

**LOWER POTTS GROVE  
TOWNSHIP AUTHORITY  
2012  
MUNICIPAL WASTELOAD  
MANAGEMENT REPORT**

**MARCH 2013**

**CHAPTER 94**  
**MUNICIPAL WASTELOAD MANAGEMENT REPORT**

**2012 ANNUAL REPORT**  
**LOWER POTTS GROVE TOWNSHIP AUTHORITY**

**MONTGOMERY COUNTY**

**Prepared by:**

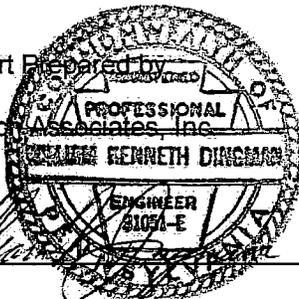
Bursich Associates  
2129 E. High Street  
Pottstown, Pa 19464

**Prepared For:**

Lower Pottsgrove Township Authority  
2199 Buchert Road  
Pottstown, Pa 19464

Report Prepared by

Bursich Associates, Inc



Date

2/26/13

Permittee:

Lower Pottsgrove Township Authority

A handwritten signature of the permittee, likely a representative of the Lower Pottsgrove Township Authority, written over a horizontal line.

Date

2/26/13

# TABLE OF CONTENTS

<u>TOPIC</u>	<u>PAGE</u>
2012 Sewer System Questionnaire	1-9

## TABLES

Table 1	“LPT Development Growth Summary”
Table 2A	“LPTA Porter Rd & Sanatoga Lake P.S. & Metering Site Flows” (Daily)
Table 2B	“LPTA Porter Rd & Sanatoga Lake P.S. Sanitary Flows” (Hourly)
Table 3	“LPTA Collection System Metering Station – Hourly Flows 2012”
Table 4	“Lower Pottsgrove Township Pump Stations 2012”
Table 4A	“Examination of Wet Weather Events to Determine Potential for I&I Removal”

## APPENDICES

### **Appendix A**

Instrumentation Calibration Data Sheet Certificates

### **Appendix B**

CAP – Quarterly Report – January 2013

### **Appendix C**

Sanitary Sewer Overflow (SSO) Reports to PADEP

### **Appendix D**

Figure 1 “Sanitary Sewer System Map Chapter 94 Report”

## 2012 SEWER SYSTEM QUESTIONNAIRE

Municipality Name: LOWER POTTS GROVE TOWNSHIP AUTHORITY Date: February 21, 2013

### A. SEWER SYSTEM DETAILS

1. **Connected Population Lower Pottsgrove Township only:**

<u>Present</u>					
<u>2012</u>	<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>2016</u>	<u>2017</u>
<u>*10,955</u>	<u>10,969</u>	<u>11,126</u>	<u>11,444</u>	<u>11,800</u>	<u>11,997</u>

2. **Total length of system:** \* 254,856 feet

3. **Range of pipe sizes:** \*

- a. Smallest: 6 inches  
b. Largest: 30 inches

4. **Total number of manholes:** \* 1,303

5. **Construction Material:**

- a. Pipes: VCP, CIP, RCP, PVC, DIP  
b. Manholes: PRECAST CONCRETE

6. **Combined sewers:**

- a. Location: NONE  
b. Percent of total system: 0

\*If estimated, please note. \* Based on 10,917 residents (Census 2010=12,059 - 1,142 O.L.D.S.); 2010 thru 2012 actual connections (14) plus annual projected units (from Table 1) X 2.65 people/EDU. \*Population Numbers do not include non-resident flow equivalent population.

