

EAST GOSHEN MUNICIPAL AUTHORITY

**April 21, 2014
Monday 7:00 PM**

1. CALL TO ORDER/PLEDGE OF ALLEGIANCE/MOMENT OF SILENCE
 - a. Ask if anyone will be taping the meeting?
2. CHAIRMAN'S REPORT/OTHER MEMBERS REPORTS
3. APPROVAL OF MINUTES
 - a. March 10, 2014
4. APPROVAL OF INVOICES

a. Pennoni	Invoice #584215	\$5,909.00
b. Pennoni	Invoice #584216	\$1,610.25
c. Pennoni	Invoice #584218	\$7,198.00
d. Gawthrop	Invoice #118753	\$ 960.00
e. Gawthrop	Invoice #117715	\$ 700.00 – paid 3-12-14
f. Gawthrop	Invoice #118753	\$ 960.00
5. LIAISON REPORTS
6. FINANCIAL REPORTS
 - a. March 2014 Report
7. OLD BUSINESS
 - a.
8. GOALS
 - a. Review current mission statement and provide the Board of Supervisors with changes, if needed – June 1, 2014
 - b. Submit an article for each newsletter – Due date for newsletter
Need by 1/31/14 – Dana **Completed**
Need by 4/30/14 - Jack
Need by 7/1/14
Need by 10/31/14
 - c. Obtain PA DEP approval for the Act 537 Plan revision for the Reservoir Road Pump Station – December 31, 2014
 - d. Develop a recommendation on covers for the SBRs – August 1, 2014

e. Attend West Goshen Meetings quarterly – more often if needed.

1st Quarter (March) - Jack

2nd Quarter (June)

3rd Quarter (September)

4th Quarter (December)

f. Respond to capacity requests in 45 days or less.

211 Ellis Lane – 1 EDU existing house, 195 Wylpen Place – 1 EDU existing house

g. Continue to implement I & I Plan

h. Operate RCSTP in compliance with NPDES Permit

January, February, March

9. NEW BUSINESS

a. Bog Turtle Habitat Assessment for Proposed Sewer Force Main – Pennoni

b. Portable Meter Replacement

10. CAPACITY REQUESTS

a.

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 March 2014

12. ANY OTHER MATTER

13. CORRESPONDENCE AND REPORTS OF INTEREST

a.

14. PUBLIC COMMENT

15. ADJOURNMENT

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draft
EAST GOSHEN TOWNSHIP MUNICIPAL AUTHORITY
MEETING MINUTES
March 10, 2014

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The East Goshen Township Municipal Authority held their regular public meeting on Monday, March 10, 2014 at 7:00 pm at the East Goshen Township building. Members in attendance were: Chairman Jack Yahraes, Fran Beck, Dana Pizarro, Kevin Cummings and Ed McAssey. Also in attendance were: Rick Smith (Township Manager), Bob Adams (Attorney), Carmen Battavio (Township Supervisor), Scott Towler (BFES), Mike Ellis (Pennoni), and Patrick McKenna (Gawthrop Greenwood).

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COMMON ACRONYMS:

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<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>SBR – Sequencing Batch Reactor</i>
<i>I&I – Inflow & Infiltration</i>	<i>SSO – Sanitary System Overflow</i>
<i>LCSTP – Lockwood Chase Sewer Treatment Plant</i>	<i>WAS – Waste Activated Sludge</i>

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Call to Order & Pledge of Allegiance

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Jack 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 and all veterans. Jack asked if anyone would be recording the meeting and there was no response.

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Introduction

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Bob Adams introduced Patrick McKenna, a member of the Gawthrop Greenwood law firm. Patrick will attend meetings for Bob as needed.

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Chairman’s Report/Other Members’ Reports

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Jack attended the West Goshen meeting. Westtown had one of their pumps crack and it is being repaired.

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Approval of Minutes

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Dana moved to accept the minutes of February 10, 2014 as corrected. Fran seconded the motion. The motion passed unanimously.

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Approval of Invoices

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1. Dana moved to approve payment of the following Pennoni invoices:

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- a. Pennoni #580215 \$ 4,431.25
 - b. Pennoni #580216 \$ 1,211.00
 - c. Pennoni #580217 \$ 5,676.25

Fran seconded the motion. The motion passed unanimously.

2. Dana moved to approve payment of the Gawthrop invoice #116912 for \$160.00. Fran seconded the motion. The motion passed unanimously.

1 **Liaison Reports**

2 **Board of Supervisors** – Carmen mentioned that widening and striping of Boot Road between
3 Route 202 bypass and Wilson Drive is being discussed again. The BOS has prioritized the
4 ABC's 2014 goals.
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6 **Financial Reports**

7 Jon Altshul's March 6, 2014 Financial Report for February 2014:

8 The Municipal Authority recorded \$10,371 in revenues and \$13,724 in expenses in February, a
9 difference of -\$3,353. Engineering costs for the Reservoir Road Pump station represented the
10 bulk of expenses, while revenues came primarily from Tapping Fees. The fund balance is now
11 \$1,629.050.
12

13 **Old Business**

14 **Capacity** – Mike confirmed the daily capacity at RCSTP is 750,000 gallons. Rick mentioned
15 that potential additional flows could come from Hersheys Mill where they have spray irrigation
16 now. Also, along Chester Creek there is potential development of the Hicks Farm and Price
17 property. With the additional flow of 300,000g/day from Reservoir Road Station, the RCSTP
18 will be close to the daily capacity. Rick mentioned that Westtown has some capacity. Kevin
19 commented that when you look at all of the construction planned in West Goshen, at some point
20 in the future, West Goshen may not want to accept our flows.
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22 **Goals**

- 23 1. Rick will bring a copy of the Municipal Authority's mission statement to the next meeting for
24 review.
25 2. Jack will submit an article for the next newsletter which is due 4/30/14.
26 3. BOS Goal - Obtain PA DEP approval for the Act 537 Plan revision for the Reservoir Road
27 Pump Station by Dec. 31. 2014. See Pennoni's report for details.
28 4. BOS Goal -Develop a recommendation on covers for the SBRs – August 1. 2014. Mike met
29 with a vendor of flexible covers. He is getting the information for a proposal. So far there have
30 been no complaints from residents.
31 5. I&I Plan – Need to find out when Mark Miller will start the smoke testing.
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33 **New Business**

- 34 1. Bog Turtle Survey – The Authority received quotes from 3 companies:

- 35 a. Conestoga-Rovers & Associates \$3,700.00
36 b. Aqua-Terra Environmental Ltd \$3,150.00
37 c. Clemmys Environmental Scvs \$2,770.01

38 Mike commented that they have no experience with any of these companies. He spoke with
39 them. Conestoga and Aqua also do botany surveys. Conestoga can do the survey next week and
40 have the report by the Authority's April meeting. Aqua is not sure they can have a report for the
41 April meeting. Kevin made a motion to negotiate with Conestoga to do the project for \$3,150.
42 If not, then go with Aqua-Terra. Ed seconded the motion. The motion passed unanimously.
43 Mike will call them.
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1 **Capacity Requests**

2 1. 211 Ellis Lane – 1 EDU – existing house. This is for a resale and they hired a contractor.
3 Kevin made a motion to grant their request for capacity. Fran seconded the motion. The motion
4 passed unanimously.

5 2. 195 Wyllpen Circle – Edu – existing house. This property is near Arrowhead Camp. The
6 existing house will be demolished and a new house will be built. The owner wants the township
7 to do the work. Rick advised him to talk to his neighbors to see if any of them want to hook in to
8 the sewer. Kevin suggested sending a letter to the neighbors. Kevin made a motion to grant
9 their request for capacity. Fran seconded the motion. The motion passed unanimously. Bob
10 will prepare the agreement.

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12 **Sewer Reports**

13 **1. Mark Miller, Director of Public Works** - January & February 2014 monthly report.

14 **Meters:** All meters were read on a daily basis. The new meter was installed at Wilson Drive.
15 The portable meters are still being used. The data is being sent to Mike Ellis. The calibrations
16 were not completed during January due to weather. They are scheduled for later this month.

17 **C.C. Collection:** The pumping stations were visited on a daily basis. We replaced the valve pit
18 top at the Ashbridge Pumping Station. We had a problem with the chemical feed corporation
19 that ties into the force main when a piece of the top fell on the corporation breaking the valve.
20 We had to utilize a pump truck while we shut the station down to make the repair. The DEP was
21 notified via phone. We also filled out the emergency incident report and sent it to the DEP. We
22 responded to two sewer lateral backups during the month of February. We plunged the lateral
23 line and cleared the blockage.

24 **R.C. Collection:** We have been working on raising and sealing the manholes on the interceptor
25 line to Ridley Creek as weather permits. To date, we have done 16 manholes.

26 **R.C. Plant:** The utility waste water pump that was pulled in December has been rebuilt. We
27 will get it installed as weather permits.

28 **Alarms:** We responded to dozens of alarms since the 1st of the year. Most of them were caused
29 by weather, such as power outages. The generators were utilized for days during the ice storm.
30 We ended up hauling fuel in on a daily basis. However, there were no problems with any of the
31 equipment while we were without power.

32 **PA One Calls:** We received 55 PA One calls since January.

33
34 **2. Pennoni** – Mike Ellis gave the following report for February:

35 **RCSTP** – Pennoni continues to provide operations assistance as needed. No issues were brought
36 to our attention in February.

37 **Reserve PS Elimination** – We are still awaiting several contract closeout documents from the
38 contractor before final payment can be made including as-built plans, a letter from the
39 geotechnical engineer confirming adequate backfill compaction within the detention basin berm,
40 written notification that they will return in the spring to remove the filter sock along the creek,
41 contractor's release, statement of surety, and maintenance bond. The contractor has not
42 indicated when these documents will be provided.

43 **Chapter 94 Annual Reports** – We continued data analysis, projections, and report preparation for
44 the Ridley Creek STP and West Goshen reports. Final drafts of both reports should be
45 completed by March 14. A draft of the Westtown report was previously completed and
46 forwarded to the Township for review.

1 Reservoir Road Pump Station Act 537 Plan – We received a response letter from the PA Dept. of
2 Conservation & Natural Resources (DCNR) and they are requiring a field botanical survey of
3 potential threats to four special concern plant species. We are preparing photo documentation
4 and other justification to submit to the DCNR in an effort to eliminate this requirement. If a field
5 botanical survey is still required, it will not be performed until the spring growing season, likely
6 in late April or May.

7 We received a response letter from the PA Historical & Museum Commission (PHMC) requiring
8 an archaeological study of the project area. We coordinated with the PHMC to revisit the need
9 for such a study since nearly all work is within existing roads and previously excavated
10 easements. The PHMC then issued a revised letter that a study is not required for the proposed
11 route. If the force main route is revised to run through the intersection of Strasburg Rd and Rt
12 352, they likely will require an archaeological study of that specific Rocky Hill Historic District
13 area.

14 We received a response letter from the U.S. Fish & Wildlife Service (F&W) requiring a Phase 1
15 bog turtle habitat assessment of the entire project area. A Phase 2 bog turtle survey could be
16 required if habitat is found in Phase 1 and adverse impacts to the habitat cannot be avoided. We
17 are coordinating with bog turtle consultants to obtain pricing and scheduling to perform the
18 Phase 1 assessment in time for consideration by the Authority at the March MA meeting.

19 We continued preparation of the Act 537 Plan report and plot plan. We intend to submit to the
20 County and Township review agencies by March 21.

