

AGENDA
EAST GOSHEN TOWNSHIP
BOARD OF SUPERVISORS

Tuesday, February 20, 2018

7:00 PM

5:45 PM Executive Session – Personnel Matter & Pending Legal Matter

1. Call to Order
2. Pledge of Allegiance
3. Moment of Silence – Supervisor Carmen Battavio
4. Ask if anyone is recording the meeting
5. Chairman's Report
 - a. The Board met in executive session prior to tonight's meeting to discuss a personnel matter and a pending legal matter.
 - b. [Acknowledge receipt of a letter from Sunoco announcing their intention to commence Horizontal Directional Drilling.](#)
 - c. Announce Giant is circulating a petition to place a referendum for alcohol sales on the ballot for the primary election.
 - d. [Announce that Township has been awarded a DVRPC grant in the amount of \\$483,000 for Segment A of the Paoli Pike Trail](#)
6. Public Hearing - none
7. Emergency Services Reports
 - WEGO – Chief Brenda Bernot
 - [Goshen Fire Co – 2017 Year-end Report](#)
 - [Malvern Fire Co - January 2018](#)
 - Fire Marshal -none
8. [Financial Report – January 2018](#)
9. Old Business
 - a. [Consider recommendation for Natural Lands Pond Study.](#)
10. New Business
 - a. Consider request from Futurist Committee to support Giant Liquor Referendum
 - b. [Consider recommendation for Branding Plan.](#)
 - c. [Consider Stormwater Agreements and Grinder Pump Agreements for lots 2 and 3 at 1420 E. Strasburg Road.](#)
 - d. [Consider Apartment for the Care of a Relative at 1040 King Road](#)
 - e. [Consider recommendation from the Planning Commission to concerning the preparation of a Zoning Amendment for larger undeveloped properties.](#)
 - f. [Consider Comp Plan Implementation Matrix.](#)
 - g. [Consider recommendation from the Planning Commission concerning the preparation of a Zoning Overlay Amendment for the Paoli Pike Corridor.](#)
11. Any Other Matter
12. Approval of Minutes
 - a. [February 6, 2018](#)
13. Treasurer's Report – February 15, 2018
14. Liaison Reports -none

15. Correspondence, Reports of Interest

- a. [January 30, 2018 Letter from Senator Killion re Senate Bill 656](#)
- b. [January 30, 2018 Letter from FEMA approving the Township's Hazard Mitigation Plan](#)
- c. [February 15, 2018 Memo from Jason Lang on 2018 NRPA National Summer Camp Dance](#)
- d. [February 15, 2018 Memo from Jason Lang on Opioid Epidemic – Park & Recreation Support](#)

16. Public Comment

17. Adjournment

Meetings & Dates of Importance

Feb 28, 2018	Site visit @ Malvern Institute (Zoning Hearing Board & parties only)	10:00 am
Mar 01, 2018	Park and Recreation Commission	7:00 pm
Mar 06, 2018	Board of Supervisors	7:00 pm
Mar 07, 2018	Planning Commission	7:00 pm
Mar 08, 2018	Historical Commission	7:00 pm
Mar 12, 2018	Municipal Authority	7:00 pm
Mar 14, 2018	Conservancy Board	7:00 pm
Mar 19, 2018	Futurist Committee	7:00 pm
Mar 19, 2018	Zoning Hearing Board Malvern Institute	7:00 pm
Mar 20, 2018	Board of Supervisors	7:00 pm
Mar 30, 2018	Township Office Closed	-----

Newsletter Deadlines for Summer of 2018: May 1st

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

Public Comment – Pursuant to Section 710.1 of the Sunshine Act the Township is required to include an opportunity for public comment agenda which is intended to allow residents and/or taxpayers to comment on matters of concern, official action or deliberation which are or may be before the Board of Supervisors. Matters of concern which merit additional research will be placed on the agenda for the next meeting.

Constant Contact - Want more information about the latest news in the Township and surrounding area? East Goshen Township and Chester County offer two valuable resources to stay informed about important local issues. East Goshen communicates information by email about all Township news through Constant Contact. To sign up, go to www.eastgoshen.org, and click the “E-notification & Emergency Alert” button on the left side of the homepage. Chester County offers an emergency notification system called ReadyChesco, which notifies residents about public safety emergencies in the area via text, email and cell phone call. Signing up is a great way to keep you and your loved ones safe when disaster strikes. Visit www.readychesco.org to sign up today!

Smart 911 - Smart911 is a new service in Chester County that allows you to create a Safety Profile at www.smart911.com that includes details you want the 9-1-1 center and public safety response teams to know about your household in an emergency. When you dial 9-1-1, from a phone associated with your Safety Profile that information automatically displays to the 9-1-1 call taker allowing them to send responders based on up-to-date location and emergency information. With your Safety Profile, responders can arrive aware of many details they would not otherwise know. Fire crews can arrive knowing exactly how many people live in your home and where the bedrooms are located. EMS personnel can know family members' allergies or specific medical conditions. And police can access a photo of a missing family member in seconds rather than minutes or hours, helping the search start faster.

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SUNOCO PIPELINE
An ENERGY TRANSFER Partnership

February 13, 2018

BY CERTIFIED AND FIRST CLASS MAIL

East Goshen Township
1580 Paoli Pike
West Chester, PA 19380



Re: Mariner East 2 – Pennsylvania Pipeline Project
Horizontal Directional Drilling Construction Notification
and Private Water Supply/Well Sampling Offer

Dear East Goshen Township:

Sunoco Pipeline L.P. ("SPLP") is writing to inform you that a certain construction activity known as Horizontal Directional Drilling ("HDD") for Mariner East 2, also known as the Pennsylvania Pipeline Project, is located within 450 feet of your property boundary.

SPLP sent you a letter before construction activity began on the first of two HDDs that will occur in the area. This letter is intended to inform you that the second HDD will begin as soon as ten (10) days of the date of this letter.

As part of this construction activity, SPLP is offering private water supply/well testing at SPLP's expense if you have a private water supply/well located within 450 feet of the HDD alignment. SPLP will provide you copies of all test results from your private water supply/well. Please note that upon their request, we will provide the test results to the Pennsylvania Department of Environmental Protection as well.

- ***If you have already contacted the Sunoco representative for your area and requested that your private water supply/well be tested, you do not need to take any further action in response to this letter.***
- If you have **not** previously contacted the Sunoco representative for your area, SPLP is requesting that you do so by calling Amy Johnson at (717) 208-7735, to provide SPLP with the following information:
 1. If you have a private water supply/well on your property;
 2. The location of your private water supply/well on your property; and,
 3. If you would like to have your private water supply/well tested.

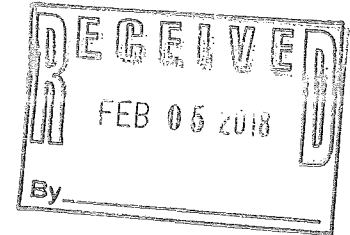
If you have not previously contacted the Sunoco representative for your area, and you would like to have your private water supply/well tested, you must contact the Sunoco representative for your area within the next then (10) days by calling Amy Johnson at (717) 208-7735. Your private water supply/well will be tested at a mutually-convenient time within ten (10) days of SPLP's receipt of your request for testing. If you do not contact the Sunoco representative, there will be no further contact from us regarding any private water supply/well testing.

If you have any questions or concerns, please do not hesitate to contact the Sunoco representative for your area by calling Amy Johnson at (717) 208-7735.

Thank you for your cooperation.

Mark McConnell
Land Project Manager
Representing Sunoco Pipeline L.P..
Office: (814) 204-0450

January 31, 2018



Mr. Mark Gordon
Zoning Officer
East Goshen Township
1580 Paoli Pike
West Chester, PA 19380

RE: DVRPC 2018 Transportation Alternatives Set-Aside Program (TA Set-Aside)

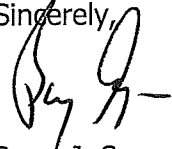
Dear Mr. Gordon:

It is my pleasure to inform you that East Goshen Township has been awarded \$483,000 for the Paoli Trail, Segment A project for implementation via the DVRPC 2018 TA Set-Aside Program. Your application was one of ten projects regionally awarded from a pool of forty-seven applications in the Pennsylvania portion of the DVRPC region.

Project readiness and the capacity of the applicants to implement these projects in a timely manner was a major consideration in the selection of these projects for funding. Funds awarded through this program must be federally obligated by August 2020. PennDOT District 6-0 will provide assistance in guiding the project through the PennDOT Design Development process.

A DVRPC project manager will be contacting you in the following weeks to schedule a project kick-off meeting to define the scope and responsibilities for the steps required to advance your project. Please be advised that you should not proceed with any element of this project for which you expect to be reimbursed until after the kick-off meeting.

Congratulations on your successful award and we look forward to working with you to implement your project.

Sincerely,

Barry J. Seymour
Executive Director

c: Charles Davies
Bryn Styche
Ryan Gallagher

East Goshen
Year to Date Statistics
 Goshen Fire Company Services 2017

Fire	JAN	FEB	MAR	APR	MAY	JUN	JULY	AUG	SEPT	OCT	NOV	DEC	TOTAL
East Goshen													
Number of Calls	17	20	29	26	23	23	22	32	18	29	32	22	293
Total Numbers YTD													
Calls													
Station 54 (Park Ave) District	34	30	40	37	30	28	34	33	28	37	50	36	417
Station 56 (Boot Rd) District	15	15	13	14	16	13	18	24	15	24	21	20	208
Total:	49	45	53	51	46	41	52	59	43	61	71	56	627
Total Firefighter Responding	369	414	402	428	350	364	482	443	307	559	602	456	5176
Average Turnout	7.5	10.2	7.6	8.4	7.6	8.9	8.8	7.5	7.2	9.2	8.5	8.1	8.3
Staff Hours	132:52:00	224:24:00	122:53:00	121:41:00	113:19:00	165:44:00	143:41:00	165:26:00	113:55:00	141:43:00	319:26:00	151:31:00	1916:35:00
Total Time In Service	27:52:35	68:41:00	21:49:28	19:58:25	21:39:00	24:11:40	23:45:00	33:21:19	28:43:00	25:06:59	72:32:29	27:38:04	395:18:59
Property Value	\$ 500,000.00	\$ 1,346,500.00	\$ 3,425,000.00	\$ 5,005,000.00	\$ -	\$ 625,000.00	\$ -	\$ 680,000.00	\$ 530,000.00	\$ 451,500.00	\$ 525,000.00	\$ 8,000.00	\$ 13,096,000.00
Property Loss	\$ 15,000.00	\$ 446,500.00	\$ 4,250.00	\$ 1,750.00	\$ -	\$ 2,000.00	\$ -	\$ 30,000.00	\$ 100,000.00	\$ 4,250.00	\$ 2,500.00	\$ 8,000.00	\$ 614,250.00
Property Saved	\$ 485,000.00	\$ 900,000.00	\$ 3,420,750.00	\$ 5,003,250.00	\$ -	\$ 623,000.00	\$ -	\$ 650,000.00	\$ 430,000.00	\$ 447,250.00	\$ 522,500.00	\$ -	\$ 12,481,750.00
Firefighter Injuries	0	0	0	0	0	1	0	0	0	0	0	0	1
Civilian Injuries	0	0	0	0	0	0	0	0	0	0	0	0	0

East Goshen
Year to Date Statistics
 Goshen Fire Company Services 2017

Ambulance	JAN	FEB	MAR	APR	MAY	JUN	JULY	AUG	SEPT	OCT	NOV	DEC	TOTAL
For East Goshen Only													
Number of Calls	197	173	189	201	173	185	172	183	149	217	211	237	2287
Hours in Service	168	151	155	191.0	139	177	143	144	117	175	160	197	1917
Person Hours in Service	370.01	316.3	321.3	426.8	293	398	302	303	243	376	335	410	4094
Patients Treated (total)	168	158	158	169	138	157	152	150	121	181	165	188	1905
Patients Treated-65 & over	138	129	127	143	114	126	127	115	93	143	142	155	1552
Total Numbers YTD													
Calls	313	302	305	326	289	295	281	310	273	345	329	350	3718
Career Only Crews (66%)	191	215	197	180	194	196	205	215	186	238	249	273	2539
Blended Crews (18%)	62	33	33	46	35	49	47	45	32	74	41	37	534
Volunteer Only Crews (22%)	60	54	75	100	60	50	29	50	55	33	39	40	645
Patients Treated Total	262	263	254	270	227	243	236	245	216	264	249	275	3004
Patients Treated-Age 65 & over	190	202	188	202	165	167	183	164	149	192	191	203	2196
Patient Treated (Total) by ALS Units													
Brandywine Medic 93	1	0	0	1	0	0	0	0	0	0	0	0	2
CCH Medic 91	55	51	60	49	54	55	46	57	46	48	42	67	630
Malvern Medic 4	19	19	34	26	20	21	21	14	22	27	27	34	284
Medic 3	0	0	1	0	0	0	0	0	0	0	0	0	1
Total Patients transported	203	207	210	219	192	197	194	203	177	226	208	237	2473
Calls No Patients were transported	110	95	95	107	97	98	87	107	96	119	121	113	1245
Box Number Statistics-Number of Calls													
51	1	0	0	0	0	0	0	0	0	0	0		1
52	1	3	0	0	0	0	0	0	0	0	0		4
53	0	1	0	0	0	0	0	0	0	0	0		1
54	155	145	156	166	141	153	132	171	143	163	142	151	1818
56	147	148	143	155	139	136	144	131	120	170	172	190	1795
Career Hours in Service	393	392	362	360	328	377	373	363	295	449	398	462	4552
Volunteer Hours in Service	163	123	163	270	147	219	93	139	161	146	124	131	1879
Unit Statistics-Hours in Service													
A54-1	20	66	67	37	73	117	73	83	88	51	28	124	827
A54-2	96	31	34	59	16	19	14	28	20	100	102	33	553
A56-1	120	76	56	116	50	54	104	30	85	33	88	103	915
A56-2	21	76	95	76	84	82	31	99	26	89	34	25	737
Calls from 6AM to 10PM	243	257	253	272	254	244	226	262	242	273	272	280	3078
Calls from 6PM through 10PM	62	61	64	57	63	42	74	65	53	74	72	62	749
Calls from 10PM to 6AM (Night Crew)	70	45	52	54	35	51	55	48	31	72	57	70	640
Saturday Calls 6AM to 6PM	16	17	25	31	24	29	21	17	26	21	27	34	288
Sunday Calls 8AM to 6PM	27	33	33	33.00	26	22	21	26	31	21	29	29	331

East Goshen
Year to Date Statistics
 Goshen Fire Company Services 2017

Fire Police	JAN	FEB	MAR	APR	MAY	JUN	JULY	AUG	SEPT	OCT	NOV	DEC	TOTAL
East Goshen													
Night Calls	4	7	1	6	3	4	6	4	2	7	7	10	61
Day Calls	8	9	13	10	4	9	8	10	12	11	7	8	109
Duration of 2 Hours +				1		2				1	1	2	7
Crew Total	206	241	124	200	63	109	113	233	105	217	154	169	1934
TRF54 responses	2	3	5	2	1	4	4	3	1	7	1	5	38
TRF54 mileage	12	11	34	10	1	14	22	16	2	45	2	32	201
TRF56 responses				1		1	1	1	1	1			6
TRF56 mileage				12		12	4	12	6	2			48
UTL54 responses	1	1				1				1	1		5
UTL54 mileage	4	15				2				10	2		33
Total Calls	12	16	14	16	7	13	14	14	14	18	14	18	170
Person Hours	40	40	31	48	9	136	31	44	34	66	48	56	583
AFA	1	2	2	2		2	2	5	4	2	2	4	28
Ambulance Assist			1	2		1	1	1	1	4		2	13
Appliance			2	1									3
Brush			2		1		2			1		1	7
Building	1							1			1		3
CO Alarm	1	1		2								2	6
Debris in Roadway								1					1
Dwelling	1		2			2				1		1	7
Electrical Fire Inside				1									1
Fire									1		1		2
Forcible Entry						1							1
Fuel Spill				1	1	1	2			2			7
Gas Leak		1	1			1			1		1	1	6
Mutual Aid to Malvern												1	1
MVA	7	3	5	6	4	2	2	4	6	8	4	5	56
Odor Investigation		1					2	2			1		6
Pedestrian Struck			1	1									2
Rescue										1			1
Smoke in Building							1						1
Special Duty				1		2				1			4
Traffic Control Assist			1										1
Transformer			1	1	1						1		4
Trash			1						1		1		3
Trees & Wires	1						2		1				4
Vehicle Fire							1					1	2



Malvern Fire Company

424 East King Street
Malvern, PA 19355

Main 610-647-0693

Fax 610-647-0249

www.malvernfireco.com

East Goshen Township 2018 EMS Statistics

January:

42 Calls; 3 BLS (3 Transports); 39 ALS (29 Transports)

Memo

To: Board of Supervisors
From: Jon Altshul
Re: January 2018 Financial Report
Date: February 9, 2018

Net of pass-through accounts, as of January 31st, the general fund had revenues of \$275,524 and expenses of \$979,306 for a year-to-date deficit of \$703,782. Compared to the YTD budget, revenues were \$43,158 under budget and expenses were \$29,076 under budget for a negative budget variance of \$14,082. As of January 31st, the general fund balance was \$4,684,667.

On the expense side, Administration, Emergency Services and Public Work are all under budget, while Parks and Recreation and Codes are slightly over budget. On the revenue side, Earned Income Tax and Real Estate Transfer Tax were under budget, while Real Estate Property Tax and Other Income were over budget.

With that said, it's impossible to draw any meaningful conclusions about the 2018 budget year after only one month, and January is always a historically slow month financially. Next month's financial report will reflect considerably more revenue from Q4 EIT remittances and 2018 real estate tax receipts and will provide the first meaningful snapshot of how the year has started.

Other funds

- The **State Liquid Fuels Fund** had \$1 in revenues and \$0 expenses. The fund balance was \$503.
- The **Sinking Fund** had \$1,741 in revenues and \$53,824 in expenses. The fund balance is \$5,971,948.
- The **Transportation Fund** had \$465 in revenues and \$0 in expenses. The fund balance is \$1,079,622.
- The **Sewer Operating Fund** had \$315,677 in revenues and \$116,434 in expenses. The fund balance is \$1,085,915.
- The **Refuse Fund** had \$83,733 in revenues and \$85,337 in expenses. The fund balance is \$612,525.
- The **Bond Fund** had \$7,970 in revenues and \$56,707 in expenses. The fund balance is \$7,287,585.
- The **Sewer Sinking Fund** had \$685 in revenues and \$6,832 in expenses. The fund balance is \$2,156,531.
- The **Operating Reserve Fund** had \$605 in revenues and no expenses. The fund balance is \$2,504,959.

EAST GOSHEN TOWNSHIP
GENERAL FUND SUMMARY
As of January 31, 2018

Account Title	Annual Budget	YTD Budget	YTD Actual	Variance
EMERGENCY SERVICES EXPENSES	4,101,440	539,148	530,708	8,440
PUBLIC WORKS EXPENSES	2,637,576	176,468	173,751	2,717
ADMINISTRATION EXPENSES	2,218,972	227,588	205,458	22,130
CODES EXPENSES	465,911	36,178	41,309	(5,130)
PARK AND RECREATION EXPENSES	690,256	19,849	18,929	920
TOTAL CORE FUNCTION EXPENSES	10,114,155	999,231	970,154	29,077
EMERGENCY SERVICES REVENUES	77,628	2,538	2,192	(346)
PUBLIC WORKS REVENUES	1,010,195	208	240	32
ADMINISTRATION REVENUES	334,024	17,937	17,398	(539)
CODES REVENUES	259,725	14,304	16,971	2,667
PARK AND RECREATION REVENUES	140,976	9,344	7,390	(1,955)
TOTAL CORE FUNCTION REVENUES	1,822,548	44,331	44,190	(141)
NET EMERGENCY SERVICES	4,023,812	536,610	528,516	8,094
NET PUBLIC WORKS	1,627,381	176,260	173,511	2,749
NET ADMINISTRATION	1,884,948	209,651	188,061	21,590
NET CODES	206,186	21,874	24,338	(2,464)
NET PARK AND RECREATION	549,280	10,505	11,539	(1,034)
CORE FUNCTION NET SUBTOTAL	8,291,607	954,900	925,964	28,936
DEBT - PRINCIPAL	549,000	-	-	0
DEBT - INTEREST	249,458	9,151	9,152	(1)
TOTAL DEBT	798,458	9,151	9,152	(1)
TOTAL CORE FUNCTION NET	9,090,065	964,051	935,117	28,934
NON-CORE FUNCTION REVENUE				
EARNED INCOME TAX	5,181,600	213,704	160,083	(53,621)
REAL ESTATE PROPERTY TAX	2,026,129	572	15,955	15,383
REAL ESTATE TRANSFER TAX	575,000	47,916	40,245	(7,671)
CABLE TELEVIS.FRANCHISE	489,600	-	-	-
LOCAL SERVICES TAX	348,000	6,627	7,484	857
OTHER INCOME	469,736	5,532	7,567	2,035
TOTAL NON CORE FUNCTION REVENUE	9,090,065	274,351	231,334	(43,017)
NET RESULT	0	(689,700)	(703,782)	(14,082)

SUMMARY OF FUNDS REPORT (AKA "JOE REPORT")
ALL FUNDS JANUARY 2018
* NOTE: GENERAL FUND INCLUDES PASS-THROUGH ACCOUNTS

	GENERAL FUND*	LIQUID FUELS STATE FUND	SINKING FUND	TRANSPORT. FUND	SEWER OP. FUND	REFUSE FUND	SEWER SINK FUND	OPERATING RESERVE	TOWNSHIP FUNDS	MUNICIPAL AUTHORITY	BOND FUND
01/01/18 BEGINNING BALANCE	\$5,531,289	\$502	6,024,031	1,079,157	886,672	614,128	\$2,162,678	\$2,504,354	\$18,057,119	\$142,331	7,336,323
RECEIPTS											
310 TAXES	\$230,276	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$230,276	\$0	\$0
320 LICENSES & PERMITS	\$170	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$170	\$0	\$0
330 FINES & FORFEITS	\$2,192	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$2,192	\$0	\$0
340 INTERESTS & RENTS	\$16,496	\$1	\$1,741	\$465	\$205	\$351	\$685	\$605	\$20,548	\$392	\$7,970
350 INTERGOVERNMENTAL	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
360 CHARGES FOR SERVICES	\$28,677	\$0	\$0	\$0	\$315,473	\$83,382	\$0	\$0	\$427,531	\$423	\$0
380 MISCELLANEOUS REVENUES	\$4,212	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$4,212	\$0	\$0
390 OTHER FINANCING SOURCES	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
	\$282,023	\$1	\$1,741	\$465	\$315,677	\$83,733	\$685	\$605	\$684,929	\$815	\$7,970
EXPENDITURES											
400 GENERAL GOVERNMENT	\$103,813	\$0	\$6,772	\$0	\$0	\$0	\$0	\$0	\$110,585	\$0	\$0
410 PUBLIC SAFETY	\$678,392	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$678,392	\$0	\$0
420 HEALTH & WELFARE	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
426 SANITATION & REFUSE	\$6,716	\$0	\$0	\$0	\$88,194	\$85,337	\$6,832	\$0	\$187,079	\$43,354	\$0
430 HIGHWAYS,ROADS & STREETS	\$145,605	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$145,605	\$0	\$0
450 CULTURE-RECREATION	\$15,494	\$0	\$46,227	\$0	\$0	\$0	\$0	\$0	\$61,721	\$0	\$56,707
460 CONSERVATION & DEVELOPMENT	\$120	\$0	\$825	\$0	\$0	\$0	\$0	\$0	\$945	\$0	\$0
470 DEBT SERVICE	\$9,461	\$0	\$0	\$0	\$28,241	\$0	\$0	\$0	\$37,701	\$0	\$0
480 MISCELLANEOUS EXPENDITURES	\$150,272	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$150,272	\$0	\$0
490 OTHER FINANCING USES	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
	\$1,109,874	\$0	\$53,824	\$0	\$116,434	\$85,337	\$6,832	\$0	\$1,372,301	\$43,354	\$56,707
2018 SURPLUS/(DEFICIT)*	(\$827,851)	\$1	(\$52,084)	\$465	\$199,243	(\$1,604)	(\$6,148)	\$605	(\$687,372)	(\$42,539)	(\$48,738)
CLEARING ACCOUNT ADJUSTMENTS	(\$18,772)										
01/31/2018 ENDING BALANCE	<u>\$4,684,667</u>	<u>\$503</u>	<u>\$5,971,948</u>	<u>\$1,079,622</u>	<u>\$1,085,915</u>	<u>\$612,525</u>	<u>\$2,156,531</u>	<u>\$2,504,959</u>	<u>\$18,096,669</u>	<u>\$99,792</u>	<u>\$7,287,585</u>

Memo

East Goshen Township

Date: July 6, 2017
To: Board of Supervisors
From: Rick Smith, Township Manager
Re: Natural Land Pond Study

We have received the Pond Study from Natural Lands. The Board previously stated it intended to refer the Pond Study to the Conservancy Board for their review and to address the question of how the ponds should be prioritized. The Board also wanted a recommendation from Jon Altshul on the timing of the projects from a cash flow perspective. And the Board requested that we advertise for residents to serve on a pond committee(s) that would provide input to the Conservancy Board.

We have six ponds in three neighborhoods. While we have seven interested residents from Pin Oaks and Marydell, the response for pond committee members is lacking for representation from Bow Tree and Hershey Mill Estates.

Accordingly, I would suggest the following course of action. The Board request the Conservancy Board review the Pond Study and provide their recommendations, including the prioritization, by the end of June. The Board appoints the interested residents to the Pin Oak & Marydell Pond Committee that is tasked with working with the Conservancy Board with respect to various improvements to be made at the Pin Oaks and Marydell Ponds. In order to avoid a potential conflict this Committee should not be involved in the prioritization. In order to maximize the resident's opportunity to participate the Township should send out letters to all of the affected residents once the Conservancy Board has determined the meeting schedule for the ponds. Lastly Jon would be requested to provide his report to the Board by the end of June as well.

The above schedule would put the Board in position to make its decision in September. As you know there is funding in the 2018 budget for Ponds and if we had a good fall weather wise, we could start work on some of the improvements in 2018 and put funding in the budget for 2019.

Suggested Motion – I move that we request that the Conservancy Board review the Pond Study and provide their recommendation, including the prioritization, to the Board by the end of June.

In addition the Board hereby appoints the following residents to the Pin Oak & Marydell Pond Committee. This Committee is tasked with working with the Conservancy Board with respect to various improvements to be made at the Pin Oaks and Marydell Ponds, however to avoid any potential conflict this Committee should not be involved in the prioritization. In order to maximize the opportunities for residents to provide input, the Township should send out letters to all of the affected residents once the Conservancy Board has determined the meeting schedule for the ponds. Lastly, Jon is hereby requested to provide his report to the Board by the end of June as well.



Study of Ponds

**East Goshen Township
Chester County, PA**

FEBRUARY 2018



Study of Ponds

**East Goshen Township
Chester County, PA**

FEBRUARY 2018



Hildacy Preserve
1031 Palmers Mill Road
Media, PA 19063
610-353-5587
natlands.org

with contributions from

Toth Brothers Clearing and Dredging
Aquascapes Unlimited, Inc.
Brandywine Science Center, Inc.
Pennoni

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<i>provided in digital format</i>	

STUDY OF PONDS - EAST GOSHEN TOWNSHIP

to what is causing the problems. A landscape architect or engineer then determines the causes. A construction company with experience in ponds and basins advises on the pond structures. An aquatic plant and pond management professional provides insights on the pond itself. Finally, the landscape architect or engineer provides recommendations for how to change the surroundings and the ponds themselves, to address the causes of the problems, rather than simply treating the symptoms.

In order to provide a holistic approach, a diverse team of professionals is required to examine the water, plants and other natural and manmade features which affect the ponds. Natural Lands subcontracted with **Toth Brothers, Clearing and Dredging, Inc.**, to assess the levels of sedimentation, the functionality of the existing structures and provide recommendations regarding dredging and construction. Natural Lands also consulted with **Aquascapes Unlimited**, on plantings and aeration. East Goshen Township hired the **Brandywine Science Center** to perform laboratory tests to determine the quality of the water, including percentages of chemicals, in each pond. **Pennoni**, the Township Engineer, also provided insights in an advisory role. Information provided by each consultant has been used to conduct a comprehensive study of the six ponds and basins, focused on reducing algae and sediment and improving water quality.



Dredging may be necessary at some of the ponds, as they have filled with sediment. CREDIT: Toth Brothers Clearing and Dredging

additional challenges

The ponds can be improved from their current state. The amount of algae can be reduced. The number of fish kills can be reduced, if not eliminated. The ponds can be dredged of the excess sediment which fills them now. But it is likely that the ponds will never be perfect. They will never be completely algae free. They will never be in a perfect natural balance. They will never be maintenance free when it comes to sediment. Three important truths will challenge work around these ponds forever:

1. Ponds do not occur naturally in southeastern Pennsylvania;
2. These are not just ponds, they are stormwater management areas;
3. Some algae is natural and normal.

In Pennsylvania, the combination of hydrology, soils and geology and topography, does not support the existence of ponds. We often see wetlands, springs and vernal pools, but not large ponds, like the ones examined in this study. Wetlands typically exist in floodplains, or in low lying areas near streams. They are shallow, with a fluctuating depth, and sometimes flowing water. Springs are fairly common, and often exist in groups, close together. Springs more typically act as headwaters, with their flows combining to form streams. Vernal pools could be described in laymen's terms as large, seasonal puddles. They are extremely



Berms, dams or other types of impoundments maintain water levels, as ponds do not occur naturally in southeastern Pennsylvania.

background

The East Branch Chester Creek and the Ridley Creek played a significant role in East Goshen's agricultural past. These major streams and their many tributaries which stretch across the township provided water for the farms which once dominated the landscape. Farmers often dammed a tributary, or diverted water from them, to create a pond, easily collect water or feed their animals. Now, most of the farms are gone, but some of the ponds remain. They now provide the residents with aesthetic beauty and some recreational use. Some ponds have been created to manage stormwater, while others have been retro fit by developers, as residential developments have replaced the farms.

No longer serving a utilitarian role, and surrounded by homes, the beauty and overall health of the ponds has been called into question. Many of them are filled with sediment, overrun by geese, and covered with algae for long periods of time, particularly in the summer. Fish kills have also been reported over the past few summers. Recent tests show that by some measures, the ponds do not meet standards for water quality for their current uses. Natural Lands has examined these issues, worked with the Township and partners, and has prepared this report on the causes of these problems and potential solutions.

Natural Lands draws on our experience managing 43 nature preserves, including the Willisbrook Preserve, nearby in Willistown Township.

approach

Natural Lands owns and operates 43 nature preserves, many of which are former farms. Some of these properties include ponds. In most cases, we have converted the ponds into wetlands, a more natural state. Ponds do not occur naturally in Pennsylvania, making their maintenance an ongoing battle against nature.

Natural Lands' ponds are different than those found throughout East Goshen. The six ponds included in this study are large and manage stormwater. They also serve the residents as they provide aesthetic beauty and recreational opportunities. **Therefore, we do not recommend converting any of the ponds included in this study, to wetlands, as it would upset the neighbors and require extensive redesign.**

Pond ecology and management are complicated, especially when stormwater management is involved. Where ponds have become filled with sediment and water quality is degraded, its important to take a holistic view of the factors affecting the ponds. Scientists are needed to test water samples to determine the levels of chemicals and sediment in the water. The test results provide clues



important for wildlife, especially amphibians such as frogs and salamanders, but they are much smaller in size and disappear in the dry months.

Where ponds do exist in our area, they are man-made. They all have a water source, such as a pipe carrying stormwater, or an existing stream. Sometimes a spring feeds a pond too. They also all have either a dam on one end, or raised berms completely surrounding the water, holding it in place. They also all have a place where water can flow out if the pond overflows. The outfall is usually in the form of a spillway, where water simply flows over an edge, or a piped structure, which acts as a drain, diverting water through a dam or side, towards a nearby stream.

Ponds like these are in a constant battle against nature and time. The concrete pipe structures degrade over time. Trees can take root and tear them apart. The berms, typically made of clay, can also subside or fall apart over the course of many years. Over time, the man made features which hold the water in place, simply fall apart without ongoing monitoring, maintenance and repairs. Additionally, the forces of nature work against ponds, trying to return them to a natural condition. Where water flows in, it brings sediment to fill the depression. Where water flows out, it can erode the areas around the structures or tear at the berms themselves, again, with the ability to undermine the berms which hold the water. Without ongoing intervention, over the course of time, nature would fill the ponds with sediment, tear apart the impoundments and restore the areas to stream channels and wetlands.

The ponds examined in this study are primarily stormwater management areas. In addition to the natural



Inlets feed stormwater, and sediment and pollutants, from the streets into the ponds.

forces at play, man-made forces also affect the ponds. Stormwater inlets in the neighborhoods surrounding the ponds bring even more water into the ponds. The forces of erosion and sedimentation which are naturally present in stream systems are exacerbated with the addition of stormwater, making it even more difficult to keep the ponds in balance. Stormwater also brings other issues, as the water typically carries pollutants, such as motor oil and gasoline, fertilizers, soaps and other substances which end up in the pond water. These substances can affect the water chemistry in ways which encourage algae growth.

