



**Lower Paxton Township**  
**Dauphin County, Pennsylvania**  
Act 537 Sewage Facilities Plan Update

December 2013

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# Executive Summary

## Introduction

The purpose of this 2013 Act 537 Plan Update is to revise the Beaver Creek Basin portion of the existing Act 537 Plan. The existing Act 537 Plan was originally prepared in September 2002 (the 2002 Plan) and approved by the Department in March 2003, with a special study prepared in 2006 to update the zoning. The 2002 Plan calls for discontinuing sanitary sewer system rehabilitation as the primary method of addressing infiltration/inflow (I/I) within the Beaver Creek Basin and enlarging essentially all of the conveyance system components to transport the wastewater to a new wet weather treatment facility that would be located near the southeastern corner of Lower Paxton Township, in South Hanover Township.

While attempting to permit the land for the proposed wet weather treatment facility, it was determined that construction of a wet weather treatment plant is no longer an option. As a result, the Lower Paxton Township Authority revised the Beaver Creek Basin Corrective Action Plan (CAP), as set forth in the Second Amendment to the Second Consent Decree. The Beaver Creek Basin CAP now calls for replacing/rehabilitating the existing sanitary sewers, and possible enlargement of selected conveyance system components and future storage as the primary method of addressing I/I in lieu of enlarging the conveyance system and construction of a wet weather treatment plant. The Second Amendment to the Second Consent Decree was approved by DEP on August 21, 2013, and fully executed by the Court on September 18, 2013.

## Selected Approach

The selected alternative includes the major revisions to the Beaver Creek CAP, which are as follows:

- Replacement/rehabilitation of a large portion of the wastewater collection systems in the Beaver Creek Drainage Basin;
- Flow metering and hydraulic modeling of the Beaver Creek wastewater conveyance system to prioritize mini-basins for replacement/rehabilitation;
- Construction of conveyance system improvements and/or future pumping/storage facilities as may be required to reduce the hydraulic overload; and
- On-going post-rehabilitation flow metering to demonstrate reductions in peak wet weather flows.

Total replacement also includes installation of observation tees and replacement of the building sewers.

## Study Adoption and Comment Period

A public notice indicating the Township's intention to adopt the Act 537 Plan Update and announcing the required 30 day public comment period was published in the Patriot-News on November 12, 2013. No comments from the public were received as of December 13, 2013. A copy of the public notice and the proof of publication are included in Appendix D.

A copy of the Special Study was submitted to the Dauphin County Planning Commission and Lower Paxton Township Planning Commission for their review and approval. Neither Planning Commission's response letter contained any comments that needed to be addressed. Copies of the response letters are included in Appendix E. The Township adopted the 2013 Act 537 Special Study Update at the December 17, 2013 Board of Supervisors' meeting. A copy of the signed resolution is included in Appendix F.

# 1. Introduction

The Pennsylvania Sewage Facilities Act requires that every municipality within the Commonwealth develop and maintain an up-to-date sewage facilities plan. The purpose of this report is to update Lower Paxton Township's existing Act 537 Plan to address the new method of dealing with the wet weather flows in the Beaver Creek Drainage Basin, as required by the Second Amendment of the Second Consent Decree approved by DEP on August 21, 2013, and fully executed by the Court on September 18, 2013.

# 2. Previous Wastewater Planning

The current Act 537 Sewage Facilities Plan for Lower Paxton Township was completed in September 2002 (the 2002 Plan) and approved by the PA Department of Environmental Protection (DEP) in March 2003. Except minor adjustments in the planned public sewerage service areas the Township provided in a plan update in 2006 (described below), the 2002 Plan is the current sewage facilities plan for the four separate drainage areas in the Township; Beaver Creek, Spring Creek, Asylum Run and Paxton Creek.

Wastewater from the public sewerage service area in the Beaver Creek Drainage Area is conveyed to the Swatara Township Authority's wastewater treatment facility (WWTF), while wastewater from public sewerage service areas in the other three drainage areas is conveyed to the City of Harrisburg's WWTF. The 2002 Plan calls for sanitary sewer system rehabilitation and/or replacement in the Paxton Creek, Spring Creek and Asylum Run Drainage Basins to address hydraulic overloading of the sewer systems. For the Beaver Creek Drainage Basin, however, the Plan calls for discontinuing sewer system rehabilitation as the primary means for reducing the hydraulic overload, and enlarging the conveyance system to transport the wastewater to a new peak wet weather treatment facility to be located near the southeastern corner of the Lower Paxton Township, in South Hanover Township. The wet weather treatment plant was to treat and discharge to Beaver Creek peak wet weather flows, as well as excess daily flows during extended periods of wet weather, as needed, in order for Lower Paxton to maintain its wastewater flows within the allocated capacities in the Swatara Township Authority's WWTF and Joint Use Interceptor (JUI) for the duration of the 20-year planning period and beyond.

The 2002 Plan was updated in 2006 (the 2006 Update) to reflect zoning changes in Lower Paxton Township, which effectively reduced the size of the planned public sewerage service areas in the Paxton Creek and Beaver Creek drainage basins. The 2006 Update re-delineated the planned public sewerage service areas, and allowed for de-centralized wastewater treatment (e.g. on-lot systems) in parts of the township that were formerly located within the planned public sewerage service area. The 2006 Update made no changes in facilities planning for the public sewerage service areas. As indicated above, 2002 Plan remains the official plan for the public sewerage in the Township, including public sewerage in the Beaver Creek Basin, which is the subject of this 2013 Plan Update.

### 3. Physical and Demographic Analysis

Physical and demographic information is provided only for the Beaver Creek Drainage Basin in Lower Paxton Township. Provided in Plate 1 is the current zoning map. Provided in Plate 2 are the following:

- Delineation of the planned public sewerage service area in the Beaver Creek Basin
- Existing approved sub-divisions within the public sewerage service area
- Future development areas within the public sewerage service area

### 4. Existing Public Sewerage

#### 4.1 Existing Facilities

Provided in Plate 3 is a detailed map of the existing public sewage facilities in the Beaver Creek Basin. These include 8-inch collection sewers, gravity trunk lines and interceptors ranging in diameter from 10 inches to 27 inches, three (3) pumping stations and one (1) package wastewater treatment plant. Also indicated in Plate 3 are the various sub-basins and mini-basins within the Beaver Creek wastewater collection/conveyance system.

As indicated, there are three (3) pumping stations in the Beaver Creek Basin. Capacity and current loading information, as presented in Swatara’s 2012 Chapter 94 Report, is provided in Table 1.

**Table 1 - Beaver Creek Basin Pumping Station Data**

Pump Station	Capacity (MGD)	Max. Daily Flow (MGD)	2-Year Max. Daily Flow (MGD)
Beaver Creek	3.36 (drawdown)*	3.18	3.19
Linglestown Road	0.32 (drawdown)*	0.304	0.304
Parkchester Road	0.187 (design)	0.032	0.032

\*Capacity is exceeded during extreme wet weather.

The locations of the pumping stations are indicated in Plate 3. The Linglestown Road Pumping Station serves development in mini-basin BC-1A. The Beaver Creek Pumping Station serves all of sub-basins BC-1, BC-2, BC-3, BC-4 and BC-5, as well as 271 EDUs located in West Hanover Township. The Parkchester Road Pumping Station serves the Paxton Towne Center shopping center in mini-basin BC-6B.

The package wastewater treatment plant serves 514 residential units in the Springford Village development, consisting of both townhouse and apartment units. The permitted hydraulic capacity of the plant is 0.075 MGD. Current annual average daily flow is 0.041 MGD, with a 3-month maximum daily flow of 0.042 MGD.

#### 4.2 Identification of Existing Needs

Provided in Table 2 is a comparison of current wastewater flows from the existing public sewerage system in the Beaver Creek Basin with allocated capacities in the Swatara Township WWTF and the Joint Use Interceptor (JUI). As apparent from the table, existing flows are within Lower Paxton Township’s allocated capacity in Swatara Township’s WWTF with respect to average annual flow

and maximum month flow. Both the peak hourly flow and instantaneous peak flow; however, are exceeded during periods of extreme wet weather, which typically occur 3-7 times per year.

During periods of extreme wet weather, not only are peak flows in the Beaver Creek basin in excess of allocated capacities in the Swatara Township Authority's WWTF and JUI, but sanitary sewer overflows (SSOs) occur within Lower Paxton Township's Beaver Creek Basin wastewater collection and conveyance system. Since SSOs are not permitted, the primary need with respect to public sewerage in the Beaver Creek Basin is to reduce peak wet weather flow in the system in order to eliminate occurrence of SSOs, and reduce the hydraulic overload in order to provide capacity for future development. Currently, Lower Paxton Township is under a Consent Decree (Second Amendment to the Second Consent Decree, signed by the Court September 18, 2013) that requires that these objectives be met.

**Table 2 - Comparison of Existing Flows with Allocated Capacities**

	Average Daily Flow (MGD)	Maximum Month Flow (MGD)	Peak Hourly Flow (MGD)	Peak Instantaneous Flow (MGD)
Existing Flows (1)	2.64	3.76	10.6	12.5
Allocated Capacity in Swatara WWTF	3.795	5.391	9.49	11.39
WWTF Reserve (Deficit)	1.155	1.631	(1.11)	(1.11)
Current JUI Allocated Capacity	N/A	N/A	7.4	7.4
Current JUI Reserve (Deficit)	N/A	N/A	(3.2)	(5.1)
JUI "Safe" Capacity (2)	N/A	N/A	9.49	11.39
Current JUI "Safe" Capacity Reserve (Deficit)	N/A	N/A	(1.11)	(1.11)

(1) Average Daily Flow (ADF) and Maximum Month Flow from metered data report in 2012 Chapter 94 Report. Peak Hourly Flow (PHF) and Peak Instantaneous Flow are based on metering at LPTA MH 3 and estimated overflows for largest recorded unexcused event of November 23, 2011.

(2) Safe capacity is defined as the carrying capacity without the threat of overflow, as determined by hydraulic modeling and field measurements, as provided for in the Second Amendment to the Second Consent Decree. Hydraulic modeling indicates that the JUI can carry the peak flow capacity of the treatment plant without the threat of overflow. Safe capacity allocation to LPTA is based LPTA share of the WWTF capacity.

In addition to reduction of peak wet weather flow, there is also a need to abandon the Springford Village package wastewater treatment facility and to replace the Beaver Creek Pumping Station's force main and one of the station's raw wastewater pumps.

# 5. Future Growth and Land Development

## 5.1 Projection of Equivalent Dwelling Units (EDUs) in the Beaver Creek Basin Public Sewerage Service Area

As indicated in Plate 2, most of the land area in the Beaver Creek Basin projected public sewerage service area is either developed, or within approved developments that are in progress. There still remains; however, approximately 800 acres of undeveloped land within the service area. Provided in Table 3 and 4, respectively, are projected new EDUs from the approved developments currently in progress and projected EDUs from undeveloped acreage. Table 5 shows the existing number of EDUs connected to the sewer system in each of Lower Paxton's Beaver Creek sub-basins. Table 5 also summarizes the projected future EDUs as presented in Tables 3 and 4.

As shown in Table 5 there were 9,117 EDUs connected to the Beaver Creek Basin as of July 2013. With 1,699 additional EDUs remaining to be constructed in existing approved developments, and an estimated 1,805 projected EDUs for undeveloped lands based on current zoning, the projected EDUs at build-out is 12,621. This is slightly higher than the 2002 projection of 12,262 because of zoning changes made in the interim, but essentially the same within the accuracy of the projection for undeveloped land.

Table 3 - Projected EDUs from Approved Developments in the Beaver Creek Basin

Map Location Number	Development Name	Sub Basin	Total EDUs	EDUs Occupied Prior to 2013	Proposed EDUs 2013 -2017	Proposed EDUs Post 2017
Approved Developments in the Beaver Creek Base as of October 2013						
26	Amber Fields (Christian Fields)	BC-10	182	67	15	100
27	Autumn Ridge					
	a. Phases I, II, III	BC-10	99	71	10	18
	b. Phase IV	BC-10	29	0	0	29
28	Betty J. Stewart (Laurelwood)	BC-2	11	0	0	11
29	Shchoffstall	BC7	34	0	10	24
31	Hearthside	BC9	14	5	5	4
33	Hunt Club	BC10	130	122	5	3
34	Kendale Oaks	BC10	172	110	25	37
35	Kings Crossing	BC-10	143	122	15	6
36	Larry Hatter (Willow Brook)	BC-9	87	79	8	0
40	Springford PRD					
	c. Springford Village Plant <sup>(1)</sup>	BC-10	258	0	258	0
41	Stonybrook	BC-9	75	74	1	0
42	Stratford Woods	BC-10	91	86	5	0
45	Huntleigh	BC-10	172	10	10	152
46	Mindy Meadows	BC-5	49	18	6	25
47	Old Iron Estates	BC-10	97	65	10	22
48	Pleasant Meadows (Trinity Estates)	BC-8	150	0	0	150
49	Atoria Knoll	BC-11	39	0	20	19
50	Montrail	BC-9	53	0	15	38
51	Park Place	BC-6	37	0	15	22
52	Spring Creek Hollows (Spring Hill)	BC-11	31	10	10	11
53	Wilshire Estates	BC-6	146	8	10	128
54	Charleston Riding Club	BC-10	18	0	8	10
55	Sunny Hill Farms South	BC-11	32	0	0	32
56	Maiden Creek	BC-11	29	15	5	9
57	Deavon Woods	BC-5	35	9	10	16
58	Shadebrook	BC-9	353	0	200	153
59	Grove Road Property	BC-9	4	0	4	0
<b>TOTAL</b>			<b>2,570</b>	<b>871</b>	<b>680</b>	<b>1,019</b>

**Notes:**

(1) Springford Village consists of 163 townhouses, 351 apartments and a community building that is currently served by a private WWTP that will be decommissioned and connected to the public sanitary sewer system. Due to the low flows, for planning purposes each connection was assumed a half EDU.

**Table 4 - Projected EDUs from Undeveloped Acreage in the Beaver Creek Basin  
by Current Zoning Classification**

Subdrainage Basin	Zoning Classification EDUs/GrossAcre	R-1	R-2	R-3	R-C	CG	BC	LI	IN	TND	Undeveloped Acres (1)	Total Projected EDUs	
		1.4	3	5	5	3.3	4	4	5	6		Res.	Non Res
BC-1	Acreage	3.9	0	0	0	0	0	0	0	0	3.9	--	--
	Residential EDUs	5	0	0	0	-	-	-	-	0		5	-
	Non-Residential EDUs	-	-	-	-	0	0	0	0	-		-	0
BC-2	Acreage	0	0	0	0	0	0	0	0	0	0	--	--
	Residential EDUs	0	0	0	0	-	-	-	-	0		0	-
	Non-Residential EDUs	-	-	-	-	0	0	0	0	-		-	0
BC-3	Acreage	0.8	0	0	0	0	0	0	0	0	0.8	--	--
	Residential EDUs	1	0	0	0	-	-	-	-	0		1	-
	Non-Residential EDUs	-	-	-	-	0	0	0	0	-		-	0
BC-4	Acreage	11.7	0	0	0	0	0	35.2	0	0	46.9	--	--
	Residential EDUs	16	0	0	0	-	-	-	-	0		16	-
	Non-Residential EDUs	-	-	-	-	0	0	141	0	-		-	141
BC-5	Acreage	51	0	0	0	0	20.9	9.6	0	0	81.5	--	--
	Residential EDUs	71	0	0	0	-	-	-	-	0		71	-
	Non-Residential EDUs	-	-	-	-	0	84	38	0	-		-	122
BC-6	Acreage	0	0	0	0	0	0	0	0	0	0	--	--
	Residential EDUs	0	0	0	0	-	-	-	-	0		0	-
	Non-Residential EDUs	-	-	-	-	0	0	0	0	-		-	0
BC-7	Acreage	67.6	0	0	0	0	0	0	0	0	67.6	--	--
	Residential EDUs	95	0	0	0	-	-	-	-	0		95	-
	Non-Residential EDUs	-	-	-	-	0	0	0	0	-		-	0
BC-8	Acreage	141.2	1	0	0	2.8	0	0	0	0	145	--	--
	Residential EDUs	198	3	0	0	-	-	-	-	0		201	-
	Non-Residential EDUs	-	-	-	-	9	0	0	0	-		-	9
BC-9	Acreage	27.9	4.1	3.4	0	0	0	0	0	0	35.4	--	--
	Residential EDUs	39	12	17	0	-	-	-	-	0		68	-
	Non-Residential EDUs	-	-	-	-	0	0	0	0	-		-	0
BC-10	Acreage	31.4	0	0	0.7	0	0	0	0	46.3	78.4	--	--
	Residential EDUs	44	0	0	4	-	-	-	-	278		326	-
	Non-Residential EDUs	-	-	-	-	0	0	0	0	-		-	0
BC-11	Acreage	152.6	0	0	0	0	0	0	0	0	152.6	--	--
	Residential EDUs	214	0	0	0	-	-	-	-	0		214	-
	Non-Residential EDUs	-	-	-	-	0	0	0	0	-		-	0
BC-12	Acreage	0	0	0	0	0	0	0	0	0	0	--	--
	Residential EDUs	0	0	0	0	-	-	-	-	0		0	-
	Non-Residential EDUs	-	-	-	-	0	0	0	0	-		-	0
BC-13	Acreage	113.1	0	0	0	0	0	0	75.6	0	188.7	--	--
	Residential EDUs	158	0	0	0	-	-	-	-	0		158	-
	Non-Residential EDUs	-	-	-	-	0	0	0	378	-		-	378
<b>Total Basin</b>											<b>800.8</b>	<b>1155</b>	<b>650</b>

Notes:  
(1) Net of flood plain.

**Table 5 - Projected EDUs Tributary in Beaver Creek**

Subdrainage Basin	Existing Conditions July 2013 EDUs	Total Proposed EDUs from Approved Developments <sup>(1)</sup>	Total Projected EDUs from Undeveloped Land <sup>(2)</sup>	Ultimate Build-Out Conditions (for treatment planning purposes) Total EDUs
BC-1	165	0	5	170
BC-2	668	11	0	679
BC-3	361	0	1	362
BC-4	456	0	157	613
BC-5	292	57	193	542
BC-6	739	175	0	914
BC-7	607	34	95	736
BC-8	880	150	210	1,240
BC-9	1,332	428	68	1,828
BC-10	2,805	738	326	3,868
BC-11	538	106	214	858
BC-12	0	0	0	0
BC-13	3	0	536	539
Lower Paxton Beaver Creek Subtotal	8,846	1,699	1,805	12,350
West Hanover <sup>(3)</sup>	271	0	0	271
Total Projected EDUs Tributary to Swatara JUI and WWTF	9,117	1,699	1,805	12,621

## Notes:

(1) Based on Table 3.

(2) Based on Table 4.

(3) West Hanover customers are included in projections since it is uncertain if they will be reclaimed by West Hanover Twp.

**5.2 Future Wastewater Flow Projections**

Future wastewater flow projections are provided in Tables 6 and 7. The projections presented in Table 6 reflect the addition of projected flows from new development to the existing wastewater flows. The projections in Table 7 are developed assuming flows from existing development are reduced by sewer system rehabilitation. The assumptions in developing flow projections are as follows:

- Average daily flow (ADF) from new development is based on the per capita flow rate of 90 gpcd (allowance for new development per Tapping Fee legislation), and average residential unit occupancy 2.36 persons (2010 census), or 212 gpd/EDU.
- Peak hourly flow (PHF) and peak instantaneous flow (PIF) from new development is 4 times ADF, or 848 per EDU.
- Maximum monthly flow (MMF) from new development is 1.25 times ADF (considered conservative for newly constructed systems).

- Total Beaver Creek Basin ADF from existing development after flow reduction by sewer system replacement/rehabilitation is 250 gpd/EDU
- Total Basin PHF and PIF from existing development after flow reduction by sewer system replacement/rehabilitation is 1,000 gpd/EDU
- Total Basin MMF from existing development is 1.42 times ADF, which is the current ratio of MMF to ADF, and considered conservative since no benefit is assumed from sewer system rehabilitation.

As evident from the tables, projected ADF and MMF are within the respective ADF and MMF allocated capacities in the Swatara Township Authority WWTF, regardless of whether flow reductions are achieved through sewer system rehabilitation. Projected PHF and PIF, however, significantly exceed allocated capacities in both the Swatara Township Authority's WWTF and JUI if existing flows are not reduced. If existing flows are reduced by sewer system replacement/rehabilitation as projected, however, peak flow allocations in the WWTF are marginally exceeded at build-out. Also, hydraulic modeling indicates that the carrying capacity of the Swatara JUI without the threat of overflow may be adequate to allow for an allocation for Lower Paxton in the JUI equivalent to its allocated PIF in the WWTF, or 11.39 mgd. This value is shown in Table 7 for comparison.

**Table 6 - Projected Build-Out Wastewater Flows (No Action)**

Proposed flows with existing conditions and allocations:	ADF (mgd)	Max. Month (mgd)	PHF (mgd)	Peak Instantaneous (mgd)
Existing Flow (1)	2.64	3.76	12.50	12.50
Additional Flow from Planned and Proposed 3,504 EDUs (2)	0.74	0.93	2.97	2.97
Total Existing and Additional Flow	3.38	4.69	15.47	15.47
Allocated Capacity in Joint Use Interceptor	--	--	7.400	7.400
Allocated Capacity in Swatara WWTF	3.795	5.391	9.490	11.390

Notes:

- (1) ADF and Max. Month flows are taken from 2012 Chapter 94 Report. The PHF and PIF are based on metering results from LPTA MH 3 and overflow estimates recorded during the largest "unexcused" wet weather event (November 23, 2011).
- (2) ADF from planned and proposed EDUs is assumed to be 212 gpd/EDU (90 gpcd x 2.36 persons/occupied residential unit). Maximum month from proposed EDUs is estimated to be 1.25 times ADF, considered conservative for new construction. PHF and PIF from proposed EDUs are assumed to be 4 times ADF or 848 gpd/EDU. Total additional planned and proposed EDUs = 3,504 EDUs.

**Table 7 - Projected Build-Out Wastewater Flows (With Sewer Replacement)**

Projected flows with existing flows reduced by completion of replacement projects.	ADF (mgd)	Max. Month (mgd)	PHF (mgd)	Peak Instantaneous (mgd)
Projected Flow from Existing Development (1)	2.28	3.25	9.12	9.12
Additional Flow from Planned and Proposed 3,504 EDUs(2)	0.74	0.93	2.97	2.97
Total Existing and Additional Flow	3.02	4.18	12.09	12.09
Anticipated Capacity in Joint Use Interceptor (3)	--	--	11.390	11.390
Allocated Capacity in Swatara WWTF	3.795	5.391	9.490	11.390

Notes:

- (1) Based on projected flow for existing EDUs is assumed to be 250 gpd/EDU for ADF and 1,000 gpd/EDU for peak flow after rehabilitation projects are complete.
- (2) ADF from planned and proposed EDUs is assumed to be 212 gpd/EDU (90 gpcd x 2.36 persons/occupied residential unit). Maximum month from proposed EDUs is estimated to be 1.25 times ADF, considered conservative for new construction. PHF and PIF from proposed EDUs are assumed to be 4 times ADF or 848 gpd/EDU. Total additional planned and proposed EDUs = 3,504 EDUs.
- (3) Based on current model data, the Joint Use Interceptor can convey approximately 18.4 mgd without the threat of overflow, of which 11.39 mgd would be allocated to Lower Paxton. This requires further modeling as noted in the Second Amendment to the Second Consent Decree, and agreed upon by other parties to the Inter-municipal Agreement, as amended in 2013.