21 Tentative Act 537 planning schedule (assuming no botanical survey of Phase 2 bog turtle
22 screening):

	<u>Estimated date</u>
23 • Submit to County & Township Agencies	March 21, 2014
24 • Phase 1 Bog Turtle Habitat Assessment	April 4, 2014
25 • 60-day County and Township Review period	May 21, 2014
26 • Revisions per Agency Comments	May 28, 2014
27 • 30-day Public Comment Period	July 4, 2014
28 • East Goshen & West Goshen Twp. Adoption	July 31, 2014
29 • PADEP Review & Approval (120 days)	December 15, 2014

30 Semi-Annual I/I Report – We received portable meter data for the past six-month period and we
31 have begun to analyze the flows. We will prepare and issue the report prior to the April MA
32 meeting.

33 New Sewer Connections – we reviewed a sketch plan for a new grinder pump and low pressure
34 sewer lateral at 211 Ellis Lane, and we forwarded comments to the Township.

35
36 **3. Big Fish Environmental Services** – The following is a summary of Scott’s report for
37 January 2014:

38 Treatment Process Operation- During January 2014, there were no exceedances of the final
39 effluent discharge limitations for Outfall 001 and Outfall 002.

40 The monthly average total phosphorus concentration was 0.26 mg/L as compared to the
41 discharge limitation of 0.5 mg/L. During the month, the final effluent total phosphorus
42 concentration discharged ranged from 0.12 mg/L to 0.39 mg/L.

43 There was no discharge to Applebrook, Outfall 002, during January 2014.

44 During the month of February 2014, there are no anticipated exceedances of the permitted
45 effluent discharge limitations.

1 The final effluent CBOD5 sample data for the composite sample collected on February 4, 2014
2 was lost due to a power failure at the certified laboratory as a result of the snow/ice storm during
3 February 3 & 4. The laboratory provided a letter that will be included in the eDMR submission
4 to PADEP. A COD analysis was performed resulting with a concentration typical of CBOD5 of
5 less than 10 mg/L (as determined using data collected through on site analysis).
6 During February 2014, there was no discharge to Applebrook.
7 The influent wastewater pollutant concentrations and loading entering the wastewater treatment
8 facility remained within the design concentrations and loadings. Composite samples are
9 collected at the influent doghouse manhole and influent wet well. The influent flow meter
10 reading is collected from the influent flow meter located prior to the Screening Building,
11 excluding the internal recycle flows.
12 SBRs #1, 3 and 4 were in service during the month of February.
13 Process monitoring of each SBR included ammonia as N, Nitrite as N, Nitrate as N, COD, SSV,
14 MLSS and total phosphorus. Foam concentrations reduced and eliminated during the month of
15 February. Increased sludge wasting and process monitoring to lower the LMSS inventory was
16 implemented. The lower biomass MLSS concentration combined with the lower SBR
17 temperatures contributed to a slight increase in the final effluent ammonia as nitrogen
18 concentration. The effluent remains in compliance with the NPDES permit discharge parameters.
19 Daily monitoring of the influent and final effluent 24-hour composites samples for total
20 phosphorus is ongoing. Daily analysis of the final effluent flow equalization grab sample total
21 phosphorus is ongoing. Sample collection and analysis of the influent wastewater collected at
22 the influent pump station wet well is ongoing.
23 Addition of aluminum sulfate solution to the SBRs to assist with phosphorus removal continued.
24 The volume of aluminum sulfate solution to the SBRs was reduced during February. The
25 addition of soda ash to the SBRs to assist with maintaining desired pH concentrations above 7.0
26 standard units continued during the month. There was an overall reduction in the soda ash
27 addition to the SBRs during February, however, an increase amount was added to the sludge
28 holding tanks.
29 SBR #2 remains out of service as a treatment unit, however, partially filled with MLSS which is
30 continuously mixed and aerated. SBR #2 was periodically placed in service to assist with
31 managing periods of high flow. The majority of the contents were transferred to the sludge
32 holding tanks.
33 During the month, the decanter for SBR 3 continued to be periodically observed as being slightly
34 tilted within the water level. The effluent knife valve was routinely closed and the decanter
35 filled with water to assist with lowering the decanter within the water level. The frequency of
36 occurrence ranged from one to several occurrences during the month.
37 Process Monitoring On-Line Instrumentation: Representatives from the Hach Co. were
38 contacted regarding the incorporation of pH monitoring in conjunction with the LDO monitoring
39 of the SBRs. A proposal from Hach is under development.
40 Solids Dewatering and Disposal: February 2014
41 During the month, sludge wasting to the sludge holding tanks and decanting of the sludge
42 holding tanks was ongoing. Process monitoring included pH, total alkalinity and total solids.
43 Sludge holding tank #1 was in service. The level at the beginning of the month was 13.44 feet
44 and the level at the end of the month was 11.01 feet. The initial total solids concentration was
45 0.87% and ended the month as 0.93% total solids. 211,400 gallons of supernatant were decanted

1 during the month. A total of 1,000 pounds of soda ash were added during the month for pH
2 adjustment.

3 Sludge holding tank #2 was in service. The level at the beginning of the month was 10.90 feet
4 and the level at the end of the month was 15.28 feet. The initial total solids concentration was
5 0.88% and ended the month as 0.96% total solids. 204,206 gallons of supernatant were decanted
6 during the month. A total of 650 pounds of soda ash were added during the month for pH
7 adjustment.

8 Significant storm/hydraulic Loading Events – On Saturday, February 8, 2014, a hydraulic
9 loading to the wastewater treatment plant exceeding 100% was sustained for a continuous period
10 of approximately 5 hours. The “high flow” event was managed utilizing manual diversion of
11 flow to the offline SBR basin (SBR#2). No exceedances of the final effluent discharge
12 limitations were experienced during this event.

13 On Friday, February 21, 2014, a hydraulic loading event to the SBRs was observed. This event
14 consisted of an influent hydraulic flow rate at or exceeding 100% of the design hydraulic
15 capacity for approximately 14 hours. No exceedances of the permitted effluent discharge
16 limitations were experienced during this event.

17 On Saturday, February 22, 2014, a hydraulic loading event to the SBRs was observed. This
18 event consisted of an influent hydraulic flow rate at or exceeding 100% of the design hydraulic
19 capacity for approximately 12 hours. No exceedances of the permitted effluent discharge
20 limitations were experienced during this event.

21 Minor Repairs and Preventive Maintenance

- 22 1. Drained and cleaned disc filters once during the month
- 23 2. Installed a valve on the potable water line to the decommissioned soda ash mix tank.
- 24 3. Installed a hose bib on the non-potable water line adjacent to SBR #3/SBR control room.
- 25 4. Removed the soda ash feed tank from the existing blower/Laboratory building.

27 Any Other Matter

28 1. Computerized Maintenance Program - Scott recommended moving to a computerized
29 maintenance program. The cost is about \$3,500. It can be managed at the Plant or the Township
30 Office by Sue. Reports will be easier to get. Right now the records are kept manually in a log
31 book. Equipment can be put in an inventory along with the cost. Also, it will notify
32 automatically when maintenance is needed. Kevin would want some history included. Bob
33 agrees that this could show maintenance trends. Carmen suggested that Jon Altshul look at the
34 proposal too.

35 2. Rick announced that the Township settled with Miller and received \$180,000.

37 Adjournment

38 There being no further business, Fran moved to adjourn the meeting. Dana seconded the motion.
39 The motion passed unanimously. The meeting was adjourned at 8:30 pm.

41 Respectfully submitted,

44 Ruth Kiefer
45 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 # : 584215
Invoice Date : 03/25/2014
Project : EGMA1307
Project Name : Reservoir Rd PS Act 537 Planning

For Services Rendered through: 3/16/2014

Phase 03 Work within Proposal Scope - Prepared plot plan for proposed pump station site and extent of force main within routing of original project scope along Reservoir Road and Strasburg Road within extents of field survey; and continued preparation of Act 537 Plan narrative report. Labor = \$2,174.50.

Phase 03 Additional Effort associated with revised & extended force main routing and PNDI coordination that was not part of project scope - Prepared plot plan sheets for revised force main routing along Misak Drive and Anne Drive and extended force main routing from entrance of Bow Tree to the Ridley Creek interceptor sewer including generating existing conditions and topography from County and State GIS data, aerial images, subdivision plans, utility plans, and observed (not surveyed) field conditions; coordinated with U.S. Fish & Wildlife Service in response to requirement for Phase 1 bog turtle habitat assessment, defined scope of Phase 1 assessment, and obtained and reviewed proposals from bog turtle consultants; coordinated with PHMC and provided additional information to retract requirements for archaeological study; and initiated coordination with DCNR in response to requirement for botanical survey for threatened plant species. Labor = \$3,734.50.

Phase : 03 -- Act 537 Plan Update

Total Phase : 03 -- Act 537 Plan Update

Labor :	5,909.00
Expense :	0.00
Phase Total :	5,909.00

Amount Due This Invoice

\$5,909.00

Continued on next page...

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 : 03 -- Act 537 Plan Update

Labor Class	<i>Hours/ Units</i>	<i>Rate</i>	<i>Amount</i>
Authority Engineer	12.50	110.00	1,375.00
Project Engineer	26.25	95.00	2,493.75
Senior Environmental Scientist	3.25	85.00	276.25
Engineering Technician II	24.50	72.00	1,764.00
Labor Total:	66.50		5,909.00

Total Phase : 03 -- Act 537 Plan Update	Labor :	\$5,909.00
	Expense :	\$0.00
Total Project : EGMA1307 -- Reservoir Rd PS Act 537 Planning	Labor :	\$5,909.00
	Expense :	\$0.00

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

East Goshen Municipal Authority
EGMA1307 Invoice Summary
Invoice Date 03/25/2014

Project: EGMA1307
Pennoni Job No.: Reservoir Rd PS Act 537 Planning
Invoice No: **584215**
Invoice Period: 2/10/2014 to 3/16/2014
Initial Authorization: \$ 77,400.00 **Date:** 1/16/2013
Contract Amount: \$ 77,400.00
Previously Invoiced: \$ 53,460.75
Current Invoice: \$ 5,909.00
Invoiced to Date (\$): \$ 59,369.75
Invoiced to Date (%): 77%
Remaining Budget (\$): \$ 18,030.25
Remaining Budget (%): 23%

Budget by Phase:

	Reservoir Rd PS Act 537 Planning	
Phase Name:		
Phase Budget:	\$	77,400.00
Previously Invoiced:	\$	53,460.75
Current Invoice:	\$	5,909.00
Invoiced to Date (\$):	\$	59,369.75
Invoiced to Date (%):		77%
Remaining Budget (\$):	\$	18,030.25
Remaining Budget (%):		23%

Comments: Phase 03 Work within Proposal Scope - Prepared plot plan for proposed pump station site and extent of force main within routing of original project scope along Reservoir Road and Strasburg Road within extents of field survey; and continued preparation of Act 537 Plan narrative report. Labor = \$2,174.50.

Phase 03 Additional Effort associated with revised & extended force main routing and PNDI coordination that was not part of project scope - Prepared plot plan sheets for revised force main routing along Misak Drive and Anne Drive and extended force main routing from entrance of Bow Tree to the Ridley Creek interceptor sewer including generating existing conditions and topography from County and State GIS data, aerial images, subdivision plans, utility plans, and observed (not surveyed) field conditions; coordinated with U.S. Fish & Wildlife Service in response to requirement for Phase 1 bog turtle habitat assessment, defined scope of Phase 1 assessment, and obtained and reviewed proposals from bog turtle consultants; coordinated with PHMC and provided additional information to retract requirements for archaeological study; and initiated coordination with DCNR in response to requirement for botanical survey for threatened plant species. Labor = \$3,734.50.



