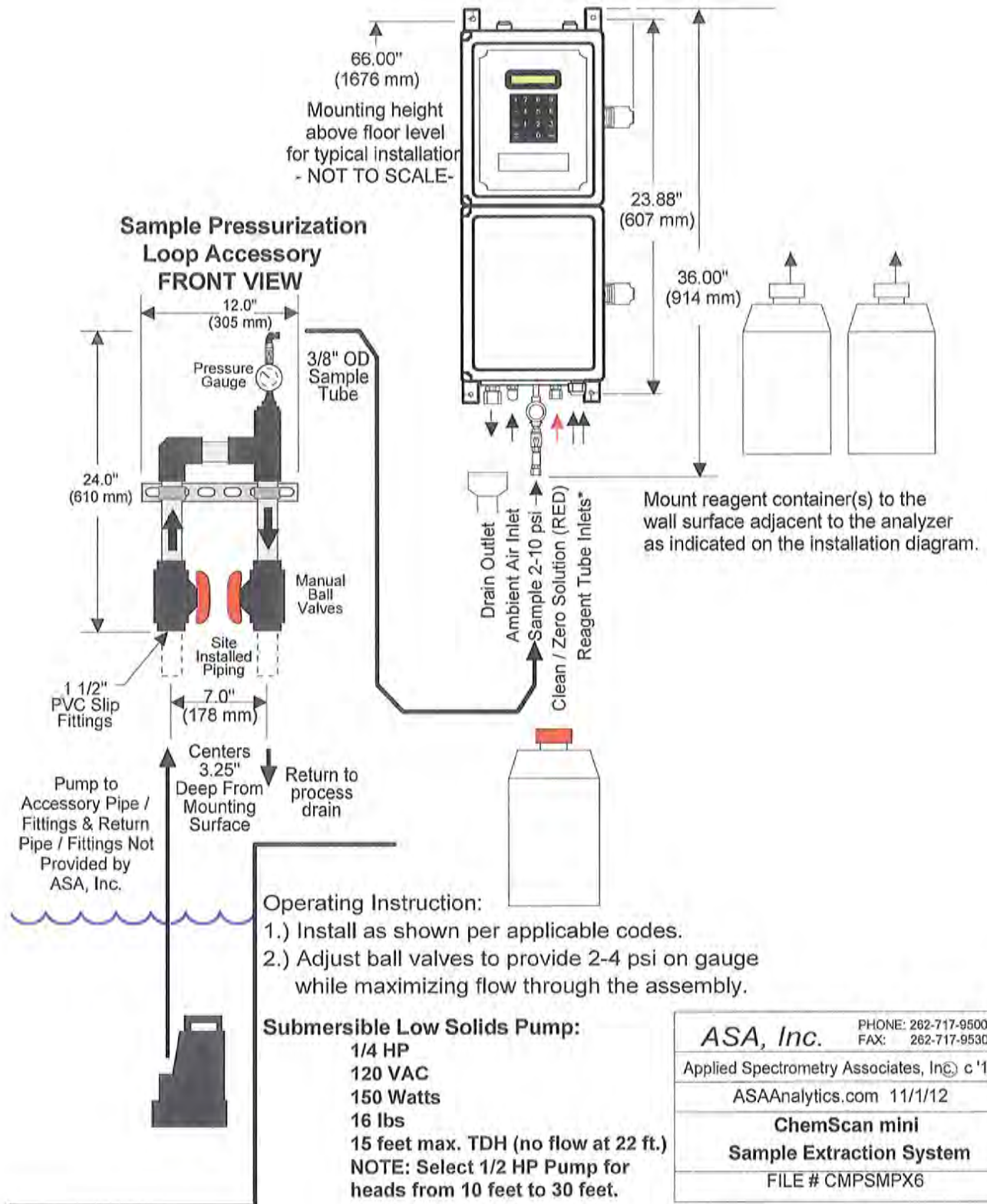
asa
ANALYTICS

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262-717-9500, Fax 262-717-9530

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**ChemScan mini-Series
Analyzer
FRONT VIEW**



- Operating Instruction:**
- 1.) Install as shown per applicable codes.
 - 2.) Adjust ball valves to provide 2-4 psi on gauge while maximizing flow through the assembly.

Submersible Low Solids Pump:
 1/4 HP
 120 VAC
 150 Watts
 16 lbs
 15 feet max. TDH (no flow at 22 ft.)
 NOTE: Select 1/2 HP Pump for heads from 10 feet to 30 feet.

