

## **SECTION 1**

### **INTRODUCTION**

Pursuant to Pennsylvania Chapter 94 Municipal Wasteload Management regulations and requirements, Westtown Township has prepared this 2014 Municipal Wasteload Management Annual Report for the West Goshen Sewer Authority (WGSA) service area.

The West Goshen Sewer Authority service area covers the central one-third of the Township generally between the West Chester Railroad to the east and Wilmington Pike (SR 202) to the west. In addition, there is a small portion in the eastern end of the Township bounded by Manley Road, Chester Road (SR 352) and West Chester Pike (SR 3) and known as the Triangle, where wastewater is conveyed through East Goshen Township to WGSA for treatment. Service is also provided to Commons of Thornbury Shopping Center located in Thornbury Township at Wilmington Pike and Street Road (SR 926). The West Goshen Sewer Authority service area is show on the Wastewater Facilities Plan.

The West Goshen Sewer Authority service area includes approximately 17 miles of 8" and 10" diameter sewer including approximately 1,000 feet of sewers in the Triangle. There are also four sewage pump stations in the WGSA service area, Pleasant Grove, Wild Goose, Cobblefield and Arborview. Wastewater from Thornbury Township is conveyed to WGSA via the Pleasant Grove Pump Station.

Wastewater from the WGSA service area enters West Goshen Township at six locations identified on the Wastewater Facilities Plan:

- The Triangle connects to East Goshen Township at the intersection of Chester Road and Manley Road. Flows are conveyed through East Goshen Township to WGSA. Flows are unmetered. Flow is estimated based on water usage records obtained from AQUA Pennsylvania.
- The Marker Drive meter pit is located on Little Shiloh Road, 300' west of Marker Drive.
- The Thorne Drive meter pit is located on Thorne Drive near the intersection of Little Shiloh Road
- Wastewater from the Pleasant Grove and Wild Goose Pump Stations discharges to a gravity sewer in South Concord Road 900' south of Little Shiloh Road. In addition to the flow from the two pump stations, there are two residential properties (901 & 903 South Concord Road) that connect to this sewer.
- The Coventry Village meter pit is located near Coventry Lane and the West Chester Railroad.
- Wastewater from District I is unmetered and connects to WGSA at two locations, at Wilmington Pike just north of Stanton Avenue, and north of Larchwood Road.

## **SECTION 2**

### **HYDRAULIC LOADING**

The Westtown Township is allocated 530,000 gallons per day (GPD) in WGSA's treatment plant. During 2014, Westtown conveyed a monthly average daily flow of 256,378 GPD to WGSA including flow from Thornbury Township. Thornbury Township flows are deducted by WGSA to calculate net flows for Westtown. Currently, Westtown is using 48.37% of their allocated capacity including the Thornbury Township flow. Flows for each of the connections to WGSA are summarized in Table No. 1.

In 2014, 4 EDU's were connected in the WGSA service area. In addition, the sales office of the Gardens of Westtown condominiums was connected. In 2015, 10 condominiums are projected to be connected. Wastewater from the condominiums is conveyed to WGSA via the Pleasant Grove Pump Station. Projected flows for the new connections in 2015 are not presently available. Flows are projected to increase by approximately 20,000 GPD in the next 5-years.

**SECTION 3**  
**CONDITION OF THE SEWER SYSTEM**

Approximately 90% of the sewer system in the WGSA service area is 30-years old or less and constructed of PVC pipe. The balance of the sewer system is 25-years or more and constructed of asbestos cement pipe. No sewer system repairs were performed in 2014.

In 2015, manhole frames and covers will be replaced with gasketed frames and covers as part of the Townships road paving program. Areas with the frames and covers will be replaced have not yet been identified.

## **SECTION 4**

### **SEWAGE PUMPING STATIONS**

There are 4 pump station in the WGSA service area. Three pump station, Pleasant Grove, Wild Goose and Arborview are equipped with flow meters. The forth pump station, Cobblefield is unmetered. Pump station flows are summarized as follows:

1. Pleasant Grove Pump Station:

Design Capacity:	650,000 GPD
Current 5-year Maximum Flow:	278,513 GPD
Projected 2-year Maximum Flow:	251,200 GPD

2. Wild Goose Pump Station:

Design Capacity:	35,000 GPD
Current 5-year Maximum Flow:	10,123 GPD
Projected 2-year Maximum Flow:	10,123 GPD

3. Arborview Pump Station:

Design Capacity:	31,680GPD
Current 5-year Maximum Flow:	4,640 GPD
Projected 2-year Maximum Flow:	4,640 GPD

4. Cobblefield Pump Station:

Design Capacity:	27,500 GPD
Current 5-year Maximum Flow:	10,000 GPD (estimated)
Projected 2-year Maximum Flow:	10,000 GPD

Pump station repairs in 2014 included the rebuilding of one pump at the Pleasant Grove Pump Station. A new pump was purchased as a spare for the Pleasant Grove Pump Station.

