

**AGENDA**  
**EAST GOSHEN TOWNSHIP**  
**BOARD OF SUPERVISORS**

Tuesday, August 6, 2013  
7:00 PM

**CORRECTED**

THE BOARD OF SUPERVISORS WILL MEET IN EXECUTIVE SESSION AT 6:30 PM TO INTERVIEW FOR THE ZONING HEARING BOARD. FORMAL MEETING WILL COMMENCE AT 7:00 PM

1. Call to Order
2. Pledge of Allegiance
3. Moment of Silence – Supervisor Carmen Battavio
4. Ask if anyone is recording the meeting
5. Public Comment – Hearing of Residents (Optional)
6. Chairman’s Report – **Consider appointment to the Vacancy Board**
7. Public Hearings - None
8. Police/EMS Report – None  
Malvern Fire Co. – None  
Fire Marshal – None
9. Financial Report – None
10. Old Business - None
11. New Business
  - a. Consider authorization of New Kent II Escrow Documents and signing of Land Development Plan
  - b. Consider Open Space Plan Update / RFP Responses
  - c. Consider Meeting Room Audio System
  - d. Consider Replacement Copier
  - e. Consider Financial Policies
  - f. Consider Geothermal Engineering
  - g. Consider Staff recommendation for Ashleybrooke Estates Escrow Release #1, #2, #3, and #4
  - h. Consider Staff recommendation for New Kent Apartments Phase I Release
12. Any Other Matter
13. Approval of Minutes
  - a. July 16, 2013
  - b. July 23, 2013
14. Treasurer’s Report
  - a. August 1, 2013
15. Review Action List
  - a. August 6, 2013
16. Correspondence, Reports of Interest
  - a. Acknowledge letter of thanks from residents to Mark Miller and Public Works for work done at Dutton Mill and Goshen Rd.

- b. Acknowledge letter regarding 1423 Garrett Lane
- c. Acknowledge PA Department of Environmental Protection Approval of County-wide Stormwater Management Plan for Chester County
- d. Acknowledge the 2013 second quarter remediation report from Sunoco
- e. Acknowledge Notice of Intent for General NPDES Permit for Goshen Meadows

17. Dates of Importance

Aug 07, 2013	Planning Commission	7:00 PM
Aug 08, 2013	Historical Commission	7:00 PM
Aug 08, 2013	Park Commission	7:00 PM
Aug 08, 2013	Farmers Market	3-7:00 PM
Aug 13, 2013	Police Commission	5:30 PM
	WEGO Police Dept	
Aug 12, 2013	Municipal Authority	7:00 PM
Aug 14, 2013	Conservancy Board	7:00 PM
Aug 15, 2013	Farmers Market	3-7:00 PM
Aug 19, 2013	Commerce Commission	7:00 PM
Aug 19, 2013	Deer Committee	7:00 PM
Aug 20, 2013	Board of Supervisors	7:00 PM
Aug 21, 2013	Police Commission CANCELLED	5:30 PM
	WEGO Police Dept	
Aug 22, 2013	Farmers Market	3-7:00 PM
Aug 26, 2013	Comp Plan Task Force	7:00 PM
Aug 29, 2013	Farmers Market	3-7:00 PM
Sept 02, 2013	Labor Day	
	Office Closed	

Fall 2013 Newsletter Articles Due: September 1  
 Posted to Website: October 1

- 18. Public Comment – Hearing of Residents
- 19. Adjournment

The Chairperson, in his or her sole discretion, shall have the authority to rearrange the agenda in order to accommodate the needs of other board members, the public or an applicant.

# Memorandum

---

East Goshen Township  
1580 Paoli Pike  
West Chester, PA 19380

Voice: 610-692-7171  
Fax: 610-692-8950  
E-mail: [mgordon@eastgoshen.org](mailto:mgordon@eastgoshen.org)

---

Date: 7/24/2013  
To: Board of Supervisors  
From: Mark Gordon, Township Zoning Officer *mlg*  
Re: Hankin Group / New Kent Apartments II Land Dev. Agreements

Board Members,

As you know the Board approved a Land development application for the construction of a new apartment building in the New Kent Apartment Community in February of this year. The Township has received the Land Development and Financial Security Agreement for this LD Plan. Please review and authorize the agreements and sign the LD Plans so the plans can be recorded.

**Draft Motion:**

I move that we authorize the Land Development and Financial Security Agreements and sign the final plans for the approved land development plan of Hankin Group for one new Apartment Building and associated parking within the New Kent Apartment Community.

**BOARD OF SUPERVISORS**  
EAST GOSHEN TOWNSHIP  
CHESTER COUNTY  
1680 PAOLI PIKE, WEST CHESTER, PA 19380-6199

March 25, 2013

**COPY**

The Hankin Group  
Attn: Mr. Neal Fisher  
707 Eagleview Blvd,  
Exton, PA 19341

Re: New Kent Apartments II  
Land Development Application (One new apartment building)  
53-4-76

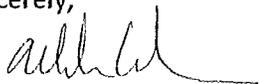
Dear Mr. Fisher:

At their meeting on February 19, 2013 the Board of Supervisors voted unanimously in favor of the following motion:

Mr. Chairman, I move that we recommend that the Board of Supervisors approve the Preliminary /Final Land Development Plan of the Hankin Group to construct one new apartment building and associated parking as depicted within the plans titled New Kent Apartments II, dated 10/9/2012 and last revised on 1/28/2013 with the following conditions:

1. The Applicant shall address all remaining comments outlined in the Township Engineer's review letter dated 1/31/2013 prior to execution and recording of the plans.
2. The applicant will follow all applicable federal, State and Local laws and secure all proper permits prior to construction of the improvements depicted on the plans.
3. The plan shall not be released for recording until escrow agreements and funds for the improvements depicted has been posted with the Township.
4. The applicant shall pay 10% of the sewer tap-in fee to reserve the sewer capacity for the project, prior to the plans being released for recording.
5. The applicant shall pay an Impact fee of \$396.25 per trip for the project prior to the issuance of a building permit.
6. Applicant will address the comments in Fire Marshall's review letter.
7. Applicant shall submit an adequacy letter from the Chester County Conservation District before the plans are released for recording.

Sincerely,



Mark A. Gordon  
Township Zoning Officer

# Memorandum

---

**East Goshen Township**  
**1580 Paoli Pike**  
**West Chester, PA 19380**

Voice: 610-692-7171  
Fax: 610-692-8950  
E-mail: [mgordon@eastgoshen.org](mailto:mgordon@eastgoshen.org)

---

Date: 8/1/2013  
To: Board of Supervisors  
From: Mark Gordon, Township Zoning Officer *mlb*  
Re: Openspace Plan Update / RFP Responses

Dear Board Members:

The Township has received three responses to the Openspace Plan Update RFP from local Openspace and recreation Planners. The responses were from the following planners:

- Simone Collins Landscape Architecture
- Urban Research Development Corporation
- Toole Recreation with Brandywine Conservancy and Natural Lands Trust

Each proposal outlines the planners' approach, scope of work and project schedule as the RFP called for. All consultants have conducted similar plans in the region. The costs for each proposal are:

<b>Simone Collins Landscape Architecture:</b>	<b>\$44,980</b>
<b>Urban Research Development Corporation:</b>	<b>\$36,700</b>
<b>Toole Recreation:</b>	<b>\$26,370</b>

In my analysis of the proposals the Toole Recreation proposal appears to be aligned most closely with the direction East Goshen Township wishes to pursue in relation to the utilization of the Township Parks and Openspace resources. The Toole proposal offers the Township a plan which will utilize a partnership with The Brandywine Conservancy and Natural Lands Trust; both of which have recent experience working in East Goshen Township. The Toole proposal also takes advantage of the current work being done on the Comprehensive Plan update thus reducing the costs considerably.

I have spoken with Carol Stauffer at the CCPC and posed the question about the possibility of amending the existing VPP contract to include an openspace plan update within the existing contract. Carol had a couple of ideas however she amending the existing contract could be problematic for all parties.

**Recommendation:** If the Board is inclined to award one of the three proposals submitted the Staff recommendation is to award the contract to **Toole Recreation Planning** for \$26,370. Additionally the Staff does not believe that combining the Openspace Plan Update with the Comprehensive Plan Update is necessary or prudent at this stage of the Comp Plan Update process.

A great deal of planning work and data collection has been done during the Comprehensive Plan Update and during the development of the Central Chester County Bicycle

and Pedestrian Plan that can be used with the Openspace Plan Update. Staff would like an opportunity to negotiate the contract price with Toole recreation with these issues in mind.

**Draft Motion:**

Mr. Chairman, I recommend that we award the Openspace Plan Update to Toole recreation Planning and authorize the Township Manager to negotiate the contract price.

**Memo**  
**East Goshen Township**  
**1580 Paoli Pike**  
**West Chester, PA 19380**

Voice (610) 692-7171

Fax (610) 425-8950

E-mail [rsmith@eastgoshen.org](mailto:rsmith@eastgoshen.org)

Date: July 23, 2013

To: Board of Supervisors

From: Rick Smith, Township Manager

Re: Meeting Room Audio System

One of the Auditel audio units in the meeting room has failed and PDM has provided us with a loaner unit. PDM advises that Auditel no longer has parts or service available in the U.S, The Auditel system is 14 years old.

They have provided us with a quote of \$4,974 for a Telecor audio system which is currently used by the Upper Merion, Springfield Township and Coatesville School District.

I would request authorization to order the new system.

# Memo

---

To: Board of Supervisors  
From: Jon Altshul  
Re: Replacement copier  
Date: July 30, 2013

---

We have been leasing the Savin C5050 copier from KDI since July 2009. The current lease is for 60 months, and we will make our last payment in June 2014. We pay \$378 per month for the lease, plus a quarterly maintenance fee of \$.06 for each color print or copy and \$.008 for each black and white print or copy.

Over the past year, the Savin has been breaking down with greater and greater frequency, which has created delays and bottlenecks for staff. This machine has slightly less print capacity than the Township needs. Accordingly, concern has been raised by KDI that these problems may continue to snowball through the remainder of the lease.

We spoke with six vendors about replacing the Savin with a new copier and buying out the existing lease, as summarized below.

Vendor	Location	Model	Monthly lease (including buy-out of existing lease)	Service agreement
KDI (Current Vendor)	Aston, PA	Canon 5250	\$390	\$.008/B&W \$.06/Color
Fraser Advanced Information Systems	Bala Cynwyd, PA	Sharp MX-6240N	\$331.78*	\$.0069/BW \$.0586/Color
Rothwell Document Solutions	West Chester, PA	Lanier (Ricoh) C5503	\$305	\$.0079/BW \$.059/Color
Chambers Group	Malvern, PA	Sharp MX-5111N	\$310.53	\$403/month, plus \$.0075/BW over 14,700 and \$0.55/Color over 5,300
Barone Technology Group	Moorestown, NJ	Xerox 7855	\$389	\$.0049/BW \$.049/Color
Copy Products	Upper Darby, PA	Taskalfa 5550ci (Kyocera)	\$325	\$.0075/BW \$.069/Color

\* Fraser's quote was based on a 10-month lease buy out, while others were based on an 11-month buy out. Each additional month of paying off the Savin lease saves roughly \$7 off the new lease.

For perspective, over the last four years, the Savin has averaged about 5,300 color prints/copies and 14,900 black & white prints/copies per month.

I analyzed estimated costs for each vendor assuming light, average and heavy copy months as shown below. This analysis shows that in light months, Rothwell would provide the best value; in average months, Chambers provides the best value; and in heavier months, Barone and Chambers are essentially tied.

**Total monthly lease and maintenance charges assuming different monthly print volumes**

Monthly Print Volume	Fraser	Chambers	KDI	Rothwell	Barone	Copy Products
<b>Light</b> (13,000 BW & 4,000 Color)	\$655.88	\$713.53	\$734.00	<b>\$643.70</b>	\$648.70	\$698.50
<b>Average</b> (14,900 BW & 5,300 Color)	\$745.17	<b>\$713.53</b>	\$827.20	\$735.41	\$721.71	\$802.45
<b>Heavy</b> (16,300 BW & 6,500 Color)	\$825.15	<b>\$787.78</b>	\$910.40	\$817.27	<b>\$787.37</b>	\$895.75

Among the three low bid companies—Chambers, Rothwell & Barone—there are two other differentiating factors: machine capacity and technician proximity.

Of the three, Rothwell’s Lanier C5503 appears to be the most robust machine with the fastest printing capacity, as shown below. For perspective, the existing Savin C5050 is rated for 50 copies per minute.

Copier (Vendor)	Pages per minute
Lanier C5503 (Rothwell)	55
Xerox 7855 (Barone)	55 (B&W) / 50 (Color)
Sharp MX-5111N (Chambers)	51

In addition, note that the Sharp MX-5111N has an inner finisher (i.e. copies aren’t ejected into an output tray facing away from the machine), meaning that it is limited to 400 copies at a time. This volume may not be sufficient to conveniently handle large copying jobs, such as for Board of Supervisors or Municipal Authority meeting packets.

Chambers and Rothwell are both located within 5 miles of the Township, meaning that technicians are readily available in the event of a machine malfunction. Both also promise that technicians arrive within 4 hours of a receiving a call. Barone, meanwhile, is located in New Jersey, although it does have technicians in the area.

Rothwell is used by a variety of area organizations, including Chester County, West Chester University, West Goshen, Westtown and WEGO. I received exceptional feedback when I checked references.

Rothwell’s estimated average monthly price of \$735.41 for lease and maintenance would be approximately \$80 less expensive than what we are currently paying on average for the Savin.

I recommend that the Township enter into an agreement with Rothwell Document Solutions for a 60-month lease on a Lanier C5503, contingent upon the successful return of the existing Savin C5050.

# Memo

---

To: Board of Supervisors  
From: Jon Altshul  
Re: Financial Policies  
Date: July 31, 2013

---

The attached resolution about various financial policies reflects the recommendations of the Finance Committee. This resolution covers five main topics:

- 1) Funding levels and appropriate expenses for the Sinking Fund
- 2) Creation of an Operating Reserve Fund
- 3) Creation of an irrevocable trust for the benefit of the WEGO pension plan
- 4) Minimum fund balance of the General Fund
- 5) Capital Improvement Program policy

**EAST GOSHEN TOWNSHIP  
CHESTER COUNTY, PENNSYLVANIA**

**RESOLUTION NO. 2013-\_\_**

**A RESOLUTION ESTABLISHING VARIOUS  
FINANCIAL POLICIES**

**WHEREAS**, it is a “best practice” of the Government Finance Officers Association for municipalities to have formal policies with respect to both the use of capital reserve funds and unrestricted general fund balances;

**BE IT RESOLVED THAT** the Board of Supervisors of East Goshen Township hereby authorize the Chief Financial Officer/Treasurer to implement the following financial policies effective in 2014:

- 1) The Capital Reserve Fund, as authorized in § 1508 of the Second Class Township Code, will henceforth be referred as the “Sinking Fund”. The Sinking Fund shall strive to maintain a fund balance equal to the estimated replacement cost of all capital assets listed in the fixed asset worksheet, plus a \$150,000 buffer for new assets. The threshold for capital assets shall continue to be \$5,000 or more. Any new capital assets purchased in a given year shall be paid out of the Sinking Fund. The General Fund will reimburse the Sinking Fund for those new purchases at year-end.
- 2) An Operating Reserve Fund shall be created and funded at 5% of estimated General Fund revenues, consistent with §1508.1 of the Second Class Township Code. Money will be appropriated from the Operating Reserve Fund to the General Fund as needed to minimize future revenue shortfalls and deficits.
- 3) An irrevocable trust for the benefit of the Westtown East Goshen Police Department pension plan shall be established to offset future increases in East Goshen’s share of WEGO’s pension costs.
- 4) The General Fund shall maintain a fund balance at least equal to 20% of annual expenses.
- 5) Beginning with the presentation of the 2014 budget and continuing at 2-year intervals thereafter, staff will present a 5-year capital improvement program (CIP) for the Board’s consideration.

**RESOLVED AND ADOPTED**, this 6th day of August, 2013.

ATTEST:

**EAST GOSHEN TOWNSHIP  
BOARD OF SUPERVISORS**

\_\_\_\_\_  
Secretary

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

## Memo

**East Goshen Township**

**1580 Paoli Pike**

**West Chester, PA 19380**

**Voice (610) 692-7171**

**Fax (610) 425-8950**

**E-mail [rsmith@eastgoshen.org](mailto:rsmith@eastgoshen.org)**

**Date:** July 23, 2013

**To:** Board of Supervisors

**From:** Rick Smith, Township Manager

**Re:** Geothermal Engineering Phase 1

Alderson Engineering has completed Phase 1 of the geothermal engineering project. Their report indicates that a geothermal system would pay for itself in just less than 9 years. I would suggest that you authorize them to proceed with Phase 2, which is the design and solicitation of bids for a geothermal system.