ASA, Inc.	PHONE: 262-717-9500
	FAX: 262-717-9530
Applied Spectrometry Associates, Inc. c '12	
ASAAalytics.com 11/1/12	
ChemScan mini	
Sample Extraction System	
FILE # CMPSMPX6	

Worry-Free Chemical Phosphorus Removal

Beaver Dam saves 56% in Ferric Costs by switching to automated dosing control

Rob Minnema, Utility Foreman, City of Beaver Dam, Wisconsin

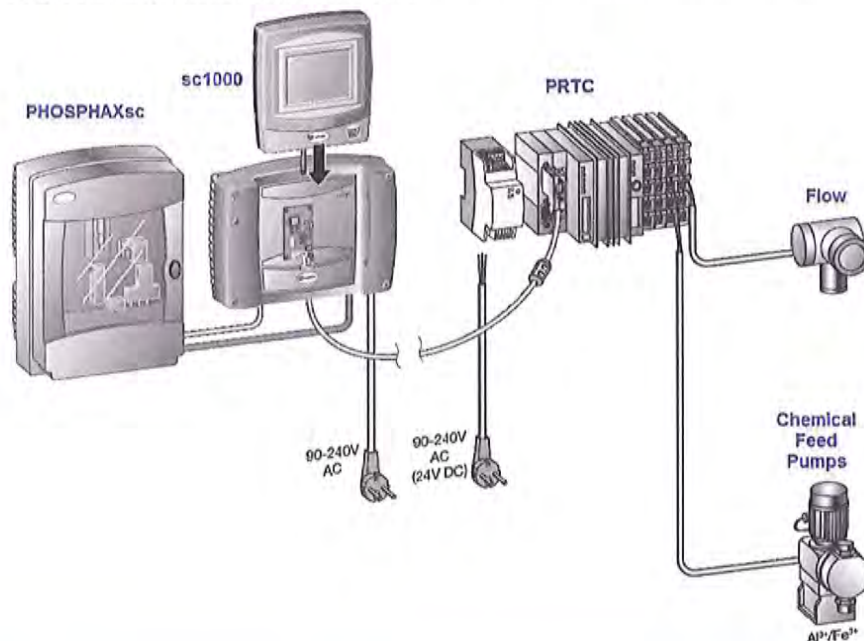
Bob Dabkowski, Wastewater Specialist, Hach

The operators at the Beaver Dam, Wisconsin wastewater treatment plant knew there had to be a better way. In order to meet the 1.0 mg/L total phosphorus limit, they had to feed enough ferric chloride to handle the incoming phosphorus spikes, but not overfeed increasing sludge production and wasting chemical. The operators were chasing the phosphorus levels—manually adjusting the ferric feed based on results from composite samples taken during the prior week.

