pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION
SOUTHEAST REGIONAL OFFICE

MAY 0 3 2010

Ms. Karen E. Chandler, Secretary
Valley Township
890 West Lincoln Highway
P.O. Box 467
Coatesville, PA 19320

Re: Act 537 Plan Update
Status: ISSUED
APS ID 312575, SITE ID 528378
Valley Township
Chester County

Dear Ms. Chandler:

We have completed our review of your municipality's updated official sewage facilities plan titled, Act 537 Official Sewage Facilities Plan, as prepared by Pennoni Associates, Inc., dated October 7, 2008. The review was conducted in accordance with the provisions of the Pennsylvania Sewage Facilities Act.

Approval of the plan is hereby granted. The plan provides for the following:

1. Valley Township (Township), through its capacity agreement with the Pennsylvania American Water Company (PAWC), is allocated an ultimate sewage treatment capacity of 1,540,000 gallons per day at the expanded PAWC Coatesville Wastewater Treatment Facility. This capacity is allocated as follows, as shown on Table IV-4, Zoning Projection Total Future Sewage flows, found on page IV-32 of the plan:

   a. 622,552 gallons per day for existing annual average flows (2007).

   b. 620,775 gallons per day for planned developments.

   c. 169,650 gallons per day for growth areas.

   d. 28,350 gallons per day for existing unsewered areas.

   e. 98,673 gallons per day unallocated capacity.

VALLEY TOWNSHIP
CHESTER COUNTY, PENNSYLVANIA

ACT 537
OFFICIAL SEWAGE FACILITIES PLAN

September 2007
Revised January 11, 2008
Revised July 15, 2008
Revised October 1, 2008

Prepared By:
Pennoni Associates, Inc.
62 Rockford Road, Suite 201
Wilmington, DE 19806
(302) 655-4451

VLTW 0605

ALL DOCUMENTS PREPARED BY PENNONI ASSOCIATES ARE INSTRUMENTS OF SERVICE IN RESPECT OF THE PROJECT. THEY ARE NOT INTENDED OR REPRESENTED TO BE SUITABLE FOR REUSE BY OWNER OR OTHERS ON EXTENSIONS OF THE PROJECT OR ON ANY OTHER PROJECT. ANY REUSE WITHOUT WRITTEN VERIFICATION OR ADAPTATION BY PENNONI ASSOCIATES FOR THE SPECIFIC PURPOSE INTENDED WILL BE AT OWNER'S SOLE RISK AND WITHOUT LIABILITY OR LEGAL EXPOSURE TO PENNONI ASSOCIATES; AND OWNER SHALL INDEMNIFY AND HOLD HARMLESS PENNONI ASSOCIATES FROM ALL CLAIMS, DAMAGES, LOSSES AND EXPENSES ARISING OUT OF OR RESULTING THEREFROM.

3800-FM-WSFR0003 9/2005

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WATER STANDARDS AND FACILITY REGULATION

Act 537 Plan Content and Environmental Assessment Checklist

PART 1 GENERAL INFORMATION

A. Project Information

1. Project Name Valley Township Act 537 Official Sewage Facilities Plan Update

2. Brief Project Description Update of the Township-wide Act 537 Official Sewage Facilities Plan

B. Client (Municipality) Information

Municipality Name	County	City	Boro	Twp
Valley Township	Chester	☐	☐	☒

Municipality Contact Individual - Last Name	First Name	MI	Suffix	Title
Chandler	Karen			Township Secretary
Additional Individual Last Name	First Name	MI	Suffix	Title

Municipality Mailing Address Line 1	Mailing Address Line 2
890 West Lincoln Highway	P.O. Box 467

Address Last Line -- City	State	ZIP+4
Coatesville	PA	19320

Phone + Ext.	FAX (optional)	Email (optional)
610-384-5751 x12	610-384-2746	

C. Site Information

Site (or Project) Name	
Valley Township	(Municipal Name) Act 537 Plan

Site Location Line 1	Site Location Line 2
Township-Wide	

D. Project Consultant Information

Last Name	First Name	MI	Suffix
Rasiul	Edward	F	

Title	Consulting Firm Name
Associate Vice President	Pennoni Associates, Inc.

Mailing Address Line 1	Mailing Address Line 2
62 Rockford Road	Suite 201

Address Last Line – City	State	ZIP+4	Country
Wilmington	DE	19806	U.S.A.

Email	Phone + Ext.	FAX
erasiul@pennoni.com	302-655-4451 x3610	302-654-2895

PART 2 ADMINISTRATIVE COMPLETENESS CHECKLIST

DEP Use Only	Indicate Page #(s) in Plan	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.
_____	TOC-1 to 10	1. **Table of Contents**
		2. **Plan Summary**
_____	i	A. Identify the proposed service areas and major problems evaluated in the plan. (Reference - Title 25, §71.21.a.7.i).
_____	ii	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).
_____	ii, VI-5	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).
_____	ii	D. Identify the municipal commitments necessary to implement the Plan. (Reference Title 25, §71.21.a.7.iii).
_____	ii	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).
_____	App. R	3. **Municipal Adoption: Original,** 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.
_____	App. Q	4. **Planning Commission / County Health Department Comments**: 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.
_____	App. Q	5. **Publication:** 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.
_____	App. Q	6. **Comments and Responses:** 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.
_____	VIII-2, 3	7. **Implementation Schedule:** 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).
_____	App. Q	8. **Consistency Documentation:** 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
_____	I-1 to 11	**I. Previous Wastewater Planning**
		A. Identify, describe and briefly analyze all past wastewater planning for its impact on the current planning effort:
_____	I-1 to 3	1. Previously undertaken under the Sewage Facilities Act (Act 537). (Reference-Act 537, Section 5 §d.1).
_____	I-1 to 3	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.
_____	I-4	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.
_____	I-5 to 9	4. Through planning modules for new land development, planning "exemptions" and addenda. (Reference-Title 25, §71.21.a.5.i.A).
_____	II-1 to 8	**II. Physical and Demographic Analysis utilizing written description and mapping** (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).
_____	II-1	A. Identification of planning area(s), municipal boundaries, Sewer Authority/Management Agency service area boundaries. (Reference-Title 25, §71.21.a.1.i).
_____	II-2	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).
_____	II-2 to 3	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).
_____	II-3 to 4	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).
_____	II-1 to 2	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).
_____	II-4 to 6	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.

_____	II-6	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.
_____	III-1 to 28	**III. Existing Sewage Facilities in the Planning Area - Identifying the Existing Needs** A. Identify, map and describe municipal and non-municipal, individual and community sewerage systems in the planning area including:
_____	III-1 to 19	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).
_____	N/A	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).
_____	III-1 to 18	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).
_____	III-1 to 19	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).
_____	III-21	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).
_____	N/A	6. Disposal areas, if other than stream discharge, and any applicable groundwater limitations. (Reference-Title 25, §71.21.a.4.i & ii).
_____	III-22 to 27	B. Using DEP's publication titled *Sewage Disposal Needs Identification*, 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:
_____	III-22	1. The types of onlot systems in use. (Reference-Title 25, §71.21.a.2.ii.A).
_____	III-23 to 27	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).
_____	III-22 to 23	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).

_____	N/A	4. An individual water supply survey to identify possible contamination by malfunctioning onlot sewage disposal systems consistent with DEP's *Sewage Disposal Needs Identification* publication. (Reference-Title 25 §71.21.a.2.ii.B).
_____	III-27	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).
_____	III-28	C. Identify wastewater sludge and septage generation, transport and disposal methods. Include this information in the sewage facilities alternative analysis including:
_____	III-28	1. Location of sources of wastewater sludge or septage (Septic tanks, holding tanks, wastewater treatment facilities). (Reference-Title 25 §71.71).
_____	III-28	2. Quantities of the types of sludges or septage generated. (Reference-Title 25 §71.71).
_____	III-28	3. Present disposal methods, locations, capacities and transportation methods. (Reference-Title 25 §71.71).
_____	IV-1 to 34	**IV. Future Growth and Land Development** A. Identify and briefly summarize all municipal and county planning documents adopted pursuant to the Pennsylvania Municipalities Planning Code (Act 247) including:
_____	IV-1 to 3	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).
_____	IV-3	2. Zoning or subdivision regulations that establish lot sizes predicated on sewage disposal methods. (Reference – Title 25§71.21.a.3.iv).
_____	IV-4	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.
		B. Delineate and describe the following through map, text and analysis.
_____	IV-4 to 19	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).
_____	IV-19 to 23	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).
_____	IV-19 to 34	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).