## 6. Alternatives to Provide Improved Wastewater Disposal Facilities

### 6.1 Prior Alternatives Considered

At the time of the 2002 Plan, Lower Paxton Township was over its allocated hydraulic capacity in the Swatara WWTF both with respect to maximum month average daily flow and peak wet weather flow, which were 3.695 and 7.400 MGD, respectively. Since additional hydraulic capacity was not available at the Swatara Township WWTF, temporary peak flow storage would not address maximum month flow, and because sewer system replacement did not seem practical to timely address the maximum month flow issue, the alternatives considered for the Beaver Creek Basin involved conveyance system improvements and wet weather wastewater treatment in Lower Paxton Township. As indicated above, the approved plan called for expansion of the conveyance facilities to eliminate overflows within Lower Paxton’s collection/conveyance system, and construction of a trickling filter wet weather treatment facility to treat both excess peak and maximum month flows on lands owned by Lower Paxton Township Authority and located in South Hanover Township. As indicated above, zoning issues encountered prevented the construction of the wet weather treatment facility, thus requiring consideration of other alternatives.

## **6.2 Changed Conditions**

In the interim time period between 2002 and the 2013, the Swatara Township Authority WWTF was upgraded to meet the requirements of the Chesapeake Bay Tributary Strategy. As a result of the upgrade, the MMF, PHF and PIF capacities of the plant were increased. Also, Lower Paxton Township purchased an additional 0.1 MGD of ADF capacity in the plant, increasing its percentage of the increased capacity of all flow categories. As indicated in Tables 6 and 7, Lower Paxton Township is not currently exceeding its ADF or MMF allocations, nor are those allocated capacities projected to be exceeded at build-out. Currently, SSOs caused by peak hourly flows that exceed both Lower Paxton Township's conveyance system, as well as Swatara Township Authority's JUI and WWTF capacities are the issue.

## **6.3 Alternatives for Meeting Existing and Projected Wastewater Needs**

Since there is no additional peak flow treatment capacity available in the Swatara Township Authority WWTF, and biological treatment of peak flows in Lower Paxton Township is not practical, there are only two viable alternatives available to reduce eliminate SSOs and reduce the hydraulic overload. These are as follows:

### **6.3.1 Alternative 1 - Sewer System Replacement/Rehabilitation**

This alternative involves the replacement of large portions of the wastewater collection system in the Beaver Creek Basin to reduce wet weather infiltration/inflow (I/I) enough to eliminate SSOs and reduce the hydraulic overload. Approximately 46% of the sewers in the Beaver Creek Basin are either asbestos cement pipe (ACP) or vitrified clay pipe (VCP). These sections will require total replacement, including replacement of all main line sewers, manholes, and service laterals. Total replacement also includes installation of observation tees, typically at the transition from the service lateral to the building sewer, and replacement of the building sewer. A larger percentage (54%) of the Beaver Creek Basin is non-ACP/VCP. While a substantial portion of this is relatively new PVC sewers, which are not considered a major source of I/I at this time, it is expected that a significant portion of these collection sewers will require rehabilitation. This alternative also involves metering of the various sub-basins and mini-basins to prioritize the order of mini-basin replacement/rehabilitation, replacement/rehabilitation hydraulic modeling to determine adequacy of trunk sewers and interceptors to accommodate existing and projected post rehabilitation peak flows, and upgrading of conveyance facilities, if necessary. This alternative is known as the Beaver Creek Corrective Action Plan (CAP), and is described in detail in Appendix A.

### **6.3.2 Alternative 2 - Conveyance System Improvements and Wet Weather Storage**

This alternative involves increasing capacity of the trunk sewers, interceptors and pumping stations in the Beaver Creek Basin to carry wet weather flows, and storage of wet weather peak flows in excess Lower Paxton's allocated capacity in the Swatara Township Authority JUI and WWTF.

### **6.3.3 Alternative 3 - Combination of Sewer System Replacement, Conveyance Improvements and Storage**

This involves a combination of Alternatives 1 and 2, replacement of a portion of the wastewater collection system, selected conveyance system improvements, and a reduced storage volume.

## **6.4 Project Cost Estimates and Impact on User Fees**

The estimated total project costs for all work in the Beaver Creek Basin is estimated at \$87,700,000; \$16,200,000 is already committed for in previous or current projects leaving approximately \$71,500,000 to be expensed over the 20 year projected corrective action plan period. The total estimated project cost of \$87,700,000 could be less if the earlier replacement projects are successful or if storage is found to be a less expensive option to continued replacement.

It is anticipated that annual loan payments for the total estimated project cost could result ultimately in an additional \$45 to \$65 per quarter increase in user fees.

# **7. Evaluation of Alternatives**

Nearly half of the Beaver Creek Basin wastewater collection system is composed of poorly performing ACP or VCP. For this reason, Alternative 1, system replacement/rehabilitation as outlined in the Beaver Creek CAP contained in the Second Amendment to the Second Consent Decree, is considered the only viable alternative at this time. This is because: (1) There is insufficient data to appropriately size storage facilities for either Alternative 2 or Alternative 3; (2) on-going sewer system replacement will be required for either of those alternatives to maintain peak flow volumes within the storage capacities; and (3) sewer system replacement/rehabilitation is considered the most reliable method of reducing peak flow to prevent SSOs.

Projected post-replacement of peak flows indicated in Table 7 suggest that some storage may be required as build-out is approached. These projections for total basin peak may be conservative; however, as they assume simple addition of flows and do not account for the fact that peaks from different areas don't arrive at the same time at the JUI and WWTF. In fact, if sewer system replacement/rehabilitation achieves flow reductions such that peak hourly flow is better approximated by the Maryland Curve ( $Q_p = 3.2 \times Q_a^{5/6}$ ), predicted PHF would be 8.04 mgd with a post replacement/rehabilitation average daily flow of 3.02 (Table 7). This is within the carrying capacity of the JUI and allocated PHF capacity in the Swatara WWTF.

Because the need for storage and the size of storage facilities, if necessary, can only be determined after sufficient post-replacement/rehabilitation data are available, Alternative 1, sewer replacement and rehabilitation, as set forth in the Beaver Creek Corrective Action Plan (Appendix A), is the recommended alternative to address wastewater needs in the Beaver Creek Basin at this time. If storage is determined to be required in the future, a further 537 Plan update will be required.

With respect to the Beaver Creek Pumping Station and force main, certain actions must be taken to address more immediate needs. The Beaver Creek Pumping Station was upgraded in 2008/2009 due to increasing mechanical and electrical issues. When the pumping station upgrade was designed, the pumps were sized assuming no I/I reduction and under the assumption that the Beaver Creek Conveyance Improvements and Wet Weather Treatment Plant would be constructed. DEP issued Water Quality Management Permit No. 2208402 on March 19, 2008. The station

upgrade increased the station's capacity to approximately 3.4 mgd using the original force main; however, the future design capacity of 5,555 gpd (8.03 mgd), to be achieved following construction of two new force mains, is set forth in the WQM Part II Permit. The 2008/2009 upgrade included replacement of the raw wastewater pumps with three new pumps (two smaller pumps and one large pump), and provisions were made for a future parallel force main.

Due to inactivity, the large pump has not worked properly and needs to be replaced. With the revised Beaver Creek Corrective Action Plan, I/I will be reduced in at least some of the tributary mini-basins; therefore, the current permitted capacity of 8.03 mgd is no longer required. It is recommended that the large pump be replaced with a pump the same size as the other two pumps, so that initially the station's current pumping capacity of approximately 3.4 mgd will be maintained.

In addition, Township staff have expressed concerns about the condition of the station's existing 12" diameter force main, which is now over 40 years old. Ultimate conveyance capacity requirements in the Beaver Creek Basin will depend on the success of the I/I removal program. It is anticipated that the Beaver Creek Pumping Station capacity will need to be between 4.0 mgd and 6.0 mgd. By June 2014, hydraulic models of the Beaver Creek Interceptor and Nyes Road Interceptor will be developed, calibrated and verified, as set forth in Phase 2, item 2 of the new Beaver Creek CAP. The models will be used to evaluate alternatives and develop a cost-effective long-term solution for Beaver Creek conveyance system upgrades. The alignment, size and discharge point for the new Beaver Creek Pumping Station force main(s) will be determined as part of this evaluation. The station's WQM Part II Permit will be amended in conjunction with the future force main project.

## **8. Institutional Evaluation**

### **8.1 Existing Authority**

The sanitary sewer system serving Lower Paxton Township is owned by the Lower Paxton Township Authority (the Authority), which was formed by the Lower Paxton Township Board of Supervisors in accordance with the Municipality Authorities Act of 1945, as amended and supplemented. The system is operated by Lower Paxton Township under the terms of a Management Agreement.

The Authority consists of a five-member board appointed by the Township Supervisors on a rotating five-year basis. The Authority meets on a quarterly basis, or additionally as required, to review and set policy and to consider and act on other matters as appropriate. As the Authority has no employees, the Township's administrative staff is responsible for day-to-day administrative duties. The Authority retains a solicitor and a consulting engineer who provide advice and professional services.

The balance sheets for the years ending December 31, 2011 and 2012 taken from the 2012 Audit are provided in Appendix B indicating the Authority's financial strength. The Authority has substantial resources through borrowed funds to finance wastewater system improvements. As part of the implementation of the Act 537 Plan recommendations, the Authority has already obtained financing to support the plan through 2014, and is planning for additional financing for full plan implementation.

Township staff maintains the sewerage system under the direction of the Lower Paxton Township Sewer Department Director. In addition to administrative employees, there are field operations staff including an operations supervisor, crew leaders, inspectors that jointly perform the duties of Sewage Enforcement Officer (SEO), and maintenance personnel that perform system maintenance,

I/I investigation and repairs. The field operations staff operates various equipment including trucks, a flusher, an internal sewer television and grouting truck, and numerous portable wastewater flow meters, and is capable of conducting I/I investigations, testing and sewer system rehabilitation. To supplement current staff capabilities, the Authority has contracts with private contractors to provide maintenance and emergency services and repairs on an as-needed basis. Staff rehabilitation and repair capabilities also includes external dig-up and repair/replacement of building sewers and laterals, depending upon the economics of in-house force account versus contracted services.

Lower Paxton Township has enacted several ordinances regulating the use of the sanitary sewer system. Lower Paxton Township and the Lower Paxton Township Authority have the legal authority to implement selected wastewater management alternatives, and are fully empowered to enforce all ordinances, set user fees and take purchasing actions, raise capital for construction and operation and maintenance of facilities, and negotiate inter-municipal.

## **8.2 Financial Activities Necessary to Implement the Plan**

The Authority reserves from the 2009 Bond Issue are sufficient support the Township's Act 537 Plan implementation through 2014. In addition, the Authority has projected long term financing needs for plan implementation and anticipates borrowing sufficient funds for timely implementation of the Plan and Second Amendment to the Second Consent Decree. The options for the additional funding include an additional bond issue, bank loan, or Pennsylvania Infrastructure Investment Authority (PENNVEST) funding. In addition, the Authority will increase quarterly rates in order to meet the debt service requirements of the bond issues.

## **8.3 Institutional Activities Necessary to Implement the Plan**

No new municipal departments or municipal authorities are required to implement the proposed plan. The functions of the Authority and the Lower Paxton Township staff are anticipated to remain the same for matters related to public sanitary sewers.

## **8.4 Administrative and Legal Activities Necessary to Implement the Plan**

Implementation of the proposed plan requires addressing several administrative and legal issues. As noted in Section 8.3, no new authorities or agencies are needed for implementation of the proposed plan. Primary administrative and legal actions required for implementation of each of the major components of the wastewater management plan alternative are as follows:

<b>Plan Component</b>	<b>Legal and Administrative Requirements</b>
I/I Removal by "Total Replacement/Rehab" Approach	<p>Agreements with property owners for private lateral testing and replacement/repair.</p> <p>Encroachment permits for sewer replacement in wetlands and stream crossings.</p> <p>Erosion and sedimentation NPDES Stormwater Permits</p> <p>Securing of rights-of-way as required.</p>

## **9. Implementation Schedule and Justification of Selected Alternatives**

As indicated in Section 6 Evaluation of Alternatives, sewer system replacement and rehabilitation as outlined in the approved Beaver Creek Corrective Action Plan (CAP) is considered the only viable alternative at this time. The schedule for implementation is provided in the Beaver Creek CAP included in Appendix A.

## **10. Environmental Report**

A Uniform Environment Review (UER) has been prepared for this project in anticipation of PENNVEST funding and is provided in Appendix C.

## **Appendices**

**Appendix A**  
**Beaver Creek Corrective Action Plan**



# pennsylvania

DEPARTMENT OF ENVIRONMENTAL PROTECTION

WATER MANAGEMENT PROGRAM

September 26, 2011

Lower Paxton Township  
c/o George Wolfe, Manager  
425 Prince St  
Ste 139  
Harrisburg, PA 17109

RE: Beaver Creek Basin  
Second Corrective Action Plan

Ladies and Gentlemen:

The Department has reviewed the proposed second Corrective Action Plan (CAP) for the Beaver Creek Basin dated September 2011. The CAP is approved.

It is our intention to proceed with amending the Second Consent Decree as proposed to reflect this current decision.

If you have any questions I can be reached at 717-705-4795.

Sincerely,

Lee A. McDonnell, P.E.  
Program Manager

cc: Swatara Twp Authority

---

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## LOWER PAXTON TOWNSHIP

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717/657-5617 FAX 717/724-8312  
SEWER DEPARTMENT  
[www.lowerpaxton-pa.gov](http://www.lowerpaxton-pa.gov)

September 7, 2011

Lee McDonnell, Environmental Program Manager  
DEP Southcentral Regional Office  
909 Elmerton Avenue  
Harrisburg, PA 17110-8200

RE: Beaver Creek – Corrective Action Plan

Dear Lee:

Attached you will find the Second Corrective Action Plan (CAP) for the Beaver Creek Drainage Basin. The Plan has been reviewed by Swatara Township Authority and they have no further comments at this time. Therefore, we are submitting the CAP to the Department for your review and approval.

If you have any questions, please call me.

Sincerely,

George Wolfe,  
Township Manager

FileC:beavercreekcap

**Beaver Creek Drainage Basin  
Hydraulic Overload Corrective Action Plan - Proposed  
September 2011**

**Introduction**

There is currently a limitation on connections in the Beaver Creek Drainage Basin because of overflows and hydraulic overloading of the sewer system caused by infiltration/inflow (I/I) during wet weather. Under the Second Consent Decree of June 13, 2002, signed by Lower Paxton and Swatara Townships, their respective Authorities, developer petitioners, and the PA Department of Environmental Protection, the "Beaver Creek Basin Solution" to reduce the hydraulic overload, commonly known as the Beaver Creek corrective action plan (Beaver Creek CAP), includes the following:

- Construction of a wet weather treatment facility to treat peak wet weather flows and maintain monthly average flows within Lower Paxton's capacity in the Swatara WWTP
- Conveyance system capacity improvements to convey peak wet weather flows to the wet weather treatment plant
- On-going replacement and/or rehabilitation of mini-basins as necessary such that peak wet weather flows do not increase from 2002.

The construction of the wet weather wastewater treatment plant in the Beaver Creek Basin appears to no longer be viable, despite the Authority's diligent efforts. This is because of the inability to obtain approvals from South Hanover Township as described in the following paragraph.

Lower Paxton Township met its obligations for facilities design and submission of permit applications, as required by the Second Consent Decree. When the Department of Environmental Protection (Department) issued an Encroachment Permit for the wet weather treatment plant on March 19, 2008, the Authority took immediate steps to begin the wet weather treatment plant component of the Beaver Creek Corrective Action Plan. In order to provide the necessary site work in advance of the treatment plant construction, the Authority made application to South Hanover Township for a permit to place fill at the proposed wet weather treatment plant site, as provided for in the Encroachment Permit. The permit was denied by South Hanover Township, and litigation followed. Appeals in Dauphin County Common Pleas and Commonwealth Courts by the Authority were unsuccessful. Even if an appeal were to be made to the Pennsylvania Supreme Court, there would be an extended period of litigation. Even if such an appeal were successful, it would most likely be followed by a further extended period of permit appeals/litigation by South Hanover Township, which would continue to prevent the construction of the wet weather treatment plant and interceptor improvements as provided for in the original Beaver Creek CAP.

This second Beaver Creek Basin CAP is necessitated, therefore, because the wet weather treatment plant and conveyance system improvements of the original Beaver Creek solution no longer appear viable. The essential elements of the plan described in this document are as follows:

- Replacement/rehabilitation of a large portion of the wastewater collection systems in the basin, including service laterals and building sewers, to reduce peak and maximum monthly flows.
- Flow metering and hydraulic modeling of the Beaver Creek wastewater conveyance system to prioritize mini-basins for replacement/rehabilitation and establish criteria for determining whether the hydraulic overload has been reduced, as defined in the Second Consent Decree.
- Construction of conveyance system improvements and/or future pumping/storage facilities as may be required to reduce the hydraulic overload.

- On-going post-rehabilitation flow metering on an annual basis to demonstrate reductions in peak wet weather flows.

Like the Paxton Creek Basin, a substantial portion (approximately 46%) of the sewers in the Beaver Creek Basin is either asbestos cement pipe (ACP) or vitrified clay pipe (VCP). These sections will require total replacement, including replacement of all main line sewers, manholes, service laterals, and building sewers. Total replacement also includes installation of observation tees, typically at the transition from the service lateral to the building sewer, and replacement of the building sewer. A larger percentage (54%) of the of the Beaver Creek Basin is non-ACP/VCP. A substantial portion of this is relatively new PVC sewers, which are not considered a major source of I/I at this time.

There are approximately 8,500 EDUs in the Beaver Creek Interceptor drainage area of Lower Paxton Township. Projected EDU totals for the year 2022 and build-out are approximately 10,600 and 12,300, respectively. With the purchase of additional capacity in the Swatara Township Authority's WWTP from Swatara Township Authority, Lower Paxton's annual average daily flow allocation in the treatment plant is 3.795 MGD. According to the Design Engineer's Report, the recent treatment plant improvements have increased the Swatara WWTP's peak hourly flow capacity to 2.5 times average daily flow. Lower Paxton Township's share of the design peak hourly flow capacity in the treatment plant, therefore, is now 9.49 MGD. The goal of the Beaver Creek Basin CAP is to reduce peak wet weather flows in order not to exceed this capacity, which would represent approximately 900 gpd/EDU at the number of EDUs projected for 2022, and 780 gpd/EDU at projected build-out. Based on experience to date, it appears that storage will be required at some point in the future. The quantity of storage required will be determined after substantial replacement/rehabilitation is completed, similar to the Paxton Creek Basin CAP. So long as LPTA remains in compliance with this CAP, the Department will advise Swatara Township Authority on the proper processing of sewer planning modules. Requests for new connections in Lower Paxton Township before LPTA's work under the CAP is completed shall be addressed consistent with the 1985 IMA, as amended or superseded, and the Settlement Agreement, as amended.

## Plan Phases

The proposed Beaver Creek Basin Corrective Action Plan, developed on the basis of experience gained in the execution of the Paxton Creek CAP and given the composition of the Beaver Creek Basin sewer system, consists of three (3) phases.

- **Phase 1** is Mini-Basin I/I Rehabilitation Program for the six (6) mini-basins that represent the highest I/I basins as presently metered. These are scheduled to be completed in five years.
- **Phase 2** Develop the long-term implementation goals to meet allocated inter-municipal flows and manage conveyance system surcharging. This phase will consist of a combination of flow metering and hydraulic modeling, which should be completed by 2014, depending on the occurrence of a sufficient number of metered wet weather events to provide adequate data for prioritization and model calibration and verification.
- **Phase 3** will be the long-term rehabilitation of the mini-basins prioritized from the data developed during Phase 2.

## Phase 1

Currently, seven (7) of 11 sub-basins within the Beaver Creek are successfully metered annually and the results included in the annual report to the Department. The three sub-basins with the highest contribution of I/I had previously been selected for metering on a mini-basin level. From that metering

data, six (6) mini-basins with the highest contribution of I/I were identified and are listed below in the table.

**Phase 1 Beaver Creek Mini-Basins Table**

Mini-Basin	Est. EDUs	Peak gpd/EDU	Estimated Peak Excess I/I (mgd)	Est. ACP/VCP Mainline (feet)	Est. "Other" Mainline (feet)
BC6A	272	7000 <sup>1</sup>	1.63 <sup>1</sup>	6300	1400
BC6C	174	7000	1.04	10000	14
BC6B Partial <sup>2</sup>	139	7000 <sup>1</sup>	0.83 <sup>1</sup>	9300	2040
BC3A	255	9000	2.04	12500	5700
BC4C	103	8000	0.72	6900	600
BC4A	151	6000	0.76	8500	8500

1 - Based on overall sub-basin metering data; no mini-basin metering data available

2 - Older sections of BC-6B south of Route 22.

The six (6) mini-basins are selected for rehabilitation in Phase 1. Replacement/rehabilitation of these basins has the potential to remove an estimated 7 MGD of excess peak I/I. The level of effort for Phase 1 includes replacement of approximately 53,500 LF of ACP/VCP collection sewers, as well as associated manholes, service laterals and building sewers. The 18,250 LF of non-ACP/VCP sewer mains and associated manholes will be addressed if determined necessary by flow metering or physical inspection. If significant underslab issues are identified for the Group 1 mini-basin during wet weather flow monitoring after project completion, the location and correction of those issues will be undertaken, as practical.

The approach for the rehabilitation of the mini-basins in Beaver Creek will be similar to the approach developed for the current Paxton Creek Basin CAP. The approach is as follows.

- Replacement, to include lining as appropriate, of essentially all ACP and VCP and associated manholes, service laterals and building sewers in the Mini-Basin, as required.
- Rehabilitation of non-ACP/VCP areas in the Mini-Basin as practical. PVC sewers will not be initially addressed unless I/I issues are identified by either flow metering or physical inspection. If excessive I/I is determined present in a PVC sewer system, a rehabilitation program consisting of testing and repair of sewer system elements will be implemented.
- Elimination of underslab sources, as practical.

## Phase 2

Phase 2 consists of developing the proposed long-term implementation goals necessary to meet and then maintain the allocated flows to Swatara. These goals will be built on a combination of additional flow metering, hydraulic modeling, and cost analysis and prioritization of corrective actions. The proposed metering schedule and meter locations are presented in Table 1 and Figure 1, respectively. The metering schedule is weather dependent, and may require modification if there are not sufficient wet weather events in a given metering season.

The primary steps of Phase 2 are outlined as follows:

1. Installation of additional meters in the fall of 2011 at strategic locations on the Beaver Creek and Nyes Road Interceptors, and the Joint Use Interceptor as permitted and at locations recommended or reviewed by Swatara Township Authority. Flow data from these meters and existing meters in Beaver Creek will be used to capture verification data for a significant and an extreme wet

weather event (see Figure 1). These two events as well as typical dry weather flows will be used to assist with the development and verification of a hydraulic model of the interceptors.