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 # : 584216
Invoice Date : 03/25/2014
Project : EGMA1401
Project Name : 2014 General Services

For Services Rendered through: 3/16/2014

Evaluated RCSTP tank odor control and cover alternatives and prepared one-page alternatives summary memo to Township; reviewed two plan & profile submissions and product info for proposed 211 Ellis Lane grinder pump & sewer connection including preparation of review comments and discussions with contractor; prepared March Engineer's Report; and attended February and March Municipal Authority meetings.

Phase : **** -- Professional Services

Total Phase : **** -- Professional Services

Labor :	1,610.25
Expense :	0.00
Phase Total :	1,610.25

Amount Due This Invoice

\$1,610.25

Fee :	10,300.00
Prior Billings :	1,211.00
Current Billings :	1,610.25
Total Billings :	2,821.25

Phase : **** -- Professional Services

Labor Class	Hours/ Units	Rate	Amount
Authority Engineer	14.25	113.00	1,610.25
Labor Total:	14.25		1,610.25

Total Phase : **** -- Professional Services

Labor :	\$1,610.25
Expense :	\$0.00

Total Project : EGMA1401 -- 2014 General Services

Labor :	\$1,610.25
Expense :	\$0.00

East Goshen Municipal Authority
EGMA1401 Invoice Summary
Invoice Date 03/25/2014

Project:	EGMA1401		
Pennoni Job No.:	2014 General Services		
Invoice No:	584216		
Invoice Period:	2/10/2014	to	3/16/2014
Initial Authorization:	\$ 10,300.00	Date:	12/9/2013
Contract Amount:	\$ 10,300.00		
Previously Invoiced:	\$ 1,211.00		
Current Invoice:	\$ 1,610.25		
Invoiced to Date (\$):	\$ 2,821.25		
Invoiced to Date (%):	27%		
Remaining Budget (\$):	\$ 7,478.75		
Remaining Budget (%):	73%		

Budget by Phase:

Phase Name:	2014 General Services		
Phase Budget:	\$ 10,300.00		
Previously Invoiced:	\$ 1,211.00		
Current Invoice:	\$ 1,610.25		
Invoiced to Date (\$):	\$ 2,821.25		
Invoiced to Date (%):	27%		
Remaining Budget (\$):	\$ 7,478.75		
Remaining Budget (%):	73%		

Comments: Evaluated RCSTP tank odor control and cover alternatives and prepared one-page alternatives summary memo to Township; reviewed two plan & profile submissions and product info for proposed 211 Ellis Lane grinder pump & sewer connection including preparation of review comments and discussions with contractor; prepared March Engineer's Report; and attended February and March Municipal Authority meetings.



INVOICE

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

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

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

Invoice # : 584218
Invoice Date : 03/25/2014
Project : EGMA1403
Project Name : 2013 Chapter 94 Reports

For Services Rendered through: 3/16/2014

Continued report preparation, data gathering, meter analysis, and projections for Ridley Creek ST and West Goshen Chapter 94 Reports.

Phase : **** -- Professional Services

Total Phase : **** -- Professional Services

Labor :	7,198.00
Expense :	0.00
Phase Total :	7,198.00

Amount Due This Invoice

\$7,198.00

Fee :	14,400.00
Prior Billings :	6,557.75
Current Billings :	7,198.00
Total Billings :	13,755.75

Phase : **** -- Professional Services

Labor Class	Hours/ Units	Rate	Amount
Authority Engineer	14.75	113.00	1,666.75
Graduate Engineer	73.75	75.00	5,531.25
Labor Total:	88.50		7,198.00

Total Phase : **** -- Professional Services

Labor :	\$7,198.00
Expense :	\$0.00

Total Project : EGMA1403 -- 2013 Chapter 94 Reports

Labor :	\$7,198.00
Expense :	\$0.00

East Goshen Municipal Authority
EGMA1403 Invoice Summary
Invoice Date 03/25/2014

Project:	EGMA1403		
Pennoni Job No.:	2013 Chapter 94 Reports		
Invoice No:	584218		
Invoice Period:	2/10/2014	to	3/16/2014
Initial Authorization:	\$ 14,400.00	Date:	12/9/2013
Contract Amount:	\$ 14,400.00		
Previously Invoiced:	\$ 6,557.75		
Current Invoice:	\$ 7,198.00		
Invoiced to Date (\$):	\$ 13,755.75		
Invoiced to Date (%):	96%		
Remaining Budget (\$):	\$ 644.25		
Remaining Budget (%):	4%		

Budget by Phase:

	2013 Chapter 94 Reports	
Phase Name:		
Phase Budget:	\$	14,400.00
Previously Invoiced:	\$	6,557.75
Current Invoice:	\$	7,198.00
Invoiced to Date (\$):	\$	13,755.75
Invoiced to Date (%):		96%
Remaining Budget (\$):	\$	644.25
Remaining Budget (%):		4%

Comments: Continued report preparation, data gathering, meter analysis, and projections for Ridley Creek STP and West Goshen Chapter 94 Reports.



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

Page: 1
03/31/2014
Client No: 6604-001M
Invoice No: 118753

General Authority Services

Fees

		Hours	
03/10/2014	RFA		
	Review packet for 3/10 Authority meeting; review Reservoir Road pump station alternatives memo by Pennoni; review G White Correspondence with R Smith regarding lateral connection; attend regular meeting of Authority.	3.80	
	PMM	1.50	n/c
	Attend municipal authority meeting (no charge).		
03/20/2014	RFA		
	Review message from R Smith regarding rescheduling April meeting; Message to same regarding April availability for meeting.	0.60	
03/24/2014	RFA		
	Review message from R Smith regarding meeting date change and bog turtle study.	0.40	
	For Current Services Rendered	4.80	960.00

Recapitulation

	<u>Timekeeper</u>	<u>Hours</u>	<u>Hourly Rate</u>	<u>Total</u>
	Robert F. Adams	4.80	\$200.00	\$960.00
	Previous Balance			\$700.00
	Total Current Charges			960.00
03/14/2014	Fee Payment			-700.00
	Balance Due			<u>\$960.00</u>



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

Page: 1
02/28/2014
Client No: 6604-001M
Invoice No. 117715

General Authority Services

Fees

		Hours		
02/10/2014	RFA	Review packet for 2/10 Authority meeting; attend regular meeting of Authority.	2.50	
02/11/2014	RFA	Draft opinion of counsel to auditors Maillie Falconiero for year ended 12/31/13.	1.00	
		For Current Services Rendered	3.50	<u>700.00</u>

Recapitulation

<u>Timekeeper</u>	<u>Hours</u>	<u>Hourly Rate</u>	<u>Total</u>
Robert F. Adams	3.50	\$200.00	\$700.00

Previous Balance \$800.00

Total Current Charges 700.00

02/26/2014 Fee Payment -800.00

Balance Due \$700.00

PAID

3/12

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.



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

Page: 1
03/31/2014
Client No: 6604-001M
Invoice No: 118753

General Authority Services

Fees

		Hours	
03/10/2014	RFA		
	Review packet for 3/10 Authority meeting; review Reservoir Road pump station alternatives memo by Pennoni; review G White Correspondence with R Smith regarding lateral connection; attend regular meeting of Authority.	3.80	
	PMM	1.50	n/c
	Attend municipal authority meeting (no charge).		
03/20/2014	RFA		
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Recapitulation

<u>Timekeeper</u>	<u>Hours</u>	<u>Hourly Rate</u>	<u>Total</u>
Robert F. Adams	4.80	\$200.00	\$960.00
Previous Balance			\$700.00
Total Current Charges			960.00
03/14/2014	Fee Payment		-700.00
	Balance Due		<u>\$960.00</u>

OK RS 4/10/14
Rick Smith

Memo

To: Municipal Authority
From: Jon Altshul
Re: MA march Financial Reports
Date: April 3, 2014

The Municipal Authority recorded \$4,561 in revenues and \$20,062 in expenses in March, a difference of -\$15,501. Engineering expenses and the quarterly administrative overhead chargeback represented the bulk of expenses, while revenues came primarily from Tapping Fees for two lots in Sorrell Hill. The fund balance is now \$1,613,549.

A complete list of all monthly expenses is provided. I have also attached a copy of the worksheet showing how the 2014 quarterly chargeback was calculated.

**EAST GOSHEN TOWNSHIP
1580 PAOLI PIKE
WEST CHESTER, PA 19380
(610) 692-7171**

March 28, 2014

**MUNICIPAL AUTHORITY EXPENSES:
1st QTR 2014**

	AMOUNT	NOTES
ABC Secretarial Services (Preparing & distributing packets):	\$1,771.38	15% of salary & benefits
Secretarial Services (Taking & Preparing Minutes):	\$210.00	6 hours @ \$35 hours/hour
Director of Finance/Treasurer	\$1,166.62	5% of salary & benefits
Staff Accountant:	\$886.34	5% of salary & benefits
Director of Public Works:	\$1,873.56	5% of salary & benefits
Manager:	<u>\$2,135.12</u>	5% of salary & benefits
	\$8,043.02	
	07424-1400	

Tia Piccolo
Staff Accountant

EAST GOSHEN TOWNSHIP
 1580 PAOLI PIKE
 WEST CHESTER, PA
 Municipal Authority
 March 2014

Account Title	Acct #	Annual Budget	Month To Date Actual	Year To Date Actual
---------------	--------	---------------	----------------------	---------------------

MUNICIPAL AUTHORITY BEGINNING FUND BALANCE 1,629,050.22

RCSTP BUDGET

REVENUE				
INTEREST EARNED - RCSTP EXPANSION	07341 1020	2,000.00	136.07	396.96
GRANT REVENUE	07392 0800	0.00	0.00	0.00
TOTAL REVENUE		2,000.00	136.07	396.96

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	0.00
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 SEWER SINKING FUND	07492 0550	0.00	0.00	0.00
TRANSFER TO AUTHORITY CAP FUND	07492 0990	0.00	0.00	0.00

TOTAL EXPENSES

RCSTP NET RESULT

TOTAL EXPENSES		0.00	0.00	0.00
RCSTP NET RESULT		2,000.00	136.07	396.96

EAST GOSHEN TOWNSHIP
1580 PAOLI PIKE
WEST CHESTER, PA
Municipal Authority
March 2014

Account Title	Acct #	Annual Budget	Month To Date Actual	Year To Date Actual
OPERATING BUDGET				
REVENUE				
INTEREST EARNINGS	07341 1000	27.00	1.71	3.62
C.C. TAPPING FEES	07364 1100	124,000.00	0.00	20,000.00
R.C. TAPPING FEES	07364 1110	21,444.00	4,000.00	6,000.00
CONNECTION FEES - SEWER	07364 1130	0.00	281.88	845.64
MISCELLANEOUS REVENUE	07380 1000	0.00	141.12	423.36
TRANSFER FROM SEWER OPERATING	07392 0500	0.00	0.00	21,000.00
TOTAL REVENUE		145,471.00	4,424.71	48,272.62
EXPENSES				
ADMINISTRATIVE WAGES	07424 1400	32,768.00	8,043.02	8,043.02
MISCELLANEOUS EXPENSE	07424 3000	4,000.00	0.00	1,450.00
MUNIC.AUTH.-AUDITING	07424 3110	10,800.00	0.00	0.00
ENGINEERING SERVICES	07424 3130	35,525.00	6,887.25	7,278.75
LEGAL SERVICES	07424 3140	7,000.00	700.00	1,500.00
M.C.-DVRFA-DEBT SERVICE	07471 1000	22,120.00	0.00	0.00
M.C.-DVRFA-INTEREST PAYMIN	07472 1000	5,115.00	0.00	0.00
M.C.-DVRFA-INTEREST PAYMIN	07472 1010	0.00	0.00	0.00
TOTAL EXPENSES		117,328.00	15,630.27	18,271.77
OPERATING NET RESULT		28,143.00	(11,205.56)	30,000.85