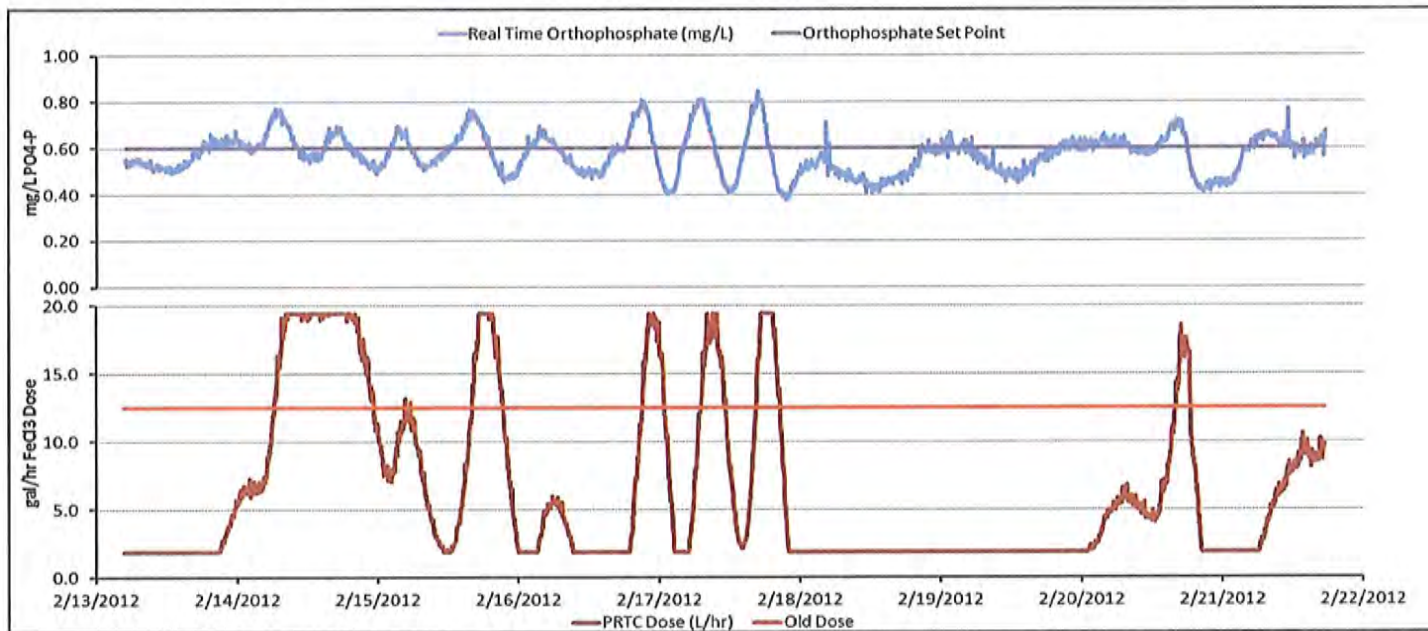


They found a better way and optimized their ferric feed with the Phosphorus Real Time Controller (PRTC) from Hach. The PRTC system automatically feeds the exact amount of precipitant needed to maintain a programmed orthophosphate setpoint. By measuring effluent flow and orthophosphate in real time, the controller uses preprogrammed algorithms to automatically adjust the ferric chloride dose ahead of the clarifiers as the phosphorus load changes. If a real time measurement signal is lost, the controller will switch to previously entered data until the signal is restored. Now, the operators rest easy, confident that the phosphorus level is consistently below their limits.

At Beaver Dam, the installation was simple. The orthophosphate analyzer measures plant effluent every five minutes, sends that measurement to the controller installed in a PLC cabinet along with the measured effluent flow. The PRTC outputs the ferric dosing signal through the PLC to control the chemical feed pumps based upon the setpoint programmed into PRTC. The system was installed, configured, and operational in less than 48 hours.



The chart below shows a typical week at Beaver Dam. Even with substantial pretreatment, influent phosphorus spikes are common. When the PRTC senses the load of phosphorus changing, it increases the ferric chloride dose to maintain the 0.60 mg/L orthophosphate setpoint.



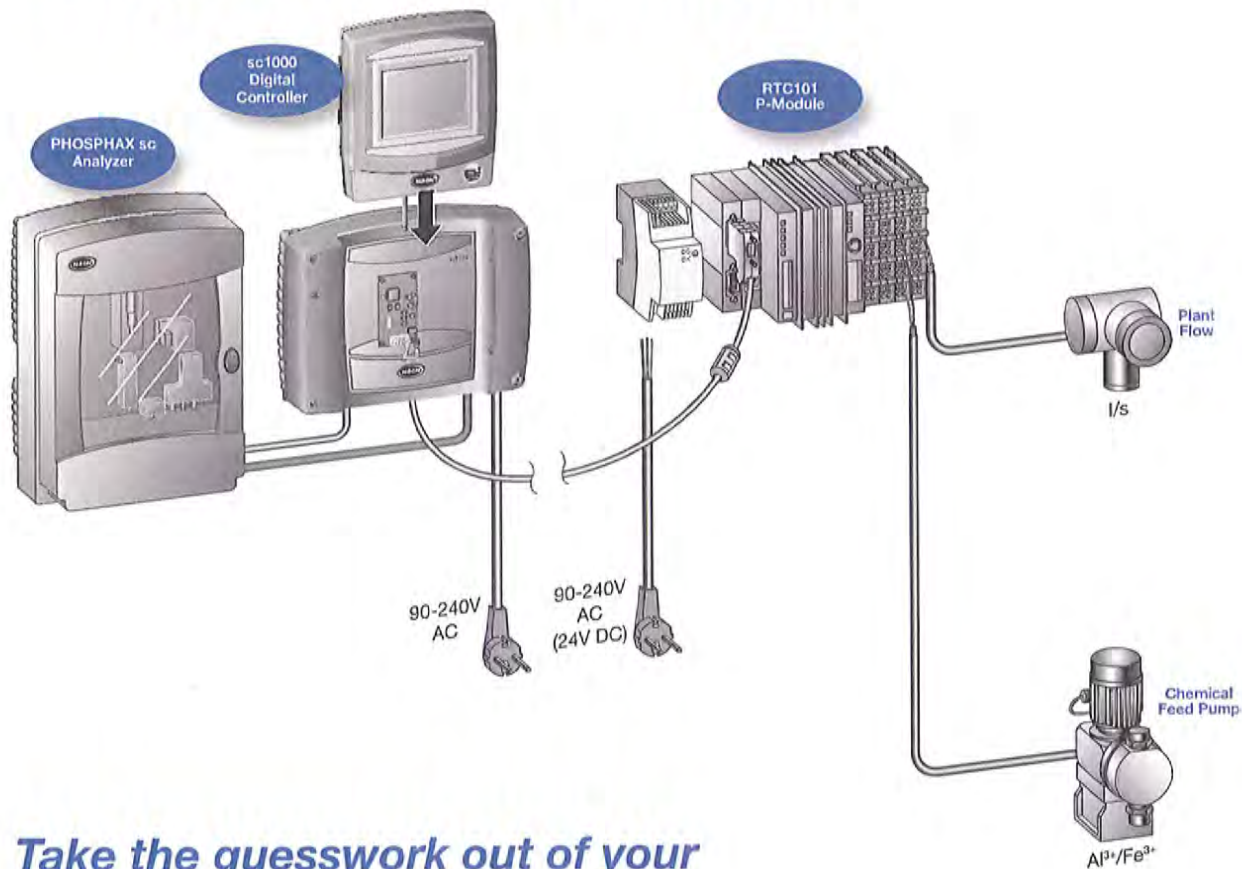
Previously, the staff maintained an average ferric chloride dose of 12.5 gallons per hour. After the PRTC installation, the average feed is 5.55 gallons per hour—saving of 56% in ferric chloride costs alone. Although not yet quantified, the staff believe that an associated decrease in sludge production provides additional savings from reduced solids handling costs.