The presence of some algae is natural and normal. This study was commissioned in part because some of the ponds were completely covered in algae in the warmer months. The residents consider this an eyesore. More importantly, a pond completely covered in algae is not a healthy pond. The recommendations included in this study seek to reduce the amount of algae in the ponds, but not to completely eliminate it. Algae are plants which occur naturally in water bodies, so some should be expected. But just like in a forest, its not healthy for one plant species to dominate the ecosystem. We seek to reduce the amount of algae, and bring it back into balance within a healthier pond ecosystem. The community will need to accept some algae in the ponds.

goals of this study

Each pond and basin in the study is different, but they all serve the same basic functions- to manage stormwater, look attractive and serve the residents of the community. Some of the ponds and basins were designed as stormwater management measures, collecting piped water through inlets and pipes, while others collect sheet flow from their surroundings. They are all in plain view of residents, some providing the view from the front window, while others provide scenic beauty to backyards. The ponds could also serve as recreational areas, for fishing, or as a setting for walking paths. With these ideas in mind, the study set out to achieve the following goals:

1. **Assess the overall functionality of the ponds** – Toth Bros, with Natural Lands, inspected the ponds,

measured them for depth and depth of sediment, and visually assessed structures such as inlets, outflows and emergency spillways, to ensure that they were safe and functional.

- 2. Assess overall health of the ponds** – In accordance with the existing and potential uses for the ponds, Natural Lands has reviewed the laboratory tests performed by Brandywine Science Center, highlighted deficiencies at each pond and prepared recommendations for improvement.
- 3. Provide recommendations to reduce the amount of seasonal algae growth, improve aesthetic beauty and provide recreational opportunities** – The ponds, with some improvement, can become centers for passive recreation within each neighborhood, providing people with a place to walk, watch birds and animals, fish or simply enjoy the scenery.

context

Detailed descriptions and recommendations related to each individual pond are found later in this report. However, a number of findings and existing conditions relate to most or all of the ponds in the study. Some are results of similar land management approaches at each of the ponds, while others, such as the state of the watershed throughout



As stormwater management measures, the ponds feature outfall structures, which allow water to escape when the ponds fill too high.

southeastern Pennsylvania, are outside of the control of the Township. The following section provides a description of the state of the ponds, the effects of their surroundings and an overview of some of the common issues.

disconnection from the people

When we visited the ponds, we saw little evidence to suggest that the nearby residents visit or use the ponds on a regular basis. There were no social trails or tracks, no garbage and few other signs of use. We did see some evidence of fishing, with some line stuck in branches over the ponds, but even that was minimal. Comments at the public meetings seemed to confirm that the residents rarely visit the ponds, mostly due to the presence of geese and their waste. There are also few amenities to draw people to the sites.

The closest residents enjoy the views of the ponds, but even they rarely visit the water's edge. They don't have a connection to the water, or to the birds, amphibians and fish that depend on it. They view the ponds from afar and have little reason to think about the processes, natural and man-made, which affect the ponds, their water quality and the animals that depend on it.

The ponds get covered with algae in the summer, and sometimes fish die, but the causes aren't obvious. Only when people visit the ponds and begin to care about them, will they ask questions like: Where is this water coming from? Is it clean? Is it good for the fish? Is it causing algae? Is there some way I can help? The neighborhoods surrounding the ponds can play a vital role in improving the ponds' health, but first they need a reason to care. Through a holistic approach to improving the ponds health, places can be made which benefit the ponds, the wildlife that depends on them and the people who surround them.

state of the watersheds

East Goshen Township is divided between the East Branch Chester Creek and Ridley Creek watersheds. Each creek has watershed wide issues which sometimes manifest themselves at East Goshen's pond sites. Every pond in the study is connected to a creek, whether as a headwater pond from which a tributary flows, or as a collection point

along the stream. This means that the state of the ponds and the state of the creeks will forever affect one another.

The Pennsylvania Department of Environmental Protection (DEP) has classified all streams in East Goshen as impaired, due to **siltation, water flow variability** or unknown reasons. All tributaries of the East Branch Chester Creek are additionally impaired due to **other habitat alterations**. The Chester County Water Resource Authority (CCWRA) has produced a series of maps available on their website, depicting these classifications. (See Appendix 2 for relevant maps.) DEP defines these impairments as follows:

- **Siltation** – Aggradations of “clean” sediments or soils in excess of what the stream channel can transport. Results in smothering of habitat for macro invertebrates and fishes.
- **Water/Flow Variability** – Changes in hydrologic regime caused by water releases, increased surface runoff from impervious surfaces during storm events, scouring and drought results in unstable environment for macro invertebrates and fishes. Habitat alterations include stream widening, substrate paving, shallower pools, etc.
- **Other Habitat Alterations** – Habitat changes due to severe bank erosion, removal or lack of riparian vegetation, and concrete channels and streambeds.

These three impairments demonstrate that the connected streams face some of the same issues as the ponds, namely siltation and a high degree of sediment. Additionally, the fact that the streams are not listed as impaired due to

any nutrient or chemical load, shows that any nutrient or chemical issues in the ponds are localized, and not the result of flowing in from the surrounding streams.

surrounding development, erosion, and sedimentation

Streams throughout the state have been overwhelmed with stormwater, leading to degradation, erosion, siltation and water flow variability. The ponds in this study are being similarly affected. Five of the ponds are fed by inlets and pipes, which convey stormwater directly from the Township streets into the ponds. The Hershey's Mill Pond is the only one which does not have a direct input from an inlet. However, the stream which feeds the pond does accept stormwater through a number of inlets on Tanglewood and Millstream Drives. With the stormwater comes sediment and chemicals, washed off the streets and neighboring residential properties.

The amount of impervious surfaces including roofs, driveways, sidewalks and streets, appears typical of most suburban communities, but generates more stormwater runoff than the streams and ponds can handle. The hydrologic cycle has been thrown out of balance. In a heavy storm, large amounts of water flow powerfully through the pipes and inlets. When they reach the streams and ponds, the force of the water erodes the banks and channel. The eroded material, sediment, drops out of the water and settles when the water slows down as it reaches the ponds. Over time, enough sediment fills the ponds to reduce their



Area streams are typically eroded, due to high stormwater volumes, which carry sediment into the ponds.



Wide streets, rooftops, driveways and other impervious surfaces create runoff, which increases flow into the stormwater system.

holding capacities, thereby making them shallower and affecting the pond ecology.

chemical testing results

Brandywine Science Center tested the water from each of the six ponds for each of the following:

- Dissolved Oxygen
- Nitrogen – in the form of Nitrate, Nitrite and Ammonia
- pH
- Phosphorous
- Fecal Coliform

The results were then compared to the standards set forth by Penn State Extension, in their web publication titled, "Water Quality Concerns for Ponds" (*see Appendix 1 for details*). The standards are established differently for each potential use of a pond. For the purpose of this study, the standards set forth for ponds being used for "Beauty" and "Fishing" were utilized. The ponds support populations of bass, sunfish, catfish and carp.

The chemical test results showed that every pond failed to meet acceptable standards for at least one category. Every pond showed higher than preferred phosphorous levels for pond beauty. Bow Tree Pond 1 had less dissolved oxygen than acceptable for pond beauty. A number of ponds showed too much nitrogen, in various forms, for fishing. The full chemical test results produced by

Brandywine Science Center are included as an appendix to this report. Additional details are included in the pond profiles included later in this report.

Penn State Extension recommends testing pond water at least on an annual basis. Where bacteria levels are found to be high, the Township may wish to test more frequently, to confirm initial results, measure the effectiveness of improvement strategies, and to identify seasonal fluctuations.

meaning of the results

In some cases, the results of chemical testing show us the presence or amount of a certain chemical or bacteria, which is unhealthy, and may require some action to eliminate it. But in other cases, the results of the chemical tests provide clues as to why certain things are happening in the ponds. For instance, the presence of phosphorous or nitrogen in the water is not in itself a problem. Phosphorous and nitrogen are in fertilizers we use to grow food and in soap which we put on our bodies. But high quantities of these chemicals can start chain reactions which result in many of the problems we see in the ponds.

phosphorous, nitrogen and algae

"A shallow, nutrient rich pond, exposed to sunlight with little water flowing through it will be teeming with algae and aquatic plants," according to "Pond Ecology," an article posted online by the Penn State Extension. Every pond tested showed high levels of phosphorous, a nutrient known to encourage algae growth. Additionally, four ponds showed Nitrogen levels, in various forms, which could be detrimental to fish or pond aesthetics. Phosphorous and nitrogen can travel on soil particles in sediment. They also come from animal waste and decomposing plant material. Many fertilizers used in commercial and residential settings also contain phosphorous and nitrogen and can wash into the neighboring ponds and streams with stormwater.



Geese frequent lawn areas surrounding the ponds, leaving their waste, which contributes nutrients into the ponds and makes the surroundings unpleasant.

The ponds in East Goshen are largely surrounded by grass lawns, which are preferred by Canada geese. The combination of goose waste and grass clippings adjacent to the ponds is likely contributing to the phosphorous levels in the water. Additionally, sediment washing into the ponds may also carry phosphorous. These factors are all likely contributing heavily to the algae growth in the ponds.

warm water and dissolved oxygen

Dissolved oxygen is an important component of water quality. Fish need dissolved oxygen to breathe and aerobic bacteria, which play a crucial role in breaking down waste materials, also depend on it. Ponds with consistently moving water tend to have higher levels of dissolved oxygen. Dissolved oxygen is also incorporated into ponds through photosynthesis conducted by aquatic plants. Cooler water also tends to hold more dissolved oxygen than warmer water.

The Marydell and Bow Tree 1 ponds each had low levels of dissolved oxygen. At Bow Tree 1, oxygen levels were low enough to affect the aesthetics at the pond, as well as fish communities. At Marydell, dissolved oxygen levels were high enough to support good aesthetics, but not high enough to adequately support trout and bass communities. These ponds do not feature aerators. Hershey's Mill also does not feature an aerator, but had adequate dissolved oxygen levels, likely due to the running water which flows continuously in and out of the pond through the connected stream.



When ponds have low levels of dissolved oxygen, fish can't breathe and die.

general recommendations

The results of the chemical tests combined with the results of Toth Bros. field analysis, reveals three important steps to improve the health and beauty of the ponds:

- Reduce Phosphorous and Nitrogen Levels
- Increase Dissolved Oxygen Levels
- Reduce Sediment Levels

A number of measures can be implemented to take these steps. Some are as simple as planting trees and changing mowing schedules, while others, such as installing forebays, will require additional engineering and further study. Friends groups or similar community organizations could be created to assist the Township in implementing these recommendations.

reduce phosphorous and nitrogen

There are three main approaches which can be taken to reduce the amount of phosphorous and nitrogen entering the ponds. All are relatively simple and straightforward. These include the installation of vegetated buffers, reduction in use of fertilizers and other chemicals and reduction of the goose population.

implement vegetated buffers

Most of the ponds are bordered on at least one side by areas of mown grass, with little tree, shrub or herbaceous plant material nearby. Mowed grass provides a relatively unimpeded course for stormwater to flow into a pond, wetland or stream. This stormwater, flowing quickly over turfgrass, carries with it sediment, grass clippings, animal waste and any chemicals, such as fertilizers, which may have been applied in the area. All of these bring phosphorous and nitrogen into the waterway.

Vegetated buffers made up of trees, shrubs and more hardy herbaceous materials would help to filter nutrients out before reaching the ponds. (*See Appendix 2 for planting list.*) When water flows over turf grass, it is able to flow quickly. The short and narrow grass blades do little to slow

the water. Additionally, soil under turf grass is typically very compacted, as turf has shallow roots which do not keep the soil loose and aerated. Therefore, the water is able to flow quickly through the turfgrass over the hard soil. This fast moving water is able to carry sediment and flow into the ponds.

The addition of vegetated buffers would go a long way towards protecting the ponds. Trees, shrubs and herbaceous materials such as meadow grasses and perennials keep the soil healthier and act as physical barriers. When water, carrying the nutrients towards the ponds, encounters a vegetated buffer, it is slowed down. As the water slows down, it is forced to drop its sediment and nutrient load before reaching the pond. Additionally, as the water slows down, it has a better chance to infiltrate directly into the soil, before ever reaching the pond. Infiltrating more stormwater into the ground helps protect not only the ponds, but also the streams they are connected to, by reducing the amount of stormwater that enters them. Too much stormwater is causing the watershed wide degradation of streams, leading to sedimentation and siltation. Additionally, measures which encourage infiltration may help East Goshen Township meet state mandated MS4 requirements.

The Township could establish buffers by seeding the turfgrass areas with meadow seed mixes and planting additional trees and shrubs. Alternatively, but less effectively, the Township could simply reduce the mowing frequency of the turfgrass, allowing it to grow taller and thicker. Mowing could be done just once or twice a year, to eliminate woody plants, vines and other invasive plant



Buffer plantings at the edges of the ponds would help to stabilize the banks, shade the water and filter and absorb stormwater flowing into the ponds.

species. When the grass is mowed, the clippings should be collected, so as not to be allowed to wash into the ponds. Most current buffer ordinances require vegetated buffers on areas within 100–150 feet of the banks of ponds, streams or wetlands. A similar width would be appropriate for East Goshen's ponds.

limit the introduction of soaps, fertilizer and other chemicals

Fertilizers and other products, including soap, can contain phosphorous and nitrogen as main ingredients. While fertilizers help lawns and landscape plants grow, they are detrimental to pond health. Where stormwater flows over lawns and landscaped areas, it can pick up fertilizers, and other chemicals, and carry them into the ponds. While it does not appear that the Township uses fertilizers in close vicinity to the ponds, neighboring residents may. The Township should further inform nearby residents as to the damage that fertilizers can do, as they can encourage the growth of algae by adding nutrients to the water.

Many car washing soaps also contain phosphates. So when a resident washes their car in their driveway, or on the street, these soap phosphates drain to an inlet and eventually reach a stream or pond. The phosphates then promote the growth of algae. Residents should be encouraged to use biodegradable, phosphate free soaps, wash their cars on pervious surfaces such as grass or visit a commercial car wash, which are regulated and required to drain the used water to a water treatment plant, rather than into our streams.

Swimming pool water can also contain phosphates. It is illegal in Pennsylvania to drain a pool to a storm sewer system. Residents should be reminded to always drain their pools in accordance with local and state regulations.

reduce the goose populations

Waste from geese and other animals can contribute to the nutrient loads in the ponds. Aside from that, their waste can make an open space unenjoyable for residents who don't want to walk through it. Additionally, the geese themselves can be unfriendly and discourage people from using the open space. Goose management is an issue municipalities throughout the area are dealing with. Measures to control populations include adding eggs, dispatching dogs and placing silhouettes or other decoys of predators.

These measures may work to some degree. However, in Natural Lands' experience, we find the best way to discourage geese is to remove their habitat. Geese like open, mowed grass areas, as they easily detect predators. At our preserves, we strive to eliminate grass areas, for many reasons. We have largely eliminated geese from our preserves simply by eliminating their habitats. Meadows and other vegetation, as described above, provide the dual benefit of filtering water and eliminating goose habitat. Eliminating grass areas will reduce the goose populations, leading to less waste in the ponds and in the surrounding neighborhoods. (See *"From Mowing to Meadows"* in Appendix 2.)

Two of the ponds tested, Hersheys Mill and Marydell, also showed higher concentrations of fecal coliform. This could be due to large amounts of goose waste, or other animal waste, finding its way into the water system. The Township may wish to monitor this result through ongoing testing. Should the goose population be reduced, but the fecal coliform measurements remain high, it could be an indication of a sewage leak in close proximity to the stormwater system or the ponds.

increase dissolved oxygen

Dissolved oxygen is an important component of the overall health of the ponds. The testing performed by Brandywine Science Center revealed that Bow Tree Pond 1 has insufficient dissolved oxygen for beauty and for fishing. Marydell Pond has insufficient levels of dissolved

oxygen for fishing. Dissolved oxygen is not a problem in most of the ponds, as aerators or stream flow keep the water moving, which dissolves more oxygen into it. Below, the report describes relatively simple ways to increase dissolved oxygen.

provide shade over the water

Previous sections of this report described the filtering and infiltration benefits of vegetated buffers. By planting trees as part of these buffers, close to the pond edges, they can also potentially increase the amount of dissolved oxygen that the water can hold. Cooler water can hold more dissolved oxygen than warmer water. Planting large tree species, such as oaks and maples near the shorelines will provide shade to cool the water.

decrease plant and animal waste

Plant and animal waste can increase nutrient levels in ponds, as already described in this report, but it can also cause the elimination of dissolved oxygen. Aerobic bacteria act in the process of breaking down and decomposing plant and animal waste. An abundance of this waste can lead to an abundance of the bacteria, which will exhaust the supply of oxygen. Low levels of dissolved oxygen can lead to fish kills and algae growth. Recommendations for reducing the goose populations and the amount of plant waste through changes in mowing regimes and plant types have been described previously in this report. The same recommendations can help increase dissolved oxygen.

install aquatic plants

As aquatic plants "breathe", they process carbon dioxide and produce oxygen. This oxygen is released into the water. The ponds currently have very few aquatic plants. More aquatic plants of diverse, native species, could be introduced to the ponds at their edges, through bench plantings. (See Appendix 2 for planting list.) Sediment from within the ponds could be regraded to create a shallow "bench," a gradually sloped ramp down into the pond. Aquatic plants could be planted on the bench. The plants would help to clean and filter the pond water, while providing habitat and food sources for other aquatic species, while, most importantly, providing more dissolved oxygen. Additionally, benches could make the ponds safer, as they would eliminate any steep drop-offs from the pond banks into the water.



Over the past few decades, it's been determined that conventional basins are ineffective in managing stormwater, leading to degradation of area streams.

Coverage of approximately 40–60% of the pond surface with aquatic plants would be ideal for shading the water and introducing additional dissolved oxygen. This ratio of aquatic plants would lead to a balanced population of algae, rather than complete algae coverage as happens now. Additionally, aquatic plants at this ratio would help reduce phosphates, likely to 0% during the growing season, as they would utilize and process the nutrients.

install aeration systems

The Pin Oaks Pond and Bow Tree 2 & 3 Pond each feature aeration systems, which contribute to the health and beauty of the ponds. The aerators keep water in motion, which makes it harder for algae to get established. More importantly, they incorporate more dissolved oxygen into the water, which helps keep healthy levels of bacteria which break down nutrients and waste. Fish rely on dissolved oxygen to breathe, and they die off when not enough



Aquatic plants can provide habitat and shade, compete with algae, and increase levels of dissolved oxygen.

dissolved oxygen is present. After dredging, to a minimum depth of four feet, aerators should be considered for installation at Bow Tree 1 Pond, the Bow Tree 2 & 3 Basin and Marydell Pond.

Further study and consultation with a pond maintenance professional will be required to install an aeration system, but some labor can be carried out by the Township staff. A system of aerators would consist of grids of pipe which rest on the bottom of the ponds, fed with air through hoses from a compressor in a cabinet on land. Electricity would also need to be extended to the cabinet. The compressor sends air to the grids, which then allows the air to bubble out, creating a column of oxygen, which mixes with the water and helps keep the water circulating horizontally and vertically.

Aeration systems can be installed when the ponds are full, using boats and cables, or they can be coordinated with dredging, and installed more easily when the ponds are dry. Township staff can likely install one aeration system with assistance from a consultant, and then install additional systems on their own. The Pentair Aquatics 4GL54-230 system would be appropriate for the ponds. The system is designed to serve ponds with a surface up to $\frac{3}{4}$ of an acre, but multiple systems can be installed to handle larger ponds (see Appendix 2).

reduce sediment levels

Sediment is entering the ponds in two ways—through direct sheet flow into the ponds off of the surrounding land, and through stormwater flowing through pipes into the ponds. There is already too much sediment in four of the ponds, while the other two will need to be addressed in the near future. Therefore, the methods for reducing sediment address elimination of the sediment already in the ponds, and reducing the amount of sediment which enters in the future.

dredge the ponds as necessary

Toth Brothers Clearing and Dredging, Inc. “floated” each of the ponds. Using a small boat, Mike Toth entered each pond, and using a variety of instruments, measured the pond depths and depth of sediment. Additionally, he inspected the associated structures and visually assessed other attributes of each pond. Considering the existing conditions of stormwater management throughout the

watersheds, it appears that dredging will remain part of ongoing maintenance well into the future. Maintaining a proper pond depth is an important factor of pond health. Most of the ponds are filling with sediment, which can add nutrients and contribute to warming of the water, which encourages growth of algae. Dredging is an important aspect of pond maintenance now, but we believe that recommendations in this plan can lessen the frequency or amount of necessary dredging in the future.

Toth Brothers found that four of the ponds are in need of dredging in the very near future. These are Hershey's Mill, Marydell, Bow Tree Farm Pond 1 and Bow Tree 2 & 3 Pond. The remaining two ponds, Bow Tree 2 & 3 Basin and the Pin Oak Pond, can wait to be dredged and/or reassessed in five years. In addition to dredging, Toth Bros also found a number of structural issues which should be addressed. These issues are described further in the pond profiles later in the report. Additionally, Toth Bros. full reports are included in the appendix to this document.

install forebays

Forebays are smaller ponds or catchment areas which filter sediment out of water as it enters a larger body. Forebays are typically planted with wet tolerant or aquatic plant species and constructed from rock or earth. As water flows out of a pipe, into a pond or basin, it first flows into the forebay. The water hits the rocks and plants, slows down and drops the sediment there, before entering the



Where stormwater flows uncontrolled over mowed lawn, it creates channels, erodes the soil, and carries sediment downstream, into ponds and basins.

pond. Installation of forebays would reduce the amount of sediment which reaches the ponds. As nitrogen and phosphorous can cling to sediment, they too would be reduced. (See Appendix 2 for details.)

Not all of the ponds and basins would be suitable to be retrofit with a forebay. It appears that forebays may be appropriate for use at Marydell, Pin Oak and Bow Tree 1, as these ponds all take on a great deal of sediment and receive heavy storm water flows. Bow Tree 2 & 3 Pond and Basin are in good shape and are functioning well without forebays. Hershey's Mill Pond is fed by a stream which flows through the pond and out over the dam. This stream should not be modified with a forebay, as it is in generally good shape.

Forebay design would require additional study and engineered design. Forebays would not eliminate sediment from the system, but would capture it and keep in one section of the existing pond. This would make it easier to remove the sediment as it builds up. Sediment could then be removed more often, but from a smaller area of the ponds. This could mean that the sediment could be removed more cheaply, with simpler equipment such as a vacuum truck, rather than entering the pond with heavy equipment.

implement vegetated buffers

Vegetated buffers were previously described at length in the section regarding reduction of phosphorous and nitrogen. While buffers help to eliminate nutrients, they



Vacuum trucks can be used to clean out ponds where sediment is more localized in forebays. This can be a less costly option than dredging.

are also effective at filtering out sediment and stabilizing shorelines and streambanks. Buffers should be installed along pond banks where they can intercept sheet flow. Trees and shrubs should also be planted where channelized water flows through the landscape and into the ponds. In these situations, the roots of the trees and shrubs will help stabilize the channels and hold the soil in place, rather than allowing it to be carried into the ponds. *(See Appendix 2 for planting list.)*

inlet filter bags

Much of the sediment entering the ponds comes directly from water piped through inlets along the Township streets. Therefore, protecting the inlets and keeping sediment from ever getting into the stormwater system would benefit the ponds. The PA DEP Erosion and Sediment Pollution Control Program Manual lists inlet filter bags as an effective sediment barrier. However, they should only be used where an inlet has a ¼-acre maximum drainage area. They also need to be inspected on a weekly basis and after each runoff event and need to be cleaned out when they are half full. Inlet filter bags require more annual care, but may reduce the frequency and cost of dredging. *(See Appendix 2 for details.)*

Due to the quantity of inlets feeding the ponds, inlet filter bags should be used strategically. The township could install them at the inlets feeding Pin Oak, Hershey's Mill, or

both, as there are only 13 inlets between them. This small number of filter bags could likely be managed by Township staff, who could also track their time spent maintaining them. The Township could then determine whether to expand use of inlet filter bags by measuring the amounts of silt captured in the bags and continuing to test the pond water quality.

rain gardens and rain barrels

Sediments and chemicals are carried to the ponds with stormwater. By capturing stormwater and infiltrating it in place or collecting it for reuse, homeowners can do their part to keep the ponds healthy. Residential properties are the primary producers of stormwater, as roofs, driveways and turf grass all generate runoff during storms. This is the water which eventually carries sediment, chemicals and nutrients to the ponds. Rain gardens on private properties can help to capture water and infiltrate it into the ground, rather than allowing it to drain to pipes. *(See Appendix 2 for details.)* Rain gardens can also benefit native pollinators, birds and small mammals, by providing food sources and habitat. Rain barrels can also help protect ponds. By draining roof drains into barrels, the water can be collected for garden use before it reaches the inlets. When this collected water is used in the garden in smaller quantities at a time, it can infiltrate into the ground, watering plants and recharging ground water supplies.



Rain gardens provide habitat and food for native birds, mammals, bees and butterflies, and capture stormwater and infiltrate it into the ground.



Rain barrels capture stormwater running off of roofs, keeping it out of the stormwater system. This water can be used to water gardens.

friends groups and community organizations

The citizens of East Goshen have demonstrated that they care about the future of the ponds, by attending the series of public meetings as part of the planning process. They stood up and spoke of how much they enjoy having the ponds. Many of them also expressed an interest in helping the situation however they can, whether through planting rain gardens on their properties, or by volunteering. An opportunity exists to rally the residents together to take action to improve the ponds.

It is important to connect the residents to the ponds, for them to see the effects of the surroundings on the water quality. Friends groups dedicated to each pond, or organized by community would help to keep the neighbors connected. More importantly, they could empower the citizens to make positive change at the ponds, by working alongside with the Township, as partners. Friends groups could take some of the workload off the Township and the Conservancy Board, and could also strengthen the communities, by bringing neighbors together and by giving them ownership of their community spaces.

The Conservancy Board could work with the Township staff, including the Parks and Recreation Director, to create friends groups for each pond or community. They may wish to refer to the Philadelphia Park Friends Group Toolkit, a 48-page guide to establishing friends groups, available on the Philadelphia Parks and Recreation website (www.phila.gov/ParksandRecreation/getinvolved).

pond profiles

The six ponds face many of the same issues. All of them tested high for phosphorous. All of them are receiving too much sediment and need to be dredged immediately or likely within the next 5 to 10 years. Many of them have low levels of dissolved oxygen, making it difficult to support fish communities and contributing to algae problems. However, each pond sits within its own landscape and is affected differently by its surroundings. Therefore, each pond requires a different approach to improvement. Strategies for improving each pond are outlined below in the individual pond profiles.



The ponds in East Goshen provide beauty and recreational opportunities to the surrounding neighborhoods.

Hershey's Mill Estates

Uses:	Beauty
Approximate Surface Area:	0.30 acres
Parcel Size:	1.22 acres
Inlets:	2 – Tanglewood Drive 2 – Millstream Drive 1 – Bell Flower Lane
Outlets:	One stream flow over regulated dam
Watershed:	Ridley Creek
Headwater Location:	King Road, West of Frazier Road, East Whiteland Township
Drainage Area:	243 acres
Depth of Water:	6 inches
Aerators:	None
Notable Chemical Testing Results:	High Phosphorous and Nitrogen (Ammonia-N and Nitrate-N)

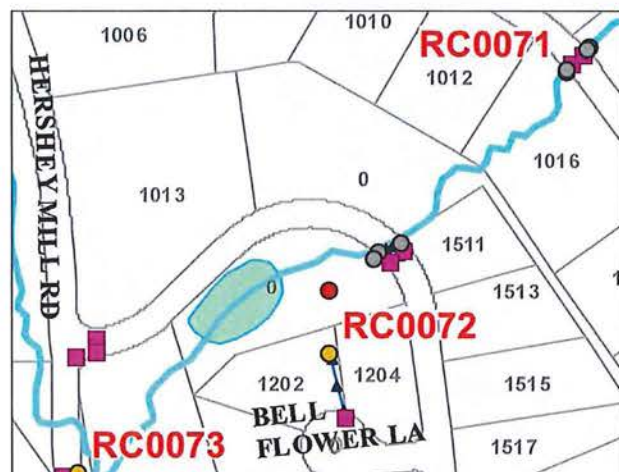
general description

The Hershey's Mill Pond is located on Tanglewood Drive, near the intersection with Hershey Mill Road, on a 1.22-acre parcel. The pond is fed by an Unnamed Tributary to the Ridley Creek, which flows directly through the pond. No inlets feed the pond. However, a number of inlets feed the stream upstream of the pond. The stream also flows through the Lockwood homeowners association open space, where it may be connected the pond/basin there. It is unclear, but an upstream farm and apartment complex could also be contributing stormwater to the creek.

Where the stream enters the pond, it flows through healthy woodland, which is providing buffering, cooling the streamwater and stabilizing the streambanks. Approximately $\frac{3}{4}$ of the pond's banks are surrounded by forest. The remaining bank features some mature trees and mowed grass. This bank separates the pond from Tanglewood Drive.



Hershey's Mill Pond Watershed



Hershey's Mill Pond stormwater management system consists of five inlets (pink squares) which convey stormwater to the pond. CREDIT: East Goshen Township

The Hershey's Mill pond is quite full of sediment, with an average depth of water of only 6 inches. As the pond sits on a small parcel, with little mowed grass around it and is relatively well buffered, it appears likely that most of the pond's issues are being caused by upstream conditions.

strategies for improvement

dredging

The pond is full of sediment and has a very shallow depth of water. It is unclear whether the pond can accommodate adequate stormwater in a major storm event. It is likely that the upstream forest is acting as a floodplain for the stream in these situations and absorbing some stormwater.

Per Toth Bros. findings and recommendations, this pond should be dredged in the very near future.



The stream feeding the Hershey's Mill Pond is well shaded and appears relatively healthy.

inlet filter bags

As it appears that most of the sediment entering the pond is coming from offsite, it is imperative to capture this sediment before it enters the stormwater system. Inlet filter bags should be considered for use in the five inlets in Tanglewood and Millstream Drives and Bell Flower Lane, which feed the stream. These could be installed as a pilot project, to determine whether the bags provide enough impact in light of the time required to maintain them.

stream buffer plantings with partners

Where the stream flows through land owned by East Goshen Township, it is well buffered. However, upstream of the pond, the stream flows through private residential properties, and land owned by the Lockwood Community Association and the Convent of the Servants of the Immaculate Heart of Mary. Aerial photography of these properties shows gaps in forest cover along the stream here. It may be that the stream is eroding the banks in these areas and carrying the sediment downstream to the pond. There could also be sheet flow off neighboring properties carrying sediment and nutrients downstream into the pond. **East Goshen Township should work with these neighbors to educate them about the effects of stormwater on the streams and ponds, and work with them to plant trees and install other better management practices on their own properties.**



The grass area near the pond attracts geese and could be planted with trees and shrubs.

rain gardens and rain barrels

The residents upstream could do their part by reducing the amount of water entering the stormwater system by installing rain gardens and rain barrels. Lower volumes of water entering the stream would also reduce the amount of sediment and nutrients entering the pond.

pond edge tree and shrub plantings

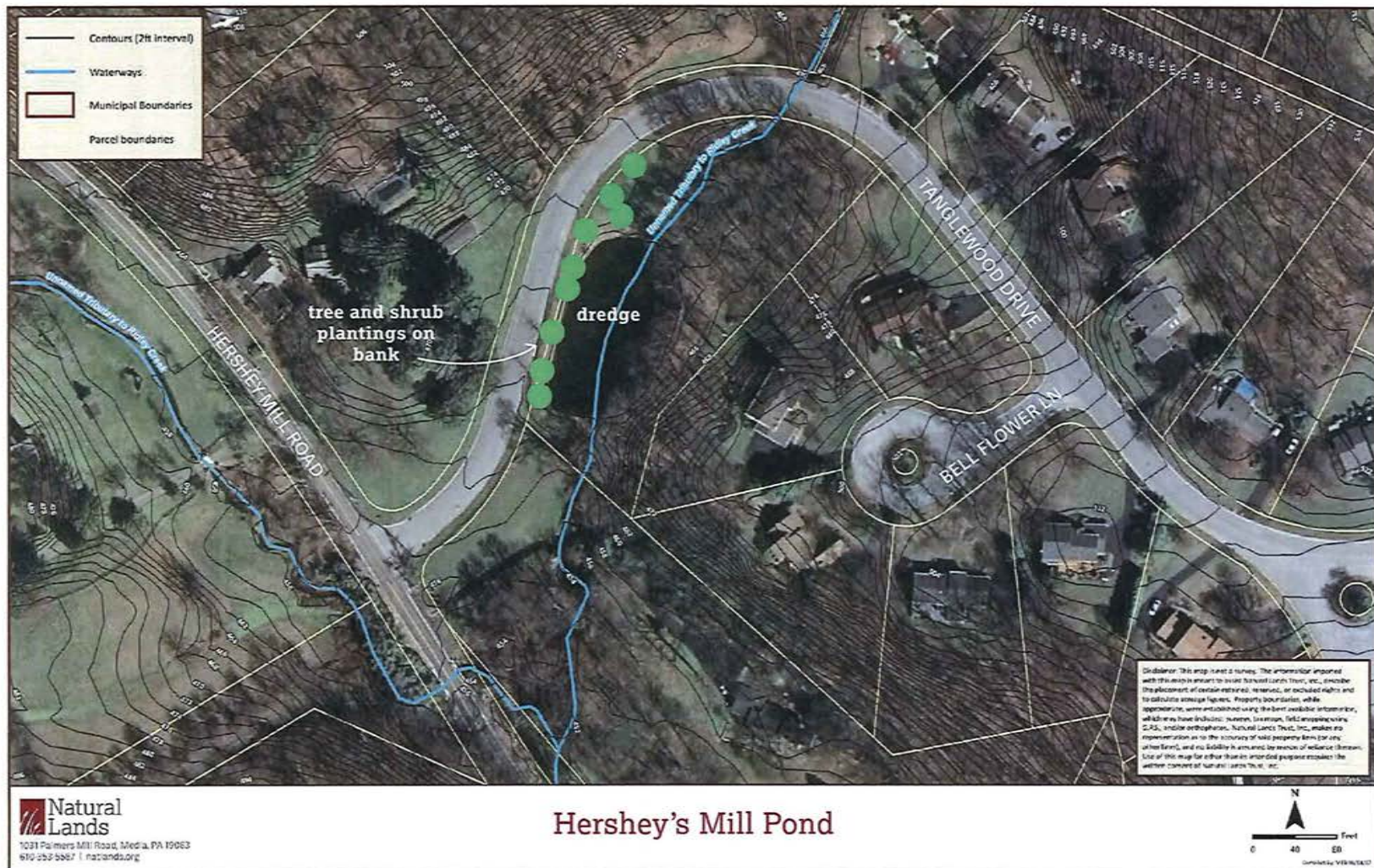
The pond is well buffered on three sides by forest. A few large trees exist along Tanglewood Drive. However, there are gaps where additional trees and shrubs could be planted to provide shade and cover for fish and help keep the water cool. Shrub plantings would also reduce the area to be mowed, thereby reducing the chance for grass clippings to enter the pond and increase nutrient levels.

conclusion

Upstream conditions appear to be the major cause of the issues in this pond. The pond should be dredged to return it to its designed/intended condition. Then upstream mitigation measures, including buffer plantings, inlet filter bags, rain gardens, rain barrels and other BMPs, should be implemented to reduce sediment loads. Finally, additional vegetation should be planted around the pond edges to beautify, provide fish habitat and reduce nutrient levels.