EAST GOSHEN TOWNSHIP
 1580 PAOLI PIKE
 WEST CHESTER, PA
 Municipal Authority
 March 2014

Account Title	Acct #	Annual Budget	Month To Date Actual	Year To Date Actual
---------------	--------	---------------	----------------------	---------------------

CAPITAL BUDGET

REVENUE

LOAN PROCEEDS-SEWER PROJECT	07393 1001	0.00	0.00	0.00
TRANSFER FROM SEWER CAP RESERVE	07392 0900	0.00	0.00	0.00

TOTAL REVENUE

0.00 0.00 0.00

EXPENSES

MARYDELL PUMP STATION - ENGINEER	07425 1000	0.00	0.00	0.00
MARYDELL PUMP STATION -CONSTRUCTION	07425 2000	0.00	0.00	0.00
MANHOLE COVER REPLACEMENTS	07424.7405	0.00	0.00	0.00
C.C. CAPITAL - COLLECTION	07424.7420	0.00	0.00	0.00
LOCHWOOD ABANDONMENT ENGINEER	07424 7475	0.00	0.00	0.00
LOCHWOOD ABANDONMENT CONSTRUCTION	07424 7476	0.00	0.00	0.00
LOCHWOOD ELIMINATION PHASE 2	07424 7477	0.00	0.00	0.00
HERSHEY MILL STATION - ENGINEER	07426 1000	0.00	0.00	0.00
HERSHEY MILL STATION - CONSTRUCTION	07426 2000	0.00	0.00	0.00
RESERVE PUMP STATION - ENGINEER	07427 1000	0.00	0.00	0.00
RESERVE PUMP STATION - CONSTRUCTION	07427 2000	0.00	0.00	0.00
RESERVOIR PUMP STATION - ENGINEER	07428 1000	75,000.00	4,431.25	15,118.75
RESERVOIR PUMP STATION CONSTRUCTION	07428 2000	0.00	0.00	0.00

TOTAL EXPENSES

75,000.00 4,431.25 15,118.75

CAPITAL NET RESULT

(75,000.00) (4,431.25) (15,118.75)

MUNICIPAL AUTHORITY ENDING FUND BALANCE

1,613,549.48

East Goshen Township General Ledger

Report Date 04/02/14

GL Transaction Details

PAGE 1

Acct #	Per	Src Trx #	Debits	Credits	Beg/End Bal	Date	Check/Ref #	ID #	Name/Description
07341-1000					0.00				
		INTEREST EARNINGS							
	1401	JE 41027		0.58		02/04/14	INTEREST		INTEREST EARNED JANUARY 2014 07 FUND
			0.00	0.58	-0.58				
	1402	41391		1.33		03/04/14	INTEREST		INTEREST EARNED FEBRUARY 2014 07100.1000
			0.00	1.33	-1.91				
	1403	41840		1.71		04/01/14	INTEREST		INTEREST EARNED MARCH 2014 07 FUND
			0.00	1.71	-3.62				
			0.00	3.62	-3.62				
07341-1020					0.00				
		INTEREST EARNED - RCSTP EXPANSION							
	1401	41028		137.33		02/04/14	INTEREST		INTEREST EARNED JANUARY 2014 07 CONSTRUCTION FUND
			0.00	137.33	-137.33				
	1402	41392		123.56		03/04/14	INTEREST		INTEREST EARNED FEBRUARY 2014 07 CONSTRUCTION FUND
			0.00	123.56	-260.89				
	1403	41841		136.07		04/01/14	INTEREST		INTEREST EARNED MARCH 2014 07 CONSTRUCTION FUND
			0.00	136.07	-396.96				
			0.00	396.96	-396.96				
07364-1100					0.00				
		C.C. TAPPING FEES							
	1401	CR 40976		12,600.00		01/31/14	3034	8069	1 GOSHEN MEADOWS INVESTORS L.P.
			0.00	12,600.00	-12,600.00				
	1402	41258		5,400.00		02/24/14	3553	8069	1 GOSHEN MEADOWS INVESTORS L.P.
		RE 41263		2,000.00		02/24/14	41263 1		TAP IN FEE - 211 ELLIS LANE
			0.00	7,400.00	-20,000.00				
			0.00	20,000.00	-20,000.00				
07364-1110					0.00				
		R.C.TAPPING FEES							
		41280		2,000.00		02/25/14	41280 1		TAP IN FEE-903 SORRELL HILL LT2
			0.00	2,000.00	-2,000.00				
	1403	41553		2,000.00		03/13/14	41553 1		TAP IN FEE FOR 909 SORRELL LT4
		41608		2,000.00		03/17/14	41608 1		TAP IN FEE-905 SORRELL LOT 3
			0.00	4,000.00	-6,000.00				

East Goshen Township General Ledger

Report Date 04/02/14

GL Transaction Details

PAGE 2

Acct #	Per	Src Trx #	Debits	Credits	Beg/End Bal	Date	Check/Ref #	ID #	Name/Description
			0.00	6,000.00	-6,000.00				
07364-1130	CONNECTION FEES - SEWER				0.00				
1402	CR	41044		423.00		02/04/14	350	8035	1 JACOBS, ROBERT & CHERYL
		41124		423.00		02/14/14	774	8033	1 GEORGE SMITH & CHRISTINA CONLE
	JE	41045	141.12			02/04/14	PINE ROCK		ANNUAL PINE ROCK INSTALLMENT
		41125	141.12			02/14/14	PINE ROCK		ANNUAL PINE ROCK INSTALLMENT
			282.24	846.00	-563.76				
1403	CR	41402		423.00		03/04/14	2307	8034	1 STOFFLET, MICHAEL
	JE	41407	141.12			03/04/14	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				
1402		41045		141.12		02/04/14	PINE ROCK		ANNUAL PINE ROCK INSTALLMENT
		41125		141.12		02/14/14	PINE ROCK		ANNUAL PINE ROCK INSTALLMENT
			0.00	282.24	-282.24				
1403		41407		141.12		03/04/14	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				
1401		40674		1,000.00		01/08/14	DEPOSIT		DEPOSIT \$ INTO MA GENERAL
		40747		20,000.00		01/14/14	XFER		FROM 05 FUND
									XFER \$ FROM SEWER TO MA TO
									COVER EXPENSES
			0.00	21,000.00	-21,000.00				
			0.00	21,000.00	-21,000.00				
07424-1400	ADMINISTRATIVE WAGES				0.00				
1403	CD	41815	8,043.02			03/31/14	2237		425 EAST GOSHEN TOWNSHIP - GENERAL
									1ST QTR.2014 MUN.AUTH. REIMBURSM
			8,043.02	0.00	8,043.02				
			8,043.02	0.00	8,043.02				
07424-3000	MISCELLANEOUS EXPENSE				0.00				
1401		40597	500.00			01/06/14	2228	2737	DEP - COMMONWEALTH OF PA
									NPDES PERMITS - CHAPTER 92A 2014
			950.00			01/06/14	2229	2132	PENNSYLVANIA MUNICIPAL AUTHORITIES ASSOC
									2014 ACTIVE MEMBERSHIP DUES
			*** 1,450.00	0.00	***				

East Goshen Township General Ledger

Report Date 04/02/14

GL Transaction Details

PAGE 3

Acct #	Per	Src Trx #	Debits	Credits	Beg/End Bal	Date	Check/Ref #	ID #	Name/Description
			1,450.00	0.00	1,450.00				
			1,450.00	0.00	1,450.00				
07424-3130					0.00				
		40653	-663.75			01/06/14	2224		1052 PENNONI ASSOCIATES INC. VOID CK. DUE TO PRINTER PROBLEM
		40743	663.75			01/14/14	2230		1052 PENNONI ASSOCIATES INC. SERVICES THRU 12/8/13 GENERAL S
	JE	40746		1,845.00		01/14/14	REFUND		PENNONI REFUND DUE TO DUPLICATE PAYMENT
			0.00	1,845.00	-1,845.00				
1402	CD	41103	2,236.50			02/11/14	2233		1052 PENNONI ASSOCIATES INC. SERVICES THROUGH 1/12/14 GEN.SER
			2,236.50	0.00	391.50				
1403		41540	6,887.25			03/12/14	2236		1052 PENNONI ASSOCIATES INC. SERVICES THRU 2/9/14 2013 CHAP.
			6,887.25	0.00	7,278.75				
			9,123.75	1,845.00	7,278.75				
07424-3140					0.00				
		1402	41310	800.00		02/27/14	2234		528 GAWTHROP GREENWOOD & HALSTED LEGAL SERVICES - NOV.2013 GEN.AU
			800.00	0.00	800.00				
1403		41540	700.00			03/12/14	2235		528 GAWTHROP GREENWOOD & HALSTED LEGAL SERVICE - FEB.2014 GEN.AUT
			700.00	0.00	1,500.00				
			1,500.00	0.00	1,500.00				
07424-7460					0.00				
		1401	40739	1,290.00		01/14/14	10012		2695 BRICKHOUSE ENVIRONMENTAL LOCHWOOD CHASE PROJECT - DEC.201
			40744	-1,290.00		01/14/14	10012		2695 BRICKHOUSE ENVIRONMENTAL VOID CK. - INCORRECT CASH ACCT.U
			40745	1,290.00		01/14/14	2231		2695 BRICKHOUSE ENVIRONMENTAL LOCHWOOD CHASE PROJECT - DEC. 20
	JE	40820		1,290.00		01/22/14	DEPOSIT		DEPOSIT TO REIMBURSE 07 MA FOR 05 EXPENSE
			1,290.00	1,290.00	0.00				
			1,290.00	1,290.00	0.00				

East Goshen Township General Ledger

Report Date 04/02/14

GL Transaction Details

PAGE 4

Acct #	Per	Src Trx #	Debits	Credits	Beg/End Bal	Date	Check/Ref #	ID #	Name/Description
07428-1000		RESERVOIR PUMP STATION - ENGINEER			0.00				
	1402 CD	41107	10,687.50			02/11/14	10013		1052 PENNONI ASSOCIATES INC. SERV.THROUGH 1/12/14 RESERVE PS
			10,687.50	0.00	10,687.50				
	1403	41541	4,431.25			03/12/14	10014		1052 PENNONI ASSOCIATES INC. SERV.THRU 2/9/14 RESERV.RD. PS
			4,431.25	0.00	15,118.75				
			15,118.75	0.00	15,118.75				
Beg Bal		0.00	36,948.88	52,227.94-15279.06					



**CONESTOGA-ROVERS
& ASSOCIATES**

410 Eagleview Boulevard, Suite 110
Exton, Pennsylvania 19341
Telephone: (610) 321-1800 Fax: (610) 321-2763
www.CRAworld.com

MEMORANDUM

TO: Rick Smith, East Goshen Township Manager REF. NO.: 085667

FROM: Scott Bush, PWS DATE: 3-20-2014

CC: Mike Ellis, Pennoni

RE: **Bog Turtle Habitat Assessment for Proposed Sewer Force Main**

CRA conducted a habitat assessment on March 19, 2014 to determine the presence or absence of habitat suitable to support bog turtles (*Glyptemys muhlenbergii*) along the currently proposed alignment of the force main between Reservoir Road and the existing sewer plant off Town Drive in East Goshen Township, Chester County, Pennsylvania. The proposed alignment and a sketch of the wetlands along the route are shown on the attached preliminary drawings prepared by Pennoni. Areas shown in green are emergent wetlands, areas in brown are forested wetlands, areas in blue are ponds and streams, and areas circled in red are core habitat areas that could potentially support bog turtles. It should be noted that the USFWS and PFBC policies regarding habitat assessments dictate that if a wetland contains areas of suitable habitat, then the entire wetland is considered as bog turtle habitat even though some portions of the wetland might provide sub-optimal habitat.