Ferric Chloride Savings (160 Day Period)			
Before		After	
Dose	12.5	PRTC Dose (average)	5.55
Gallons Consumed	48,000	Gallons Consumed	21,312
Gallons Saved			26,688
% Saved			56%

Lastly, and most important, staff no longer feel like they are “chasing” phosphorus. Their worry while waiting for phosphorus results has been replaced by confidence and peace of mind. If the permit limits decrease in the future, the Beaver Dam staff aren’t worried—they will simply change the setpoint in the Hach PRTC and rest assured that the new limit will be met.

RTC101 P-Module Real-Time Phosphorus Control Solution

Application
• Wastewater



Take the guesswork out of your chemical phosphorus removal.

Adjusting chemical dose based on flow—or setting a fixed chemical dose—can be very expensive. With a system that provides Real-Time Control, you can significantly lower chemical costs, quickly adjust for loading changes, and enjoy the peace-of-mind in knowing your effluent phosphorus levels are within permit range.

System Optimization Through Continuous Measurement

By continuously measuring your phosphorus and flow, the RTC101 Phosphorus Control System responds automatically when loading changes occur and adjusts the chemical dosing at the right time to ensure consistent phosphorus levels in your effluent, potentially reducing the volume of sludge produced.

Dose Only What's Needed

Pre-programmed algorithms, designed to determine the exact loading of phosphorus in your water, allows the RTC101 P-Module to automatically control chemical dosing to only what is needed.

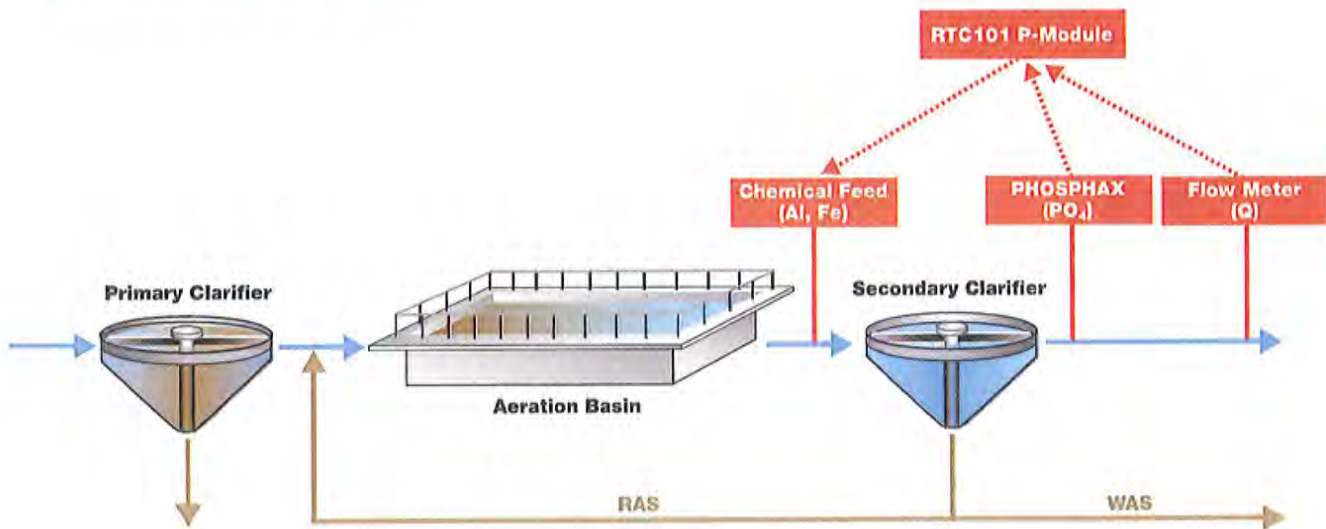
An Off-the-Shelf System

Using a turn-key solution with instruments and technology designed to work together, means the RTC System is quickly installed and is ready to give you control of your phosphorus levels.