2. Develop a hydraulic model of the Beaver Creek and Nyes Road Interceptors, as well as the Joint Use Interceptor, as permitted by Swatara Township Authority. These models will be calibrated and verified using the metering data collected above. Once verified for existing conditions, the Beaver Creek Basin Sewer Model will be used to (1) verify and manage surcharging sewers, (2) identify capacity limitations, (3) comply with inter-municipal agreements. The model will also be used along with cost analysis to compare various rehabilitation, storage and capacity improvement scenarios to determine the most effective long-term solutions for implementation. The model results and suggested long-term solutions will be submitted to the Department for approval along with the annual report in June 2012, assuming the appropriate weather conditions are experienced to allow collection of necessary data. If sufficient data cannot be obtained, an extension of time to complete the modeling will be required. All raw data will be made available to STA as soon as it becomes available, and data analysis and reporting upon completion.
3. More aggressive metering of unmetered mini-basins throughout the fall of 2012 – spring 2014 in order to prioritize the remaining mini-basins, where feasible, in Beaver Creek. (Note: Not all mini-basins will be able to be successfully metered due to access or hydraulic factors. Also, a mini-basin will not be included in the prioritization if it is determined to have a peak flow rate equal to or less than 1,000 gpd/EDU or does not contribute significant I/I.) The resulting mini-basin rehabilitation schedule and associated collection system improvements will be grouped into five-year periods for implementation and submitted to the Department for approval with the annual report in June 2014. Prioritization will be based on (1) elimination of overflows and (2) most significant excess I/I.

### Phase 3

Phase 3 will be the rehabilitation of the mini-basins prioritized from the data developed during Phase 2 and as described in Phase 1.

A completed mini-basin project is defined to be:

1. Completion of a) replacement, or lining as appropriate, of the all ACP and VCP sewer mains and associated manholes, service laterals and building sewers in the Mini-Basin; and b) demonstration that all non-ACP/VCP sewer sections meet or are below 1,000 gpd/EDU based on the Mini-Basin Characteristic Curve from wet weather monitoring for a storm event equivalent to a 4,500 gpd/EDU storm from the control basin, PC-1F.

or

2. Completion of a) replacement, or lining as appropriate, of the all ACP and VCP sewer mains and associated manholes, service laterals and building sewers in the Mini-Basin; and b) rehabilitation of non-ACP/VCP areas in the mini-basin as defined in Section CL. of the original Second Consent Decree (PVC sewers built after the year 2000 will not be initially addressed unless I/I issues are known).

or

3. Demonstration that the mini-basin from the Prioritization Schedule meets or is below 1,000 gpd/EDU based on the Mini-Basin Characteristic Curve from wet weather monitoring for a storm event equivalent to a 4,500 gpd/EDU storm from the control basin, PC-1F.

### **Beaver Creek Corrective Action Plan Implementation Schedule**

Because of the significant efforts needed, a 20-year implementation schedule for this Beaver Creek Basin CAP is required. The Beaver Creek Basin includes an estimated 233,000 LF of ACP/VCP sewer mains (44 miles) and associated service laterals and manholes, and approximately 270,000 LF of non-ACP/VCP sewer mains (51 miles) and the testing and potential repair/replacement of an estimated 340,000 LF or more of service laterals and building sewers (65 miles). PVC sewers constructed since the year 2000 and PVC sewer sections with wet weather peak hourly flows less than 1,000 gpd/EDU will not be initially addressed in the CAP unless I/I issues are known.

Given the success and the knowledge gained from the Paxton Creek CAP, the Beaver Creek Mini-Basin I/I Rehabilitation Program, with complete replacement of ACP/VCP collection sewer systems, is expected to ultimately eliminate overflows, and has the potential to reduce the hydraulic overload in the Beaver Creek Basin. That is, to accommodate future build-out projections and maintain a peak wet weather flow rate of less than or equal to the target of 9.49 MGD.

After fifteen years from the initiation of the Beaver Creek CAP, the Township will evaluate the progress and success of the Beaver Creek CAP and determine whether any pumping/storage facilities will be required to insure future capacity. If so, it is anticipated that such facilities will be completed within three years of DEP planning approval.

### **Permits and Connections**

During the years that this Beaver Creek CAP is in effect, as long as Lower Paxton meets the Plan and Schedule outlined in the CAP, Lower Paxton and STA will review Planning Modules for development in the Beaver Creek Basin and submit them to the Department for approval. Such modules will be submitted only with the agreement by the developers to hold the Department, STA, and Lower Paxton Township harmless if connection permits are not available. The Department will provide STA with guidance on how STA should process modules before work under the CAP is completed by LPTA.

As long as the Department determines that Lower Paxton Township is in compliance with the terms and conditions of the Beaver Creek CAP, Lower Paxton will receive approval from the Department for connections consistent with the Second Consent Decree. Such approvals by the Department are subject to STA's rights under the Intermunicipal Agreement, as amended or superseded, and Settlement Agreement, as amended.

**TABLE 1  
BEAVER CREEK PRIORITIZATION**

Minibasin/ Interceptor	LENGTH OF PIPE (FT)								2010 EDUs	Metering EDUs	No. of Accounts	Peak [gpd/EDU] †	Peak Excess l/l (mgd)	Prioritiz ation	Meter Season
	ABS	ACP	CIP	PVC	RCP	OTHER	VCP	TOTALS							
<b>BC1</b>	-	<b>8,311</b>	<b>134</b>	<b>1,501</b>	-	<b>196</b>	<b>190</b>	<b>10,332</b>	<b>154</b>	<b>154</b>	<b>149</b>				
BC1A	-	8311	134	1501	0	196	190	10,332	154	154	149				Complete
<b>BC2</b>	-	<b>26,794</b>	-	<b>5,228</b>	-	-	<b>983</b>	<b>33,005</b>	<b>642</b>	<b>633</b>	<b>600</b>	<b>6,500</b>			
BC2A	-	8,354	-	4,618	-	-	192	13,164	293	292	277				2011
BC2B	-	9,395	-	-	-	-	-	9,395	144	150	143				2011
BC2C	-	9,045	-	610	-	-	791	10,446	205	191	180				2011
<b>BC3</b>	-	<b>18,791</b>	<b>1,264</b>	<b>4,810</b>	-	-	<b>117</b>	<b>24,982</b>	<b>355</b>	<b>283</b>	<b>945</b>	<b>9,000</b>			
BC3A	-	12,751	1,264	3,761	-	-	117	17,899	263	194	253	9,000	1.55	1	Complete
BC3B	-	6,040	-	1,049	-	-	-	7,089	92	89	92	2,500	0.13		Complete
<b>BC4</b>	<b>277</b>	<b>18,317</b>	<b>428</b>	<b>12,975</b>	-	-	<b>460</b>	<b>32,456</b>	<b>410</b>	<b>393</b>	<b>329</b>	<b>6,000</b>			
BC4A	277	8,207	62	8,467	-	-	460	17,473	158	119	150	6,000	0.60	4	Complete
BC4B	-	3,182	-	4,275	-	-	-	7,457	142	158	130	5,500	0.71	6	Complete
BC4C	-	6,928	366	233	-	-	-	7,527	110	116	49	8,000	0.81	2	Complete
<b>BC5</b>	-	<b>8,605</b>	<b>492</b>	<b>16,702</b>	-	<b>223</b>	-	<b>26,023</b>	<b>290</b>	<b>289</b>	<b>287</b>				
BC5A	-	2,744	492	9,947	-	223	-	13,406	122	91	120				2011-2012
BC5B	-	5,862	-	6,755	-	-	-	12,617	168	198	167				2011-2012
<b>BC6</b>	-	<b>5,208</b>	<b>1,111</b>	<b>5,691</b>	<b>14</b>	<b>796</b>	<b>28,032</b>	<b>40,852</b>	<b>768</b>	<b>779</b>	<b>356</b>	<b>7,000</b>			
BC6A	-	1,776	-	999	-	314	4,697	7,786	282	277	83				2011
BC6B	-	3,432	1,111	4,692	-	482	13,318	23,035	306	315	144				2011
BC6C	-	-	-	-	14	-	10,017	10,031	180	187	129		1.12	3	2011
<b>BC7</b>	-	<b>18,214</b>	-	<b>9,933</b>	<b>602</b>	<b>511</b>	<b>1,743</b>	<b>31,003</b>	<b>502</b>	<b>558</b>	<b>500</b>				
BC7A	-	7,597	-	434	-	164	-	8,195	111	110	110				2013-2014
BC7B	-	6,480	-	1,643	-	-	-	8,123	111	109	111				2013-2014
BC7C	-	3,839	-	528	-	-	1,743	6,110	89	147	88				2013-2014
BC7D	-	298	-	7,328	602	347	-	8,575	191	192	191				2013-2014
<b>BC8</b>	<b>4,223</b>	<b>16,481</b>	<b>1,085</b>	<b>17,065</b>	-	<b>37</b>	<b>27,091</b>	<b>65,982</b>	<b>1,247</b>	<b>1,369</b>	<b>1,029</b>	<b>5,000</b>			
BC8A	-	5,398	-	1,188	-	-	248	6,834	1	2	1				2012-2013
BC8B	-	-	1,085	7,886	-	37	-	9,008	375	489	163				2012-2013
BC8C	772	2,704	-	6,524	-	-	-	10,000	95	96	96	5,000	0.48	5	2012-2012
BC8D	-	1,944	-	-	-	-	1,886	3,330	59	60	59				2012-2012
BC8E	1,428	2,614	-	-	-	-	2,255	6,297	102	101	102				2012-2012
BC8F	2,023	2,771	-	-	-	-	-	4,794	92	92	92				2012-2012
BC8G	-	892	-	-	-	-	12,891	13,783	266	274	259				2012-2012
BC8H	-	158	-	1,467	-	-	9,811	11,436	257	255	257				2012-2012
<b>BC9</b>	<b>3,241</b>	<b>22,342</b>	<b>117</b>	<b>27,089</b>	<b>1,491</b>	<b>35</b>	<b>3,182</b>	<b>57,497</b>	<b>1,331</b>	<b>1,255</b>	<b>884</b>	<b>4,000</b>			
BC9A	-	5,909	117	3,434	322	-	1,532	11,314	144	138	122				2013-2014
BC9B	-	263	-	20,439	227	-	-	20,929	503	426	503				2013-2014
BC9C	2,261	6,201	-	1,675	385	-	1,650	12,172	167	176	116				2013-2014
BC9D	980	7,024	-	1,541	557	35	-	10,137	145	143	142				2013-2014
BC9E	-	2,945	-	-	-	-	-	2,945	372	372	1				2013-2014
<b>BC10</b>	<b>3,225</b>	<b>23,505</b>	<b>378</b>	<b>102,760</b>	-	<b>1,420</b>	-	<b>131,288</b>	<b>2,271</b>	<b>1,993</b>	<b>1,582</b>				
BC10A	632	8,651	378	49,811	-	-	-	59,472	1,124	982	656				2011-2012
BC10B	-	280	-	26,475	-	24	-	26,775	334	274	334				2011-2012
BC10C	2,593	9,363	-	21,627	-	1,396	-	34,979	675	610	454				2011-2012
BC10D	-	5,211	-	4,847	-	-	-	10,058	138	127	138				2011-2012
<b>BC11</b>	-	<b>13,604</b>	-	<b>26,513</b>	-	<b>4,118</b>	-	<b>44,236</b>	<b>592</b>	<b>592</b>	<b>198</b>				
BC11A	-	5,518	-	16,928	-	3,775	-	26,221	435	435	42				2013-2014
BC11B	-	8,086	-	9,586	-	343	-	18,015	157	157	156				2013-2014
<b>WH</b>	-	-	-	-	-	<b>11,410</b>	-	<b>11,410</b>	<b>271</b>	-	-				
WHO1	-	-	-	-	-	5,259	-	5,259	142						2011-2012
WHO2	-	-	-	-	-	6,151	-	6,151	129						2011-2012
<b>Trunklines</b>															
Beaver Creek Interceptor	-	6,134	2,814	-	5,350	-	-	14,298							
Nyes Road Interceptor	-	6,050	1,404	506	11,840	417	-	20,217							
Trunk G	-	4,456	72	-	-	42	-	4,570							
Trunk H	-	803	-	-	3,932	-	-	4,735							
Trunk J	-	5,929	-	189	-	128	-	6,246							
Trunk K	-	4,500	1,603	-	-	-	-	6,103							
Trunk L	-	480	-	-	-	-	-	480							

**Appendix B**  
**2012 Audit Balance Sheets for the**  
**Years Ending December 31, 2011 and 2012**

**LOWER PAXTON TOWNSHIP  
AUTHORITY  
(A COMPONENT UNIT OF  
LOWER PAXTON TOWNSHIP)  
FINANCIAL STATEMENTS  
YEAR ENDED DECEMBER 31, 2012**

LOWER PAXTON TOWNSHIP AUTHORITY  
(A COMPONENT UNIT OF LOWER PAXTON TOWNSHIP)  
FINANCIAL STATEMENTS  
YEAR ENDED DECEMBER 31, 2012

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# Zelenkofske Axelrod LLC

## INDEPENDENT AUDITORS' REPORT

Board of Supervisors  
Lower Paxton Township Authority  
Harrisburg, Pennsylvania

We have audited the accompanying financial statements of the business-type activities of LOWER PAXTON TOWNSHIP AUTHORITY as of and for the year ended December 31, 2012, and the related notes to the financial statements, which collectively comprise LOWER PAXTON TOWNSHIP AUTHORITY's basic financial statements as listed in the table of contents.

### ***Management's Responsibility for the Financial Statements***

Management is responsible for the preparation and fair presentation of these financial statements in accordance with accounting principles generally accepted in the United States of America; this includes the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error.

### ***Auditor's Responsibility***

Our responsibility is to express an opinion on these financial statements based on our audit. We conducted our audit in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

### ***Opinion***

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of the business-type activities of LOWER PAXTON TOWNSHIP AUTHORITY, as of December 31, 2012, and the changes in financial position and cash flows thereof for the year then ended in accordance with accounting principles generally accepted in the United States of America.

<b><i>Harrisburg</i></b>	<b><i>Lehigh Valley</i></b>	<b><i>Philadelphia</i></b>	<b><i>Pittsburgh</i></b>
830 Sir Thomas Court, Suite 100 Harrisburg, PA 17109 717.561.9200 Fax 717.561.9202	1101 West Hamilton Street Allentown, PA 18101-1043 610.871.5077 Fax 717.561.9202	2370 York Road, Suite A-5 Jamison, PA 18929 215.918.2277 Fax 215.918.2302	3800 McKnight E. Drive, Suite 3805 Pittsburgh, PA 15237 412.367.7102 Fax 412.367.7103

# Zelenkofske Axelrod LLC

## ***Adoption of Governmental Accounting Standard Board Principles***

As discussed in Note 1 to the financial statements, in 2012 the AUTHORITY adopted the remaining provisions of Governmental Accounting Standards Board's Statement 57, "OPEB Measurements by Agent Employers and Agent Multiple Employer Plans", and the provisions of Statement No. 60, "Accounting and Financial Reporting for Service Concession Arrangements", Statement No. 62, "Codification of Accounting and Financial Reporting Guidance Contained in Pre – November 30, 1989 FASB and AICPA Pronouncements", Statement No. 63, "Financial Reporting of Deferred Outflows of Resources, Deferred Inflows of Resources, and Net Position", and Statement No. 64, "Derivative Instruments: Application of Hedge Accounting Termination Provisions – an Amendment of GASB Statement No. 53".

## ***Other-Matters***

### ***Required Supplementary Information***

Accounting principles generally accepted in the United States of America require that the management's discussion and analysis on pages 3 through 9 be presented to supplement the basic financial statements. Such information, although not a part of the basic financial statements, is required by the Governmental Accounting Standards Board, who considers it to be an essential part of financial reporting for placing the basic financial statements in an appropriate operational, economic, or historical context. We have applied certain limited procedures to the required supplementary information in accordance with auditing standards generally accepted in the United States of America, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic financial statements, and other knowledge we obtained during our audit of the basic financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

*Zelenkofske Axelrod LLC*

ZELENKOFKSKE AXELROD LLC

Harrisburg, Pennsylvania  
June 24, 2013

**LOWER PAXTON TOWNSHIP AUTHORITY  
HARRISBURG, PENNSYLVANIA  
MANAGEMENT'S DISCUSSION AND ANALYSIS (MD&A)  
DECEMBER 31, 2012**

The Management's Discussion and Analysis (MD&A) is a component part of the reporting model adopted by the Governmental Accounting Standards Board (GASB), as referenced in Statement No. 34 issued in June 1999. The intent of this MD&A is to summarize Lower Paxton Township Authority's (Authority) financial performance as a whole, in part, using comparative information from the current year analyzed against prior years.

The Authority's MD&A presents a narrative overview and analysis of the Authority's financial performance for the fiscal year ended December 31, 2012. It is recommended that it be read in conjunction with the accompanying basic financial statements and notes to the financial statements in order to obtain a thorough understanding of the Authority's financial condition as of December 31, 2012.

**FINANCIAL HIGHLIGHTS**

The following are key financial highlights.

The Authority continues to implement the Second Consent Decree with the Pennsylvania Department of Environmental Protection (PADEP), which was entered into in June 2002 to eliminate the hydraulic overloads in the sewer system, including Beaver, Paxton and Spring Creek. The PADEP approved the first amendment to the Second Consent Decree in 2007 for the Paxton Creek Basin which essentially provides for the replacement of 70% of the Asbestos Cement Main Sewer Pipe in the basin over a 15-year period at a cost of \$75 million. The Authority authorized the consulting engineer, CET Engineering, in late 2010 to prepare a Second Beaver Creek Basin CAP for a sewer replacement program similar to Paxton Creek which was necessitated because the wet weather treatment plant permit was denied and the appeals in Dauphin County and Commonwealth Court were unsuccessful. The Authority submitted the Second Beaver Creek CAP in August 2011 and received approval from PADEP in September 2011. In addition, the Authority received a draft Second Amendment to the Second Consent Decree from the PADEP and Settlement Agreement from Swatara Township Authority to provide for the new Beaver Creek 15 year sewer replacement program. The Second Amendment to the Second Consent Decree and Settlement Agreement are scheduled for Board action by all the parties in January 2013.

In April 2010, the Township of Lower Paxton obtained a Pennsylvania Infrastructure Investment Authority ("PENNVEST") loan to finance a portion of the Sewer Remediation Project. The principal amount of the loan is \$13,354,113, of which \$9,749,491 has been drawn down as of December 31, 2012. The outstanding balance as of December 31, 2012 was \$9,438,693.

In 2012, the sewer rates remained at \$120 per quarter due to a significant cash balance created by the delay in the implementation of the Beaver Creek Corrective Action Plan.

As of December 31, 2012, the amount of money available for continuing sanitary sewer capital projects is \$35,783,226.

## **OVERVIEW OF THE FINANCIAL STATEMENTS**

The financial section of this report consists of five parts: management's discussion and analysis; statement of net position; statement of revenues and expenses; statement of cash flows and notes to financial statements.

These statements offer short- and long-term financial information about the Authority's activities.

The statement of net position provides information about the Authority's assets and serves as a useful indicator of the entity's financial position. Increases and decreases in net position show whether the financial condition is improving or deteriorating.

All of the current year's revenues and expenses are accounted for in the statement of revenues and expenses. This statement measures the success of the Authority's operations over the past year and can be used to determine whether the Authority has recovered all of its costs in maintaining the sewer system.

The Authority's rates are based on a study performed by its consulting engineer as part of the recent Subsidy Agreement for the repayment of debt with the Township. This study is updated annually as part of the annual budget approval process and the ongoing Act 537 Plan.

The statement of cash flows provides information about the Authority's cash flows from operating activities; capital and related financing activities and investing activities. The statement reports cash receipts, cash payments and net changes in cash from each of these activities during the reporting period.

The notes to the financial statements provide required disclosures and other information that are essential to a full understanding of the data in the statements. The notes present information about the Authority's accounting policies, deposits and investments, long-term debt, advance refundings, commitments, policy on interest and legal agreements that may affect the operation of the Authority.

## **SUMMARY OF ORGANIZATION AND BUSINESS**

The Lower Paxton Township Authority was incorporated on June 11, 1951 and the Articles of Incorporation were amended on April 30, 1954, changing the name to the Lower Paxton Township Authority for the purpose of financing, construction and maintenance of sewerage facilities. In 1969, the Township extended the term of existence of the Authority for 50 years, from May 1, 1969 to May 1, 2019.

In 2002, the Authority amended the Articles of Incorporation to extend the term of existence to 2023 and increase the members from five to seven. In 2009, the term of existence was amended again to extend the term to 2058 for issuance of new bonds. The Township Authority is an independent organization directed by board members appointed by the Township Supervisors for five-year terms. The Authority meets the second Tuesday of the second month in each calendar quarter. The Authority entered into an Interim Management Agreement with the Township at the beginning of 1995 and finalized the agreement in 1997. Under this agreement, the Township provides administration, operation and maintenance services related to the Authority's sewer system. The Authority retains ownership of the sewer system and all property, and the Township owns most personal equipment. The Township Sewer Department currently has a staff of 22 full-time employees and 4 part-time employees.

The sewer system consists of more than 270 miles of sanitary sewers, ranging in size from 8" to 30"; 6 pumping stations; a sewer operations facility and a package treatment facility with .075 MGD capacity.

**FINANCIAL ANALYSIS**

The following comparative Tables A-1 and A-2 are condensed financial statements that provide key financial data over the reporting period. Additional financial highlights for 2012 are provided after each table as supporting information.

**Table A-1**  
**Statements of Net Position**  
**December 31, 2012 and 2011**

	December 31, 2012	December 31, 2011
Current and Other Assets	\$ 9,942,682	\$ 11,026,125
Capital Assets	74,283,772	68,948,153
Other Noncurrent Assets	32,059,147	37,814,758
<b>Total Assets</b>	<b>\$ 116,285,601</b>	<b>\$ 117,789,036</b>
Current Liabilities	\$ 5,057,156	\$ 5,275,780
Long-Term Liabilities	78,781,032	78,936,942
<b>Total Liabilities</b>	<b>83,838,188</b>	<b>84,212,722</b>
Net Investment in Capital Assets	26,202,166	26,419,947
Unrestricted	6,245,247	7,156,367
<b>Total Net Position</b>	<b>32,447,413</b>	<b>33,576,314</b>
<b>Total Liabilities and Net Position</b>	<b>\$ 116,285,601</b>	<b>\$ 117,789,036</b>

Total net position decreased from 2011 to 2012. This is primarily due to an increase in operating expenses related to the Second Consent Decree.