**Suggested motion:** I move that we authorize Alderson Engineering to proceed with Phase 2.



**ALDERSON ENGINEERING, INC.**  
CONSULTING ENGINEERS

---

July 17, 2013

**East Goshen Township**  
**1580 Paoli Pike**  
**West Chester, PA 19380**

att: Mr. Louis F. Smith – Township Manager  
re: East Goshen Township Building / 13-410 / Life Cycle Cost Analysis

---

Dear Rick;

Pursuant to your request, and in accordance with the scope of work outlined our proposal to you, we have prepared a 25 year life cycle cost analysis for conversion of the conventional water source heat pump system to a closed loop geothermal heat pump system.

The report has been prepared within the bounds of reasonable engineering certainty and subject to revisions, should additional information become available.

If there are any questions, or if we can be of any further service, please contact our office.

Sincerely,

Neal Babcock, PE  
Alderson Engineering, Inc.

**Title:**

**“Life Cycle Cost Analysis”**

**AEI Project #13-410**

**Property:**

**East Goshen Township Building**

**1580 Paoli Pike  
West Chester, PA 19380**

**Report Prepared For:**

**Board of Supervisors  
East Goshen Township  
West Chester, PA 19380**

**Mr. Rick Smith  
Township Manager**

**Prepared by:**

**Alderson Engineering, Inc.  
407 Lakeside Drive  
Southampton, PA 18966**

**Neal Babcock, P.E., LEED™ AP**

**Reviewed by:**

**Howard Alderson, P.E.**

**Date:**

**July 17, 2013**

### Limited Use of Report:

The information contained in this report was prepared from observations, discussion, and opinions prepared by Alderson Engineering, Inc. solely for the convenience of Alderson Engineering, Inc. and East Goshen Township. It is designed to be used solely by Alderson Engineering, Inc. and East Goshen Township in their internal evaluation as to the suitability or economic viability of various Mechanical/Electrical systems as they relate to this property. This report is not to be used for any other purpose without the expressed written consent of Alderson Engineering, Inc. Alderson Engineering, Inc. takes no responsibility for the use of this report other than for the extremely limited purposes for which it was intended.

### Construction Costs:

Since Alderson Engineering, Inc. has no control over the cost of labor, materials or equipment, or over the Contractor's method of determining prices, or over competitive bidding or market conditions, opinions of probable construction costs provided for herein are made on the basis of experience and qualifications. These opinions represent Alderson Engineering, Inc.'s judgment as a firm familiar with the construction industry. However, Alderson Engineering, Inc. cannot guarantee that proposals, bids, or other construction costs will not vary from opinions of probable costs prepared by Alderson Engineering, Inc. If the owner wishes greater assurance as to the costs, then he shall employ an independent cost estimator. There are no representations and/or warranties either expressed or implied associated with the estimates which were generated in this report.

# TABLE OF CONTENTS

- 1. Executive Summary.....5
- 2. Introduction.....6
- 3. Project Location.....7
- 4. [A] Replaced Water Source Heat Pump System Description .....8
- 5. [B] Geothermal Water Source Heat Pump .....9
- 6. Energy Model Inputs .....10
- 7. Life Cycle Analysis Inputs ..... 11-12
- 8. Life Cycle Analysis Results Graph .....13

Attachments

- Life Cycle Cost Analysis Calculations

## EXECUTIVE SUMMARY

East Goshen Township has retained Alderson Engineering, Inc. to prepare a Life Cycle Cost Analysis comparing several HVAC system options for the East Goshen Township Building, PA. The purpose of this report is to identify the economic feasibility of utilizing a geothermal water source heat pump system.

The report compares the following systems:

- [A] Replace existing Water Source Heat Pump System (WSHP)
- [B] Geothermal Water Source Heat Pump (GWSHP)

	[A] Replacement of Water Source Heat Pump System in-kind	[A1] Replacement of Water Source Heat Pump System in-kind*	[B] Geothermal Water Source Heat Pump System
Construction Cost	\$ 254,803	\$ 223,553*	\$ 364,567
First Year HVAC Energy Operating Cost	\$ 14,820	\$ 14,820	\$ 7,828

\* Without replacement of Existing Boiler or Electric Makeup Air Unit

Payback:

[A] v. [B]

- 1) **9.9 Year Payback** for [B] Geothermal Water Source Heat Pump (GWSHP) system over [A] with 3% Energy Escalation over Inflation (2.1%) and No Incentives.
  - Building HVAC energy costs normalized to match existing utility bills within  $\pm 10\%$ .
- 2) **8.6 Year Payback** for [B] Geothermal Water Source Heat Pump (GWSHP) system over [A] with 3% Energy Escalation over Inflation (2.1%) and No Incentives.
  - Building HVAC energy costs normalized to match existing utility bills within  $\pm 10\%$ .
  - *If tower and boiler replacement costs are amortized over equipment lifetimes.*

[A1\*] v. [B]

- 3) **12.4 Year Payback\*** for [B] Geothermal Water Source Heat Pump (GWSHP) system over [A1] with 3% Energy Escalation over Inflation (2.1%) and No Incentives.
  - Building HVAC energy costs normalized to match existing utility bills within  $\pm 10\%$ .
- 4) **10.7 Year Payback\*** for [B] Geothermal Water Source Heat Pump (GWSHP) system over [A1] with 3% Energy Escalation over Inflation (2.1%) and No Incentives.
  - Building HVAC energy costs normalized to match existing utility bills within  $\pm 10\%$ .
  - *If tower and boiler replacement costs are amortized over equipment lifetimes.*
- 5) **12.1 Year Payback\*** for [B] Geothermal Water Source Heat Pump (GWSHP) system over [A1] with 3% Energy Escalation over Inflation (2.1%) and No Incentives.
  - Building HVAC energy costs normalized to *code required year round ventilation.*

Recommendation:

We recommend that the [B] Geothermal Water Source Heat Pump (GWSHP) system be utilized.

# INTRODUCTION

East Goshen Township has retained Alderson Engineering, Inc. to prepare a Life Cycle Cost Analysis comparing HVAC system options for the East Goshen Township Municipal Building in Chester County, PA. The purpose of this report is to identify the economic feasibility of utilizing a geothermal water source heat pump system.

## Material Available

- 1) Project Documents:
  - a) Architectural Drawings: A1, A2 & A3 dated 5/14/92.
  - b) MEP Drawings: H1, H2, H3, H4 & H5 Dated 5/14/92.
  
- 2) Utility Bills:
  - a) Electric: 2 years.
  - b) Natural Gas: 2 years.

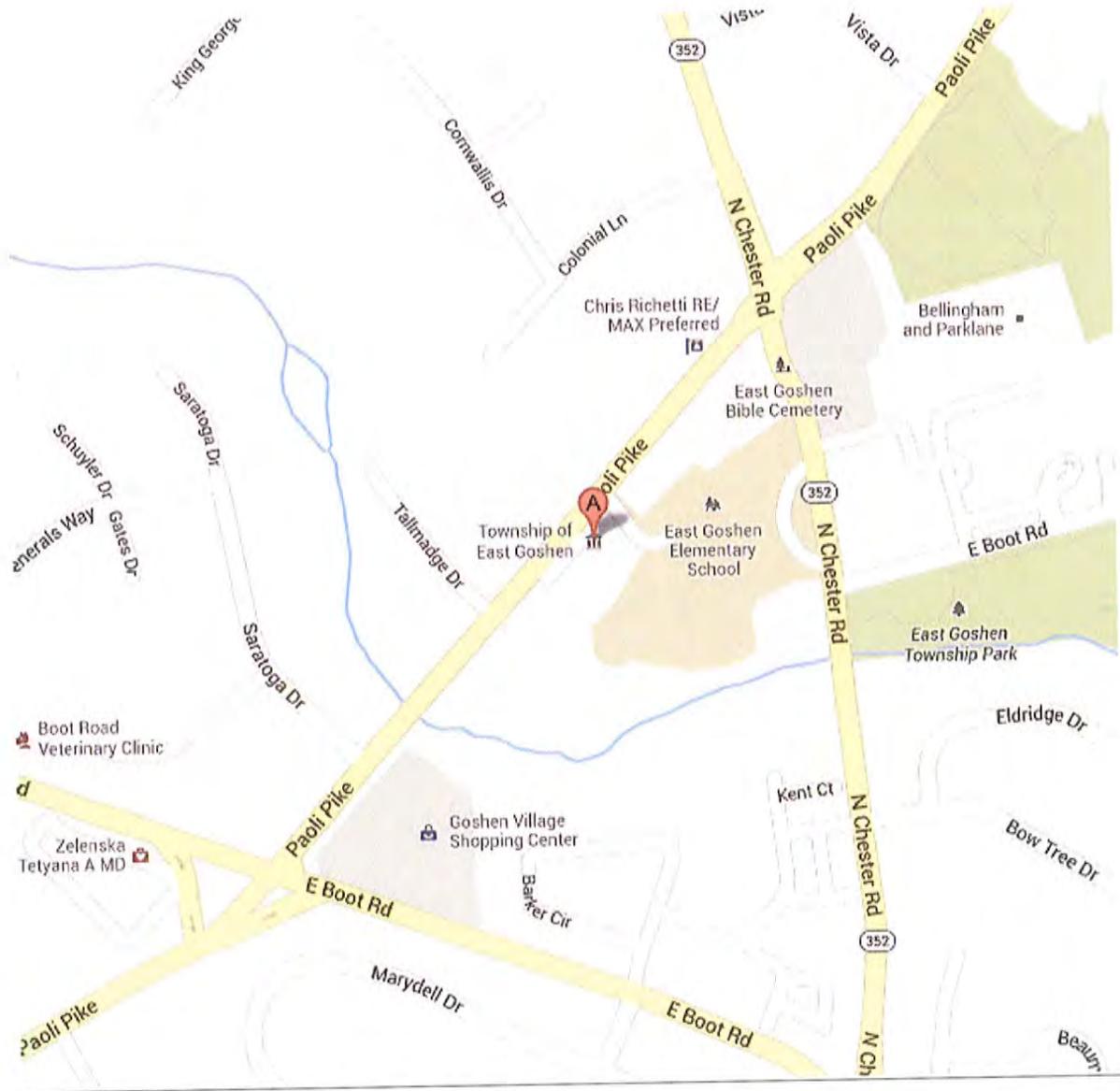
## Building Area

According to the record set of plans, the project consists of the following:

Description	Area (sf)
Municipal Building	14,495
Garage (not included in [A] or [B])	3,000
Total	17,495

# PROJECT LOCATION

East Goshen Township Municipal Building  
Paoli Pike  
West Chester, PA 19380



## [A] REPLACE EXISTING WSHP SYSTEM

### System Description

This system would replace the (27) existing water source heat pumps with new units including new standalone thermostats. The cooling tower would also be replaced and VFD's and new pump motors would be provided.

The existing boiler and outside air unit would remain. If replaced during upgrade, the cost would increase and decrease the effective payback period.

### Comfort Considerations

- Control: Individual zones would have control of space temperature and would be able to heat or cool year round.
- Noise: Low, compressors located above the ceiling.
- Ventilation: Fresh air is brought in centrally by the existing "heating only" make-up air unit.
- Filtration: Standard or (optional) high efficiency disposable filters.
- Effect of Failure: A compressor or major system component failure only affects one zone. Equipment is standard and easily repairable.

### Space Considerations

- Floor Space: Minimal, all air handling units would be placed above ceiling.
- Plenum Space: Required in ceiling for units. In areas where ductwork is to be concealed.
- Furniture Placement: No limitations.
- Maintenance Accessibility: Excellent; can be maintained by "swapping" off the shelf parts..
- Roofs: No equipment on roof.

# [B] GEOTHERMAL WATER SOURCE HEAT PUMP SYSTEM DESCRIPTION

## System Description

Geothermal Water Source Heat Pump System - This system would have one geothermal water source heat pump per zone located in ceiling. The system would not require a cooling tower or supplemental boiler. Existing ductwork and air devices would be cleaned and reused.

The geothermal condenser water will utilize a geothermal well field for heat exchange. The well field will consist of (10-12) 500' deep geothermal wells. The geothermal wells will be piped together below grade outdoors and brought into the building with one supply and one return well.

The existing make-up air unit would be replaced by an air-to-air energy recovery unit.

## Comfort Considerations

- Control: Individual zones would have control of space temperature and would be able to heat or cool year round.
- Noise: Low, compressor and fan in ceiling above acoustic tile.
- Ventilation: Fresh air is brought in centrally through a new energy recovery unit.
- Filtration: Standard or (optional) high efficiency disposable filters.
- Effect of Failure: A compressor or major system component failure only affects one zone. The well system would be grouped into circuits. The failure of a geothermal well would reduce the total building capacity on a design day by less than 10%, once the failed well circuit has been valved off from the system.

## Space Considerations

- Floor Space: Minimal, all heat pumps would be placed above ceiling. A small amount of mechanical room space would be required for a piping manifold.
- Plenum Space: Required in ceiling for units. In areas where ductwork is to be concealed.
- Furniture Placement: No limitations.
- Maintenance Accessibility: Excellent; can be maintained by "swapping" heat pumps.
- Roofs: Minimal equipment on roof; no space for cooling tower or boiler stack is needed.

## ENERGY MODEL INPUTS

### Software:

Energy modeling was performed using Carrier Hourly Analysis Program (HAP) 4.6.

### Weather:

Typical Meteorological Year 2 (TMY2) weather data for West Chester, PA.

### Utility Rates:

Electricity: \$0.12 / kWh  
Natural Gas: \$ 0.61 / therm

### Hours of Operation:

Monday thru Friday: 7:30am-3:00pm  
Saturday and Sunday: Minimal Occupancy

### Building Envelope:

Wall R-Value: 10.5 hr-ft<sup>2</sup>-°F / Btu  
Roof R-Value: 12.8 hr-ft<sup>2</sup>-°F / Btu  
Glazing U-Value: 0.560 Btu / hr / ft<sup>2</sup> / °F  
Glazing Shade Coefficient: 0.811

### HVAC Design Criteria:

Indoor Design Temp.: Cooling Occupied - 75°F / Cooling Unoccupied - 80°F  
Heating Occupied - 70°F / Heating Unoccupied - 65°F  
HVAC Equipment: See equipment descriptions [A] and [B].  
Zoning: To match current equipment layout.  
Supplemental Heat: None.  
Ductwork: Ducted supply & return within thermal envelope of building.  
Air Distribution: Heating & Cooling from ceiling.  
Ventilation Rate: To match existing.  
Bathroom Exhaust: Through dedicated heat recovery units.  
Kitchen Exhaust: NA.  
Lighting Load: 1.0 Watts / S.F.  
Misc. Equipment Load: 1.0 Watts / S.F.  
Population Density: 200 S.F. / Person

### HVAC Equipment Efficiency:

WSHP Cooling EER: 13.4 - ASHRAE Requirement (@ 77°F EWT)  
WSHP Heating COP: 3.1 - ASHRAE Requirement (@ 32°F EWT)

GWSHP Cooling EER: 19.0  
GWSHP Heating COP: 4.0

Condenser Pumps: 19 Watts / GPM  
80.0% Mechanical Efficiency  
94.0% Electrical Efficiency

## LIFE CYCLE ANALYSIS INPUTS

### Operating Cost:

Energy modeling was performed using Carrier Hourly Analysis Program (HAP) 4.6 in accordance with ASHRAE 90.1 2007 Appendix G – Performance Rating Method.

### Life Cycle Cost:

A in depth Present-Value Analysis was performed in accordance with the 2007 ASHRAE Handbook – HVAC Applications Chapter 36: Owning and Operating Cost.

### Construction Cost:

The construction cost for each of the systems was estimated and a summary of the construction costs can be found below. The construction costs are based on equipment budget prices provided by local equipment vendors, actual material takeoffs, costs per square foot based on historical data, and estimates based on RS Means CostWorks® estimating software.

### Maintenance Cost:

Annual maintenance cost were estimated utilizing the values outlined in:

2003 ASHRAE Applications Handbook; Chapter 36

### Escalation (above inflation):

Electricity: 3% Annually

Natural Gas: 3% Annually

Maintenance: N/A

### Depreciation:

Not accounted for since no taxes are paid.

### Tax Rate:

It was assumed that no taxes are paid.