When We Say Service, We Mean Service!

A complete Service package includes local field service experts to provide routine maintenance visits and warranty repair. Plus a team of remote technical experts with the ability to monitor your system to ensure optimum performance. It's like having a Hach Technician right there with you at the facility.

Phosphorus Control System



Enhanced Chemical Phosphate Precipitation

The RTC101 P-Module is a real-time controller designed to optimize chemical phosphate removal at wastewater treatment plants.

Based on the current phosphate load, the RTC101 P-Module automatically calculates the minimum amount of chemical needed to reliably meet the required effluent values.

In addition, the reduced chemical dose also lowers the amount of sludge produced, saving money on sludge dewatering and disposal costs.

The typical requirements for a controller, listed below, are met as standard:

- Load-dependent dosage
- Stable phosphate discharge values
- Reduced precipitant consumption
- Low level of sludge generation
- Simple installation

Included as standard in the system:

- Instrumentation and commissioning
- Programming
- User interface
- Software test
- Control algorithms
- Fall-back levels/replacement strategies
- Software adjustment
- Quarterly instrument maintenance
- Remote performance monitoring
- Monthly performance report
- End-user training

Theory of Operation

The RTC101 P-Module can be used for both open (feed forward) and closed loop (feed back) control of the chemical dose. The chemical feed pump is controlled continuously via a 4-20 mA signal or a dry contact relay. Both outputs can be utilized together: if the dose determined by the controller is below the pump minimum flow rate, the system will switch from 4-20mA control to relay control automatically.

If the phosphate or flow input is disrupted, the RTC101 P-Module automatically refers back to previously created profiles to ensure that effluent compliance is maintained until the signal is restored.

Programming of the RTC101 P-Module is simple and intuitive, using the touchscreen of the Hach sc1000 controller.

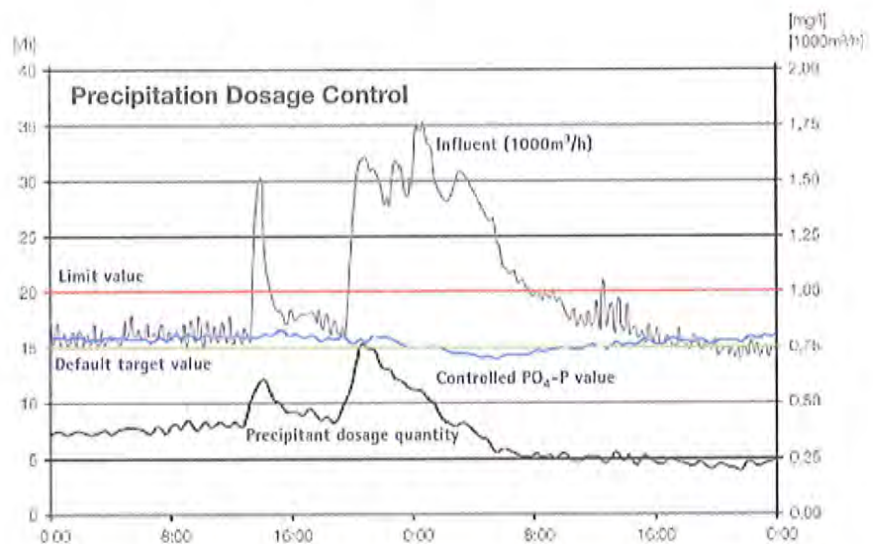


Chart depicting precipitation dosage control: Stable compliance with the specified PO₄-P target value (0.75 mg/L in this case) even during strong influent fluctuations. Chemical dosage is automatically adjusted based on current phosphate concentration and flow volume.