**Table A-2**  
**Years ended December 31, 2012 and 2011**  
**Statements of Revenues and Expenses**

	<u>December 31,</u> <u>2012</u>	<u>December 31,</u> <u>2011</u>
<b>Revenues</b>		
<b>Operating Revenues</b>		
Sewer Rentals	\$ 12,022,038	\$ 11,957,479
Other	<u>55,379</u>	<u>51,853</u>
<b>Total Operating Revenues</b>	<u>12,077,417</u>	<u>12,009,332</u>
<b>Non-Operating Revenues</b>		
Tapping Fees	375,257	194,150
Grant Income	266,884	-
Interest Income	<u>1,090,802</u>	<u>1,346,936</u>
<b>Total Non-Operating Revenues</b>	<u>1,732,943</u>	<u>1,541,086</u>
<b>Total Revenues</b>	<u>13,810,360</u>	<u>13,550,418</u>
<b>Expenses</b>		
<b>Operating Expenses</b>		
Treatment and Transmission Charges	3,984,987	4,416,895
Sewer Maintenance	41,980	54,104
Legal and Accounting	227,571	186,757
Engineering	58,180	57,677
Office, Insurance and Miscellaneous Expenses	237,686	190,114
Reimbursements to Lower Paxton Township	1,894,343	1,721,470
Private Source Repairs	1,966,663	267,893
Other	129,417	237,752
Amortization	336,848	298,292
Depreciation	<u>2,315,378</u>	<u>2,128,242</u>
<b>Total Operating Expenses</b>	<u>11,173,053</u>	<u>9,559,196</u>
<b>Non-Operating Expenses</b>		
Interest	<u>3,766,208</u>	<u>3,636,359</u>
<b>Total Non-Operating Expenses</b>	<u>3,766,208</u>	<u>3,636,359</u>
<b>Total Expenses</b>	<u>14,939,261</u>	<u>13,195,555</u>
<b>Net Income</b>	<u>\$ (1,128,901)</u>	<u>\$ 354,863</u>

Sewer rental revenue increased slightly in 2012, due to new sewer customers from development. Treatment and transmission charges decreased slightly due to the reduced payments to the City of Harrisburg. Total operating expenses increased with the increase in engineering and legal expenses and private source repairs associated with expenses with the Second Consent Decree.

**CAPITAL ASSETS**

The Authority's investment in capital assets at December 31, 2012, net of accumulated depreciation, was \$74,283,772. Capital assets consist primarily of the sewer system and deferred capacity costs. The following is a summary of capital assets at December 31, 2012:

Land	\$ 830,692
Intangibles (Non-depreciable)	1,148,530
Intangibles (Depreciable)	551,395
Buildings	1,116,145
Machinery and Equipment	292,876
Furniture	19,299
Sewer System	87,937,980
Deferred Capacity Costs	21,144,628
Accumulated Depreciation	<u>(38,757,773)</u>
	<u>\$ 74,283,772</u>

Detailed information about the Authority's capital assets can be found in Note 3 of the Financial Statements.

**DEBT ADMINISTRATION**

The Authority's long term debt activity for 2012 is as follows and is detailed in Note 4 to the Financial Statements:

Type	Beginning Balance	Additions	Deletions	Ending Balance
General Obligation Debt	\$ 71,070,000	\$ -	\$ 1,265,000	\$ 69,805,000
Loans Payable	<u>8,381,942</u>	<u>1,367,549</u>	<u>310,798</u>	<u>9,438,693</u>
Total Long Term Debt	<u>\$ 79,451,942</u>	<u>\$ 1,367,549</u>	<u>\$ 1,575,798</u>	<u>\$ 79,243,693</u>

At the end of 2012, the Authority had a total long-term debt, net of current maturities, in the amount of \$78,781,032 based on amounts under subsidy agreements with the Township.

The Authority agrees to pay the Township, from receipts and revenues from its sewer system, amounts sufficient to pay the Authority's portion of the principal and interest on the bonds when and as the same become due. The subsidy agreements contain various covenants of the Authority, including a covenant to impose and collect sewer rentals in each year sufficient, with other funds, to pay the operation and maintenance expenses, including amounts due in accordance with the terms of the subsidy agreements for amounts payable for debt service on the bonds issued.

In April 2010, the Township of Lower Paxton obtained a Pennsylvania Infrastructure Investment Authority ("PENNVEST") loan to finance a portion of the Sewer Remediation Project. The principal amount of the loan is \$13,354,113, of which \$9,749,491 has been drawn down as of December 31, 2012. It is anticipated that the final loan amount will be \$10,236,966 following release of the 5% in retainage of \$487,475. The final loan amount was reduced due to the actual construction bids received and final quantities being less than the engineer estimate. It is anticipated that the retainage will be released in 2013 and all funds from the loan will be drawn down by December 31, 2013. The Authority is required to make monthly interest only payments until all funds are drawn down, and the loan carries an interest rate of 2.445% during the construction phase. Once all funds are drawn down, the loan carries an interest rate of 2.445% for years 1-5 and a rate of 3.133% years 5-maturity. The loan is scheduled to mature on June 1, 2032. As of December 31, 2012, the outstanding balance was \$9,438,693.

## **GENERAL TRENDS AND SIGNIFICANT EVENTS**

On June 13, 2002, the Commonwealth Court approved the Second Consent Decree which incorporates the corrective action plans to eliminate the overflows and hydraulic overload in the Beaver Creek, Paxton Creek and a portion of the Spring Creek Basins. The Second Consent Decree is in the process of being amended to incorporate the new Beaver Creek Corrective Action Plan.

The Second Consent Decree eliminated the moratorium on the approval of PADEP planning modules for new building lots in each drainage basin. The Authority initially realized a significant increase in new approved lots in the Beaver Creek and Paxton Creek Basin in 2002 and a significant decrease in 2008 and 2009 with the downturn in the economy. However, over the past several years the Township has seen a slight increase in planning module submissions and permit applications. The Second Consent Decree continues to impose restrictions on the number of new connections annually in each drainage basin. Specifically, the Township receives 168 connections in the Beaver Creek Basin together with any carryover permits from the "Developers" allowable under the agreement and 93 permits in Paxton Creek provided that the Township is in compliance with the Second Consent Decree.

The Authority has started the sewer replacements scheduled under the Second Paxton Creek Corrective Action Plan to eliminate the hydraulic overload in Paxton Creek. The approved corrective action plan calls for a 15-year mini-basin total sewer replacement/repair program and provides for the replacement/enlargement of several interceptor sewers at an estimated cost of \$75 million. In 2022, the Authority is required to evaluate the progress and success of the work to determine if any storage facilities will be needed to ensure future capacity. If they are required, it is anticipated that such facilities will be completed within three years of PADEP approval or 2027. The Beaver Creek Corrective Action Plan has been amended and the Project will include a 15-year mini-basin total sewer replacement/repair program similar to Paxton Creek. CET Engineering has prepared a cost estimate of \$85 Million for the Beaver Creek Corrective Action Plan. In April 2010, the Authority settled on a PENNVEST low interest loan in the amount of \$13.3 million, of which \$9,749,491 was drawn down as of December 31, 2012, which includes the Second Consent Decree projects, excluding \$3 million which has been allocated to the Asylum Run project. The Asylum Run project was required to reduce flows to the Susquehanna Township Authority interceptor in accordance with the inter-municipal agreement.

In addition, the Authority is responsible for its pro rata share for upgrading the City of Harrisburg's Treatment Plant. The City of Harrisburg has revised its Act 537 Plan and it has been determined that the Authority's share, which was originally estimated at \$40 million, has been reduced to \$20 million with the revised plan. These costs are expected to be phased over a three-year period beginning in 2013. The Authority's modeling of the sewer system in the Spring Creek Basin has determined additional improvements necessary in this basin. Specifically, the Authority was required to begin an additional mini-basin sewer replacement project in the SC-1E mini-basin at a cost of \$2.9 Million and additional interceptor improvements in the SC-1H mini-basin at a cost of \$300,000. This work is scheduled to be completed in January 2013. Additional sewer rate increases are anticipated over the next 10 years to cover funding of the Second Consent Decree projects and treatment plant upgrades. The Authority engineer, CET Engineering Services, has prepared a revised long term "financing plan" for the Authority which indicates additional financing will be required for the Second Consent Decree projects beginning in 2015 in the amount of \$25,000,000 with additional borrowing in 2018 in the amount of \$8,130,000 and \$9,260,000 in the year 2022.

## **RESULTS OF OPERATIONS**

The Authority's revenues from operations are essentially from sewer rental charges to its customers in Lower Paxton Township. Sewer rental charges are based on a flat rate for residential customers and a cost per gallon used with a minimum charge for commercial accounts. Sewer rental revenues essentially remained constant due to the sewer rental rate remaining at \$120 per quarter.

The nonoperating income decreased slightly when compared to 2011 due to the decrease in interest income in 2012. The total revenues remained constant due to the sewer rental rate remaining at \$120 per quarter during 2012.

Operating expenses increased with the increase in legal and engineering fees and private source repairs associated with the Second Consent Decree expenses. The decrease in the transmission and treatment costs were a result of the lower fees being paid to the City of Harrisburg. Total expenses increased slightly in 2012 when compared to 2011 due to the increase in costs for engineering, legal fees and private source repairs.

The Capital Assets increased in 2012 as a result of the improvements to the sewer system associated with the implementation of the Paxton Creek Corrective Action Plan.

#### **FINANCIAL CONDITION**

The Authority's financial condition remained strong at year-end with sufficient liquid assets to complete the 2012 – 2017 corrective action plans of the Authority as required by the Second Consent Decree with PADEP. However, the Authority anticipates that additional funds will be required to complete the new Second Amendment to the Second Consent Decree and Settlement Agreement which requires the implementation of the Second Paxton Creek Corrective Action Plan to eliminate the hydraulic overload in the Paxton Creek Basin by 2027 and the Second Beaver Creek Corrective Action Plan to eliminate the overload in the Beaver Creek Basin by 2032.

#### **NEXT YEAR'S BUDGET**

The Authority requests that its consulting engineer, each year as part of the annual budget, prepare a report indicating whether sewer rental charges are sufficient to cover operating expenses and debt service requirements. The 2011 sewer rental rates were increased to keep pace with the current and future capital improvements required by the Second Consent Decree and the Second Paxton Creek Corrective Action Plan (included under the First Amendment to the Second Consent Decree) and the planned amendments to the Beaver Creek Corrective Action Plan. In 2012, the sewer rates remained at \$120 per quarter and are scheduled to remain at \$120 per quarter in 2013 due to a significant cash balance created by the delay in the construction costs associated with the Beaver Creek Corrective Action Plan and the decrease payments to the City of Harrisburg.

#### **FINAL COMMENTS**

Fiscal year 2012 continued a trend of strong financial performance by the Authority. This current strength with projected economic recovery is needed to ensure that there is sufficient revenue for annual debt service payments required to fund improvements to the sewer system, as required by the I/I corrective action plans. In addition, financial strength will need to be maintained in order to allow for future borrowing, which will be needed to complete the I/I corrective action plans for the recent Second Paxton Creek Corrective Action Plan, Second Beaver Creek Corrective Action Plan and treatment plant upgrade costs to the City of Harrisburg.

#### **CONTACTING THE AUTHORITY'S FINANCIAL MANAGER**

This report is designed to provide our citizens, customers and creditors with a general overview of the Authority's finances and to demonstrate the accountability of the Authority. If you have any questions about this report or need additional information, contact the Lower Paxton Township Authority Manager, 425 Prince Street, Harrisburg, PA 17109.

LOWER PAXTON TOWNSHIP AUTHORITY  
STATEMENT OF NET POSITION  
DECEMBER 31, 2012

**ASSETS****Current Assets:**

Cash and Cash Equivalents	\$ 4,838,516
Investments	1,253,921
Sewer Rentals Receivable	
Billed	780,901
Unbilled	2,977,474
Other Receivables	53,059
Prepaid Expenses	38,811
<b>Total Current Assets</b>	<b><u>9,942,682</u></b>

**Noncurrent Assets**

Restricted Cash	11,375,531
Restricted Investments	18,509,329
Sewer Assessments, Net of Allowance of \$134,194	75,464
Lateral Connections	6,811
Capital Assets, Nondepreciable	1,979,222
Capital Assets, Depreciable, Net	55,623,412
Deferred Capacity Costs, Net	16,681,138
Bond Issuance Costs, Net	621,005
Bond Discount, Net	178,130
Deferred Assets on Refunding, Net	1,292,877
<b>Total Noncurrent Assets</b>	<b><u>106,342,919</u></b>
<b>Total Assets</b>	<b><u>116,285,601</u></b>

**LIABILITIES****Current Liabilities:**

Accounts Payable	2,113,120
Developers Escrow	145,969
Accrued Interest	888,562
Due to Primary Government	492,141
Due to Other Governments	954,703
Loan Payable	422,661
Bonds Payable	40,000
<b>Total Current Liabilities</b>	<b><u>5,057,156</u></b>

**Noncurrent Liabilities:**

Loan Payable	9,016,032
Bonds Payable	69,765,000
<b>Total Noncurrent Liabilities</b>	<b><u>78,781,032</u></b>
<b>Total Liabilities</b>	<b><u>83,838,188</u></b>

**NET POSITION**

Net Investment in Capital Assets	26,202,166
Unrestricted	6,245,247
<b>Total Net Position</b>	<b><u>\$ 32,447,413</u></b>

The accompanying notes are an integral part of the financial statements.

LOWER PAXTON TOWNSHIP AUTHORITY  
STATEMENT OF REVENUES, EXPENSES, AND CHANGES IN NET POSITION  
FOR THE YEAR ENDED DECEMBER 31, 2012

Operating Revenues	
Sewer Rentals	\$ 12,022,038
Developer Fees	14,052
Miscellaneous	41,327
Total Operating Revenues	<u>12,077,417</u>
Operating Expenses	
Treatment and Transmission Charges	3,964,987
Transportation	36,415
Sewer Maintenance	41,980
Maintenance of Pumping Stations and Garage	80,021
Equipment Maintenance	9,394
Department of Environmental Protection Charges	1,125
Tools	2,462
Office Supplies and Postage	165,021
Legal and Accounting	227,571
Engineering	58,180
Insurance	38,667
Employee Expense	17,116
Trustee Fees	6,720
Miscellaneous	10,162
Reimbursements to Lower Paxton Township	1,894,343
Private Source Repairs	1,966,663
Depreciation	2,315,378
Amortization	336,848
Total Operating Expenses	<u>11,173,053</u>
Operating Income	<u>904,364</u>
Nonoperating Revenues (Expenses)	
Tapping Fees	375,257
Interest Income	1,090,802
Grant Income	266,884
Interest Expense	(3,766,208)
Total Net Nonoperating Expenses	<u>(2,033,265)</u>
Changes In Net Position	(1,128,901)
Total Net Position - Beginning of Year	<u>33,576,314</u>
Total Net Position - End of Year	<u>\$ 32,447,413</u>

The accompanying notes are an integral part of the financial statements.

LOWER PAXTON TOWNSHIP AUTHORITY  
STATEMENT OF CASH FLOWS  
FOR THE YEAR ENDED DECEMBER 31, 2012

Cash Flows From Operating Activities	
Cash Received from Customers and Users	\$ 11,926,612
Cash Payments to:	
Suppliers	(6,398,888)
Lower Paxton Township	(1,894,847)
Net Cash Provided by Operating Activities	<u>3,632,877</u>
Cash Flow From Capital and Related Financing Activities	
Purchase of Capital Assets, Including Capitalized Interest	(7,650,997)
Grant Income	266,884
Tapping Fees	375,257
Principal Payments on Bonds	(1,265,000)
Principal Payments on Loan	(310,798)
Increase in Loans Payable	1,367,549
Interest Expense	(3,766,208)
Net Cash Used in Capital Financing Activities	<u>(10,983,313)</u>
Cash Flows from Investing Activities	
Decrease in Investments	16,805,443
Interest Income	1,090,802
Net Cash Provided by Investing Activities	<u>17,896,245</u>
Net Increase in Cash and Cash Equivalents	10,545,809
Cash and Cash Equivalents, Beginning of Year	<u>5,668,238</u>
Cash and Cash Equivalents, End of Year	<u>\$ 16,214,047</u>
Presented in the Financial Statements as:	
Cash and Cash Equivalents	\$ 4,838,516
Restricted Cash	<u>11,375,531</u>
	<u>\$ 16,214,047</u>

The accompanying notes are an integral part of the financial statements.

LOWER PAXTON TOWNSHIP AUTHORITY  
STATEMENT OF CASH FLOWS (CONTINUED)  
FOR THE YEAR ENDED DECEMBER 31, 2012

Reconciliation of Operating Income to Net Cash Provided by Operating Activities	
Operating Income	\$ 904,364
Adjustments to Reconcile Operating Loss to Net Cash Provided by Operating Activities	
Depreciation/Amortization Expense	2,652,226
Change in Assets and Liabilities	
Receivables	(151,327)
Prepaid Expenses	393,899
Accounts Payable and Accrued Expenses	(166,303)
Due to Lower Paxton Township	(504)
Developers Escrow	522
Net Cash Provided by Operating Activities	<u>\$ 3,632,877</u>

The accompanying notes are an integral part of the financial statements.

LOWER PAXTON TOWNSHIP AUTHORITY  
(A COMPONENT UNIT OF LOWER PAXTON TOWNSHIP)  
NOTES TO THE FINANCIAL STATEMENTS  
DECEMBER 31, 2012

NOTE 1: NATURE OF ENTITY AND SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

The Lower Paxton Township Authority (the Authority) was incorporated on June 11, 1951, under the Municipal Authorities Act of 1945, P.L. 382, as amended, pursuant to a resolution adopted by the supervisors of the Township of Lower Paxton (the Township). The Authority is an operating Authority responsible for acquiring, holding, constructing, improving, maintaining, operating, owning and leasing, either in the capacity of lessor or lessee, sewers, sewer systems or parts thereof. The Authority is considered a component unit of the Township due to the Township's ability to impose its will on the Authority.

A summary of the Authority's significant accounting policies is as follows:

A) Reporting Entity

The Authority has adopted the provisions of Section 2100 of the Codification of Governmental Accounting and Financial Reporting Standards for the criteria used to evaluate organizations, activities and functions that should be included in the Authority's financial statements. The basic criteria are the exercise of oversight responsibility over such organizations, activities and functions.

The Authority has not identified any entities which should be subject to evaluation for inclusion in the Authority's reporting entity. The Township includes the Authority in its financial statements as a blended component unit because the Township appoints the Authority's governing board and guarantees the Authority debt and the Authority meets the criteria satisfying inclusion in the Township's financial statements.

B) Measurement Focus, Basis of Accounting, and Financial Statement Presentation

The Authority's financial statements are presented on the accrual basis of accounting in accordance with accounting principles generally accepted in the United States of America. Under this basis of accounting, revenues are recorded when earned and expenses are recorded when the liability is incurred, regardless of the timing of the related cash flows. The Authority applies Governmental Accounting Standards Board (GASB) pronouncements.

All activities of the Authority are accounted for within one proprietary (enterprise) fund. Proprietary funds are used to account for operations that are (a) financed and operated in a manner similar to private business enterprises where the intent of the governing body is that the cost (expenses, including depreciation) of providing goods or services to the general public on a continuing basis be financed or recovered primarily through user charges; or (b) where the governing body has decided that periodic determination of revenues earned, expenses incurred, and/or net income is appropriate for capital maintenance, public policy, management control, accountability, or other purposes.

LOWER PAXTON TOWNSHIP AUTHORITY  
(A COMPONENT UNIT OF LOWER PAXTON TOWNSHIP)  
NOTES TO THE FINANCIAL STATEMENTS (CONTINUED)  
DECEMBER 31, 2012

NOTE 1: NATURE OF ENTITY AND SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES  
(CONTINUED)

B) Measurement Focus, Basis of Accounting, and Financial Statement Presentation  
(Continued)

The accounting and financial reporting treatment applied to the Authority is determined by its measurement focus. The transactions of the Authority are accounted for on a flow of economic resources measurement focus. With this measurement focus, all assets and all liabilities associated with the operations are included on the balance sheet. Net Position (i.e., total assets net of total liabilities) are segregated into "net investment in capital assets"; "restricted for debt service"; and "unrestricted" components. Proprietary fund type operating statements present increases (revenues) and decreases (expenses) in total net position.

Operating revenues, such as charges for services, result from exchange transactions associated with the principal activity of the Authority. Exchange transactions are those in which each party receives and gives up essentially equal values. Non-operating revenues, such as subsidies and investment earnings, result from nonexchange transactions or ancillary activities. When both restricted and unrestricted resources are available for use, it is the Authority's policy to use restricted resources, and then unrestricted resources as they are needed for their intended purposes.

C) Cash and Cash Equivalents

Cash and cash equivalents, for the purposes of the statement of cash flows, include restricted cash on hand or on deposit with a maturity of three months or less.

D) Investments

The Authority follows the provisions of GASB Statement No. 31, therefore investments are stated at fair value. Investments that do not have an estimated market value are recorded at estimated fair value.

E) Restricted Assets

Restricted assets represent cash and investment balances from developers' escrow and unspent bond proceeds. At December 31, 2012, the restricted cash balance was \$11,375,531 and the restricted investment balance was \$18,509,329.

LOWER PAXTON TOWNSHIP AUTHORITY  
(A COMPONENT UNIT OF LOWER PAXTON TOWNSHIP)  
NOTES TO THE FINANCIAL STATEMENTS (CONTINUED)  
DECEMBER 31, 2012

NOTE 1: NATURE OF ENTITY AND SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES  
(CONTINUED)

F) Receivables

Receivables are stated at the amount management expects to collect from outstanding balances. No allowance for doubtful accounts has been provided for the sewer rentals receivable since the Authority can place a lien on the property of customers who are significantly in arrears on sewer payments. The allowance on other receivables represents management's estimate of uncollectible sewer assessments based upon an evaluation of those accounts where liens were not satisfied in prior years. Allowance for uncollectible sewer assessments at December 31, 2012 is \$134,194. Unbilled sewer rentals receivable relate to services performed at December 31 and not billed until the following January.

G) Capital Assets

Capital assets, which include property, plant, and equipment, and infrastructure, are stated at cost, except for sewer extensions contributed to the Authority, which are recorded at fair value at the date of contribution. Depreciation is provided on the straight-line method over the estimated useful lives of the various assets.

The costs of normal maintenance and repairs that do not add to the value of the assets or materially extend assets lives are not capitalized. Major outlay of capital assets and improvements are capitalized as projects are completed. Interest incurred during the construction phase of the capital asset is included as part of the capitalized value of the assets constructed.

Capital assets of the Authority are depreciated using the straight-line method over the following estimated useful lives:

<u>Assets</u>	<u>Years</u>
Intangibles	3-60
Sewer system and deferred capacity	15-60
Buildings	50
Furniture, machinery and equipment	5-20

H) Debt Related Costs

Bond issuance costs represent costs incurred to issue the long-term debt. Amortization is being provided on the straight-line method over the terms of the subsidy agreements.

For current and advance refundings resulting in the defeasance of debt, the difference between the reacquisition price and the net carrying amount of the old debt is deferred and amortized as a component of interest expense over the remaining life of the old debt or the life of the new debt, whichever is shorter. Amortization expense for the year ended December 31, 2012 amounted to \$336,848.

LOWER PAXTON TOWNSHIP AUTHORITY  
(A COMPONENT UNIT OF LOWER PAXTON TOWNSHIP)  
NOTES TO THE FINANCIAL STATEMENTS (CONTINUED)  
DECEMBER 31, 2012

NOTE 1: NATURE OF ENTITY AND SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES  
(CONTINUED)

I) Deferred Capacity Costs

The Authority participated in the construction of various facilities. This participation gave the Authority reserved rights to use a percentage of the facilities. Consequently, an asset is recorded based upon construction costs paid net of accumulated amortization of those costs, which is determined on the straight-line method over the estimated useful life of the capacity purchased.