The Hershey's Mill Pond adds beauty to the neighborhood entrance road.

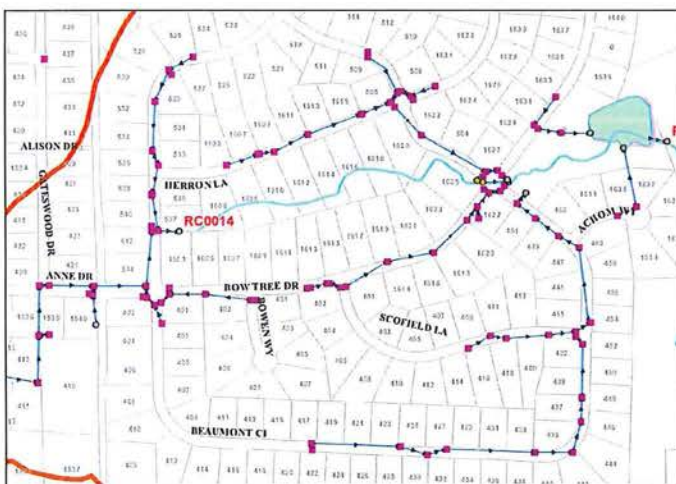


Bow Tree 1 Pond

Uses:	Beauty and Potentially Fishing/Habitat
Approximate Surface Area:	1.37 acres
Parcel Size:	6 acres (connected downstream to 42-acre open space)
Inlets:	96(±)
Outlets:	Two 5-foot diameter concrete structures
Watershed:	Ridley Creek
Headwater Location:	537 Beaumont Circle
Drainage Area:	Less than 10 acres
Depth of Water:	Varies 4 inches to 2 feet
Aerators:	None
Notable Chemical Testing Results:	Phosphorous, Nitrogen (Ammonia-N) and Low Dissolved Oxygen

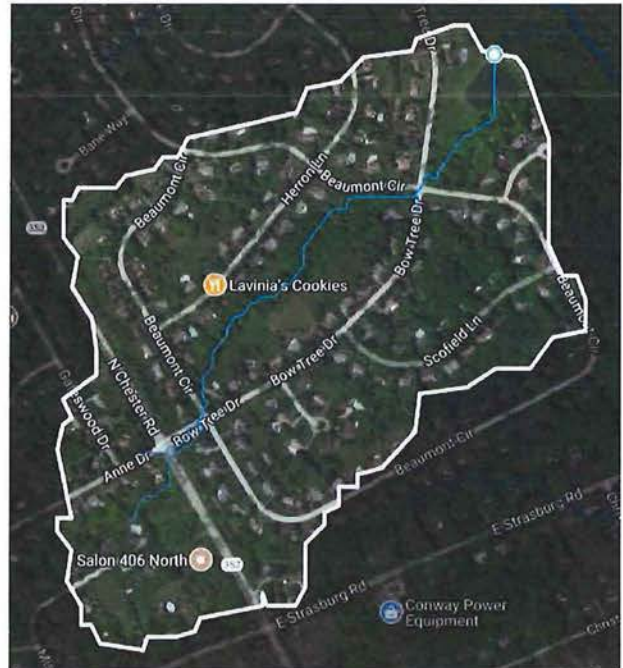
general description

The Bow Tree 1 Pond is the primary stormwater management area for the Bow Tree 1 development. It is fed by an unnamed tributary to the Ridley Creek, with its headwaters within the



The Bow Tree 1 Pond is fed by 96 inlets (pink squares).

CREDIT: East Goshen Township



Bow Tree 1 Pond Watershed

development, at 537 Beaumont Circle and 1606 Herron Lane. The pond and tributary collect stormwater through no fewer than 96 inlets spread throughout the development.

The pond sits mostly within a 6-acre open space parcel which fronts on Bow Tree Drive. It is surrounded by private lots on two sides and connects to a larger open space parcel which contains the tributary as it flows out of the pond. Much of the south side of the pond is buffers by woodlands. The remaining three sides are surrounded by large swaths of mown lawn on steep slopes, sloping down to the pond.

strategies for improvement

dredging

With a variable depth between 4 inches and 2 feet, the pond has accumulated a great deal of sediment. The sediment has likely come from the steep slopes of mown grass surrounding the pond as well as with water conveyed through the stormwater system. **Per Toth Bros. recommendations, this pond should be dredged in the near future.** The dredged spoils can be spread on the surrounding hillside. However, without additional plantings, the spoils could ultimately be washed back into the pond over time.

aerator system

Installation of an aeration system would help to increase dissolved oxygen levels. The pond surface is currently approximately 1.37 acres. At this size, two aeration systems would be necessary. Should the Township also install a forebay, it may be possible to reduce the pond surface area in need of aeration, as forebays do not need to be aerated.

Aeration would only be recommended if the pond is first dredged to a minimum depth of 4 feet.

forebay

Ninety-six inlets feed the two pipes and one tributary which lead into the pond. These three stormwater sources all enter the pond on the south bank. A large forebay could potentially be constructed which would capture water flowing in from all three sources. A forebay could collect sediment in a portion of the pond, rather than allowing it to spread across the entire pond. Ongoing sediment removal, through dredging or vacuuming could then be focused on a smaller area.

upstream BMPs and education

With over 300 units contributing to the stormwater system in Bow Tree 1, education of the residents could make a difference in protecting the pond's health. Every resident who installs a rain barrel or rain garden can help to decrease the amount of sediment, water volume and nutrients which make their way into the pond. Every



Sediment entering the pond through the stormwater system has collected and formed an island, complete with vegetation.

resident who chooses to take their car to a commercial car wash helps to keep phosphorous and other pollutants out of the ecosystem.

vegetated buffers

At the pond site, a shift in land management and the implementation of vegetated buffers would benefit the pond. The hillsides of mown grass are contributing sediment and nutrients to the ponds. There is very little shade over the water. The turf grass areas could be converted to meadows, which would require less frequent mowing and would keep grass clippings from washing into the pond. Additionally, deep rooted meadow plants will help stabilize the soil, reduce erosion and decrease the amount of sediment washing directly into the pond.

Additional trees would also help buffer the pond and stabilize the soil. Trees could also shade the water, cooling it down, which would help to increase the dissolved oxygen level. More trees could also make the open space a more appealing place to visit.

vegetated infiltration swale

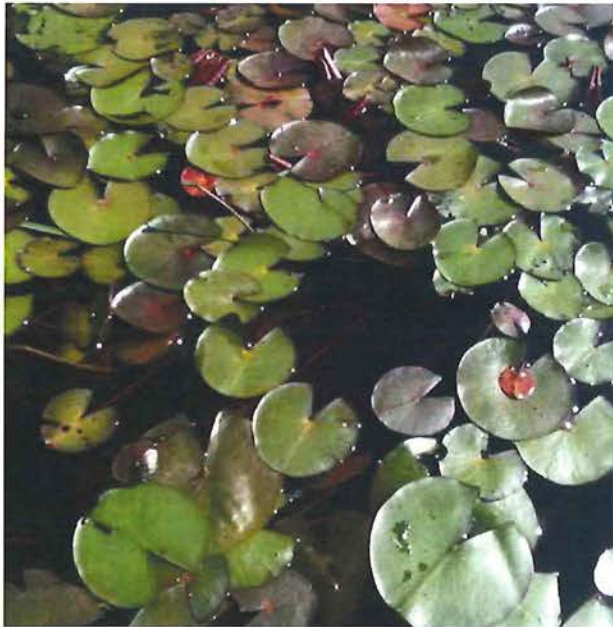
A linear rain garden called a vegetated infiltration swale could also be implemented parallel to the edge of the pond. This swale would be designed to catch any stormwater which escapes the meadow uphill, before it reaches the basin. It would be planted with meadow grasses and flowering perennials. The water, captured in the swale, would keep nutrients, sediment and grass clippings from ever reaching the basin. It would also encourage the water to infiltrate directly into the ground, rather than entering the basin and the stream system. Soil and infiltration tests, and potentially an engineering study would be necessary to determine whether a vegetated infiltration swale would function here.

aquatic plants

Installation of aquatic plants would also benefit the pond by increasing the dissolved oxygen levels, shading the water and providing habitat for fish. Aquatic plants, covering approximately 40–60% of the water surface would also further beautify the pond and contribute to the aesthetic value of the open space.

conclusion

The future health of the Bow Tree 1 Pond is in the hands of the residents who surround it. The stormwater which leaves their streets and properties provides the water for the pond, but also the nutrients and sediments which are



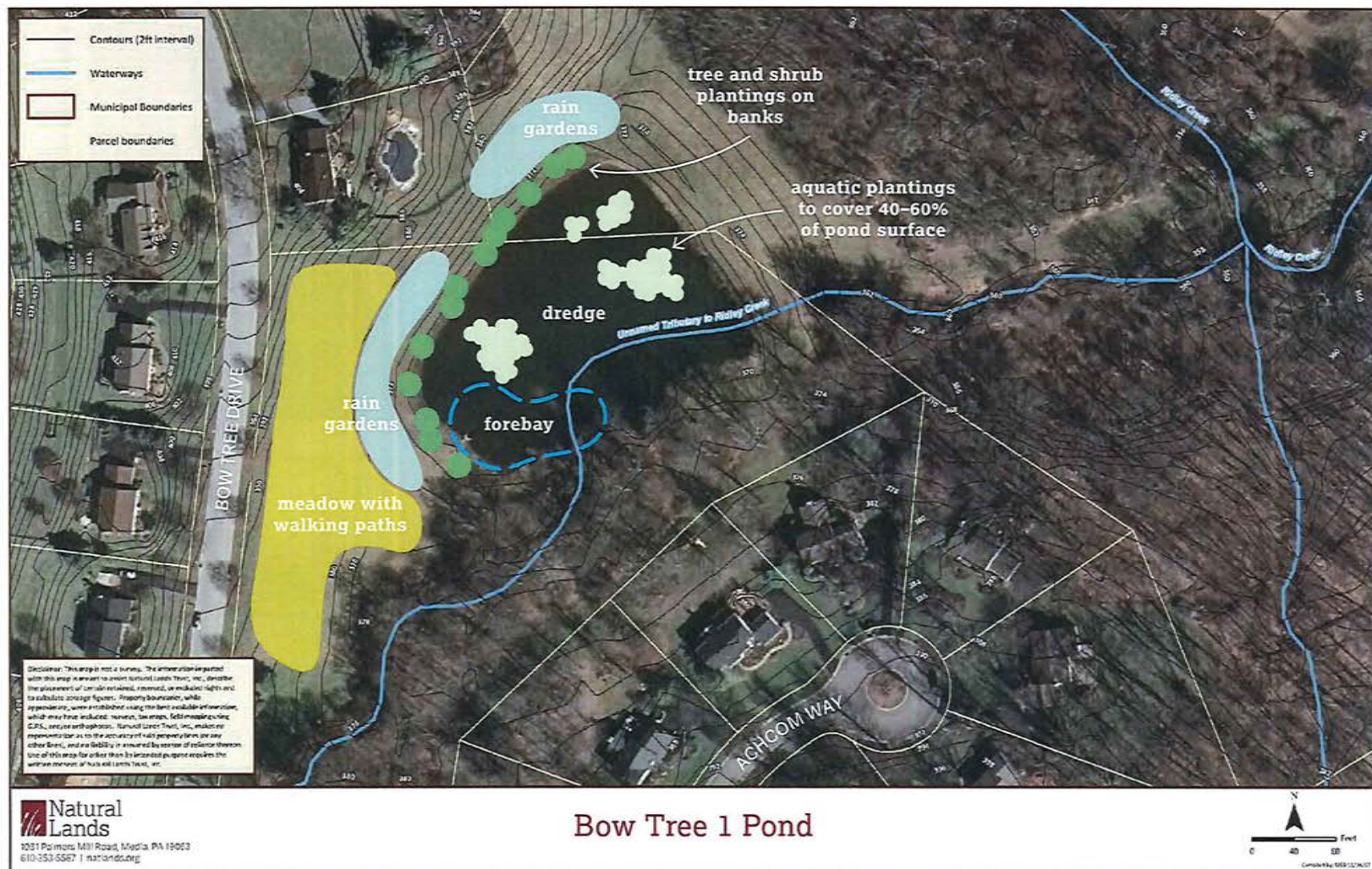
causing its problems. It is necessary to dredge the pond soon, and this pond will continue to require dredging into the future unless significant changes are made to the stormwater management upstream and immediately surrounding the pond.

Fortunately, the Bow Tree 1 Pond holds much greater potential than it currently utilizes. A rehabilitated pond could become the centerpiece of a reinvigorated passive open space park. Grass trails could be cut into a newly planted meadow, where birds nest and butterflies hunt for nectar. Trees could provide shade over benches and the pond could be the place to admire ducks, catch tadpoles or chase dragonflies. As the pond site connects to an additional 150 acres of township owned open space, it could become a hub or entrance to a larger trail system. Transforming the pond area into a cherished open space, which contributes to the lives of the residents, will help to make them care more about how their actions affect the pond and the creatures which live in it.

LEFT: Aquatic plants, such as lillies, can provide habitat, shade, and dissolved oxygen.

BELOW: Buffer plantings have grown around some edges of the pond, but more plantings would improve the pond's health.





Bow Tree 2 & 3 Pond

Uses:	Beauty and Fish Habitat
Approximate Surface Area:	0.95 acres
Parcel Size:	47.4 acres (8 acres focus)
Inlets:	21
Outlets:	1 concrete channel emptying into Bow Tree 2 & 3 Basins
Watershed:	Ridley Creek
Headwater Location:	Inlets on Bow Tree Drive and Beaumont Circle
Drainage Area:	30 acres
Depth of Water:	Average depth of 4 feet
Aerators:	5
Notable Chemical Testing Results:	Phosphorous and Nitrogen (Ammonia-N)

general description

The Bow Tree 2 & 3 Pond is in relatively good condition. It is fed by 21 inlets spread throughout the Bow Tree development, as well as sheet flow from surrounding residential properties and a steeply sloped hillside above. Water flows out of the pond into a concrete channel, which



Bow Tree 2 & 3 Pond and Basin Watershed

then feeds into the Bow Tree 2 & 3 Basin, and ultimately into the Ridley Creek. The pond is surrounded by backyards and has one access between homes on Bow Tree Drive.

The pond holds five aerators which keep the water moving and keep the dissolved oxygen at adequate levels. Nutrients, phosphorous and nitrogen (Ammonia-N) are high. This pond is also collecting sediment, but does not require immediate dredging.

The pond is surrounded mostly by mowed grass, but some edge vegetation and mature tree stands exist as well. The pond is at a low point in comparison to the surrounding homes' backyards. Stormwater is flowing from the backyards, over the mown areas and into the pond, likely



Twenty-one inlets (pink squares) feed the Bow Tree 2 & 3 Pond, which then feeds the Basin. CREDIT: East Goshen Township



The five aerators at the Bow Tree 1 & 2 pond keep the water well oxygenated.

carrying grass clippings and nutrients with it. The property lines are in close proximity to the pond edges, as close as a few feet in some areas, making major site improvements on the Township owned land difficult.

strategies for improvement

dredging

Toth Bros. report states that they would not recommend dredging at this point and that they see this pond to be in good shape for the next five years. The pond is receiving sediment with the most impact likely coming from the inlets which feed it. The pond should be reassessed for dredging in 2022, at which point a more comprehensive effort could also be implemented around multiple improvement strategies.

mark property boundaries

When private spaces border public spaces, it is typical for residents to encroach on publicly owned property. This sometimes takes the form of placing buildings over property lines, but more often it is more subtle, like dumping grass clippings on Township property, or mowing beyond property lines. Should the Township wish to engage in any altered management of the land surrounding the pond and basin at Bow Tree 2 & 3, the property lines should be delineated with permanent markers and the Township should reach out the residents to explain why.



The grass areas around the pond attract geese, which leave their waste and add nutrients to the pond.

mowing to meadows

Most of the area surrounding the pond is too narrow for the installation of a meadow, which would help to slow down stormwater on its way to the ponds. However, the Township could simply mow the area less frequently, allowing the grass to grow taller and thicker. This would allow the grass to help slow and filter stormwater and also discourage geese. Mowing the area only once or twice a year would keep woody species, trees and shrubs, from establishing. (See Appendix 2 for “From Mowing to Meadows.”)

rain gardens and rain barrels

The residents upstream could help in reducing the amount of water entering the stormwater system by installing rain gardens and rain barrels. Lower volumes of water entering the stream would also reduce the amount of sediment and nutrients entering the pond. The residents whose backyards surround the Bow Tree 2 & 3 Pond and Basin could install rain gardens along their rear property lines to catch the water flowing off of their properties and into the ponds. Rain gardens and rain barrels do require some maintenance. These measures are completely voluntary.

vegetated buffers

Additional trees would help buffer the pond and stabilize the soil. Trees could also shade the water, cooling it down, which would help to increase the dissolved oxygen level and make the water more suitable for some fish species. More trees could also make the open space a more appealing place to visit for the surrounding residents.



The concrete channel which connects the pond to the basin could benefit from tree and shrub plantings which would help to shade the water and keep it cool.

conclusion

The aerators in the Bow Tree 2 & 3 Pond are doing the majority of the work in keeping the pond from being covered over by algae. The pond is in relatively good condition and sediment levels are acceptable but should be reassessed in 2022. At that point, the Township should consider undertaking a more comprehensive approach to land management, education and stormwater infiltration as a means to improving the ongoing health of the pond.



Bow Tree 2 & 3 Basin

Uses: Beauty and Potentially Fishing/Habitat

Approximate Surface Area: 1.17 acres

Parcel Size: 47.4 acres (8 acres focus)

Inlets: 28

Outlets: 1 to Ridley Creek

Watershed: Ridley Creek

Headwater Location: Bow Tree 2 & 3 Pond and Inlets throughout Bow Tree

Drainage Area: 30 acres

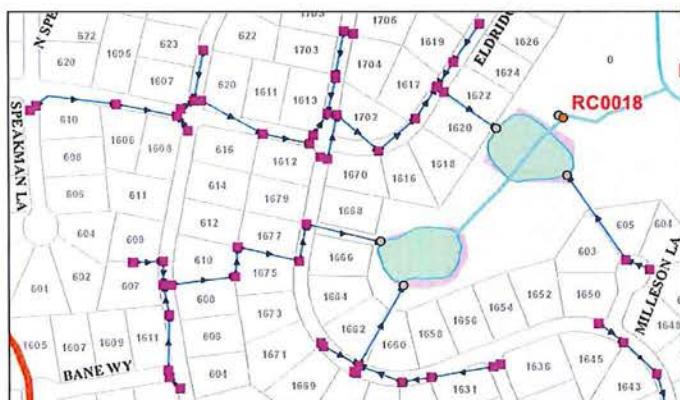
Depth of Water: Average 1.5 feet

Aerators: None

Notable Chemical Testing Results: Phosphorous

general description

Like the Bow Tree 1 & 2 Pond, the basin is also largely surrounded by residential backyards. It is also surrounded by some steeply sloped, mown lawns on three sides which are contributing sheet flow to the basin. The fourth side opens up to a large swath of wooded Township open space. The banks of the basin are relatively steep and feature little edge vegetation. The outflow from the pond travels through



Twenty-eight inlets (pink squares) convey stormwater into the Basin. CREDIT: East Goshen Township



Bow Tree 2 & 3 Pond and Basin Watershed

a concrete channel into the basin. An additional 28 inlets in Bow Tree 1 & 2 also feed the basin.

The Bow Tree 2 & 3 Basin is not in as good a condition as its neighbor, the pond. It tested high for phosphorous and needs dredging and structural repair of the channel. Scrub vegetation has also grown into the channel, impeding the water flow.

strategies for improvement

Toth Bros. recommends dredging of the basin as the average depth is 1.5 feet. Additionally, the concrete channel should be repaired and brush should be removed where it is impeding the flow of the water.



The Bow Tree 2 & 3 Basin is covered in algae in the summer months.

aerator system

Installation of an aeration system would help to increase dissolved oxygen levels. The pond surface is currently approximately 1.17 acres. At this size, two aeration systems would be necessary. Should the Township also install a forebay, it may be possible to reduce the pond surface area in need of aeration, as forebays do not need to be aerated.

Aeration would only be recommended if the pond is first dredged to a minimum depth of 4 feet.

vegetate steep banks

The basin is surrounded by steep banks on the north east end. All of the pond edges should be planted with trees and shrubs to shade the water and provide fish and animal habitat. Additional vegetation could also help stabilize the steeper slopes and make them safer if people walk along the top of the berm. More vegetation would also make the basin less appealing to geese.

trees over channel

The channel which leads from the pond to the basin conveys water at a shallow depth, typically less than one inch, and in full sun. Warm water contributes to lowered levels of dissolved oxygen and reduced suitability for fish habitat. Trees should be planted along the length of the channel to help shade the water flowing through it. Additionally, trees and shrubs would help to camouflage the channel, making the site more aesthetically pleasing.



Some edge vegetation helps to filter stormwater and also provides a barrier for people who may walk on the berm.

rain gardens and rain barrels

The residents upstream could do their part by reducing the amount of water entering the stormwater system by installing rain gardens and rain barrels. Lower volumes of water entering the stream would also reduce the amount of sediment and nutrients entering the pond. The residents whose backyards surround the Bow Tree 2 & 3 Pond and Basin could install rain gardens along their rear property lines to catch the water flowing off of their properties and into the ponds.

infiltration swale and meadow plantings

The hill to the southeast of the basin stretches approximately 240 feet from the edge of the pond to the neighboring resident's backyard. The average slope of the



The channel which connects the pond and basin has been damaged by overgrown vegetation, which causes water to stop, stagnate and grow algae.

hillside is approximately 10%. The hillside is mowed on a regular basis to keep the turfgrass short. Its likely that large volumes of stormwater flow down this hillside, carrying nutrients, sediment and grass clippings with it. The hillside could be converted to a meadow, which would discourage geese from gathering there as well as slowing, filtering and infiltrating the stormwater.

A vegetated infiltration swale could also be implemented parallel to the edge of the basin. This swale would essentially act as a linear rain garden, to catch any stormwater which escapes the meadow, before it reaches the basin. It would be planted with meadow grasses and flowering perennials. The water, captured in the swale, would keep nutrients, sediment and grass clippings from ever reaching the basin. It would also encourage the water to infiltrate directly into the ground, rather than entering the basin and the stream system. Soil and infiltration tests, and potentially an engineering study would be necessary to determine whether a vegetated infiltration swale would function here.

conclusion

When this basin is dredged, it would be a good time to implement the additional strategies to ensure the long term health of the basin. When residents see the cost, difficulty and scale of dredging, it may be the right time to begin educating them on the actions they can take to help improve the health of the basin. Once the basin is dredged back to its ideal condition, it would be logical to implement the other physical changes, such as tree planting, and meadow and rain garden installation, to help it stay in the best condition possible, for as long as possible.

See previous section for plan.

Marydell Pond

Uses:	Beauty and Potentially Fishing/Habitat
Approximate Surface Area:	1.98 acres
Parcel Size:	16.6 acres
Inlets:	19
Outlets:	1 – Flows to smaller ponds, then East Branch Chester Creek
Watershed:	East Branch Chester Creek
Headwater Location:	Subdivision inlets and spring
Drainage Area:	<24 acres
Depth of Water:	1.5 to 5 feet
Aerators:	None
Notable Chemical Testing Results:	Phosphorous, Nitrogen (Ammonia-N), and Low Dissolved Oxygen

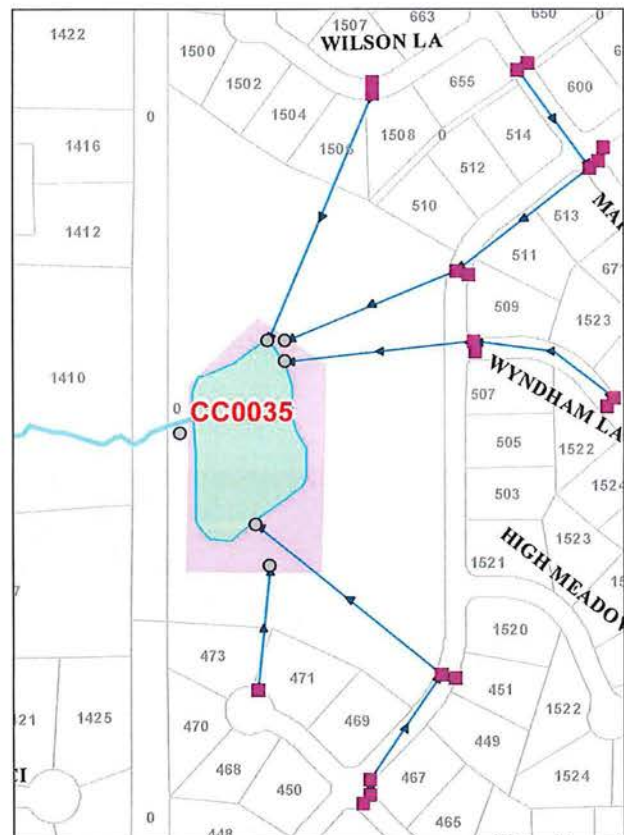
general description

The Marydell Pond sits within a 16-acre open space parcel surrounded by the Marydell subdivision. The space is mostly mowed lawn, with a forested area to the northwest. Barker Drive runs along the eastern edge of the property, approximately 30 feet in elevation above the surface of the pond. The horizontal distance from the road to the pond is approximately 330 feet. It appears that the space is relatively unused, aside from some fishing, as evidenced by some stray fishing line. Kids sled there in the winter as well. A hockey goal in the pond suggests that residents use the pond for skating and ice hockey in the winter as well. The neighbors used to hold civic events in the lawn area, but don't any longer as the goose population and goose waste has made the space unpleasant to use.

The Conservancy Board recently planted a dozen trees along the northeastern edge of the pond. They are in rough, double rows, ranging in distance from the shoreline from approximately 10–40 feet. The trees are a mix of oaks, birches and redbuds. These three native species will



Marydell Pond Watershed



Nineteen inlets (pink squares) feed the Marydell Pond stormwater management system. CREDIT: East Goshen Township

provide food and habitat to a variety of mammals, birds and insects. They are also all tolerant of wet soils and are appropriate for a pond side planting. The mix of species will grow to three different heights, providing an understory and canopy layer. The redbuds will likely grow to approximately 30 feet in height, the birches to 50–70 feet in height, with the oaks most likely topping out around 80 feet in height. At maturity, the birches and oaks should provide some shade to the pond.

In addition to shade, the trees will also provide some stormwater management. They are planted at the bottom of a slope, near the pond edge. As they grow and establish their root systems, they will help to stabilize the soil, slow flowing water and reduce erosion. They are the first step in establishing a vegetated buffer, recommended at all the ponds. In the future, the Conservancy Board could supplement these trees with more trees, further uphill to widen the buffer. Additionally, shrubs could be added beneath the trees once the canopies begin to connect.

The pond is fed by 19 inlets throughout the subdivisions, sheet flow across the vast hillside, a spring and a few channelized, intermittent waterways across the lawn area. The eastern pond edges lack significant vegetation for the most part, save for the newly planted trees and a few other more mature shade trees. The western edge is bordered by forest. The large lawn area is often occupied by geese, as evidenced by their abundant waste. One outlet drains pond water to an unnamed tributary of the East Branch Chester Creek.



The trees planted at Marydell include oaks, birches and redbuds, native species which will shade the pond, filter stormwater and provide habitat for native birds, insects and mammals.

The Marydell Pond seems to be affected by every negative impact possible. Geese occupy the site and leave an abundance of waste. The pond water is exposed to full sun, with little shade. There is little edge vegetation for fish habitat and no significant vegetated buffers on three sides, allowing stormwater to sheet flow into the pond. Finally, 28 inlets drain stormwater from the neighboring yards and streets directly into the pond, bringing sediment, nutrients and chemicals into the water. These factors have led to the pond being low in dissolved oxygen, high in phosphorous and nitrogen and in need of dredging and physical repair.

strategies for improvement

dredging and repairs

Toth Bros. recommends dredging this pond and spreading the sediment on the hillside above. Additionally, the outflow structure should be repaired simultaneously.

two forebays

Only 19 inlets feed the four pipes and one swale which lead into the pond. Three pipes feed the pond at its north end, while one pipe and the swale feed the pond at its south end. Two forebays, one north and one south, would be necessary to capture sediment as it exits the pipes and swale. The forebays would collect sediment in smaller areas of the pond, rather than allowing it to spread across the entire pond. Ongoing sediment removal, through dredging or vacuuming could then be focused on two smaller areas.



A sycamore tree is growing out of the outflow structure at Marydell and should be removed.

aerator system

Installation of an aeration system would help to increase dissolved oxygen levels. The pond surface is currently approximately 1.98 acres. At this size, two aeration systems would be necessary. Should the Township also install two forebays, it may be possible to reduce the pond surface area in need of aeration, as forebays do not need to be aerated. **Aeration would only be recommended if the pond is first dredged to a minimum depth of 4 feet.**

meadow plantings and vegetated swale

The vast mowed hillsides surrounding the pond on three sides allow stormwater to sheet flow directly into the pond. As the water flows through the grass, it carries clippings, sediment and nutrients into the pond. The large grass hillsides between the pond and the road could be converted to meadow plantings, which would help to slow, filter and infiltrate the water before it reaches the pond. Beyond the initial costs of installation, meadow maintenance would likely be less costly than the typical lawn maintenance, as meadows need to be mowed only a few times per year.

A vegetated infiltration swale could also be implemented parallel to the edge of the basin. This swale would essentially act as a linear rain garden, to catch any stormwater which escapes the meadow, before it reaches the basin. It would be planted with meadow grasses and flowering perennials. The water, captured in the swale, would keep nutrients, sediment and grass clippings from ever reaching the basin. It would also encourage the water



The Marydell pond features some edge plantings, but more plantings would provide more shade and better filter stormwater.

to infiltrate directly into the ground, rather than entering the basin and the stream system. Soil and infiltration tests, and potentially an engineering study would be necessary to determine whether a vegetated infiltration swale would function here.

vegetated buffers

The Marydell Pond site lacks vegetation, aside from the wooded areas along the western edge. The pond would benefit from additional plantings which could help to filter runoff, stabilize the soil and shade the water. More trees would also make the site more aesthetically pleasing and comfortable during the hotter seasons. Buffer plantings should be planted along the pond banks and where stormwater runoff is channelizing and forming intermittent streams down the hillside.

aquatic plants

The Marydell Pond tested low for dissolved oxygen. Fish need dissolved oxygen to breathe and aerobic bacteria, which break down decaying matter in the water, are also dependent on dissolved oxygen. The introduction of native aquatic plants would be an effective method for increasing dissolved oxygen levels. Should this pond be dredged, some of the spoils could be graded into the banks to create a shallow bench underwater, on which to plant the aquatic plant species.

inlet filter bags

This plan recommends a pilot program for the use of inlet filter bags at inlets feeding the Pin Oak and Hershey's Mill Ponds. These two ponds are fed by a total of 13 inlets between them. The Marydell Pond is fed by 19 inlets, which is the third fewest of the six ponds. Inlet filter bags should be considered for use at Marydell based upon review of the results of the pilot program at Pin Oak and Hershey's Mill. Should inlet filter bags be found to be effective there, the Township could incrementally increase their use. Marydell would be the next logical step, based on the relatively low number of inlets.

upstream BMPs and education

With the surrounding neighborhood contributing to the stormwater system in Marydell, education of the residents could make a difference in protecting the pond's health.