_____	IV-20 to 23	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). --public ground/surface water supplies --recreational water use areas --groundwater recharge areas --industrial water use --wetlands
_____	IV-19 to 34	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).
_____	V-1 to 9	**V. Identify Alternatives to Provide New or Improved Wastewater Disposal Facilities**
		A. Conventional collection, conveyance, treatment and discharge alternatives including:
_____	V-3	1. The potential for regional wastewater treatment. (Reference-Title 25, §71.21.a.4).
_____	V-1 to 3	2. The potential for extension of existing municipal or non-municipal sewage facilities to areas in need of new or improved sewage facilities. (Reference-Title 25, §71.21.a.4.i).
_____	V-1 to 3	3. The potential for the continued use of existing municipal or non-municipal sewage facilities through one or more of the following: (Reference-Title 25, §71.21.a.4.ii).
_____	V-1 to 3	a. Repair. (Reference-Title 25, §71.21.a.4.ii.A).
_____	V-1 to 3	b. Upgrading. (Reference-Title 25, §71.21.a.4.ii.B).
_____	V-1 to 3	c. Reduction of hydraulic or organic loading to existing facilities. (Reference-Title 25, §71.71).
_____	V-1 to 3	d. Improved operation and maintenance. Reference-Title 25, §71.21.a.4.ii.C).
_____	V-1 to 3	e. Other applicable actions that will resolve or abate the identified problems. (Reference-Title 25, §71.21.a.4.ii.D).
_____	V-1 to 3	4. Repair or replacement of existing collection and conveyance system components. (Reference-Title 25, §71.21.a.4.ii.A).
_____	V-3	5. The need for construction of new community sewage systems including sewer systems and/or treatment facilities. (Reference-Title 25, §71.21.a.4.iii).
_____	V-1 to 3	6. Use of innovative/alternative methods of collection/conveyance to serve needs areas using existing wastewater treatment facilities. (Reference-Title 25, §71.21.a.4.ii.B).
_____	V-4	B. The use of individual sewage disposal systems including individual residential spray irrigation systems based on:
_____	V-4	1. Soil and slope suitability. (Reference-Title 25, §71.21.a.2.ii.C).
_____	V-4	2. Preliminary hydrogeologic evaluation. (Reference-Title 25, §71.21.a.2.ii.C).
_____	V-4	3. The establishment of a sewage management program. (Reference-Title 25, §71.21.a.4.iv). See also Part “F” below.
_____	V-4	4. The repair, replacement or upgrading of existing malfunctioning systems in

areas suitable for onlot disposal considering: (Reference-Title 25, §71.21.a.4).

_____ V-4 a. Existing technology and sizing requirements of Title 25 Chapter 73. (Reference-Title 25, §73.31-73.72).

_____ V-4 b. Use of expanded absorption areas or alternating absorption areas. (Reference-Title 25, §73.16).

_____ V-4 c. Use of water conservation devices. (Reference-Title 25, §71.73.b.2.iii).

_____ V-4 to 5 C. The use of small flow sewage treatment facilities or package treatment facilities to serve individual homes or clusters of homes with consideration of: (Reference-Title 25, §71.64.d).

_____ V-4 to 5 1. Treatment and discharge requirements. (Reference-Title 25, §71.64.d).

_____ V-4 to 5 2. Soil suitability. (Reference-Title 25, §71.64.c.l).

_____ V-4 to 5 3. Preliminary hydrogeologic evaluation. (Reference-Title 25, §71.64.c.2).

_____ V-4 to 5 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.

_____ V-5 D. The use of community land disposal alternatives including:

_____ V-5 1. Soil and site suitability. (Reference-Title 25, §71.21.a.2.ii.C).

_____ V-5 2. Preliminary hydrogeologic evaluation. (Reference-Title 25, §71.21.a.2.ii.C).

_____ V-5 3. Municipality, Local Agency or Other Controls over operation and maintenance requirements through a Sewage Management Program (Reference-Title25, §71.21.a.2.ii.C). See Part "F" below.

_____ V-5 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.

_____ V-5 to 6 E. The use of retaining tank alternatives on a temporary or permanent basis including: (Reference- Title 25, §71.21.a.4).

_____ V-5 to 6 1. Commercial, residential and industrial use. (Reference-Title 25, §71.63.e).

_____ V-5 to 6 2 Designated conveyance facilities (pumper trucks). (Reference-Title 25, §71.63.b.2).

_____ V-5 to 6 3. Designated treatment facilities or disposal site. (Reference-Title 25, §71.63.b.2).

_____ V-5 to 6 4. Implementation of a retaining tank ordinance by the municipality. (Reference-Title 25, §71.63.c.3). See Part "F" below.

_____ V-5 to 6 5. Financial guarantees when retaining tanks are used as an interim sewage disposal measure. (Reference-Title 25, §71.63.c.2).

_____ V-6 to 8 F. Sewage Management Programs to assure the future operation and maintenance of existing and proposed sewage facilities through:

_____ V-6 to 7 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).

_____ V-6 2. Required inspection of sewage disposal systems on a schedule established by the municipality. (Reference-Title 25, §71.73.b.1.).

_____ V-6 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).

_____ V-6 to 7 4. Repair, replacement or upgrading of malfunctioning onlot sewage systems. (Reference-Title 25, §71.21.a.4.iv) and §71.73.b.5 through:

_____ V-6 to 7 a. Aggressive pro-active enforcement of ordinances that require operation and maintenance and prohibit malfunctioning systems. (Reference-Title 25, §71.73.b.5).

_____ V-7 b. Public education programs to encourage proper operation and maintenance and repair of sewage disposal systems.

_____ V-6 to 7 5. Establishment of joint municipal sewage management programs. (Reference-Title 25, §71.73.b.8).

_____ V-6 to 7 6. Requirements for bonding, escrow accounts, management agencies or associations to assure operation and maintenance for non-municipal facilities. (Reference-Title 25, §71.71).

_____ V-8 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).

1. Modification of existing comprehensive plans involving:

_____ V-8 a. Land use designations. (Reference-Title 25, §71.21.a.4).

_____ V-8 b. Densities. (Reference-Title 25, §71.21.a.4).

_____ V-8 c. Municipal ordinances and regulations. (Reference-Title 25, §71.21.a.4).

_____ V-8 d. Improved enforcement. (Reference-Title 25, §71.21.a.4).

_____ V-8 e. Protection of drinking water sources. (Reference-Title 25, §71.21.a.4).

_____ V-8 2. Consideration of a local comprehensive plan to assist in producing sound economic and consistent land development. (Reference-Title 25, §71.21.a.4).

_____ V-8 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).

_____ V-8 4. Evaluation of existing local agency programs and the need for technical or administrative training. (Reference-Title 25, §71.21.a.4).

_____ V-8 H. A no-action alternative which includes discussion of both short-term and long-term impacts on: (Reference-Title 25, §71.21.a.4).

_____ V-8 1. Water Quality/Public Health. (Reference-Title 25, §71.21.a.4).

_____ V-8 2. Growth potential (residential, commercial, industrial). (Reference-Title 25, §71.21.a.4).

_____ V-8 3. Community economic conditions. (Reference-Title 25, §71.21.a.4).

_____ V-8 4. Recreational opportunities. (Reference-Title 25, §71.21.a.4).

_____ V-8 5. Drinking water sources. (Reference-Title 25, §71.21.a.4).

_____ V-8 6. Other environmental concerns. (Reference-Title 25, §71.21.a.4).

_____ VI-1 to 12 **VI. Evaluation of Alternatives**

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.).

_____ VI-1 1. Applicable plans developed and approved under **Sections 4 and 5 of the Clean Streams Law or Section 208 of the Clean Water Act** (33 U.S.C.A. 1288). (Reference-Title 25, §71.21.a.5.i.A). Appendix B, Section II.A of the

Planning Guide.

_____ VI-1 to 2 2. Municipal wasteload management **Corrective Action Plans or Annual Reports** 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.

_____ VI-2 3. Plans developed under **Title II of the Clean Water Act** (33 U.S.C.A. 1281-1299) or **Titles II and VI of the Water Quality Act of 1987** (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.

_____ VI-2 to 3 4. **Comprehensive plans** 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.

_____ VI-3 5. **Antidegradation requirements** 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.

_____ VI-3 6. **State Water Plans** 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.

_____ VI-3 to 4 7. **Pennsylvania Prime Agricultural Land Policy** 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.

_____ VI-4 8. **County Stormwater Management Plans** 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.

_____ VI-4 9. **Wetland Protection.** 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.

_____ VI-4 10. **Protection of rare, endangered or threatened plant and animal species** 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.

_____ VI-4 11. **Historical and archaeological resource protection** 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.

_____ VI-4 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.

_____ VI-4 to 5 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).

_____ VI-5, VI-8 to 12 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).

_____ VI-5 to 6 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).

_____ VI-6 to 7 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).

_____ VI-6 to 7 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).

_____ VI-6 to 7 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).

_____ VI-7 G. Evaluate administrative organizations and legal authority necessary for plan implementation. (Reference - Title 25, §71.21.a.5.vi.D.).

_____ VII-1 to 3 **VII. Institutional Evaluation**

A. Provide an analysis of all existing wastewater treatment authorities, their past actions and present performance including:

_____ VII-1 1. Financial and debt status. (Reference-Title 25, §71.61.d.2).

_____ VII-1 2. Available staff and administrative resources. (Reference-Title 25, §71.61.d.2)

_____ VII-1 to 2 3. Existing legal authority to:

_____ VII-1 to 2 a. Implement wastewater planning recommendations. (Reference-Title 25, §71.61.d.2).

_____ VII-1 to 2 b. Implement system-wide operation and maintenance activities. (Reference-Title 25, §71.61.d.2).

_____ VII-1 to 2 c. Set user fees and take purchasing actions. (Reference-Title 25, §71.61.d.2).

_____ VII-1 to 2 d. Take enforcement actions against ordinance violators. (Reference-Title 25,

§71.61.d.2).