J) Developers Escrow Liability

The Authority requires developers to deposit funds pursuant to an escrow agreement to provide assurance that projects will be completed according to approved specifications and on a timely basis. If work is not completed satisfactorily, the Authority uses the developer's escrow account to reimburse themselves for fees incurred in correcting the work done.

K) Use of Estimates

The preparation of financial statements requires management to make estimates and assumptions that affect certain reported amounts and disclosures. Accordingly, actual results could differ from those estimates.

L) Adoption of Governmental Accounting Standards

The Authority adopted the remaining provisions of GASB Issued Statement No. 57, "OPEB Measurements by Agent Employers and Agent Multiple Employer Plans" and the provisions of GASB Issued Statement No. 60, "Accounting and Financial Reporting for Service Concession Arrangements", GASB Issued Statement No. 62, "Codification of Accounting and Financial Reporting Guidance Contained in Pre – November 30, 1989 FASB and AICPA Pronouncements", GASB Issued Statement No. 63, "Financial Reporting of Deferred Outflows of Resources, Deferred Inflows of Resources, and Net Position", and GASB Issued Statement No. 64, "Derivative Instruments: Application of Hedge Accounting Termination Provisions – an Amendment of GASB Statement No. 53".

The adoption of GASB 63 resulted in the renaming of the residual measure of all other elements presented in a statement of financial position as "net position", rather than "net assets". The adoption of the other statements had no effect on previously reported amounts.

LOWER PAXTON TOWNSHIP AUTHORITY  
 (A COMPONENT UNIT OF LOWER PAXTON TOWNSHIP)  
 NOTES TO THE FINANCIAL STATEMENTS (CONTINUED)  
 DECEMBER 31, 2012

NOTE 1: NATURE OF ENTITY AND SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES  
 (CONTINUED)

M) Pending Changes in Accounting Principles (Continued)

In November 2010, the GASB issued Statement No. 61, "*The Financial Reporting Entity: Omnibus – an amendment of GASB Statements No. 14 and No. 34*". The Authority is required to adopt statement No. 61 for its calendar year 2013 financial statements.

In March 2012 the GASB issued Statement No. 65, "*Items Previously Reported as Assets and Liabilities*". The Authority is required to adopt Statement No. 65 for its calendar year 2013 financial statements.

In March 2012 the GASB issued Statement No. 66, "*Technical Corrections – 2012 – an amendment of GASB Statements No. 10 and No. 62*". The Authority is required to adopt Statement No. 66 for its calendar year 2013 financial statements.

In June 2012, the GASB issued a Statement No. 67, "*Financial Reporting for Pension Plans – an amendment of GASB Statement No. 25*". The Authority is required to adopt statement No. 67 for its fiscal year 2014 financial statements.

In June 2012, the GASB issued a Statement No. 68, "*Accounting and Financial Reporting – an amendment of GASB Statement No. 27*". The Authority is required to adopt statement No. 68 for its fiscal year 2015 financial statements.

In January 2013, the GASB issued a Statement No. 69, "*Government Combinations and Disposals of Government Operations*". The Authority is required to adopt statement No. 69 for its fiscal year 2014 financial statements.

In April 2013, the GASB issued a Statement No. 70, "*Accounting and Financial Reporting for Nonexchange Financial Guarantees*". The Authority is required to adopt statement No. 70 for its fiscal year 2014 financial statements.

The Authority has not yet completed the various analysis required to estimate the financial statement impact of these new pronouncements.

NOTE 2: DEPOSIT AND INVESTMENT RISK

Cash and Cash Equivalents

*Custodial Credit Risk* – For deposits, custodial credit risk is the risk that in the event of the failure of the counterparty, the Authority will not be able to recover the value of its deposits or collateral securities that are in the possession of an outside party. As of December 31, 2012, the Authority's cash balance was \$16,214,047, and its bank balance was \$16,200,083. At December 31, 2012, \$15,200,083 of the Authority's deposits were exposed to custodial credit risk, as they are collateralized with securities held by the pledging financial institution not in the Authority's name and uninsured. None of the Authority's investments were exposed to custodial credit risk at December 31, 2012. The Authority does not have a formal investment policy related to custodial credit risk.

LOWER PAXTON TOWNSHIP AUTHORITY  
(A COMPONENT UNIT OF LOWER PAXTON TOWNSHIP)  
NOTES TO THE FINANCIAL STATEMENTS (CONTINUED)  
DECEMBER 31, 2012

NOTE 2: DEPOSIT AND INVESTMENT RISK (CONTINUED)

Cash and Cash Equivalents (Continued)

As of December 31, 2012, the Authority had the following debt investments and maturities:

<u>Investment Type</u>	<u>Fair Value</u>	<u>Investment Maturities (in Years)</u>	
		<u>Less Than 1</u>	<u>1-5</u>
Authority			
U.S. Government Agencies	\$ 150,065	\$ -	\$ 150,065
U.S. Treasury Notes	15,045,329	11,667,809	3,377,520
Total	<u>\$ 15,195,394</u>	<u>\$ 11,667,809</u>	<u>\$ 3,527,585</u>

*Interest Rate Risk.* The Authority's Investment Policies do not limit investment maturities as a means of managing their exposure to fair value losses arising from increasing interest rates.

*Credit Risk.* The Authority does not have a formal policy that limits investments to ratings issued by nationally recognized statistical rating organizations. As of December 31, 2012, 1% and 99% of the Authorities fixed income investments were rated AAA and Aaa respectively, by Moody's.

*Concentration of Credit Risk.* The Authority does not have a formal policy that places a limit on the amount or percent that may be invested in any one issuer. At December 31, 2012 the Authority did not have any investments subject to concentration of credit risk.

LOWER PAXTON TOWNSHIP AUTHORITY  
(A COMPONENT UNIT OF LOWER PAXTON TOWNSHIP)  
NOTES TO THE FINANCIAL STATEMENTS (CONTINUED)  
DECEMBER 31, 2012

## NOTE 3: CAPITAL ASSETS

	Beginning Balance	Additions	Retirements	Ending Balance
Capital assets not being depreciated (cost):				
Land	\$ 830,692	\$ -	\$ -	\$ 830,692
Intangibles	564,353	584,177	-	1,148,530
Total capital assets not being depreciated	<u>1,395,045</u>	<u>584,177</u>	<u>-</u>	<u>1,979,222</u>
Capital assets being depreciated (cost):				
Intangibles	61,979	489,416	-	551,395
Buildings	1,116,145	-	-	1,116,145
Machinery and equipment	286,828	6,048	-	292,876
Furniture	19,299	-	-	19,299
Sewer System	81,366,624	6,571,356	-	87,937,980
Total capital assets being depreciated	<u>82,850,875</u>	<u>7,066,820</u>	<u>-</u>	<u>89,917,695</u>
Less accumulated depreciation for:				
Intangibles	-	(20,660)	-	(20,660)
Buildings	(255,446)	(27,903)	-	(283,349)
Machinery and equipment	(48,335)	(33,889)	-	(82,224)
Furniture	(18,656)	(643)	-	(19,299)
Sewer System	(32,089,175)	(1,799,576)	-	(33,888,751)
Total accumulated depreciation	<u>(32,411,612)</u>	<u>(1,882,671)</u>	<u>-</u>	<u>(34,294,283)</u>
Total capital assets being depreciated, net	<u>50,439,263</u>	<u>5,184,149</u>	<u>-</u>	<u>55,623,412</u>
Total property, plant and equipment, net	<u>51,834,308</u>	<u>5,768,326</u>	<u>-</u>	<u>57,602,634</u>
Deferred capacity costs	21,144,628	-	-	21,144,628
Less: Accumulated depreciation	(4,030,783)	(432,707)	-	(4,463,490)
Total deferred capacity costs, net	<u>17,113,845</u>	<u>(432,707)</u>	<u>-</u>	<u>16,681,138</u>
Total capital assets, net	<u>\$ 68,948,153</u>	<u>\$ 5,335,619</u>	<u>\$ -</u>	<u>\$ 74,283,772</u>

LOWER PAXTON TOWNSHIP AUTHORITY  
(A COMPONENT UNIT OF LOWER PAXTON TOWNSHIP)  
NOTES TO THE FINANCIAL STATEMENTS (CONTINUED)  
DECEMBER 31, 2012

## NOTE 4: LONG – TERM LIABILITIES

The following is a summary of changes in long-term liabilities for the year ended December 31, 2012:

	Balance at January 1, 2012	Additions	Reductions	Balance at December 31, 2011	Due Within One Year
General obligation debt	\$ 71,070,000	\$ -	\$ 1,265,000	\$ 69,805,000	\$ 40,000
Loan payable	8,381,942	1,367,549	310,798	9,438,693	422,661
Lower Paxton Township Authority long-term liabilities	<u>\$ 79,451,942</u>	<u>\$ 1,367,549</u>	<u>\$ 1,575,798</u>	<u>\$ 79,243,693</u>	<u>\$ 462,661</u>

Pertinent information regarding long-term debt obligations outstanding is presented below:

<u>Date of Issue</u>	<u>Amount of Original Issue</u>	<u>Purpose</u>	<u>Balance Outstanding at December 31, 2012</u>
2006	\$ 9,995,000	General Obligation Bonds, Series of 2006 issued to advance refund a portion of General Obligation Bonds, Series of 2002A and pay the costs of issuing the bonds. Bond carries an interest rate ranging from 3.20% to 4.25% payable semi-annually on April 1 and October 1. (Final maturity is April 2022.)	\$ 8,045,000
2009A	\$ 4,240,000	General Obligation Bonds, Series of 2009A issued to advance refund General Obligation Bonds, Series 2002 and pay the costs of issuing the bonds. Bond carries an interest rate ranging from 2.00% to 3.25% payable semi-annually on January 1 and July 1. (Final maturity is January 2018.)	2,575,000
2009C	\$ 14,355,000	General Obligation Bonds, Series of 2009C issued to advance refund the General Obligation Bonds, Series of 2002A and pay the costs of issuing the bonds. Bond carries an interest rate ranging from 2.00% to 4.25% payable semi-annually on April 1 and October 1. (Final maturity is April 2029.)	14,345,000
2009D	\$ 42,465,000	General Obligation Bonds, Series of 2009D issued to finance various capital improvements to the wastewater collection and conveyance system. Bond carries an interest rate ranging from 6.245% to 6.345% payable semi-annually on April 1 and October 1. Principal payments begin in April 2029. The Bonds are considered to be a "Build America Bond" under the American Recovery and Reinvestment Act of 2009. The Township elected to receive a cash subsidy from the US Treasury equal to 35% of the interest payable on the Bonds. The 35% interest subsidy from the US government amounts to \$23,633,907 which will be remitted to the Township in payments over the life of the bond. (Final maturity is April 2039.)	42,465,000

LOWER PAXTON TOWNSHIP AUTHORITY  
(A COMPONENT UNIT OF LOWER PAXTON TOWNSHIP)  
NOTES TO THE FINANCIAL STATEMENTS (CONTINUED)  
DECEMBER 31, 2012

## NOTE 4: LONG – TERM LIABILITIES (CONTINUED)

Date of Issue	Amount of Original Issue	Purpose	Balance Outstanding at December 31, 2012
2010B	\$ 1,500,000	General Obligation Bonds, Series of 2010B issued to advance refund the General Obligation Bonds, Series of 2002B and pay the costs of issuing the bonds. Bond carries an interest rate ranging from 0.75% to 4.00% payable semi-annually on January 1 and July 1. (Final maturity is January 2016.)	\$ 1,500,000
2010C	\$ 3,305,000	General Obligation Bonds, Series of 2010C issued to advance refund the General Obligation Bonds, Series of 2002B and pay the costs of issuing the bonds. Bond carries an interest rate ranging from 1.558% to 2.552% payable semi-annually on January 1 and July 1. (Final maturity is January 2015.)	875,000
2010	\$ 9,749,491	Loan payable to Pennsylvania Industrial Investment Authority ("PENNVEST") in the amount of \$13,354,113, of which \$9,749,491 has been drawn as of December 31, 2012. Interest only payments are due on the loan for the construction phase. Loan carries an interest rate of 2.445% during construction and for years 1-5 of the payoff, and a rate of 3.133% for the remaining term of the loan. (Final maturity is June 2032.)	9,438,693
			<u>\$ 79,243,693</u>

Changes in bonded and other debt are as follows:

	Balance January 1, 2012	Additons	Deletions	Balance December 31, 2012	Due in One Year
<u>Bonds Payable</u>					
Series of 2006	\$ 8,080,000	\$ -	\$ (35,000)	\$ 8,045,000	\$ 35,000
Series of 2009A	3,050,000	-	(475,000)	2,575,000	-
Series of 2009C	14,350,000	-	(5,000)	14,345,000	5,000
Series of 2009D	42,465,000	-	-	42,465,000	-
Series of 2010B	1,500,000	-	-	1,500,000	-
Series of 2010C	1,625,000	-	(750,000)	875,000	-
Total Bonds Payable	<u>71,070,000</u>	<u>-</u>	<u>(1,265,000)</u>	<u>69,805,000</u>	<u>40,000</u>
<u>Loan Payable</u>					
Pennvest Loan	8,381,942	1,367,549	(310,798)	9,438,693	422,661
Total Loans Payable	<u>8,381,942</u>	<u>1,367,549</u>	<u>(310,798)</u>	<u>9,438,693</u>	<u>422,661</u>
	<u>\$ 79,451,942</u>	<u>\$ 1,367,549</u>	<u>\$ (1,575,798)</u>	<u>\$ 79,243,693</u>	<u>\$ 462,661</u>

LOWER PAXTON TOWNSHIP AUTHORITY  
(A COMPONENT UNIT OF LOWER PAXTON TOWNSHIP)  
NOTES TO THE FINANCIAL STATEMENTS (CONTINUED)  
DECEMBER 31, 2012

## NOTE 4: LONG – TERM LIABILITIES (CONTINUED)

	Principal Requirements	Interest Requirements	Total Debt Service Requirements
2013	\$ 462,661	\$ 3,902,571	\$ 4,365,232
2014	1,728,112	3,905,669	5,633,781
2015	1,778,821	3,854,604	5,633,425
2016	1,989,795	3,795,822	5,785,617
2017	1,141,375	3,800,666	4,942,041
2018-2022	11,928,923	17,905,291	29,834,214
2023-2027	12,143,256	15,584,382	27,727,638
2028-2032	16,985,760	12,475,015	29,460,765
2033-2037	21,270,000	6,590,195	27,860,195
2038-2040	9,815,000	629,265	10,444,265
	<u>\$ 79,243,693</u>	<u>\$ 72,443,480</u>	<u>\$ 151,687,173</u>

Deferred Assets on Refunding

Deferred amounts represent the difference between the reacquisition price and the net carrying amount of the refunded debt. The following is a summary of deferred amounts due to the refunding of outstanding debt:

The Township of Lower Paxton issued General Obligation Bonds, Series of 2006, in the amount of \$9,995,000 dated as of January 6, 2006 to advance refund a portion of the General Obligation Bonds, Series A of 2002 and pay the costs of issuing the bonds. A deferred amount of \$206,052 was recorded on the refunding and is being amortized on the straight-line basis over 16.25 years, the life of the issue. The balance at December 31, 2012 is \$119,156.

On January 21, 2009, the Township of Lower Paxton issued General Obligation Bonds, Series A of 2009 in the amount of \$4,240,000. Proceeds of the Series A of 2009 were used to advance refund General Obligation Bonds, Series of 2002 and pay the costs of issuing the bonds. A deferred amount of \$425,569 was recorded on the refunding and is being amortized on the straight-line basis over eight years, the life of the issue. The balance at December 31, 2012 is \$227,983.

On October 15, 2009, the Township of Lower Paxton issued General Obligation Bonds, Series C of 2009 in the amount of \$14,355,000. Proceeds of the Series C of 2009 were used to advance refund the General Obligation Bonds, Series A of 2002 and pay the costs of issuing the bonds. A deferred amount of \$779,113 was recorded on the refunding and is being amortized on the straight-line basis over nine years, the remaining life of the refunded issue. The balance at December 31, 2012 is \$552,441.

LOWER PAXTON TOWNSHIP AUTHORITY  
(A COMPONENT UNIT OF LOWER PAXTON TOWNSHIP)  
NOTES TO THE FINANCIAL STATEMENTS (CONTINUED)  
DECEMBER 31, 2012

NOTE 4: LONG – TERM LIABILITIES (CONTINUED)

Deferred Assets on Refunding (Continued)

On October 26, 2010, the Township of Lower Paxton issued General Obligation Bonds, Series B of 2010 in the amount of \$1,500,000. Proceeds of the Series B of 2010 were used to advance refund the General Obligation Bonds, Series B of 2002 and pay the costs of issuing the bonds. A deferred amount of \$233,821 was recorded on the refunding and is being amortized on the straight-line basis over 6 years, the life of the new debt. The balance at December 31, 2012 is \$136,320.

On October 26, 2010, the Township of Lower Paxton issued General Obligation Bonds, Series C of 2010 in the amount of \$3,305,000. Proceeds of the Series C of 2010 were used to advance refund the General Obligation Bonds, Series B of 2002 and pay the costs of issuing the bonds. A deferred amount of \$515,186 was recorded on the refunding and is being amortized on the straight-line basis over 5 years, the life of the new debt. The balance at December 31, 2012 is \$256,977.

NOTE 5: DEFEASED DEBT

In prior years, the Authority defeased the Series of 1992 Capital Appreciation Bonds by placing the proceeds of new issues in irrevocable trusts to provide for all future debt service payments on the old bonds. Accordingly, the trust account assets and the liability for the defeased bonds are not included in the Authority's financial statements. At December 31, 2012, the principal amount outstanding relative to defeased debt was \$3,320,000.

NOTE 6: COMMITMENTS AND CONTINGENCIES

In the normal course of business, there are various claims and suits pending against the Authority and its elected officials. Management is of the opinion that these matters will not have a material adverse effect on the Authority's financial position at December 31, 2012.

The Authority has entered into agreements with downstream municipalities for the transmission and treatment of sewage. Charges for transmission and treatment are principally based upon a combination of the number of equivalent dwelling units and sewage transmitted.

The Authority has entered into agreements for repairs and rehabilitation of its sewer system. There were nine construction contracts in process as of December 31, 2012 which totaled \$27,898,227. Work totaling \$19,663,099 had been completed on these contracts as of year-end.

NOTE 7: CAPITALIZED INTEREST

The Authority follows the policy of capitalizing interest as a component of the cost of property, plant and equipment constructed for its own use. In 2012, \$3,946,251 was incurred in interest expense, of which \$3,766,208 was charged to operations.

LOWER PAXTON TOWNSHIP AUTHORITY  
(A COMPONENT UNIT OF LOWER PAXTON TOWNSHIP)  
NOTES TO THE FINANCIAL STATEMENTS (CONTINUED)  
DECEMBER 31, 2012

NOTE 8: LEGAL AGREEMENTS AND RESTRICTIONS REGARDING SANITARY SEWER OPERATIONS:

In June 1995, the Pennsylvania Department of Environmental Protection (PADEP) entered a consent decree to the Authority, Lower Paxton Township and Swatara Township Authority, outlining certain steps that need to be met to abate the overload of the Beaver Creek Basin interceptor.

On May 29, 2002, the parties, including the Developers as Intervenor, entered into a Second Consent Decree to supersede the first Consent Decree of June 1995, the 1991 Spring Creek Consent Decree and to settle two Environmental Hearing Board appeals and a Commonwealth Court Petition. In addition, the previous agreement between Swatara Township Authority, Lower Paxton Township Authority and the Developers was superseded by a new agreement regarding connections and planning modules in Beaver Creek. This agreement was executed on April 1, 2002 and was made part of the Second Consent Decree as Exhibit D. The Commonwealth Court approved the Second Consent Decree on June 13, 2002.

The Second Consent Decree incorporates the Township's Act 537 Plan and corrective action plans to eliminate the overflows and hydraulic overloads in the Beaver Creek, Paxton Creek and a portion of the Spring Creek Basin. This decree contains stipulated civil penalties for violation of final compliance dates set forth in the decree and for overflows in the sewer system.

The Second Consent Decree has eliminated the moratorium on approval of planning modules within each drainage basin. However, the agreement for Beaver Creek, included as Exhibit D of the Second Consent Decree, imposes a limitation on planning modules each year with a maximum of 200 equivalent dwelling units per year. This limitation is scheduled to continue until six months after the completion of the Wet Weather Treatment Facility and final elimination of the hydraulic overload, which is scheduled for December 2013.

The Second Consent Decree and agreement imposes restrictions on the number of new connections in each drainage basin. Specifically, the Township receives 168 connections in Beaver Creek together with any carryover permits from the Developers allowable under this agreement, 93 permits annually in Paxton Creek and two connections in Spring Creek provided that the Township is in compliance with the Second Consent Decree. The Township submitted, and PADEP approved, an amendment to the Second Consent Decree to address Paxton Creek beyond 2007.

The approved corrective action plan calls for a 15-year mini-basin total sewer replacement/repair program through 2022 and provides for the replacement/enlargement of several interceptor sewers. In 2022, the Authority is required to evaluate the progress and success of the work to determine if any storage facilities will be needed to ensure future capacity. If they are required, it is anticipated that such facilities will be completed within three years of PADEP planning approval. The cost of the replacement/repair program is estimated to be \$75 million.

LOWER PAXTON TOWNSHIP AUTHORITY  
(A COMPONENT UNIT OF LOWER PAXTON TOWNSHIP)  
NOTES TO THE FINANCIAL STATEMENTS (CONTINUED)  
DECEMBER 31, 2012

**NOTE 9: AGREEMENTS**

The Authority has entered into the Swatara Township Authority Intermunicipal Agreement with the joint users of the Swatara Township Authority treatment plant. The Agreement covers the operating expenses of the Swatara Township Authority treatment plant and transmission facilities and the corresponding responsibilities of each user based on a pro rata share basis. Under this agreement, Lower Paxton Township Authority's operating costs amounted to \$1,612,973 for the year ended December 31, 2012.

**NOTE 10: MANAGEMENT AGREEMENT**

The Authority has entered into an agreement with Lower Paxton Township to procure certain management services with regard to its operations, activities and functions. The Authority and the Township have certain common management. The total management services for 2012 amounted to \$154,856. Additionally, due to the Township providing all employees to the Authority, the Authority reimbursed the Township for wages, payroll taxes, pension and various insurances in the approximate amount of \$1,739,487 for the year ended December 31, 2012. At December 31, 2012, the Authority owed the Township \$492,141 for the fourth quarter of calendar year 2012.

**NOTE 11: DUE TO OTHER GOVERNMENTS**

The City of Harrisburg, by letter dated March 18, 2010, provided notice to the Lower Paxton Township Authority of its belief that sanitary sewer invoices generated for the Authority were prepared using an incorrect equivalent dwelling unit (EDU) rate of \$42.03 per EDU. Further, the City stated that, by Ordinance No. 25 of 2006, it adopted an increase for sewer rates which became effective January 2007. Based on this Ordinance, the correct rate for sanitary sewer service for the period of time between January 1, 2007 and March 18, 2010 was \$48.20 per EDU per calendar quarter, or an increase of \$6.17 from the previous rate of \$42.03.