CRA identified several wetlands along the alignment that contain habitat suitable to support bog turtles based on the vegetation, soils, and hydrology present. This includes Wetlands 1, 6, 7, and 8 as shown on the attached drawing. While in some cases the entire wetland may not be suitable bog turtle habitat, the wildlife agencies will require avoidance of these wetlands or demonstration that bog turtles are absent within these wetlands before any potential impacts would be approved.

Based on these findings, we recommend the following:

Determine an alternate access route to the eastern terminus of the force main that not impact Wetland 1 or areas near Wetland 1. Potential alternate access routes include the old farm lane to the north and a temporary crossing from the west across Ridley Creek. If any potential impacts to Wetland 1 are proposed, the USFWS and PFBC would have to be consulted and Phase 2 Survey / Phase 3 Trapping surveys may be required.

For the pump house site located at the western terminus of the project, directionally drill beneath the creek between the existing foot bridge and the Strasburg Road bridge to avoid Wetland 7. It is likely that avoidance and protection measures will be required including the installation of a turtle barrier fence and oversight of the crossing by a bog turtle biologist.

We recommend completing coordination of the Phase 1 report with USFWS as soon as possible to determine what methods will be acceptable to USFWS at these various locations. With the avoidance planning discussed in this memo, we believe that Phase 2 / Phase 3 surveys will likely not be required.

ACT 537 PLAN UPDATE REVISION

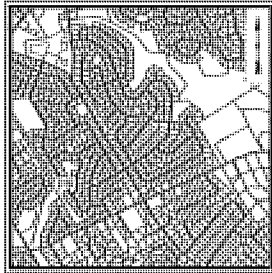
RESERVOIR ROAD PUMP STATION AND FORCE MAIN

EAST GOSHEN TOWNSHIP - CHESTER COUNTY, PENNSYLVANIA
 ORIG SUBMISSION DATE

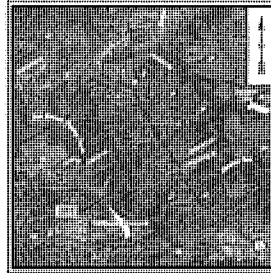
PREPARED FOR:
 OWNER/DEVELOPER
EAST GOSHEN MUNICIPAL AUTHORITY
 1580 PAOLI PIKE
 WEST CHESTER, PA 19380-6199
 (610) 692-7171



SOILS MAP
 Scale: 1" = 2000'



LOCATION MAP
 Scale: 1" = 1 MILE



USGS MAP
 Scale: 1" = 2000'

PREPARED BY:
PENNONI ASSOCIATES INC.



Christiana Executive Campus
 121 Continental Drive, Suite 207
 Newark, DE 19713-4310
 T 302.655.4451
 F 302.654.2895



CALL BEFORE YOU DIG
 BEFORE YOU DIG ANYWHERE IN PENNSYLVANIA
 CALL 848-888-8888
 PA ACT 201 OF 1998 PROVIDES THAT WORKING DAYS
 NOTICE REQUIREMENTS APPLY TO ALL UTILITIES
 EXCEPT PENNSYLVANIA GAS-CALL SYSTEM, P.C.

NOT FOR CONSTRUCTION

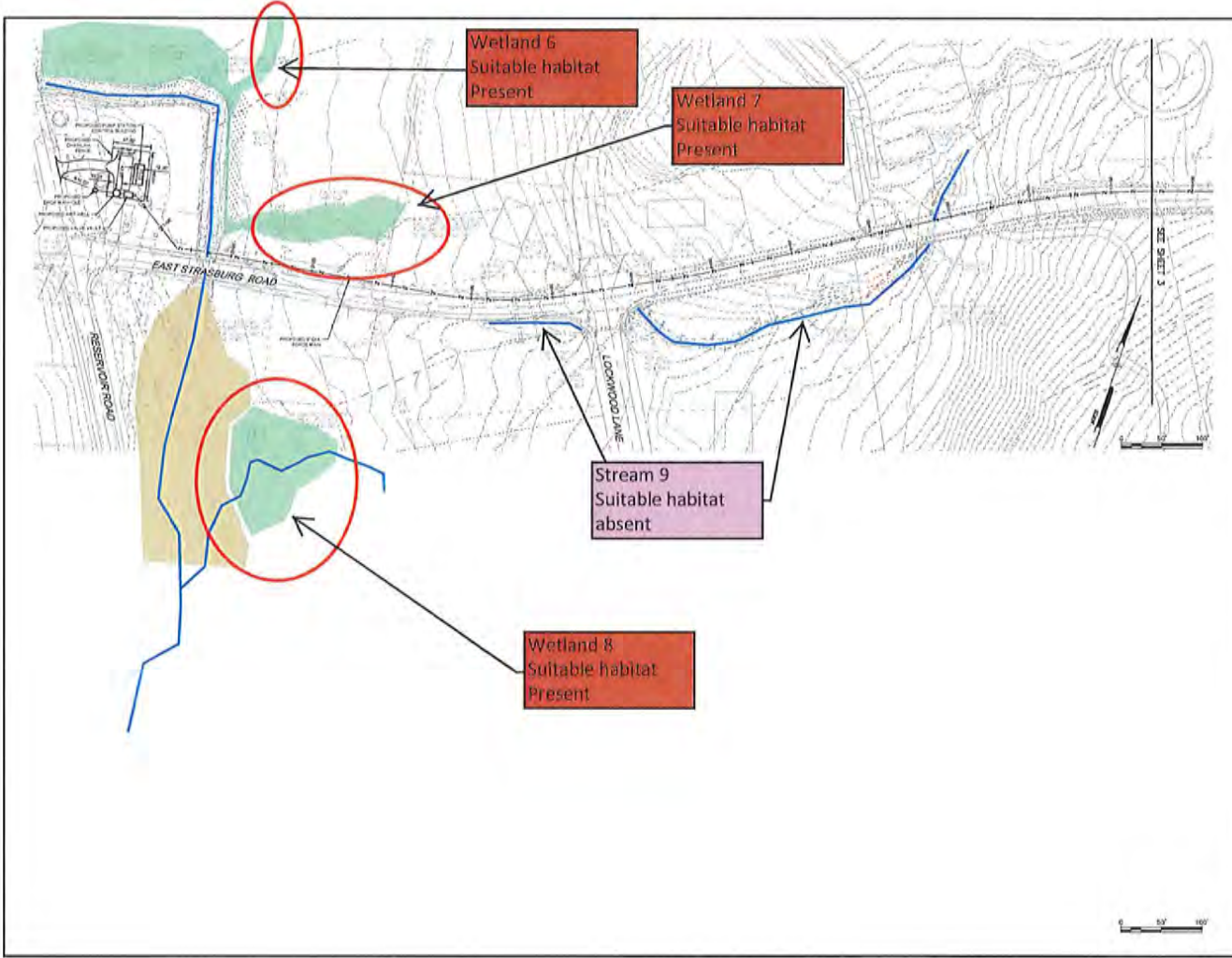
ENGINEERS • SURVEYORS • PLANNERS • LANDSCAPE ARCHITECTS

<small>ALL WORKMAN AND MATERIALS TO BE USED IN ACCORDANCE WITH THE SPECIFICATIONS AND CONTRACT DOCUMENTS.</small>	<small>DATE: 11/14/14</small> <small>BY: [Signature]</small>
-------------------------------------------------------------------------------------------------------------------	-----------------------------------------------------------------

ACT 537 PLAN UPDATE REVISION
 Reservoir Road Pump Station and Force Main
 East Goshen Township, Chester County, PA
 COVER SHEET
 EAST GOSHEN MUNICIPAL AUTHORITY
 1580 PAOLI PIKE
 WEST CHESTER, PA 19380-6199

PROJECT NO. EGWA1307
 SHEET 1 OF 9
 DATE 2014-01-14
 M.F.

CM0001



Pennoni
 Engineers • Surveyors • Planners • Landscape Architects

AS PREPARED BY: []
 AS CHECKED BY: []
 DATE: []

ACT 537 PLAN UPDATE REVISION
 RESERVOIR ROAD AT EAST STRASSBURG ROAD
 PILOT PLAN 1
 EAST DESIGN MUNICIPAL AUTHORITY

EGMA1207
 REV 2 OF 9

DATE: 2014-04-11
 DRAWN BY: []
 CHECKED BY: []

CM1001



Pennoni Associates Inc.
 Engineers • Surveyors • Planners • Landscape Architects



DATE	NO.	REVISIONS

ALL WORKMANSHIP SHALL BE IN ACCORD WITH THE CURRENT EDITIONS OF THE PENNSYLVANIA BOARD OF SURVEYING AND PLANNING BOARD OF LANDSCAPE ARCHITECTURE.

ACT 537 PLAN UPDATE REVISION
 REVISION NO. 1
 WEST CHESTER DRIVE
 WEST CHESTER, PA
PILOT PLAN 2
 EAST COSHEM MUNICIPAL AUTHORITY
 1580 PAZI PKE.
 WEST CHESTER, PA 19380-2118

PREPARED BY: EDWARD J. EDWARDS
 CHECKED BY: EDWARD J. EDWARDS
 DATE: 08/14/14

PROJECT NO.	EDWA1307
SHEET NO.	3 OF 9
DATE	08/14/14
BY	ME
CHECKED BY	M.E.
CM1002	

PENNONI ASSOCIATES INC. IS AN EQUAL OPPORTUNITY EMPLOYER. ALL WORKMANSHIP SHALL BE IN ACCORD WITH THE CURRENT EDITIONS OF THE PENNSYLVANIA BOARD OF SURVEYING AND PLANNING BOARD OF LANDSCAPE ARCHITECTURE.



Pennoni Associates Inc. *Engineers • Surveyors • Planners • Landscape Architects*



NO.	DATE	BY	DESCRIPTION

ALL WORKMANSHIP SHALL BE IN ACCORD WITH THE APPROPRIATE PROFESSIONAL STANDARDS AND PRACTICES OF THE STATE OF PENNSYLVANIA.