_____	VII-1 to 2	e. Negotiate agreements with other parties. (Reference-Title 25, §71.61.d.2).
_____	VII-1 to 2	f. Raise capital for construction and operation and maintenance of facilities. (Reference-Title 25,§71.61.d.2).
_____	VII-2 to 3	B. Provide an analysis and description of the various institutional alternatives necessary to implement the proposed technical alternatives including:
_____	VII-2	1. Need for new municipal departments or municipal authorities. (Reference-Title 25, §71.61.d.2).
_____	VII-2	2. Functions of existing and proposed organizations (sewer authorities, onlot maintenance agencies, etc.). (Reference-Title 25, §71.61.d.2).
_____	VII-2 to 3	3. Cost of administration, implementability, and the capability of the authority/agency to react to future needs. (Reference-Title 25, §71.61.d.2).
_____	VII-3	C. Describe all necessary administrative and legal activities to be completed and adopted to ensure the implementation of the recommended alternative including:
_____	VII-3	1. Incorporation of authorities or agencies. (Reference-Title 25, §71.61.d.2).
_____	VII-3	2. Development of all required ordinances, regulations, standards and inter-municipal agreements. (Reference-Title 25, §71.61.d.2).
_____	VII-3	3. Description of activities to provide rights-of-way, easements and land transfers. (Reference-Title 25, §71.61.d.2).
_____	VII-3	4. Adoption of other municipal sewage facilities plans. (Reference-Title 25, §71.61.d.2).
_____	VII-3	5. Any other legal documents. (Reference-Title 25, §71.61.d.2).
_____	VII-3	6. Dates or timeframes for items 1-5 above on the project's implementation schedule.
_____	VII-2 to 3	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).
_____	VIII-1 to 3	**VIII. Implementation Schedule and Justification for Selected Technical & Institutional Alternatives**
		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:
_____	VIII-1	1. Existing wastewater disposal needs. (Reference-Title 25, §71.21.a.6).
_____	VIII-1	2. Future wastewater disposal needs. (five and ten years growth areas). (Reference-Title 25, §71.21.a.6).
_____	VIII-1	3. Operation and maintenance considerations. (Reference-Title 25, §71.21.a.6).
_____	VIII-1	4. Cost-effectiveness. (Reference-Title 25, §71.21.a.6).
_____	VIII-1 to 2	5. Available management and administrative systems. (Reference-Title 25, §71.21.a.6).
_____	VIII-1 to 2	6. Available financing methods. (Reference-Title 25, §71.21.a.6).

_____	VIII-1	7. Environmental soundness and compliance with natural resource planning and preservation programs. (Reference-Title 25, §71.21.a.6).
_____	VIII-2	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)
_____	VIII-2 to 3	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)
		IX. Environmental Report (ER) generated from the Uniform Environmental Review Process (UER)
_____	N/A	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: *An ER is required only for Wastewater projects proposing funding through any of the funding sources identified in the UER.*

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PLAN SUMMARY

A. PURPOSE

The Pennsylvania Department of Environmental Protection (DEP) has required that Valley Township update its Act 537 Official Sewage Facilities Plan for the entire Township. The Plan update is being required to support the planned expansion of the Pennsylvania-American Water Company (PAWC) Treatment Plant. The permitted capacity of the upgraded plant will be based on the projected future sewage flows from Valley Township and the other communities that convey wastewater to the Plant. The Plan must also be updated to address any existing sewage needs of the Township, primarily associated with malfunctioning onlot sewage disposal systems, and actions to address problems if deemed necessary.

B. EXISTING NEEDS

There were nine areas in Valley Township that were identified in the previous Act 537 Plan as having a high-risk for existing onlot disposal system failures. Four of the "problem areas" have been connected to the public sewer or are currently in the process of being connected – Glencrest Road, Robinson Avenue & Oaklyn Lane, South Mount Airy Road, and the West End of Lincoln Highway. Of the remaining "problem areas", there has been only one reported malfunction in the Rainbow Neighborhood and none in the other four areas – North Mount Airy Road; Valley Station Road; Northview, Peck, and East Drives; and Brick Street – over the past six-plus years. In general, these areas do not currently present a major public health concern or environmental hazard. However, the Township is aware that sewer extensions to these areas may be necessary in the future and is exploring ways, namely funding methods, to accomplish the work.

C. FUTURE NEEDS

Valley Township proposes that the entire Township be part of PAWC's service area. The Township intends for all future development to connect to the public sewer system. Existing parcels that are not currently sewered are also anticipated to ultimately connect to the public sewer system. The ultimate build-out of the Township is projected to generate an average of 1,441,327 gallons per day (GPD) of wastewater for treatment at the PAWC Treatment Plant. PAWC has currently granted Valley Township an allocation of 1,140,000 GPD at the Treatment Plant. PAWC has agreed to make an additional 400,000 GPD of allocation available to the Township after the planned expansion of the Treatment Plant is completed, bringing Valley Township's total potential allocation to 1,540,000 GPD. The agreement does not set forth when or in what quantities the additional allocation must be purchased, so the Township intends to make partial purchases as the need arises. Therefore, the Township's allocation at the Plant is sufficient for the projected ultimate sewage flows. The ultimate build-out will occur over a twenty-plus year time horizon.

The capacity of Valley Township's sanitary sewer collection and conveyance facilities will be evaluated when sewer extensions are proposed. Collection and conveyance facilities will be upgraded at that time if necessary.

D. PROPOSED ALTERNATIVES

The preferred sewage disposal method for future development is extension of the existing sanitary sewer system. Extensions to service new developments are to be funded by the Developer.

The preferred sewage disposal method for "problem areas" that present critical hazards is also extension of the existing sanitary sewer system. However, none of the "problem areas" are in need of immediate or phased extensions. When sewer extensions are pursued, the cost is likely to be shared by both Valley Township and the property owners for whom the extension will provide service. The Township will also likely apply for grants and possibly loans. Sanitary sewer extensions to unsewered areas will be pursued and scheduled when a critical health or environmental problem arises, when the property owners are willing to commit to an extension, and/or when funding becomes available.

In areas where sanitary sewer has not yet been extended, any malfunctioning onlot disposal systems shall be repaired or replaced if possible. Alternatively, a pump and haul system with a holding tank can be utilized as a last resort option and will be considered by Valley Township on a case-by-case basis. For continued use of onlot disposal systems and holding tanks in the Township, the Sewage Management Program in the ordinance titled "An Ordinance Providing for a Sewage Management Program for Valley Township" (see Appendix J) has recently been adopted, and the program set forth therein is in the process of being implemented. Costs associated with the continued use of individual onlot sewage disposal systems, including repair or replacement, and holding tanks are the sole responsibility of the individual property owner.

E. MUNICIPAL COMMITMENTS & IMPLEMENTATION TIMEFRAMES

Upon formal adoption of this Plan by Valley Township, the following Township commitments will be necessary as part of Plan implementation:

1. Evaluate the need for a full-time operation and maintenance crew for the sanitary sewer system within one (1) year of DEP approval of this Plan. If a full-time crew is deemed necessary, an implementation schedule will be provided with the evaluation.

2. Implement the Sewage Management Program for onlot sewage disposal systems as contained in the ordinance titled "An Ordinance Providing for a Sewage Management Program for Valley Township". The following implementation activities will be completed within one (1) year of DEP approval of this Plan.

a. Determination of the funding method for implementation of the Program. The Township may assess fees to onlot disposal system owners to cover the costs associated with the Program.

b. Employment or contracting of an authorized agent to carry out the Program. The authorized agent could be an independent third party or an existing Township employee who has received necessary training.

c. Provide educational materials to property owners with onlot disposal systems about the proper use and maintenance of onlot systems.

3. Evaluate the sanitary sewer user fees to ensure there is a sufficient revenue base to cover current and anticipated ownership costs as well as to maintain an adequate reserve for extensions, upgrades, and emergencies. If necessary, rates will be adjusted. The evaluation will be performed as part of the first annual Township budgeting (typically in early Autumn) following DEP approval of this Plan. Evaluation and any necessary rate adjustments will be conducted on an annual basis thereafter.

4. Revisit approach and re-establish focus on Inflow and Infiltration (I&I) Reduction Program throughout the sanitary sewer system. Work in the past has limited some I&I, but a more focused program needs to be implemented. The program should include monthly monitoring of sewage flows, identification of areas of concern, video inspections, and necessary repairs. This Program will begin immediately upon DEP approval of this Plan.

5. Modify and adopt revisions to the Valley Township Zoning Ordinance to bring the ordinance into compliance with the Township Comprehensive Plan's land use goals and objectives. The modified ordinance will be adopted by the Township within two (2) years of DEP approval of this Plan.