Within the City's March 18, 2010 letter, it was noted that a review of the Authority's account revealed that an undercharge resulted due to the use of the incorrect EDU rate in the amount of \$954,703. The City also transmitted an invoice for the undercharged amount and requested payment within 60 days. Similar notices and invoicing for undercharged amounts were presented to the Susquehanna Township Authority, Borough of Penbrook, Borough of Paxtang, and Steelton Borough Authority.

Prior to reaching a final decision on the issue of undercharges by the City, the above municipalities, together with the Swatara Township Authority, jointly responded by requesting relevant information to determine whether an appropriate rate pursuant to written agreements was indeed being imposed. The municipalities/authorities who have been billed for suspected undercharges have jointly informed the City that they will make no payments for undercharges until such time as they have received, reviewed and concurred with the requested information. As of December 31, 2010, the Authority, as well as the other municipalities involved above, have engaged a forensic auditor to review the undercharge claimed by the City of Harrisburg. The full amount of \$954,703 has been accrued in the financial statements for December 31, 2012.

LOWER PAXTON TOWNSHIP AUTHORITY  
(A COMPONENT UNIT OF LOWER PAXTON TOWNSHIP)  
NOTES TO THE FINANCIAL STATEMENTS (CONTINUED)  
DECEMBER 31, 2012

NOTE 11: DUE TO OTHER GOVERNMENTS (CONTINUED)

In 2012, Steelton Borough, Steelton Borough Authority, Swatara Township, Swatara Township Authority, Lower Paxton Township, Lower Paxton Township Authority, Paxtang Borough, the Borough of Penbrook, Susquehanna Township and Susquehanna Township Authority (the "Suburban Municipalities") filed an objection to the Recovery Plan (the "Plan") issued by David Unkovic, Receiver for the City of Harrisburg. The plan, as submitted, called for the continuation of unlawful transfers from the City's Sewer Trust Fund to the City's general fund for non-sewer purposes in violation of Pennsylvania law and the contractual rights of the Suburban Municipalities.

Over the past year, the Suburban Municipalities discovered that the City has for many years has been charging the Suburban Municipalities inflated sewer rates to create a surplus in the Sewer Trust Fund, and transferred those surplus sewer revenues to the City's general fund. The Suburban Municipalities believe this arrangement is in violation of the Intermunicipal Agreement and the Sewer Rental Act. The plan, as filed, calls for the "transfers" to be continued at their present levels and to be reduced by 5% per year.

The rates paid by the Suburban Municipalities were set by the City at such a high rate that annual surpluses in the range of \$7 million to \$10 million were created. Moving forward, the Suburban Municipalities requested that the Receiver adjust the sewer rates under the Intermunicipal Agreement to eliminate the annual accumulation of a Sewer Trust Fund surplus. The Suburban Municipalities also believe that the rates should include a credit, amortized over 15 years or some other reasonable period, to repay the Suburban Municipalities at least \$14,500,000 in historic overpayments from 2006-2010 that were transferred from the Sewer Fund for non-sewer purposes. At December 31, 2012, no accrual has been reflected in the financial statements for this request.

NOTE 12: SUBSEQUENT EVENTS

In March 2013, the Township issued General Obligation Bonds, Series of 2013 in the amount of \$9,720,000, respectively. In connection with the Series of 2013 Bonds, the Township and Lower Paxton Township Authority entered into a Subsidy Agreement, whereby the Authority is obligated to satisfy the annual debt service requirement on \$7,965,000 of the aggregate principal amount of the Series of 2013 Bonds. The Series of 2013 Bonds were issued for the purpose of currently refunding the General Obligation Bonds, Series of 2008 and payment of Series of 2013 bond issuance costs. The 2013 Bonds shall mature no later than April 1, 2022 and shall bear an interest rate from 0.60% to 2.00%.

**Appendix C**  
**Uniform Environment Review**



**Lower Paxton Township**  
2013 Act 537 Plan Update  
UNIFORM ENVIRONMENTAL REVIEW

December 2013

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## Exhibit 1

### **Public Notifications and Responses**

# 1. PROJECT DESCRIPTION AND NEED

## 1.1 Purpose of and Need for Project

The purpose of this 2013 Act 537 Plan Update is to revise the Beaver Creek Basin portion of the existing Act 537 Plan. The existing Act 537 Plan was originally prepared in September 2002 (the 2002 Plan) and approved by the Department in March 2003, with a special study prepared in 2006 to update the zoning. The existing Act 537 Plan calls for discontinuing sewer system rehabilitation as the primary method of addressing infiltration/inflow (I/I) within the Beaver Creek Basin and enlarging the conveyance system to transport the wastewater to a new wet weather treatment facility that would be located near the southeastern corner of the Lower Paxton Township, in South Hanover Township. The wet weather treatment plant would treat and discharge peak wet weather flows to Beaver Creek, as well as excess daily flows during extended periods of wet weather, as needed in order for Lower Paxton to maintain its wastewater flows within the allocated capacities in the Swatara Township WWTP and Joint Use Interceptor (JUI) for the duration of the 20-year planning period and beyond.

While attempting to permit the land for the proposed wet weather treatment facility, it was determined that construction of a wet weather treatment plant was no longer a viable option due to zoning issues. As a result, the Lower Paxton Township Authority revised the Beaver Creek Basin Corrective Action Plan, as set forth in the Second Amendment to the Second Consent Decree, which calls for replacing existing sanitary sewers and possible future storage in lieu of construction of the wet weather treatment plant. The Second Amendment to the Second Consent Decree was approved by the court as of September 18, 2013. Therefore, replacement of the existing sanitary sewer system is now the only option available to reduce the wet weather flows to the Swatara Township WWTP and JUI and to eliminate overflows within Lower Paxton Township.

## 1.2 Project Description

After the metering and modeling for the Beaver Creek Basin is complete, priority mini-basins will be determined and replacement projects, per mini-basin, will be designed and bid for construction. The majority of the existing collection sewers will be replaced in the existing locations; however, realignments may be necessary. In addition, service laterals and building sewers will also be replaced in areas as part of the collection sewer replacement projects.

Lower Paxton Township Authority will finance the projects using existing capital reserves and the public bond that they have already secured, as well as future bond issues. Pennsylvania Infrastructure Investment Authority (PENNVEST) funding may also be pursued for individual projects if determined to be in the Authority's best interest. The Authority also intends to apply for any grant funding that may be available for the projects.

## **2.0 SUMMARY OF REASONABLE ALTERNATIVES CONSIDERED**

After the wet weather treatment plant alternative was eliminated, the replacement of the existing sanitary sewers, with possible future wet weather storage, is the only alternative available to reduce the existing wet weather peak flows to Swatara Township Authority WWTP and the Joint Use Interceptor (JUI) and to eliminate overflows within Lower Paxton Township.

## **3.0 ENVIRONMENTAL CONSEQUENCES OF THE SELECTED ALTERNATIVE**

The following environmental consequences for each of the sanitary sewer replacement projects will be reviewed during the design of each project:

### **3.1 Land Use/Important Farmland/Formally Classified Lands**

Replacing the sanitary sewers is consistent with local land use planning and agricultural preservation interests and does not change any land use. These projects will have no impact on farmland.

There are no State Parks within Lower Paxton Township. Replacement of existing sanitary sewers will not have any impacts on registered or eligible national monuments and landmarks.

#### **3.1.1 Direct, Indirect, and Cumulative Effects**

The project will have no impact on agricultural preservation, prime farmland, or national monuments and landmarks.

### **3.2 Floodplains**

Some of the existing sanitary sewers may be located within the floodplains. If there is no alternative to avoid construction within the floodplain, appropriate permits will be obtained. Replacement of the sanitary sewers in the floodplain will have no impact on the flood elevations.

#### **3.2.1 Direct, Indirect, and Cumulative Effects**

Permits will be obtained prior to any construction activities within the floodplain.

### **3.3 Wetlands**

Areas classified as wetlands per the US Fish and Wildlife Service's National Wetlands Inventory (NWI) will be determined during design. Some of the existing sanitary sewers may be located within wetlands. If there is no alternative to avoid construction within a wetland, appropriate permits will be obtained. Replacement of sanitary sewers will have no permanent impact on wetlands.

#### **3.3.1 Direct, Indirect, and Cumulative Effects**

Permits will be obtained prior to any construction activities within wetlands.

### **3.4 Historic Resources**

The majority of the work will be completed in existing trenches and previously disturbed areas. PHMC will be contacted when necessary during design and any historic resources will be avoided.

### **3.4.1 Direct, Indirect, and Cumulative Effects**

There should be no impact to any historic resources.

## **3.5 Biological Resources**

Pennsylvania Natural Diversity Inventory (PNDI) maintains a database containing site information on regulated plant and animal species, outstanding geological features, and significant natural communities. A search of PNDI's website will be performed during design.

### **3.5.1 Direct, Indirect, and Cumulative Effects**

This project should not have a negative impact on sensitive biological resources.

## **3.6 Water Quality Issues**

No direct discharges are proposed.

### **3.6.1 Direct, Indirect, and Cumulative Effects**

This project should improve the water quality by eliminating sanitary sewer overflows.

## **3.7 Coastal Resources**

The project is not located in a coastal zone management area; therefore, it will have no impact on coastal resources.

### **3.7.1 Direct, Indirect, and Cumulative Effects**

This project will not impact coastal resources.

## **3.8 Socio-Economic Issues**

The project will not impose any disproportionate adverse effects on minority and/or disadvantaged populations. It is Lower Paxton's policy to treat all of its customers equally and to evaluate wastewater service with no regards to socio-economic status.

### **3.8.1 Direct, Indirect, and Cumulative Effects**

This project will not disproportionately impact minority and/or disadvantaged populations.

## **3.9 Air Quality**

The only potential for impacts on air quality resulting from this project may be emissions from construction equipment/vehicles and minor amounts of fugitive dust from construction activities. The contractors will control dust and mud as required by local ordinances and best management practices.

### **3.9.1 Direct, Indirect, and Cumulative Effects**

This project will not impact air quality.

### **3.10 Transportation**

There will be an increase in traffic from construction vehicles in the project areas during the construction period. It is not anticipated that this additional traffic will have any adverse impacts on the project area. After construction is completed, there will be no additional traffic as a result of this project and no effects on the transportation infrastructure in the project area.

#### **3.10.1 Direct, Indirect, and Cumulative Effects**

This project will not impact transportation other than temporary disruption of traffic patterns during construction. Road resurfacing in project areas will improve the Township's road infrastructure.

### **3.11 Noise Abatement and Control**

There will be additional noise from construction activities during the construction period. The contractors will be required to limit construction activities to approved hours as determined by the local municipality. There will be no permanent increase in noise as a result of this project.

#### **3.11.1 Direct, Indirect, and Cumulative Effects**

This project will not impact noise levels other than a temporary increase during construction.

### **3.12 Wild and Scenic Rivers**

No direct discharges are proposed.

#### **3.12.1 Direct, Indirect, and Cumulative Effects**

This project will not impact a wild and scenic river.

### **3.13 Miscellaneous Environmental Considerations**

There will be no impacts on or from local landfills or Superfund/HSCA sites as a result of this project.

#### **3.13.1 Direct, Indirect, and Cumulative Effects**

This project is not anticipated to have any additional miscellaneous environmental impacts, other than environmental improvements resulting from elimination of wet weather sanitary sewer overflows.

## **4.0 SUMMARY OF MITIGATION**

No mitigation is required for this project.

## **5.0 PUBLIC PARTICIPATION**

Information on the project was provided to the Dauphin County Planning Commission and the Lower Paxton Township Planning Commission as part of the Act 537 Planning Process. Copies of the Planning Commissions' response letters are included in Exhibit 1 of this report. The public was also invited to comment on the Act 537 Plan Update during the required 30-day public comment period via an advertisement that was run in the Patriot News on November 12, 2013. A copy of the advertisement and proof of publication is also included in Exhibit 1. As of December 13, 2013, no comments from the public were received.

## **6.0 EXHIBITS**

- Exhibit 1 – Public Notifications and Responses:

Correspondence with the Dauphin County Planning Commission

Correspondence with the Lower Paxton Township Planning Commission

**Exhibit 1**  
**Public Notifications  
and Responses**

Attention Residents and Interested Persons of Lower Paxton Township

2013 Act 537 Plan Update for Lower Paxton Township

ACT 537 COMMENT PERIOD

The Public is hereby advised that it is the intention of the Lower Paxton Township Board of Supervisors to adopt an update to the existing Act 537 Plan (Update). Interested persons are encouraged to review the Update by appointment at the Lower Paxton Township Sewer Department office. The public is invited to comment on the Update within the thirty (30) day public comment period, which will begin on November 12, 2013 and conclude on December 12, 2013. Appointments can be made by contacting Mr. William Weaver, Sewer Department Director at (717) 657-5617 between 8:00 am and 4:00 pm.

The Update will revise the Beaver Creek Basin portion of the existing Act 537 Plan. The existing Act 537 Plan calls for enlarging the conveyance system within the Beaver Creek Basin to transport the wastewater to a new wet weather treatment facility that would treat and discharge peak wet weather flows to Beaver Creek, as needed, in order for Lower Paxton to maintain its wastewater flows within the allocated capacities in the Swatara Township WWTP and Joint Use Interceptor (JUI). While attempting to permit the land for the proposed wet weather treatment facility, it was determined that construction of a wet weather treatment plant is no longer a viable option. As a result, Lower Paxton revised the Beaver Creek Basin Corrective Action Plan (CAP) and DEP approved the revised Beaver Creek CAP in September 2011. Major revisions to the Beaver Creek CAP include the following in lieu of construction of the wet weather treatment plant:

- Replacement/rehabilitation of a large portion of the wastewater collection systems in the Beaver Creek Drainage Basin;
- Flow metering and hydraulic modeling of the Beaver Creek wastewater conveyance system to prioritize mini-basins for replacement/rehabilitation;
- Construction of conveyance system improvements and/or future pumping/storage facilities as may be required to reduce the hydraulic overload; and
- On-going post-rehabilitation flow metering to demonstrate reductions in peak wet weather flows.

The Second Amendment to the Second Consent Decree was then prepared and it was approved by the Court on September 18, 2013. The Second Amendment to the Second Consent Decree includes the revisions to the Beaver Creek CAP and requires Lower Paxton Township to update its Act 537 Plan accordingly.

Lower Paxton Township Authority (LPTA) will finance the projects using any grants received, existing capital reserves and the public bond that they have already secured, as well as future bond issues. PENNVEST funding may also be pursued for individual projects if determined to be in LPTA's best interest. User rates will be adjusted periodically, as needed, to generate sufficient revenues to meet the financial obligations, including any debt service associated with financing the proposed projects.





# LOWER PAXTON TOWNSHIP

425 PRINCE STREET HARRISBURG, PA 17109  
717/657-5600 FAX 717/724-8311  
www.lowerpaxton-pa.gov

BOARD OF SUPERVISORS  
WILLIAM B. HAWK  
CHAIRMAN  
WILLIAM C. SEEDS, SR.  
VICE CHAIRMAN  
GARY A. CRISSMAN  
SECRETARY  
WILLIAM L. HORNUNG  
DAVID B. BLAIN

November 20, 2013

Melissa Tomich Smith, P.E.  
Staff Engineer  
GHD  
1240 N Mountain Road  
Harrisburg, PA 17112

RECEIVED  
GHD Inc.

NOV 23 2013

Re: Act 537 Update

Dear Melissa:

The Lower Paxton Township Planning Commission has reviewed the prepared update for the Lower Paxton Township Act 537 Plan and finds it consistent with the Township Ordinances. The Planning Commission further recommends that the Lower Paxton Township Supervisors approve the plan update.

We would like to thank Mr. Jeff Wendle for his presentation to our Board at its meeting on November 6, 2013.

Thank you for the opportunity to review and offer comments on this plan update.

Sincerely,

Fred Lighty, Chairman  
Lower Paxton Township  
Planning Commission

# DAUPHIN COUNTY PLANNING COMMISSION

DAUPHIN COUNTY COURTHOUSE - HARRISBURG, PENNSYLVANIA 17101

STAFF OFFICE  
112 Market Street, 2nd Floor  
Harrisburg, Pennsylvania 17101-2015  
Telephone 717 234-2639  
Fax 717-234-4058  
e-mail: [planning@tcrpc-pa.org](mailto:planning@tcrpc-pa.org)

RECEIVED  
GHD Inc.  
DEC 11 2013

December 9, 2013

Mr. Kevin Shannon  
GHD  
1240 North Mountain Road  
Harrisburg, PA 17112

Re: Dauphin County Planning Commission review of  
Act 537 Sewage Facilities Plan Update  
Lower Paxton Township, Dauphin County

Dear Mr. Shannon,

The Dauphin County Planning Commission has reviewed Lower Paxton Township's Act 537 plan update at the December 9<sup>th</sup>, 2013 meeting and supports the adoption of the plan and offers the following comments:

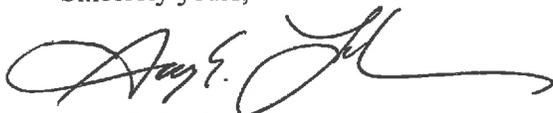
The plan's primary purpose is to address the new method of dealing with the wet weather peak flows in the Beaver Creek Basin. The recommended alternative of replacement/rehabilitation over a twenty year timeframe of the waste water collection infrastructure within the Beaver Creek Basin identified and analyzed in the plan proposes sufficient capacity in the sewer system to handle future wet weather peak flows in addition to current and projected future demand from current proposed development and projected development based on current township zoning requirements.

The plan is consistent with the Dauphin County Comprehensive Plan, especially the following strategies:

- Promote and encourage development where existing infrastructure exists with available excess capacity, rather than extending services into new areas and increasing costs to both the developer and the municipality/authority that operates the sewer treatment plant
- Encourage and assist local governments to adopt and implement official municipal sewage plans (Act 537 Plans) that adequately plan for public collection and treatment, as well as on-lot sub-surface systems . . .

Thank you for the opportunity to review this plan.

Sincerely yours,



Gary E. Lenker  
Chairman, Dauphin County Planning Commission

Cc: Lower Paxton Township (Attn.: Ms. Diane Moran)

**Appendix D**  
**Advertisement for Public Notice and Proof of**  
**Publication**

Attention Residents and Interested Persons of Lower Paxton Township

2013 Act 537 Plan Update for Lower Paxton Township

ACT 537 COMMENT PERIOD

The Public is hereby advised that it is the intention of the Lower Paxton Township Board of Supervisors to adopt an update to the existing Act 537 Plan (Update). Interested persons are encouraged to review the Update by appointment at the Lower Paxton Township Sewer Department office. The public is invited to comment on the Update within the thirty (30) day public comment period, which will begin on November 12, 2013 and conclude on December 12, 2013. Appointments can be made by contacting Mr. William Weaver, Sewer Department Director at (717) 657-5617 between 8:00 am and 4:00 pm.

The Update will revise the Beaver Creek Basin portion of the existing Act 537 Plan. The existing Act 537 Plan calls for enlarging the conveyance system within the Beaver Creek Basin to transport the wastewater to a new wet weather treatment facility that would treat and discharge peak wet weather flows to Beaver Creek, as needed, in order for Lower Paxton to maintain its wastewater flows within the allocated capacities in the Swatara Township WWTP and Joint Use Interceptor (JUI). While attempting to permit the land for the proposed wet weather treatment facility, it was determined that construction of a wet weather treatment plant is no longer a viable option. As a result, Lower Paxton revised the Beaver Creek Basin Corrective Action Plan (CAP) and DEP approved the revised Beaver Creek CAP in September 2011. Major revisions to the Beaver Creek CAP include the following in lieu of construction of the wet weather treatment plant:

- Replacement/rehabilitation of a large portion of the wastewater collection systems in the Beaver Creek Drainage Basin;
- Flow metering and hydraulic modeling of the Beaver Creek wastewater conveyance system to prioritize mini-basins for replacement/rehabilitation;
- Construction of conveyance system improvements and/or future pumping/storage facilities as may be required to reduce the hydraulic overload; and
- On-going post-rehabilitation flow metering to demonstrate reductions in peak wet weather flows.

The Second Amendment to the Second Consent Decree was then prepared and it was approved by the Court on September 18, 2013. The Second Amendment to the Second Consent Decree includes the revisions to the Beaver Creek CAP and requires Lower Paxton Township to update its Act 537 Plan accordingly.

Lower Paxton Township Authority (LPTA) will finance the projects using any grants received, existing capital reserves and the public bond that they have already secured, as well as future bond issues. PENNVEST funding may also be pursued for individual projects if determined to be in LPTA's best interest. User rates will be adjusted periodically, as needed, to generate sufficient revenues to meet the financial obligations, including any debt service associated with financing the proposed projects.

Written comments should be forwarded to the following address:

Mr. William Weaver, Sewer Department Director  
Lower Paxton Township  
425 Prince Street  
Suite 139  
Harrisburg, PA 17109

After addressing any comments received from the Public and the Township and County Planning Commissions, the Lower Paxton Township Board of Supervisors plan to adopt the Update at a public meeting.



**Appendix E**  
**Lower Paxton township Planning Commission**  
**and Dauphin County Planning Commission**



October 31, 2013

Lower Paxton Township Planning Commission  
425 Prince Street  
Harrisburg, PA 17109

To whom it may concern,

**2013 Act 537 Plan Update  
Lower Paxton Township, Dauphin County**

Enclosed is a draft copy of the update to Lower Paxton Township's existing Act 537 Plan, and accompanying Special Study to update the zoning, that were prepared in 2002 and 2006 respectively. This letter is to notify the Planning Commission that the existing Act 537 Planning needs to be updated again to revise the Beaver Creek Basin portion of the Plan to reflect the recently approved Beaver Creek Basin Corrective Action Plan (CAP), as set forth in the Second Amendment to the Second Consent Decree. The new CAP calls for replacing the existing sanitary sewers and possible future storage as the approved method of addressing infiltration/ inflow (I/I) in the Beaver Creek Basin in lieu of constructing a wet weather treatment plant as originally planned.

As you are aware, one of the requirements of Act 537 Planning is to provide evidence that the municipality has requested, reviewed and considered comments by appropriate official planning agencies. Therefore, please provide any comments you may have regarding the attached report. All comments will be considered and written responses will be provided to the Planning Commission and will be included in the 2013 Act 537 Plan Update that will be submitted to DEP.

Lower Paxton Township would like to submit the Plan Update as soon as possible and will be publishing the required 30-day public comment period in the Patriot News shortly. Therefore, any assistance in expediting the Planning Commission's review would be appreciated. Please contact us if you have questions or need additional information.

Sincerely,  
GHD

A handwritten signature in cursive script that reads 'Melissa Tomich Smith'.

**Melissa Tomich Smith, P.E.**  
Staff Engineer

Enclosures  
c: William Weaver, w/o enclosures



## LOWER PAXTON TOWNSHIP

425 PRINCE STREET HARRISBURG, PA 17109  
717/657-5600 FAX 717/724-8311  
www.lowerpaxton-pa.gov

BOARD OF SUPERVISORS  
WILLIAM B. HAWK  
CHAIRMAN  
WILLIAM C. SEEDS, SR.  
VICE CHAIRMAN  
GARY A. CRISSMAN  
SECRETARY  
WILLIAM L. HORNING  
DAVID B. BLAIN

November 20, 2013

Melissa Tomich Smith, P.E.  
Staff Engineer  
GHD  
1240 N Mountain Road  
Harrisburg, PA 17112

RECEIVED  
GHD Inc.