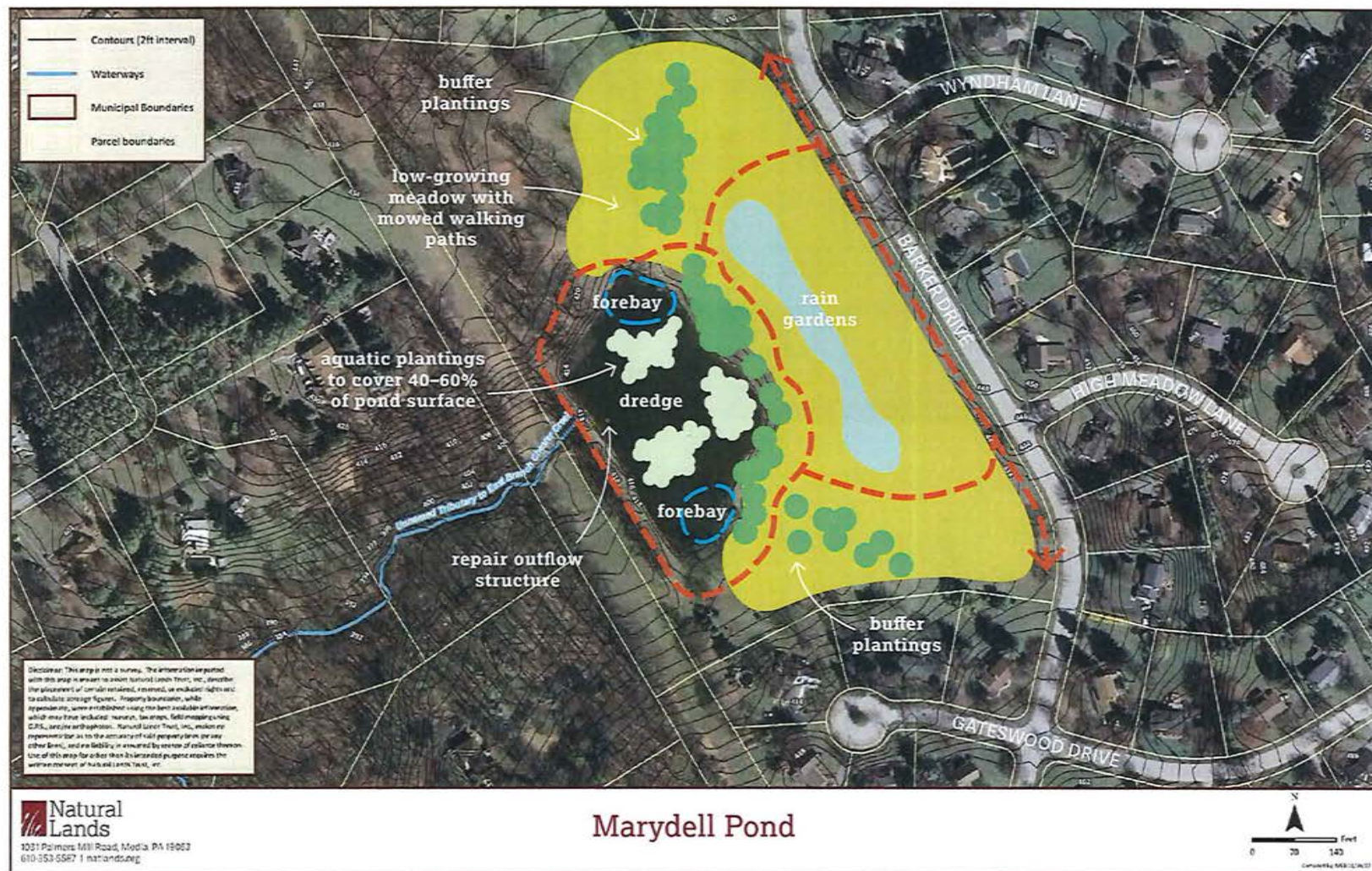
Every resident who installs a rain barrel or rain garden can help to decrease the amount of sediment, water volume and nutrients which make their way into the pond. Every resident who chooses to take their car to a commercial car wash helps to keep phosphorous and other pollutants out of the ecosystem.

conclusion

The Marydell Pond open space has the potential to be transformed into a passive park which could become a new centerpiece of the neighborhood. The strategies for improvement would be designed in a manner to improve the ponds health as well as encourage use by the residents. Grass walking paths could bring residents comfortably to the pond. Meadow plantings would discourage geese from inhabiting the site. More trees would provide summer shade and habitat for birds. The pond and the 16 acres surrounding it could be transformed into a natural area with gathering space for neighborhood events, educational programs and recreational events.



Some aquatic plants, like duckweed, are growing naturally in the pond.

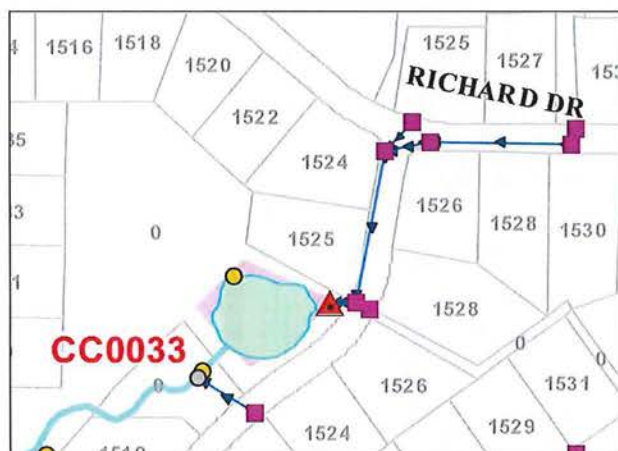


Pin Oak Pond

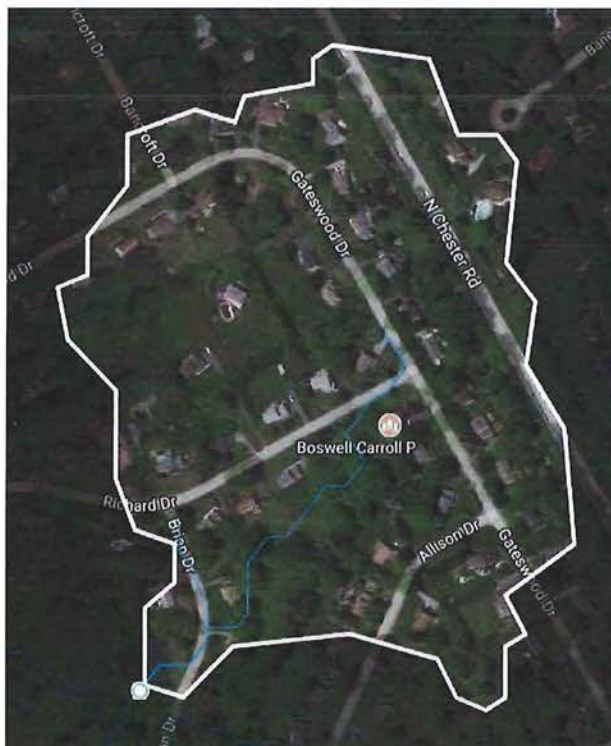
Uses:	Beauty and Potentially Fishing/Habitat
Approximate Surface Area:	0.46 acres
Parcel Size:	4.6 acres
Inlets:	8
Outlets:	1
Watershed:	East Branch Chester Creek
Headwater Location:	Inlets on Brian and Richard Drives
Drainage Area:	42.4 acres
Depth of Water:	2 to 6 feet
Aerators:	1
Notable Chemical Testing Results:	Phosphorous

general description

The Pin Oak Pond rests in a more intimate setting than the others. It sits along a quiet street, on a smaller parcel, adjacent only to a few homes. It's a small pond at just under a half acre. It is clearly well loved by the neighborhood, as residents asked what we were doing at every site visit.



Only eight inlets (pink squares) feed the Pin Oak Pond, making it suitable for an inlet filter bag pilot program
CREDIT: East Goshen Township



Pin Oak Pond Watershed

The pond is just a few feet from Brian Drive to the east and a private residence to the north. The majority of the 4.6-acre parcel on which it resides, lies to the west and south of the pond. Most of the area to the west is mowed grass, stretching from the banks of the pond to the residents'



Some edges of the pond are well vegetated, but more plantings would help to stabilize the banks.

rear yards, just about 250 feet away. Due to the slopes, it appears that most of the sheet flow from the grass area is missing the pond, but likely flowing directly into the unnamed tributary of the East Branch Chester Creek, to which the pond drains as well.

The pond is fed by a series of eight inlets on Brian and Richard Drives. The inlets channel water into a single pipe which feeds the pond. The pond banks near the pipe have scoured, creating a “neck” from the pipe to the pond. It appears that water likely rushes out of the pipe at high velocities, carrying sediment and scouring the pond banks before slowing down in the body of the pond and dropping its sediment there. In addition to sedimentation, the pond also has a few structural issues. The emergency spillway has failed and a 60-foot stretch of shoreline is being undercut. Water drains from the pond through an outlet structure, but is also leaking through the spillway and making a new channel towards the creek.

The water tested high for phosphorous. Unlike many of the other ponds, it does not appear that sheet flow off the adjacent lawn is a major culprit. It is more likely that the phosphorous is being carried in with sediment, or washing in from the inlets in the form of fertilizers or other chemicals.

strategies for improvement

dredging and forebay

Toth Bros. recommends dredging this pond in approximately 2022. Between now and then, the Township could prepare the pond for a major makeover. In addition to fixing the spillway, this pond could be fitted with a forebay. A forebay is a smaller ponding area, designed to slow water's velocity, so that it drops sediment there, rather than in the open water of the pond. The “neck” referred to earlier could potentially be fashioned into a spillway. If the sediment were concentrated here, future removal of sediment could be achieved with lighter equipment, such as vacuum trucks, at a lesser cost. It is also possible that the water rushing in through the neck is causing the undercutting of the opposite bank. Installation of a forebay, designed to slow the water on entry, could also reduce future undercutting and could allow the bank to be stabilized through tree plantings.

tree plantings

Much of the land surrounding the pond is unstable, due to the forces of the pond water. Additional trees planted around the pond would help to hold the soil and stabilize the land, keeping more sediment from entering the stream.



The existing channel entering the pond could potentially be converted into a forebay, to capture sediment in a smaller area before it enters the pond.



The existing spillway is unstable, and should be reconstructed. Additional plantings could also help to stabilize the banks.

inlet filter bags

As only eight inlets feed the pipes which lead to the pond, inlet filter bags could greatly reduce the amount of sediment entering the stormwater system off of the residential properties and streets.

upstream BMPs and education

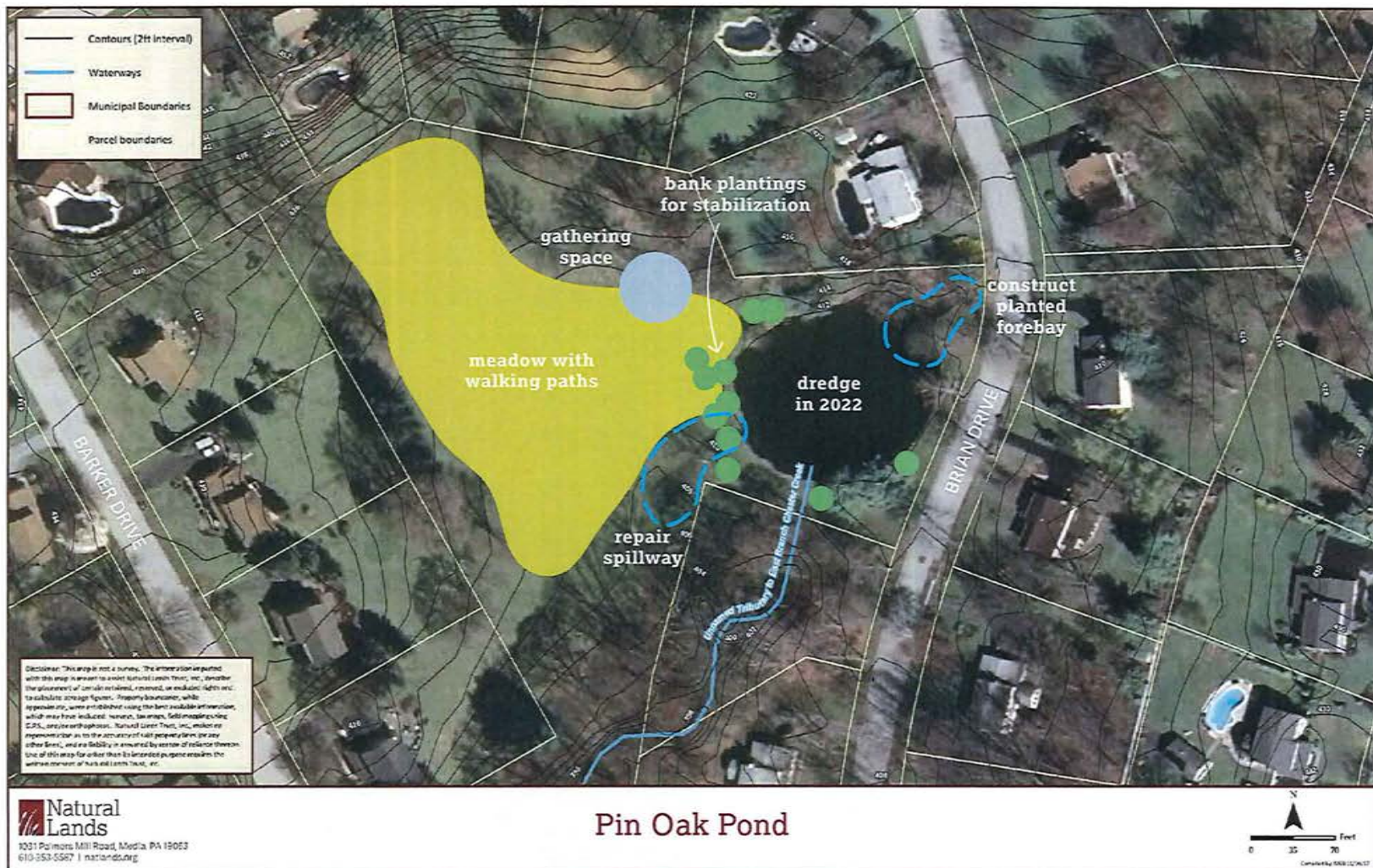
With the surrounding neighborhood contributing to the effects on the Pin Oak Pond, education of the residents could make a difference in protecting the pond's health. Every resident who installs a rain barrel or rain garden can help to decrease the amount of sediment, water volume and nutrients which make their way into the pond. Every resident who chooses to take their car to a commercial car wash helps to keep phosphorous and other pollutants out of the ecosystem.

conclusion

The Pin Oak Pond site is well loved by the neighboring residents, but could serve them better. The site connects to another 75 acres of adjacent open space. The recommendations for improving the pond's health could be implemented in a way to transform the site into a neighborhood passive park and trailhead. Trees intended to stabilize the pond banks would also shade visitors. Meadows intended to infiltrate ground water would also provide habitat for birds and interest for walkers. Beautifying the site, upgrading it to better serve the neighbors and strengthening their connections to it are the best ways to get them to care about the health of the pond and make positive changes to improve it.



The aerator in the Pin Oak pond helps keep the water moving and well oxygenated, which benefits water quality and the fish that live in the pond.



conclusion

East Goshen's ponds are each unique, slightly different from each other, but face the same issues as most ponds and basins within southeastern Pennsylvania. They are already full of sediment, deposited over decades. They aren't well planted and aren't supported by a robust ecosystem. They continue to accept stormwater carrying sediment and pollutants. Every pond has slightly different needs for improvement, but the same general recommendations are relevant to each of East Goshen's Ponds.

All of the ponds need to be dredged, now or in the future. All of the ponds need more plantings. All of the ponds need better filtration of the stormwater which enters them.

And in addition to these physical changes, there needs to be social change as well. As long as the people who live around the ponds don't care about them, it will be very difficult for anyone to keep them in good health.

The ponds are all in need of some improvement, but East Goshen has the right people in leadership and the community, to make sure that the ponds are well cared for in the future. The residents are interested and see an opportunity to transform the ponds into important centerpieces for their communities. They see that these can be beautiful places to gather, to watch birds, to fish, to follow butterflies and frogs and to simply enjoy the outdoors. Through the recommendations in this report, the community can make this a reality.



The ponds in East Goshen hold great potential as small neighborhood parks, where people can hold events, enjoy the scenery of simply go for a walk in nature.

appendix 1

subconsultant reports & cost estimates

1A: Water Quality Laboratory Tests

1B: Site Inspection Report Outlines

1C: Cost Estimates

LAB #
714897

BRANDYWINE SCIENCE CENTER INC.
204 LINE ROAD
KENNETT SQUARE, PA 19348
DEP# 15-301
(610) 444-9850



LABORATORY REPORT
FOR

ORIGIN OF SAMPLE	NAME	Hershey Mill Estates		Client:	East
	ADDRESS	Goshen			
	CITY/STATE	Township			
	TOWNSHIP			COUNTY	
SOURCE OF SUPPLY	POND	x	MANNER OF COLLECTION	INSIDE TAP	
	SPRING			OUTSIDE TAP	
	TREATED			HOLDING TANK	
SAMPLE COLLECTED BY	LAB STAFF		SAMPLE INFORMATION	SAMPLE DATE	10/13/2017
	WELL DRILLER			SAMPLE TIME	9:00
	OTHER	East Goshen		DATE RECEIVED	10/13/2017
TRANSPORT	ICE /REFRIG	x		TIME RECEIVED	10:30
INFORMATION				DATE OF REPORT	10/27/2017

SAMPLE ID:

ANALYSIS	RESULT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
AMMONIA-N	0.21	mg/L	SM 5210 D	10/13/17 18:30	HC
DISSOLVED OXYGEN	9.0	mg/L	SM 4500 OG	10/13/17 10:35	HC
NITRATE-N	16.4	mg/L	SM 4500-NO3- D	10/14/17 14:30	HC
NITRITE-N	<0.01	mg/L	SM 4500-NO2- B	10/14/17 12:30	HC
pH	7.22	SU	SM 4500-H+ B	10/13/17 17:32	HC
T-PHOSPHORUS (P)	0.09	mg/L	SM 4500-P E	10/16/17 17:05	HC
FECAL COLIFORM	48	mg/L	SM 9222 D	10/13/17 12:00	MJ

Henry D. Clemens III

Henry D. Clemens III
Laboratory Director

< Less Than

SM refers to Standard Methods for the Examination of Wastewater and Water, 18th Edition, APHA-AWWA-WPCF.

Chemical Analyses performed in accordance with " STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER, 18th EDITION APHA-AWWA-WPCF.

LAB #
714902

BRANDYWINE SCIENCE CENTER INC.
204 LINE ROAD
KENNETT SQUARE, PA 19348
DEP# 15-301
(610) 444-9850



**LABORATORY REPORT
FOR**

ORIGIN OF SAMPLE	NAME	Bow Tree I		Client:	East
	ADDRESS	Retention Pond			Goshen
	CITY/STATE				Township
	TOWNSHIP			COUNTY	
SOURCE OF SUPPLY	POND	x	MANNER OF COLLECTION	INSIDE TAP	
	SPRING			OUTSIDE TAP	
	TREATED			HOLDING TANK	
SAMPLE COLLECTED BY	LAB STAFF		SAMPLE INFORMATION	SAMPLE DATE	10/13/2017
	WELL DRILLER			SAMPLE TIME	8:45
	OTHER	East Goshen		DATE RECEIVED	10/13/2017
TRANSPORT	ICE /REFRIG	x		TIME RECEIVED	10:30
INFORMATION				DATE OF REPORT	10/27/2017

SAMPLE ID:

ANALYSIS	RESULT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
AMMONIA-N	1.33	mg/L	SM 5210 D	10/13/17 18:30	HC
DISSOLVED OXYGEN	4.9	mg/L	SM 4500 OG	10/13/17 10:35	HC
NITRATE-N	2.4	mg/L	SM 4500-NO3- D	10/14/17 14:30	HC
NITRITE-N	0.272	mg/L	SM 4500-NO2- B	10/14/17 12:30	HC
pH	7.08	SU	SM 4500-H+ B	10/13/17 17:37	HC
T-PHOSPHORUS (P)	0.13	mg/L	SM 4500-P E	10/16/17 17:05	HC
FECAL COLIFORM	240	mg/L	SM 9222 D	10/13/17 12:00	MJ

Henry D. Clemens III

Henry D. Clemens III
Laboratory Director

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LAB #
714900

BRANDYWINE SCIENCE CENTER INC.
204 LINE ROAD
KENNETT SQUARE, PA 19348
DEP# 15-301
(610) 444-9850



**LABORATORY REPORT
FOR**

ORIGIN OF SAMPLE	NAME	Bow Tree II & III		Client:	East
	ADDRESS	Farm Pond			Goshen
	CITY/STATE				Township
	TOWNSHIP			COUNTY	
SOURCE OF SUPPLY	POND	x	MANNER OF COLLECTION	INSIDE TAP	
	SPRING			OUTSIDE TAP	
	TREATED			HOLDING TANK	
SAMPLE COLLECTED BY	LAB STAFF		SAMPLE INFORMATION	SAMPLE DATE	10/13/2017
	WELL DRILLER			SAMPLE TIME	8:30
	OTHER	East Goshen		DATE RECEIVED	10/13/2017
				TIME RECEIVED	10:30
TRANSPORT	ICE /REFRIG	x		DATE OF REPORT	10/27/2017
INFORMATION					

SAMPLE ID:

ANALYSIS	RESULT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
AMMONIA-N	<0.10	mg/L	SM 5210 D	10/13/17 18:30	HC
DISSOLVED OXYGEN	7.2	mg/L	SM 4500 OG	10/13/17 10:35	HC
NITRATE-N	2.47	mg/L	SM 4500-NO3- D	10/14/17 14:30	HC
NITRITE-N	0.282	mg/L	SM 4500-NO2- B	10/14/17 12:30	HC
pH	7.38	SU	SM 4500-H+ B	10/13/17 17:36	HC
T-PHOSPHORUS (P)	0.17	mg/L	SM 4500-P E	10/16/17 17:05	HC
FECAL COLIFORM	29	mg/L	SM 9222 D	10/13/17 12:00	MJ

Henry D. Clemens III

Henry D. Clemens III
Laboratory Director

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LAB #
714901

BRANDYWINE SCIENCE CENTER INC.
204 LINE ROAD
KENNETT SQUARE, PA 19348
DEP# 15-301
(610) 444-9850



**LABORATORY REPORT
FOR**

ORIGIN OF SAMPLE	NAME	Bow Tree II & III		Client:	East
	ADDRESS	Retention Pond			Goshen
	CITY/STATE				Township
	TOWNSHIP			COUNTY	
SOURCE OF SUPPLY	POND	x	MANNER OF COLLECTION	INSIDE TAP	
	SPRING			OUTSIDE TAP	
	TREATED			HOLDING TANK	
SAMPLE COLLECTED BY	LAB STAFF		SAMPLE INFORMATION	SAMPLE DATE	10/13/2017
	WELL DRILLER			SAMPLE TIME	8:45
	OTHER	East Goshen		DATE RECEIVED	10/13/2017
TRANSPORT	ICE /REFRIG	x		TIME RECEIVED	10:30
INFORMATION				DATE OF REPORT	10/27/2017

SAMPLE ID:

ANALYSIS	RESULT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
AMMONIA-N	<0.10	mg/L	SM 5210 D	10/13/17 18:30	HC
DISSOLVED OXYGEN	7.8	mg/L	SM 4500 OG	10/13/17 10:35	HC
NITRATE-N	2.51	mg/L	SM 4500-NO3- D	10/14/17 14:30	HC
NITRITE-N	0.115	mg/L	SM 4500-NO2- B	10/14/17 12:30	HC
pH	7.18	SU	SM 4500-H+ B	10/13/17 17:37	HC
T-PHOSPHORUS (P)	0.09	mg/L	SM 4500-P E	10/16/17 17:05	HC
FECAL COLIFORM	35	mg/L	SM 9222 D	10/13/17 12:00	MJ

Henry D. Clemens III

Henry D. Clemens III
Laboratory Director

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LAB #
714898

BRANDYWINE SCIENCE CENTER INC.
204 LINE ROAD
KENNETT SQUARE, PA 19348
DEP# 15-301
(610) 444-9850



**LABORATORY REPORT
FOR**

ORIGIN OF SAMPLE	NAME	Mary Dell		Client:	East
	ADDRESS	Goshen			
	CITY/STATE	Township			
	TOWNSHIP			COUNTY	
SOURCE OF SUPPLY	POND	x	MANNER OF COLLECTION	INSIDE TAP	
	SPRING			OUTSIDE TAP	
	TREATED			HOLDING TANK	
SAMPLE COLLECTED BY	LAB STAFF		SAMPLE INFORMATION	SAMPLE DATE	10/13/2017
	WELL DRILLER			SAMPLE TIME	9:15
	OTHER	East Goshen		DATE RECEIVED	10/13/2017
TRANSPORT	ICE /REFRIG	x		TIME RECEIVED	10:30
INFORMATION				DATE OF REPORT	10/27/2017

SAMPLE ID:

ANALYSIS	RESULT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
AMMONIA-N	0.20	mg/L	SM 5210 D	10/13/17 18:30	HC
DISSOLVED OXYGEN	5.2	mg/L	SM 4500 OG	10/13/17 10:35	HC
NITRATE-N	2.28	mg/L	SM 4500-NO3- D	10/14/17 14:30	HC
NITRITE-N	<0.01	mg/L	SM 4500-NO2- B	10/14/17 12:30	HC
pH	7.02	SU	SM 4500-H+ B	10/13/17 17:34	HC
T-PHOSPHORUS (P)	<0.06	mg/L	SM 4500-P E	10/16/17 17:05	HC
FECAL COLIFORM	570	mg/L	SM 9222 D	10/13/17 12:00	MJ

Henry D. Clemens III

Henry D. Clemens III
Laboratory Director

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LAB #
714899

BRANDYWINE SCIENCE CENTER INC.
204 LINE ROAD
KENNETT SQUARE, PA 19348
DEP# 15-301
(610) 444-9850



LABORATORY REPORT
FOR

ORIGIN OF SAMPLE	NAME	Pin Oaks		Client:	East
	ADDRESS				Goshen
	CITY/STATE				Township
	TOWNSHIP			COUNTY	
SOURCE OF SUPPLY	POND	x	MANNER OF COLLECTION	INSIDE TAP	
	SPRING			OUTSIDE TAP	
	TREATED			HOLDING TANK	
SAMPLE COLLECTED BY	LAB STAFF		SAMPLE INFORMATION	SAMPLE DATE	10/13/2017
	WELL DRILLER			SAMPLE TIME	9:00
	OTHER	East Goshen		DATE RECEIVED	10/13/2017
TRANSPORT	ICE /REFRIG	x		TIME RECEIVED	10:30
INFORMATION				DATE OF REPORT	10/27/2017

SAMPLE ID:

ANALYSIS	RESULT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
AMMONIA-N	<0.10	mg/L	SM 5210 D	10/13/17 18:30	HC
DISSOLVED OXYGEN	8.2	mg/L	SM 4500 OG	10/13/17 10:35	HC
NITRATE-N	2.77	mg/L	SM 4500-NO3- D	10/14/17 14:30	HC
NITRITE-N	0.112	mg/L	SM 4500-NO2- B	10/14/17 12:30	HC
pH	7.40	SU	SM 4500-H+ B	10/13/17 17:35	HC
T-PHOSPHORUS (P)	0.07	mg/L	SM 4500-P E	10/16/17 17:05	HC
FECAL COLIFORM	22	mg/L	SM 9222 D	10/13/17 12:00	MJ

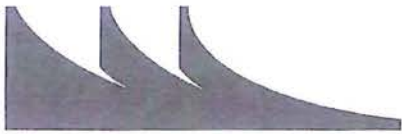
Henry D. Clemens III

Henry D. Clemens III
Laboratory Director

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TOTH BROS.

CLEARING & DREDGING, INC.

JOSEPH TOTH • MICHAEL TOTH
P.O. Box 426 Sellersville, PA 18960
p: 215-368-7178 f: 215-257-3665
e: tothbros7178@comcast.net
www.tothbrothers.com

WET EXCAVATION

• LAND CLEARING

• DEMOLITION

November 3, 2017

SITE INSPECTION REPORT OUTLINE

PROJECT NAME: Hersheys Mill pond

Location- Vicinity 1511 Tanglewood Drive

Date of Inspection- 11/1/17

Water Quality East Branch Chester Creek; TSF / MF

PNDI Status: - No permit required

Watershed Area: 243 acres

Coordinates- 40 01.033 / 75 33.648

DREDGING INFORMATION:

Pond has a maximum water depth this date of 6 inches overall. It seriously needs dredging. Sediment load is 6 feet or 4442 cubic yards. This dredge material must be hauled off-site at a cost of \$132,000.

SUGGEST:

This should be considered a "Regulated" dam due to the drainage area/watershed & dam height.

This is a very sensitive dredging project, as the private pond just Below has been an issue for more than 20 years and is in serious need of dredging. We do not want to give the owner any reason to consider the Township's work part of his concern.



TOTH BROS.

CLEARING & DREDGING, INC.

JOSEPH TOTH • MICHAEL TOTH
P.O. Box 426 Sellersville, PA 18960
p: 215-368-7178 f: 215-257-3665
e: tothbros7178@comcast.net
www.tothbrothers.com

WET EXCAVATION

• LAND CLEARING

• DEMOLITION

November 3, 2017

SITE INSPECTION REPORT OUTLINE

PROJECT NAME: Bow Tree 1 Pond

Location- 1631 Bow Tree Drive

Date of Inspection- 11/1/17

Water Quality Ridley Creek; TSF/MF

PNDI Status: N/A No Permit Required

Watershed Area: <10 acres

Coordinates- 39 59.036 / 75 31.951

DREDGING INFORMATION:

Pond has a maximum depth of 2 feet surrounding (2) 5 foot diameter concrete outflow structures including steel trash racks, all in good repair. The pond has a minimum depth of 4 inches, thus it is in need of dredging with an average sediment load of 7,647 cubic yards. This dredged material could be blended with existing contours at a cost of \$ 130,000

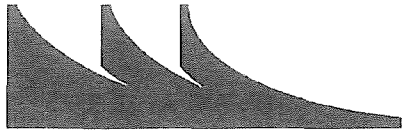
SUGGESTION:

All components appear to be working fine at this farm pond



Outflow Structure
in GOOD condition

Outlet Struc. Bow Trench #1 GOOD Shape



TOTH BROS.

CLEARING & DREDGING, INC.

JOSEPH TOTH • MICHAEL TOTH
P.O. Box 426 Sellersville, PA 18960
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www.tothbrothers.com

WET EXCAVATION

• LAND CLEARING

• DEMOLITION

November 3, 2017

SITE INSPECTION REPORT OUTLINE

PROJECT NAME: Bow Tree 2 & 3 Pond

Location- Vicinity 1679 Bow Tree Drive

Date of Inspection- 11/1/17

Water Quality- Ridley Creek; TSF/MF

PNDI Status: N/A No Permit Required

Watershed Area: 30 acres

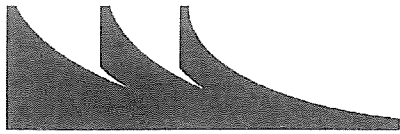
Coordinates- 39 59.137/ 75 32.27

SILT LEVELS:

Pond has a maximum depth now of 5.5 feet at outlet and a minimum depth of 1.5 feet at inlet; average sediment load of 5,733 cubic yards. This old farm pond was dug at 11 feet at the outlet; this is the reason for the large amounts of sediment. However, the water depth is still favorable for a healthy pond. At this point we would not recommend dredging as on average there is 4 feet of water.

SUGGESTION:

We see this pond to be in good shape for the next 5 years. The aeration system is working great at the Bow tree Farm Pond.



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WET EXCAVATION

• LAND CLEARING

• DEMOLITION

November 3, 2017

SITE INSPECTION REPORT OUTLINE

PROJECT NAME: Bow Tree 2 & 3 Basin

Location- Vicinity 1679 Bow Tree Drive

Date of Inspection- 11/1/17

Water Quality- Ridley Creek; TSF/MF

PNDI Status: N/A No Permit Required

Watershed Area: 30 acres

Coordinates- 39 59.137/ 75 32.27

SILT LEVELS:

Pond has a maximum depth of 2.5 surrounding concrete outflow structure and a minimum depth of 1 foot surrounding the inlet, with an average sediment load of 1060 cubic yards. Average water depth is 1.5 feet overall. Pond needs dredging.

Estimated cost \$20,000

SUGGESTION:

Minor brush clearing should be done at pond inlet; concrete retaining walls have failed in 2 sections; however it is stable with root growth.

Estimated Clearing cost... \$1,500

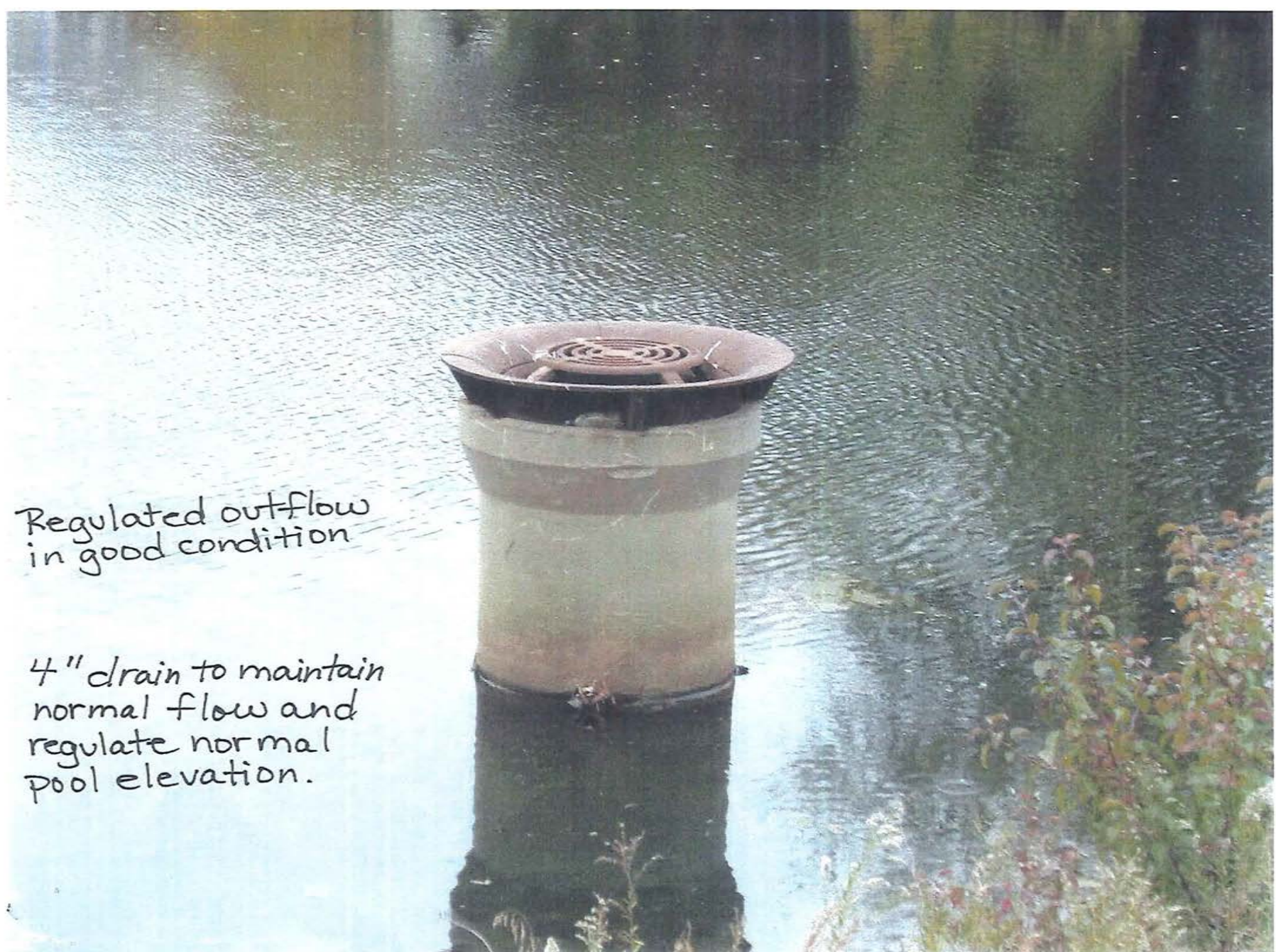


Minor brush clearing
should be done to
facilitate future inspection
and storm flows.