6. Continue to review plans for all proposed sewage facilities in Valley Township to ensure proposed facilities are consistent with this Plan. Continue to oversee construction of all sewage facilities in the Township as well. This work is ongoing.

7. Continue to provide amendments to the Act 537 Plan in the form of Sewage Facilities Planning Modules for all sewer extensions in Valley Township. This work is ongoing.

CHAPTER I
PREVIOUS WASTEWATER PLANNING

A. PREVIOUS WASTEWATER PLANNING UNDER ACT 537

1. Master Sewer Plan, Revised Edition 1970, for Chester County Pennsylvania, Existing - 1968 to 1978 - 1978 to 1988

Valley Township was included in the Master Plan, Revised Edition 1970, for Chester County (Existing – 1968 to 1978 - 1978 to 1988). This Master Plan proposed that the regional system for the Coatesville area would serve Valley Township, a small portion of the West Caln Township, the western part of Caln Township, and the City of Coatesville. It stated that major trunk sewers would be required along Sucker Run to serve Valley Township and along Rock Run to serve Valley Township and West Caln Township. The existing City of Coatesville treatment plant would then be incorporated into the regional system. The estimated flows to the plant were 2.45 MGD by 1978 and 3.43 MGD by 1988. The existing facility was adequate to treat those flows over that study period.

It was estimated that in 1978, 3,800 persons would be serviced in Valley Township, with a flow of 0.38 MGD. The connected population in 1988 was estimated to be 4,800 persons, with a flow of 0.68 MGD.

"Future Considerations" were also included in the Master Plan. This Plan stated that the Coatesville facility was ideally located to serve the West Branch of the Brandywine Creek drainage basin above Coatesville. It was highly probable that some areas in West Brandywine Township would require sewerage facilities in the future; ultimately the areas requiring sewer service should be served by the Coatesville Regional system. However, until such time as there was sufficient population to support extensions to the regional system, localized collection systems and package treatment plants would be required. These treatment plants would constitute an interim solution, with the permanent solution being the incorporation of the collection system.

2. Valley Township's Act 537 Official Sewage Facilities Plan, dated August 2000, approved February 20, 2001 by DEP

The Plan evaluated the Township's existing and future sewage needs, and suggested three alternatives to address the needs: (1) Continued use of individual on-lot subsurface disposal; (2) Continued use of holding tanks; and (3) Extension of the existing public sewer system. In order to effectively implement the alternatives, the Plan required that the Township adopt and implement an Ordinance for a Sewage Management Program. The Plan also provided for implementation of an inflow and infiltration (I&I) reduction program including monitoring of sewage flows within the collection and conveyance system and carrying out inspection and repair activities to address I&I issues. It is noted that the Township is currently in the process of adopting an ordinance titled "An Ordinance Providing for a Sewage Management Program for Valley Township" (see

Appendix J). Implementation will follow adoption. It is also noted that the Township has taken steps to address I&I problems, but a more focused program should be implemented.

The DEP's approval of the Plan was conditioned upon the provision of additional sewage facilities planning for potential sewer extensions to problem areas and new land development projects. The additional planning was required to be satisfied by a Base Plan amendment(s) and/or Sewage Facilities Planning Module(s).

Sewer extensions to two of the problem areas are currently under construction and are discussed in Chapter III "Existing Needs". There have also been sewer extensions to new land development projects, and the Base Plan has been revised by approval of Sewage Facilities Planning Modules.

3. Limited Scope Act 537 Official Sewage Facilities Plan Rock Run Basin Update for Valley Township, dated August 14, 2006

The Limited Scope Act 537 demonstrated that both the conveyance and treatment facilities servicing the Rock Run Basin are capable of providing conveyance and treatment respectively for the London Tract project. It was submitted to obtain planning approval for the London Tract Development, which consists of 14 residential lots.

The Limited Scope Act 537 also stated that future submission of an Act 537 Plan Update for the entire Township would show the need and ability of the Township facilities to provide sewer service for further development within the Rock Run Basin.

Approval of the Plan was implicitly granted by DEP in their approval of the Planning Module for the D. London Tract Subdivision, via letter dated March 28, 2007.

4. Limited Scope Act 537 Official Sewage Facilities Plan Westwood Basin Update for Valley Township, dated May 31, 2006

The Limited Scope Act 537 demonstrated that both the conveyance and treatment facilities servicing the Westwood Basin are capable of providing conveyance and treatment respectively for the Keystone Foods project in the Valley View Business Center. It was submitted to obtain planning approval for the Keystone Foods project.

The Limited Scope Act 537 also stated that future submission of an Act 537 Plan Update for the entire Township would show the need and ability of the Township facilities to provide sewer service to the entire Valley View Business Center and residential development.

The Limited Scope Act 537 was never formally approved by the DEP and was superseded by the Limited Scope Act 537 Official Sewage Facilities Plan Hayti Basin Update.

5. Limited Scope Act 537 Official Sewage Facilities Plan Hayti Basin Update for Valley Township, dated November 30, 2006

The Limited Scope Act 537 demonstrated that both the conveyance and treatment facilities servicing the Hayti Basin are capable of providing conveyance and treatment respectively for the Keystone Foods project in the Valley View Business Center. It was submitted to obtain planning approval for the Keystone Foods project.

The Limited Scope Act 537 also stated that future submission of an Act 537 Plan Update for the entire Township would show the need and ability of the Township facilities to provide sewer service to the entire Valley View Business Center and residential development.

Approval of the Plan was implicitly granted by DEP in their approval of the Planning Module for the Keystone Foods project, via letter dated January 19, 2007.

6. Pennsylvania American Water Company (PAWC) Act 537 Sewage Facilities Plan Update

PAWC is concurrently submitting a base plan update in order to facilitate expansion of the treatment plant. The plan addresses the needs of all the tributary municipalities, including Valley Township, that utilize the PAWC treatment plant. The PAWC Plan Update currently estimates the future sewage needs of the tributary municipalities that have not provided an Act 537 Plan Update yet. DEP approval of the PAWC Plan Update is contingent upon approval of the individual municipalities' Act 537 Plan Updates. PAWC's planning consultant has indicated that PAWC's Plan Update will include the information in Valley Township's Plan Update. In the event of conflicts between the PAWC and Valley Township Plan Updates, it is anticipated that the DEP would ultimately determine which Plan governs.

B. SEWER AGREEMENT WITH PAWC

The approved Act 537 Base Plan, dated September 18, 2000, indicated Valley Township's bulk allocation at the Treatment Plant to be 550,000 gallons of sewage per day (GPD) in accordance with an agreement between Valley Township and the City of Coatesville Authority. Valley Township's allocation was increased twice by PAWC, but the DEP was not made aware of the increased allocations since a Base Plan Update was not submitted at the time of purchase of the additional allocations. The first allocation increase was purchased May 20, 2002 in the amount of 157,500 GPD so as not to use all of the remaining 550,000 GPD of capacity for the Hillview Development (also known as Hill Farm). The second purchased allocation in the amount of 432,500 GPD was for developments that were at various stages of approval in Valley Township. The second additional allocation was purchased with the understanding connections would be phased in accordance with the December 2004 Connection Management Plan. The DEP only recognizes additional allocations for which Sewage Facilities Planning Modules have been approved (see Section D). Additional allocations beyond those approved through Planning Modules are not being

recognized by the DEP because Base Plan Updates were not submitted to demonstrate the need for the allocation and to confirm the treatment plant has the additional capacity. Currently the DEP recognizes Valley Township as having an allocation of 550,000 GPD at the treatment plant per the Valley Township-City of Coatesville Authority Sewage Treatment Agreement (see Appendix A) and an additional approximate 385,537 GPD per approved Sewage Facilities Planning Modules (see Appendix H). Therefore, the total allocation recognized by DEP is approximately 935,537 GPD, even though PAWC has granted Valley Township a total allocation of 1,140,000 GPD (see *Second Amendment to the Sewage Treatment Agreement Between Valley Township and Pennsylvania-American Water Company* in Appendix C).

In the *Second Amendment to the Sewage Treatment Agreement Between Valley Township and Pennsylvania-American Water Company*, PAWC also agreed to make an additional 400,000 GPD of allocation available to the Township after their treatment plant has been expanded. Therefore, the potential total allocation available to Valley Township from PAWC will be 1,540,000 GPD following expansion of the treatment plant. Once the Township has purchased part or all of the additional 400,000 GPD, it is anticipated that DEP will recognize the additional allocation since this Plan justifies the need and since the expanded Plant should have sufficient capacity in accordance with the PAWC-Valley Township agreement.

PAWC continues to indicate that the treatment plant can accommodate additional wastewater flows within the limits stated in the Consent Order and Agreement issued on November 30, 2005. PAWC's claim is based on historic flow data plus projection of flows as indicated in the Connection Management Plan. At the time PAWC granted the second additional allocation in 2004, the Developers of the Valley View Business Center (formerly the Bone Tract) and the D. London Tract Development had provided funding for the purchase of treatment allocation for 450 Equivalent Dwelling Units (EDU's) (135,000 GPD) and 14 EDU's (4,200 GPD) respectively, which was based on a flow rate of 300 GPD/EDU. As a result, the DEP agreed to consider Sewage Facilities Planning Modules for the Keystone Foods project in the Valley View Business Center and the D. London Tract Development. However, Limited Scope Act 537 Plan Update Revisions were required by the DEP.