ACT 537 PLAN UPDATE REVISION
 REVISION TO ACT 537 PLAN FOR EAST STREMLING ROAD
 WEST CHESTER, PA

PLOT PLAN 3

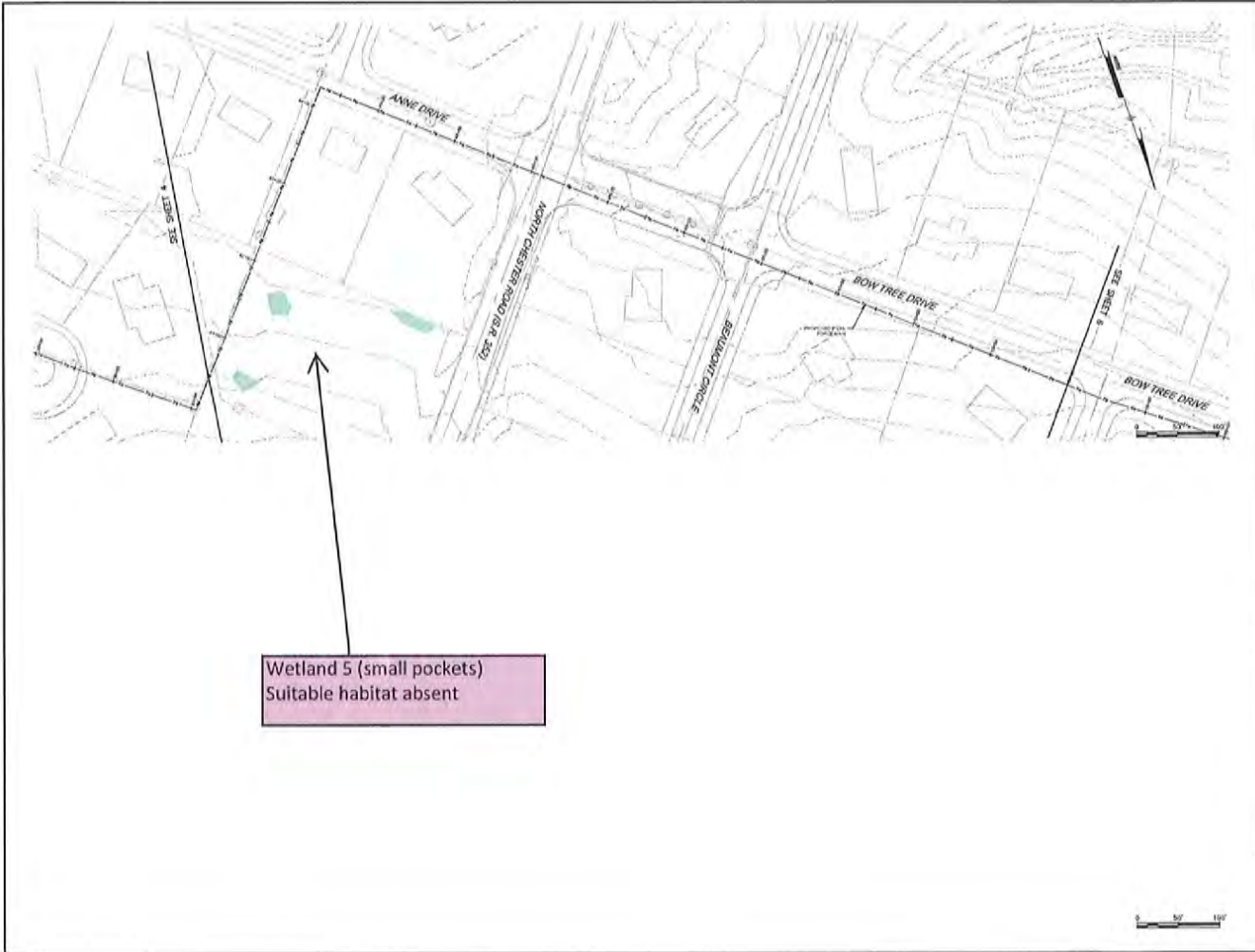
EAST COSSHEN MUNICIPAL AUTHORITY
 1080 PAUL PINE
 WEST CHESTER, PA 19380-2158

PROPOSED DRIVEWAY

PROJECT NO.	EDWA1307
SHEET	4 OF 9
DATE	2014-01-14
BY	MSE
CHECKED BY	MSE

CM1003

VERTICAL CURVES OBTAINED FROM PENNSYLVANIA DEPARTMENT OF TRANSPORTATION. SOURCE: 1990, 1995, 2000, 2005, 2010. PENNSYLVANIA DEPARTMENT OF TRANSPORTATION, "2014 ROADWAY DESIGN MANUAL".



Wetland 5 (small pockets)
 Suitable habitat absent

Pennoni Associates Inc. Engineers • Surveyors • Planners • Landscape Architects

Civil Engineer, Registered Professional Engineer, State of Tennessee, License No. 32023-0001
 ACT 537 PLAN UPDATE REVISION
 FEBRUARY 2025
 EAST COSSON MUNICIPAL AUTHORITY
 1000 N. MAIN ST. #200
 COSSON, TENNESSEE, TN 37024-4318

PROJECT NO. EGM1307

DATE 02/25/25

SCALE 5/8" = 1'

CM1004

PLOT PLAN 4

Pennoni



Pennoni Associates Inc. *Engineers • Surveyors • Planners • Landscape Architects*



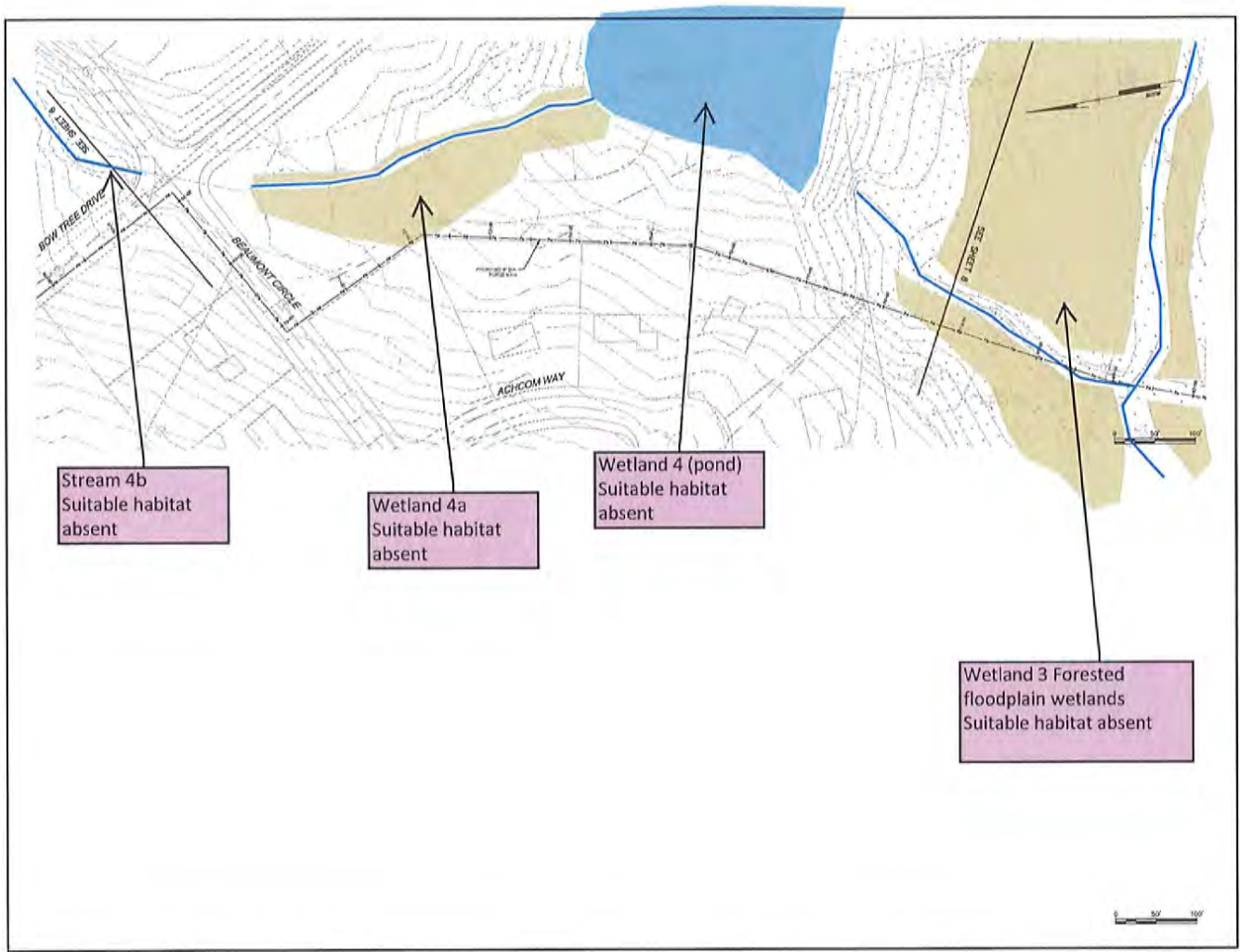
NO.	DATE	BY

ALL INFORMATION CONTAINED HEREIN IS UNCLASSIFIED EXCEPT WHERE SHOWN OTHERWISE

ACT 637 PLAN UPDATE REVISION
 HICKORY ROAD AT EAST SPRINGFIELD ROAD
 WEST CHESTER, PA
 PLOT PLAN 5
 EAST COSHEN MUNICIPAL AUTHORITY
 1380 PA. P.E.C. NO. 1108
 WEST CHESTER, PA

Professional Engineer
 License No. 1108
 State of Pennsylvania

PROJECT NO.	EGMA1307
DATE	5/18/14
SCALE	1" = 30'
DATE	2014-01-14
DESIGNED BY	WJC
CHECKED BY	WJC
CM1005	



Stream 4b
Suitable habitat
absent

Wetland 4a
Suitable habitat
absent

Wetland 4 (pond)
Suitable habitat
absent

Wetland 3 Forested
floodplain wetlands
Suitable habitat absent



Engineers • Surveyors • Planners • Landscape Architects

DATE	NO.	DESCRIPTION

East Codden Municipal Authority
1200 N. 10th St.
East Codden, PA 17045-1010

ACT 537 PLAN UPDATE REVISION
REVISION NO. 6
PLOT PLAN 6
EAST CODDEN MUNICIPAL AUTHORITY
1200 N. 10th St.
East Codden, PA 17045-1010

PROJECT NO.
EGM1307
DATE
7/9/9

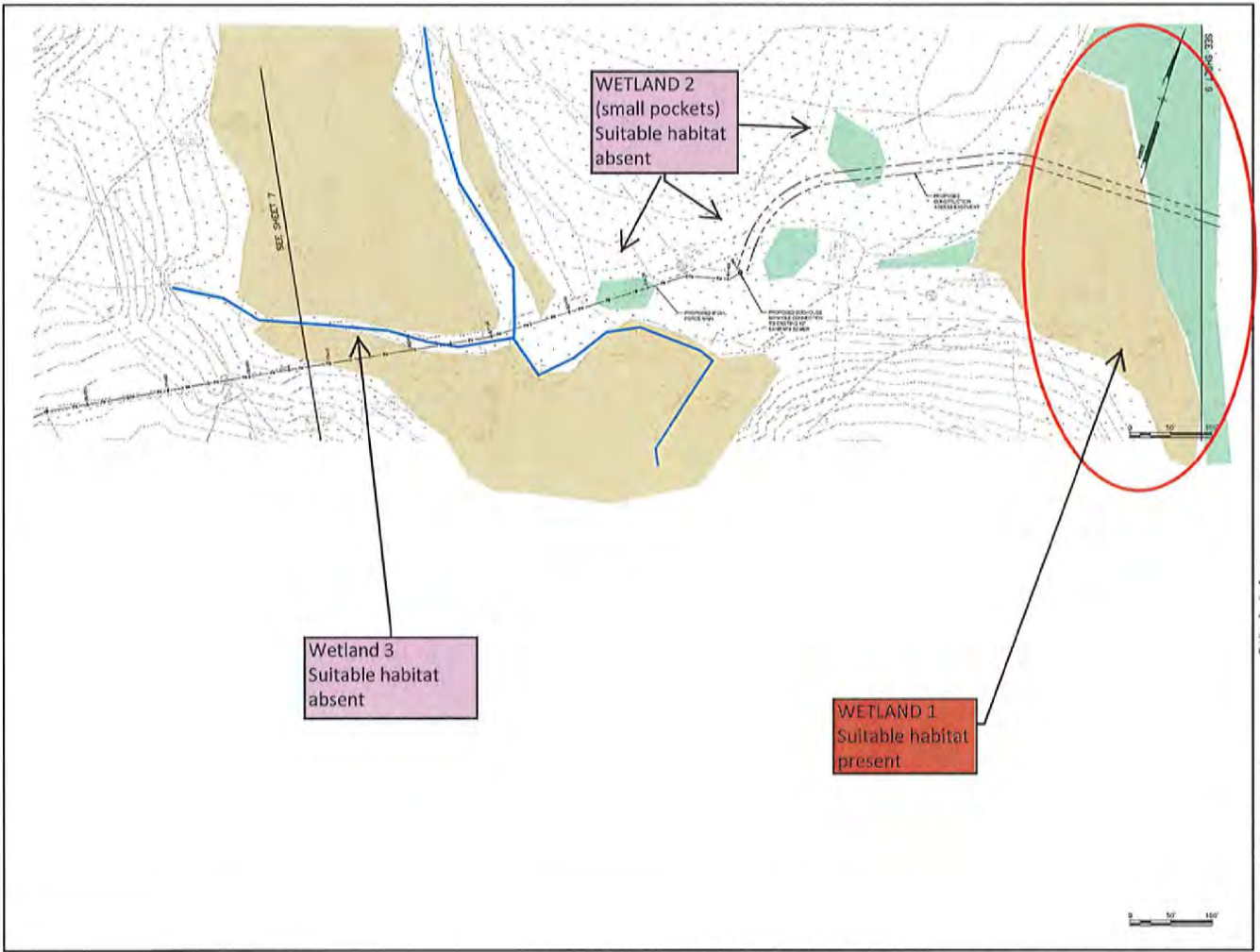
SCALE
1" = 50'
DATE
2014-02-14
DRAWN BY
M.E.