Channel 2 203



Bow Tree inlet to 3

A photograph of a 4-inch drain pipe protruding from a body of water. The pipe is white with a black top section and a black grate. The water is dark and reflects the surrounding environment. The drain is in good condition and is used to regulate outflow and maintain normal flow and pool elevation.

Regulated outflow
in good condition

4" drain to maintain
normal flow and
regulate normal
pool elevation.





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WET EXCAVATION

• LAND CLEARING

• DEMOLITION

November 3, 2017

SITE INSPECTION REPORT OUTLINE

PROJECT NAME: Marydell Pond

Location- Vicinity 509 Baker Drive

Date of Inspection- 11/1/17

Water Quality East Branch Chester Creek

PNDI Status: N/A No Permit Required

Watershed Area: <24 acres

Coordinates- 39.98333 / 75.54861

DREDGING INFORMATION:

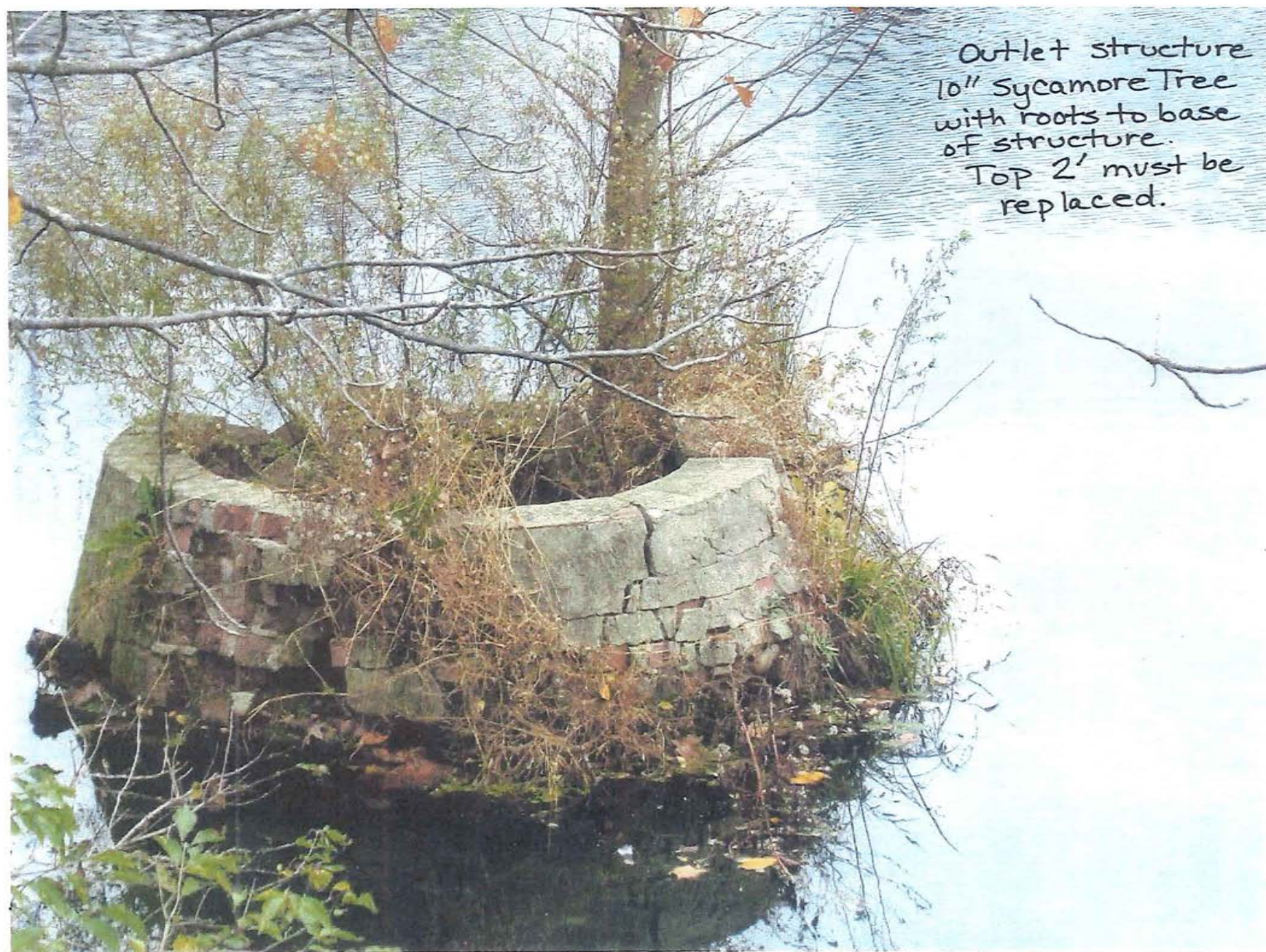
Currently, pond has a maximum depth of 5 feet at the dilapidated top section brick outflow structure and a minimum depth of 1.5 feet. This pond is in need of dredging; current silt average is 3.5 feet overall totaling 5,690 cubic yards.

ESTIMATED COSTS:

Dredge material could be blended in with existing contours at a cost of \$100,000.

Suggestion #1- Repair brick outflow structure- Cost if done simultaneously with dredging would be \$3,000. Should Township request this repair with pond full; estimated cost would be \$5,000.

Note; Emergency spillway is in good condition; mowed lawn.



Outlet structure
10" Sycamore Tree
with roots to base
of structure.
Top 2' must be
replaced.

Sealing Outflow Structure at Maybell Pond 10" Sycamore Roots 8' long to 2' down





Base in good shape 2' Top Sec falling apart



Tree Roots to floor



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WET EXCAVATION

• LAND CLEARING

• DEMOLITION

November 3, 2017

SITE INSPECTION REPORT OUTLINE

PROJECT NAME: Pin Oak Pond

Location- Vicinity 1524 Brian Drive

Date of Inspection- 11/1/17

Water Quality- East Branch Chester Creek; TSF/MF

PNDI Status: N/A No Permit Required

Watershed Area: 42.4 acres

Coordinates- 3958.746 / 75 32.569

DREDGING INFORMATION:

Pond has a maximum depth of 6.5 feet at aerator, approximately 2 feet at the inlet & an average sediment load of 3.5 feet; total sediment 860 cubic yards. It has been 20 years & the Township could wait another 5 years of so to dredge this pond.

Suggestion #1: The emergency spillway introduces water to the lawn area, this site should be abandoned and replaced with a mild geo-web/grass swale ovetop existing outflow pipe-
Estimated cost - \$5,000.00

Suggestion #2- Sixty feet of shoreline at the 30" white pines is under cutting; this could be easily corrected with stone rip-rap approximately 15 ton & fabric- Estimated cost \$3,500.00

ESTIMATED COSTS:

Estimated Costs; Suggestions #1 & #2- \$8,500.00



Emergency Spillway
to be abandoned
and relocated
over top barrel
pipe. (outlet)

Emeg Spillway on Pan Oak pond



pen Dale Eng Spilling to abandon

Rough Cost Estimates

The following rough cost estimates have been compiled through the use of cost estimating software, opinions of other experts and past experience. These estimates are intended to provide the Township with a rough estimate of costs for improvements to each pond. It should be noted that additional study or more detailed landscape or engineering design may be necessary in order to prepare detailed, construction cost estimates. Also, permit applications and associated fees or costs have not been included.

The following notes apply to the estimates as footnoted throughout the spreadsheets.

- (1) Trees may be available at subsidized costs through grant programs including TreeVitalize Watersheds and the Arbor Day Foundation.
- (2) Labor costs may be reduced through the use of volunteers.
- (3) Labor costs may be reduced through the use of Township staff.
- (4) Consulting costs for aeration system installation may only be necessary for the first installation. Township staff may be able to handle installation without a consultant on subsequent installations. Therefore, this fee should only be accounted for once.
- (5) Estimates for meadows include typical per acre costs for herbicide treatments, purchase of seed and spreading of seeds. However, these costs can be eliminated if the Township chooses to simply reduce the frequency of mowing in order to establish a tall grass meadow.
- (6) These costs may be reduced if the item is implemented in concert with dredging, while the pond is empty.

Hershey's Mill Estate - Rough Cost Estimate

<u>A. Pond Upgrades</u>	UNIT	SIZE	QTY.	UNIT PRICE	MAT'L COST	LABOR	LABOR COST	TOTAL
Dredging	LS	NA	1	\$ 132,000.00	\$ 132,000.00	\$ -	\$ -	\$ 132,000.00
Forebay Construction	EA	NA	0	\$ -	\$ -	\$ -	\$ -	\$ -
Structural Repairs	LS	NA	0	\$ -	\$ -	\$ -	\$ -	\$ -
SUBTOTAL					\$ 132,000.00		\$ -	\$ 132,000.00

<u>B. Aeration</u>	UNIT	SIZE	QTY.	UNIT PRICE	MAT'L COST	LABOR	LABOR COST	TOTAL
PentAir System	EA	NA	0	\$ 3,071.00	\$ -	\$ -	\$ -	\$ -
Consulting	Day	NA	0	\$ 1,000.00	\$ -	\$ -	\$ -	\$ -
Electricity Source	LS	NA	0	\$ 10,000.00	\$ -	\$ -	\$ -	\$ -
SUBTOTAL					\$ -		\$ -	\$ -

<u>C. Plantings</u>	UNIT	SIZE	QTY.	UNIT PRICE	MAT'L COST	LABOR	LABOR COST	TOTAL
Trees (1)(2)	EA	1" cal	35	\$ 70.00	\$ 2,450.00	\$ 140.00	\$ 4,900.00	\$ 7,350.00
Tree Tubes (2)	EA	60" ht	35	\$ 2.50	\$ 87.50	\$ 5.00	\$ 175.00	\$ 262.50
Shrubs (2)	EA	24-36" ht	35	\$ 36.00	\$ 1,260.00	\$ 70.00	\$ 2,450.00	\$ 3,710.00
Deer Mesh Fence (shrubs) (2)	LF	7' ht x 100LF	1	\$ 125.00	\$ 125.00	\$ 200.00	\$ 200.00	\$ 325.00
Perennials	EA	SP2	0	\$ 6.00	\$ -	\$ 2.00	\$ -	\$ -
Meadow	AC	NA	0	\$ 2,000.00	\$ -	\$ -	\$ -	\$ -
Aquatic Plants	EA	2" Plug	0	\$ 1.00	\$ -	\$ 2.00	\$ -	\$ -
Plug Planting Fence	LF	NA	0	\$ 1.50	\$ -	\$ 3.50	\$ -	\$ -
SUBTOTAL					\$ 3,922.50		\$ 7,725.00	\$ 11,647.50

<u>D. BMPs</u>	UNIT	SIZE	QTY.	UNIT PRICE	MAT'L COST	LABOR	LABOR COST	TOTAL
Rain Garden/Swale Bed Prep	CY		0	\$ 13.00		\$ -	\$ -	\$ -
Inlet Filter Bags	EA	Varies	5	\$ 100.00	\$ 500.00	\$ -	\$ -	\$ 500.00
Install by Twp	hour	NA	10	\$ 40.00	\$ 400.00	\$ -	\$ -	\$ 400.00
SUBTOTAL					\$ 900.00		\$ -	\$ 900.00

<u>E. Other Features</u>	UNIT	SIZE	QTY.	UNIT PRICE	MAT'L COST	LABOR	LABOR COST	TOTAL
Benches	EA	4'	0	\$ 500.00	\$ -	\$ 1,000.00	\$ -	\$ -
Gazebo	EA	8'x 10'	0	\$ 4,000.00	\$ -	\$ 8,000.00	\$ -	\$ -
Split Rail Fence	LF	4' height	0	\$6	\$ -	\$ 12.00	\$ -	\$ -
SUBTOTAL					\$ -		\$ -	\$ -

TOTAL: **\$ 144,547.50**

Bow Tree 1 Pond - Rough Cost Estimate

A. Pond Upgrades	UNIT	SIZE	QTY.	UNIT PRICE	MAT'L COST	LABOR	LABOR COST	TOTAL
Dredging	LS	NA	1	\$ 130,000.00	\$ 130,000.00	\$ -	\$ -	\$ 130,000.00
Forebay Design	EA	NA	1	\$ 5,000.00	\$ 5,000.00	\$ -	\$ -	\$ 5,000.00
Forebay Construction	LS	NA	1	\$ 15,000.00	\$ 15,000.00	\$ -	\$ -	\$ 15,000.00
Structural Repairs	LS	NA	0	\$ -	\$ -	\$ -	\$ -	\$ -
SUBTOTAL					\$ 150,000.00		\$ -	\$ 150,000.00

B. Aeration	UNIT	SIZE	QTY.	UNIT PRICE	MAT'L COST	LABOR	LABOR COST	TOTAL
PentAir System	EA	NA	2	\$ 3,071.00	\$ 6,142.00	\$ -	\$ -	\$ 6,142.00
Consulting (4)	Day	NA	2	\$ 1,000.00	\$ 2,000.00	\$ -	\$ -	\$ 2,000.00
Install by Twp	hour	NA	16	\$ 40.00	\$ 640.00	\$ -	\$ -	\$ 640.00
Trenching (3)	B.C.Y.	NA	11	\$ -	\$ -	\$ 6.00	\$ 66.00	\$ 66.00
Mobilization Backhoe	LS	NA	1	\$ 1,000.00	\$ 1,000.00	\$ -	\$ -	\$ 1,000.00
Wire (Electricity)	LF	UF-B	200	\$ 0.40	\$ 80.00	\$ -	\$ -	\$ 80.00
Conduit (Electricity)	LF	3/4" D	200	\$ 0.30	\$ 60.00	\$ -	\$ -	\$ 60.00
SUBTOTAL					\$ 9,922.00		\$ 66.00	\$ 9,988.00

C. Plantings	UNIT	SIZE	QTY.	UNIT PRICE	MAT'L COST	LABOR	LABOR COST	TOTAL
Trees (1)(2)	EA	1" cal	150	\$ 70.00	\$ 10,500.00	\$ 140.00	\$ 21,000.00	\$ 31,500.00
Tree Tubes (2)	EA	60" ht	150	\$ 2.50	\$ 375.00	\$ 5.00	\$ 750.00	\$ 1,125.00
Shrubs (2)	EA	24-36" ht	150	\$ 36.00	\$ 5,400.00	\$ 70.00	\$ 10,500.00	\$ 15,900.00
Deer Mesh Fence (shrubs) (2)	EA	7' ht x 100LF	5	\$ 125.00	\$ 625.00	\$ 200.00	\$ 1,000.00	\$ 1,625.00
Perennials (2)	EA	SP2	2000	\$ 6.00	\$ 12,000.00	\$ 2.00	\$ 4,000.00	\$ 16,000.00
Meadow (5)	AC	NA	1	\$ 2,000.00	\$ 2,000.00	\$ -	\$ -	\$ 2,000.00
Aquatic Plants	EA	2" Plug	1000	\$ 1.00	\$ 1,000.00	\$ 2.00	\$ 2,000.00	\$ 3,000.00
Plug Planting Fence	LF	NA	500	\$ 1.50	\$ 750.00	\$ 3.50	\$ 1,750.00	\$ 2,500.00
SUBTOTAL					\$ 32,650.00		\$ 41,000.00	\$ 73,650.00

D. BMPs	UNIT	SIZE	QTY.	UNIT PRICE	MAT'L COST	LABOR	LABOR COST	TOTAL
Rain Garden/Swale Bed Prep	CY	Avg .75' depth x 3'W	41	\$ 13.00		\$ -	\$ 533.00	\$ 533.00
Inlet Filter Bags	EA	Varies	0	\$ 100.00	\$ -	\$ 200.00	\$ -	\$ -
SUBTOTAL					\$ -		\$ 533.00	\$ 533.00

E. Other Features	UNIT	SIZE	QTY.	UNIT PRICE	MAT'L COST	LABOR	LABOR COST	TOTAL
Benches (3)	EA	4'	5	\$ 500.00	\$ 2,500.00	\$ 1,000.00	\$ 5,000.00	\$ 7,500.00
Gazebo	EA	8'x 10'	0	\$ 4,000.00	\$ -	\$ 8,000.00	\$ -	\$ -
Split Rail Fence	LF	4' height	0	\$ 6.00	\$ -	\$ 12.00	\$ -	\$ -
SUBTOTAL					\$ 2,500.00		\$ 5,000.00	\$ 7,500.00

TOTAL: \$ 241,671.00

Bow Tree 2 & 3 Pond - Rough Cost Estimate

A. Pond Upgrades	UNIT	SIZE	QTY.	UNIT PRICE	MAT'L COST	LABOR	LABOR COST	TOTAL
Dredging	LS	NA	0	\$ -	\$ -	\$ -	\$ -	\$ -
Forebay Construction	EA	NA	0	\$ -	\$ -	\$ -	\$ -	\$ -
Structural Repairs	LS	NA	0	\$ -	\$ -	\$ -	\$ -	\$ -
SUBTOTAL					\$ -		\$ -	\$ -
B. Aeration	UNIT	SIZE	QTY.	UNIT PRICE	MAT'L COST	LABOR	LABOR COST	TOTAL
PentAir System	EA	NA	0	\$ 3,071.00	\$ -	\$ -	\$ -	\$ -
Consulting (4)	Day	NA	0	\$ 1,000.00	\$ -	\$ -	\$ -	\$ -
Trenching (Electricity)	B.C.Y.	NA	0	\$ -	\$ -	\$ 6.00	\$ -	\$ -
Mobilization Backhoe	LS	NA	0	\$ 1,000.00	\$ -	\$ -	\$ -	\$ -
Wire (Electricity)	LF	UF-B	0	\$ 0.40	\$ -	\$ -	\$ -	\$ -
Conduit (Electricity)	LF	3/4" D	0	\$ 0.30	\$ -	\$ -	\$ -	\$ -
SUBTOTAL					\$ -		\$ -	\$ -
C. Plantings	UNIT	SIZE	QTY.	UNIT PRICE	MAT'L COST	LABOR	LABOR COST	TOTAL
Trees (1)(2)	EA	1" cal	15	\$ 70.00	\$ 1,050.00	\$ 140.00	\$ 2,100.00	\$ 3,150.00
Tree Tubes (2)	EA	60" ht	15	\$ 2.50	\$ 37.50	\$ 5.00	\$ 75.00	\$ 112.50
Shrubs (2)	EA	24-36" ht	15	\$ 36.00	\$ 540.00	\$ 70.00	\$ 1,050.00	\$ 1,590.00
Deer Mesh Fence (shrubs)(2)	EA	7' ht x 100LF	1	\$ 125.00	\$ 125.00	\$ 200.00	\$ 200.00	\$ 325.00
Perennials	EA	SP2	0	\$ 6.00	\$ -	\$ 2.00	\$ -	\$ -
Meadow	AC	NA	0	\$ 2,000.00	\$ -	\$ -	\$ -	\$ -
Aquatic Plants	EA	2" Plug	0	\$ 1.00	\$ -	\$ 2.00	\$ -	\$ -
Plug Planting Fence	LF	NA	0	\$ 1.50	\$ -	\$ 3.50	\$ -	\$ -
SUBTOTAL					\$ 1,752.50		\$ 3,425.00	\$ 5,177.50
D. BMPs	UNIT	SIZE	QTY.	UNIT PRICE	MAT'L COST	LABOR	LABOR COST	TOTAL
Rain Garden/Swale Bed Prep	CY	Avg .75' depth x 3'W	0	\$ 13.00		\$ -	\$ -	\$ -
Inlet Filter Bags	EA	Varies	0	\$ 100.00	\$ -	\$ 200.00	\$ -	\$ -
SUBTOTAL					\$ -		\$ -	\$ -
E. Other Features	UNIT	SIZE	QTY.	UNIT PRICE	MAT'L COST	LABOR	LABOR COST	TOTAL
Benches (3)	EA	4'	2	\$ 500.00	\$ 1,000.00	\$ 1,000.00	\$ 2,000.00	\$ 3,000.00
Gazebo	EA	8'x 10'	0	\$ 4,000.00	\$ -	\$ 8,000.00	\$ -	\$ -
Split Rail Fence (3)	LF	4' height	216	\$ 6.00	\$ 1,296.00	\$ 12.00	\$ 2,592.00	\$ 3,888.00
SUBTOTAL					\$ 2,296.00		\$ 4,592.00	\$ 6,888.00

TOTAL: **\$ 12,065.50**

Bow Tree 2 & 3 Basin - Rough Cost Estimate

A. Pond Upgrades	UNIT	SIZE	QTY.	UNIT PRICE	MAT'L COST	LABOR	LABOR COST	TOTAL
Dredging	LS	NA	1	\$ 20,000.00	\$ 20,000.00	\$ -	\$ -	\$ 20,000.00
Forebay Construction	EA	NA	0	\$ -	\$ -	\$ -	\$ -	\$ -
Brush Clearing (3)	LS	NA	1	\$ 1,500.00	\$ 1,500.00	\$ -	\$ -	\$ 1,500.00
SUBTOTAL					\$ 21,500.00		\$ -	\$ 21,500.00

B. Aeration	UNIT	SIZE	QTY.	UNIT PRICE	MAT'L COST	LABOR	LABOR COST	TOTAL
PentAir System	EA	NA	1.56	\$ 3,071.00	\$ 4,790.76	\$ -	\$ -	\$ 4,790.76
Consulting (4)	Day	NA	2	\$ 1,000.00	\$ 2,000.00	\$ -	\$ -	\$ 2,000.00
Install by Twp	hour	NA	16	\$ 40.00	\$ 640.00	\$ -	\$ -	\$ 640.00
Trenching (3)	B.C.Y.	NA	40	\$ -	\$ -	\$ 6.00	\$ 240.00	\$ 240.00
Mobilization Backhoe	LS	NA	1	\$ 1,000.00	\$ 1,000.00	\$ -	\$ -	\$ 1,000.00
Wire (Electricity)	LF	UF-B	480	\$ 0.40	\$ 192.00	\$ -	\$ -	\$ 192.00
Conduit (Electricity)	LF	3/4" D	480	\$ 0.30	\$ 144.00	\$ -	\$ -	\$ 144.00
SUBTOTAL					\$ 8,766.76		\$ 240.00	\$ 9,006.76

C. Plantings	UNIT	SIZE	QTY.	UNIT PRICE	MAT'L COST	LABOR	LABOR COST	TOTAL
Trees (1)(2)	EA	1" cal	50	\$ 70.00	\$ 3,500.00	\$ 140.00	\$ 7,000.00	\$ 10,500.00
Tree Tubes (2)	EA	60" ht	50	\$ 2.50	\$ 125.00	\$ 5.00	\$ 250.00	\$ 375.00
Shrubs (2)	EA	24-36" ht	50	\$ 36.00	\$ 1,800.00	\$ 70.00	\$ 3,500.00	\$ 5,300.00
Deer Mesh Fence (shrubs)(2)	EA	7' ht x 100LF	2	\$ 125.00	\$ 250.00	\$ 200.00	\$ 400.00	\$ 650.00
Perennials (2)	EA	SP2	1000	\$ 6.00	\$ 6,000.00	\$ 2.00	\$ 2,000.00	\$ 8,000.00
Meadow (5)	AC	NA	1	\$ 2,000.00	\$ 2,000.00	\$ -	\$ -	\$ 2,000.00
Aquatic Plants	EA	2" Plug	0	\$ 1.00	\$ -	\$ 2.00	\$ -	\$ -
Plug Planting Fence	LF	NA	0	\$ 1.50	\$ -	\$ 3.50	\$ -	\$ -
SUBTOTAL					\$ 13,675.00		\$ 13,150.00	\$ 26,825.00

D. BMPs	UNIT	SIZE	QTY.	UNIT PRICE	MAT'L COST	LABOR	LABOR COST	TOTAL
Rain Garden/Swale Bed Prep (6)	CY	Avg .75' depth, 3'W	28	\$ 13.00		\$ -	\$ 364.00	\$ 364.00
Inlet Filter Bags	EA	Varies	0	\$ 100.00	\$ -	\$ 200.00	\$ -	\$ -
SUBTOTAL					\$ -		\$ 364.00	\$ 364.00

E. Other Features	UNIT	SIZE	QTY.	UNIT PRICE	MAT'L COST	LABOR	LABOR COST	TOTAL
Benches (3)	EA	4'	2	\$ 500.00	\$ 1,000.00	\$ 1,000.00	\$ 2,000.00	\$ 3,000.00
Gazebo	EA	8'x 10'	0	\$ 4,000.00	\$ -	\$ 8,000.00	\$ -	\$ -
Split Rail Fence (3)	LF	4' height	72	\$ 6.00	\$ 432.00	\$ 12.00	\$ 864.00	\$ 1,296.00
SUBTOTAL					\$ 1,432.00		\$ 2,864.00	\$ 4,296.00

TOTAL: **\$ 61,991.76**

Marydell Pond - Rough Cost Estimate

A. Pond Upgrades	UNIT	SIZE	QTY.	UNIT PRICE	MAT'L COST	LABOR	LABOR COST	TOTAL
Dredging	LS	NA	1	\$ 100,000.00	\$ 100,000.00	\$ -	\$ -	\$ 100,000.00
Forebay Design	EA	NA	2	\$ 5,000.00	\$ 10,000.00	\$ -	\$ -	\$ 10,000.00
Forebay Construction	LS	NA	1	\$ 20,000.00	\$ 20,000.00	\$ -	\$ -	\$ 20,000.00
Structural Repairs (6)	LS	NA	1	\$ 5,000.00	\$ 5,000.00	\$ -	\$ -	\$ 5,000.00
SUBTOTAL					\$ 135,000.00		\$ -	\$ 135,000.00
B. Aeration	UNIT	SIZE	QTY.	UNIT PRICE	MAT'L COST	LABOR	LABOR COST	TOTAL
PentAir System	EA	NA	2.66	\$ 3,071.00	\$ 8,168.86	\$ -	\$ -	\$ 8,168.86
Consulting (4)	Day	NA	2	\$ 1,000.00	\$ 2,000.00	\$ -	\$ -	\$ 2,000.00
Install by Twp	hour	NA	16	\$ 40.00	\$ 640.00	\$ -	\$ -	\$ 640.00
Trenching (3)	B.C.Y.	NA	55	\$ -	\$ -	\$ 6.00	\$ 330.00	\$ 330.00
Mobilization Backhoe	LS	NA	1	\$ 1,000.00	\$ 1,000.00	\$ -	\$ -	\$ 1,000.00
Wire (Electricity)	LF	UF-B	660	\$ 0.40	\$ 264.00	\$ -	\$ -	\$ 264.00
Conduit (Electricity)	LF	3/4" D	660	\$ 0.30	\$ 198.00	\$ -	\$ -	\$ 198.00
SUBTOTAL					\$ 12,270.86		\$ 330.00	\$ 12,600.86
C. Plantings	UNIT	SIZE	QTY.	UNIT PRICE	MAT'L COST	LABOR	LABOR COST	TOTAL
Trees (1)(2)	EA	1" cal	150	\$ 70.00	\$ 10,500.00	\$ 140.00	\$ 21,000.00	\$ 31,500.00
Tree Tubes (2)	EA	60" ht	150	\$ 2.50	\$ 375.00	\$ 5.00	\$ 750.00	\$ 1,125.00
Shrubs (2)	EA	24-36" ht	110	\$ 36.00	\$ 3,960.00	\$ 70.00	\$ 7,700.00	\$ 11,660.00
Deer Mesh Fence (shrubs) (2)	EA	7' ht x 100LF	4	\$ 125.00	\$ 500.00	\$ 200.00	\$ 800.00	\$ 1,300.00
Perennials	EA	SP2	0	\$ 6.00	\$ -	\$ 2.00	\$ -	\$ -
Meadow	AC	NA	0	\$ 2,000.00	\$ -	\$ -	\$ -	\$ -
Aquatic Plants	EA	2" Plug	1100	\$ 1.00	\$ 1,100.00	\$ 2.00	\$ 2,200.00	\$ 3,300.00
Plug Planting Fence	LF	NA	550	\$ 1.50	\$ 825.00	\$ 3.50	\$ 1,925.00	\$ 2,750.00
SUBTOTAL					\$ 17,260.00		\$ 34,375.00	\$ 51,635.00
D. BMPs	UNIT	SIZE	QTY.	UNIT PRICE	MAT'L COST	LABOR	LABOR COST	TOTAL
Rain Garden/Swale Bed Prep	CY	Avg .75' depth, 3'W	0	\$ 13.00		\$ -	\$ -	\$ -
Inlet Filter Bags	EA	Varies	0	\$ 100.00	\$ -	\$ 200.00	\$ -	\$ -
SUBTOTAL					\$ -		\$ -	\$ -
E. Other Features	UNIT	SIZE	QTY.	UNIT PRICE	MAT'L COST	LABOR	LABOR COST	TOTAL
Benches (3)	EA	4'	5	\$ 500.00	\$ 2,500.00	\$ 1,000.00	\$ 5,000.00	\$ 7,500.00
Gazebo	EA	8'x 10'	0	\$ 4,000.00	\$ -	\$ 8,000.00	\$ -	\$ -
Split Rail Fence	LF	4' height	0	\$ 6.00	\$ -	\$ 12.00	\$ -	\$ -
SUBTOTAL					\$ 2,500.00		\$ 5,000.00	\$ 7,500.00

TOTAL: **\$ 206,735.86**

Pin Oak Pond - Rough Cost Estimate

<u>A. Pond Upgrades</u>	UNIT	SIZE	QTY.	UNIT PRICE	MAT'L COST	LABOR	LABOR COST	TOTAL
Dredging	LS	NA	0	\$ -	\$ -	\$ -	\$ -	\$ -
Forebay Design	EA	NA	1	\$ 5,000.00	\$ 5,000.00	\$ -	\$ -	\$ 5,000.00
Forebay Construction	EA	NA	1	\$ 5,000.00	\$ 5,000.00	\$ -	\$ -	\$ 5,000.00
Structural Repairs	LS	NA	1	\$ 8,500.00	\$ 8,500.00	\$ -	\$ -	\$ 8,500.00
SUBTOTAL					\$ 18,500.00		\$ -	\$ 18,500.00

<u>B. Aeration</u>	UNIT	SIZE	QTY.	UNIT PRICE	MAT'L COST	LABOR	LABOR COST	TOTAL
PentAir System	EA	NA	0	\$ 3,071.00	\$ -	\$ -	\$ -	\$ -
Consulting	Day	NA	0	\$ 1,000.00	\$ -	\$ -	\$ -	\$ -
Installation	hour	NA	0	\$ 40.00	\$ -	\$ -	\$ -	\$ -
Trenching (Electricity)	B.C.Y.	NA	0	\$ -	\$ -	\$ 6.00	\$ -	\$ -
Mobilization Backhoe	LS	NA	0	\$ 1,000.00	\$ -	\$ -	\$ -	\$ -
Wire (Electricity)	LF	UF-B	0	\$ 0.40	\$ -	\$ -	\$ -	\$ -
Conduit (Electricity)	LF	3/4" D	0	\$ 0.30	\$ -	\$ -	\$ -	\$ -
SUBTOTAL					\$ -		\$ -	\$ -

<u>C. Plantings</u>	UNIT	SIZE	QTY.	UNIT PRICE	MAT'L COST	LABOR	LABOR COST	TOTAL
Trees (1)(2)	EA	1" cal	15	\$ 70.00	\$ 1,050.00	\$ 140.00	\$ 2,100.00	\$ 3,150.00
Tree Tubes (2)	EA	60" ht	15	\$ 2.50	\$ 37.50	\$ 5.00	\$ 75.00	\$ 112.50
Shrubs (2)	EA	24-36" ht	15	\$ 36.00	\$ 540.00	\$ 70.00	\$ 1,050.00	\$ 1,590.00
Deer Mesh Fence (shrubs)	EA	7' ht x 100LF	1	\$ 125.00	\$ 125.00	\$ 200.00	\$ 200.00	\$ 325.00
Perennials	EA	SP2	0	\$ 6.00	\$ -	\$ 2.00	\$ -	\$ -
Meadow (5)	AC	NA	1.5	\$ 2,000.00	\$ 3,000.00	\$ -	\$ -	\$ 3,000.00
Aquatic Plants	EA	2" Plug	0	\$ 1.00	\$ -	\$ 2.00	\$ -	\$ -
Plug Planting Fence	LF	NA	0	\$ 1.50	\$ -	\$ 3.50	\$ -	\$ -
SUBTOTAL					\$ 4,752.50		\$ 3,425.00	\$ 8,177.50

<u>D. BMPs</u>	UNIT	SIZE	QTY.	UNIT PRICE	MAT'L COST	LABOR	LABOR COST	TOTAL
Rain Garden/Swale Bed Prep	CY	Avg .75' depth, 3'W	0	\$ 13.00		\$ -	\$ -	\$ -
Inlet Filter Bags	EA	Varies	8	\$ 100.00	\$ 800.00	\$ -	\$ -	\$ 800.00
Install by Twp	hour	NA	16	\$ 40.00	\$ 640.00	\$ -	\$ -	\$ 640.00
SUBTOTAL					\$ 1,440.00		\$ -	\$ 1,440.00

<u>E. Other Features</u>	UNIT	SIZE	QTY.	UNIT PRICE	MAT'L COST	LABOR	LABOR COST	TOTAL
Benches	EA	4'	3	\$ 500.00	\$ 1,500.00	\$ 1,000.00	\$ 3,000.00	\$ 4,500.00
Gazebo	EA	8'x 10'	1	\$ 4,000.00	\$ 4,000.00	\$ 8,000.00	\$ 8,000.00	\$ 12,000.00
Split Rail Fence	LF	4' height	0	\$ 6.00	\$ -	\$ 12.00	\$ -	\$ -
SUBTOTAL					\$ 5,500.00		\$ 11,000.00	\$ 16,500.00

TOTAL: **\$ 44,617.50**

appendix 2

supporting documents – *provided in digital format*

- 2A: PSU Materials – Water Quality
- 2B: Chester County Water Resource Authority maps
- 2C: East Goshen Township Stormwater Management Quad Maps
- 2D: DEP – Stormwater Inlet Bag Detail
- 2E: TreeVitalize Watershed Grant Information
- 2F: Forebay Detail
- 2G: Philadelphia Water Department Residential Rain Garden Information
- 2H: Rain Barrel Assembly Instructions
- 2I: Downspout Planter Details
- 2J: Wetland Planting Guide
- 2K: Pentair Aeration Products
- 2L: Meadows in Southeastern Pennsylvania
- 2M: From Mowing to Meadows article in County Lines Magazine
- 2N: Aquatic Plant List
- 2O: Buffer Plant List



Natural Lands' Hildacy Preserve
Media, PA
55 acres



Hildacy Preserve
1031 Palmers Mill Road
Media, PA 19063
610-353-5587
natlands.org

Memo

To: Board of Supervisors
From: Jon Altshul
Re: Consider RFP and process for branding plan
Date: February 14, 2018

As you know, the Paoli Pike Corridor Master Plan identified developing a “branding plan” as a Tier I priority for the Township. A new Township branding design could be used for street signs along arterial roads (e.g. “Welcome to East Goshen”), proposed wayfinding signs, the website, letterhead, the newsletter and email signature lines; in short, any media with the Township’s imprimatur. To that end, the Township budgeted money in the 2018 general fund budget for this purpose.