C. CHAPTER 94 CORRECTIVE ACTION PLANNING

Currently, there are two DEP-approved Corrective Action Plans (CAP) in the Township. The first consists of upgrading a 10-inch sewer line in Lincoln Highway between Manholes 512-10 and 511-1. This sewer will not have sufficient capacity upon development of planned developments within the Hayti Basin. This upgrade has been provided for and approved in the Round Hill Development Sewage Facilities Planning Module. It is also provided for in the Limited Scope Act 537 Official Sewage Facilities Plan Hayti Basin Update.

The second CAP is for reprogramming the pumps in the Rock Run Pump Station and was approved in a letter from DEP dated May 14, 2008. This CAP was necessitated as part of the OTP Corporation Office, Hotel, and Restaurant project. The proposed project will exceed the previously approved pumping capacity of the Pump Station (650 GPM and 300,000

GPD). The CAP approved the pumps to be reprogrammed to 800 GPM each, which results in a daily capacity of 384,000 GPD.

D. PLANNING MODULES

Planning Module approval letters for the following projects are included in Appendix H. Refer to Part IV "Future Needs" Section B "Existing Development and Plotted Subdivisions" for more detail on each of these projects, including the current status.

1. Valley Crossing IV

Approval of a Planning Module for Valley Crossing IV for a revision to the Act 537 Base Plan was granted by the DEP via letter dated May 21, 2002. The revision provides for the development of 60 townhouses, which were projected to generate 18,000 GPD to be treated at the PAWC Wastewater Treatment Facility.

2. Highlands Corporate Center

A modification to a previously approved Planning Module for the Highlands Corporate Center was granted by the DEP via letter dated July 12, 2002. The modification provides for connection of the two pump stations in series, rather than for each to have separate points of discharge into the public gravity sewer. As a result, Pump Station #2 discharges to existing Pump Station #1. Pump Station #2 was designed for an initial flow of 3,000 GPD; however, it was permitted for the planned flow of 59,321 GPD. Pump Station #1 was designed and permitted for 52,743 GPD. All sewage flows will be conveyed and treated at the PAWC Wastewater Treatment Facility.

3. Meadowbrook

Approval of a Planning Module for the Meadowbrook Subdivision for a revision to the Act 537 Base Plan was granted by the DEP via letter dated December 4, 2002. The revision provides for 49 residential lots, which were projected to generate a total of 14,700 GPD to be treated at the PAWC Wastewater Treatment Facility. According to the DEP approval letter, capacity for this project is proposed consistent with PAWC's Chapter 94 Wasteload Management Plan's Connection Management Plan.

The development of Meadowbrook consists of 88 lots in total. The other 39 residential lots were covered by an exemption granted by DEP while the City of Coatesville Authority owned the treatment facilities.

4. Hillview

Approval of a Planning Module for the Hillview Development (formerly Hill Farm) for a revision to the Act 537 Base Plan was granted by the DEP via letter dated December 30, 2002. The approval was for the sections of the development within Valley Township. The revision provides for 522 new residential dwellings, which were projected to

generate a total of 104,400 GPD to be treated at the PAWC Wastewater Treatment Facility. It also provides for one municipally-owned sewage pumping station and associated force main. According to the DEP approval letter, capacity for this project is proposed consistent with PAWC's Chapter 94 Wasteload Management Plan's Connection Management Plan.

Following the approval of 522 residential units, the developer revised the plans and now proposes 512 residential units. The additional 10 EDU's were re-allocated on the January 2008 CMP to Concern (3 EDU's), Valley Farm Associates (1 EDU), Laurence Professional Center (2 EDU's), Saligman Hangar (1 EDU), John Woodward Lot (1 EDU), Olinick Lot (1 EDU), and Saunders Lot (1 EDU), although not all of these projects have been approved by the Township.

5. Lambert Subdivision

Approval of a Planning Module for the Lambert Subdivision for a revision to the Act 537 Base Plan was granted by the DEP via letter dated February 3, 2004. The revision provides for a three lot residential subdivision. The project was proposed to generate an additional 900 GPD to be treated at the PAWC Wastewater Treatment Facility. Although the DEP approval letter did not specifically state that this project is proposed consistent with PAWC planning documents, the project is included in PAWC's Chapter 94 Connection Management Plan.

6. Timberlane

Approval of a Planning Module for the Timberlane Subdivision for a revision to the Act 537 Base Plan was granted by the DEP via letter dated May 14, 2004. The revision provides for 46 townhouses, which were projected to generate 13,800 GPD to be treated at the PAWC Wastewater Treatment Facility. According to the DEP approval letter, capacity for this project is proposed consistent with PAWC's Chapter 94 Connection Management Plan.

7. Hanscom Subdivision

Approval of a Planning Module for the Hanscom Subdivision for a revision to the Act 537 Base Plan was granted by the DEP via letter dated November 1, 2004. The revision provides for a two lot residential subdivision with one existing and one proposed dwelling. The project was proposed to generate an additional 300 GPD to be treated at the PAWC Wastewater Treatment Facility. According to the DEP approval letter, capacity for this project is proposed consistent with PAWC's Chapter 94 Connection Management Plan.

8. Oakcrest

Approval of a Planning Module for the Oakcrest Subdivision for a revision to the Act 537 Base Plan was granted by the DEP via letter dated June 1, 2005. The revision provides

for 170 residential lots (169 proposed dwellings with 2 existing dwellings to remain). 17 existing residences on Glencrest Road will also be connected to the public sewer; 11 of the dwellings will utilize grinder pumps and low-pressure force mains. The project was projected to generate a total of 49,350 GPD, which will be treated at the PAWC Wastewater Treatment Facility. The approval also includes a municipally-owned force main. According to the DEP approval letter, capacity for this project is proposed consistent with PAWC's December 2004 Connection Management Plan.

9. Woodland Pointe

Approval of a Planning Module for Woodland Pointe for a revision to the Act 537 Base Plan was granted by the DEP via letter dated November 21, 2005. The revision provides for the connection of 9 new residential dwellings and one existing dwelling to the public sewer. The project was proposed to generate 2,625 GPD to be treated at the PAWC Wastewater Treatment Facility. According to the DEP approval letter, capacity for this project is proposed consistent with PAWC's November 2005 Connection Management Plan.

10. Middleton Subdivision

Approval of a Planning Module for the Middleton Subdivision for a revision to the Act 537 Base Plan was granted by the DEP via letter dated November 21, 2005. The revision provides for a two lot residential subdivision with one existing dwelling and one new dwelling. The project was projected to generate an additional 262 GPD to be treated at the PAWC Wastewater Treatment Facility. According to the DEP approval letter, capacity for this project is proposed consistent with PAWC's November 2005 Connection Management Plan.

11. Valley Suburban Center

Approval of a Planning Module for the Valley Suburban Center for a revision to the Act 537 Base Plan was granted by the DEP via letter dated January 25, 2006. The revision provides for 192 apartment units, 98 townhouses, and 5 commercial buildings, which were projected to generate a total of 89,250 GPD to be treated at the PAWC Wastewater Treatment Facility. It also provides for one municipally-owned sewage pumping station and associated force main. According to the DEP approval letter, capacity for this project is proposed consistent with PAWC's November 2005 Chapter 94 Wasteload Management Plan's Connection Management Plan.

12. Valley Farm Subdivision

Approval of a Planning Module for the Valley Farm Subdivision for a revision to the Act 537 Base Plan was granted by the DEP via letter dated February 16, 2006. The revision provides for the connection of 58 new single-family residential dwellings and 21 existing residences on Mount Airy Road to the public sewer. Two of the existing residences on Mount Airy Road will be connected with individual grinder pumps and low-pressure

force mains. Two existing dwellings on the residual tract were also proposed to be connected to the public sewer. The approval letter from DEP does not explicitly mention these two existing dwellings; however, they are included in the overall projected sewage flow from the development and mentioned in the project narrative. The project was projected to generate 21,263 GPD to be treated at the PAWC Wastewater Treatment Facility. According to the DEP approval letter, capacity for this project is proposed consistent with PAWC's November 2005 Chapter 94 Connection Management Plan.

The discharge flow rate from the Township's Rock Run Pump Station was also approved concurrently. The pump station's permitted flow rate was increased from a 230,400 GPD annual average flow rate to a 300,000 GPD annual average flow rate.

13. Round Hill Development

Approval of a Planning Module for the Round Hill Development for a revision to the Act 537 Base Plan was granted by the DEP via letter dated March 15, 2006. The revision provides for 201 new multi-family dwellings, which were projected to generate 52,762 GPD to be treated at the PAWC Wastewater Treatment Facility (the DEP's review letter mistakenly states 55,762 GPD). Following planning approval, a Water Quality Management Permit was granted to construct two municipally-owned sewage pumping stations, associated force mains, and gravity sewers. The gravity sewer will be extended through an existing neighborhood of 29 dwellings.