CM1006

Pennoni Associates Inc.

East Codden Municipal Authority
1200 N. 10th St.
East Codden, PA 17045-1010

Engineers • Surveyors • Planners • Landscape Architects



Pennoni Associates Inc.
 Engineers • Surveyors • Planners • Landscape Architects

Pennoni

DATE	ISSUE	REVISION	BY

Division Director
 Project No. 2014-01-14

ACT 537 PLAN UPDATE REVISION
 REDWOOD ROAD AT EAST STRASBURG ROAD
 PLOT PLAN 7
 EAST OGDEN MUNICIPAL AUTHORITY
 11297 N.W. 11TH AVE.
 SUITE 200
 BOCA RATON, FL 33433

EGMA1307
 B of D

DATE: 11/14/14
 SCALE: 1" = 50'
 SHEET: 10 OF 14

CM1007



Pennoni

Pennoni Associates Inc.
Engineers • Surveyors • Planners • Landscape Architects

300 West Street, Suite 200
Philadelphia, PA 19107 • 215-592-2000

ACT 537 PLAN UPDATE REVISION
KOSCIUSKO ROAD AT EAST SPRINGFIELD ROAD
WEST CHESTER, PA

PLOT PLAN 8
EAST COSHEN MUNICIPAL AUTHORITY
11001 ROAD #102
WEST CHESTER, PA 19380

NO. OF SHEETS	8
SHEET NO.	8
DATE	09/29
SCALE	AS SHOWN

CM1008

DATE: 2014-04-11
SCALE: 1" = 50'
DRAWN BY: MKK
CHECKED BY: MKK

PROJECT NO.: EGMA1307

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

To: Municipal Authority
From: Mark Miller
Re: Portable Meters

I would like your approval to replace two of the portable flow meters. The two that we would like to replace have been in service for 7 years, parts are no longer available.

I received a quote from North East Technical Sales to replace both meters for \$5,941.00 which includes the software and USB cables.

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

April 16, 2014

To: Municipal Authority
From: Mark Miller
Re: March 2014 Monthly Report

Meters: All meters were read on a daily basis. We have pulled the portable meters, they have been sent out for calibration.

C.C. Collection: We televised 2000 feet of pipe in Supplee Valley along the creek. We also repaired a dozen cleanout pipes that were damaged over the winter.

We visited all the pump stations on a daily basis. We experienced a problem at the Hershey Mill Pump Station when the main controller malfunctioned. In order to keep the station operational we had to operate the VFD's in the bypass mode.

R.C. Collection: The Hunt Country pump station was visited on a routine basis with not problems to report.

R.C. Plant: We have started pulling the wet well pumps out for routine maintenance, two have been completed, and the final one will be pulled this week. Once they are done we will begin to pull the SBR pumps.

Alarms: We responded to 27 alarms for the month of March.

PA One Calls: We received 78 PA One calls in March.

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

March 26, 2014

To: Municipal Authority
From: Mark Miller
RE: Ashbridge Force Main

On 3-16-2014 the Police Dept. called to report water coming up thru Manley Road. When I arrived at the intersection of Manley Road and Pheasant Run Road it was apparent that the 6" force main was broken.

We called in a PA One call and began to saw cut the roadway, the roadway was 12" thick. We dug most of the day but were unable to locate, we barricaded the area and came back Monday. Pump trucks were brought in to pump and haul thru the night.

On Monday we located the break and made repairs. The Force Main was put back in service at 2:30 pm.



Crew Saw cutting the roadway

↓ Large Rock

↙ Large Rock ↘

Brake Pipe





Broken Pipe



Kevin + Dusty installing
repair clamps
and pipe



Pipe repaired



Monthly Operations Report: March 2014

Treatment Process Operation

During February 2014, there were no exceedances of the final effluent discharge limitations for outfall 001 and no discharge from Outfall 002. Table 1 illustrates the final effluent composite sample data reported for the February 2014 eDMR.

Table 1

February 2014 - Final Effluent - Out Fall 001											
NPDES Permit Discharge Limitations	Flow	CBOD ₅		TSS		NH ₄ -N		Phosphorus, Total , mg/L		Fecal Coliform	
	MGD Average	mg/L	lbs/ month	mg/L	lbs/ month	mg/L	lbs/ month	mg/L	lbs/ month	Geo Mean	Geo Mean
	0.75	20	125	21	131	7	44	0.5	3	200	1,000
	Instantaneous Maximum	40		42							
Sample Date											
February 4, 2014	0.383			7	22	0.616	1.97	0.35	1.12	1	0.0000
February 11, 2014	0.490	2.8	11.4	5	20	0.781	3.19	0.50	2.04	1	0.0000
February 18, 2014	0.444	2.1	7.8	5	19	2.01	7.44	0.27	1.00	1	0.0000
February 25, 2014	0.541	2.0	9.0	2	9	1.20	5.41	0.11	0.50	1	0.0000
Average	0.4645	2.3	9.4	5	18	1.152	4.50	0.31	1.16	1	0.0000
Minimum	0.3830	2.0	7.8	2	9	0.616	1.97	0.11	0.50	1	0.0000
Maximum	0.5410	2.8	11.4	7	22	2.010	7.44	0.50	2.04	1	0.0000

The monthly average total phosphorus concentration was 0.31 mg/L as compared to the discharge limitation of 0.5 mg/L. During the month, the final effluent total phosphorus concentration discharged ranged from 0.11 mg/L to 0.50 mg/L.

There was no discharge to Applebrook, Outfall 002, during February 2014.

Table 2 illustrates the influent wastewater pollutant loadings for February 2013. The influent loadings remained within the treatment facility design loadings.



Table 2

February 2014 - Influent Wastewater											
Design Basis	Flow	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
	MGD Average	335	2,098	320	2,001	32	200	48	301	9.1	57
Sample Date											
February 4, 2014	0.424	211	745	112	396	23.1	82	67.2	237	4.7	17
February 11, 2014	0.509	299	1,056	232	820	23.2	82	35.1	124	5.2	18
February 18, 2014	0.408	228	805	220	777	34.0	120	49.2	174	5.0	18
February 25, 2014	0.484	146	516	200	707	22.4	79	34.9	123	3.7	13
Average	0.4562	221	781	191	675	25.7	91	46.6	165	4.7	16
Minimum	0.4083	146	516	112	396	22.4	79	34.9	123	3.7	13
Maximum	0.5089	299	1056	232	820	34.0	120	67.2	237	5.2	18

During the month of March 2014, there were no exceedances of the permitted effluent discharge limitations. Table 3 presents the final effluent data for the month of March 2014.

Table 3

March 2014 - Final Effluent - Out Fall 001											
NPDES Permit Discharge Limitations	Flow	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
	MGD Average	20	125	21	131	7	44	0.5	3	200	1,000
	Instantaneous Maximum	40		42							
Sample Date											
March 4, 2014	0.454	2.1	8.0	3	11	3.08	11.66	0.25	0.95	1	0.0000
April 11, 2014	0.528	7.5	33.0	7	31	3.88	17.09	0.63	2.77	1	0.0000
March 18, 2014	0.424	2.2	7.78	2	7	5.59	19.77	0.24	0.85	1	0.0000
March 25, 2014	0.473	4.4	17.4	3	12	1.51	5.96	0.41	1.62	1	0.0000
Average	0.4698	4.1	16.5	4	15	3.515	13.62	0.38	1.55	1	0.0000
Minimum	0.4240	2.1	7.8	2	7	1.510	5.96	0.24	0.85	1	0.0000
Maximum	0.5280	7.5	33.0	7	31	5.590	19.77	0.63	2.77	1	0.0000



During March 2014, there was no discharge to Applebrook.

The influent wastewater pollutant concentrations and loading entering the wastewater treatment facility remained within the design concentrations and loadings. Composite samples are collected at the influent doghouse manhole and influent wet well. The influent flow meter reading is collected from the influent flow meter located prior to the Screening Building, excluding the internal recycle flows.

Table 4 presents the available pollutant data for the influent wastewater collected at the doghouse manhole.

Table 4

March 2014 - Influent Wastewater											
Design Basis	Flow	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
	MGD Average	335	2,098	320	2,001	32	200	48	301	9.1	57
Sample Date											
March 4, 2014	0.464	160	619	136	526	25.9	100	36.1	140	4.8	19
April 11, 2014	0.562	177	685	224	867	25.3	98	39.6	153	4.0	15
March 18, 2014	0.446	124	480	44	170	22.4	87	35.7	138	4.3	17
March 25, 2014	0.592	184	712	132	511		0	39.0	151	4.5	17
Average	0.5160	161	624	134	519	24.5	71	37.6	146	4.4	17
Minimum	0.4460	124	480	44	170	22.4	0	35.7	138	4.0	15
Maximum	0.5920	184	712	224	867	25.9	100	39.6	153	4.8	19

Sequencing batch reactors (SBRs) numbered 1, 3 and 4 were in service during the month of January.

Process monitoring of each SBR included ammonia as N, nitrite as N, Nitrate as N, COD, SSV, MLSS and total phosphorus. Foam concentrations remain reduced during the month of March. Increased sludge wasting was continued to maintain lower the MLSS concentrations. The slight increase in wastewater SBR temperatures has contributed to lowering the final effluent ammonia as nitrogen concentration during the last week of March. The effluent remains in compliance with the NPDES Permit discharge parameters.



Daily monitoring of the influent and final effluent 24-hour composites samples for total phosphorus is ongoing. Daily analysis of the final effluent flow equalization grab sample is total phosphorus is ongoing. Sample collection and analysis of the influent wastewater collected at the influent pump station wet well is ongoing.

Addition of aluminum sulfate solution to the SBRs to assist with phosphorus removal continued. The volume of aluminum sulfate solution to the SBRs was remained consistent reduced during March. The addition of soda ash to the SBRs to assist with maintain desired pH concentrations above 7.0 standard units continued during the month. Soda ash addition to the SBRs during March remained consistent around 273 pounds per day.

SBR No. 2 remains out of service as a treatment unit, however, partially filled with MLSS which continuously mixed and aerated. The majority of the contents were transferred to the sludge holding tanks.

The decanter for SBR 3 continued to be periodically observed as being slightly tilted within the water level. The effluent knife valve was routinely closed and the decanter filled with water to assist with lowering the decanter within the water level. The frequency of occurrence ranged from one to several occurrences during the month. The SBR is planned for removal from service during May for inspection.