We would propose the following process for designing and ultimately selecting a new branding design:

1) The Township issues an RFP to qualified designers/design firms requesting the following information (late February):

- Examples of corporate, non-profit or municipal branding designs.
- Biographies of designers assigned to the East Goshen project.
- A narrative response to the question “What should people think of when they think of East Goshen Township?”
- A proposed timeline for project completion.
- A best and final cost proposal.

2) The BOS selects the winning firm based on recommendations and input from Township Staff and the Futurist Committee (April)

3) With input from Township staff and the Futurist Committee, the winning firm develops 3-5 branding designs for the Township (late Spring/early Summer).

4) Upon receipt of the 3-5 designs, Township staff coordinates a fun, month-long resident survey to select the most popular design. Addresses would be verified to ensure that only Township resident votes are counted.

5) At a Township-sponsored event in late summer/early fall (e.g. a Farmer’s Market), the winning design is formally announced, based on the survey results, with great fanfare and excitement.

I have attached a Draft RFP for the branding plan for the Board’s consideration. I will also be meeting concurrently with the Futurist Committee about this RFP and the proposed process on Tuesday evening.

East Goshen Township
Request for Proposals
Township Rebranding Plan

Background: East Goshen Township, Chester County, Pennsylvania (population 18, 026) is accepting proposals from qualified designers to rebrand the Township. This rebranding effort would involve a redesign across all Township-owned media, including, but not limited to, the Township's various road signs at the Township line along arterial roads ("Welcome to East Goshen"), the website, the newsletter, official letterhead, email signature lines and future wayfinding signs along the Paoli Pike Corridor.

The need to rebrand the Township was identified in the Paoli Pike Corridor Master Plan, adopted in December 2017. A copy of the plan can be found on the Township's website (www.eastgoshen.org), under Boards>Paoli Pike Corridor Master Plan Committee.

East Goshen takes great pride in being a premier place to live, work and play in Chester County. East Goshen Township has a number of natural features and historic structures that the general public associates with East Goshen, as listed below:

- 1) The 55-acre active Township Park, featuring a brand new "destination playground" (to be completed in early spring 2018), tennis and pickleball courts, a butterfly garden, an amphitheater, walking paths, and four ball fields for organized sports. The Park hosts a Farmers Market every Thursday during warmer months and various large-scale community events throughout the year, including Community Day (fireworks, food and family-friendly activities and games in early summer), the Egg Hunt in early spring, and the Pumpkin Fest in the fall.
- 2) A 100-acre passive park (Applebrook Park) directly across Paoli Pike from the Township Park.
- 3) The historic Goshenville district, which features the Blacksmith Shop built in the 1740s; the Plank House, a historic home from the early 1800s; and two Quaker meeting houses from the mid-1800s. The Blacksmith Shop and Plank House are owned by the Township and are open to the public at various times throughout the year. The Blacksmith Shop is featured on the Township's current logo. In addition, various other historic structures, recalling the Township's early history as a Quaker farming community, dot the landscape.
- 4) The Paoli Pike Corridor, which is expected to be transformed over the next decade, with construction of a 2.7 mile pedestrian/bike path (engineering is on-going and construction is expected to begin sometime next year); zoning changes that will hopefully transform the area between North Chester Road and Boot Road into a traditional Town Center; and wayfinding signs and traffic calming features that will encourage residents to stop in East Goshen rather than simply passing through on their way to West Chester or Paoli. More information about the Paoli Pike Trail can be found on the website under Boards>Trail Committee.

Detail about the selection process and next steps:

After the deadline for this RFP, the Township's Board of Supervisors will select a winning designer, with input from Township Staff and the Township's Futurist Committee. The winning designer will then be asked to submit between three and five design proposals for the Township. Township Staff and members of the Futurist Committee will be available to assist the winning firm in person or by phone as needed during this process.

Upon receipt of the three to five design proposals, Township Staff will conduct an on-line survey of Township residents to gauge which design proposal is most popular among Township residents, in order to get buy-in from the community about how they'd like to see their Township branded. We expect that resident voting will remain open for approximately one month, with results announced in late summer at a Township-sponsored event, such as a weekly Farmer's Market.

Regardless of which design is ultimately selected, all the proposed designs from the winning designer shall become the property of East Goshen Township, and, at its sole discretion, the Township reserves the right to use any submitted design in the future.

The winning design firm shall also make itself available, as needed, to assist third parties, such as sign companies, website designers, printers, etc in implementing the design throughout all Township-owned media.

Required Information:

To be considered, your proposal must address the following required items:

- 1) At least 5 (and preferably more) examples of corporate, non-profit and/or municipal branding designs that you or your firm has developed.
- 2) Brief biographies of all designers who would be assigned to this project and either a full or partial list of corporate, non-profit or municipal branding designs that each has worked on.
- 3) A narrative response to the question: "What should people think when they think of East Goshen Township?"
- 4) A proposed timeline for completion of the project.
- 5) A best and final cost proposal.

Brevity of responses is encouraged.

Additional information: Please contact Jon Altshul at jaltshul@eastgoshen.org or 610-692-7171 for additional information.

Deadline: An electronic copy of the proposal can be emailed to Jon Altshul at jaltshul@eastgoshen.org. and must be received by not later than Friday, April 13, 2018 at 5pm.

Additional disclosures: If a contract is entered into as a result of this RFP, the contents of the selected vendor's proposal will become contractual obligations of the firm. Negotiations may be undertaken with one or more vendors whose proposals as to price and other factors show them to be qualified,

responsible, and capable of performing the work. This request for proposals does not, under any circumstances, commit the Township to any cost incurred by any vendor prior to the execution of the agreement. Each prospective vendor is solely responsible for all costs associated with the preparation of a response to this RFP. The Township reserves the right to reject any and all proposals received as a result of this request and to negotiate separately with competing vendors.

F:\Data\Shared Data\Paoli Pike Corridor Master Plan\RFP for Rebranding.docx

Memorandum

East Goshen Township
1580 Paoli Pike
West Chester, PA 19380
Voice: 610-692-7171
Fax: 610-692-8950
E-mail: mgordon@eastgosheh.org

Date: 2/13/2018
To: Board of Supervisors
From: Mark Gordon, Township Zoning Officer 
Re: Operation and Maintenance Agreements

Dear Board Members:

I have the following Storm water management and Grinder Pump Operation and Maintenance Agreements for the Board's approval.

SWM Operation Agreement:
1420 E. Strasburg Rd. (Lots 2 and 3)

Grinder Pump Agreement:
1420 E. Strasburg Rd. (Lots 2 and 3)


Draft Motion:

I move that we authorize the Chairman to execute the storm water management and grinder pump operation and maintenance agreements for 1420 E. Strasburg Rd. (Lots 2 and 3).

Memorandum

East Goshen Township
1580 Paoli Pike
West Chester, PA 19380

Voice: 610-692-7171
Fax: 610-692-8950
E-mail: mgordon@eastgoshen.org

Date: 2/13/2018
To: Board of Supervisors
From: Mark Gordon, Township Zoning Officer 
Re: Apartment for the Care of a relative (In-Law Suite Agreement)

Dear Board Members:

The owners of 1040 King Rd. have decided to convert the addition they are currently building on their property into an Apartment for the care of a relative. The Owners Mr. and Mrs. Roberts are converting the living space into an In-Law Suite for Mrs. Roberts' parents who are elderly and need care.

Draft Motion:

I move that we authorize the Chairman to execute the Apartment for the care of a relative agreement (Section 240-32.C Agreement) for 1040 King Rd.

Memorandum

East Goshen Township
1580 Paoli Pike
West Chester, PA 19380

Voice: 610-692-7171
Fax: 610-692-8950
E-mail: mgordon@eastgoshen.org

Date: 2/13/2018
To: Board of Supervisors
From: Mark Gordon, Township Zoning Officer *mdg*
Re: New Residential Development Regulations

Dear Board Members,

The Township Planning Commission and Staff is seeking the Board of Supervisors' consideration and input on the development of a Zoning Ordinance (ZO) amendment that would apply to the larger undeveloped or under developed residential properties in the Township.

The current Single Family Openspace Development (SFOD) regulation (§240-36) provides an openspace preservation development option for properties zoned R-2 and R-4, for clustering of single family homes however it does not consider semi-detached (Carriage Homes or Twins) or a multi-family (townhouses) options. The SFOD requires a tract size of at least 8 acres, 55% of which must be set aside for openspace.

The primary motivation of this endeavor is to consider additional residential development options for the larger parcels in the Township which have significant natural and cultural resources. A Carriage Home or Townhouse Openspace development could facilitate the preservation of Historic Resources and the natural areas that exist on larger residential properties within the Township.

There are 26 properties greater than 8 acres in East Goshen. Subtracting those within the BP and I districts and those which are deed restricted from further development leaves us with 16 properties with a lot size greater than 8 acres.

There could be other opportunities if lots were combined but this is a starting point. The lot sizes range from 8.0 acres to 87.28 acres. I used 8 acres as a starting point because that's the lot size requirement for SFOD's today.

The Comp Plan, Openspace Plan and the Paoli Pike Corridor Master Plan support the concept of having a diverse range of housing options that preserve openspace and historic resources as well as promote pedestrian and bicycle connections.

The following sections of the Township Comprehensive Plan and the Paoli Pike Corridor Master support this concept.

The Township Comprehensive Plan:

Objective 6.7 – Continue to provide for a variety of housing options within the Township to accommodate a diverse population.

Recommendation 6.7.1 – Evaluate the Zoning Ordinance in Light of housing choices for changing demographics and income diversity.

Objective 6.8 – Preserve the Character of existing residential housing neighborhoods.

Recommendation 6.8.1 – Consider adopting provisions in the Zoning and Subdivision & Land Development Ordinance that encourage innovative design for new residential development while respecting the character of surrounding neighborhoods.

Paoli Pike Corridor Master Plan:

The Land Use Overview of the Paoli Pike Corridor Master Plan identifies a demand for additional housing units in the Township. Based on the population projections and the build out analysis, more diverse housing options are needed.

Staff Recommendation:

Staff is of the opinion that there is support in both the PPCMP and the Comp Plan to warrant moving forward with a planning effort to develop a draft amendment to the existing SFOD ordinance or a to develop a new residential openspace development that will meet these identified goals and objectives.

Staff and the Planning Commission believe that the services of a planning consultant are necessary to properly develop this draft ordinance. Thomas Comitta Associates is intimately familiar with the planning efforts undertaken by the Township over the last few years and would be a good fit to assist the township in this effort.

Planning Commission Recommendation:

The Planning Commission has forwarded their recommendation to the Board; see attached.

Recommended Draft Motion:

Mr. Chairman, I move that we authorize the Staff to solicit a proposal from Thomas Comitta Associates Inc., to work with the Planning Commission on the development of an openspace development option that includes either semidetached dwellings and/or townhouse dwellings into the Zoning Ordinance.

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

February 13, 2018

East Goshen Township
Board of Supervisors
1580 Paoli Pike
West Chester, Pa. 19380

Re: New Openspace Development Ordinance

Dear Board Members:

At their meeting on February 7, 2018 the Planning Commission voted unanimously in favor of the following motion:

Mr. Chairman, I move that the Planning Commission recommend that the Board of Supervisors authorize the Staff and the Planning Commission to begin the process of drafting a zoning ordinance to permit semidetached dwellings and/or townhouse dwellings as an option for a residential openspace development option.

Sincerely,



Mark A. Gordon
Township Zoning Officer

Memo

East Goshen Township

Date: February 15 2018
To: Board of Supervisors
From: Rick Smith, Township Manager
Re: Review of 2015 Comp Plan Implementation Matrix

One of the goals the Board set for itself for 2018 is to review the Implementation Matrix in the 2015 update to the Comp Plan.

Attached is a copy of the matrix with comments on what has transpired with respect to some of the action items.

The matrix listed 8 action items that had a high priority (1).

It would seem that the Board should review these 8 actions items and decide if all of them still warrant their current high priority ranking, and if the completion time frame, responsibility, etc. are still appropriate.

Objective		Priority	Completion Time Frame (1)	Responsibility (2)		Method of Implementation (3)	Potential Funding Sources (2)	
				Primary	Other			
5. Housing Plan								
5.1.	Encouraging the maintenance and improvement of the existing housing stock	*	on-going	PS		Development, Plan Review	PS	
5.2.	Continuing to provide opportunities for a variety of housing types.	*	on-going	BOS	PC	ZO	PS	
5.3.	Encouraging infill opportunities by providing for additional dwelling units, without adversely impacting the character of existing neighborhoods.	*	on-going	PC	BOS, FC	ZO, SLDO, Plan Review	PS	
5.4.	Redeveloping selected properties along West Chester Pike in order to provide for new housing opportunities.	3	2 to 10 years	PS		Development, Plan Review	PS	Presented LERTA to WCASD in 2016 2017 - WCASD is not interested in LERTA
5.5.	Encouraging mixed uses and mixed housing types where appropriate.	*	on-going	BOS	PC	ZO	PS	
5.6.	Encouraging the Redevelopment of vacant and/or underperforming lots to create new housing opportunities.	3	5 to 10 years	PC	PS	Development, Plan Review	PS	Presented LERTA to WCASD in 2016 2017 – WCASD is not interested in LERTA
5.7.	Fostering opportunities for aging in place.	2	2 to 10 years	BOS	PC	ZO	PS, CCC	
6. Land Use Plan								
6.1.	Transforming the Town Center into a viable, walkable, visitable Place.	1	1 to 10 years	PS	BOS, PC	Plan Review, Development	PS, PT	Obtained grant or Paoli Pike Master Corridor Plan in 2016 Adopted Paoli Pike Master Corridor Plan 12/19/17
6.2.	Transforming the Paoli Pike Corridor into a walkable, connected, artery.	1	1 to 10 years	BOS	PC, PT, CCC	Special Study	PT, DVRPC	Obtained grants for Paoli Pike Trail Segments C to G in 2016 Obtained grants for all Segments except B.
6.3.	Transforming the West Chester Pike Corridor into a more functional and attractive artery.	2	2 to 20 years	PS	BOS, PC, PT	Special Study	PT, PS, DVRPC	
6.4.	Continuing to receive guidance from the Authorities, Boards and Commissions (ABC's).	*	on-going	BOS	PC, ABC's	Meetings, Workshops	GF	

6.5.	Continuing effective governance by the East Goshen Township Board of Supervisors.	*	on-going	BOS		Meetings, Hearings	GF	
6.6.	Continuing to accommodate a diverse mix of residential, commercial, institutional, light industrial, and recreational uses.	*	on-going	BOS	PC, FC	ZO, Plan Review	PS	

Objective		Priority	Completion Time Frame (1)	Responsibility (2)		Method of Implementation (3)	Potential Funding Sources (2)	
				Primary	Other			
7. Economic Development Strategy								
7.1.	Promoting the enhancement of business opportunities in the Town Center.	*	on-going	BOS	PC, CC, FC	ZO, SLDO, Plan Review	PS, GF	Adopted Paoli Pike Master Plan 12/19/17
7.2.	Promoting the enhancement of business opportunities along the West Chester Pike Corridor.	*	on-going	BOS	PC, CC, FC	ZO, SLDO, Plan Review	PS, GF	Presented LERTA to WCASD in 2016 2017 WCASD is not interested in LERTA
7.3.	Allowing for new uses and smaller incubator businesses in the corporate parks and the industrial park.	1	1 to 10 years	BOS	PC, CC, FC	ZO, Plan Review, Development	PS	
7.4.	Continuing the use of East Goshen Park for the Farmers Market and other context-sensitive enterprises and activities.	*	on-going	BOS	PR	Programs, Development	GF	
7.5.	Utilizing the Commerce Commission with the business community, in order to identify and address needs pertaining to business growth and expansion.	*	on-going	CC	BOS	Workshops, Newsletter, Website	PS	Commerce Commission was disbanded on 1/4/2016
7.6.	Providing opportunities for shared parking opportunities for smaller commercial establishments.	2	2 years	BOC	PC	ZO, SLDO	PS	

7.7.	Continuing No-Impact Home-Based Businesses, Home Occupations, and Home-Related Businesses.	*	on-going	BOS	PC, PS	ZO, SLDO	PS	
8. Transportation & Circulation Systems Plan								
8.1.	Continuing to provide safe, well-maintained roads throughout the Township.	*	on-going	BOS	PT	Maintenance	GF, PT	Re decked Bridge on East Boot Road in 2016
8.2.	Identifying and implementing regional highway improvement projects that enhance mobility, safety, and reduce congestion.	1	1 to 10 years	BOS	PT, DVRPC	Special Study	PT, DVRPC	Adaptive Signal Project to West Chester Pike was let in February 2018
8.3.	Minimizing speeding vehicular traffic on the local roadways and minimizing cut-through vehicular traffic within neighborhoods.	*	on-going	BOS	PT	Maintenance, Development	PT, PS	January 2018 – Installed temporary speed humps in Wyllpen Farms during Dutton Mill Road Bridge closure
8.4.	Implementing vehicular traffic flow and traffic calming improvements for select roads and intersections.	2	2 to 10 years	BOS	PT	Plan Review, Maintenance	PT, GF	
8.5.	Reducing vehicular traffic by supporting public transportation opportunities and travel demand management techniques.	*	on-going	BOS	DVRPC	Special Study	DVRPC, PT	

Objective		Priority	Completion Time Frame (1)	Responsibility (2)		Method of Implementation (3)	Potential Funding Sources	
				Primary	Other			
8. Transportation & Circulation Systems Plan (continued)								
8.6.	Increasing pedestrian circulation along Paoli Pike, especially in the form of a "Paoli Pike Promenade" with Sidewalks and Crosswalks, as well as increasing pedestrian circulation and pedestrian safety along Greenway, with Trails, Walkways, and Crosswalks.	1	1 to 10 years	BOS	PC, PR	Special Study, ZO, SLDO	GF, CCC, DVRPC, DCNR	Obtained grants for Paoli Pike Trail Segments C to G in 2016 Obtained grants for all Segments except B
8.7.	Implementing the East Goshen Township Act 209 Transportation Plan	*	on-going	BOS	PC	Plan Review	PS	
9. Community Facilities and Services Plan								
9.1.	Maintaining and expanding the Open Space, Recreation, and Trails Network.	2	2 to 20 years	BOS	PC, PR, CB	Special Study	GF, CCC, DCNR	
9.2.	Developing the Paoli Pike Trail to create the linkage between West Chester and Malvern, through East Goshen, from West Goshen to Willistown.	1	1 to 10 years	BOS	PC, PR, PT, CCC	Special Study	GF, PT, CCC, DCNR	Obtained grants for Paoli Pike Trail Segments C to G in 2016 Obtained grants for all Segments except B
9.3.	Maintaining and upgrading East Goshen Park.	*	on-going	BOS	PR	Maintenance, Rec Fee in Lieu	GF, DCNR	Obtained grants for Playground Renovations in 2016 Started construction in Fall of 2017
9.4.	Continuing to provide high quality Recreation Services.	*	on-going	BOS	PR	Programs	GF, DCNR	
9.5.	Continuing to provide high quality Police, Fire and EMS services.	*	on-going	BOS		Maintenance	GF, DCED	1/2/18 - Updated Emergency Services resolution to address change in Advance Life Support provider.
9.6.	Continuing the provisions of effective administrative, public works, and related services.	*	on-going	BOS	MA	Maintenance	GF	
9.7.	Continuing to support important and viable Community Facilities.	*	on-going	BOS	PR	Maintenance	GF	

10. Utilities Plan								
10.1.	Continuing to provide effective sewage disposal and wastewater treatment with oversight of the Municipal Authority.	*	on-going	BOS	MA	Development	PS	Update West Goshen Sewer Agreement
10.2.	Continuing to provide effective solid waste disposal, and recycling services.	*	on-going	BOS	MA	Maintenance	GF	Rebid refuse and recycling contract in 2016
10.3.	Maintaining the role of the East Goshen Township Municipal Authority for evaluating sewer and unsewered areas.	*	on-going	BOS	MA	Special Study, Plan Review	PS	

Objective		Priority	Completion Time Frame (1)	Responsibility (2)		Method of Implementation (3)	Potential Funding Sources (2)	
				Primary	Other			
10. Utilities Plan (continued)								
10.4.	Cooperating with Aqua on Public Water Supply	*	on-going	PS		Development	PS	
10.5.	Maintaining effective Stormwater Management	*	on-going	BOS	DEP	Plan Review	PS	
10.6.	Regulating pipelines to protect land uses and the environment.	*	on-going	BOS	DEP	Plan Review	CCC, PS	
11. Natural Resource Protection Plan								
11.1.	Protecting the Riparian Areas along Ridley and Chester Creeks and their tributaries.	*	on-going	BOS	PC, DEP, DCNR	CB, DCNR, DEP	PS, DCNR, DEP	Milltown Dam and Hershey Mill Dam Park Projects are in progress
11.2.	Considering opportunities for a Greenway Network along Chester and Ridley Creeks.	*	on-going	BOS	PC, PR, DCNR	Special Study, Plan Review	DCNR, GF	
11.3.	Preserving and enhancing Street Trees.	*	on-going	BOS	PC, CB	Plan Review	PS	
11.4.	Continuing the advocacy role of the Conservancy Board.	*	on-going	CB	BOS	Website, Plan Review	GF	

11.5.	Continuing riparian buffer plantings throughout the Township.	1	1 to 20 years	CB	DCNR	Planting	GF, DCNR	CB planted trees on East Boot Road in 2016 CB planted trees in Marydell in 2017
11.6.	Continuing to control invasive species.	*	on-going	CB	DCNR	DEP, Plan Review	PS	
11.7.	Improving woodland protection standards.	2	2 to 5 years	BOS	PC, CB	ZO, SLDO	GF, CCC	
11.8.	Reviewing and updating tree replacement standards as needed.	2	2 to 5 years	BOS	PC, CB	ZO, SLDO, Plan Review	GF, CCC	
11.9.	Reviewing and updating criteria for non-buildable areas.	2	2 to 5 years	BOS	PC, CB	ZO, SLDO, Plan Review	GF, CCC	
11.10.	Improving and enhancing Green Infrastructure	*	on-going	BOS	PC, PS	ZO, SLDO, Plan Review	GF, DCNR	
12. Energy Conservation Strategy								
12.1.	Creating more compact, mixed-use, walkable places.	*	on-going	PS	BOS, PC, FC	Plan Review, Development	PS, DCED	
12.2.	Advocating energy conservation for residents, businesses, and institutions.	*	on-going	BOS	PC, CB, FC	Website, Newsletter	GF, DEP	
12.3.	Advocating green building and site development practices.	*	on-going	BOS	PC, CB, FC	ZO, SLDO, Special Study	GF, DEP, DVRPC	
12.4.	Promoting and enhancing the protection of Woodlands.	*	on-going	BOS	PC, CB, DCNR	ZO, SLDO, Plan Review	PS, DCNR	


Objective		Priority	Completion Time Frame (1)	Responsibility (2)		Method of Implementation (3)	Potential Funding Sources	
				Primary	Other			
12. Energy Conservation Strategy (continued)								
12.5.	Designating areas for compact car parking, in order to reduce the size of off-street parking lots.	2	2 to 5 years	BOS	PC	ZO, SLDO, Plan Review	PS	
12.6.	Encouraging park and ride facilities, shared parking, and increased public transportation.	*	on-going	BOS	PT, CCC, DVRPC	BOS, DVRPC, CCC, PT	PT, DVRPC, BOS	

12.7.	Providing conservation tips on the Township website.	*	on-going	BOS	CB	Website	GF	
13. Historic Resources Protection Plan								
13.1.	Continuing the East Goshen Historical Commission (EGHC) programs at the Blacksmith Shop and Plank House, and refinement of the Township Historic Property Inventory.	*	on-going	HC	BOS	HC Programs, Special Study	GF	
13.2.	Continuing to have the EGHC comment on applications for subdivision and land development involving and adjacent to Historic properties.	*	on-going	HC	PC	SLDO	PS	
13.3.	Continuing to have the EGHC provide educational information for the Township website and Newsletter.	*	on-going	HC		Website, Newsletter	GF	
13.4.	Utilizing the characteristics of Goshenville and Rocky Hill to guide the character of nearby development.	3	5 years	HC	PC, BOS	ZO, SLDO	CCC, GF	
13.5.	Reviewing Historic Preservation requirements.	1	1 to 5 years	HC	PC	ZO, SLDO	CCC, GF	
13.6.	Considering simplified Historic Preservation Standards.	2	2 to 5 years	HC	PC	ZO, SLDO	CCC, GF	

Memorandum

East Goshen Township
1580 Paoli Pike
West Chester, PA 19380

Voice: 610-692-7171
Fax: 610-692-8950
E-mail: mgordon@eastgoshen.org

Date: 2/13/2018
To: Planning Commission
From: Mark Gordon, Township Zoning Officer 
Re: Paoli Pike Corridor Zoning Overlay

Dear Board Members,

As you know the Paoli Pike Corridor Master Plan identified a number of tasks to be accomplished in order to Enhance Goshenville and create a town center feel. The Planning Commission has discussed the land use issues identified in the plan and would like to begin the planning effort to create a Zoning Overlay for the Paoli Pike Corridor as identified in the plan. This will effectively convert the vision of the PPCMP into a text amendment to the Zoning Ordinance.

This endeavor is highlighted in the following Township Planning Initiatives:

The Township Comprehensive Plan:

Objective 7.1 – Promote the enhancement of Business opportunities in the Town Center.

Recommendation 7.1.1 – Consider infill development and redevelopment options

Paoli Pike Corridor Master Plan:

The Land Use Overview of the Paoli Pike Corridor Master Plan identifies initiatives needed to enhance the Paoli Pike Corridor and Goshenville (Town Center), they are:

- Zoning Ordinance Text Amendment
- Zoning Map Amendment
- SALDO Amendments

Ref. 5-12 of the PPCMP

Staff Recommendation:

Staff is of the opinion that there is support in both the PPCMP and the Comp Plan to warrant moving forward with a planning effort to develop a Zoning Overlay for the Paoli Pike corridor. We envision the project to include the following:

- Zoning Ordinance Text Amendment
- Zoning Map Amendment
- SALDO Amendments

Recommended Draft Motion:

Mr. Chairman, I move that we authorize township Staff to solicit a proposal from Thomas Comitta Associates Inc. to work with the Planning Commission on the development of the Paoli Pike Corridor Master Plan policy recommendation to create a Goshenville Overlay District.

**EAST GOSHEN TOWNSHIP
BOARD OF SUPERVISORS MEETING
1580 PAOLI PIKE
TUESDAY, FEBRUARY 6, 2018
DRAFT MINUTES**

Present: Chairman Marty Shane; Vice Chairman Carmen Battavio; Supervisors David Shuey, Janet Emanuel and Mike Lynch; Township Manager Rick Smith; Jon Altshul, Finance Director; Park & Recreation Director Jason Lang and Conservancy Board Chairman Erich Meyer.

Call to Order & Pledge of Allegiance

Marty called the meeting to order at 7:00 p.m. and led the pledge of allegiance.

Moment of Silence

Carmen called for a moment of silence to honor our troops and the victims of recent school shootings.

Recording

None.

Chairman's Report

Marty made the following announcements:

- The Board met in Executive Session prior to tonight's meeting to discuss a legal matter and on January 30, 2018, to discuss a personnel matter.
- Enbridge will be doing routine maintenance work on the Texas Eastern Pipeline Right-of-Way
- The public comment period for the Adelphia Gateway Project closes on February 13, 2018, at 5pm.

Marty also acknowledged Ginnie Newlin's resignation as the Township's Poet Laureate and presented Ms. Newlin with a Certificate of Appreciation for her many contributions to the Township over the years.

Fire Marshall Report

Carmen reported on a garage fire in the Lochwood-Chase development and praised a fast thinking mother, several neighbors and the Goshen, East Whiteland and Malvern fire companies for successfully containing it.

Consider Special Exception and Variance Request for the Malvern Institute

Marty stated that because he was not at the first meeting on this matter, he deferred to Carmen to chair this portion of the meeting. Carmen asked for additional public comments on topics that were not discussed at the January 23rd meeting and stated that the public comment period would end after 30 minutes. Kristin provided the Board with an overview of what their options for tonight's meeting were.

1 Specifically, she noted that if the Board moved to oppose the Malvern Institute's
2 application, it would forfeit the right to recommend that the Zoning Hearing Board
3 impose any conditions on the applicant, in the event that the Zoning Hearing Board
4 approves the application.

5
6 Debbie Marovick, 8 Brookmont Drive, stated that she has documentation on 74
7 incidents that have occurred at the Malvern Institute since 2015. These incidents
8 include disorderly conduct, alcohol use, car vandalism, drug paraphernalia and
9 transfer of possible contraband from cars entering the parking lot to patients. She
10 has spoken with both the police and Malvern Institute management about these
11 issues. Malvern Institute management repeatedly tells her that they're trying to
12 address these issues, but that that no improvements are ever made.

13
14 Paige Fenimore, 3 Treemont Drive, raised concerns that the application violates the
15 Township's parking ordinance. Ms. Camp noted that the Township's parking
16 ordinance would not apply to a non-conforming use.

17
18 Terri Relick, 12 Treemont Drive, stated that she is disappointed by the Township
19 and that, in her opinion, the application violates the allowable square footage
20 requirement in the zoning ordinance. She added that she disagrees with the
21 common law doctrine of natural expansion; that she doesn't like the conditions that
22 the Planning Commission recommended; and that she doubts that those conditions
23 can be enforced.

24
25 Scott Relick, 12 Treemont Drive, stated that he believes the Township has
26 previously allowed the Malvern Institute to over-expand in violation of its zoning
27 ordinance. He added that by over-building, the Institute has been able to add new
28 beds, which has caused overcrowding and, in turn, has necessitated more expansion.
29 Ms. Camp noted that the Township doesn't regulate the number of beds in a
30 treatment center and that the number of beds is regulated at the state level.

31
32 Ms. Fenimore stated that in addition to the footprint expansion, the Institute now
33 uses both its basement and its attic for its operations. She stated that the Township
34 does not know if permits were ever pulled to finish basement or attic space.

35
36 Joanne Murphy, 20 Brookmont Drive, asked how this expansion would benefit the
37 Township. Ms. Camp explained the doctrine of natural expansion, as well as the
38 constitutional principles of property law that the Board needs to wrestle with in
39 making its decision.

40
41 Marty suggested that concerned residents should invite experts to testify on their
42 behalf at the Zoning Hearing Board hearing about why the application should be
43 denied.

44
45 Deb Lyon, 5 Brookmont Drive, raised concerns that the proposed 8-foot fence would
46 be an eyesore that may not help to contain noise.

1
2 Lisa O'Neil, 10 Brookmont Drive, voiced her objection to the proposed smoking
3 pavilion.