A Water Quality Management Permit was also granted to upgrade a 10-inch sewer line in Lincoln Highway between Manholes 512-10 and 511-1, which will not have sufficient capacity upon development of this project and other development in the Hayti Basin. Furthermore, a PAWC sewer line between Manholes 1017 and 1016 will be upgraded due to projected insufficient capacity. According to the DEP approval letter, capacity for this project is proposed consistent with PAWC's Chapter 94 Wasteload Management Plan's Connection Management Plan.

The approval does <u>not</u> include connection of the 29 existing dwellings in the neighborhood through which the new gravity sewer will be installed. Refer to the Robinson Avenue/Oaklyn Lane Planning Module approval below for the existing dwellings.

14. Keystone Foods

Approval of a Planning Module for the Keystone Foods project (Lot 4 of the Valley View Business Center) for a revision to the Act 537 Base Plan was granted by the DEP via letter dated January 19, 2007. The revision provides for a distribution center that is projected to generate 5,250 GPD to be treated at the PAWC Wastewater Treatment Facility. Following planning approval, a Water Quality Management Permit was granted to construct one municipally-owned temporary sewage pumping station, sections of associated 2-inch and 4-inch force mains located in Valley Township between the temporary pumping station and the Sadsbury Township boundary line, and an 8-inch

gravity line that will convey sewage flows from the Keystone Foods lot to the temporary pumping station. According to the DEP approval letter, capacity for this project is proposed consistent with PAWC's Chapter 94 Wasteload Management Plan's Connection Management Plan.

The Planning Module Approval was conditioned upon adoption of additional sewage facilities planning by Sadsbury Township and approval by the DEP for the portion of the proposed force mains within Sadsbury Township. Since then, Sadsbury Township and the DEP have both granted planning approval for the proposed force mains, and DEP has granted a Part II permit. The second condition was that sewage facilities planning for Valley View Lot 5 must be adopted by Valley Township and approved by the DEP before any building permits for that lot may be issued. Lots 1-3 are all located entirely within Sadsbury Township and will not utilize any of Valley Township's sewer facilities. Therefore, Lots 1-3 do not require any approvals from Valley Township.

15. D. London Tract Subdivision

Approval of a Planning Module for the D. London Tract Subdivision for a revision to the Act 537 Base Plan was granted by the DEP via letter dated March 28, 2007. The revision provides for 14 new residential dwellings, which were projected to generate 3,150 GPD to be treated at the PAWC Wastewater Treatment Facility. Following planning approval, a Water Quality Management Permit was granted to construct individual grinder pumps and a low pressure collection system to serve the homes. Valley Township will own and operate the common forcemain associated with the system.

16. Robinson Avenue/Oaklyn Lane

Approval of a Planning Module for Robinson Avenue/Oaklyn Lane for a revision to the Act 537 Base Plan was granted by the DEP via letter dated March 26, 2008. The revision provides for the connection of 29 existing residences to the public sewer.

17. New Rainbow Elementary School

Approval of a Planning Module for the New Rainbow Elementary School for a revision to the Act 537 Base Plan was granted by the DEP via letter dated March 31, 2008. The revision provides for the development of a new elementary school to replace an existing school. The new school will serve 750 students and employ 100 staff. The project was projected to generate 3,188 GPD to be treated at the PAWC Wastewater Treatment Facility. According to the DEP approval letter, this project is a replacement discharge to conveyance and treatment facilities and is therefore not listed on PAWC's CMP.

E. OTHER MUNICIPAL AND COUNTY PLANNING DOCUMENTS

1. 2003 Comprehensive Plan, Valley Township, Chester County, PA, adopted May 6, 2003.

The Comprehensive Plan was a full and complete update of the Township's 1965 Comprehensive Plan. The Plan establishes goals, objectives, and policies for future growth and land use within the Township. It is consistent with the Municipalities Planning Code (including amendments through 2002) and is intended to be consistent with the Chester County *Landscapes* Plan Policy for growth and preservation. The land use objectives are also generally consistent with those of the neighboring communities.

As part of the Comprehensive Plan preparation, Valley Township conducted an extensive public outreach and input process to include a series of advertised and noticed public informational meetings; a detailed survey of the wishes, needs, observations, and visions of Township residents; and a formal public meeting/presentation. The Comprehensive Plan is intended to be implemented over a 20-plus year time horizon. It provides a background of data and historic information, utilizes available current data including the 2000 U.S. Census, and develops a set of recommendations. The future land uses of Natural, Rural, Suburban, Suburban Center, and Urban, as set forth in *Landscapes*, are defined as they apply to growth within Valley Township and are mapped. Goals for use of resources (i.e. natural, scenic, historic), economic development, transportation, and community facilities are also established. Additionally, the Comprehensive Plan recommends short, moderate, and long-range implementation strategies, measures, and steps to achieve the desired growth pattern.

The Comprehensive Plan suggested that the Township's Zoning Ordinance and Subdivision and Land Development Ordinance be revised to come into compliance with its land use goals and objectives. These revisions were recommended to be completed within one to three years of Comprehensive Plan approval. Valley Township has updated the Subdivision and Land Development Ordinance with amendments a few times since adoption of the Comprehensive Plan. The Zoning Ordinance has also had a few minor updates, but it has not been amended to totally comply with the Comprehensive Plan. One of the Township's commitments as part of this Plan Update is to amend the Zoning Ordinance accordingly.

2. Landscapes: Managing Change in Chester County 1996 – 2020, Chester County Comprehensive Plan Policy Element, adopted July 12, 1996.

Chester County's Comprehensive Plan, titled *Landscapes*, provides for 4 general land classifications (landscapes) and the use and development objectives in each landscape area. Refer to Part VI Para A.4.b for information regarding the consistency of this Plan Update with *Landscapes*.

3. **<u>Watersheds: An Integrated Water Resources Plan for Chester County, Pennsylvania and Its Watersheds</u>, adopted September 17, 2002.**

   Watersheds is an Integrated Water Resources Plan for Chester County and is the water resources element of *Landscapes*. It provides guidance for existing land use and development to protect streams and aquifers. Refer to Part VI Para A.4.c for information regarding the consistency of this Plan Update with *Watersheds*.

4. **Pennsylvania American Water Company's January 2008 Connection Management Plan.**

5. **Valley Township Zoning Ordinance, adopted January 15, 1991, as amended through March 18, 2008.**

6. **Valley Township Subdivision and Land Development Ordinance, adopted September 1989, as amended through March 18, 2008.**

CHAPTER II
PHYSICAL & DEMOGRAPHIC ANALYSIS

A. PLANNING AREA

Valley Township is located in the west-central region of Chester County with an area of approximately 6 square miles. The Township is located north and west of the City of Coatesville. The Township is also bordered by West Caln Township to the north, East Fallowfield Township to the south, and Sadsbury Township to the west. It has historically been considered a rural community, although the areas abutting the City of Coatesville are considered medium density residential. The Township is currently undergoing significant development, which is altering the previous rural areas into a suburban setting.

Major arterial roads through the Township are the U.S. Route 30 Bypass running east to west across the northern portion of the Township; Business Route 30 which runs generally in a diagonal direction from southeast to northwest across the center of the Township; State Route 372 running east to west across the southern portion of the Township and State Route 82 running north to south in the eastern portion of the Township. In addition, major railroad arteries run east to west along the southern portion and north to south along the eastern portion of the Township. There are no passenger access points to train service in Valley Township.

The Chester County Airport is also located within the confines of the Township. The airport and surrounding facilities encompass approximately 275 acres in the south-central portion of the Township.

The Township is the sewer authority for all collection and conveyance facilities located within its boundaries. The Pennsylvania-American Water Company (PAWC) wastewater treatment facility treats all of the Township's public sewage. The treatment facility is located southeast of Valley Township, within the Borough of South Coatesville. Map IV-1 is the PAWC Sewer Service Area Map, as provided in PAWC's draft Act 537 Sewage Facilities Plan Update, dated August 2006.

Refer to Exhibit 2-1 for an Aerial Map of the Township and Exhibit 2-2 for a Roads Map.

B. TOPOGRAPHY

Valley Township is generally comprised of several distinct areas. The majority of the area in the western and northern parts of the Township is composed of gentle to moderate slopes (less than 15%) emanating from the relatively flat acreage surrounding the Chester County Airport. The southern and eastern portions of the Township generally have steeper slopes on the order of 20% to 40%. In particular, steep sloping areas include the border with East Fallowfield Township, land immediately north of the railroad, and land to the east and west of Rock Run and the West Branch of the Brandywine Creek. A Topography Map is provided in Exhibit 2-3.

The highest elevation in the Township is 685 feet above mean sea level (M.S.L.- U.S.G.S. Standard) located in the northwest portion near the Airport Road-U.S. Route 30 interchange. The lowest point is elevation 295 located along the West Branch of the Brandywine Creek in the southeast corner of the Township.