7. **Major Interceptors:**

<u>Name</u>	<u>Length (feet)</u>	<u>Pipe Diameter (in)</u>		<u>Estimated Service Population (EDU*2.65)</u>
		<u>Maximum</u>	<u>Minimum</u>	
<b>Sprogels Run-Lower: Porter Rd. Pump Station to Kepler &amp; Buchert Roads</b>	<b>9,751</b>	<b>30"</b>	<b>10"</b>	10,067
<b>Sunnybrook Road: Sprogels Run to Pleasantview Road</b>	<b>4,122</b>	<b>15"</b>	<b>8"</b>	1,434
<b>Sprogels Run-Upper: Sunnybrook Road to North Charlotte Street</b>	<b>5,749</b>	<b>18"</b>	<b>12"</b>	3,498
<b>Sanatoga Interceptor</b>	<b>2,462</b>	<b>18"</b>	<b>18"</b>	2,224

8. **Five-year Projections: Interceptors \*** Projected Annual Average & Peak Hour Flows (Mgd)

<u>Name/Segment</u>	<u>Limiting Segment Capacity (Mgd)</u>	<u>2013</u>		<u>2014</u>		<u>2015</u>		<u>2016</u>		<u>2017</u>	
		<u>Avg.</u>	<u>Peak</u>								
<b>Sprogels Run-Lower:</b>	12.72 (1)	1.143	11.559	1.12	10.403	1.12	10.355	1.11	10.262	1.09	10.104
Sprogels R. Peaking Factor		10.11		9.23		9.23		9.23		9.23	
<b>Sanatoga Interceptor</b>	4.24 (2)	0.354	4.094	0.346	3.682	0.339	3.609	0.348	3.703	0.352	3.745
Sanatoga Peaking Factor		11.57		10.65		10.65		10.65		10.65	

(Sanatoga Int. Flows Equal to PS Flows Less 57 EDU)

Notes: (1) Capacity based on 27" concrete pipe with n=0.012 and slope = 0.34% between MH 1001 and MH 1002 (2) Limiting Segment Capacity based on 18" PVC pipe with n=0.010 and slope = 0.23% between MH 3005 and MH 3004.

\* See Table 1 for projected EDUs and Table 4 for peaking factors.

**9. Mitigating Measures:**

If the projected flow exceeds the limiting section capacity at any time during the five-year period, explain proposed and on-going efforts to correct the potential overload for each instance. Estimate the probable success of these mitigating measures in eliminating the potential overload condition. Use additional sheets if necessary.

**All sanitary sewers are sized to convey future five (5) year flows**

**LPTA is currently contracted with Sewer Specialty Services, Inc. for a two-year televising and repair contract to remove infiltration and inflow from the sewer system.**

---

---

---

---

---

---

---

---



2. **Five-year Projections: Municipally Owned Pumping Stations \***

LPT Projected Average & Peak Hourly Input Flows (mgd)

Name	Capacity (mgd)	2013		2014		2015		2016		2017	
		Avg.	Peak								
Sanatoga Lake (25%)	3.17	0.365	4.226	0.357	3.803	0.350	3.731	0.359	3.824	0.363	3.867
Porter Road (75%)	13.00	1.143	11.559	1.126	10.403	1.121	10.355	1.111	10.262	1.094	10.104
Villa Drive	0.17	0.017	0.087	0.017	0.087	0.017	0.087	0.017	0.087	0.017	0.087

\* Recorded LPT daily flow from January 1, 2012 thru December 31, 2012 included in Table 2A, and hourly flows for events with recorded SSOs in Table 2B. [Projections based on metered 2012 ADF for Sanatoga at 0.377 mgd and Porter at 1.163 mgd and 10% I&I reduction per year. See Table 4 for capacity notes, 2012 Peak Hourly Flows, and projected peaking factors.

\* No Data for Hurricane Sandy was included

3. **Mitigating Measures**

If the projected peak flow exceeds the pumping station capacity at any time during the five-year period, explain proposed and on-going efforts to correct the potential overload for each instance. Estimate the probable success of these mitigating measures in eliminating the potential overload condition. Use additional sheets if necessary.