Specifications*

PHOSPHAX™ sc Phosphate Analyzer

Measurement Method	Photometric method using molybdovanadate
Measurement Range	0.05 to 15 mg/L (PO ₄ -P)
Lower Detection Limit	0.05 mg/L
Accuracy	2%, ±0.05 mg/L
Reproducibility	2%, ±0.05 mg/L
Response Time (T90)	Less than 5 minutes, including sample preparation
Measurement Interval	5 to 120 minutes, adjustable
Power Supply	115 Vac/50-60Hz or optional 230 Vac/50Hz; connected to sc1000
Dimensions	21.3 in. x 28.3 in. x 15.4 in.
Weight (approximate)	35 kg (77 lbs.) including reagents

Filtrax™ Sample Filtration System

Sample Flow	Approx. 900 mL/h for up to three process instruments
Outputs	Programmable Fault Alarm Contact: Potential free contact (115 V, 3A maximum) Programmable Warning Contact: Potential free contact (115 V, 3A maximum) Service Interface: RS232
Power Supply	115 or 230 Vac ±10% AC, 50/60 Hz
Dimensions	Control Unit: 17 in. x 21 in. x 9 in. Module Holder: 4 in. x 20 in. x 13 in.
Control Unit	22 kg (49 lbs.)
Module Holder, 5 m Suction Tube	9 kg (20 lbs.)

sc1000™ Digital Controller

Power Requirements	100 to 240 Vac, 50/60 Hz; Power: 75W Optional 24 Vdc
Communication	RS-485 (MODBUS/PROFIBUS DPV1), LAN and GPRS (Modbus TCP/IP, webserver) Advanced communications networking with PLC or SCADA system directly from analyzer; GSM GPRS cellular module
Dimensions	12.4 in. x 9.8 in. x 5.6 in.
Weight (approximate)	6.5 kg (14.3 lbs.) (varies with options)

RTC101 P-Module

Processor	Pentium®†, MMX compatible, 500 MHz clock rate
Analog Input	4–20 mA for flow rate measurement
Analog Output	4–20 mA for dosing pump
Dimensions	6.5 in. x 4.72 in. x 3.78 in.
Weight (approximate)	0.9 kg

†Pentium is a registered trademark of the Intel Corporation.

*Subject to change without notice.

Ordering Information

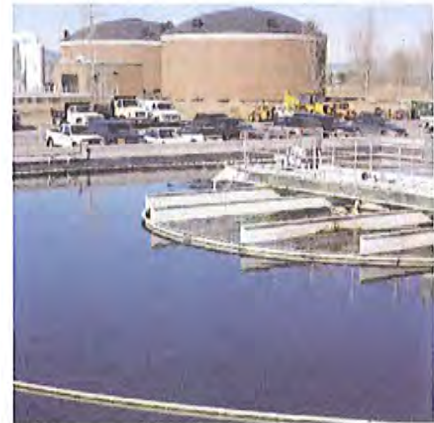
PRTC1C	Real Time Phosphorus Control System Includes RTC101 P-Module, Phosphax sc, Filtrax, sc1000 with 6-sensor probe module and display with GSM, TCP/IP
2825254	Phosphax sc Reagent, 2000 mL (replace quarterly)
2825352	Phosphax sc Cleaning Solution, 1000 mL (replace annually)

Mounting Accessories

LZY285	Rail Mounting Kit for Phosphax sc
LZY286	Stand Mounting Kit for Phosphax sc
LZX414.00.40000	Basin Wall Mounting Kit for Filtrax
LZX676	Mounting Kit for Filtrax Control Module
4696400	Power Cord for Filtrax, 115V
LZY489	sc1000 Bus Cable, 2-wire cable (sold by the foot)
LZX990	sc1000 Remote Antennae Kit

Service Plan

WRTUPGP-RTC	WarrantyPlus™ for Real-Time Phosphorus Control System (Covers RTC101 P-Module, Phosphax sc, Filtrax, sc1000) Includes 4 maintenance visits and monthly remote monitoring/reporting, all Preventative Maintenance parts and warranty parts. Reagents are not included.
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Let Hach Help You Take the Guesswork Out of Your Chemical Phosphorus Removal.

Please contact your local Hach Representative for more information on your specific installation requirements, product specifications, pricing and ordering.

HACH COMPANY World Headquarters: Loveland, Colorado USA

United States: 800-227-4224 tel 970-669-2932 fax orders@hach.com

www.hach.com

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In the interest of improving and updating its equipment, Hach Company reserves the right to alter specifications to equipment at any time.