Topographical suitability for onlot systems is provided in the DEP publication "A Municipal Official's Guide to MANAGING ONLOT SEWAGE DISPOSAL SYSTEMS". Areas of steep slopes (25% and greater), as shaded in brown in Exhibit 2-3, are not suitable for onlot sewage disposal systems. Areas of moderate slopes (15 – 25%), as shaded in green in Exhibit 2-3, are primarily suitable for spray irrigation disposal systems in wooded lots. The majority of the areas of moderate to steep slopes within the Township are undeveloped and wooded. For moderately sloping areas, conventional systems may also be utilized where the depth to the limiting zone is greater than 6 feet. The topography of all other areas within the Township is generally suitable for elevated sand mound and spray irrigation disposal systems as well as conventional systems in which the depth to the limiting zone is greater than 5 feet.

C. HYDROLOGY AND FLOODPLAINS

The primary waterway through the Township is the West Branch of the Brandywine Creek which flows in a southerly direction, through the eastern portion of the Township. The Township lies within the drainage area of the Brandywine. All streams in Valley Township flow toward the West Branch in a southerly or easterly direction. Rock Run, which is a significant tributary, drains through the northern third of Valley Township. Another waterway, referred to as Sucker Run, lies in the southern portion of the Township and flows in a west to east direction to its confluence with the West Branch of the Brandywine in the extreme southeast corner of the Township. Numerous other smaller streams also contribute to the flow through these natural drainage basins.

Refer to Exhibit 2-3 for a Topography Map and Exhibit 2-4 for a Hydrology Map.

Floodplain areas of the aforementioned creeks are also delineated in Exhibit 2-4. The floodplains are reproduced from the Flood Insurance Rate Maps, dated 9/29/06, developed by the Federal Emergency Management Agency (FEMA).

D. SOILS

Valley Township is composed of several distinct soil types as shown in Exhibit 2-5. Most of these soils are classified as loams and silt loams. The predominant soil types in the Township are the Glenelg channery silt loam in the northern region and the Edgemont channery loam in the central-southern portion. Other soil types include: Brandywine loam, Chester silt loam, Chewacla silt loam, Conestoga silt loam, Glenville silt loam, Guthrie silt loam, Lawrence silt loams, Manor loams, Montalto silt loam, Neshaminy silt loam, Wedhadkee silt loam, and Worsham silt loam. Additionally, the developed areas of the Township are primarily identified as Urban land, which is defined as man-made land resulting from earthwork and use of imported fill material that occurred during land development.

Exhibit 2-6 depicts those areas throughout the Township where the soils have characteristics which may be unsuitable for on-site sewage disposal. The suitability of the soils is provided in the United States Department of Agriculture (USDA) National Resources Conservation Service (NRCS) online Web Soil Survey. In general, all of the soils in the Township have some limitation in their use for onlot sewage systems. The "Somewhat Limited" soils in the NRCS Web Soil Survey are considered suitable for onlot systems and include Chester, Conestoga, and Glenelg soils with slopes less than 15 percent. Some Urban soils are also considered acceptable for onlot systems including Conestoga (UkbB), Duffield (UnB), and Glenelg (UoB) soils. The "Very Limited" soils are considered unsuitable for onlot sewage systems and include Brandywine, Chewacla, Edgemont, Glenelg with slopes of 15 percent and greater, Glenville, Guthrie, Lawrence, Manor, Montalto, Neshaminy, Wehadkee, and Worsham soils. The Urban Glenelg (UoD) soil is also unsuitable for onlot systems. The remaining Urban soils are not identified as suitable or unsuitable in the Web Soil Survey; however, for our purposes, the soils will be considered suitable to be consistent with past characterizations.

For any new onlot system in any soil within the Township, the adequacy of the surface soils and underlying strata must always be field investigated and analyzed.

Prime agricultural soils are scattered throughout the Township and shown in Exhibit 2-7, per Chester County Planning Commission Map Series "Prime Agricultural Soils".

E. GEOLOGIC FEATURES

Valley Township is composed primarily of gneiss, quartzite, and limestone formations. The gneiss formations comprise the northern half of the Township and include Banded Mafic Gneiss, Felsic to Mafic Gneiss, and Felsic and Intermediate Gneiss. The quartzite formations are located south of the gneiss formations and comprise approximately one-quarter of the Township. The quartzite formations are Chickie's Quartzite and Antietam & Harper's Formations, Undivided. The gneiss and quartzite formations throughout the Township generally have low porosities and little suitability for onlot disposal systems. The three wells that supply the Township's public water system are located in the northern portion of the Township in the gneiss formation. Due to the low porosity of this formation, there is very limited to no hazard of groundwater pollution from onlot sewage disposal.

Conestoga Limestone comprises the southern portion of the Township. Because there are solution channels through limestone which can allow sewage to pass into the groundwater, there is a high hazard of groundwater pollution from onlot sewage disposal in this formation. Therefore, the limestone formation is unsuitable for onlot systems.

Agricultural activities are typically the primary source of nitrate-nitrogen pollution in communities. Due to minimal agricultural activity in Valley Township, there are no known large sources of nitrates and nitrogen. The nitrate level in the public well water system is below 5 mg/L. The nitrate levels are tested at least quarterly and have ranged between 2.5 and 3.7 mg/L since the beginning of 2006.

Refer to Exhibit 2-8 for geologic formations in the Township, per Chester County Planning Commission Map Series "Geologic Formations".

F. POTABLE WATER SUPPLIES

Potable water supply is provided to residents of Valley Township through one of the following four sources, as shown in Exhibit 2-9:

1. Public water supply systems owned and operated by Valley Township

a. Interconnected water supply system

The Township's interconnected water supply system consists of a system of Township-owned wells and bulk water purchased from PAWC.

The well system, known as the Valley Springs (or Mineral Springs) system, is comprised of three wells with treatment and pumping facilities north of the U.S. Route 30 Bypass. The well water supply is conveyed to a 150,000-gallon storage tower adjacent to the Meadowbrook development. The system was originally installed to provide water supply for approximately 500 residential units. The Delaware River Basin Commission (DRBC) approved a permit in 1988 for the withdrawal of up to 4,500,000 gallons of water per month (which is equivalent to 150,000 GPD). The permit was extended in 1993 for five years, in 1998 for an additional ten years, and again in 2008 for an additional ten years. This approval was granted with a condition that an agreement be reached with the City of Coatesville Authority (CCA) for installation of a back-up connection for the system. (The CCA has since transferred ownership of its water supply facilities to Pennsylvania-American Water Company (PAWC)).

A metered interconnection was installed in 2003 from PAWC's 16-inch main at the intersection of Business Route 30 and Airport Road. The meter through which the PAWC and Valley Township systems are connected is referred to as the Airport Road Meter Pit. The 16-inch main is pressurized from a 250,000 gallon storage tank in Sadsbury Township. A 12-inch main now runs east along Business Route 30 and is connected to Valley Township's water tower. The PAWC interconnection is primarily intended to supplement the water supply from Valley Township's well system, which is the primary source of water to the water tower. There is a pressure reducing valve on the 12-inch interconnect main prior to the water tower which only allows water from the main to flow into the tower (and on to the tributary developments) when the well system supply is insufficient.

The interconnected system supplements the well system's water supply to the developments of Valley Springs (143 units), Beacon Hill (128 units), Country Ridge (49 units), Country Club Valley (168 units), and Meadowbrook (88 units), all of which are located in the central and northern region of the Township. The interconnected system also supplements service to the developments of Oakcrest (169

units) and Valley Farm (60 units), both of which are currently under construction. Furthermore, the interconnected system is planned to supplement service to the proposed London Tract (14 units) and existing Mt. Airy Road residences. Additionally, the interconnect is the only source of water supply to the Chester County Airport via the Airport Service Meter. The interconnect is planned to be extended to be the only source of water service to the Valley Suburban Center (190 residential units, 2 restaurants, and 3 retail facilities) and the New Rainbow Elementary School. The interconnect will likely be utilized for future development and water supply needs east of Airport Road in the vicinity of Lincoln Highway as well. The 1990 Water Service Agreement between Valley Township and CCA provided Valley Township a peak daily usage of 400,000 GPD through this interconnection at Airport Road (see Appendix G).

The three wells supplied 30,373,812 gallons of water to the Township in calendar year 2007 (83,215 GPD). The PAWC interconnection supplemented the well system by providing 1,929,000 gallons of water to the Township's water tower in 2007 (5,300 GPD). The properties serviced by the interconnected system, including both the interconnect main and the wells, use varying amounts of water, but the average water usage per unit in 2007 was 145 GPD.

b. Other water supply systems

The 1990 Water Service Agreement between Valley Township and CCA provided for Valley Township to make additional taps to the CCA system (see Appendix G). Valley Township owns the water mains on the Township side of the meter pit.