Flow data:

March 2014		
Flow Meter Location	Total Volume for Month, MGD	Average Daily Flow, gpd
Influent Wastewater to Screening Building	14.474	466,898
Influent Wastewater to SBRs	16.000	516,147
Internal Recycle	1.527	49,248
Treated Effluent to Disc Filters	15.545	501,458
Final Effluent Discharge	15.369	495,774
Applebrook Golf Course	0	0

Chemical Usage:

March 2014		
Chemical	Daily Average	Total Monthly
Soda Ash	273	8,450
Magnesium Hydroxide	0	0
Aluminum Sulfate solution	44.4	1,376
Polymer (centrifuge)	0.86*	14 gallons

*Sixteen (16) days of centrifuge operation



Solids Dewatering and Disposal: March 2014

Sludge Dewatering Summary	
Gallons of sludge dewatered	266,332 gallons
Average Dewatered Total Solids, %	18.5%
Wet Tons	46.92
Dry Tons	8.679
Number of dumpsters	4

**A total of four (4) dumpsters were filled and five (5) dumpsters were removed during March.*

During the month, sludge wasting to the sludge holding tanks and decanting of the sludge holding tanks was ongoing. Process monitoring included pH, total alkalinity and total solids.

Sludge holding tank No. 1 was in service. The level at the beginning of the month was 12.17 feet and the level at the end of the month was 12.91 feet. The initial total solids concentration was 0.81% and ended the month as 1.20% total solids. 340,465 gallons of supernatant were decanted during the month. A total of 350 pounds of soda ash were added during the month for pH adjustment.

Sludge holding tank No. 2 was in service. The level at the beginning of the month was 12.40 feet and the level at the end of the month was 5.37 feet. The initial total solids concentration were 0.98% and ended the month as 0.67% total solids. No supernatant was decanted during the month. A total of 1,200 pounds of soda ash were added during the month for pH adjustment.

Significant Storm/Hydraulic Loading Events

On Saturday and Sunday, March 29th and 30th, the area experienced continuous rainfall. The facility exceeded the average daily design flow of 0.750 MGD on Sunday, March 30th through recording an effluent flow of 0.795 MGD through outfall 001. The effluent clarity remained good and samples compliance samples collected on April 1, 2014 are within permit discharge limitations. A summary of the influent, SBR influent and final effluent flows for March 30th through the 31st is present in Table 5.

Table 5

	Influent, MGD	Influent to SBRs, MGD	Final Effluent outfall 001, MGD
3/29/14	0.564	0.483	0.583
3/30/14	0.795	0.810	0.872
3/31/14	0.561	0.619	0.622



Minor Repairs and Preventative Maintenance

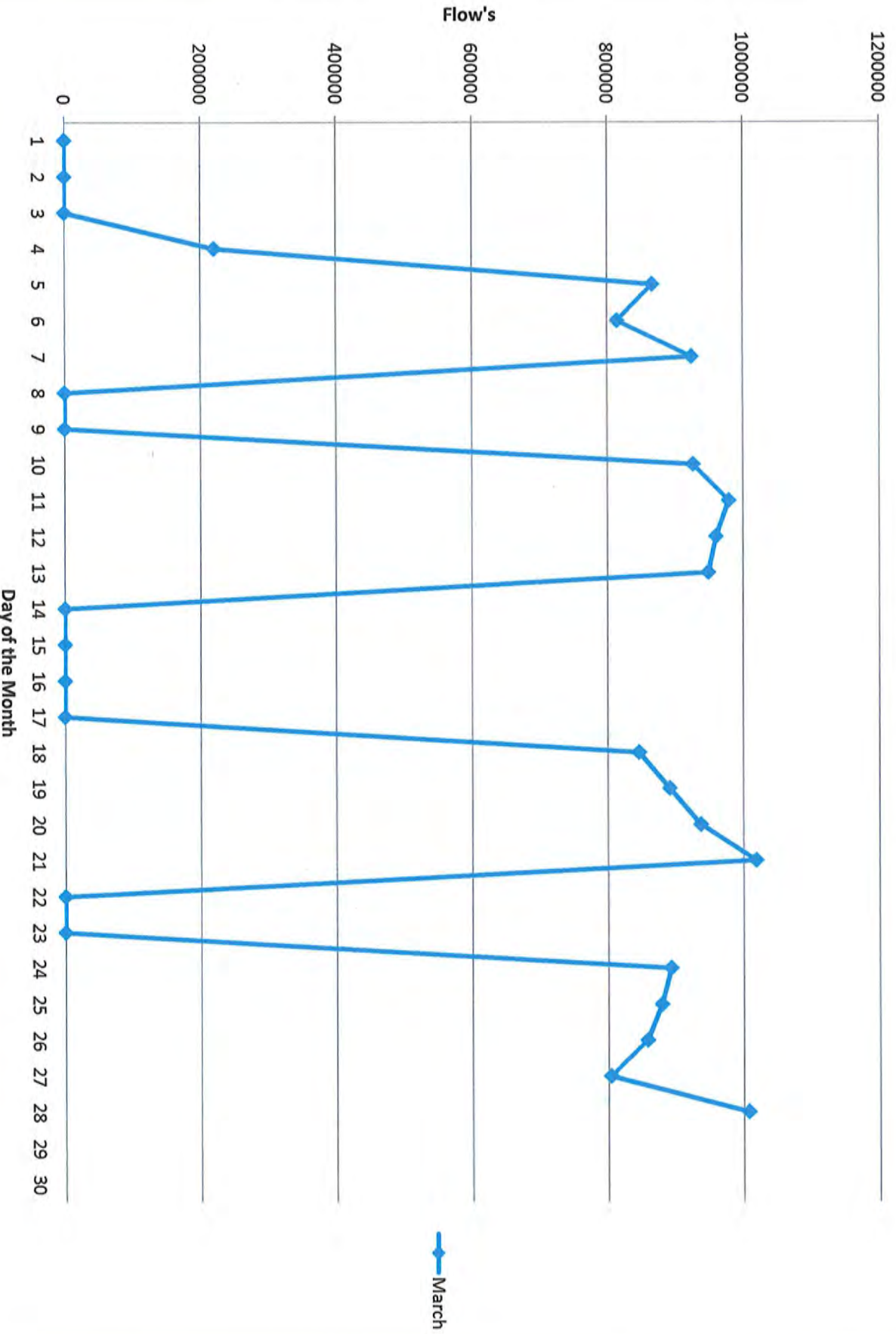
- Replaced a ballast in UV bank Number 2.
- Replaced the spider gear coupling for disc filter number 1
- Removed containment tank wall from the soda ash feed tank area within the blower/Laboratory building.
- Township Staff installed influent pump number 1. Pump was returned to service.
- Township Staff removed influent pump number 3 for inspection and seal replacement.

2014 SUMMARY OF METER READINGS

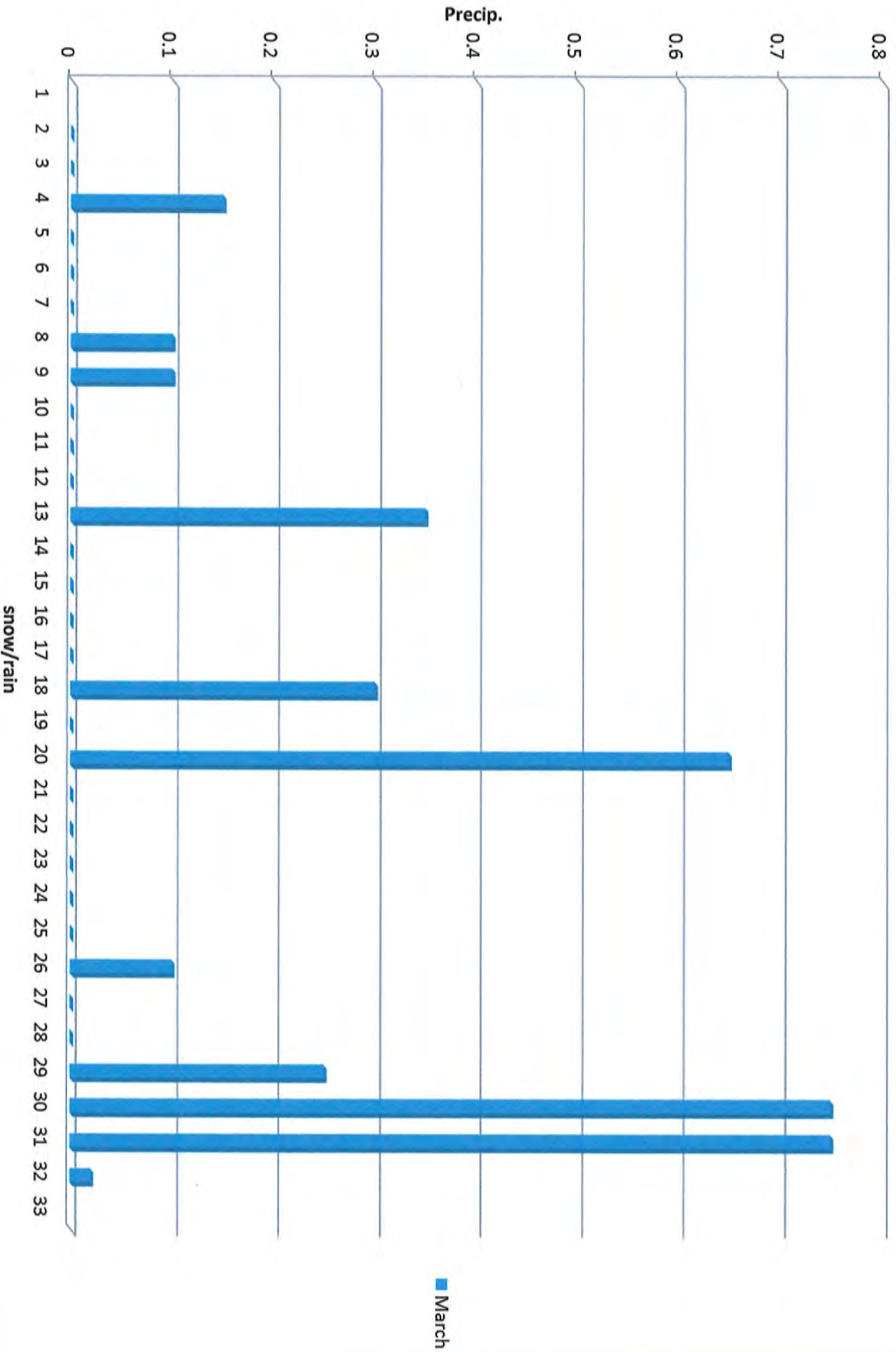
	WESTTOWN WAY	ELLIS LANE	PAOLI PIKE	WILSON DRIVE	SUMMIT	HERSHEY MILL	ASHBRIDGE	HICKS	RESERVOIR	SHERMAN	BARKWAY
JANUARY	1,120,955	112,631	63,436	80,890	24,000			256,116	795,376		
FEBRUARY	1,249,173	138,449	68,472	88,803	24,000			287,831	881,433		
MARCH	1,182,533	126,933	67,479	84,197	24,000	860,074	75,186	291,520	827,109		28,696
APRIL											
MAY											
JUNE											
JULY											
AUGUST											
SEPTEMBER											
OCTOBER											
NOVEMBER											
DECEMBER											
Total Flows											
Monthly Ave	1,776,331	189,007	99,694	126,945	36,000	107,509	9,398	417,234	1,251,959	0	28,696

To
West Goshen 1,360,686

Flowmeters March 2014



March Precip. 3.52- 2014



2013 Monthly Precipitation