## **SECTION 5**

### **INDUSTRIAL WASTES**

Currently, there are no industrial users in the WGSA service area, nor are any planned in the future. An industrial waste discharge ordinance was adopted in 2005.

Table No. 1  
Westtown Township  
West Goshen Sewer Authority Service Area  
Monthly Flow Summary

Month	The Triangle Flow (GPD) (1)	Marker Drive Flow (GPD)	Thorne Drive Flow (GPD)	Pleasant Grove Wild Goose Flow (GPD) (3)	901 & 903 Concord Rd. Flow (GPD) (2)	Coventry Village Flow (GPD)	District I Flow (GPD) (4)	Total Monthly Flow (GPD)
January	2,200	20,984	5,208	175,004	700	32,687	17,633	254,415
February	2,200	19,304	4,171	223,788	700	25,404	17,633	293,198
March	2,200	17,281	4,388	202,495	700	27,635	17,633	272,332
April	6,505	19,413	5,166	225,681	700	41,197	17,633	316,295
May	6,505	17,623	5,371	239,860	700	31,497	17,633	319,188
June	6,505	17,877	4,085	177,008	700	35,103	17,633	258,912
July	9,607	15,713	3,549	146,749	700	26,874	17,633	220,825
August	9,607	18,123	4,435	141,300	700	31,058	17,633	222,855
September	9,607	17,627	4,333	145,395	700	28,163	17,633	223,458
October	4,977	19,952	4,937	155,352	700	33,100	17,633	236,651
November	4,977	15,433	3,535	144,950	700	23,117	17,633	210,345
December	4,977	21,406	4,348	173,083	700	25,910	17,633	248,057
Average								256,378

Notes:

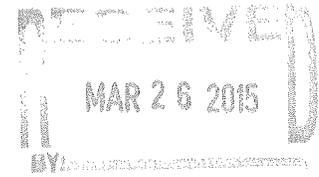
- (1) Based on water usage data provided by AQUA Pennsylvania.
- (2) Based 2 homes at 360 gallons per day per agreement
- (3) Based on pump station flow meter readings. Includes flows from Thornbury Township.
- (4) Based on 77 homes @ 229 gallons per day per agreement

# CARROLL ENGINEERING CORPORATION

949 Easton Road  
 Warrington, PA 18976  
 215-343-5700  
 FAX: 215-343-0875

630 Freedom Business Center, Third Floor  
 King of Prussia, PA 19406  
 610-489-5100

101 Lindenwood Drive, Suite 225  
 Malvern, PA 19355  
 484-875-3075



## Letter of Transmittal

TO: West Goshen Township	DATE: 3/23/15	JOB NO.: 15-5702.00
1025 Paoli Pike	ATTENTION: Michael Moffa	
West Chester, PA 19380	Environmental Compliance Officer	
RE: Westtown Township Chapter 94 Report		

WE ARE SENDING YOU  Attached  Under separate cover via \_\_\_\_\_ the following items:

- Shop Drawings     Prints     Plans     Samples     Specifications  
 Copy of letter     Change order     Report

COPIES	DATE	NO	DESCRIPTION
1	March 2015		Chapter 94 Report – West Goshen Sewer Authority Service Area

THESE ARE TRANSMITTED as checked below:

- For approval                       Approved as submitted                       Resubmit \_\_\_\_\_ copies for approval  
 For your use                               Approved as noted                               Submit \_\_\_\_\_ copies for distribution  
 As Requested                               Returned for Corrections                       Return \_\_\_\_\_ corrected prints  
 For review and comment                       \_\_\_\_\_  
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REMARKS: Mark,

COPY TO: Robert R. Pingar, P.E, Manager

SIGNED:   
 William N. Malin, P.E.