# LIFE CYCLE ANALYSIS INPUTS

## Equipment Replacement Cost:

It is assumed that the GWSHP systems will exceed the 25 year analysis as they are rated for 24+ years. It is assumed WSHP system will be replaced in year 25; the boiler will be replaced at roughly age 22 and the cooling tower will be replaced at 22 years. See table excerpt from ASHRAE Handbook below:

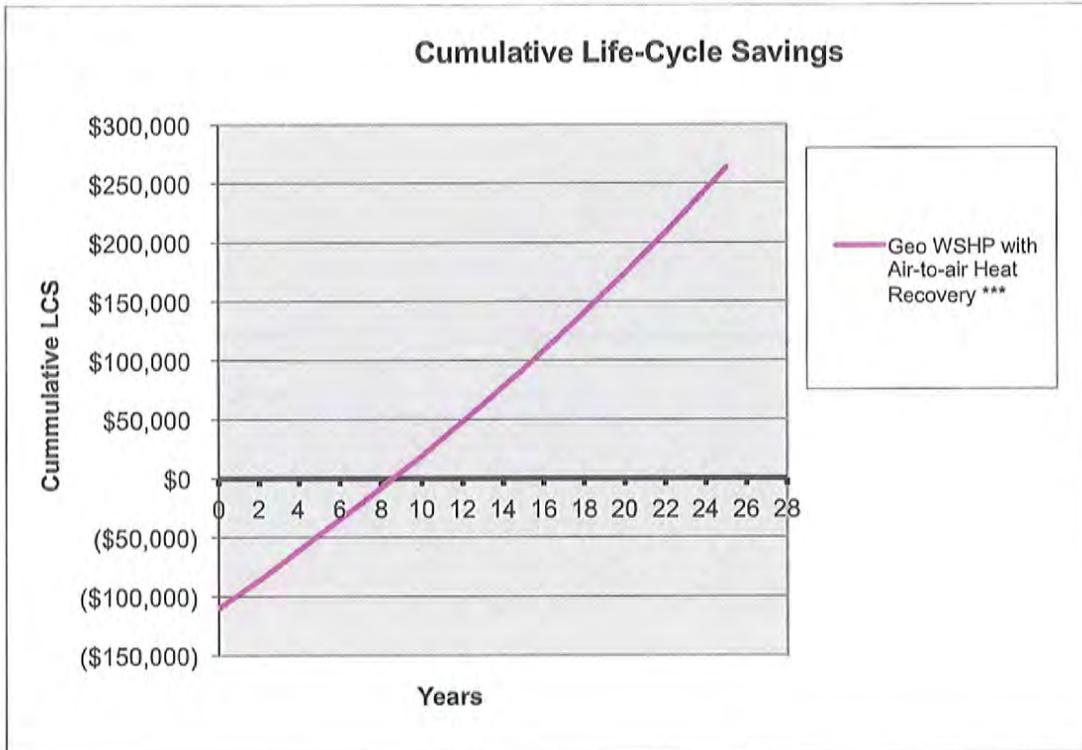
**Table 4 Comparison of Service Life Estimates**

Equipment Item	Median Service Life, Years		Equipment Item	Median Service Life, Years		Equipment Item	Median Service Life, Years	
	Abramson et al. (2005)	Akalin (1978)		Abramson et al. (2005)	Akalin (1978)		Abramson et al. (2005)	Akalin (1978)
<b>Air Conditioners</b>			<b>Air Terminals</b>			<b>Condensers</b>		
Window unit	N/A*	10	Diffusers, grilles, and registers	N/A*	27	Air-cooled	N/A	20
Residential single or split package	N/A*	15	Induction and fan-coil units	N/A*	20	Evaporative	N/A*	20
Commercial through-the-wall	N/A*	15	VAV and double-duct boxes	N/A*	20	<b>Insulation</b>		
Water-cooled package	>24	15	Air washers	N/A*	17	Molded	N/A*	20
<b>Heat pumps</b>			<b>Ductwork</b>	N/A*	30	Blanket	N/A*	24
Residential air-to-air	N/A*	15 <sup>b</sup>	<b>Dampers</b>	N/A*	20	<b>Pumps</b>		
Commercial air-to-air	N/A*	15	<b>Fans</b>	N/A*		Base-mounted	N/A*	20
Commercial water-to-air	>24	19	Centrifugal	N/A*	25	Pipe-mounted	N/A*	10
<b>Roof-top air conditioners</b>			Axial	N/A*	20	Sump and well	N/A*	10
Single-zone	N/A*	15	Propeller	N/A*	15	Condensate	N/A*	15
Multizone	N/A*	15	Ventilating roof-mounted	N/A*	20	<b>Reciprocating engines</b>	N/A*	20
<b>Boilers, Hot-Water (Steam)</b>			Coils			Steam turbines	N/A*	30
Steel water-tube	>22	24 (30)	DX, water, or steam	N/A*	20	<b>Electric motors</b>	N/A*	18
Steel fire-tube		25 (25)	Electric	N/A*	15	<b>Motor starters</b>	N/A*	17
Cast iron	N/A*	35 (30)	<b>Heat Exchangers</b>			<b>Electric transformers</b>	N/A*	30
Electric	N/A*	15	Shell-and-tube	N/A*	24	<b>Controls</b>		
<b>Burners</b>	N/A*	21	<b>Reciprocating compressors</b>	N/A*	20	Pneumatic	N/A*	20
<b>Furnaces</b>			<b>Packaged Chillers</b>			Electric	N/A*	16
Gas- or oil-fired	N/A*	18	Reciprocating	N/A*	20	Electronic	N/A*	15
<b>Unit heaters</b>			Centrifugal	>25	23	<b>Valve actuators</b>		
Gas or electric	N/A*	13	Absorption	N/A*	23	Hydraulic	N/A*	15
Hot-water or steam	N/A*	20	<b>Cooling Towers</b>			Pneumatic	N/A*	20
<b>Radiant heaters</b>			Galvanized metal	>22	20	Self-contained		10
Electric	N/A*	10	Wood	N/A*	20			
Hot-water or steam	N/A*	25	Ceramic	N/A*	34			

\*N/A: Not enough data yet in Abramson et al. (2005). Note that data from Akalin (1978) for these categories may be outdated and not statistically relevant. Use these data with caution until enough updated data are accumulated in Abramson et al.

# LIFE CYCLE COST ANALYSIS RESULTS GRAPH

See Attached.



Year #	Investment-Related Costs (e.g., 1st cost, rebooster, residual)		Operations-Related Costs (e.g., non-annual/maintenance)		ELECTRIC COSTS			NATURAL GAS COSTS			RECURRING COSTS		ANNUAL COSTS		TOTAL COSTS		CUMULATIVE SAVINGS		Payback Discounted Payback Yrs
	Description of Cost	Constant \$	Discounted PV \$	Description of Cost	Constant \$	Electric Escalation %	Real w/Fuel Esc. PV \$	Annual Recurring Constant \$	Nat Gas Differential Escalation %	Discounted Nat Gas w/Fuel Esc. PV \$	Annual Recurring Constant \$	Discounted Recurring (e.g., maintenance) PV \$	Year Date	Discounted Total Costs PV \$	Discounted Cumulative Costs PV \$	Discounted Cumulative Savings PV \$	Year Date		
0	Fuel Cost	\$254,803	\$254,803	n/a	n/a	5.10%	\$14,820	\$172	5.10%	\$177	\$4,266	\$4,266	2013	\$254,803	\$254,803	n/a	2013		
1		\$2,006	\$2,006			5.10%	\$15,255	\$172	5.10%	\$182	\$4,232	\$4,232	2014	\$22,163	\$276,965	n/a	2014		
2		\$1,924	\$1,924			5.10%	\$15,764	\$172	5.10%	\$188	\$4,198	\$4,198	2015	\$22,635	\$299,600	n/a	2015		
3		\$1,844	\$1,844			5.10%	\$16,296	\$172	5.10%	\$193	\$4,164	\$4,164	2016	\$23,101	\$322,701	n/a	2016		
4		\$1,764	\$1,764			5.10%	\$16,849	\$172	5.10%	\$199	\$4,130	\$4,130	2017	\$23,562	\$346,263	n/a	2017		
5		\$1,684	\$1,684			5.10%	\$17,422	\$172	5.10%	\$204	\$4,096	\$4,096	2018	\$24,019	\$370,282	n/a	2018		
6		\$1,604	\$1,604			5.10%	\$18,014	\$172	5.10%	\$210	\$4,062	\$4,062	2019	\$24,473	\$394,755	n/a	2019		
7		\$1,524	\$1,524			5.10%	\$18,624	\$172	5.10%	\$216	\$4,028	\$4,028	2020	\$24,924	\$419,679	n/a	2020		
8		\$1,444	\$1,444			5.10%	\$19,251	\$172	5.10%	\$222	\$3,994	\$3,994	2021	\$25,372	\$445,051	n/a	2021		
9		\$1,364	\$1,364			5.10%	\$19,894	\$172	5.10%	\$228	\$3,960	\$3,960	2022	\$25,817	\$470,868	n/a	2022		
10		\$1,284	\$1,284			5.10%	\$20,553	\$172	5.10%	\$234	\$3,926	\$3,926	2023	\$26,259	\$497,127	n/a	2023		
11		\$1,204	\$1,204			5.10%	\$21,228	\$172	5.10%	\$240	\$3,892	\$3,892	2024	\$26,698	\$523,825	n/a	2024		
12		\$1,124	\$1,124			5.10%	\$21,919	\$172	5.10%	\$246	\$3,858	\$3,858	2025	\$27,134	\$550,959	n/a	2025		
13		\$1,044	\$1,044			5.10%	\$22,626	\$172	5.10%	\$252	\$3,824	\$3,824	2026	\$27,567	\$578,526	n/a	2026		
14		\$1,064	\$1,064			5.10%	\$23,349	\$172	5.10%	\$258	\$3,790	\$3,790	2027	\$27,997	\$606,523	n/a	2027		
15		\$1,084	\$1,084			5.10%	\$24,087	\$172	5.10%	\$264	\$3,756	\$3,756	2028	\$28,424	\$634,947	n/a	2028		
16		\$1,104	\$1,104			5.10%	\$24,840	\$172	5.10%	\$270	\$3,722	\$3,722	2029	\$28,848	\$663,795	n/a	2029		
17		\$1,124	\$1,124			5.10%	\$25,608	\$172	5.10%	\$276	\$3,688	\$3,688	2030	\$29,269	\$693,064	n/a	2030		
18		\$1,144	\$1,144			5.10%	\$26,391	\$172	5.10%	\$282	\$3,654	\$3,654	2031	\$29,687	\$722,751	n/a	2031		
19		\$1,164	\$1,164			5.10%	\$27,189	\$172	5.10%	\$288	\$3,620	\$3,620	2032	\$30,102	\$752,853	n/a	2032		
20		\$1,184	\$1,184			5.10%	\$27,999	\$172	5.10%	\$294	\$3,586	\$3,586	2033	\$30,514	\$783,367	n/a	2033		
21		\$1,204	\$1,204			5.10%	\$28,821	\$172	5.10%	\$300	\$3,552	\$3,552	2034	\$30,923	\$814,290	n/a	2034		
22		\$1,224	\$1,224			5.10%	\$29,654	\$172	5.10%	\$306	\$3,518	\$3,518	2035	\$31,329	\$845,619	n/a	2035		
23		\$1,244	\$1,244			5.10%	\$30,500	\$172	5.10%	\$312	\$3,484	\$3,484	2036	\$31,732	\$877,351	n/a	2036		
24		\$1,264	\$1,264			5.10%	\$31,358	\$172	5.10%	\$318	\$3,450	\$3,450	2037	\$32,132	\$909,483	n/a	2037		
25		\$1,284	\$1,284			5.10%	\$32,228	\$172	5.10%	\$324	\$3,416	\$3,416	2038	\$32,529	\$942,012	n/a	2038		
		\$307,058	\$295,144	\$0	\$0		\$370,900	\$4,300		\$6,403	\$114,474	\$114,474		\$967,740	\$967,740	n/a			