2012 SUMMARY OF METER READINGS

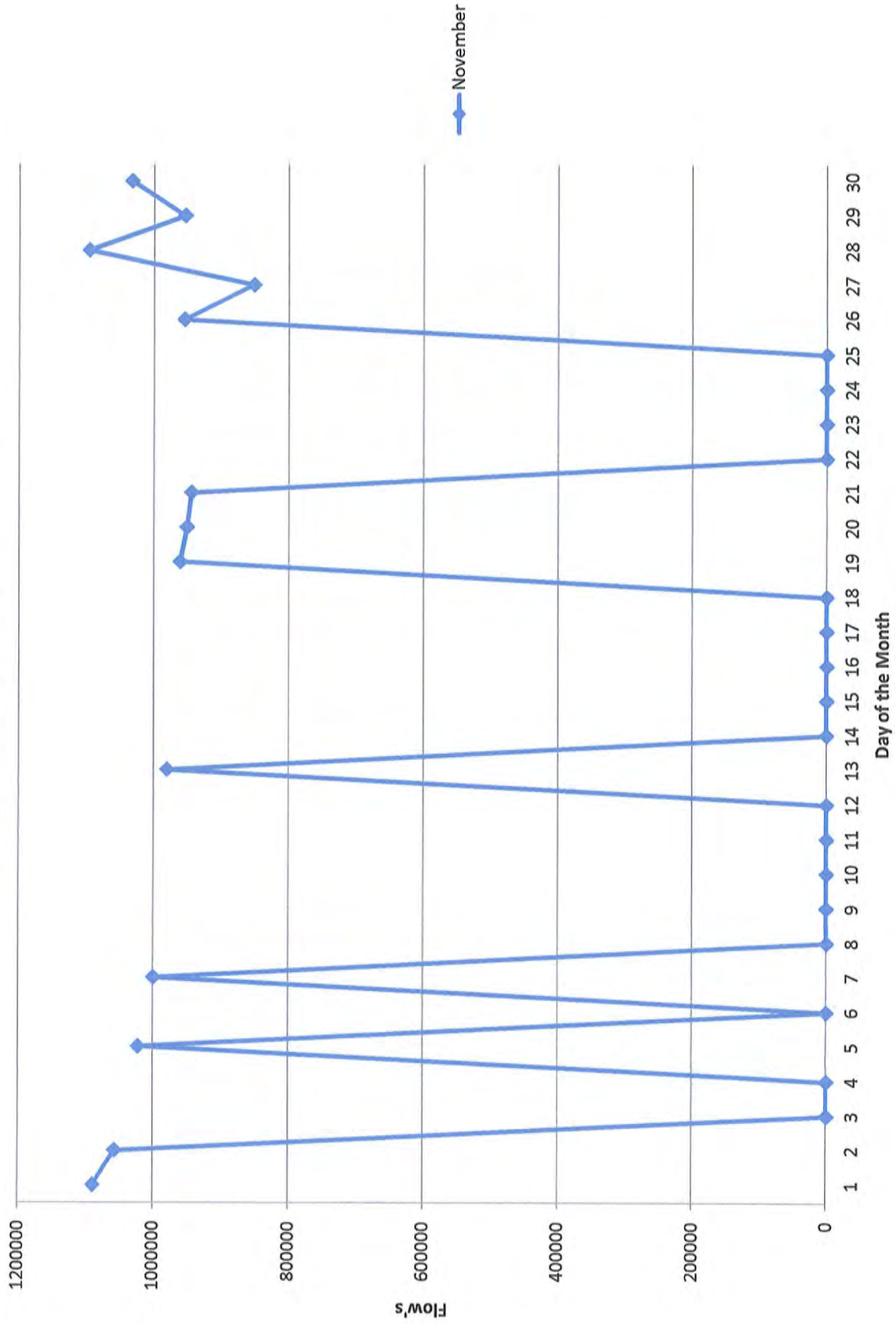
	WESTTOWN WAY	ELLIS LANE	PAOLI PIKE	WILSON DRIVE	SUMMIT	HERSHEY MILL	ASHBRIDGE	HICKS	RESERVOIR	SHERMAN	BARKWAY
JANUARY	1,296,433	152,585	69,729	69,440	20,400	73,086	90,225	67,846	909,322	6,922	12,327
FEBRUARY	1,172,663	140,579	61,074	65,911	20,400	63,555	73,939	295,466	1,019,637	6,561	11,350
MARCH	1,157,405	222,657	61,103	71,039	20,400	60,276	70,943	300,484	0	6,707	8,575
APRIL	1,059,167	186,208	53,353	57,578	20,400	58,987	63,358	285,508	285,613	6,407	10,305
MAY	1,144,546	167,830	63,648	81,622	20,400	55,378	60,690	304,075	652,083	6,354	10,862
JUNE	1,125,246	105,303	62,210	90,570	20,400	70,259	61,597			6,517	10,177
JULY	994,447	122,359	59,212	81,067	20,400	63,421	58,789	0	0	5,317	9,892
AUGUST	835,178	91,496	51,644	79,506	20,400	60,575	58,577	0	909,131	6,450	9,654
SEPTEMBER	0	117,229	51,630	78,510	20,400	66,058	60,098	0	760,473	6,647	9,596
OCTOBER	1,858,361	113,019	55,175	67,714	20,400	85,831	104,029	0	806,598	9,236	13,977
NOVEMBER	1,100,644	94,084	44,672	60,590	20,400	46,730	34,560	0	791,952	3,939	5,916
DECEMBER											
Total Flows											
Monthly Ave	1,067,645	137,577	57,586	73,050	20,400	64,014	66,982	250,676	766,851	6,460	10,239