4
5 Tom McElwee, 6 Line Road (Willistown Twp), also raised concerns about the impact
6 of the proposed 8-foot wall on property values.

7
8 Mark Thompson, the attorney representing the Relicks and the O'Neils, stated that
9 he disagreed with Ms. Camp over the beds and parking issues.

10
11 Brian Nagle, MacElree Harvey representing the applicant, stated that it was his
12 understanding based on previous meetings with neighbors that conditions at the
13 Malvern Institute had improved over the past several years. Marty asked Mr. Nagle
14 how long the present owners have owned the property. Mr. Nagle was not certain
15 when the transaction occurred.

16
17 Mike asked Mr. Nagle if his client would be comfortable postponing the Zoning
18 Hearing Board hearing 2-4 weeks so that the Board of Supervisors had more time to
19 deliberate.

20
21 Ms. Relick raised more concerns about the proposed fence; specifically that it will
22 hurt property values and won't prevent drugs from passing through or over it.

23
24 Janet suggested that the specific details of the fence be hammered out during the
25 land development stage. Carmen expressed concern about potentially removing the
26 fence as a condition, because if the Zoning Hearing Board approves the application
27 without the fence condition, adding a fence can't become a new demand at a later
28 time if the neighborhood changes its mind.

29
30 Janet observed that ultimately the final decision on the application will be made by
31 the Zoning Hearing Board. She made the following motion:

32
33 Mr. Chairman, I move that the Board of Supervisors take "no position" on the special exception
34 and variances requested by the Malvern Institute or the legal argument advanced by the
35 Applicant with respect to the right to expand the legal non-conforming treatment center use
36 based on the doctrine of natural expansion. Should the ZHB determine that the Applicant has
37 met its legal burden and is entitled to expand the non-conforming use either by the grant of
38 variances, special exception or based on the doctrine of natural expansion of a nonconforming
39 use, the Board of Supervisors recommends that the ZHB impose the following conditions on the
40 Applicant in order to mitigate the impacts that the expansion of the non-conforming use will
41 have on the surrounding community. The Board of Supervisors authorizes the Township
42 Solicitor and the Township Engineer to enter an appearance on behalf of the Board of
43 Supervisors at the zoning hearing and advocate that the following conditions be imposed in any
44 decision approving the expansion of the treatment center.

1. The Applicant shall restrict the drug and alcohol treatment programming at the King Road facility (the "Facility") to in-patient treatment only.
2. The Applicant shall limit the number of patients receiving treatment at the Facility to a maximum of 80 patients on-site at any one time. The Applicant shall forward a letter to the Commonwealth of PA Department of Drug and Alcohol Programing or successor licensing agency agreeing to permanently cap the licensing of the facility to 80 in-patients in perpetuity.
3. The Applicant shall add cameras at the front entrance and at various locations along the main driveway entrance to supplement its existing video security system. The video cameras shall be set up and monitored to alert staff and security personnel of incoming and outgoing pedestrians at the front driveway entrance. The eastern parking lot gate shall be locked by 11 p.m. to ensure that any vehicle entering the site must approach the main building. The Applicant shall have no less than one security guard on site during the nighttime shift when the clinical staff is reduced in number. In addition, the Applicant shall implement and maintain the use of security cameras which are continually monitored by properly trained staff including a certified clinical supervisor during the overnight shift.
4. The Applicant may build only a one story addition as identified in the site plan dated 02/24/2017, last revised 12/11/2017 (the "Plan") to facilitate the expansion of the use. The new addition shall be set back a minimum of 45 feet from any property line.
5. The Applicant shall submit a land development application that includes the proposed improvements to the Property which are approved in the Zoning Hearing Board Decision and which are consistent with the testimony and exhibits presented at the zoning hearing and with the conditions of approval within 180 days of final unappealable, and unappealed zoning approval.
6. King Road is assumed to run in and east-west direction for the purpose of this condition. The Applicant shall install and maintain an 8 foot high fence, approved by the Board of Supervisors, along the entire western and southern boundaries of the Property except for any areas within the floodplain.
7. The Applicant shall submit and implement a landscape plan in accordance with §240-27.C.(2) of the East Goshen Code for the western and southern portions of the property except for any areas within the floodplain.

The Applicant shall plant and maintain the aforesaid buffer yard landscaping in accordance with §240-27.C.(3), as long as the Property is used as a treatment center, subject to accommodation of the fence and wood chip walking path within said buffer yard landscaping. Provided however that the high-level screen shall consist of a combination of evergreen and deciduous trees planted with specimens no less than ten feet in height. These plantings are intended to mitigate the view of the 8 foot fence from the neighboring properties. As part of the land development plan approval process, the Applicant shall meet with the Conservancy Board to present its proposed landscape plan. The Conservancy Board shall provide recommendations to the Board as

1 to whether the Applicant's landscape plan complies provides a completely planted
2 visual barrier or landscape screen to mitigate the view of the fence.
3

- 4 9. King Road is assumed to run in and east-west direction for the purpose of this condition.
5 The Applicant shall install 6 foot high estate fencing and deer resistant landscaping to
6 buffer the fencing along the eastern property boundary in accordance with the
7 Willistown Township ordinances. The Applicant shall install deer resistant understory
8 landscape buffer plantings in the wooded area on the eastern side of the Property prior
9 to the installation of any proposed walking paths and/or meditation areas on the east
10 side of the Ridley Creek. The fencing and landscaping shall be shown on the landscape
11 plans submitted with the land development application and shall be approved by the
12 Board of Supervisors as part of land development.
13

- 14 10. King Road is assumed to run in and east-west direction for the purpose of this condition.
15 The Applicant shall install 6 foot high estate fencing along the right of way line for King
16 Road. The fencing shall go around the pump station. This fencing shall be connected to
17 the 8 foot fence and the estate fencing referred to in this condition and condition 9. The
18 purpose of the fencing referred to in this condition and conditions 6 and 9 are to limit
19 ingress and egress to the main entrance of the Facility.
20

- 21 11. The proposed fencing shall be detailed on the land development plan and shall be
22 continually maintained by the owner.
23

- 24 12. The Applicant shall identify the fencing types and styles and provide details, samples
25 and/or images if available, of each style of fencing in the land development plan. The
26 fencing shall be approved by the Board of Supervisors during land development.
27

- 28 13. The Applicant shall agree to permit no recreational activity in the area between the
29 existing and/or proposed building and the southern and western property lines other
30 than the garden, the greenhouse, and the pedestrian walking paths.
31

- 32 14. The Applicant shall identify the existing and proposed active recreation areas on the
33 land development plan. If Applicant proposes to add new outdoor recreation facilities
34 that are not shown and approved on the land development plan, they shall be reviewed
35 by the Township Engineer who shall recommend the installation of appropriate sound
36 attenuation measures if necessary to mitigate potential noise from these facilities.
37

- 38 15. The Facility shall be restricted to one outdoor smoking area for patients (smoking
39 pavilion). The Applicant shall agree to require all patients to smoke within the limit of
40 the smoking pavilion. Staff and visitors shall be restricted to smoking in the front of the
41 building.
42

- 43 16. The smoking pavilion shall be equipped with a "Smoke Eater" type of ventilation and
44 filtration system to minimize the effects of smoke for the surrounding property owners.
45

- 46 17. The Applicant shall screen the new smoking pavilion from the neighboring properties to
47 the west and north with a temporary 8 foot fence which shall remain in place until the
48 one story addition is built.

18. The Applicant shall demonstrate during the land development application review that the "Smoke Eater" system can effectively ventilate and filter cigarette smoke in the proposed smoking pavilion.
19. The Applicant shall install sound attenuation blankets or similar sound dampening material inside the existing emergency generator fencing to mitigate noise from the generator.
20. The following site improvements shall be completed prior to issuance of a building permit for the building addition or barn renovations:
 - a. Parking lot renovations;
 - b. Installation of estate fence and the 8 foot fence;
 - c. Installation of the smoking pavilion, including the installation of screening and smoke mitigation measures;
 - d. Installation of sound blankets inside the generator fencing;
 - e. Installation of plantings as required on the landscape plan that is approved as part of the land development plans.
21. The Applicant shall construct and maintain all walking paths with pervious wood chips.
22. The Applicant shall comply with the parking allocation presented on the Plan.
23. The Applicant shall agree to only permit outdoor patient activities on the property between the hours of 7 AM and 10 PM, with the following exceptions. A maximum of 8 patients at any one time, with active staff supervision shall be permitted to use the smoking pavilion between 10 PM and 11:30 PM. A maximum of 4 patients at any one time, with active supervision from staff shall be permitted to use the smoking pavilion between 11:30 PM and 7 AM.
24. In the event that the Applicant's requested relief is granted, the Applicant shall record a deed restriction with the Chester County Recorder of Deeds that prohibits any further expansion of the treatment center for a period of 30 years. The deed restriction shall be enforceable by the Township.
25. The Applicant shall establish and adhere to a written protocol for responding to neighbors who contact the Facility to complain about adverse impacts from the operation of the Facility. This protocol shall require that a properly trained employee respond to neighbor's calls and advise the neighbors how to respond to a situation where a patient has left the Facility and is seeking assistance from the neighbors.
26. The Applicant shall annually make a presentation to the Board of Supervisors at a public meeting to provide an update on the state of affairs at the Facility. This report shall advise the Board on the status of the expansion project, identify any issues that the Facility has encountered in the last year with neighboring property owners and identify any new programs or policies that the Facility has implemented to improve the relationship with neighbors.

1 27. When the Applicant becomes aware that a patient has left the Facility AWOL, it shall
2 notify the Westtown East Goshen Regional Police Department of such fact provided that
3 such notification does not violate any patient privacy laws. The intent of this
4 notification is not to reveal the patient's identify or to require the police to respond but
5 simply to advise the police that someone has left the Facility.
6

7 28. If Applicant is granted zoning relief to expand the Facility, it shall obtain a building
8 permit for the building addition within three years from the date of an unappealed and
9 unappealable zoning decision and it shall obtain a building permit for the barn
10 renovations within four years from the date of an unappealed and unappealable zoning
11 decision.
12
13

14 Mike seconded the motion. Marty noted that one effect of Condition 23 would be
15 that the meditation area would be off limits at night.
16

17 Carmen asked Mr. Nagle whether his client would accept these conditions if the
18 Zoning Hearing Board granted the relief. Mr. Nagle stated that if the Zoning Hearing
19 Board approves the single story addition, his client would accept all of these
20 conditions and would not appeal them.
21

22 The motion passed 5-0.
23

24 **Consider Recommendation for Community Day**

25 Jason stated that the Park & Recreation Commission had recommended that
26 Community Day be held on Saturday, June 30th this year. Marty asked whether this
27 date might conflict with July 4th vacation plans for Township residents.
28

29 Janet moved to hold the 2018 Community Day on June 30, 2018. Carmen seconded.
30 The motion passed 5-0.
31

32 **Consider Recommendation to Replace the Street Sweeper**

33 Mike noted that we budgeted only \$145,000 for the street sweeper, but that the
34 price was \$173,400. Jon stated that \$203,000 has depreciated in the sinking fund for
35 the replacement of this asset and that therefore Township has more than enough
36 available cash to replace the street sweeper.
37

38 Carmen made a motion to purchase a Tymco street sweeper through Golden
39 Equipment at a price of \$173,400, net of trade-in. Janet seconded. The motion
40 passed 5-0.
41

42 **Consider Recommendation for PennDOT Mowing Agreement**

43 Mike made a motion to adopt Resolution 2018-58A. David seconded the motion. The
44 motion passed 5-0.
45

46 **Consider Recommendation for Paoli Pike Right-of-Way**

1 Mike made a motion to authorize the Chairman to execute the Amended Easement
2 and Right-of-Way for a Public Road for 1591 Paoli Pike, 1599 Paoli Pike, 1601 Paoli
3 Pike and 1595 Paoli Pike. David seconded. The motion passed 5-0.

4
5 **Consider Adelphia Gateway Pipeline Project**

6 Rick stated that Adelphia filed an application with the Federal Energy Regulatory
7 Commission (FERC) for Certificates of Public Convenience and Necessity to allow for
8 the acquisition, construction and operation of pipeline facilities in Pennsylvania and
9 Delaware. He recommended that the Board file a petition to intervene and seek
10 party status in this matter with FERC.

11
12 Lex Pavlo, 611 S. Speakman Lane, told the Board that he and his group have met
13 with a number of legislators about Adelphia's proposed repurposing of the existing
14 pipeline. He noted that he spoke with U.S. Rep. Ryan Costello and that Rep. Costello
15 seemed receptive to reviewing federal regulations, particularly those governing the
16 Pipeline and Hazardous Materials Safety Administration, which are very old at this
17 point.

18
19 David made a motion to direct the Manager to have Margie Morris, Esq, file a
20 petition to intervene and seek party status before FERC on Adelphia's application.
21 Janet seconded. The motion passed 5-0.

22
23 **Consider Recommendation for Adelphia Gateway Easement**

24 Rick reported that Adelphia had offered the Township \$250 for an easement
25 running through the Wentworth open space, where a valve is currently located. It is
26 Rick's understanding that Adelphia would like to install a "blow down" assembly at
27 this location, although he has some unanswered questions about what this means.
28 He also observed that there is ambiguous language in the draft easement agreement
29 that makes reference to pipelines (plural) and may allow for the conveyance of any
30 kind of natural gas. He recommended that the Board take no action on this matter
31 right now while he gathers more information. The Board agreed to take no action on
32 the easement for the time being.

33
34 **Consider Recommendations for ABC Goals**

35 Janet made a motion to approve the 2018 ABC goals as drafted. Carmen seconded.
36 The motion passed 5-0.

37
38 **Consider Recommendation for Escrow Release for Lexington at 1304 Goshen**
39 **Parkway**

40 Rick explained that this project had been finished for some time, but that due to
41 BB&T acquiring Susquehanna Bank some years prior, the developer had lost track of
42 the account and was only now requesting the final release. Mike made a motion to
43 authorize the final escrow release of \$24,144 for 1304 Goshen Parkway to bring the
44 remaining balance to \$0. Carmen seconded. The motion passed 5-0.

45
46 **Approval of Minutes for January 16 and 23, 2018**

1 David made a motion to approve the minutes of January 16 and 23, 2018, as
2 corrected. Janet seconded. The motion passed 5-0.

3
4 **Treasurer's Report**

5 Carmen moved to graciously accept the Treasurer's Report and the Expenditure
6 Register Report as recommended by the Treasurer, to accept the receipts and to
7 authorize payment of the invoices just reviewed. Janet seconded. The motion
8 passed 5-0.
9

10 **Correspondence, Reports of Interest**

11 The Board acknowledged the following correspondence and reports of interest:

- 12 • January 2018 Liquid Fuels Audit. Marty thanked Barbara Phillips and Susan
13 Smith for their hard work on this.
- 14 • Sunoco Station Remediation Letter
- 15 • 1/22/18 letter from Senator Killion regarding HB 1620
- 16 • 1/25/18 letter from PennDOT regarding the resurfacing of North Chester
17 Road
- 18 • 1/22/18 SARS Title III Tier II Report from Mars Drinks
- 19 • Letter from the Futurist Committee regarding the Paoli Pike Corridor Master
20 Plan
21

22 **Public Comment**

23 Robert Plummer, 1339 Park Ave, raised concerns about a firewood/lumber business
24 operating on Strasburg Road. Jon took his phone number and said that he'd pass the
25 matter on to the Codes Department in the morning.
26

27 **Adjournment**

28 There being no further business, Janet motioned to adjourn the meeting at 9:50 pm.
29 Carmen seconded the motion. The motion passed 5-0.
30

31 Respectfully submitted,

32 *Jon Altshul*

33 *Recording Secretary*
34

35 Attachments: February 1, 2018 Treasurer's Report

February 1, 2018

**TREASURER'S REPORT
2018 RECEIPTS AND BILLS**

GENERAL FUND

Real Estate Tax	\$15,561.33	Accounts Payable	\$37,085.57
Earned Income Tax	\$64,500.00	<u>Electronic Pmts:</u>	
Local Service Tax	\$3,400.00	Credit Card	\$2,674.37
Transfer Tax	\$40,244.68	Postage	\$0.00
General Fund Interest Earned	\$0.00	Debt Service	\$0.00
Total Other Revenue	\$25,217.83	Payroll	\$175,540.51
Total Receipts:	<u>\$148,923.84</u>	Total Expenditures:	<u>\$215,300.45</u>

STATE LIQUID FUELS FUND

Receipts	\$0.00		
Interest Earned	\$0.00		
Total State Liquid Fuels:	<u>\$0.00</u>	Expenditures:	<u>\$0.00</u>

SINKING FUND

Receipts	\$0.00	Accounts Payable	\$1,860.78
Interest Earned	\$0.00	Credit Card	\$0.00
Total Sinking Fund:	<u>\$0.00</u>	Total Expenditures:	<u>\$1,860.78</u>

TRANSPORTATION FUND

Receipts	\$0.00		
Interest Earned	\$0.00		
Total Sinking Fund:	<u>\$0.00</u>	Expenditures:	<u>\$0.00</u>

SEWER OPERATING FUND

Receipts	\$293,612.41	Accounts Payable	\$32,621.24
Interest Earned	\$0.00	Debt Service	\$0.00
Total Sewer:	<u>\$293,612.41</u>	Credit Card	\$0.00
		Total Expenditures:	<u>\$32,621.24</u>

REFUSE FUND

Receipts	\$74,681.99		
Interest Earned	\$0.00		
Total Refuse:	<u>\$74,681.99</u>	Expenditures:	<u>\$74,972.10</u>

BOND FUND

Receipts	\$0.00		
Interest Earned	\$0.00		
Total Sewer Sinking Fund:	<u>\$0.00</u>	Expenditures:	<u>\$11,533.26</u>

SEWER SINKING FUND

Receipts	\$0.00		
Interest Earned	\$0.00		
Total Sewer Sinking Fund:	<u>\$0.00</u>	Expenditures:	<u>\$6,832.39</u>

OPERATING RESERVE FUND

Receipts	\$0.00		
Interest Earned	\$0.00		
Total Operating Reserve Fund:	<u>\$0.00</u>	Expenditures:	<u>\$0.00</u>

1

2/6/18

February 6, 2018

10

February 15, 2018

**TREASURER'S REPORT
2018 RECEIPTS AND BILLS**

GENERAL FUND

Real Estate Tax	\$313,719.90
Earned Income Tax	\$715,100.76
Local Service Tax	\$66,554.21
Transfer Tax	\$55,097.10
General Fund Interest Earned	\$6,607.51
Total Other Revenue	\$154,273.15
Total Receipts:	<u>\$1,311,352.63</u>

Accounts Payable	\$596,655.32
Electronic Pmts:	
Credit Card	\$0.00
Postage	\$0.00
Debt Service	\$9,460.82
Payroll	\$127,824.56
Total Expenditures:	<u>\$733,940.70</u>

STATE LIQUID FUELS FUND

Receipts	\$0.00
Interest Earned	\$0.58
Total State Liquid Fuels:	<u>\$0.58</u>

Expenditures:	<u>\$0.00</u>
---------------	---------------

SINKING FUND

Receipts	\$0.00
Interest Earned	\$1,740.68
Total Sinking Fund:	<u>\$1,740.68</u>

Accounts Payable	\$19,105.55
Credit Card	\$0.00
Total Expenditures:	<u>\$19,105.55</u>

TRANSPORTATION FUND

Receipts	\$0.00
Interest Earned	\$464.97
Total Sinking Fund:	<u>\$464.97</u>

Expenditures:	<u>\$0.00</u>
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SEWER OPERATING FUND

Receipts	\$162,037.46
Interest Earned	\$203.49
Total Sewer:	<u>\$162,240.95</u>

Accounts Payable	\$301,398.28
Debt Service	\$28,240.59
Credit Card	\$0.00
Total Expenditures:	<u>\$329,638.87</u>

REFUSE FUND

Receipts	\$43,066.55
Interest Earned	\$356.32
Total Refuse:	<u>\$43,422.87</u>

Expenditures:	<u>\$67,810.45</u>
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BOND FUND

Receipts	\$0.00
Interest Earned	\$7,969.85
Total Sewer Sinking Fund:	<u>\$7,969.85</u>

Expenditures:	<u>\$0.00</u>
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SEWER SINKING FUND

Receipts	\$0.00
Interest Earned	\$684.84
Total Sewer Sinking Fund:	<u>\$684.84</u>

Expenditures:	<u>\$8,525.48</u>
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OPERATING RESERVE FUND

Receipts	\$0.00
Interest Earned	\$604.54
Total Operating Reserve Fund:	<u>\$604.54</u>

Expenditures:	<u>\$0.00</u>
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EAST GOSHEN TOWNSHIP
MONTHLY DEBT PAYMENT BREAKDOWN
February 28, 2018

GENERAL FUND:

Interest payment	Principal payment	Year of Issuance	Loan Description	Original loan amount	Remaining Principal	Retirement Date
\$7,589.19	\$0	2003	Multi purpose 9 projects	\$5,500,000	\$2,113,000	2023
\$1,563.10	\$0	1999	Applebrook Park	\$3,000,000	\$462,000	2019
\$308.53	\$0	2000	Spray Irrigation	\$287,000	\$89,000	2021

SEWER FUND:

Interest payment	Principal payment		Loan Description	Original loan amount	Remaining Principal	Retirement Date
\$22,859.10	\$0	2008	RCSTP Expansion	\$9,500,000	\$6,927,000	2032
\$5,381.49	\$0	2013	Diversion Projects	\$2,500,000	\$2,118,000	2033

**EAST GOSHEN TOWNSHIP
MEMORANDUM**

TO: BOARD OF SUPERVISORS
FROM: BRIAN MCCOOL
SUBJECT: PROPOSED PAYMENTS OF BILLS
DATE: 02-15-2018

Please accept the attached Treasurer's Report and Expenditure Register Report for consideration by the Board of Supervisors. I recommend the Treasurer's Report and each register item be approved for payment.

General Fund Revenues include the receipt of 4th quarter franchise fees from Comcast in the amount of \$65,480 and receipt of the penultimate TCDI grant reimbursement for the Paoli Pike Master Plan in the amount of \$26,060. EIT revenue is well above average due to receipt of 4th quarter remittances.

General Fund expenses include the monthly contribution to WEGO for \$365,994, \$64,315 for road salt and \$49,140 for health insurance.

Sinking Fund expenses include \$19,106 for a new server and PCs.

Sewer Fund expenses include a payment of \$171,161 to West Goshen Township for 4th quarter operating expenses and \$101,790 for 1st quarter charges for Summit House and Cider Knoll. Please advise if the Board decides to make any changes or if the reports are acceptable as drafted.

Report Date 02/02/18

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MARP05 run by BARBARA 1 : 30 PM

Vendor	Req #	Budget#	Sub#	Description	Invoice Number	Req Date	Check Dte	Recpt Dte	Check#	Amount
01				GENERAL FUND						
1471				WESTTOWN-EAST GOSHEN POLICE						
	53961	1	01410 5300	POLICE GEN.EXPENSE	020118	02/02/18	02/01/18	02/02/18	14836 p	365,993.72
				FEBRUARY 2018 CONTRIBUTION						
										365,993.72
										365,993.72
										1 Prepays, totaling 365,993.72
										0 Printed, totaling 0.00

FUND SUMMARY

Fund	Bank Account	Amount	Description
01	01	365,993.72	GENERAL FUND
		365,993.72	

PERIOD SUMMARY

Period	Amount
1802	365,993.72
	365,993.72

Report Date 02/06/18

Expenditures Register
GL-1802-61807

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MARPO5 run by BARBARA 1 : 35 PM

Vendor	Req #	Budget#	Sub#	Description	Invoice Number	Req Date	Check Dte	Recpt Dte	Check#	Amount
01		GENERAL FUND								
1470		WESTTOWN TOWNSHIP								
	53966	1	01410 5310	REGIONAL POLICE BLDG INTEREST JANUARY 2018 - INTEREST	013118	02/06/18		02/06/18		1,105.63
	53966	2	01410 5320	REGIONAL POLICE BLDG PRINCIPAL JANUARY 2018 - PRINCIPAL	013118	02/06/18		02/06/18		9,583.33
										10,688.96
										10,688.96
0 Printed, totaling										10,688.96

FUND SUMMARY

Fund	Bank Account	Amount	Description
01	01	10,688.96	GENERAL FUND
		10,688.96	

PERIOD SUMMARY

Period	Amount
1802	10,688.96
	10,688.96

Report Date 02/07/18

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MARP05 run by BARBARA 10 : 17 AM

Vendor	Req #	Budget#	Sub#	Description	Invoice Number	Req Date	Check Dte	Recpt Dte	Check#	Amount
01				GENERAL FUND						
2228				EAST GOSHEN TWP. - TAX COLLECTOR						
	53967	1	01409 4300	WIRELESS TOWER TAX PAYMENTS	020118	02/07/18	02/07/18	02/07/18	14842	265.41
				E.GOSHEN TWP. TAX 2018 ACCT. 17220						
				PARCEL #53-04-0077.0100						
										265.41
										265.41
										265.41
										1 Printed, totaling 265.41

FUND SUMMARY

Fund	Bank Account	Amount	Description
01	01	265.41	GENERAL FUND
		265.41	

PERIOD SUMMARY

Period	Amount
1802	265.41
	265.41

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MARP05 run by BARBARA

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Vendor	Req #	Budget#	Sub#	Description	Invoice Number	Req Date	Check Dte	Recpt Dte	Check#	Amount
01	GENERAL FUND									
2226	53986	1	01401 3400	21ST CENT.MEDIA NEWS #884433 ADVERTISING - PRINTING NOTICE - 1/22 MUN.AUTH.MTG.	1509087	02/13/18		02/13/18		65.90
										65.90
6	53987	1	01409 3740	ABC PAPER & CHEMICAL INC TWP. BLDG. - MAINT & REPAIRS AIR FRESHENER	087247A	02/13/18		02/13/18		46.17
	53988	1	01409 3740	TWP. BLDG. - MAINT & REPAIRS AIR FRESHENER, C-FOLD TOWELS & TOILET TISSUE	087247	02/13/18		02/13/18		96.42
	53988	2	01409 3745	PW BUILDING - MAINT REPAIRS AIR FRESHENER, C-FOLD TOWELS & TOILET TISSUE	087247	02/13/18		02/13/18		96.42
										239.01
68	53993	1	01401 3120	AMS APPLIED MICRO SYSTEMS LTD. CONSULTING SERVICES JANUARY 2018	64231	02/13/18		02/13/18		1,097.00
	53993	2	01414 5001	ZONING IT CONSULTING JANUARY 2018 - GEO PLAN	64231	02/13/18		02/13/18		28.00
	53994	1	01401 3120	CONSULTING SERVICES W2'S, ENVELOPES & LABOR	64193	02/13/18		02/13/18		210.45
										1,335.45
1657	53995	1	01409 3600	AQUA PA TWP. BLDG. - FUEL, LIGHT, WATER 309801 0309801 12/27/17 -1/23/18 BS	012518 BS	02/13/18		02/13/18		16.80
	53996	1	01411 3630	HYDRANT & WATER SERVICE 309987 309987 12/29/17 -1/31/18 HY6	020118 HY6	02/13/18		02/13/18		137.52
	53997	1	01411 3630	HYDRANT & WATER SERVICE 310033 310033 12/29/17 -1/31/18 186	020118 279	02/13/18		02/13/18		4,696.50
	53997	2	01411 3631	HYDRANTS - RECHARGE EXPENSE 310033 310033 12/29/17 -1/31/18 93	020118 279	02/13/18		02/13/18		2,348.25
										7,199.07
82	54001	1	01432 2500	ASSOCIATED TRUCK PARTS SNOW - MAINTENANCE & REPAIRS LED WORKLAMPS	207737	02/13/18		02/13/18		190.20
										190.20

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Vendor	Req #	Budget#	Sub#	Description	Invoice Number	Req Date	Check Dte	Recpt Dte	Check#	Amount
01	GENERAL FUND									
3490	54024	1	01401 3210	COMCAST 8499-10-109-0111284 COMMUNICATION EXPENSE 0111284 2/9-3/8/18 SPEC.VIDEO PW	020418	02/13/18		02/13/18		16.88
										16.88
317	54026	1	01437 2460	CONTRACTOR'S CHOICE GENERAL EXPENSE - SHOP SPROCKETS, SPARK PLUG, CHAIN, FUEL FILTER & AIR FILTER	00219908	02/13/18		02/13/18		58.99
										58.99
1990	54027	1	01401 2100	CRYSTAL SPRINGS MATERIALS & SUPPLIES CREAMER, SWEETENERS & COFFEE	3154612 011918	02/13/18		02/13/18		157.58
										157.58
3613	54028	1	01486 1560	DELAWARE VALLEY HEALTH TRUST HEALTH, ACCID. & LIFE FEBRUARY 2018 PREMIUM - MED/RX	14160	02/13/18		02/13/18		49,140.36
	54028	2	01213 1000	DENTAL INSURANCE W/H FEBRUARY 2018 PREMIUM - DENTAL	14160	02/13/18		02/13/18		1,345.00
										50,485.36
364	54029	1	01401 3000	DELCHESTER PUBLIC WORKS ASSOC GENERAL EXPENSE 2018 MEMBERSHIP RENEWAL (10)	020118	02/13/18		02/13/18		75.00
										75.00
3941	54034	1	01487 1500	DISCOVERY BENEFITS INC. MISC. EMPLOYEE BENEFITS JANUARY 2018 FSA SERVICES	0000847004-IN	02/13/18		02/13/18		51.50
										51.50
3872	54033	1	01409 3745	EAGLE TERMITE & PEST CONTROL PW BUILDING - MAINT REPAIRS EXTERM.SERVICE - JAN.2018 PW	191856	02/13/18		02/13/18		45.00
	54035	1	01409 3840	DISTRICT COURT EXPENSES EXTERM.SERVICE - JAN.2018 DIST.CT	191857	02/13/18		02/13/18		50.00
	54037	1	01409 3740	TWP. BLDG. - MAINT & REPAIRS EXTERM.SERVICE - JAN.2018 TWP.	191854	02/13/18		02/13/18		105.00
										200.00

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Vendor	Req #	Budget#	Sub#	Description	Invoice Number	Req Date	Check Dte	Recpt Dte	Check#	Amount
01	GENERAL FUND									
430	54043	1	01409	3600	EAST GOSHEN TWP - SEWER TWP. BLDG. - FUEL, LIGHT, WATER QTR.1-2018 SEWER TWP.	010118T	02/13/18	02/13/18		136.20
										136.20
430	54044	1	01409	3605	EAST GOSHEN TWP - SEWER PW BLDG - FUEL,LIGHT,SEWER & WATER QTR.1-2018 SEWER PW	010118PW	02/13/18	02/13/18		194.86
										194.86
3752	54039	1	01432	2460	EASTERN SALT COMPANY INC. SNOW - MATERIALS & SUPPLIES 215.09 TONS ROCK SALT	INV072430	02/13/18	02/13/18		13,045.21
	54040	1	01432	2460	SNOW - MATERIALS & SUPPLIES 260.45 TONS ROCK SALT	INV072796	02/13/18	02/13/18		15,796.30
	54041	1	01432	2460	SNOW - MATERIALS & SUPPLIES 246.83 TONS ROCK SALT	INV074280	02/13/18	02/13/18		14,970.24
	54042	1	01432	2460	SNOW - MATERIALS & SUPPLIES 25.08 TONS ROCK SALT	INV073164	02/13/18	02/13/18		1,521.10
										45,332.85
218	54046	1	01452	3712	EVANGELISTA, CHARO YOGA EXPENSE YOGA INSTRUCTION - WINTER SESS.1	7041	02/13/18	02/13/18		3,502.00
										3,502.00
1731	54047	1	01409	3740	FARINOLA INC, MV TWP. BLDG. - MAINT & REPAIRS QUARTERLY ELEVATOR INSPECTION 1/23	218400	02/13/18	02/13/18		110.00
										110.00
3942	54048	1	01430	2325	FERGUSON & MCCANN INC. MAINTENANCE AND REPAIRS - FUEL TANK PREVENTATIVE MAINTENANCE 2 TANKS	41290	02/13/18	02/13/18		579.00
										579.00
2958	54049	1	01430	2330	FREIGHTLINER OF LANCASTER VEHICLE MAINT AND REPAIR NRG/27-SWA-110R PRESSURE SWITCH	268357DE	02/13/18	02/13/18		112.17
										112.17

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Vendor	Req #	Budget#	Sub#	Description	Invoice Number	Req Date	Check Dte	Recpt Dte	Check#	Amount
01	GENERAL FUND									
2631	54050	1	01401 2110	GRAPHIC IMPRESSIONS OF AMERICA INC. STATIONERY BOS WINDOW ENVELOPES W/TINT	18-9312	02/13/18		02/13/18		144.00
										144.00
3131	54051	1	01401 3840	GREAT AMERICA FINANCIAL SERVICES RENTAL OF EQUIP. -OFFICE FEB.2018 - LANIER MP C5503 COPIER	22055571	02/13/18		02/13/18		305.00
										305.00
679	54053	1	01432 2500	INTERCON TRUCK EQUIPMENT SNOW - MAINTENANCE & REPAIRS MONROE - BEARING THRUST & SPRING	1060512-IN	02/13/18		02/13/18		162.24
										162.24
719	54054	1	01437 2460	KEEN COMPRESSED GAS COMPANY GENERAL EXPENSE - SHOP VARIOUS GAS CYLINDERS	83168511	02/13/18		02/13/18		71.72
	54055	1	01430 2330	VEHICLE MAINT AND REPAIR CONTACT TIP ADAPTERS & NOZZLES	30456991	02/13/18		02/13/18		48.78
										120.50
2442	54056	1	01433 2450	KENT AUTOMOTIVE MATERIALS & SUPPLIES - SIGNS EAR STRAP BUCKLES	9305518790	02/13/18		02/13/18		196.29
	54057	1	01430 2600	MINOR EQUIP. PURCHASE HEAVY DUTY SWIVEL CASTERS	9305489144	02/13/18		02/13/18		134.41
	54058	1	01430 2330	VEHICLE MAINT AND REPAIR SLIP PLATE PENETRANT	9305500491	02/13/18		02/13/18		179.97
										510.67
2813	54059	1	01452 3711	LAYFIELD, RUBY PILATES PILATE INSTRUCT. - WINTER SESS.1	020118	02/13/18		02/13/18		340.85
										340.85
3932	54060	1	01452 3601	LEMUS FINE ARTS INC. MISCELLANEOUS EVENTS CLAY SCULPTURE INSTRUCT. JAN-FEB 18	2504	02/13/18		02/13/18		733.13
										733.13