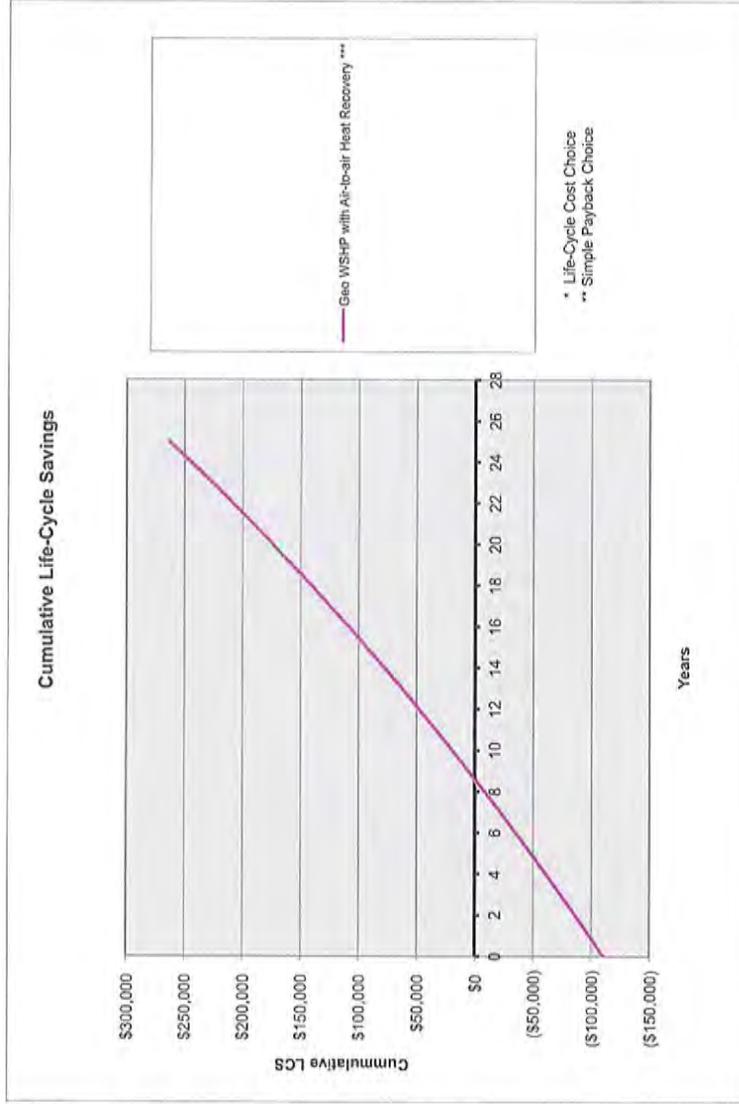
[B] Geo WSHP with Air-to-air Heat Recovery		Analysis Month/Year: 4/2013 Yrs before "On-Line": 0		Years of Project Service: 25		FEMP Fiscal Year: 2013 Disc. Rate: 2.1%		DOE Region: Northeast Analysis Sector: Commercial						
Year #	NON-ANNUAL RECURRING COSTS		ELECTRIC COSTS		NATURAL GAS COSTS		ANNUAL RECURRING COSTS		TOTAL COSTS		CUMULATIVE SAVINGS		Payback yrs	
	Investment-Related Costs (e.g., 1st cost, replacement, activities)	Operations-Related Costs (e.g., non-annual maintenance)	Annual Recurring Electric Constant \$	Electric Differential Escalation %	Discounted Electric w/Fuel Esc. PV \$	Annual Recurring Nat Gas Constant \$	Nat Gas Differential Escalation %	Discounted Nat Gas w/Fuel Esc. PV \$	Annual Recurring (e.g., maintenance) Constant \$	Discounted Recurring Total Costs PV \$	Year Date	Discounted Cumulative Costs PV \$		Discounted Cumulative Savings PV \$
0	First Cost: \$364,567		\$7,828	5.10%	\$6,058	\$0	5.10%	\$0	\$1,590	2013	\$364,567	\$364,567	(\$109,764)	
1	\$0	\$0	\$7,828	5.10%	\$6,295	\$0	5.10%	\$0	\$1,616	2014	\$9,911	\$374,215	(\$97,696)	
2	\$0	\$0	\$7,828	5.10%	\$6,539	\$0	5.10%	\$0	\$1,642	2015	\$10,161	\$384,128	(\$86,334)	
3	\$0	\$0	\$7,828	5.10%	\$6,789	\$0	5.10%	\$0	\$1,668	2016	\$10,423	\$394,307	(\$72,939)	
4	\$0	\$0	\$7,828	5.10%	\$7,045	\$0	5.10%	\$0	\$1,694	2017	\$10,698	\$404,785	(\$56,296)	
5	\$0	\$0	\$7,828	5.10%	\$7,307	\$0	5.10%	\$0	\$1,721	2018	\$11,034	\$415,507	(\$41,456)	
6	\$0	\$0	\$7,828	5.10%	\$7,575	\$0	5.10%	\$0	\$1,747	2019	\$11,384	\$426,541	(\$28,511)	
7	\$0	\$0	\$7,828	5.10%	\$7,850	\$0	5.10%	\$0	\$1,773	2020	\$11,662	\$437,813	(\$17,133)	
8	\$0	\$0	\$7,828	5.10%	\$8,131	\$0	5.10%	\$0	\$1,799	2021	\$11,959	\$449,316	(\$7,076)	
9	\$0	\$0	\$7,828	5.10%	\$8,419	\$0	5.10%	\$0	\$1,825	2022	\$12,276	\$461,474	\$0,031	8.6
10	\$0	\$0	\$7,828	5.10%	\$8,714	\$0	5.10%	\$0	\$1,851	2023	\$12,614	\$473,330	\$13,976	
11	\$0	\$0	\$7,828	5.10%	\$9,016	\$0	5.10%	\$0	\$1,877	2024	\$12,988	\$485,372	\$26,572	
12	\$0	\$0	\$7,828	5.10%	\$9,325	\$0	5.10%	\$0	\$1,903	2025	\$13,390	\$497,330	\$39,307	
13	\$0	\$0	\$7,828	5.10%	\$9,641	\$0	5.10%	\$0	\$1,929	2026	\$13,817	\$509,316	\$52,307	
14	\$0	\$0	\$7,828	5.10%	\$9,964	\$0	5.10%	\$0	\$1,955	2027	\$14,272	\$521,316	\$65,476	
15	\$0	\$0	\$7,828	5.10%	\$10,294	\$0	5.10%	\$0	\$1,981	2028	\$14,754	\$533,330	\$78,807	
16	\$0	\$0	\$7,828	5.10%	\$10,631	\$0	5.10%	\$0	\$2,008	2029	\$15,217	\$545,372	\$92,307	
17	\$0	\$0	\$7,828	5.10%	\$10,975	\$0	5.10%	\$0	\$2,034	2030	\$15,711	\$557,507	\$105,976	
18	\$0	\$0	\$7,828	5.10%	\$11,326	\$0	5.10%	\$0	\$2,060	2031	\$16,217	\$569,580	\$119,811	
19	\$0	\$0	\$7,828	5.10%	\$11,684	\$0	5.10%	\$0	\$2,086	2032	\$16,744	\$581,430	\$133,806	
20	\$0	\$0	\$7,828	5.10%	\$12,049	\$0	5.10%	\$0	\$2,112	2033	\$17,292	\$593,066	\$147,955	
21	\$0	\$0	\$7,828	5.10%	\$12,421	\$0	5.10%	\$0	\$2,138	2034	\$17,861	\$604,439	\$162,259	
22	\$0	\$0	\$7,828	5.10%	\$12,799	\$0	5.10%	\$0	\$2,164	2035	\$18,451	\$615,580	\$176,713	
23	\$0	\$0	\$7,828	5.10%	\$13,184	\$0	5.10%	\$0	\$2,190	2036	\$19,062	\$626,430	\$191,316	
24	\$0	\$0	\$7,828	5.10%	\$13,575	\$0	5.10%	\$0	\$2,216	2037	\$19,694	\$636,927	\$206,059	
25	\$0	\$0	\$7,828	5.10%	\$13,972	\$0	5.10%	\$0	\$2,242	2038	\$20,347	\$647,095	\$221,032	
26	\$0	\$0	\$7,828	5.10%	\$14,375	\$0	5.10%	\$0	\$2,268	2039	\$21,022	\$656,866	\$236,245	
27	\$0	\$0	\$7,828	5.10%	\$14,784	\$0	5.10%	\$0	\$2,294	2040	\$21,719	\$666,266	\$251,696	
28	\$0	\$0	\$7,828	5.10%	\$15,199	\$0	5.10%	\$0	\$2,320	2041	\$22,438	\$675,316	\$267,387	
29	\$0	\$0	\$7,828	5.10%	\$15,620	\$0	5.10%	\$0	\$2,346	2042	\$23,179	\$684,039	\$283,316	
30	\$0	\$0	\$7,828	5.10%	\$16,047	\$0	5.10%	\$0	\$2,372	2043	\$23,942	\$692,457	\$299,487	
31	\$0	\$0	\$7,828	5.10%	\$16,481	\$0	5.10%	\$0	\$2,398	2044	\$24,727	\$700,580	\$315,900	
32	\$0	\$0	\$7,828	5.10%	\$16,921	\$0	5.10%	\$0	\$2,424	2045	\$25,534	\$708,316	\$332,567	
33	\$0	\$0	\$7,828	5.10%	\$17,368	\$0	5.10%	\$0	\$2,450	2046	\$26,363	\$715,680	\$349,487	
34	\$0	\$0	\$7,828	5.10%	\$17,821	\$0	5.10%	\$0	\$2,476	2047	\$27,214	\$722,680	\$366,657	
35	\$0	\$0	\$7,828	5.10%	\$18,280	\$0	5.10%	\$0	\$2,502	2048	\$28,087	\$729,316	\$384,087	
36	\$0	\$0	\$7,828	5.10%	\$18,745	\$0	5.10%	\$0	\$2,528	2049	\$28,982	\$735,580	\$401,776	
37	\$0	\$0	\$7,828	5.10%	\$19,216	\$0	5.10%	\$0	\$2,554	2050	\$29,899	\$741,480	\$419,713	
38	\$0	\$0	\$7,828	5.10%	\$19,693	\$0	5.10%	\$0	\$2,580	2051	\$30,838	\$746,927	\$437,900	
39	\$0	\$0	\$7,828	5.10%	\$20,176	\$0	5.10%	\$0	\$2,606	2052	\$31,799	\$751,939	\$456,337	
40	\$0	\$0	\$7,828	5.10%	\$20,665	\$0	5.10%	\$0	\$2,632	2053	\$32,782	\$756,516	\$475,026	
41	\$0	\$0	\$7,828	5.10%	\$21,160	\$0	5.10%	\$0	\$2,658	2054	\$33,787	\$760,666	\$493,967	
42	\$0	\$0	\$7,828	5.10%	\$21,661	\$0	5.10%	\$0	\$2,684	2055	\$34,814	\$764,380	\$513,160	
43	\$0	\$0	\$7,828	5.10%	\$22,168	\$0	5.10%	\$0	\$2,710	2056	\$35,863	\$767,666	\$532,607	
44	\$0	\$0	\$7,828	5.10%	\$22,681	\$0	5.10%	\$0	\$2,736	2057	\$36,934	\$770,530	\$552,307	
45	\$0	\$0	\$7,828	5.10%	\$23,200	\$0	5.10%	\$0	\$2,762	2058	\$38,027	\$772,980	\$572,259	
46	\$0	\$0	\$7,828	5.10%	\$23,725	\$0	5.10%	\$0	\$2,788	2059	\$39,142	\$775,016	\$592,467	
47	\$0	\$0	\$7,828	5.10%	\$24,256	\$0	5.10%	\$0	\$2,814	2060	\$40,279	\$776,640	\$612,932	
48	\$0	\$0	\$7,828	5.10%	\$24,793	\$0	5.10%	\$0	\$2,840	2061	\$41,438	\$777,860	\$633,655	
49	\$0	\$0	\$7,828	5.10%	\$25,336	\$0	5.10%	\$0	\$2,866	2062	\$42,619	\$778,680	\$654,637	
50	\$0	\$0	\$7,828	5.10%	\$25,885	\$0	5.10%	\$0	\$2,892	2063	\$43,822	\$779,016	\$675,870	
51	\$0	\$0	\$7,828	5.10%	\$26,440	\$0	5.10%	\$0	\$2,918	2064	\$45,047	\$778,980	\$697,365	
52	\$0	\$0	\$7,828	5.10%	\$27,001	\$0	5.10%	\$0	\$2,944	2065	\$46,294	\$777,580	\$719,120	
53	\$0	\$0	\$7,828	5.10%	\$27,568	\$0	5.10%	\$0	\$2,970	2066	\$47,563	\$774,830	\$741,145	
54	\$0	\$0	\$7,828	5.10%	\$28,141	\$0	5.10%	\$0	\$2,996	2067	\$48,854	\$770,740	\$763,440	
55	\$0	\$0	\$7,828	5.10%	\$28,720	\$0	5.10%	\$0	\$3,022	2068	\$50,167	\$765,316	\$785,995	
56	\$0	\$0	\$7,828	5.10%	\$29,305	\$0	5.10%	\$0	\$3,048	2069	\$51,502	\$758,566	\$808,810	
57	\$0	\$0	\$7,828	5.10%	\$29,896	\$0	5.10%	\$0	\$3,074	2070	\$52,869	\$750,480	\$831,885	
58	\$0	\$0	\$7,828	5.10%	\$30,493	\$0	5.10%	\$0	\$3,100	2071	\$54,259	\$741,060	\$855,220	
59	\$0	\$0	\$7,828	5.10%	\$31,096	\$0	5.10%	\$0	\$3,126	2072	\$55,682	\$730,316	\$878,815	
60	\$0	\$0	\$7,828	5.10%	\$31,705	\$0	5.10%	\$0	\$3,152	2073	\$57,138	\$718,260	\$902,670	
61	\$0	\$0	\$7,828	5.10%	\$32,320	\$0	5.10%	\$0	\$3,178	2074	\$58,627	\$704,980	\$926,785	
62	\$0	\$0	\$7,828	5.10%	\$32,941	\$0	5.10%	\$0	\$3,204	2075	\$60,149	\$691,480	\$951,160	
63	\$0	\$0	\$7,828	5.10%	\$33,568	\$0	5.10%	\$0	\$3,230	2076	\$61,704	\$676,780	\$975,805	
64	\$0	\$0	\$7,828	5.10%	\$34,201	\$0	5.10%	\$0	\$3,256	2077	\$63,292	\$660,880	\$1,000,720	
65	\$0	\$0	\$7,828	5.10%	\$34,840	\$0	5.10%	\$0	\$3,282	2078	\$64,913	\$643,880	\$1,026,915	
66	\$0	\$0	\$7,828	5.10%	\$35,485	\$0	5.10%	\$0	\$3,308	2079	\$66,567	\$625,780	\$1,054,390	
67	\$0	\$0	\$7,828	5.10%	\$36,136	\$0	5.10%	\$0	\$3,334	2080	\$68,254	\$606,580	\$1,083,145	
68	\$0	\$0	\$7,828	5.10%	\$36,793	\$0	5.10%	\$0	\$3,360	2081	\$69,974	\$586,280	\$1,113,170	
69	\$0	\$0	\$7,828	5.10%	\$37,456	\$0	5.10%	\$0	\$3,386	2082	\$71,727	\$564,880	\$1,144,465	
70	\$0	\$0	\$7,828	5.10%	\$38,125	\$0	5.10%	\$0	\$3,412	2083	\$73,513	\$542,380	\$1,177,030	
71	\$0	\$0	\$7,828	5.10%	\$38,800	\$0	5.10%	\$0	\$3,438	2084	\$75,332	\$518,780	\$1,211,365	
72	\$0	\$0	\$7,828	5.10%	\$39,481	\$0	5.10%	\$0	\$3,464	2085	\$77,184	\$494,080	\$1,247,480	
73	\$0	\$0	\$7,828	5.10%	\$40,168	\$0	5.10%	\$0	\$3,490	2086	\$79,069	\$468,280	\$1,285,365	
74	\$0	\$0	\$7,828	5.10%	\$40,861	\$0	5.10%	\$0	\$3,516	2087	\$80,987	\$441,380	\$1,325,010	
75	\$0	\$0	\$7,828	5.10%	\$41,560	\$0	5.10%	\$0	\$3,542	2088	\$82,938	\$413,380	\$1,366,425	
76	\$0	\$0	\$7,828	5.10%	\$42,265	\$0	5.10%	\$0	\$3,568	2089	\$84,922	\$384,280	\$1,409,610	
77	\$0	\$0	\$7,828	5.10%	\$42,976	\$0	5.10%	\$0	\$3,594	2090	\$86,939	\$354,080	\$1,454,565	
78	\$0	\$0	\$7,828	5.10%	\$43,693	\$0	5.10%	\$0	\$3,620	2091	\$88,989	\$322,800	\$1,501,280	
79	\$0	\$0	\$7,828	5.10%	\$44,416	\$0	5.10%	\$0	\$3,646	2092	\$91,072	\$290,430	\$1,549,755	
80	\$0	\$0	\$7,828	5.10%	\$45,145	\$0	5.10%	\$0	\$3,672	2093	\$93,188	\$256,980	\$1,600,000	
81	\$0	\$0	\$7,828	5.10%	\$45,880	\$0	5.10%	\$0	\$3,698	2094	\$95,337	\$222,560	\$1,653,025	
82	\$0	\$0	\$7,828	5.10%	\$46,621	\$0	5.10%	\$0	\$3,724	2095	\$97,519	\$187,180	\$1,708,540	
83	\$0	\$0	\$7,828	5.10%	\$47,368	\$0	5.10%	\$0	\$3,750	2096	\$99,734	\$150,850	\$1,766,455	
84	\$0	\$0	\$7,828	5.10%	\$48,121	\$0	5.10%	\$0	\$3,776	2097	\$101,982	\$113,570	\$1,826,780	
85	\$0	\$0	\$7,828	5.10%	\$48,880	\$0	5.10%	\$0	\$3,802	2098	\$104,263	\$75,350	\$1,889,525	
86	\$0	\$0	\$7,828	5.10%	\$49,645	\$0	5.10%	\$0	\$3,828	2099	\$106,577	\$36,180	\$1,954,680	
87	\$0	\$0	\$7,828	5.10%	\$50,416	\$0	5.10%	\$0	\$3,854	2100	\$108,924	\$0	\$2,022,255	
88	\$0	\$0	\$7,828	5.10%	\$51,193	\$0	5.10%	\$0	\$3,880	2101	\$111,304		\$2,092,360	
89	\$0	\$0	\$7,828	5.10%										

### Glazing Selection Example Analysis

Case	Description	One-Time Costs		Total Utility		Maintenance		Total LCC Undisc PV \$	Total LCC PV \$	Net Savings NS	Discounted Payback yrs	Investment Related PV \$	Operations Related PV \$	Saving-to-Invest Ratio SIR	Adjusted Internal Rate-of-Return AIRR
		1st year \$	LCC PV \$	1st year \$	LCC PV \$	1st year \$	LCC PV \$								
	Base NEW Conventional WSHWP	\$254,803	\$295,144	\$762,468	\$558,122	\$4,266	\$114,474	\$1,184,011	\$987,740	n/a	n/a	\$295,144	\$672,596	n/a	n/a
	[B] Geo WSHWP with Air-to-air Heat Recovery ***	\$364,567	\$364,567	\$398,119	\$291,421	\$1,590	\$47,580	\$703,567	\$703,567	n/a	n/a	\$364,567	\$339,000	n/a	n/a
	*** alternative with least life-cycle cost														
	** alternative with most rapid simple payback														
	[B] Geo WSHWP with Air-to-air Heat Recovery ***	(\$109,764)	(\$69,423)	\$7,154	\$364,349	\$2,676	\$66,894	\$373,745	\$264,173	\$264,173	8.6	\$69,423	\$333,586	4.8	8.7%
	** Simple Payback choice														

Base NEW Conventional WSHWP  
 [B] Geo WSHWP with Air-to-air Heat Recovery \*\*\*  
 \* alternative with least life-cycle cost  
 \*\* alternative with most rapid simple payback

[B] Geo WSHWP with Air-to-air Heat Recovery \*\*\*  
 \*\* Simple Payback choice



## Rick Smith

---

**From:** Paul Chiappardi <pchiappardi@aldersonengineering.com>  
**Sent:** Wednesday, July 17, 2013 4:56 PM  
**To:** rsmith@eastgoshen.org  
**Cc:** Neal Babcock  
**Subject:** East Goshen Township / 12-410 / 20 Year Life Cycle Report  
**Attachments:** 2013.07.17 East Goshen TWP Study.pdf

Rick,

Attached is the 20 Year life cycle report for replacement of the HVAC systems at the township building.

I will be out of the office tomorrow and Friday but you can contact Neal Babcock or Howard if wish to discuss the details.

Let us know your comments. Thanks.

**Paul Chiappardi**  
Alderson Engineering, Inc.  
407 Lakeside Drive | P: (215) 364-5635  
Southampton, PA 18966 | F: (215) 364-5637

ASHLEYBROOKE ESTATES - TO BE HANDED OUT AT MEETING.

**BOARD OF SUPERVISORS**  
EAST GOSHEN TOWNSHIP  
CHESTER COUNTY  
1580 PAOLI PIKE, WEST CHESTER, PA 19380-6199

August 2, 2013

To: Board of Supervisors

From: Mark Miller

Re: New Kent Apartments Phase I Release

The Township Engineer and I have reviewed the request and recommend releasing \$415,816.85 in security which will close the account. The project has been completed to our satisfaction.

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

**EAST GOSHEN TOWNSHIP  
BOARD OF SUPERVISORS MEETING  
1580 PAOLI PIKE  
July 16, 2013  
Draft Minutes**

**Present:** Chairman Senya D. Isayeff, Vice-Chairman Carmen Battavio, Supervisors Marty Shane, Chuck Proctor and Janet Emanuel. Also present were Township Manager Rick Smith, CFO Jon Altshul, and Township Solicitor Kristin Camp. ABC member Erich Meyer (Park & Rec) was also in attendance.

**Executive Session**

The Board met in Executive Session from 6:45pm to 7:00pm to interview a candidate for the Vacancy Board.

**Call to Order & Pledge of Allegiance**

Senya called the regular meeting to order at 7:00pm and asked resident Ron Keplinger to lead everyone in the Pledge of Allegiance.

**Moment of Silence**

Carmen called for a moment of silence to remember the troops and all those in uniform who help keep us safe.

**Recording of Meeting**

No one recorded the meeting.

**Public Comment on Non-Agenda Items**

None.

**Chairman's Report**

Senya announced that the Board received a letter from Janet Emanuel tendering her resignation from the Zoning Hearing Board effective June 25 due to her appointment as Township Supervisor. Rick stated that the vacancy on the Zoning Hearing Board has been advertised, and applications are due by the end of the week.

**Scheduling of Special Meeting**

Chuck moved to schedule a meeting on July 23 for the Board to discuss issues related to the Comprehensive Plan. Marty seconded the motion. Carmen advised that he would be unable to attend the meeting. There was no further discussion and no public comment. The Board voted unanimously to approve the motion.