To
West Goshen 799,431

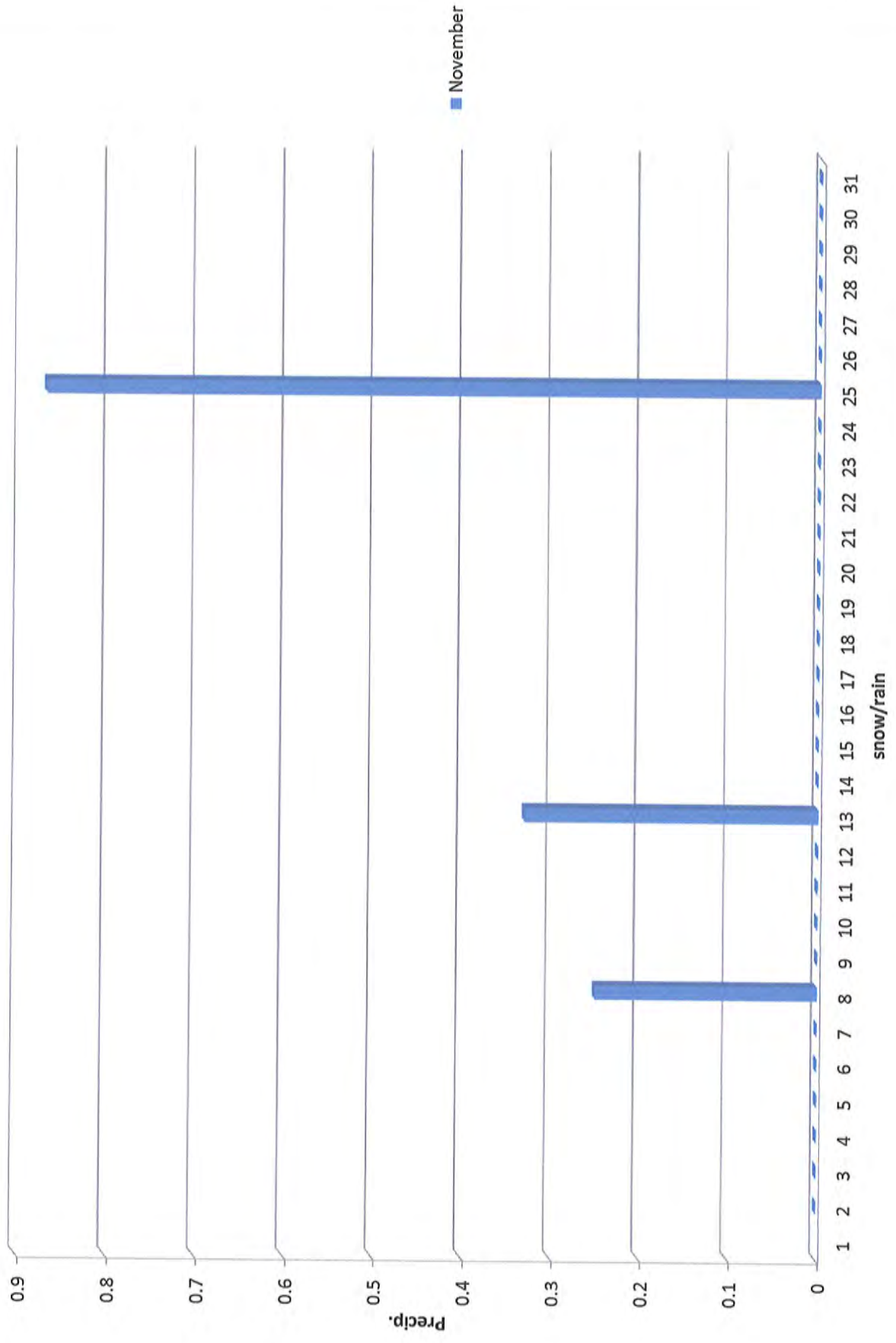
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Flowmeters November 2012



November Precip. 1.45 - 2012



2012 Monthly Precipitation