**The Sanatoga Lake pump station's firm pumping capacity was exceeded during wet weather-induced high flows in 2012. An 18-inch force main was installed in 2011 and became operational at the end of 2011. The PA DEP approved a Corrective Action Plan (CAP) for LPTA and LPT to address the wet weather sewer system capacity issues at the two pump stations (Quarterly CAP report dated Jan. 16, 2013 attached).**

C. **METER PITS:** Daily flow data reported in Table 2A. Peak hourly flows reported in Table 3.

<u>Name/Number</u>	<u>Location</u>	<u>Size/Type</u>	<u>Sensor</u>	<u>Estimated Connected Population</u>
Porter Road Pump Stn	Porter Road	1 @ 18", 1@16" & 1 @ 10"	Magnetic	10,067
Sanatoga Lake Pump Station	Sanatoga Road at Park Road	16"	Doppler	2,375
Home Depot (On-lot Grinder Pump)	Rear of store	1 ½"	Magnetic	N/A
Industrial Highway	Adjacent to PECO	8" Open Channel	Area/Velocity	N/A
422 Sports Center (On-lot Grinder Pump)	Moyer Blvd. @WWTP	1 ½"	Magnetic	N/A
Turnberry Development (1) * **	North Charlotte St. at Turnberry Court	8" Open Channel	Area/Velocity	610
North Adams Street (1) * ** ***	North Adams Street at Woodland Avenue	10" Open Channel	Area/Velocity	946

Note 1. See Table 3 for Home Depot, Industrial Highway, and 422 Sports Center hourly flows for wet weather events.

**Northend (North Adams St.) & Turnberry meter sites 2012 flows obtained by Pottstown Borough.**

\* Append meter record summaries. Daily flows provided in Borough of Pottstown Chapter 94 Report.

\*\* i.e., weir, flume, pipe, etc. Calibration Reports are attached.

\*\*\* Pottstown Borough 758

Upper Pottsgrove 119

Lower Pottsgrove 69

946 Estimated Connection Population

**D. OPERATION AND MAINTENANCE**

**1. Describe routine operation and maintenance procedures:**

- a. Sewer system: **Monitoring manholes inspected weekly and during precipitation events . Infiltration checked in sewer mains and laterals during precipitation events and are repaired as necessary. New development property owners with existing sewer laterals are required to inspect their laterals and make any necessary repairs prior to occupying the building.**
  
- b. Pump stations: **Inspected daily** \_\_\_\_\_
  
- c. Meter pits: **Inspected weekly.** \_\_\_\_\_

**2. Known Problem Areas:**

<u>Location</u>	<u>Nature of Problem *</u>	<u>Corrective Measures Taken</u>
		<u>The PA DEP approved a Corrective Action Plan (CAP) for LPTA and LPT to address the wet weather sewer system capacity issues at the two pump stations (Quarterly CAP report dated Jan. 16, 2013 attached).</u>

\* i.e., surcharging, line blockage, etc.

**E. SANITARY SEWER EXTENSIONS (2012 ONLY) \***

<u>Name/Area Served</u>	<u>Sewer Size</u>	<u>Extension Length</u>	<u>DEP Permit No.</u>	<u>Equivalent Dwelling Units Served</u>	
				<u>Actual</u>	<u>Estimated</u>
<b>No Extensions Constructed</b>					

Indicate number of gallons per day used for 1 EDU 200 gpd

\* Append plan of sanitary sewer system detailing additions made this year.

F. PROPOSED DEVELOPMENTS

Proposed Equivalent Dwelling Units

<u>Name/Area Served</u>	<u>Permits Obtained</u>	<u>DEP Permit No.</u>	<u>2012</u>	<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>2016</u>
-------------------------	-----------------------------	---------------------------	-------------	-------------	-------------	-------------	-------------

SEE TABLE 1 &  
FIGURE 1

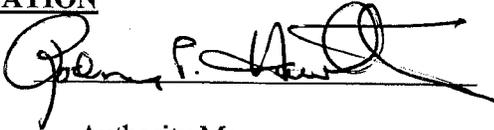
---

---

---

---

G. CERTIFICATION

Signed: 

(SEAL)

Title: Authority Manager

Address: 2199 Buchert Road

Pottstown, PA 19464

Phone No.: (610) - 323-0436 x 1