**Public Hearing – Proposed Amendment to Township Code - “Peddling and Soliciting”**

The Board held a public hearing to discuss a proposed amendment to the “Peddling and Soliciting” portion of the Township Code.

1 Public comments were made by resident Ron Keplinger of Bow Tree and by Joanne Morgan  
2 (Township Receptionist/Secretary).

3  
4 Marty moved to adopt the Ordinance amending Chapter 169 of the Township Code, titled  
5 "Peddling and Soliciting," as described by Township Solicitor Kristen Camp. Carmen seconded  
6 the motion. The Board voted unanimously to approve the motion.

7  
8 A court reporter was present and will provide a complete transcript of the proceedings.

9  
10 **Public Hearing – Proposed Amendment to Township Code - "Zoning"**

11 The Board held a public hearing to discuss a proposed amendment to the "Zoning" Section of the  
12 Township Code to revise the standards for the collocation and modification of commercial  
13 communications antenna on existing structures to comply with the Pennsylvania Wireless  
14 Broadband Collocation Act.

15  
16 There were no public comments.

17  
18 Marty moved to accept the Planning Commission's June 6, 2013 recommendation to approve the  
19 Zoning ordinance incorporating the new requirements outlined in the Pennsylvania Wireless  
20 Broadband Communications Act, P.S. 53, and some minor changes to the annual reporting  
21 requirements. Carmen seconded the motion. The Board voted unanimously to approve the  
22 motion.

23  
24 A court reporter was present and will provide a complete transcript of the proceedings.

25  
26 **Police Report**

27 Chief Brenda Bernot announced that a new session of the Citizens' Policy Academy will start on  
28 September 4. Applications are available online, and she also had hard copies available with her.

29  
30 The police have concluded an 18-month investigation into a resident who was hosting illegal  
31 casino activities and drug sales at his home. He was charged with multiple felonies and released  
32 on bail.

33  
34 The police responded to a domestic violence situation during which one of the parties was  
35 charged with assaulting an officer.

36  
37 Thefts from unlocked cars continue to be a problem.

38  
39 The police arrested 5 local residents between the ages of 19 and 65 during a June 21 DUI  
40 checkpoint.

41  
42 Another elderly resident has fallen victim to a "granny scam" over the telephone. Chief Bernot  
43 asked everyone to please warn the senior citizens in their life. If there is any question as to  
44 whether a call is legitimate, please contact the police for assistance.

1 Marty thanked Chief Bernot for making an outdoor presentation to East Goshen day campers  
2 during an especially hot day as he knows the children enjoyed it. Chief Bernot said she was glad  
3 to do it.

4  
5 Marty stated there seems to be more criminal activity in Thornbury than in East Goshen, perhaps  
6 due to its proximity to Route 202. Chief Bernot stated that people mistakenly think there is more  
7 crime at the Giant store in Dilworthtown than there actually is. The store has a very good loss  
8 prevention team and surveillance system. She also noted that the recent large-scale  
9 investigations into the illegal casino activity, as well as the drug bust on Valley Drive prove that  
10 not all the big crimes are happening outside of East Goshen. She believes the criminal activity  
11 among the three townships balances out, and the PPU's will bear that out.

12  
13 Chief Bernot briefly discussed the current PPU's and noted the June numbers were thrown off a  
14 bit due to some officers taking summer vacations.

15  
16 Senya thanked Chief Bernot for her update.

17  
18 **Malvern Fire Company Update**

19 Rick reported that Malvern responded to no calls in East Goshen during June.

20  
21 **Goshen Fire Company Update**

22 Goshen Fire Company President Jerry Fokas was not present, and no report was submitted to the  
23 Township.

24  
25 **Financial Report**

26 Jon Altshul reported that as of June 30 the General Fund had a year-to-date positive variance of  
27 \$1,406,796 excluding pass-through accounts. The General Fund balance was \$7,615,931. Based  
28 on the first half of 2013, Jon projects the General Fund will finish the year with a small positive  
29 variance of \$92,631. The other funds appear to be on track to finish the year in healthy  
30 positions.

31  
32 Jon reported that Tia Piccolo recommends the Township file District Justice complaints against  
33 two utility account holders who are more than \$3,000 in arrears, not current on payment plans,  
34 and/or are in the process of foreclosure. Marty moved for the staff to file the two complaints.  
35 Carmen seconded the motion. There was no discussion or public comment. The Board voted  
36 unanimously to approve the motion.

37  
38 **Township Newsletter**

39 Jon Altshul shared his findings that if the Township wishes to publish a printed newsletter with  
40 advertisements, two companies would be available to provide that service: Hometown Press and  
41 Franklin Maps. Samples of their work was provided to the Supervisors.

42  
43 Marty thanked Jon for putting the data together and said he personally prefers the layout of the  
44 Hometown Press publication and the fact that it would allow more space for Township articles.  
45 However since it would allow less space than the current Township newsletter, the various ABC's  
46 might have to rotate articles (i.e. not every ABC would have a an article in each issue). Marty

1 stated he is favor of returning to a hard-copy newsletter that gets mailed to residents, and he is in  
2 favor of using the Hometown Press service.

3  
4 Carmen asked Jon how long the Township would be locked in to using one of the services  
5 should they go that route. Jon said he believes there is no long-term obligation but the service  
6 can be used on issue-to-issue basis.

7  
8 Janet asked if the Township would discontinue creating and posting the e-newsletter. Rick said  
9 the hard-copy newsletter could be scanned and posted to the website. Jon confirmed this and  
10 said the e-newsletter would not continue to be created as a separate document to offer expanded  
11 articles, etc.

12  
13 *Public Comment: Ron Keplinger, Bow Tree* – Asked if the Township is not getting the desired  
14 response from the e-newsletter.

15  
16 Senya stated there is no hard evidence to back up the claim by some supervisors that the  
17 e-newsletter is not reaching its audience and is not effective. These decisions should not be  
18 based on “feelings” but on facts. He asked Receptionist/Secretary Joanne Morgan (in the  
19 audience) how many residents have signed up to receive printed copies of the newsletter. Joanne  
20 stated that in her conversations with residents a lot of the older, long-term residents have told her  
21 they miss the hard copies being mailed to their homes. Some of them try to find the e-newsletter  
22 online but have difficulty locating it on the website, and Joanne often has to walk them through  
23 the website over the phone to help them find it.

24  
25 *Public Comment: Ron Keplinger, Bow Tree* – Stated that change is hard but he got used to the  
26 e-newsletter and now he loves it. Plus it’s less costly for the Township. The world is going  
27 electronic, and the older generation can be resistant to change.

28  
29 Senya said the Township took a full year to slowly transition over to the e-newsletter and  
30 provided plenty of advance notification to the residents about the change. Now that the  
31 Township is in a good cash position some of the Supervisors want to go back in time. When the  
32 Board voted to discontinue the printed newsletter it was a decision that was sound in judgment,  
33 well thought-out and well planned. It’s not environmentally responsible to return to a printed  
34 newsletter.

35  
36 Marty said he is not in favor of needlessly spending money but the facts are that 30% of the  
37 residents are over 65, there has been a noticeable drop-off in Park & Rec program participation  
38 rates, and not many residents have signed up for Constant Contact. Marty said a return to a  
39 printed newsletter is realistic under the circumstances. Items put into a printed newsletter reach  
40 the residents. The change back to a printed newsletter will not be forever, but can serve as a  
41 bridge to a future time when more people are signed up for Constant Contact.

42  
43 Marty moved to return to issuing a printed newsletter using Hometown Press as the service for  
44 the near future. Chuck seconded the motion.

1 Senya said this will not serve as a bridge but a crutch. There is no supporting data that the  
2 residents want a printed newsletter back. Senya said he has yet to hear even one resident say  
3 they wish the Township would mail out newsletters out again. He also said he is opposed to the  
4 advertising in the Hometown Press publications. However, if the majority of the Board wants to  
5 return to a printed and mailed newsletter it's his opinion that a service with ads should not be  
6 utilized but the Township should be do the work itself, as in the past. Senya said having a  
7 printed newsletter mailed to residents is an old-fashioned, out-of-date idea which is inconsistent  
8 with the example East Goshen strives to set for the county, state, and nation.

9  
10 Marty said he respectfully disagreed with Senya's eloquent arguments against publishing a  
11 newsletter. Marty would like the staff to find out how many municipalities in the local area still  
12 publish newsletters.

13  
14 Janet said she wished to speak in defense of older residents – not all of them want a printed  
15 newsletter. At one of her campaign events in Hershey's Mill, Carmen asked the attendees how  
16 many were in favor of a printed newsletter coming back and the consensus was that they are  
17 content with the electronic version. (It was noted however that this was a sampling of  
18 approximately 40 individuals and not representative of all seniors in the Township.)

19  
20 Carmen said he has spoken to quite a few individuals who have stated they prefer the printed  
21 newsletters. One reason is they like to have a list of trash days they can cut out and post on their  
22 refrigerator. At least if the Township gives the Hometown Press a try, the staff and Board can  
23 get a feel for how it is received, and a postcard survey form can be put into the newsletter to get  
24 feedback from residents. It won't cost much money to try this out for one issue.

25  
26 Chuck said on a personal level he is in favor of return to hard copy newsletters because they are  
27 nice to have around as a reference. With so few residents signed up for Constant Contact, he is  
28 in favor of trying out the Hometown Press service. This may bridge the gap as Marty stated  
29 earlier.

30  
31 Senya asked Rick how many residents are on Constant Contact and Rick said approximately  
32 2,200. Senya noted that number has grown from only 300 members two years ago.

33  
34 Senya stated again that he is opposed to returning to a printed newsletter, especially one that will  
35 have ads. The Township has done as much as possible to crack down on unwanted solicitors so,  
36 in a similar vein, it seems to him the Township would not want to subject residents to intrusive  
37 ads in their newsletters.

38  
39 Marty said he is in agreement with Carmen's suggestion to put a postcard survey form into the  
40 first issue of the new newsletter to get residential feedback.

41  
42 *Public Comment: Joanne Morgan* – Noted that the Township map sent out in the Welcome  
43 Packet to all new residents has advertisements for local businesses, and no one has ever  
44 complained about that. Senya said that's different because the map is free, while the Township  
45 newsletter will be paid for with tax dollars. Marty said the cost to the taxpayers will be for the

1 postage only, and will be quite minimal. Jon said it will cost only 24¢ or 25¢ to mail each  
2 newsletter at the bulk rate.

3  
4 Rick noted that per the census, 30% of households do not have access to the internet.

5  
6 There was no further discussion or public comment. The Board voted 4:1 in favor of the motion.  
7 Senya was opposed.

### 8 9 **Gator Replacement**

10 The Board reviewed a July 1 request from Public Works Director Mark Miller to replace the  
11 Township's Gator vehicle. Marty reminded Rick that he would prefer these types of requests to  
12 come through Jon Altshul in future so that Jon can provide the Board with additional information  
13 not usually included in Mark's memos.

14  
15 Marty moved to accept Mark Miller's recommendation to order a replacement Gator from  
16 Conway Power Equipment in the amount of \$8,422.23. The money will come from the Capital  
17 Reserve. Carmen seconded the motion. There was no further discussion and no public  
18 comment. The Board voted unanimously to approve the motion.

### 19 20 **2013-2014 Archery Hunting Program**

21 Rick summarized the changes to the program recommended by the Deer Committee, the main  
22 change being the elimination of the Blackout Period. Carmen said he is opposed to eliminating  
23 the Blackout Period as it was added for a reason. There is no use in opening a can of worms and  
24 potentially upsetting the residents with such a change at this time. Marty agreed with Carmen  
25 and said if something isn't broken there is no need to fix it. This is a very emotionally charged  
26 issue that caused a great deal of angst in the Township, and there is no reason to go there again.  
27 Besides, allowing hunting during the Blackout Period will not significantly add to the cull, in his  
28 opinion. Chuck stated that the reports indicate the harvest has dropped off during the past two  
29 years. Carmen noted that hunting takes place at some of the larger private properties, and those  
30 results are not added to the official harvest. Senya asked if it's the Board's desire to disregard  
31 the recommendation of the Deer Committee. Marty said there is no reason to make the requested  
32 change in the program. The Township has made a commitment to the residents and there's no  
33 need to go back on that.

34  
35 Marty moved to approve Resolution 2013-24 outlining the Deer Management Archery Hunting  
36 Program for the 2013-2014 hunting season with the exception of the requested changes to the  
37 Blackout Period. The Blackout Period will not be eliminated. The Township Manager will  
38 check with the local schools to confirm which dates will fall within the Blackout Period. There  
39 was no further discussion and no public comment. The Board voted unanimously to approve the  
40 motion.

### 41 42 **Plan Scanning**

43 The Board reviewed a July 8 request from Mark Gordon to hire an intern to work on a project to  
44 digitize all large-format plans in the archives. Carmen moved to authorize the staff to hire an  
45 intern to develop a project plan and RFP for digitizing all large-format plans in the archives for  
46 future reference on the Township's document management system. Chuck seconded the motion.

1  
2 *Public Comment: Bill Egan, Mill Creek* – Asked if finalized plans are already available in  
3 digital format from the county. Rick said only the cover sheets are available at this time, not the  
4 plans themselves.

5  
6 There was no further discussion or public comment. The Board voted unanimously to approve  
7 the motion.

8  
9 **Any Other Matter**

10 Open Space Plan – Marty asked Rick the status of this plan. Rick said the RFPs are due at the  
11 end of next week. One has been received already.

12  
13 Friends of East Goshen – Chuck reported that the Friends still do not have official 501(c)3 status  
14 yet, and they are continuing to work through IRS red tape. On the positive side, donations for  
15 Community Day exceeded the cost of the event. Volunteers are needed to serve on the Friends  
16 board due to the resignation of Dr. Clapper and the fact that Chuck and Jon should not remain  
17 board members in the long term. Any residents interested in serving should let the Township  
18 know.

19  
20 **Review of Minutes**

21 The Board reviewed and corrected the draft minutes of June 4, June 25, and July 2. Senya stated  
22 that the minutes would stand approved as corrected.

23  
24 **Treasurer's Report**

25 *See attached Treasurer's Report for July 11, 2013.*

26 The Board reviewed the Treasurer's Report and the current invoices. Marty moved to accept the  
27 Treasurer's Report and the Expenditure Register Report as recommended by the Treasurer, to  
28 accept the receipts and to authorize payment of the invoices just reviewed. Carmen seconded the  
29 motion. There was no discussion or public comment. The Board voted unanimously to approve  
30 the motion.

31  
32 **Action List**

33 Quarterly Comp Plan Goals Report from ABCs – Reports have been received from the  
34 Municipal Authority, Commerce Commission, and Planning Commission.

35 Quarterly Report on Municipal Authority Projects – Lockwood has been graded and seeded. The  
36 pipe work has been completed at the Marydell Pump Station and Hershey's Mill Pump Stations  
37 and both are in service. A contract has been awarded for work at The Reserve Pump Station.

38 Quarterly Financial Reports – Marty stated that the Finance Committee would have a report for  
39 the Board by their next meeting.

40 Quarterly Report on I&I – April: a large leak was repaired on the Chester Creek Interceptor.  
41 One lateral repair was made in Pin Oaks. Hunt Country was TV'd and cleaned. May: 12,550 ft.  
42 of Chester Creek Interceptor was TV'd and 6 repairs were made. June: 2 repairs were made and  
43 25 manhole lids were replaced in Pin Oaks.

44 Quarterly Review of Right-To-Know Requests – The Board reviewed a report from Nancy  
45 Scheiderman. Chuck noted that Signature Information Solutions of Trenton, NJ would no doubt  
46 plan to resell the information received from the Township.