NOV 23 2013

Re: Act 537 Update

Dear Melissa:

The Lower Paxton Township Planning Commission has reviewed the prepared update for the Lower Paxton Township Act 537 Plan and finds it consistent with the Township Ordinances. The Planning Commission further recommends that the Lower Paxton Township Supervisors approve the plan update.

We would like to thank Mr. Jeff Wendle for his presentation to our Board at its meeting on November 6, 2013.

Thank you for the opportunity to review and offer comments on this plan update.

Sincerely,

Fred Lighty, Chairman  
Lower Paxton Township  
Planning Commission



November 11, 2013

Dauphin County Planning Commission  
Dauphin County Veterans Memorial Building  
112 Market Street, 2<sup>nd</sup> Floor  
Harrisburg, PA 17101

Attention: Leah Pearlman-Storch

**2013 Act 537 Plan Update  
Lower Paxton Township, Dauphin County**

Enclosed for your review is one (1) copy of the Act 537 Plan Update for Lower Paxton Township dated October 2013. The main purpose of this Plan Update is to revise the Beaver Creek Basin portion of the Township's current Act 537 Plan to reflect the actions set forth in the 2011 revised Beaver Creek Drainage Basin Hydraulic Overload Corrective Action Plan (CAP) and the 2013 Second Amendment to the Second Consent Decree between Lower Paxton, DEP and other parties. The revised Beaver Creek CAP calls for replacement/rehabilitation of a large portion of the sanitary sewer system in the Beaver Creek Basin, flow metering and hydraulic modeling, and construction of conveyance system improvements and/or future pumping/storage facilities as may be required to eliminate the hydraulic overload conditions in Lower Paxton's Beaver Creek Basin, in lieu of constructing a wet weather treatment plant as originally planned.

As you are aware, one of the requirements of Act 537 Planning is to provide evidence that the municipality has requested, reviewed and considered comments by appropriate official planning agencies. On behalf of Lower Paxton Township, we are requesting that you place the enclosed Act 537 Plan Update on the agenda for the Dauphin County Planning Commission's December 9th meeting. All comments will be considered and written responses will be provided to the Planning Commission and will be included in the final 2013 Act 537 Plan Update that will be submitted to DEP. Lower Paxton Township must submit the final Act 537 Plan Update to DEP by December 18, 2013. Therefore, any assistance in expediting the Planning Commission's review would be greatly appreciated. Your review letter can be emailed to [ww Weaver@lowerpaxton-pa.gov](mailto:ww Weaver@lowerpaxton-pa.gov) and to me at [kevin.shannon@ghd.com](mailto:kevin.shannon@ghd.com). Please contact us if you have questions or need additional information.

Sincerely,  
GHD

A handwritten signature in cursive script that reads "Kevin Shannon".

**Kevin Shannon, P.E.**  
Project Manager

Enclosure

c: William Weaver, w/o enclosures

G:\86\8910616\Phase 1700 COA Compliance\Act 537 Update\537 Update 2013\2013.11.11 Letter to DC PC.docx

**GHD**

1240 North Mountain Road Harrisburg PA 17112 USA  
T 1 717 541 0622 F 1 717 541 8004 E [harrisburg@ghd.com](mailto:harrisburg@ghd.com) W [www.ghd.com](http://www.ghd.com)

# DAUPHIN COUNTY PLANNING COMMISSION

DAUPHIN COUNTY COURTHOUSE - HARRISBURG, PENNSYLVANIA 17101

STAFF OFFICE  
112 Market Street, 2nd Floor  
Harrisburg, Pennsylvania 17101-2015  
Telephone 717 234-2639  
Fax 717-234-4058  
e-mail: [planning@tcrcp-pa.org](mailto:planning@tcrcp-pa.org)

RECEIVED  
GHD Inc.  
DEC 11 2013

December 9, 2013

Mr. Kevin Shannon  
GHD  
1240 North Mountain Road  
Harrisburg, PA 17112

Re: Dauphin County Planning Commission review of  
Act 537 Sewage Facilities Plan Update  
Lower Paxton Township, Dauphin County

Dear Mr. Shannon,

The Dauphin County Planning Commission has reviewed Lower Paxton Township's Act 537 plan update at the December 9<sup>th</sup>, 2013 meeting and supports the adoption of the plan and offers the following comments:

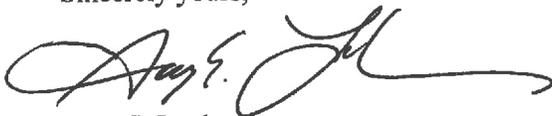
The plan's primary purpose is to address the new method of dealing with the wet weather peak flows in the Beaver Creek Basin. The recommended alternative of replacement/rehabilitation over a twenty year timeframe of the waste water collection infrastructure within the Beaver Creek Basin identified and analyzed in the plan proposes sufficient capacity in the sewer system to handle future wet weather peak flows in addition to current and projected future demand from current proposed development and projected development based on current township zoning requirements.

The plan is consistent with the Dauphin County Comprehensive Plan, especially the following strategies:

- Promote and encourage development where existing infrastructure exists with available excess capacity, rather than extending services into new areas and increasing costs to both the developer and the municipality/authority that operates the sewer treatment plant
- Encourage and assist local governments to adopt and implement official municipal sewage plans (Act 537 Plans) that adequately plan for public collection and treatment, as well as on-lot sub-surface systems . . .

Thank you for the opportunity to review this plan.

Sincerely yours,



Gary E. Lenker  
Chairman, Dauphin County Planning Commission

Cc: Lower Paxton Township (Attn.: Ms. Diane Moran)

**Appendix F**  
**Resolution Adopting the Act 537 Plan Update**

**LOWER PAXTON TOWNSHIP  
BOARD OF SUPERVISORS**

**Resolution 13-46**

**RESOLUTION OF THE SUPERVISORS OF LOWER PAXTON TOWNSHIP, DAUPHIN COUNTY, PENNSYLVANIA, (hereinafter "the Municipality") ADOPTING A PENNSYLVANIA SEWAGE FACILITIES, ACT 537 PLAN.**

**WHEREAS**, Section 5 of the Act of January 24, 1966, P. O. 1535, No. 537, known as the "Pennsylvania Sewage Facilities Act", as amended, and the Rules and Regulations of the Pennsylvania Department of Environmental Protection adopted thereunder, Chapter 71 of Title 25 of the Pennsylvania Code, require the Municipality to adopt an Official Sewage Facilities Plan providing for sewage services adequate to prevent contamination of waters and/or environmental health hazards with sewage wastes; and

**WHEREAS**, the Municipality has an approved Sewage Facilities Plan for the Beaver Creek, Paxton Creek, Asylum Run and Spring Creek Drainage Basins which was completed in 2002 and updated in 2006; and

**WHEREAS** the current approved Plan for the Beaver Creek Basin calls for Conveyance System Improvements, Construction of a Biological Wet Weather Treatment Facility in South Hanover Township, and on-going rehabilitation/maintenance of the sewer system; and

**WHEREAS**, the current approved Plan for the Beaver Creek Basin is no longer viable because the proposed wet weather treatment plant site in South Hanover Township cannot be used due to a zoning conflict and there are no other practical locations for the plant; and

**WHEREAS**, the current Act 537 Planning needs to be updated to revise the Beaver Creek Basin portion of the Plan to reflect the recently approved Beaver Creek Basin Corrective Action Plan (CAP), as set forth in the Second Amendment to the Second Consent Decree dated September 18, 2013; and

**WHEREAS**, The Municipality has prepared such a Sewage Facilities Plan Update in conjunction with the services provided by its consulting engineers; and

**WHEREAS**, This Sewage Facilities Plan has been prepared in conformance with Act 537 and the check list of the Pennsylvania Department of Environmental Protection; and

**NOW, THEREFORE, BE IT RESOLVED** that the Supervisors of the Township of Lower Paxton hereby adopt and submit to the Department of Environmental Protection for its approval the Lower Paxton Township Act 537 Sewage Facilities Plan Update for the Beaver Creek Basin, which plan is attached hereto. The selected plan for the Beaver Creek Basin is a 20-year program for replacement and/or rehabilitation of the sewer system, including main line sewers, manholes, service laterals and private building sewers, to eliminate sanitary sewer

overflows, reduce the hydraulic overload, and maintain wastewater flows within Lower Paxton Township's allocated capacities in the Swatara Township Authority's wastewater conveyance and treatment facility.

**DULY ADOPTED** By the Board Of Supervisors of Lower Paxton Township on  
December 17, 2013.

Attest:



---

Gary A. Crissman, Secretary

**BOARD OF SUPERVISORS  
LOWER PAXTON TOWNSHIP**



---

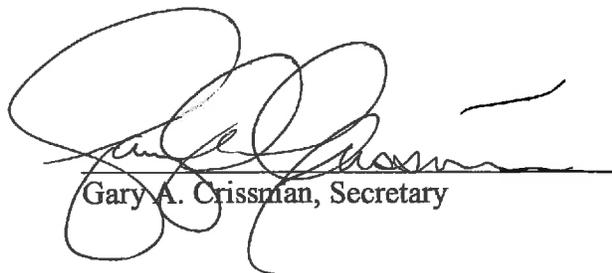
William B. Hawk, Chairman

CERTIFICATE

I, Gary A. Crissman, the undersigned, Secretary of the Lower Paxton Township Board of Supervisors, certify that the foregoing Resolution was adopted by a majority of the entire Board of the Supervisors at a meeting duly convened according to law and held on December 17, 2013, at which meeting a quorum was present; said Resolution was adopted by an aye or nay vote; said Resolution and the vote thereon showing how each member voted have been recorded in the minutes of said Board; and said Resolution remains in effect, unaltered and unamended as of the date of this Certificate.

**IN WITNESS WHEREOF**, I set my hand and official seal of the Board of Supervisors, this 17 day of December, 2013.

Seal



Gary A. Crissman, Secretary

**Appendix G**  
**Act 537 Plan Content and Environmental**  
**Assessment Checklist**



COMMONWEALTH OF PENNSYLVANIA  
DEPARTMENT OF ENVIRONMENTAL PROTECTION  
BUREAU OF POINT AND NON-POINT SOURCE MANAGEMENT

## Instructions for Completing Act 537 Plan Content and Environmental Assessment Checklist

Remove and recycle these instructions prior to submission

### CHECKLIST INSTRUCTIONS

These instructions are designed to assist the applicant in completing the Act 537 Plan Content and Environmental Assessment Checklist.

This checklist is composed of three parts: one for "General Information," one for "Administrative Completeness," and one for "General Plan Content". A plan must be "administratively complete" in order to be formally reviewed by DEP. The General Plan Content portion of the checklist identifies each of the issues that must be addressed in your Act 537 Plan Update based on the pre-planning meeting between you and/or your consultant and DEP.

Use the right-hand column blanks in the checklist to identify the page in the plan on which each planning issue is found or to reference a previously approved update or special study (title and page number).

If you determine a planning issue is not applicable even though it was previously thought to be needed, please explain your decision within the text of the plan (or as a footnote) and indicate the page number where this documentation is found.

When information required as part of an official plan update revision has been developed separately or in a previous update revision, incorporate the information by reference to the planning document and page.

For specific details covering the Act 537 planning requirements, refer to Chapters 71 and 73 of DEP's regulations.

Wastewater projects proposing funding through the following sources must prepare an "Environmental Report" as described in the Uniform Environmental Review Process (UER) and include it with the plan submission designated as "Plan-Appendix A". The following funding programs use the UER process.

- The Clean Water State Revolving Loan Fund (PENNVEST, DEP, EPA)
- The RUS Water and Waste Disposal Grant and Loan Program (USDA-RD)
- The Community Development Block Grant Program (DCED, HUG)
- Other Federal Funding Efforts (EPA)

The checklist items or portions of checklist items required in the Act 537 Plan Update revision and that are also included in the UER process are indicated by shading. Most of the "Environmental Report" document may be constructed from the Act 537 Official Plan Update revision by using "copy & paste" techniques. The technical guidance document *Uniform Environmental Review Process* (UER) (DEP ID. 381-5511-111) is available electronically on DEP's website at [www.dep.state.pa.us](http://www.dep.state.pa.us).

After Municipal Adoption by Resolution, submit three copies of the plan, any attachments or addenda and this checklist to DEP.

A copy of this completed checklist must be included with your Act 537 plan. DEP will use the "DEP USE ONLY" column during the completeness evaluation of the plan. This column may also be used by DEP during the pre-planning meeting with the municipality to identify planning elements that are not required to be included in the plan.



COMMONWEALTH OF PENNSYLVANIA  
DEPARTMENT OF ENVIRONMENTAL PROTECTION  
BUREAU OF POINT AND NON-POINT SOURCE MANAGEMENT

## Act 537 Plan Content and Environmental Assessment Checklist

### PART 1 GENERAL INFORMATION

#### A. Project Information

- Project Name Lower Paxton Township Act 537 Sewage Facilities Plan Update
- Brief Project Description The purpose of this report is to update Lower Paxton Township's existing Act 537 Plan to address the new method of dealing with the wet weather flows in the Beaver Creek Drainage Basin, as required by the Second Amendment of the Second Consent Decree approved by DEP on August 21, 2013, and fully executed by the Court on September 18, 2013

#### B. Client (Municipality) Information

Municipality Name	County	City	Boro	Twp
Lower Paxton Township	Dauphin	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Municipality Contact Individual - Last Name	First Name	MI	Suffix	Title
Weaver	William			Sewer Department Director
Additional Individual Last Name	First Name	MI	Suffix	Title

Municipality Mailing Address Line 1	Mailing Address Line 2	
425 Prince Street	Suite 139	
Address Last Line -- City	State	ZIP+4
Harrisburg	PA	17109
Phone + Ext.	FAX (optional)	Email (optional)
717-657-5617		wweaver@lowerpaxton-pa.gov

#### C. Site Information

Site (or Project) Name	(Municipal Name) Act 537 Plan Update
Lower Paxton Township Conveyance System in Beaver Creek Basin	
Site Location Line 1	Site Location Line 2

#### D. Project Consultant Information

Last Name	First Name	MI	Suffix
Wendle	Jeffrey	G	P.E., BCEE
Title	Consulting Firm Name		
Principal Engineer	GHD		
Mailing Address Line 1	Mailing Address Line 2		
1240 North Mountain Road			
Address Last Line -- City	State	ZIP+4	Country
Harrisburg	PA	17112	USA
Email	Phone + Ext.	FAX	
jeffrey.wendle@ghd.com	717-541-0622	717-541-8004	

**PART 2 ADMINISTRATIVE COMPLETENESS CHECKLIST**

<b>DEP Use Only</b>	<b>Indicate Page #(s) in Plan</b>	<b>In addition to the main body of the plan, the plan must include items one through eight listed below to be accepted for formal review by the department. Incomplete Plans will be returned unless the municipality is clearly requesting an advisory review.</b>
_____	<u>i-ii</u>	1. <b>Table of Contents</b> 2. <b>Plan Summary</b>
_____	<u>I</u>	A. Identify the proposed service areas and major problems evaluated in the plan. (Reference - Title 25, §71.21.a.7.i).
_____	<u>I, 11-15</u>	B. Identify the alternative(s) chosen to solve the problems and serve the areas of need identified in the plan. Also, include any institutional arrangements necessary to implement the chosen alternative(s). (Reference Title 25 §71.21.a.7.ii).
_____	<u>13</u>	C. Present the estimated cost of implementing the proposed alternative (including the user fees) and the proposed funding method to be used. (Reference Title 25, §71.21.a.7.ii).
_____	<u>15</u>	D. Identify the municipal commitments necessary to implement the Plan. (Reference Title 25, §71.21.a.7.iii).
_____	<u>16, App. A</u>	E. Provide a schedule of implementation for the project that identifies the MAJOR milestones with dates necessary to accomplish the project to the point of operational status. (Reference Title 25, §71.21.a.7.iv).
_____	<u>I, App. F</u>	3. <b>Municipal Adoption: Original</b> , signed and sealed Resolution of Adoption by the municipality which contains, at a minimum, alternatives chosen and a commitment to implement the Plan in accordance with the implementation schedule. (Reference Title 25, §71.31.f) Section V.F. of the Planning Guide.
_____	<u>I, App. E</u>	4. <b>Planning Commission / County Health Department Comments:</b> Evidence that the municipality has requested, reviewed and considered comments by appropriate official planning agencies of the municipality, planning agencies of the county, planning agencies with area wide jurisdiction (where applicable), and any existing county or joint county departments of health. (Reference-Title 25, §71.31.b) Section V.E.1 of the Planning Guide.
_____	<u>I, App. D</u>	5. <b>Publication:</b> Proof of Public Notice which documents the proposed plan adoption, plan summary, and the establishment and conduct of a 30 day comment period. (Reference-Title 25, §71.31.c) Section V.E.2 of the Planning Guide.
_____	<u>I, App. E</u>	6. <b>Comments and Responses:</b> Copies of ALL written comments received and municipal response to EACH comment in relation to the proposed plan. (Reference-Title 25, §71.31.c) Section V.E.2 of the Planning Guide.
_____	<u>16, App. A</u>	7. <b>Implementation Schedule:</b> A complete project implementation schedule with milestone dates specific for each existing and future area of need. Other activities in the project implementation schedule should be indicated as occurring a finite number of days from a major milestone. (Reference-Title 25, §71.31.d) Section V.F. of the Planning Guide. Include dates for the future initiation of feasibility evaluations in the project's implementation schedule for areas proposing completion of sewage facilities for planning periods in excess of five years. (Reference Title 25, §71.21.c).
_____	<u>I, App. E</u>	8. <b>Consistency Documentation:</b> Documentation indicating that the appropriate agencies have received, reviewed and concurred with the method proposed to resolve identified inconsistencies within the proposed alternative and consistency requirements in 71.21.(a)(5)(i-iii). (Reference-Title 25, §71.31.e). Appendix B of the Planning Guide.

PART 3 GENERAL PLAN CONTENT CHECKLIST		
DEP Use Only	Indicate Page #(s) in Plan	Item Required
_____	<u>1</u>	<b>I. Previous Wastewater Planning</b>
_____	_____	A. Identify, describe and briefly analyze all past wastewater planning for its impact on the current planning effort:
_____	_____	1. Previously undertaken under the Sewage Facilities Act (Act 537). (Reference-Act 537, Section 5 §d.1).
_____	_____	2. Has not been carried out according to an approved implementation schedule contained in the plans. (Reference-Title 25, §71.21.a.5.i.A-D). Section V.F of the Planning Guide.
_____	_____	3. Is anticipated or planned by applicable sewer authorities or approved under a Chapter 94 Corrective Action Plan. (Reference-Title 25, §71.21.a.5.i.A&B). Section V.D. of the Planning Guide.
_____	_____	4. Through planning modules for new land development, planning "exemptions" and addenda. (Reference-Title 25, §71.21.a.5.i.A).
_____	_____	<b>II. Physical and Demographic Analysis utilizing written description and mapping</b> (All items listed below require maps, and all maps should show all current lots and structures and be of appropriate scale to clearly show significant information).
_____	<u>Plate 2</u>	A. Identification of planning area(s), municipal boundaries, Sewer Authority/Management Agency service area boundaries. (Reference-Title 25, §71.21.a.1.i).
_____	<u>Plate 2</u>	B. Identification of physical characteristics (streams, lakes, impoundments, natural conveyance, channels, drainage basins in the planning area). (Reference-Title 25, §71.21.a.1.ii).
_____	<u>N/A</u>	C. Soils - Analysis with description by soil type and soils mapping for areas not presently served by sanitary sewer service. Show areas suitable for in-ground onlot systems, elevated sand mounds, individual residential spray irrigation systems, and areas unsuitable for soil dependent systems. (Reference-Title 25, §71.21.a.1.iii). Show Prime Agricultural Soils and any locally protected agricultural soils. (Reference-Title 25, §71.21.a.1.iii).
_____	<u>N/A</u>	D. Geologic Features - (1) Identification through analysis, (2) mapping and (3) their relation to existing or potential nitrate-nitrogen pollution and drinking water sources. Include areas where existing nitrate-nitrogen levels are in excess of 5 mg/L. (Reference-Title 25, §71.21.a.1.iii).
_____	<u>N/A</u>	E. Topography - Depict areas with slopes that are suitable for conventional systems; slopes that are suitable for elevated sand mounds and slopes that are unsuitable for onlot systems. (Reference-Title 25, §71.21.a.1.ii).
_____	<u>N/A</u>	F. Potable Water Supplies - Identification through mapping, description and analysis. Include public water supply service areas and available public water supply capacity and aquifer yield for groundwater supplies. (Reference-Title 25 §71.21.a.1.vi). Section V.C. of the Planning Guide.
_____	<u>N/A</u>	G. Wetlands-Identify wetlands as defined in Title 25, Chapter 105 by description, analysis and mapping. Include National Wetland Inventory mapping and potential wetland areas per USDA, SCS mapped hydric soils. Proposed collection, conveyance and treatment facilities and lines must be located and labeled, along with the identified wetlands, on the map. (Reference-Title 25, §71.21.a.1.v). Appendix B, Section II.I of the Planning Guide.

		<b>III.</b>	<b>Existing Sewage Facilities in the Planning Area - Identifying the Existing Needs</b>
		A.	Identify, map and describe municipal and non-municipal, individual and community sewerage systems in the planning area including:
	<u>Plate 3</u>	1.	Location, size and ownership of treatment facilities, main intercepting lines, pumping stations and force mains including their size, capacity, point of discharge. Also include the name of the receiving stream, drainage basin, and the facility's effluent discharge requirements. (Reference-Title 25, §71.21a.2.i.A).
	<u>N/A</u>	2.	A narrative and schematic diagram of the facility's basic treatment processes including the facility's NPDES permitted capacity, and the Clean Streams Law permit number. (Reference-Title 25, §71.21.a.2.i.A).
	<u>2-3</u>	3.	A description of problems with existing facilities (collection, conveyance and/or treatment), including existing or projected overload under Title 25, Chapter 94 (relating to municipal wasteload management) or violations of the NPDES permit, Clean Streams Law permit, or other permit, rule or regulation of DEP. (Reference-Title 25, §71.21.a.2.i.B).
	<u>N/A</u>	4.	Details of scheduled or in-progress upgrading or expansion of treatment facilities and the anticipated completion date of the improvements. Discuss any remaining reserve capacity and the policy concerning the allocation of reserve capacity. Also discuss the compatibility of the rate of growth to existing and proposed wastewater treatment facilities. (Reference-Title 25, §71.21.a.4.i & ii).
	<u>N/A</u>	5.	A detailed description of the municipality's operation and maintenance requirements for small flow treatment facility systems, including the status of past and present compliance with these requirements and any other requirements relating to sewage management programs. (Reference-Title 25, §71.21.a.2.i.C).
	<u>N/A</u>	6.	Disposal areas, if other than stream discharge, and any applicable groundwater limitations. (Reference-Title 25, §71.21.a.4.i & ii).
	<u>N/A</u>	B.	Using DEP's publication titled <i>Sewage Disposal Needs Identification</i> , identify, map and describe areas that utilize individual and community onlot sewage disposal and, unpermitted collection and disposal systems ("wildcat" sewers, borehole disposal, etc.) and retaining tank systems in the planning area including:
		1.	The types of onlot systems in use. (Reference-Title 25, §71.21.a.2.ii.A).
		2.	A sanitary survey complete with description, map and tabulation of documented and potential public health, pollution, and operational problems (including malfunctioning systems) with the systems, including violations of local ordinances, the Sewage Facilities Act, the Clean Stream Law or regulations promulgated thereunder. (Reference-Title 25, §71.21.a.2.ii.B).
		3.	A comparison of the types of onlot sewage systems installed in an area with the types of systems which are appropriate for the area according to soil, geologic conditions, topographic limitations sewage flows, and Title 25 Chapter 73 (relating to standards for sewage disposal facilities). (Reference-Title 25, §71.21.a.2.ii.C).
		4.	An individual water supply survey to identify possible contamination by malfunctioning onlot sewage disposal systems consistent with DEP's <i>Sewage Disposal Needs Identification</i> publication. (Reference-Title 25 §71.21.a.2.ii.B).
		5.	Detailed description of operation and maintenance requirements of the municipality for individual and small volume community onlot systems, including the status of past and present compliance with these requirements and any other requirements relating to sewage management programs. (Reference-Title 25, §71.21.a.2.i.C).