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Vendor	Req #	Budget#	Sub#	Description	Invoice Number	Req Date	Check Dte	Recpt Dte	Check#	Amount
01	GENERAL FUND									
765	LENNI ELECTRIC CORPORATION									
54061	1	01409	3745	PW BUILDING - MAINT REPAIRS	180114	02/13/18		02/13/18		960.00
54062	1	01409	3740	INSTALL LED LIGHTS - SALT BIN						
54062	1	01409	3740	TWP. BLDG. - MAINT & REPAIRS	180115	02/13/18		02/13/18		305.50
54064	1	01452	3720	INSTALL NEW LIGHTS - TWP SIGN						
54064	1	01452	3720	HOLIDAY TREE CELEBRATION	171273	02/13/18		02/13/18		107.00
54066	1	01409	3745	REPLACE GFI FOR CHRITMAS TREE CORD						
54066	1	01409	3745	PW BUILDING - MAINT REPAIRS	180104	02/13/18		02/13/18		2,805.08
				INSTALL PW STORAGE LIGHTING						
										4,177.58
2861	LITTLE INC., ROBERT E.									
54067	1	01430	2330	VEHICLE MAINT AND REPAIR	03-523025	02/13/18		02/13/18		172.51
				JDC-SEAT & STIHL SG 11YR						
54068	1	01437	2460	GENERAL EXPENSE - SHOP	03-523051	02/13/18		02/13/18		89.99
				ST-APRON CHAPS 32						
										262.50
3943	MULL, ANGELA									
54070	1	01367	3020	TRIPS	821154	02/13/18		02/13/18		90.00
				REFUND - UNABLE TO ATTEND DC TRIP						
										90.00
1641	NAPA AUTO PARTS									
54071	1	01430	2330	VEHICLE MAINT AND REPAIR	2-728594	02/13/18		02/13/18		17.57
				OIL & AIR FILTER						
54072	1	01430	2330	VEHICLE MAINT AND REPAIR	2-728595	02/13/18		02/13/18		54.87
				OIL & AIR FILTERS						
54073	1	01430	2330	VEHICLE MAINT AND REPAIR	2-727896	02/13/18		02/13/18		180.24
				HEADS & BRACES						
54074	1	01430	2330	VEHICLE MAINT AND REPAIR	2-727906	02/13/18		02/13/18		38.15
				BRACE						
54075	1	01430	2330	VEHICLE MAINT AND REPAIR	2-728125	02/13/18		02/13/18		59.99
				SPRAYER						
54076	1	01430	2330	VEHICLE MAINT AND REPAIR	2-728954	02/13/18		02/13/18		412.35
				OIL & AIR FILTERS						
54077	1	01430	2330	VEHICLE MAINT AND REPAIR	2-729746	02/13/18		02/13/18		329.42
				FUEL, OIL & AIR FILTERS						
										1,092.59

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Vendor	Req #	Budget#	Sub#	Description	Invoice Number	Req Date	Check Dte	Recpt Dte	Check#	Amount
1540				NELSON, PAMELA						
	54078	1	01452	3710 ZUMBA ZUMBA REGISTRATIONS 11/22/17-2/9/18	020918	02/13/18		02/13/18		985.15
										985.15
3679				NETCARRIER TELECOM INC. 67846						
	54085	1	01401	3210 COMMUNICATION EXPENSE 2/1/18 - 2/28/18	498172	02/13/18		02/13/18		370.03
										370.03
3680				NETCARRIER TELECOM INC. 67891						
	54079	1	01401	3210 COMMUNICATION EXPENSE 2/1/18 - 2/28/18	498179	02/13/18		02/13/18		136.93
										136.93
969				O'ROURKE & SONS INC.						
	54094	1	01430	2330 VEHICLE MAINT AND REPAIR FLAT BAR	R38952	02/13/18		02/13/18		20.00
										20.00
3548				OFFICE BASICS						
	54086	1	01401	2100 MATERIALS & SUPPLIES USB DRIVES	I-821902	02/13/18		02/13/18		49.45
	54087	1	01401	2100 MATERIALS & SUPPLIES BINDER CLIPS - XLARGE	I-827948	02/13/18		02/13/18		36.87
	54088	1	01401	2100 MATERIALS & SUPPLIES USB DRIVES (6)	I-831636	02/13/18		02/13/18		59.34
	54089	1	01401	2100 MATERIALS & SUPPLIES 8.5x11 PICTURE FRAME	I-835368	02/13/18		02/13/18		11.28
	54090	1	01401	2100 MATERIALS & SUPPLIES PRINTER CARTRIDGES	I-835142	02/13/18		02/13/18		189.00
										345.94
1554				OFFICE DEPOT						
	54091	1	01401	2100 MATERIALS & SUPPLIES LTR. FILE POCKETS, STAPLES, BINDER CLIPS & FOLDERS	101317945001	02/13/18		02/13/18		97.43
	54092	1	01401	2100 MATERIALS & SUPPLIES BINDER CLIPS - REFUND	101785800001	02/13/18		02/13/18		-16.65
	54093	1	01401	2100 MATERIALS & SUPPLIES TONER, OFFICE DUSTER, LEGAL FOLDERS	998857400001	02/13/18		02/13/18		207.31
										288.09

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Vendor	Req #	Budget#	Sub#	Description	Invoice Number	Req Date	Check Dte	Recpt Dte	Check#	Amount
2352				PECO - 99193-01400						
	54098	1	01434	3610 STREET LIGHTING 99193-01400 12/22/17-1/26/18	020118	02/13/18		02/13/18		776.73
	54098	2	01433	2470 UTILITIES - TRAFFIC LIGHTS 99193-01400 12/22/17-1/26/18	020118	02/13/18		02/13/18		674.50
										1,451.23
3153				PECO - 01360-05046						
	54100	1	01409	7505 BOOT & PAOLI LED SIGN 01360-05046 12/28/17-1/30/18 BOOT RD. LED	020218	02/13/18		02/13/18		46.27
										46.27
2593				PECO - 18510-39089						
	54102	1	01454	3600 UTILITIES 18510-39089 1/3-2/2/18 BOW TRE PUMP	020518	02/13/18		02/13/18		101.22
										101.22
1555				PECO - 45168-01609						
	54097	1	01409	3840 DISTRICT COURT EXPENSES 45168-01609 12/21/17-1/25/18 GAS	012918	02/13/18		02/13/18		2,350.96
	54097	2	01409	3605 PW BLDG - FUEL,LIGHT,SEWER & WATER 45168-01609 12/21/17-1/25/18 ELEC.	012918	02/13/18		02/13/18		1,148.86
										3,499.82
2592				PECO - 45951-30004						
	54101	1	01454	3600 UTILITIES 45951-30004 12/18/17-1/22/18 RESTRO OMS	012318	02/13/18		02/13/18		380.50
										380.50
2591				PECO - 59500-35010						
	54099	1	01454	3600 UTILITIES 59500-35010 12/21/17-1/25/18 POND PUMP	012918	02/13/18		02/13/18		27.70
										27.70
1032				PECO - 99193-01302						
	54096	1	01409	3600 TWP. BLDG. - FUEL, LIGHT, WATER 99193-01302 12/22/17-1/31/18	020718	02/13/18		02/13/18		4,598.09
	54096	2	01454	3600 UTILITIES 99193-01302 12/22/17-1/31/18	020718	02/13/18		02/13/18		433.15
										5,031.24

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Vendor	Req #	Budget#	Sub#	Description	Invoice Number	Req Date	Check Dte	Recpt Dte	Check#	Amount
01				GENERAL FUND						
1800				PELLE'S AUTOMOTIVE						
	54103	1	01430 2330	VEHICLE MAINT AND REPAIR	22314	02/13/18		02/13/18		51.60
				VEHICLE INSPECT.- 2012 FORD ESCAPE						
										51.60
2986				PENNBC REGION 1						
	54106	1	01487 4600	TRAINING & SEMINARS-EMPLY	020618	02/13/18		02/13/18		50.00
				G.ALTHOUSE & V.DIMARTINI - TRAINING						
				COURSE 3/8/18						
										50.00
1005				PENNSYLVANIA ONE CALL SYSTEM						
	54104	1	01438 3840	EQUIPMENT RENTAL	0000757027	02/13/18		02/13/18		24.89
				MONTHLY ACTIVITY FEE - JAN.2018						
										24.89
1785				PENNSYLVANIA STATE POLICE						
	54105	1	01401 3000	GENERAL EXPENSE	020218	02/13/18		02/13/18		22.00
				R19202356 BKGRND CK.- SEJDA						
	54105	2	01401 3000	GENERAL EXPENSE	020218	02/13/18		02/13/18		22.00
				R19202428 BKGRND CK.- BREWER						
	54105	3	01401 3000	GENERAL EXPENSE	020218	02/13/18		02/13/18		22.00
				R19202469 BKGRND CK.- CLARK						
	54105	4	01401 3000	GENERAL EXPENSE	020218	02/13/18		02/13/18		22.00
				R19202516 BKGRND CK.- CUADRADO						
	54105	5	01401 3000	GENERAL EXPENSE	020218	02/13/18		02/13/18		22.00
				R19202559 BKGRND CK.- BROADBENT						
	54105	6	01401 3000	GENERAL EXPENSE	020218	02/13/18		02/13/18		22.00
				R19202606 BKGRND CK.- ROBBINS						
	54105	7	01401 3000	GENERAL EXPENSE	020218	02/13/18		02/13/18		22.00
				R19202685 BKGRND CK.- BIRD-KELLY						
	54105	8	01401 3000	GENERAL EXPENSE	020218	02/13/18		02/13/18		22.00
				R19221172 BKGRND CK.- HOLLINGSWORTH						
	54105	9	01401 3000	GENERAL EXPENSE	020218	02/13/18		02/13/18		22.00
				R19221368 BKGRND CK.- HAMILTON						
										198.00
2674				PROVANTAGE CORPORATION						
	54107	1	01407 2130	COMPUTER EXPENSE	8083422	02/13/18		02/13/18		234.40
				HP LASER JET PRINTER						
	54108	1	01407 2130	COMPUTER EXPENSE	8076248	02/13/18		02/13/18		160.57
				DUAL WAN VPN ROUTER						
	54109	1	01407 2130	COMPUTER EXPENSE	8072493	02/13/18		02/13/18		1,118.60
				PROSAFE STACKABLE SMART SWITCHES						

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Vendor	Req #	Budget#	Sub#	Description	Invoice Number	Req Date	Check Dte	Recpt Dte	Check#	Amount
03	SINKING FUND									
366	DELL MARKETING I.P.									
	54030	1	03401 7400	CAPITAL REPLACEMENT - OFFICE EQUIP VLA OFFICE STD (6)	10219032063	02/13/18		02/13/18		1,782.00
	54030	2	03401 7400	CAPITAL REPLACEMENT - OFFICE EQUIP VLA ACROBAT STANDARD (5)	10219032063	02/13/18		02/13/18		1,320.00
	54031	1	03401 7400	CAPITAL REPLACEMENT - OFFICE EQUIP POWER EDGE T630 SERVER	10219471610	02/13/18		02/13/18		7,723.55
	54032	1	03401 7400	CAPITAL REPLACEMENT - OFFICE EQUIP BASE,AIO,OPTI,7450,CTO,WW (8)	10219266774	02/13/18		02/13/18		8,280.00
										19,105.55

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Vendor	Req #	Budget#	Sub#	Description	Invoice Number	Req Date	Check Dte	Recpt Dte	Check#	Amount
05	SEWER OPERATING									
3140	53989	1	05422	3700	ACE DISPOSAL CORP R.C. STP-MAINT.& REPAIRS PORTABLE TOILETS - RCSTP 1/19/18	129438	02/13/18	02/13/18		112.50
										112.50
2918	53992	1	05422	4500	ALS ENVIRONMENTAL R.C. STP-CONTRACTED SERV. LAB TESTING-RCSTP 12/12-12/19/17	40-2224439	02/13/18	02/13/18		210.00
										210.00
1658	53998	1	05420	3602	AQUA PA C.C. COLLECTION -UTILITIES 0305003 0305003 12/28/17-1/24/18 WW	012618 WW	02/13/18	02/13/18		28.88
	53999	1	05420	3602	C.C. COLLECTION -UTILITIES 0309826 0309826 12/27/17-1/23/18 TH	012518 TH	02/13/18	02/13/18		55.65
	54000	1	05422	3601	R.C. COLLEC.-UTILITIES 1533998 1087842 12/27/17-1/23/18 TW	012518 TW	02/13/18	02/13/18		59.54
										144.07
151	54004	1	05422	4502	BLOENSKI DISPOSAL CO, CHARLES R.C. SLUDGE-LAND CHESTER SWITCH 20 YDS WITH LINER 1/29/18	16356	02/13/18	02/13/18		181.00
	54005	1	05422	4502	R.C. SLUDGE-LAND CHESTER SWITCH 20 YDS WITH LINER 1/22/18	16355	02/13/18	02/13/18		181.00
										362.00
241	54007	2	05422	4502	C.C. SOLID WASTE AUTHORITY R.C. SLUDGE-LAND CHESTER WEEK 1/23/18 - 1/30/18	49675	02/13/18	02/13/18		534.66
										534.66
3872	54036	1	05420	3702	EAGLE TERMITE & PEST CONTROL C.C. COLLEC.-MAINT.& REPR. EXTERM.SERVICE - JAN.2018 ASHBRDG	191858	02/13/18	02/13/18		25.00
	54038	1	05422	3700	R.C. STP-MAINT.& REPAIRS EXTERM.SERVICE - JAN.2018 RCSTP	191855	02/13/18	02/13/18		45.00
										70.00

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Vendor	Req #	Budget#	Sub#	Description	Invoice Number	Req Date	Check Dte	Recpt Dte	Check#	Amount
3725				NETCARRIER TELECOM INC. 68255						
	54083	1	05420	3702 C.C. COLLEC.-MAINT.& REPR. 2/1/18 - 2/28/18	498373	02/13/18		02/13/18		50.92
										50.92
1031				PECO - 99193-01204						
	54095	1	05420	3602 C.C. COLLECTION -UTILITIES 99193-01204 12/29/17-1/31/18	020718	02/13/18		02/13/18		1,200.92
	54095	2	05420	3600 C.C. METERS - UTILITIES 99193-01204 12/29/17-1/31/18	020718	02/13/18		02/13/18		9.60
	54095	3	05422	3601 R.C. COLLEC.-UTILITIES 99193-01204 12/29/17-1/31/18	020718	02/13/18		02/13/18		495.56
	54095	4	05422	3600 R.C STP -UTILITIES 99193-01204 12/29/17-1/31/18	020718	02/13/18		02/13/18		13,810.17
										15,516.25
1005				PENNSYLVANIA ONE CALL SYSTEM						
	54104	2	05420	3701 C.C. INTERCEPT.-MAINT.&REP MONTHLY ACTIVITY FEE - JAN.2018	0000757027	02/13/18		02/13/18		24.88
	54104	3	05420	3702 C.C. COLLEC.-MAINT.& REPR. MONTHLY ACTIVITY FEE - JAN.2018	0000757027	02/13/18		02/13/18		24.88
										49.76
3944				SEALGUARD INC.						
	54116	1	05420	3702 C.C. COLLEC.-MAINT.& REPR. DUAL COMPONENT GROUT	11-04144	02/13/18		02/13/18		1,925.01
										1,925.01
1393				US POSTMASTER						
	54124	2	05429	3250 ADMIN.- POSTAGE REPLENISH POSTAGE DUE ACCT.	021218	02/13/18		02/13/18		70.00
										70.00
1395				USA BLUE BOOK						
	54122	1	05422	3700 R.C. STP-MAINT.& REPAIRS TREATMENT PLANT LOG BOOKS	454431	02/13/18		02/13/18		101.22
										101.22
3529				VERIZON - MODEMS						
	54125	1	05420	3601 C.C. INTERCEPTOR-UTILITIES 12/26/17 - 1/25/18 MODEMS	9800564287	02/13/18		02/13/18		80.84
										80.84

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<u>Vendor</u>	<u>Req #</u>	<u>Budget#</u>	<u>Sub#</u>	<u>Description</u>	<u>Invoice Number</u>	<u>Req Date</u>	<u>Check Dte</u>	<u>Recpt Dte</u>	<u>Check#</u>	<u>Amount</u>
05				SEWER OPERATING						
2773				VERIZON - PW FIOS 0001-15						
	54129	1	05422 3601	R.C. COLLEC.-UTILITIES 1/28/18 - 2/27/18 FIOS - PW	000115-012718	02/13/18		02/13/18		89.99
										89.99
1431				WEST GOSHEN TOWNSHIP						
	54131	1	05420 3850	C.C. WEST GOSHEN OPER/MAINT 4TH QTR.2017 OPERATIONS & MGMT.	012918	02/13/18		02/13/18		171,160.70
										171,160.70
1470				WESTTOWN TOWNSHIP						
	54132	1	05429 4500	CONTR. SERV. SUMMIT HOUSE QTR.1-2018 SEWER - SUMMIT	012518-S	02/13/18		02/13/18		83,070.00
	54133	1	05429 4510	CONTR. SERV. CIDER KNOLL QTR.1-2018 SEWER - CIDER KNOLL	012518C	02/13/18		02/13/18		18,720.00
										101,790.00

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Vendor	Req #	Budget#	Sub#	Description	Invoice Number	Req Date	Check Dte	Recpt Dte	Check#	Amount
06	REFUSE									
2762	53990	1	06427 4500	AJB A.J. BLOSENSKI INC. CONTRACTED SERV. RESIDENTIAL P/U FEB.2018	82100150	02/13/18		02/13/18		57,910.03
										57,910.03
241	54007	1	06427 4502	C.C. SOLID WASTE AUTHORITY LANDFILL FEES WEEK 1/23/18 - 1/30/18	49675	02/13/18		02/13/18		5,468.41
	54008	1	06427 4502	LANDFILL FEES WEEK 2/05/18 - 2/07/18	49752	02/13/18		02/13/18		4,012.01
										9,480.42
1393	54124	3	06427 3250	US POSTMASTER POSTAGE REPLENISH POSTAGE DUE ACCT.	021218	02/13/18		02/13/18		70.00
										70.00

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Vendor	Req #	Budget#	Sub#	Description	Invoice Number	Req Date	Check Dte	Recpt Dte	Check#	Amount
09				Sewer Capital Reserve Fund						
2917				ALFA LAVAL INC.						
53991	1	09429	7400	MACHINERY/EQUIPMENT - REPLACEMENT	278001907	02/13/18		02/13/18		4,005.58
				REBUILT CENERFUGE						
										4,005.58
765				LENNI ELECTRIC CORPORATION						
54063	1	09429	7400	MACHINERY/EQUIPMENT - REPLACEMENT	180113	02/13/18		02/13/18		4,519.90
				REPLACE ENTIRE INNER HEATER WITH						
				EXPLOSION PROOF HEATER						
										4,519.90
										577,845.76
										106 Printed, totaling 577,845.76

FUND SUMMARY

Fund	Bank Account	Amount	Description
01	01	181,849.40	GENERAL FUND
03	03	19,105.55	SINKING FUND
05	05	300,904.88	SEWER OPERATING
06	06	67,460.45	REFUSE
09	09	8,525.48	Sewer Capital Reserve Fund
		577,845.76	

PERIOD SUMMARY

Period	Amount
1802	577,845.76
	577,845.76

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Vendor	Req #	Budget#	Sub#	Description	Invoice Number	Req Date	Check Dte	Recpt Dte	Check#	Amount
01	GENERAL FUND									
3927				CARGILL INC.						
	54147	1	01432 2460	SNOW - MATERIALS & SUPPLIES 25.40 TONS DEICER SALT	2903898772	02/15/18		02/15/18		1,496.57
										1,496.57
3249				COMCAST 8499-10-109-0107712						
	54148	1	01401 3210	COMMUNICATION EXPENSE 0107712 2/5-3/4/18 EG PARK LED	020418	02/15/18		02/15/18		115.75
										115.75
3945				FELDSHER, DIANE						
	54150	1	01367 3712	YOGA CLASSES REFUND - CANCELED MEDITATION CLASS	821156	02/15/18		02/15/18		60.00
										60.00
525				GARDEN STATE HWY. PRODUCT						
	54151	1	01433 2500	MAINT. REPAIRS.TRAFF.SIG. SINGLE FACED WHITE/GREEN SIGNS	127519	02/15/18		02/15/18		99.90
										99.90
594				HAMMOND & MCCLOSKEY INC.						
	54152	1	01409 3745	PW BUILDING - MAINT REPAIRS INSTALL NEW TOILET - PW LOCKER ROOM	8544	02/15/18		02/15/18		691.00
										691.00
3947				MATHESON, BARBARA						
	54153	1	01367 3712	YOGA CLASSES REFUND - CANCELED MEDITATION CLASS	821157	02/15/18		02/15/18		60.00
										60.00
2417				PPC LUBRICANTS EAST						
	54155	1	01430 2330	VEHICLE MAINT AND REPAIR HALDEMAN SWIVEL & BALCRANK AUTO NOZZLE	1491296	02/15/18		02/15/18		239.40
										239.40

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Vendor	Req #	Budget#	Sub#	Description	Invoice Number	Req Date	Check Dte	Recpt Dte	Check#	Amount
05				SEWER OPERATING						
1087				PIPE XPRESS INC.						
54154	1	05420	3704	C.C. COLLECT.-MAINT & REP - I&I 4X20' PVC PIPE	89796	02/15/18		02/15/18		143.40
										143.40
										3,928.23
0 Printed, totaling										3,928.23

FUND SUMMARY

Fund	Bank Account	Amount	Description
01	01	3,784.83	GENERAL FUND
05	05	143.40	SEWER OPERATING
		3,928.23	

PERIOD SUMMARY

Period	Amount
1802	3,928.23
	3,928.23

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Vendor	Req #	Budget#	Sub#	Description	Invoice Number	Req Date	Check Dte	Recpt Dte	Check#	Amount
01		GENERAL FUND								
182				BROWN, JEFFREY						
53968	1	01401	3000	GENERAL EXPENSE	020218	02/07/18		02/07/18		21,493.00
										21,493.00
3931				HENNESSY ESQ., BRENDAN D.						
53969	1	01404	3140	LEGAL - ADMIN	020218	02/07/18		02/07/18		12,500.00
				LEGAL SERVICE - JAN.2018						
										12,500.00
										33,993.00
0 Printed, totaling										33,993.00

FUND SUMMARY

Fund	Bank Account	Amount	Description
01	01	33,993.00	GENERAL FUND
		33,993.00	

PERIOD SUMMARY

Period	Amount
1802	33,993.00
	33,993.00

ACH DEBITS TO GENERAL FUNDS**ATTACHMENT 1 of 1**Meeting Date**2/20/2018**2/1/18 - 2/15/18

01 TRX#	Amount Charged	Date	Name	Description
61758	\$80.00	2/10/2018	PRIMEPAY	MISC. EMPLOYEE BENEFITS
 05 TRX#				
61759	\$350.00	2/3/2018	LOCKBOX FEES - JAN.2018	LOCKBOX FEES FOR S/R ACCT.
 06 TRX#				
61769	\$350.00	2/3/2018	LOCKBOX FEES - JAN.2018	LOCKBOX FEES FOR S/R ACCT.

9TH SENATORIAL DISTRICT
**STATE SENATOR
TOM KILLION**

SENATE BOX 203009
HARRISBURG, PA 17120-3009
717-787-4712
FAX 717-783-7490
TOLL FREE 1-888-9TH-DIST

4110 EDMONT AVENUE
BROOKHAVEN, PA 19015
610-447-3163
FAX 610-447-5848

780 E. MARKET STREET, SUITE 140
WEST CHESTER, PA 19380
610-436-3320
FAX 610-436-6983



Senate of Pennsylvania

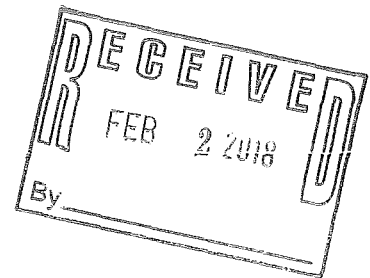
COMMITTEES

STATE GOVERNMENT, VICE CHAIR
APPROPRIATIONS
BANKING & INSURANCE
COMMUNICATIONS & TECHNOLOGY
CONSUMER PROTECTION &
PROFESSIONAL LICENSURE
URBAN AFFAIRS & HOUSING
MAJORITY POLICY

senatorkillion.com
tkillion@pasen.gov

January 30, 2018

Mr. Louis F. Smith, Jr.
Township Manager
East Goshen Township
1580 Paoli Pike
West Chester, PA 19382



Re: Senate Bill 656

Dear Mr. Smith:

Thank you for your letter dated January 24, 2018 in opposition to "proposed amendments" to Senate Bill 656, legislation that would amend Chapter 56 (relating to municipal authorities) of Title 53 (Municipalities Generally) to authorize a governmental unit to use public funds for the replacement or remediation of private water laterals and private sewer laterals that are connected to public systems.


Senate Bill 656 was approved by the full Senate on June 21, 2017; was unanimously approved by the House Local Government Committee on June 28, 2017; given first consideration in the House of Representatives on that same date; and was re-referred to the House Consumer Affairs Committee on December 12, 2017.

Should the current version of the bill be amended in Committee or in the full House, it would then need to come back to the Senate for concurrence. I appreciate being aware of your position in opposition to "proposed amendments" to the current version of the bill, and my staff will be sure to keep me informed of any amended version.

If you have not done so already, I encourage you to contact Representative Comitta regarding your position.

Again, thank you for taking the time to contact me. If you have any additional questions or concerns, please do not hesitate to contact me again.

Sincerely,


TOM KILLION
SENATOR, 9th DISTRICT

TK/kih

U.S. Department of Homeland Security
Region III
One Independence Mall, Sixth Floor
615 Chestnut Street
Philadelphia, PA 19106-4404

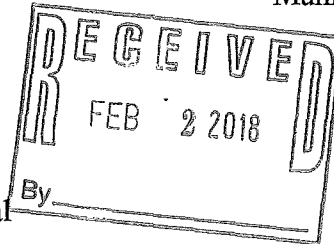


FEMA

January 30, 2018

Mr. Senya D. Isayeff
Chair, Board of Supervisors
East Goshen Township
1580 Paoli Pike
West Chester, Pennsylvania 19380

Municipality: East Goshen Township
County, State: Chester, PA
Adoption Date: 5/17/2016
Date Approved: 1/7/2016
Expiration Date: 1/6/2021



Re: Hazard Mitigation Plan Approval

Dear Mr. Isayeff:

The Hazard Mitigation Plan for your community has been approved by the Federal Emergency Management Agency (FEMA). Your community is now eligible to apply for federal disaster assistance until the plan expires.

The plan was reviewed and approved based on the criteria contained in 44 Code of Federal Regulations, Part 201, as authorized by the Disaster Mitigation Act of 2000 (DMA2K). These criteria address the planning process, risk assessment (including hazard identification), mitigation strategy and plan maintenance process requirements. Enclosed is a list of specific recommendations for improving the plan. FEMA encourages communities to improve and update their plans as well as take mitigation actions by implementing strategies within the plan. Some resources to assist you include:

Mitigation Ideas: A Resource for Reducing Risk to Natural Hazards
<http://www.fema.gov/library/viewRecord.do?id=6938>

Integrating Hazard Mitigation Into Local Planning: Case Studies and Tools for
Community Officials <http://www.fema.gov/library/viewRecord.do?id=7130>

If you have questions, please contact Ernie Szabo, State Hazard Mitigation Planner, at (717) 651-2159. I commend you for your dedication demonstrated in preparing and adopting a strategy to reduce future disaster losses.

Sincerely,

Janice P. Barlow
Acting Director, Mitigation Division

Enclosure

Cc: Thomas Hughes, State Hazard Mitigation Officer, PEMA
Ernie Szabo, Mitigation Planner, PEMA
Robert J. Kagel, Director, Department of Emergency Services, Chester County

FYI

To: Board of Supervisors
From: Jason Lang, Director of Parks & Recreation
Re: 2018 NRPA National Summer Camp Dance
Date: February 15, 2018

In 2015, the East Goshen REC Camp started a collaborative camp activity called the “Mid-Atlantic Summer Camp Dance”. With a few other camp programs in PA, MD and VA, we piloted this activity to see if it was feasible on a larger scale. Essentially, the Parks & Recreation Director created a simple choreographed dance to “Walking on Sunshine” by Katrina and the Waves (copyright secured) and then a staff training video. Partner summer camps could view, download and use the staff training video during their own camp staff training events. From there, the dance was introduced to the campers however each municipality saw fit. On one specific day, all the camps danced “simultaneously” as we danced across the Mid-Atlantic. The P & R Director merged media into one collective video for all participants to enjoy that is posted to our YouTube channel. MACD goals are:

- 1) Unite municipal summer camp programs through a collective “turn-key” programmatic effort
- 2) Encourage kids to be active, healthy and well
- 3) Have fun!

I met with representatives from the National Recreation and Parks Association (NRPA) in December about adding this activity to Parks and Recreation month in July. They were excited by the idea and we are moving forward with it. It'll officially be renamed the NRPA National Summer Camp Dance and will appear in marketing/advertising efforts sometime in late spring. NRPA is located outside Washington DC, and at a TBD date I'll head down there to shoot the promo video and staff training video. I plan to wear my East Goshen Township polo on camera for all to see! Our 2018 goal is 200 municipal camp programs and 20,000 kids!



EGT REC Campers learning about the dance in 2015.
Computer/H:/East Goshen Township/Budget





Office of the Governor
508 Main Capitol Building, Harrisburg, PA 17120

22 January 2018
Re: opioid epidemic

Governor Tom Wolf:

On behalf of the Pennsylvania Recreation and Park Society (PRPS) and its 2,000 members, we commend the Wolf Administration for declaring the heroin and opioid epidemic a statewide disaster emergency. Recent figures place Pennsylvania among the states with the highest rates of drug use, overdose and death associated with heroin and opioid use. This declaration is a concrete step forward, positioning the Commonwealth to best tackle this problem through collective efforts.

The declaration's thirteen key initiatives clearly set directives and goals that can improve emergency response coordination, help those suffering from substance use disorders get into treatment, and ultimately, save lives. PRPS represents 334 Pennsylvania municipalities that provide park and recreation to their citizens, striving to improve the Commonwealth's residential quality of life through access to park facilities and innovative recreational programming opportunities. In light of our unique role within our communities, we would like to extend our expertise and resources to help fight the heroin and opioid epidemic alongside the Administration.

Park and recreation departments can support prevention initiatives. We are chief stewards of traditional disease prevention measures through physical health and wellness programs. Regarding opioid use, we interact daily with at risk populations and can assist other state organizations to gain access and influence through prevention efforts.

Additionally, those coming out of recovery can benefit from positive, defined recreational programs to regain self-esteem, self-confidence and create healthy social relationships. Pennsylvania municipal parks and recreation departments provide just such opportunities for their communities, and can easily transition and incorporate new efforts to meet additional challenges. For example, East Goshen Township in West Chester has begun collaborating with the Chester County Department of Drug and Alcohol Services to bolster countywide recovery efforts, including:

- Scholarships for those in recovery to attend park and recreation trips, classes and clinics
- Public viewing parties of dependency/recovery documentaries
- Stakeholder meetings with county officials, community leaders and concerned citizens
- Naloxone trainings

Ultimately, the opioid crisis will be solved only through a comprehensive effort that incorporates leaders from a myriad of fields. Park and recreation departments stand ready to provide programmed recreational opportunities and prevention initiative support to help these Pennsylvania residents realize once again that they are accepted, valued residents that have tremendous self-worth.

We applaud the Administration for galvanizing statewide forces through this declaration. The heroin and opioid epidemic is a formidable problem; but it is one we can solve together. PRPS welcomes any opportunities to support the Administration in its efforts going forward.

Sincerely,

A handwritten signature in black ink that reads "Timothy Herd".

Tim Herd, CPRE
CEO

FYI

To: Board of Supervisors
From: Jason Lang, Director of Park and Recreation
Re: Opioid Epidemic – Park & Recreation Support
Date: February 1st, 2018

Board of Supervisors-

One of the main objectives of a successful parks and recreation department is promoting and providing health and wellness opportunities for its residents. In keeping with this objective, the Parks and Recreation Department has partnered with the Chesco Department of Drug & Alcohol Services to support county opioid efforts. Some current partnership examples are:

- Held a stakeholder panel with Rep. Comitta, Chesco Department of D & A, WEGO Police, various community organizations and the general public
- Viewing of the documentary “Generation Found” – how the city of Houston positively addresses the opioid crisis
- Naloxone Training (March 3rd)

I’ll be presenting at the PRPS State Conference in late March, with the goal of increasing P & R’s willingness and ability to support local efforts. I also penned the recent PRPS Statement to Governor Wolf regarding his opioid declaration that highlights East Goshen Township’s efforts (attached). In light of the above, PRPS has asked that I chair the newly formed PRPS Opioid Task Force (OTF). The OTF’s goal will be to communicate how municipal park and recreation departments can support county-wide opioid prevention and recovery efforts across Pennsylvania.