1 Comcast Franchise – Kristin Camp is marking up a draft agreement.  
2

3 **Public Comments**

4 Bill Egan of Mill Creek suggested the Township consider orienting one of the new LED  
5 billboards so it's visible to drivers along Boot Road, instead of having both signs oriented toward  
6 Paoli Pike.  
7

8 **Correspondence & Reports of Interest**

9 Senya acknowledged receipt of a letter from the County regarding Housing and Community  
10 Department programs. He also acknowledged receipt of letter from the PA DEP approving the  
11 Township's Act 101 Recycling Program Performance Grant in the amount of \$29,782.00.  
12

13 **Meetings & Dates of Importance**

14 Senya noted the upcoming meetings as listed in the agenda.  
15

16 **Adjournment**

17 There being no further business, the meeting was adjourned at 9:05pm.  
18

19 Anne Meddings

20 Recording Secretary

21 *Attachments: Treasurer's Report*  
22

July 11, 2013

**TREASURER'S REPORT**  
**2013 RECEIPTS AND BILLS**

**GENERAL FUND**

Real Estate Tax	\$10,543.36
Earned Income Tax	\$11,300.00
Local Service Tax	\$0.00
Transfer Tax	\$68,450.06
General Fund Interest Earned	\$2,471.25
Total Other Revenue	\$399,573.51
<b>Total Receipts:</b>	<b>\$492,338.18</b>

Accounts Payable	\$531,724.89
<u>Electronic Pmts:</u>	
Health Insurance	\$0.00
Credit Card	\$0.00
Postage	\$1,000.00
Debt Service	\$18,082.89
Payroll	\$94,000.00
<b>Total Expenditures:</b>	<b>\$644,807.78</b>

**STATE LIQUID FUELS FUND**

Receipts	\$0.00
Interest Earned	\$162.10
<b>Total State Liquid Fuels:</b>	<b>\$162.10</b>

Expenditures:	\$0.00
---------------	--------

**CAPITAL RESERVE**

Interest Earned	\$715.40
-----------------	----------

Expenditures:	\$370.37
---------------	----------

**TRANSPORTATION FUND**

Interest Earned	\$290.71
-----------------	----------

Expenditures:	\$0.00
---------------	--------

**SEWER OPERATING**

Receipts	\$18,433.82
Interest Earned	\$125.13
<b>Total Sewer:</b>	<b>\$18,558.95</b>

Accounts Payable	\$87,164.84
Debt Service	\$28,837.47
<b>Total Expenditures:</b>	<b>\$116,002.31</b>

**REFUSE**

Receipts	\$5,153.40
Interest Earned	\$54.54
<b>Total Refuse:</b>	<b>\$5,207.94</b>

Expenditures	\$88,075.93
--------------	-------------

**SEWER CAPITAL RESERVE**

Interest Earned	\$168.82
-----------------	----------

Expenditures	\$0.00
--------------	--------

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25  
26  
27  
28  
29  
30  
31  
32  
33  
34  
35  
36  
37  
38  
39  
40  
41  
42  
43  
44  
45  
46

**EAST GOSHEN TOWNSHIP  
BOARD OF SUPERVISORS MEETING  
1580 PAOLI PIKE  
July 23, 2013  
Draft Minutes**

**Present:** Chairman Senya D. Isayeff, Supervisors Marty Shane, Chuck Proctor and Janet Emanuel. Vice-Chairman Carmen Battavio was absent. Township Manager Rick Smith was also present, as were ABC members Erich Meyer (Park & Rec), Susan Carty and Dan Daley (Planning Commission) and Al Zuccarello (Planning Commission and Commerce Commission). Guests included John Theilacker of the Brandywine Conservancy and Jeannine Speirs of the Chester County Planning Commission.

**Executive Session**

The Board met in Executive Session from 6:45pm to 7:00pm to interview a candidate for the Vacancy Board.

**Call to Order & Pledge of Allegiance**

Senya called the regular meeting to order at 7:00pm and asked John Theilacker to lead everyone in the Pledge of Allegiance.

**Moment of Silence**

Rick called for a moment of silence to remember the troops and all those in uniform who help keep us safe.

**Recording of Meeting**

No one recorded the meeting.

**Public Comment on Non-Agenda Items**

None.

**Comprehensive Plan Update**

Senya stated that the Board recently realized that they should have met with the Comprehensive Plan Task Force and the Brandywine Conservancy earlier in the Comprehensive Plan process, and apologized for not doing so.

Senya stated that most residents have made a rational, deliberate choice to live in East Goshen. Marco Carrara chose to locate Tecniplast USA in East Goshen because of the Township's beauty.

Marty stated that Senya, Rick Smith, Mark Gordon and he met last week to discuss the Comprehensive Plan and had a productive meeting. He is learning that everyone has a different definition of what a "vision" is. In his opinion it's the job of the Board of Supervisors to convey ideas on how the Township should be and for others to work out the "how." East Goshen is one of, if not the premier residential community in Chester County. This is in no small part due to the high level of service the Township provides to its residents. The question is how to maintain

1 that level of service 10-20 years down the road. It's also going to be vital to anticipate the needs  
2 of the business community and meet those needs. Amenities such as trails and greenways are  
3 important, where feasible to put them in, as are energy conservation issues. The Township needs  
4 to stay positioned to receive grants that may be available. The challenge is great but the mission  
5 is simple. Marty thanked the members of the Comprehensive Plan Task Force for being present.

6  
7 Senya said he wanted to develop a mission statement this evening.

8  
9 Chuck said East Goshen is "on the map," and people in the region know about East Goshen.  
10 It's key to maintain the Township's reputation and keep it fiscally sound. To that end, the  
11 Commerce Commission and Friends of East Goshen are great initiatives.

12  
13 Janet said it's a hard charge to predict what the business community will need 10-20 years down  
14 the road. There needs to be enough flexibility in the Comprehensive Plan and Township zoning  
15 to react to the unforeseen.

16  
17 Senya said the Township must consider what will happen with the CTDI property if CTDI  
18 outgrows it and can no longer stay due to restrictions on parking, etc. The Township has to  
19 consider what can be done today to encourage businesses to plan for the future. Futurists are  
20 needed in the Township, even if it means getting it wrong sometimes. Looking forward and  
21 planning for the future provides a basis for a Comprehensive Plan. At a meeting of the  
22 Department of Community & Economic Development (DCED) he learned it would be  
23 advantageous in future grant applications if the item being requested is mentioned in the  
24 Township's Comprehensive Plan.

25  
26 Marty asked John Theilacker what the capability of the Brandywine Conservancy is in regard to  
27 predicting the future – what kind of expectations should the Township have. Mr. Theilacker  
28 noted that Triad Associates, who works with the Brandywine Conservancy, is the group that  
29 addresses economic development planning. As far as commercial and industrial planning, Triad  
30 should be up to the task. The Brandywine Conservancy should be able to provide the other  
31 information needed.

32  
33 Al Zuccarello said he has realized he is a "semi futurist." Planning out 20 or 25 years is tough  
34 for anyone. Fortunately the initial charge is only to plan out for the next 10 years.

35  
36 Jeannine Speirs said she located the Microsoft Word document containing the Township's prior  
37 Comprehensive Plan, and has provided copies on CD to John Theilacker and Mark Gordon. She  
38 also provided a sample Economic Development Plan to Mark Gordon, and emailed John and  
39 Mark samples of Comprehensive Plans from other municipalities. She recently helped the  
40 borough of Malvern with their Comprehensive Plan. Their high-priority items are for the next  
41 5 years; their medium-priority items are 5-10 years out; and their low-priority items are for 10+  
42 years out, or as time and funds allow. Some of the language used in their Comprehensive Plan  
43 was specifically written so it can be copied and pasted into future grant applications.

44  
45 Senya assured the group that East Goshen won't have to paint itself into a corner when writing  
46 the Comprehensive Plan, because the 10-year plan can be changed at any time.

1  
2 Marty asked Jeannine about master planning. She said one way it can be addressed is the way  
3 East Brandywine did it. They expanded their Comprehensive Plan's Scope of Work to include a  
4 Master Plan for Guthriesville and an Implementation Plan.

5  
6 John Theilacker said he was hoping to get clear consensus from the Board this evening as to  
7 what the Brandywine Conservancy should be working on. It was clear from the July 2  
8 Supervisors' meeting that the Board, Senya in particular, is not in favor of the Town Center idea.  
9 Rick Smith said perhaps it would be helpful to define the term "town center." To some residents  
10 who live here, the area containing the Township Building, schools, shopping center, and Wawa  
11 already constitute something of a town center.

12  
13 Al Zuccarello said everything will be driven by money and entrepreneurs. The Task Force will  
14 get more input from entrepreneurs in the Township in a few months during the Tour of  
15 Excellence.

16  
17 Jeannine Speirs said a Suburban Center Handbook is available online for review at  
18 [www.landscapes2.org](http://www.landscapes2.org). She also stated that open space planning for a congregating place can be  
19 addressed in a recreation chapter in the Comprehensive Plan. She cautioned against missing the  
20 forest for the trees and recommended not spending lots of time on details, but to stay true to the  
21 Township's over-arching goals and ideals.

22  
23 John Theilacker said the Brandywine Conservancy emphasized their desire to develop an  
24 achievable and implementable plan at the Task Force meeting last evening. Marty said the  
25 Township should focus on the things that can be achieved in the next 5-10 years and put the  
26 energy and resources into those things.

27  
28 Al Zuccarello suggested limiting each ABC to five suggested recommendations and using those  
29 as the basis for discussion. Marty said once the suggestions are aggregated, the Township can  
30 look to see what items are missing and add those.

31  
32 Senya said there is another option. If the Township didn't already have a prior Comprehensive  
33 Plan to work from, what would the Task Force come up with? Also, it's important for East  
34 Goshen to develop its own plan and not borrow from others.

35  
36 The format of the new plan was discussed. Marty said it will be shorter this time, with all the  
37 backup data contained in the appendices.

38  
39 Senya said he would not like the old plan to be used as the basis for the new plan. He wouldn't  
40 mind dispensing with the disc with the old Word document. Jeannie Speirs recommended not  
41 doing that, as the disc contains a lot of useful, still-valid inventory data the Township wouldn't  
42 want to pay for all over again. She added that using the old Comprehensive Plan is not a crutch.  
43 She suggested keeping the old data that is still good and starting over from scratch only in those  
44 areas where it's necessary.

45 Dan Daley said it sounds to him like the Task Force is on the right path. He expected to hear  
46 differently this evening. Al Zuccarello said during the last couple of weeks the Township has

1 focused in more sharply. He thinks a lot of things were aired out during the July 2 Supervisors'  
2 meeting.

3  
4 Erich Meyer was asked his opinion. He said that sometimes Township meetings can veer off  
5 course and not focus on what's on the agenda.

6  
7 Resident Bill Egan expressed concern about the comments indicating the focus should be on the  
8 needs of the Township's commercial residents, instead of the people (residents) who make up  
9 90% of the tax base. He does not want other residents to have to go through what he did with  
10 Comcast in trying to ensure the Township's zoning regulations were honored. He spent a lot of  
11 money and a great deal of personal time on that matter.

12  
13 Senya said the commercial interests provide a good source of funding to the Township. The cell  
14 tower, for example, provides as much income per year as 200+ households would provide in  
15 taxes. He hopes that in recent years Mr. Egan has seen greater sensitivity by the Board and staff  
16 to the balance between commercial and residential interests.

17  
18 Rick stated that the body of the old Comprehensive Plan is only 66 pages, with 35 pages of that  
19 indicating who does what. He asked the Task Force members if they have gone through it and  
20 identified what has been accomplished. Marty and Sue Carty said the Task Force is working on  
21 doing that.

22  
23 Dan Daley asked how the Task Force should proceed in regard to master planning and the open  
24 space/recreation planning. John Theilacker said the first step is for the Brandywine Conservancy  
25 to find out what the County will fund. They will then bring that information back to the Task  
26 Force.

27  
28 Bill Egan suggested the new Comprehensive Plan contain tabs to make it easier to locate the  
29 various sections.

30  
31 There was no further discussion about the Comprehensive Plan. The meeting adjourned at  
32 8:36pm.

33  
34 **Executive Session**

35 The Board met in Executive Session until 8:55pm to discuss a personnel matter.

36  
37 Anne Meddings  
38 Recording Secretary

## EAST GOSHEN TOWNSHIP ACTION LIST

New additions are in <b>bold</b>	August 6, 2013
<b>Item</b>	<b>Date</b>
Hershey's Mill Dam	August 6, 2013
Comp Plan	August 6, 2013
<b>Open Space Plan</b>	August 6, 2013
<b>Act 167 Ordinance</b>	August 6, 2013
Comcast Franchise Renewal	August 20, 2013
Quarterly Report on Comp Plan Goals for ABCs	October 15, 2013
Quarterly Report Municipal Authority Projects	October 15, 2013
Quarterly Financial Reports	October 15, 2013
Quarterly Report on I&I	October 15, 2013
Quarterly Review of Right to Know Requests	October 15, 2013

**EAST GOSHEN TOWNSHIP  
ACTION ITEM**

Item:	<b>Hershey's Mill Dam</b>	No:	1
List Date:	5/22/2007	Completed Date:	
Description:	Bring Dam into compliance with DEP requirements or dispose of dam		

Date	Action
	<b>Note I have hidden the 2010 comments to save space</b>
1/3/2011	Update from Neil DeReimer
2/1/2011	Update from Neil DeReimer
3/1/2011	Update tabled to 3/8
3/8/2011	Update from Neil DeReimer
3/24/2011	American Rivers/NOAH grant denied
4/5/2011	Update from Neil DeReimer
5/10/2011	Update from Neil DeReimer
6/7/2011	Update from Neil DeReimer
7/12/2011	Update from Neil DeReimer
8/9/2011	Update from Neil DeReimer
11/1/2011	Update from Neil DeReimer and see attached
12/6/2011	Update from Neil DeReimer
12/9/2011	Submitted grant application to American Rivers (decision by 3/9/12)
1/3/2012	contacted PADEP about meeting
2/7/2012	Conference call with DEP scheduled for 2/2/12
3/7/2012	Contract with Walsh executed on 2/7. Status report attached
4/3/2012	Status report attached
5/1/2012	Status report attached
6/5/2012	Status report attached
7/3/2012	Status report attached
8/7/2012	Presentation to BoS. BoS agreed to send 1,000 foot letter and invite residents once rendering is done
10/2/2012	Presentation - Ok to send plans to DEP
11/13/2012	Plans sent to DEP
12/4/2012	Status Report attached
1/7/2013	Per DEP we should have comments on plans by mid January
2/5/2013	DEP advised that we need to submit for an NPDES permit and provide them with an O&M Manual. The engineer has submitted the NPDES Application and is preparing the O&M Manual
3/5/2013	Revised plans sent to DEP on 2/18
5/7/2013	Comment letter received. Engineer will re-submit next week.
6/4/2013	Verbal Report at Meeting -Engineer waiting on info from structural engineer
7/2/2013	Verbal Report at Meeting
<b>8/6/2013</b>	<b>Revised plan sent to DEP on 7/1</b>

## EAST GOSHEN TOWNSHIP ACTION ITEM

Item:

Comp Plan

No:

4

List Date:

2/7/2011

Completed Date:

Description:

Update Comp Plan

Date	Action
2/7/2012	Consider applying for Vision Partnership Grant. At 2/7 meeting BoS requested Staff develop RFP for Consultant
3/20/2012	Working on RFP
4/17/2012	Working on RFP
5/15/2012	RFP Issued
6/19/2012	Contracted with Brandywine Conservancy on 6/5
7/17/2012	Working on grant application which is due 8/15/12
8/21/2012	VP Grant Application submitted 8/15/12
10/16/2012	CCPC recommended grant for approval
1/15/2013	Contract executed. Memo on task force makeup in 1/15 agenda
2/19/2013	Comp Plan Task created. Kick off meeting scheduled for February 25, 2013
3/5/2013	Verbal Update on 2/25/13 meeting
5/7/2013	The public visioning session is scheduled for June 3, 2013
6/4/2013	Verbal Update on Visioning Session
7/2/2013	Board to review "sustainability section" on 7/2
<b>8/6/2013</b>	<b>BoS met with John T on 7/23 to establish "goals" for the Plan.</b>

**EAST GOSHEN TOWNSHIP  
ACTION ITEM**

Item: **Open Space Plan** No: 14

List Date: 6/18/2013 Completed Date:

Description: Consider updating the Open Space Plan

Date	Action
8/6/2013	RFP Issued in July. BoS to consider proposals on 8/6.

**EAST GOSHEN TOWNSHIP  
ACTION ITEM**

Item:

**Act 167 Ordinance**

No:

List Date:

7/16/2013

Completed Date:

Description:

Adopt Acy 167 Ordinance

Date	Action
<b>8/6/2013</b>	<b>Seminar scheduled for 8/7/13</b>

**EAST GOSHEN TOWNSHIP  
ACTION ITEM**

Item: **Act 167 Ordinance** No:

List Date: **7/16/2013** Completed Date:

Description: **Adopt Act 167 Ordinance by January 2, 2014**

Date	Action
<b>8/6/2013</b>	<b>Seminar scheduled for 8/7/13</b>

Board of Supervisors

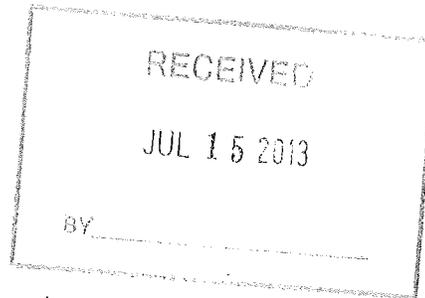
we would like to thank mark miller and his crew for fixing the corner at dutton mill rd. and goshen rd. they did a great job in the heat. Anyone who makes that turn will surely appreciate how much easier it is to navigate now! thanks also for installing signs at the intersections.

keith & gale banks

329 dutton mill rd.



Senya D. Isayeff  
Chairman of the Board of Supervisors  
East Goshen Township  
1580 Paoli Pike  
West Chester, PA 19380



July 12, 2013

Dear Mr. Isayeff,

I am writing as a follow up to my letter to you of June 3<sup>rd</sup>, 2013 regarding the property adjacent to ours. The property in question is located at **1423 Garrett Lane in the Goshen Downs** development and is owned by **Tom and Nanae Miles**.