	<u>N/A</u>	<p>C. Identify wastewater sludge and septage generation, transport and disposal methods. Include this information in the sewage facilities alternative analysis including:</p> <ol style="list-style-type: none"> <li>1. Location of sources of wastewater sludge or septage (Septic tanks, holding tanks, wastewater treatment facilities). (Reference-Title 25 §71.71).</li> <li>2. Quantities of the types of sludges or septage generated. (Reference-Title 25 §71.71).</li> <li>3. Present disposal methods, locations, capacities and transportation methods. (Reference-Title 25 §71.71).</li> </ol>
		<p><b>IV. Future Growth and Land Development</b></p> <p>A. Identify and briefly summarize all municipal and county planning documents adopted pursuant to the Pennsylvania Municipalities Planning Code (Act 247) including:</p> <ol style="list-style-type: none"> <li>1. All land use plans and zoning maps that identify residential, commercial, industrial, agricultural, recreational and open space areas. (Reference-Title 25, §71.21.a.3.iv).</li> <li>2. Zoning or subdivision regulations that establish lot sizes predicated on sewage disposal methods. (Reference – Title 25§71.21.a.3.iv).</li> <li>3. All limitations and plans related to floodplain and stormwater management and special protection (Ch. 93) areas. (Reference-Title 25 §71.21.a.3.iv) Appendix B, Section II.F of the Planning Guide.</li> </ol> <p>B. Delineate and describe the following through map, text and analysis.</p> <ol style="list-style-type: none"> <li>1. Areas with existing development or plotted subdivisions. Include the name, location, description, total number of EDU's in development, total number of EDU's currently developed and total number of EDU's remaining to be developed (include time schedule for EDU's remaining to be developed). (Reference-Title 25, §71.21.a.3.i).</li> <li>2. Land use designations established under the Pennsylvania Municipalities Planning Code (35 P.S. 10101-11202), including residential, commercial and industrial areas. (Reference-Title 25,§71.21.a.3.ii). Include a comparison of proposed land use as allowed by zoning and existing sewage facility planning. (Reference-Title 25, §71.21 a.3.iv).</li> <li>3. Future growth areas with population and EDU projections for these areas using historical, current and future population figures and projections of the municipality. Discuss and evaluate discrepancies between local, county, state and federal projections as they relate to sewage facilities. (Reference-Title 25, §71.21.a.1.iv). (Reference-Title 25, §71.21.a.3.iii).</li> <li>4. Zoning, and/or subdivision regulations; local, county or regional comprehensive plans; and existing plans of any other agency relating to the development, use and protection of land and water resources with special attention to: (Reference-Title 25, §71.21 a.3.iv). <ul style="list-style-type: none"> <li>--public ground/surface water supplies</li> <li>--recreational water use areas</li> <li>--groundwater recharge areas</li> <li>--industrial water use</li> <li>--wetlands</li> </ul> </li> <li>5. Sewage planning necessary to provide adequate wastewater treatment for five and ten year future planning periods based on projected growth of existing and proposed wastewater collection and treatment facilities. (Reference-Title 25, §71.21.a.3.v).</li> </ol>
	<u>Plate 1</u>	
	<u>Table 4</u>	
	<u>N/A</u>	
	<u>Plate 2,</u> <u>Tables 3-</u> <u>5</u>	
	<u>Plate 1,</u> <u>Table 4</u>	
	<u>Plate 2,</u> <u>Tables 3-</u> <u>4</u>	
	<u>N/A</u>	
	<u>4-7</u>	



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|  |            | 3. Preliminary hydrogeologic evaluation. (Reference-Title 25, §71.64.c.2).                                                                                                                                                                         |
|  |            | 4. Municipal, Local, Agency or other controls over operation and maintenance requirements through a Sewage Management Program. (Reference-Title 25, §71.64.d). See Part "F" below.                                                                 |
|  | <u>N/A</u> | D. The use of community land disposal alternatives including:                                                                                                                                                                                      |
|  |            | 1. Soil and site suitability. (Reference-Title 25, §71.21.a.2.ii.C).                                                                                                                                                                               |
|  |            | 2. Preliminary hydrogeologic evaluation. (Reference-Title 25, §71.21.a.2.ii.C).                                                                                                                                                                    |
|  |            | 3. Municipality, Local Agency or Other Controls over operation and maintenance requirements through a Sewage Management Program (Reference-Title 25, §71.21.a.2.ii.C). See Part "F" below.                                                         |
|  |            | 4. The rehabilitation or replacement of existing malfunctioning community land disposal systems. (See Part "V", B, 4, a, b, c above). See also Part "F" below.                                                                                     |
|  | <u>N/A</u> | E. The use of retaining tank alternatives on a temporary or permanent basis including: (Reference- Title 25, §71.21.a.4).                                                                                                                          |
|  |            | 1. Commercial, residential and industrial use. (Reference-Title 25, §71.63.e).                                                                                                                                                                     |
|  |            | 2. Designated conveyance facilities (pumper trucks). (Reference-Title 25, §71.63.b.2).                                                                                                                                                             |
|  |            | 3. Designated treatment facilities or disposal site. (Reference-Title 25, §71.63.b.2).                                                                                                                                                             |
|  |            | 4. Implementation of a retaining tank ordinance by the municipality. (Reference-Title 25, §71.63.c.3). See Part "F" below.                                                                                                                         |
|  |            | 5. Financial guarantees when retaining tanks are used as an interim sewage disposal measure. (Reference-Title 25, §71.63.c.2).                                                                                                                     |
|  | <u>N/A</u> | F. Sewage Management Programs to assure the future operation and maintenance of existing and proposed sewage facilities through:                                                                                                                   |
|  |            | 1. Municipal ownership or control over the operation and maintenance of individual onlot sewage disposal systems, small flow treatment facilities, or other traditionally non-municipal treatment facilities. (Reference-Title 25, §71.21.a.4.iv). |
|  |            | 2. Required inspection of sewage disposal systems on a schedule established by the municipality. (Reference-Title 25, §71.73.b.1.).                                                                                                                |
|  |            | 3. Required maintenance of sewage disposal systems including septic and aerobic treatment tanks and other system components on a schedule established by the municipality. (Reference-Title 25, §71.73.b.2).                                       |
|  |            | 4. Repair, replacement or upgrading of malfunctioning onlot sewage systems. (Reference-Title 25, §71.21.a.4.iv) and §71.73.b.5 through:                                                                                                            |
|  |            | a. Aggressive pro-active enforcement of ordinances that require operation and maintenance and prohibit malfunctioning systems. (Reference-Title 25, §71.73.b.5).                                                                                   |
|  |            | b. Public education programs to encourage proper operation and maintenance and repair of sewage disposal systems.                                                                                                                                  |
|  |            | 5. Establishment of joint municipal sewage management programs. (Reference-Title 25, §71.73.b.8).                                                                                                                                                  |
|  |            | 6. Requirements for bonding, escrow accounts, management agencies or associations to assure operation and maintenance for non-municipal facilities. (Reference-Title 25, §71.71).                                                                  |

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| <u>      </u> | <u>N/A</u>    | G. Non-structural comprehensive planning alternatives that can be undertaken to assist in meeting existing and future sewage disposal needs including: (Reference-Title 25, §71.21.a.4).                                     |
| <u>      </u> | <u>      </u> | 1. Modification of existing comprehensive plans involving:                                                                                                                                                                   |
| <u>      </u> | <u>      </u> | a. Land use designations. (Reference-Title 25, §71.21.a.4).                                                                                                                                                                  |
| <u>      </u> | <u>      </u> | b. Densities. (Reference-Title 25, §71.21.a.4).                                                                                                                                                                              |
| <u>      </u> | <u>      </u> | c. Municipal ordinances and regulations. (Reference-Title 25, §71.21.a.4).                                                                                                                                                   |
| <u>      </u> | <u>      </u> | d. Improved enforcement. (Reference-Title 25, §71.21.a.4).                                                                                                                                                                   |
| <u>      </u> | <u>      </u> | e. Protection of drinking water sources. (Reference-Title 25, §71.21.a.4).                                                                                                                                                   |
| <u>      </u> | <u>      </u> | 2. Consideration of a local comprehensive plan to assist in producing sound economic and consistent land development. (Reference-Title 25, §71.21.a.4).                                                                      |
| <u>      </u> | <u>      </u> | 3. Alternatives for creating or changing municipal subdivision regulations to assure long-term use of on-site sewage disposal that consider lot sizes and protection of replacement areas. (Reference-Title 25, §71.21.a.4). |
| <u>      </u> | <u>      </u> | 4. Evaluation of existing local agency programs and the need for technical or administrative training. (Reference-Title 25, §71.21.a.4).                                                                                     |

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| <u>      </u> | <u>N/A</u>    | H. A no-action alternative which includes discussion of both short-term and long-term impacts on: (Reference-Title 25, §71.21.a.4). |
| <u>      </u> | <u>      </u> | 1. Water Quality/Public Health. (Reference-Title 25, §71.21.a.4).                                                                   |
| <u>      </u> | <u>      </u> | 2. Growth potential (residential, commercial, industrial). (Reference-Title 25, §71.21.a.4).                                        |
| <u>      </u> | <u>      </u> | 3. Community economic conditions. (Reference-Title 25, §71.21.a.4).                                                                 |
| <u>      </u> | <u>      </u> | 4. Recreational opportunities. (Reference-Title 25, §71.21.a.4).                                                                    |
| <u>      </u> | <u>      </u> | 5. Drinking water sources. (Reference-Title 25, §71.21.a.4).                                                                        |
| <u>      </u> | <u>      </u> | 6. Other environmental concerns. (Reference-Title 25, §71.21.a.4).                                                                  |

**VI. Evaluation of Alternatives**

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| <u>      </u> |  | A. Technically feasible alternatives identified in Section V of this check-list must be evaluated for consistency with respect to the following: (Reference-Title 25, §71.21.a.5.i.). |
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| <u>      </u> | <u>N/A</u> | 1. Applicable plans developed and approved under <b>Sections 4 and 5 of the Clean Streams Law or Section 208 of the Clean Water Act</b> (33 U.S.C.A. 1288). (Reference-Title 25, §71.21.a.5.i.A). Appendix B, Section II.A of the Planning Guide. |
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| <u>      </u> | <u>11-12</u> | 2. Municipal wasteload management <b>Corrective Action Plans or Annual Reports</b> developed under PA Code, Title 25, Chapter 94. (Reference-Title 25, §71.21.a.5.i.B). The municipality's recent Wasteload Management (Chapter 94) Reports should be examined to determine if the proposed alternative is consistent with the recommendations and findings of the report. Appendix B, Section II.B of the Planning Guide. |
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| <u>      </u> | <u>N/A</u> | 3. Plans developed under <b>Title II of the Clean Water Act</b> (33 U.S.C.A. 1281-1299) or <b>Titles II and VI of the Water Quality Act of 1987</b> (33 U.S.C.A. 1251-1376). (Reference-Title 25, §71.21.a.5.i.C). Appendix B, Section II.E of the Planning Guide. |
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| _____ | <u>N/A</u>    | 4. <b>Comprehensive plans</b> developed under the Pennsylvania Municipalities Planning Code. (Reference-Title 25, §71.21.a.5.i.D). The municipality's comprehensive plan must be examined to assure that the proposed wastewater disposal alternative is consistent with land use and all other requirements stated in the comprehensive plan. Appendix B, Section II.D of the Planning Guide.                                                                                                                                                                                                        |
| _____ | <u>N/A</u>    | 5. <b>Antidegradation requirements</b> as contained in PA Code, Title 25, Chapters 93, 95 and 102 (relating to water quality standards, wastewater treatment requirements and erosion control) and the Clean Water Act. (Reference-Title 25, §71.21.a.5.i.E). Appendix B, Section II.F of the Planning Guide.                                                                                                                                                                                                                                                                                         |
| _____ | <u>N/A</u>    | 6. <b>State Water Plans</b> developed under the Water Resources Planning Act (42 U.S.C.A. 1962-1962 d-18). (Reference-Title 25, §71.21.a.5.i.F). Appendix B, Section II.C of the Planning Guide.                                                                                                                                                                                                                                                                                                                                                                                                      |
| _____ | <u>N/A</u>    | 7. <b>Pennsylvania Prime Agricultural Land Policy</b> contained in Title 4 of the Pennsylvania Code, Chapter 7, Subchapter W. Provide narrative on local municipal policy and an overlay map on prime agricultural soils. (Reference-Title 25, §71.21.a.5.i.G). Appendix B, Section II.G of the Planning Guide.                                                                                                                                                                                                                                                                                       |
| _____ | <u>N/A</u>    | 8. <b>County Stormwater Management Plans</b> approved by DEP under the Storm Water Management Act (32 P.S. 680.1-680.17). (Reference-Title 25, §71.21.a.5.i.H). Conflicts created by the implementation of the proposed wastewater alternative and the existing recommendations for the management of stormwater in the county Stormwater Management Plan must be evaluated and mitigated. If no plan exists, no conflict exists. Appendix B, Section II.H of the Planning Guide.                                                                                                                     |
| _____ | <u>App. C</u> | 9. <b>Wetland Protection.</b> Using wetland mapping developed under Checklist Section II.G, identify and discuss mitigative measures including the need to obtain permits for any encroachments on wetlands from the construction or operation of any proposed wastewater facilities. (Reference-Title 25, §71.21.a.5.i.I) Appendix B, Section II.I of the Planning Guide.                                                                                                                                                                                                                            |
| _____ | <u>App. C</u> | 10. <b>Protection of rare, endangered or threatened plant and animal species</b> as identified by the Pennsylvania Natural Diversity Inventory (PNDI). (Reference-Title 25, §71.21.a.5.i.J). Provide DEP with a copy of the completed Request For PNDI Search document. Also provide a copy of the response letter from the Department of Conservation and Natural Resources' Bureau of Forestry regarding the findings of the PNDI search. Appendix B, Section II.J of the Planning Guide.                                                                                                           |
| _____ | <u>App. C</u> | 11. <b>Historical and archaeological resource protection</b> under P.C.S. Title 37, Section 507 relating to cooperation by public officials with the Pennsylvania Historical and Museum Commission. (Reference-Title 25, §71.21.a.5.i.K). Provide the department with a completed copy of a Cultural Resource Notice request of the Bureau of Historic Preservation (BHP) to provide a listing of known historical sites and potential impacts on known archaeological and historical sites. Also provide a copy of the response letter from the BHP. Appendix B, Section II.K of the Planning Guide. |
| _____ | <u>11-12</u>  | B. Provide for the resolution of any inconsistencies in any of the points identified in Section VI.A. of this checklist by submitting a letter from the appropriate agency stating that the agency has received, reviewed and concurred with the resolution of identified inconsistencies. (Reference-Title 25, §71.21.a.5.ii). Appendix B of the Planning Guide.                                                                                                                                                                                                                                     |
| _____ | <u>11-12</u>  | C. Evaluate alternatives identified in Section V of this checklist with respect to applicable water quality standards, effluent limitations or other technical, legislative or legal requirements. (Reference-Title 25, §71.21.a.5.iii).                                                                                                                                                                                                                                                                                                                                                              |

- \_\_\_\_\_ 11 D. Provide cost estimates using present worth analysis for construction, financing, on going administration, operation and maintenance and user fees for alternatives identified in Section V of this checklist. Estimates shall be limited to areas identified in the plan as needing improved sewage facilities within five years from the date of plan submission. (Reference-Title 25, §71.21 a.5.iv).
- \_\_\_\_\_ 11 E. Provide an analysis of the funding methods available to finance the proposed alternatives evaluated in Section V of this checklist. Also provide documentation to demonstrate which alternative and financing scheme combination is the most cost-effective; and a contingency financial plan to be used if the preferred method of financing cannot be implemented. The funding analysis shall be limited to areas identified in the plan as needing improved sewage facilities within five years from the date of the plan submission. (Reference-Title 25, §71.21.a.5.v).
- \_\_\_\_\_ N/A F. Analyze the need for immediate or phased implementation of each alternative proposed in Section V of this checklist including: (Reference-Title 25, §71.21.a.5.vi).
  - \_\_\_\_\_ \_\_\_\_\_ 1. A description of any activities necessary to abate critical public health hazards pending completion of sewage facilities or implementation of sewage management programs. (Reference-Title 25, §71.21.a.5.vi.A).
  - \_\_\_\_\_ \_\_\_\_\_ 2. A description of the advantages, if any, in phasing construction of the facilities or implementation of a sewage management program justifying time schedules for each phase. (Reference-Title 25, §71.21.a.5.vi.B).
- \_\_\_\_\_ 12-13 G. Evaluate administrative organizations and legal authority necessary for plan implementation. (Reference - Title 25, §71.21.a.5.vi.D.).
- \_\_\_\_\_ \_\_\_\_\_ **VII. Institutional Evaluation**
- \_\_\_\_\_ 12, App. B A. Provide an analysis of all existing wastewater treatment authorities, their past actions and present performance including:
  - \_\_\_\_\_ 12-13 1. Financial and debt status. (Reference-Title 25, §71.61.d.2).
  - \_\_\_\_\_ 12-13 2. Available staff and administrative resources. (Reference-Title 25, §71.61.d.2)
  - \_\_\_\_\_ 12-13 3. Existing legal authority to:
    - \_\_\_\_\_ 12-13 a. Implement wastewater planning recommendations. (Reference-Title 25, §71.61.d.2).
    - \_\_\_\_\_ 12-13 b. Implement system-wide operation and maintenance activities. (Reference-Title 25, §71.61.d.2).
    - \_\_\_\_\_ 13 c. Set user fees and take purchasing actions. (Reference-Title 25, §71.61.d.2).
    - \_\_\_\_\_ 13 d. Take enforcement actions against ordinance violators. (Reference-Title 25, §71.61.d.2).
    - \_\_\_\_\_ 13 e. Negotiate agreements with other parties. (Reference-Title 25, §71.61.d.2).
    - \_\_\_\_\_ 13 f. Raise capital for construction and operation and maintenance of facilities. (Reference-Title 25,§71.61.d.2).
- \_\_\_\_\_ \_\_\_\_\_ B. Provide an analysis and description of the various institutional alternatives necessary to implement the proposed technical alternatives including:
  - \_\_\_\_\_ 13 1. Need for new municipal departments or municipal authorities. (Reference-Title 25, §71.61.d.2).
  - \_\_\_\_\_ 13 2. Functions of existing and proposed organizations (sewer authorities, onlot maintenance agencies, etc.). (Reference-Title 25, §71.61.d.2).
  - \_\_\_\_\_ 13 3. Cost of administration, implementability, and the capability of the

authority/agency to react to future needs. (Reference-Title 25, §71.61.d.2).

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|  |            | C. Describe all necessary administrative and legal activities to be completed and adopted to ensure the implementation of the recommended alternative including:                                                                                                                                                            |
|  | <u>N/A</u> | 1. Incorporation of authorities or agencies. (Reference-Title 25, §71.61.d.2).                                                                                                                                                                                                                                              |
|  | <u>N/A</u> | 2. Development of all required ordinances, regulations, standards and inter-municipal agreements. (Reference-Title 25, §71.61.d.2).                                                                                                                                                                                         |
|  | <u>13</u>  | 3. Description of activities to provide rights-of-way, easements and land transfers. (Reference-Title 25, §71.61.d.2).                                                                                                                                                                                                      |
|  | <u>N/A</u> | 4. Adoption of other municipal sewage facilities plans. (Reference-Title 25, §71.61.d.2).                                                                                                                                                                                                                                   |
|  | <u>13</u>  | 5. Any other legal documents. (Reference-Title 25, §71.61.d.2).                                                                                                                                                                                                                                                             |
|  | <u>13</u>  | 6. Dates or timeframes for items 1-5 above on the project's implementation schedule.                                                                                                                                                                                                                                        |
|  | <u>13</u>  | D. Identify the proposed institutional alternative for implementing the chosen technical wastewater disposal alternative. Provide justification for choosing the specific institutional alternative considering administrative issues, organizational needs and enabling legal authority. (Reference-Title 25, §71.61.d.2). |

14, App. A

**VIII. Implementation Schedule and Justification for Selected Technical & Institutional Alternatives**

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|  |  | A. Identify the technical wastewater disposal alternative which best meets the wastewater treatment needs of each study area of the municipality. Justify the choice by providing documentation which shows that it is the best alternative based on: |
|  |  | 1. Existing wastewater disposal needs. (Reference-Title 25, §71.21 a.6).                                                                                                                                                                              |
|  |  | 2. Future wastewater disposal needs. (five and ten years growth areas). (Reference-Title 25, §71.21 a.6).                                                                                                                                             |
|  |  | 3. Operation and maintenance considerations. (Reference-Title 25, §71.21.a.6).                                                                                                                                                                        |
|  |  | 4. Cost-effectiveness. (Reference-Title 25, §71.21 a.6).                                                                                                                                                                                              |
|  |  | 5. Available management and administrative systems. (Reference-Title 25, §71.21 a.6).                                                                                                                                                                 |
|  |  | 6. Available financing methods. (Reference-Title 25, §71.21 a.6).                                                                                                                                                                                     |
|  |  | 7. Environmental soundness and compliance with natural resource planning and preservation programs. (Reference-Title 25, §71.21 a.6).                                                                                                                 |
|  |  | B. Designate and describe the capital financing plan chosen to implement the selected alternative(s). Designate and describe the chosen back-up financing plan. (Reference-Title 25, §71.21.a.6)                                                      |
|  |  | C. Designate and describe the implementation schedule for the recommended alternative, including justification for any proposed phasing of construction or implementation of a Sewage Management Program. (Reference – Title 25 §71.31d)              |

14, App. C

**IX. Environmental Report (ER) generated from the Uniform Environmental Review Process (UER)**

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|  |  | A. Complete an ER as required by the UER process and as described in the DEP Technical Guidance 381-5511-111. Include this document as "Appendix A" to the Act 537 Plan Update Revision. Note: <i>An ER is required only for Wastewater projects proposing funding through any of the funding sources identified in the UER.</i> |
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# **Sanitary Sewer System Map Plates**

**Plate 1**  
**Zoning Map**

**Plate 2**  
**Proposed Developments and Projected  
Development Areas (Beaver Creek Basin)**

**Plate 3**  
**Sanitary Sewer System Map**

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**Document Status**

Rev No.	Author	Reviewer		Approved for Issue		
		Name	Signature	Name	Signature	Date

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