I did receive a prompt follow-up phone call from Mr. Mark Gordon, Director of Zoning and Codes Enforcement, and had a subsequent telephone conversation with Mr. Gordon regarding what steps would be taken to rectify the situation. Mr. Gordon informed us that on top of the issues I had already outlined in my letter, there was also an unregistered vehicle belonging to Mr. Miles that was sitting on the street and needed to be taken care of in some way. Mr. Gordon informed me that he did conduct a cursory investigation of the property and noted that the issues I had raised were valid and were indeed violations of East Goshen Zoning and Code. Mr. Gordon further informed me that mine was not the first complaint receive regarding Tom and Nanae Miles and the property at 1423 Garrett Lane.

I am not certain what steps have been taken by the township to rectify the issues with this property but I thought it would be prudent to keep both you and Mr. Gordon informed of the current situation with the property.

- The unregistered pick-up truck is now parked on the lawn and covered with a tarp. This is not an adequate solution to the problem and has given the property an air of "Fred Sanford's Salvage Yard".
- Regarding the overgrown lawn on the side and back yard – Mr. Miles has cut a path through the lawn, again, not an adequate solution to the overgrowth as the noxious, waist-high weeds remain. The cages and animal pens remain intact and are completely overgrown with weeds. There is also a set of Uneven Gymnastics bars set up in the back yard which is yet another hazard (no fence around this).
- The fence around the swimming pool remains a decayed mess – with sections of it completely fallen down. I do not know the condition of the swimming pool itself but taking the rest of the property as an example, I would imagine that it is a breeding ground for disease carrying mosquitoes.

Mr. Isayeff, I implore you and the township officials to take this issue seriously and continue to monitor this property as the current state of decay affects not only my property but the property values of the entire neighborhood. If conversations have taken place with Mr. & Mrs. Miles, it does not appear that they are taking your authority or the laws very seriously.

I thank you in advance for taking the time to address this situation.

Leanne M. Corba  
610-692-2298

cc: Mr. Mark Gordon

**BOARD OF SUPERVISORS**  
EAST GOSHEN TOWNSHIP  
CHESTER COUNTY  
1580 PAOLI PIKE, WEST CHESTER, PA 19380-6199

July 16, 2013

Mrs. Leanne M. Corba  
1251 Upton Cir.  
West Chester PA, 19380

**Re: 1423 Garrett Ln., West Chester, PA, 19380**

Dear Mrs. Corba:

The Township has received your letter Dated July 12, 2013 regarding the property conditions at 1423 Garret Ln. I have been in contact with the property owner, Mr. Thomas Miles, both on the telephone and via mail and I'm working with Mr. Miles to correct the issues outlined in my letter to him on July 3, 2013; I have enclosed my letter to Mr. Miles for your information and use.

The Board of Supervisors will acknowledge receipt of your letter at their meeting on August 6, 2013. If you have any questions or need additional information please don't hesitate contact me.

Sincerely,



Mark A. Gordon  
Township Zoning Officer

Cc: East Goshen Township Board of Supervisors

BOARD OF SUPERVISORS  
EAST GOSHEN TOWNSHIP  
CHESTER COUNTY  
1580 PAOLI PIKE, WEST CHESTER, PA 19380-6199

FILE COPY

July 3, 2013

Health First Centers  
ATTN: Mr. Dr. Tim Miles  
20 Liberty Blvd. # A 12  
Malvern PA 19355

**Re: 1423 Garrett Ln., West Chester, PA, 19380 / T.P.N. 53-1M-31  
Township Code and Zoning Ordinance Violations  
Sent first Class Mail**

Dear Mr. Miles:

Thank you for taking the time to speak to me on June 18<sup>th</sup>. As we discussed, pursuant to a complaint by one of your neighbors, the Township visually inspected your property at the above referenced address and found a number of property maintenance code, Township Code, and Township Zoning Ordinance violations.

1. I found that the grass exceeds the height limit specified in the ordinance, **§96-2 Maintenance of a lot and §302.4 of the 2009 International Property Maintenance Code (2009 IPMC)**. The Township Property Maintenance Code requires that all grass and weeds be kept at a length of six inches or less as outlined in the East Goshen Township Code. It is your responsibility as the owner of the above referenced property to insure that the grass is maintained to a length of six inches or less at all times.

**Action Required:**

1. **Cut the grass and weeds to a height of six (6) inches or less and maintain the grass and weeds on your property to a height of 6 inches throughout the growing season.**
2. The swimming pool on your property does not appear to be operational and could present a health hazard for you and the surrounding residents. Swimming pools are required to be maintained in a sanitary condition and in good repair at all times as per section **§303.1 of the 2009 International Property Maintenance Code (2009 IPMC)**.

BOARD OF SUPERVISORS  
EAST GOSHEN TOWNSHIP

**Action Required:**

1. Place the pool in operation and maintain the pool in a sanitary manner or:
  2. Drain and cover the pool with a pool cover and install a working pool cover pump to remove any water that collects on the cover.
3. The swimming pool is required to have a complete enclosure to provide a safety barrier around the swimming pool. It appears that the pool barrier is in poor conditions and currently does not meet the standards as outlined in **§303.2 of the 2009 International Property Maintenance Code (2009 IPMC)**.
1. Repair the pool (fence) enclosure to meet the standards.
4. The property appears to have a large amount of junk throughout the lot. Unregistered and uninspected vehicles are considered Junk and are not permitted to be stored outdoors. **§240-24.E.(5) Outdoor storage of junk.**

**Action Required:**

1. Remove all junk and unused items.
  2. Place the unlicensed and unregistered truck in your garage or have it removed from the property.
5. It appears that you have raised chickens and or rabbits on the property in the past. Chicken coups and animal enclosures still exist on the property and must be removed. The Township zoning ordinance prohibits the raising of these animals on properties with less than 2 acres. **§240-32.A.: Keeping of animals or fowl**

**Action Required:**

1. Remove all animal pens, coups and fencing.

Please contact me immediately to schedule a site visit of the property so I can specifically address all these items and the corrective actions with you in person. If you do not contact me on or before July 17, 2013 the Township will begin enforcement action.

Enclosed is a copy of the relevant sections of the Township Code for your information and use. Thank you in advance for your prompt attention to this matter.

Sincerely,



Mark A. Gordon  
Township Zoning Officer

Enclosures



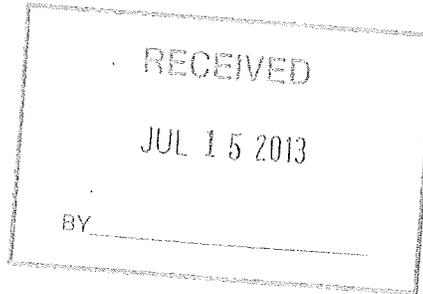
# pennsylvania

DEPARTMENT OF ENVIRONMENTAL PROTECTION

SOUTHEAST REGIONAL OFFICE

July 12, 2013

East Goshen Township  
1580 Paoli Pike  
West Chester, PA 19380



Re: Implementation of the County-wide Stormwater  
Management Plan for Chester County

Dear Sir or Madam:

The subject Act 167 Stormwater Management Plan (SWM Plan) was adopted by Chester County on March 27, 2013, and approved by the Department of Environmental Protection (DEP) on July 2, 2013, pursuant to the Pennsylvania Storm Water Management Act, the Act of October 4, 1978, 32 P.S., P.L. 864 (No. 167), Sections 680.1 et seq. ("Act 167"), as amended by Act 63 of May 24, 1984, and the Storm Water Management Guidelines as approved by the General Assembly on May 14, 1985. A copy of DEP's letter of approval of the SWM Plan is enclosed for your records.

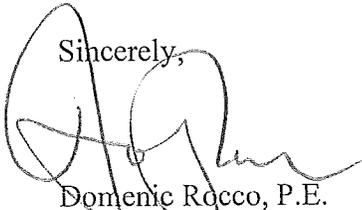
Section 11(b) of the Storm Water Management Act requires each municipality within the area covered by the subject SWM Plan to adopt or amend and implement such ordinances and regulations, including zoning, subdivision and development, building code, and erosion and sedimentation ordinances as are necessary to regulate development within the municipality in a manner consistent with the SWM Plan and the provisions of the Storm Water Management Act. A model stormwater management ordinance was prepared by Chester County as part of the SWM Plan and was transmitted by Chester County to the municipalities prior to the County's adoption of the SWM Plan.

The deadline for enacting an ordinance to satisfy these requirements is January 2, 2014. Please provide a copy of this letter to your solicitor regarding your obligation to implement the subject SWM Plan.

Please notify DEP immediately after your municipality enacts or amends ordinances as necessary to meet the requirements of the Storm Water Management Act. The notification should include the SWM Plan name, ordinance number, and the date the ordinance was enacted to meet the requirements of the SWM Plan and the Act.

Thank you for your interest and participation in the Stormwater Management Program. If you have any questions, please contact Mr. David Burke by e-mail at [daburke@pa.gov](mailto:daburke@pa.gov) or by telephone at 484.250.5822.

Sincerely,

A handwritten signature in black ink, appearing to read "D. Rocco", written over the word "Sincerely,".

Domenic Rocco, P.E.  
Regional Manager  
Waterways and Wetlands

Enclosure

cc: Mr. Furlan, DEP Division of Planning and Permits  
Mr. Fitzpatrick, PA Department of Community and Economic Development  
Re 30 (GJS13WAW)192b

**Memo**  
**East Goshen Township**  
**1580 Paoli Pike**  
**West Chester, PA 19380**  
Voice (610) 692-7171  
Fax (610) 425-8950  
E-mail [rsmith@eastgoshen.org](mailto:rsmith@eastgoshen.org)

Date: July 16, 2013  
To: Board of Supervisors  
From: Rick Smith, Township Manager  
Re: Sunoco Remediation Report

We received the 2013 second quarter report from Sunoco. They have pumped and treated 286,309 gallons of ground water during this reporting period.

Of the 24 test wells only 3 have a MTBE reading above 20 ug/l (State Limit).

A summary of what transpired during this quarter is on page 4.  
A complete copy of the report is available for review at the Township Building.

**ENVIRONMENTAL  
ALLIANCE, INC.**

July 12, 2013

- *Engineering*
- *Remediation*
- *Consulting*

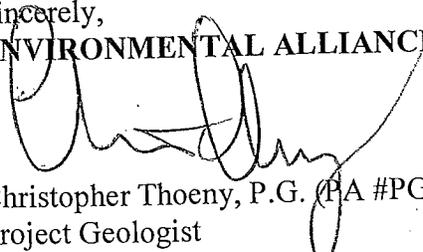
Ms. Lauren Mapleton  
Pennsylvania Department of Environmental Protection  
Southeast Regional Office  
2 East Main Street  
Norristown, PA 19401

**RE: REMEDIAL ACTION PROGRESS REPORT  
SUNOCO STATION #0004-7969  
1425 PAOLI PIKE  
WEST CHESTER, PA  
PADEP Facility ID No. 15-20353**

Dear Ms. Mapleton:

Enclosed please find the Remedial Action Progress Report prepared by Environmental Alliance, Inc. (Alliance) on behalf of Sunoco, Inc. for the above referenced site. This report is based on PA Code Title 25 Chapter 245 Requirements and presents a summary of Site activities completed between April 1<sup>st</sup> and June 30<sup>th</sup> 2013, including results of the most recent groundwater sampling event conducted at this Site on April 2, 2013. Please feel free to contact me if you have any questions or comments regarding this project.

Sincerely,  
**ENVIRONMENTAL ALLIANCE, INC.**

  
Christopher Thoeny, P.G. (PA #PG004864)  
Project Geologist

Enclosure

c: Fiona Livingston – Sunoco, Inc. (R&M)  
ICF International – T. Aubel (Claim #06-186)  
Goodman Properties - Phil Gray – Phoenix GeoEnvironmental, LLC  
Rick Smith – East Goshen Township

J:\EAI\_files\PCG\Sun\2199\_Paoli Pike\Reports\RAPR's\2Q13 RAPR\2Q13 RAPR-2199.doc

*5341 Limestone Road Wilmington, DE 19808*  
302-234-4400 302-234-1535 Fax [www.envalliance.com](http://www.envalliance.com)

RECEIVED

JUL 15 2013

BY \_\_\_\_\_

# Remedial Action Progress Report Second Quarter 2013

Sunoco Station # 0004-7969  
1425 Paoli Pike  
West Chester, PA

## General Information

Sunoco Remediation Associate:	Fiona Livingston
Consultant:	Environmental Alliance, Inc. (Alliance) 5341 Limestone Road Wilmington, DE 19808
Alliance Program Manager:	Joe Rossi
Alliance Project Manager:	Chris Thoeny
PADEP Case Manager:	Lauren Mapleton – PADEP Southeast Regional Office
PADEP Facility ID#:	15-20353
County:	Chester
Municipality:	East Goshen Township

## SITE OVERVIEW

- ◆ The site is an active retail gasoline station and A-Plus convenience store.

## SITE HISTORY

- ◆ In July of 1989, Sunoco retained Groundwater and Environmental Services, Inc. (GES) to conduct a hydrogeologic investigation upon the acquisition of the Site. GES installed 4 monitoring wells along with collecting soil samples and an initial groundwater sampling event. Analytical results indicated the presence of total BTEX and total petroleum hydrocarbons (TPH) in the two samples that were located nearest the underground storage tank (UST) field.
- ◆ In the fall of 1989, Sunoco upgraded the UST system onsite. Upgrade activities included: the removal of four 4,000 gallon steel USTs which were replaced with three 10,000 gallon fiberglass USTs and the removal of two 550 gallon heating and waste oil tanks that were replaced with two 275 gallon aboveground storage tanks (ASTs).
- ◆ In December 1992 and January 1993, Sunoco completed service station upgrades, which included the abandonment of the on-site water supply well.
- ◆ In January 1995, the Pennsylvania Department of Environmental Resources (PADER) issued a letter in which no further investigative activities were deemed necessary. Subsequently, all monitoring wells were abandoned by B. L. Myers on January 27, 1995.
- ◆ In October 2006, Sunoco upgraded the dispensers and product piping at the Site. During upgrade activities contamination was detected beneath one of the dispensers and was confirmed through a grab soil sample. Benzene was detected above Pennsylvania

- Department of Environmental Protection (PADEP) statewide health standard (SHS) and a notice of release (NOR) was submitted to the PADEP by Alliance on October 16, 2006.
- ◆ On January 17<sup>th</sup> and 18<sup>th</sup>, 2007, Alliance conducted soil borings and the installation of four monitoring wells. The monitoring wells were sampled on February 6<sup>th</sup> and April 25<sup>th</sup>, 2007.
  - ◆ In August 2007, Alliance submitted a Site Characterization Report (SCR) to the PADEP. The SCR was disapproved based on further site characterization being needed.
  - ◆ On September 19<sup>th</sup> and 20<sup>th</sup>, 2007, Alliance installed an additional four monitoring wells to help further delineate any potential migration of contaminants of concern.
  - ◆ In accordance with a letter from the PADEP dated March 3, 2008 Alliance conducted an extensive well search, in which no drinking wells were identified between the Site and the closest down-gradient sensitive receptor, Ridley Creek.
  - ◆ On September 3, 2008, Alliance installed two offsite monitoring wells and one onsite monitoring well. The offsite wells (MW-9 and MW-10) were installed for further horizontal delineation of potential contaminants of concern. The onsite well (MW-7B) was installed for vertical delineation of potential contaminants of concern.
  - ◆ In December 2008, a slug test was performed on monitoring well MW-7B to calculate the hydraulic conductivity of the bedrock aquifer beneath the site.
  - ◆ On May 27<sup>th</sup> and 28<sup>th</sup>, 2009 Alliance installed three offsite deep monitoring wells (MW-9B, MW-10B, and MW-11B) and two onsite deep monitoring wells (MW-2B and MW-8B).
  - ◆ On November 3<sup>rd</sup> through 5<sup>th</sup>, 2009 Alliance installed three offsite monitoring wells (MW-12 through 14) and four offsite deep monitoring wells (MW-5B, MW-12B, MW-13B, and MW-14B).
  - ◆ On November 9, 2009, Alliance submitted a Status Report for Site Characterization to the PADEP.
  - ◆ On February 1, 2010, Alliance submitted a Site Characterization Report (SCR) to the PADEP selecting the Site Specific Standard (SSS) as the clean up standard for the site. The SCR was approved by the PADEP in a letter dated April 21, 2010.
  - ◆ On June 10, 2010, Alliance submitted a Remedial Action Plan (RAP) to the PADEP in which a groundwater pump and treat remediation system was selected as the remedial strategy for the site. The RAP was approved by the PADEP in a letter dated July 21, 2010.
  - ◆ Start up/shake down procedures for the groundwater remediation system were initiated on June 15, 2010. The permanent operation date for the groundwater remediation system is June 28, 2010.
  - ◆ Operation and Maintenance (O&M) of the remediation system has been ongoing since June 28, 2010.
  - ◆ On August 28, 2012, Alliance submitted a request to PADEP by e-mail on behalf of Sunoco, to modify the groundwater sampling plan during active remediation to a reduced list of wells. PADEP agreed to a reduced groundwater sampling plan per an August 28, 2012 e-mail. The following wells were removed from the quarterly groundwater sampling scope MW-2 & 2B; MW-5 & 5B; MW-9 & 9B; MW-10 & 10B; MW-13 & 13B. All the wells will remain in place, secured with a water tight manhole and locking well plug (wells will not be abandoned). Once active pumping is ceased, the

wells will be returned to the sampling plan, or a modified sampling plan to meet post remediation monitoring needs will be developed in participation with PADEP.

- ◆ A Notice of Intent (NOI) was submitted to PADEP on September 6, 2012, for renewal of the NPDES Permit, to continue operation of the remediation system. Coverage under the statewide permit was extended in a letter from PADEP dated October 24, 2012.
- ◆ On September 27 2012, Alliance installed a regenerative air blower at the Site to aid in sub-surface remediation. The blower was installed in the remediation shed, and tied into piping runs connected to MW-7B. The purpose of the blower is to provide additional hydraulic influence at well MW-7B and possibly extract hydrocarbon vapors from the de-watered bedrock surrounding MW-7B. All extracted vapors are passed through activated vapor-phase granular carbon prior to discharge to the atmosphere.

### SITE INFORMATION

Well Specifications:	Fourteen 2-inch diameter overburden monitoring wells (MW-1 through MW-14); Eight 2-inch diameter shallow bedrock wells (MW-2B, MW-5B, MW-9B, MW-10B, MW-11B, MW-12B, MW-13B, & MW-14B); Two 6-inch diameter deep wells (MW-7B, & MW-8B)
Geology:	Soils consist of greenish gray and orange clay and micaceous silt underlain by Precambrian age, medium grained felsic gneiss. Depth to bedrock reported during drilling ranged from 20-feet (MW-14B) to 48-feet (MW-8B). Bedrock is gradationally overlain by a thick mantle of saprolite identified in most borings.
Groundwater Elevation:	Overburden – 83.21 feet (MW-12) to 75.32 feet (MW-14) Shallow Bedrock – 83.25 feet (MW-12B) to 75.31 feet (MW-14B)
Hydraulic Gradient:	From April 10, 2012 (last sampling event under non-pumping conditions) Shallow - 0.013 feet per foot to the northeast Deep - 0.014 feet per foot to the northeast
Hydraulic Conductivity:	4.75 feet per day (shallow); 1.75 feet per day (deep)
Groundwater Sampling Frequency:	Quarterly
Analytical Method:	Benzene, Toluene, Ethylbenzene, Total Xylenes (BTEX), Methyl tertiary-butyl ether (MTBE), Isopropylbenzene, Naphthalene via Environmental Protection Agency (EPA) Method 8260B.
Soil Quality:	Soil quality data from October 2006 dispenser sampling indicated Benzene above SHS at sample <i>Disp/Line 2</i> . Soil quality data from well installation in January 2007, indicated MTBE above SHS at MW-3 (11-12 feet).
Separate-Phase Hydrocarbons:	Separate-phase hydrocarbons (SPH) have never been detected in the site monitoring wells.

## RISK ASSESSMENT

Potentially Sensitive Receptors: There are 34 known wells identified by the Environmental Data Resources, Inc. radius report (utilizing the Federal and Pennsylvania well databases) within a 0.5-mile radius. The East Branch of Ridley Creek lies approximately 900 feet northeast of the site.

Closest Known Well: One Federal Public Supply well was identified within a one-half mile radius to the east of the site.

Municipal Water Supply: Aqua Pennsylvania, Inc.

## SITE ACTIVITIES THIS REPORTING PERIOD

- ◆ Liquid-level data was collected from thirteen shallow monitoring wells (MW- 1 through MW-5 and MW-7 through MW-14) and nine deep monitoring wells (MW-2B, MW-5B, and MW-8B through MW-14B) on April 2, 2013.
- ◆ Additionally, on April 2, 2013 groundwater quality samples were collected from MW-1, MW-3, MW-4, MW-7, MW-7B, MW-11, MW-11B, MW-12, MW-12B, MW-14, and MW-14B (per reduced scope).
- ◆ Maps depicting groundwater elevation and analytical data for the shallow (overburden) and deep (shallow bedrock) monitoring wells are included as Figures 1 and 2, respectively. Historical groundwater elevation and analytical data are summarized in Table 1. A copy of the laboratory results is included in Appendix A.
- ◆ System operations and maintenance (O&M) visits were performed throughout the reporting period. Historical dissolved-phase hydrocarbon recovery data is summarized in Table 2. Groundwater system performance graphs are included as Appendix B.
- ◆ System sampling was conducted in accordance with the National Pollutant Discharge Elimination System (NPDES) Permit for the Site. The system sampling analytical data is summarized in Table 3. Laboratory analytical reports from the system sampling are included as Appendix C.

## REMEDIATION SYSTEM INFORMATION

- ◆ Type of System: Vacuum Enhanced Groundwater Extraction (VEGE)
- ◆ Permanent Operation Dates:
  - Groundwater June 28, 2010 to present
  - SVE: September 27, 2012 to December 23, 2012; March 19, 2013 to present
- ◆ Extraction Points: MW-1, MW-2, and MW-7B.
- ◆ Extraction Points Utilized: MW-7B.
- ◆ Recovery Equipment: Grundfos ES-7 Electric Submersible Pump & Gast R4 SVE blower
- ◆ Liquid-Phase Treatment Equipment: GeoTech Lo-Profile Air Stripper, (2) 200 lb. liquid granular activated carbon (LGAC) vessels
- ◆ Vapor-Phase Treatment Equipment: vapor-phase granular activated carbon
- ◆ Groundwater Discharge Location: Storm Sewer
- ◆ Approximate gallons pumped and treated this Reporting Period: 286,309

- ◆ Average Groundwater Recovery Rate this Reporting Period: 2.21 GPM
- ◆ Total Groundwater Recovered through June 24, 2013: 2,248,939 gallons
  - Totalizer replaced 12/5/12 at 1,714,261 gallons
- ◆ Total Dissolved-Phase MTBE Recovered through June 24, 2013: 120.77 pounds

### FUTURE SITE ACTIVITIES

- ◆ Quarterly groundwater monitoring and sampling will continue using the August 28, 2012 revised sampling plan. The next sampling event is scheduled in July 2013.
- ◆ Continue to operate and optimize the remediation system with regularly scheduled O&M visits (weekly visits to maintain operational efficiency and to prevent fouling of transfer pumps and other system components).
- ◆ Continue to collect bi-monthly system samples and submit monthly Discharge Monitoring Reports (DMR) in accordance with the NPDES Permit.

### ATTACHMENTS

Figure 1	Groundwater Analytical and Gradient Map - Overburden (Shallow) Wells April 2, 2013
Figure 2	Groundwater Analytical and Gradient Map - Shallow Bedrock (Deep) Wells April 2, 2013
Table 1	Groundwater Elevation Data and Analytical Summary
Table 2	Dissolved Phase Hydrocarbon Recovery Data
Table 3	System Analytical Summary
Appendix A	Groundwater Sampling Laboratory Analytical Reports
Appendix B	Groundwater System Performance Graphs
Appendix C	System Sampling Laboratory Analytical Reports

610-356-9550  
FAX 610-356-5032

**Herbert E. MacCombie, Jr., P.E.**  
CONSULTING ENGINEERS & SURVEYORS, INC.  
1000 PALMERS MILL ROAD  
MEDIA, PA 19063

James W. MacCombie, P.E., P.L.S.  
Herbert E. MacCombie, III, Technician

REPLY TO:  
P.O. BOX 118  
BROOMALL, PA 19008-0118



July 24, 2013

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

Re: Notice of Intent for Coverage under the General NPDES Permit  
Goshen Meadows Investors, LP  
Proposed Planned Apartment Development - Smith Property

Dear Mr. Smith:

Acts 14, 67, 68 and 127, which amended the Municipalities Planning Code, direct state agencies to consider comprehensive plans and zoning ordinances when reviewing applications for permitting of facilities and infrastructure, and specify that state agencies may rely upon comprehensive plans and zoning ordinances under certain conditions as described in Sections 619.2 and 1105 of the Municipalities Planning Code. The Pennsylvania Department of Environmental Protection's Policy for Consideration of Local Comprehensive Plans and Zoning Ordinances in DEP Review of Permits for Facilities and Infrastructure (DEP's Land Use Policy) provides direction and guidance to DEP staff, permit applicants, and local and county governments for the implementation of Acts 67, 68 and 127 of 2000. This policy can be found at [www.depweb.state.pa.us](http://www.depweb.state.pa.us); keyword: Land Use.

In accordance with DEP's Land Use Policy, enclosed please find a Municipal Land Use Letter that is to be submitted with our permit application to DEP for an NPDES Permit for Stormwater Discharges Associated with Construction Activities (copy enclosed). Please complete the attached form and return within 30 days to:

<b>Name of Applicant:</b>	Goshen Meadows Investors, LP
<b>Address of Applicant:</b>	P.O. Box 446 Narberth, PA 19072
<b>Project Location:</b>	1323 West Chester Pike

<b>Project Description:</b>	Consolidate a 5.1151 Acre parcel (Smith Tract) with existing 13.6364 Acre Goshen Meadows apartment complex property to form one (1) parcel. The applicant proposes to develop the 5.1151 acre former Smith Tract with five (5) three (3) story multi-family apartment buildings each containing 12 units. In addition, the applicant proposes to rehabilitate the existing historic Hoopes House for two (2) apartments.
-----------------------------	--

**Please do not send this form to DEP,** as we must include the Municipal Land Use Letter with our permit application. If we do not receive a response from you **within 30 days**, we shall proceed to submit our permit application to DEP without the Municipal Land Use Letter. If the Municipal Land Use Letter is not submitted with our permit application, and we provide proof to DEP that we attempted to obtain it, DEP will assume there are no substantive land use conflicts and proceed with the normal application review process.

If you have any questions, please do not hesitate to contact me at 610-356-9550 and/or [hem.engineers@verizon.net](mailto:hem.engineers@verizon.net).

Very Truly Yours,



---

David M. Porter, EIT

copy: Goshen Meadows Investors, LP  
File

Enclosures

**MUNICIPAL LAND USE LETTER**

Date: \_\_\_\_\_  
To: Goshen Meadows Investors, LP c/o Mr. Scott Fagan  
From: Mr. Rick Smith, East Goshen Township Manager  
Re: Proposed Planned Apartment Development - Smith Property

The municipality of East Goshen Township states that it:  
\_\_\_\_\_ has adopted a municipal or multi-municipal comprehensive plan.  
If yes, please provide date of adoption:

\_\_\_\_\_ has not adopted a municipal or multi-municipal comprehensive plan.

The municipality of East Goshen Township states that it:  
\_\_\_\_\_ has adopted a county zoning ordinance, or a municipal or joint-municipal zoning ordinance.  
\_\_\_\_\_ has not adopted a county zoning ordinance, or a municipal or joint-municipal zoning ordinance.

*If applicable:*

The municipality of East Goshen Township states that its zoning ordinance is generally consistent with its municipal comprehensive plan and the county comprehensive plan.

The above referenced proposed project  
\_\_\_\_\_ meets the provisions of the local zoning ordinance.

If zoning approval is required for the project to proceed, the above referenced project:  
\_\_\_\_\_ has received zoning approval.  
\_\_\_\_\_ has not received zoning approval.

*If the proposed project has not received zoning approval:*

What is the status of the zoning request for the proposed project? (e.g., Special Exception Approval from the Zoning Hearing Board required, Conditional Use approval from the Governing Body required)

---

---

---

Is there a legal challenge by the applicant with regard to zoning for the proposed project?

---

---

Name and Contact Information for Municipal Zoning Officer:

*Mark A. Gordon*  
*East Goshen Township*

---

---

---

Additional Comments (attach additional sheets if necessary):

---

---

---

Submitted By:

Name	
Title	
Contact Information (Address & Phone)	
Signature	
Date	

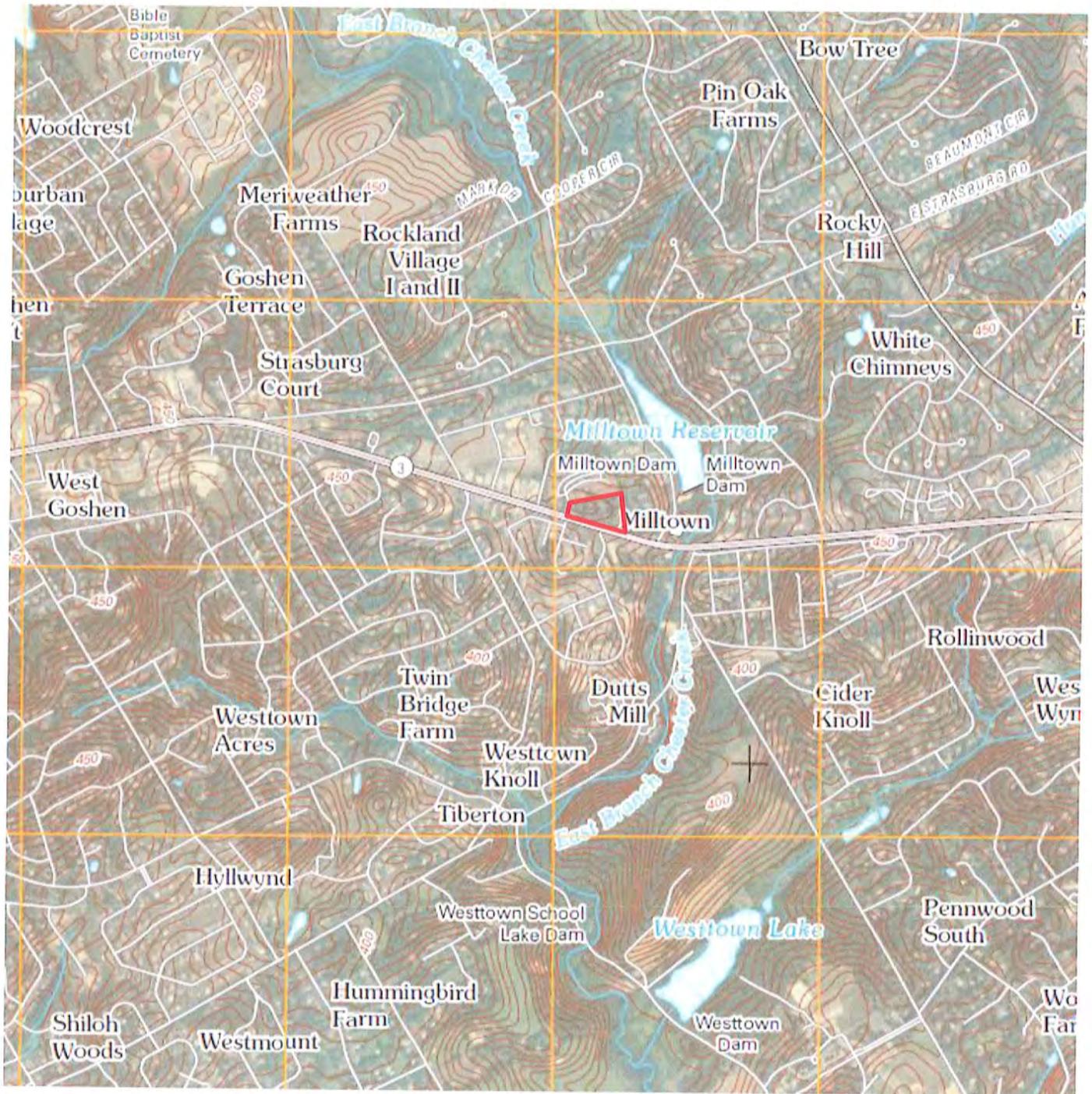
**APPENDIX A**

**Land Use Information Questions**

Responses to the following questions are required to determine applicability of DEP's Land Use Policy for Permitting of Infrastructure and Facilities.

Note: Applicants are encouraged to submit copies of local zoning approvals with their authorization application.

<b>LAND USE INFORMATION</b>		
1.	Is there an adopted county or multi-county comprehensive plan?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
2.	Is there an adopted municipal or multi-municipal comprehensive plan?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
3.	Is there an adopted county-wide zoning ordinance, municipal zoning ordinance or joint municipal zoning ordinance?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
<p><i>If the applicant answers NO to either Question 1, 2, or 3, the provisions of the PA MPC are not applicable and the applicant does not need to respond to questions 4 and 5 below.</i></p> <p><i>If the applicant answers YES to questions 1, 2 and 3, the applicant should respond to questions 4 and 5 below.</i></p>		
4.	Does the proposed project meet the provisions of the zoning ordinance or does the proposed project have zoning approval?  <i>If zoning approval has been received, attach documentation.</i>	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
5.	Have you attached Municipal and County Land Use Letters for the project?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>



 PROJECT SITE AREA (6 Ac. ±)

**USGS SITE LOCATION**

SCALE: 1" = 2,000'

Goshen Meadows  
 Smith Property  
 East Goshen Township, Chester County, PA

7.5-Minute Series  
 West Chester, PA Quadrangle  
 2010