One such connection exists with PAWC's Octorora line, a 24-inch main paralleling the Amtrak rail line on the south side of the Township, at the Red Road Meter Pit. The Water Service Agreement allows Valley Township a peak daily usage of 150,000 GPD at this connection. The Township used 15,803,000 gallons in calendar year 2007 (43,000 GPD) through this connection. Valley Township owns the 14-inch main on Red Road, which runs to a tee at the Valley Road intersection and continues in both east and west directions along Valley Road. The western line provides water to the Valley Crossing subdivision (224 units). The eastern line provides water to existing residences on Maple Avenue and the Timberlane development (46 units). The eastern line also runs south on Mt. Carmel Road to supply water to a number of subdivisions in East Fallowfield Township. All piping installed in Valley Township to accomplish this was dedicated to Valley Township as part of the conveyance agreement for Strasburg Hills with CCA.

There is also a connection to the PAWC system on Old Lincoln Highway at the Mt. Pleasant Street Meter Pit. Valley Township owns the 12-inch line from the meter pit to its termination at the northern intersection of Old Lincoln Highway and Lincoln Highway (Business Route 30). The line provides water supply to existing residences on Old Lincoln Highway which were experiencing contaminated well water supplies. Valley Township used 311,000 gallons in 2007 (850 GPD) through this connection.

Additionally, a connection to the PAWC system services the Hill View development (512 units) at the Hill View Meter Pit. Valley Township used 12,504,000 gallons in 2007 (34,000 GPD) through this connection.

Connections to the PAWC system have also been proposed to provide water supply to the planned Valley View Business Park and Highlands Corporate Center Phase III.

2. PAWC Franchise Areas

PAWC maintains franchise rights to the water supply in specific areas on the west end of Valley Township. As such, Valley Township does not own, operate, or collect revenues for water supply to these parts of the Township. The largest franchise area is in the northwest corner of the Township. The Highlands Corporate Center Phases I & II and Airport Village Shopping Center are the primary users of water supply in this area. An extension of the PAWC system within this franchise area has also been constructed for the Round Hill development (201 units) and existing residences on Robinson Avenue and Oaklyn Lane. The second franchise area is the Keystone Foods property (Lot 4 of the Valley View Business Park), which borders Sadsbury Township. The Keystone Foods facility is expected to be connected to the PAWC water supply system in 2009.

3. Direct connection by properties adjacent to PAWC water mains

A number of properties are directly connected to PAWC water mains which pass through the Township. Residences connecting directly to the PAWC mains are located toward the east side of the Township on Williams Way, Brick Street, Wagontown Road, Valley Station Road, and in the West End neighborhood. There have also been direct connections by properties on the south side of Lincoln Highway to the west of Airport Road.

4. Individual on-site wells

With some exceptions, the remaining residences in the Township rely on individual on-site wells as their only means of potable water. These residences are primarily located in the central and south-central portions of the Township.

G. WETLANDS

Wetlands are not predominant in the Township; although, small patches are scattered throughout. Most of the wetlands are classified in the Palustrine system, Unconsolidated Bottom or Forested class. The Riverine system, composed of the Upper Perennial subsystem, is also found in the northeast sector of the Township. The Hydrology Map, Exhibit 2-4, shows the locations and classifications of wetlands in the Township. This information was obtained from National Wetland Inventory Maps. There are also a few hydric soils scattered throughout the Township: Guthrie, Wehadkee, and Worsham soils. The hydric soils are shown on Exhibit 2-4.

In general, no sanitary sewer facilities are planned to be installed in or through any wetlands.

H. POPULATION

Valley Township is predominately a residential community. The Chester County Planning Commission (CCPC) estimated the 2005 population of the Township to be 6,044 people (as of July 1, 2005). The last physical count was conducted by the Census Bureau in 2000. At that time, the population was 5,116 people.

Past population trends, as shown in Table II-1, indicate a direct correlation between population and the economic conditions of the region. Being a predominately manufacturing region, the emergence of the steel industry in the mid 1960's and the subsequent cutbacks during the 1970's may at least partially account for the large increase in population between 1960 and 1970, and the subsequent decrease in the decade thereafter. As the region has shifted from a predominately manufacturing region to a residential region over the past few decades, there has been a dramatic increase in the population of Valley Township.

Table II-1
Valley Township Population History

Year	Population	% Change
1960	3,101	
1970	3,791	+ 22.3
1980	3,598	– 5.1
1990	4,007	+ 11.4
2000	5,116	+ 27.7
2005	6,044[a]	+ 18.1
2007	6,730[b]	+ 11.4

[a] Estimated 2005 Population by CCPC.
[b] Estimated 2007 Population as part of this Plan. Population was estimated by adding the estimated population growth in 2005 - 2007 to the 2005 estimated population. The 2005 - 2007 estimated population growth was calculated by multiplying the number of new homes in the Township (259) by 2.65 people/home.

Anticipated growth in the Township through the year 2030, as estimated by Valley Township's 2003 Comprehensive Plan, is shown in Table II-2. The table also provides the most recent projections by the CCPC, which were made in 2002. The Comprehensive Plan Unadjusted projection is a linear estimate of future population growth based upon average annual growth from 1980 to 2000. The Comprehensive Plan Adjusted projection was obtained by adjusting the CCPC projection to estimate more growth from 2000 to 2010, but result in the same 2030 projection. The Comprehensive Plan concluded that the Adjusted projection was the most realistic estimate of future population.

Table II-2
Population Projections

Year	CCPC	Comprehensive Plan Adjusted	Comprehensive Plan Unadjusted
2010	5,740 (+12.2%)	5,910 (+15.5%)	6,195 (+21.1%)
2020	6,430 (+12.0%)	6,540 (+10.7%)	7,502 (+21.1%)
2030	7,230 (+12.4%)	7,230 (+10.6%)	9,084 (+21.1%)

According to this plan's 2007 population estimate, Valley Township's population in 2007 had likely already exceeded the Comprehensive Plan Unadjusted projections for 2010 and the Comprehensive Plan Adjusted and CCPC projections for 2020. This trend of significant growth is expected to continue over the next decade as numerous residential developments are currently under construction and more are planned. As a result, it is expected that the future growth within the Township will continue to dramatically exceed both the Adjusted and Unadjusted projections, particularly through 2020. Moderation of growth is anticipated beyond 2020 as more land restrictions will likely take place and growth will become concentrated on industrial, commercial, and retail instead of residential.

CHAPTER III
EXISTING NEEDS

A. EXISTING SEWAGE FACILITIES

The sanitary sewer collection system which serves Valley Township is owned and operated by Valley Township. Treatment of the Township's sewage is provided by the Pennsylvania-American Water Company (PAWC) at their wastewater treatment plant per the Valley Township-City of Coatesville Authority Sewage Treatment Agreement dated January 7, 1992 (see Appendix A).

Valley Township's sewage collection system is presently composed of approximately 16 miles of interceptors, trunk lines and tributary systems. The Township is divided into three drainage basins as shown on Exhibit 3-1: the Rock Run, Hayti, and Westwood Basins. These basins handle the flows from the northern, central and southern regions of the Township respectively. The collection systems in all three basins are composed of gravity lines with a major interceptor transversing each basin. Moreover, with the exception of the Rock Run basin, conveyance to PAWC's treatment plant is exclusively by gravity. The following is a more detailed description of each of the three service areas.

1. Rock Run Basin

a. Description of System

The Rock Run service area covers roughly the northern third of Valley Township. The service area is comprised of lands zoned for commercial, conservation, residential, and planned development uses. The sewer system serving the Rock Run service area has three tributary systems which include collector sewers, interceptors, pumping stations and a force main. There are six pumping stations of which five of them convey sewage from limited areas and the sixth one (Rock Run pump station) receives and conveys flows from all of the tributary systems.

There are two pumping stations within the Highlands Corporate Center. The first station, which is off of Fox Chase Road, has a pumping capacity of 150 GPM and feeds a 4-inch force main which connects to the gravity sewer at Hilltop Lane. This station was constructed in 1991 and dedicated to Valley Township by the developer of the Highlands Corporate Center. This pump station is operated and maintained by Valley Township personnel. The second pumping station is located in the vicinity of Airport Road and Cheshire Court. The station has a design pumping capacity of 150 GPM and feeds a 2-inch low pressure sewer and, in the future, a 4-inch low pressure sewer which is currently capped. Both low pressure sewers connect to the gravity sewer at Fox Chase in the Highlands Corporate Center. This station was constructed in 2002 by the developer of the Highlands Corporate Center, who is currently responsible for its operation and maintenance.

A third sewage pumping station was installed to pump the flows from the Country Ridge subdivision in the northeast corner of the Township to the Rock Run Basin interceptor. This station provides a pumping capacity of 65 GPM for the 51 lot subdivision. Only 49 lots currently produce flow to the system. The other 2 lots are undeveloped. A 4-inch force main carries the flow to the gravity system which then flows to the Rock Run pump station. This pump station is maintained by Valley Township personnel.

The fourth pumping station is privately owned and operated by the Coatesville Country Club, in West Caln Township. This pumping station, with a capacity of 50 GPM, feeds a 3-inch force main which ends in a manhole at the intersection of Country Club Road and Mineral Springs Road.

The fifth sewage pumping station is located within the Hillview Development, north of the McElree Lane cul-de-sac and south of the Route 30 Bypass. This pumping station has a pumping capacity of 220 GPM and feeds a 4-inch force main that discharges into the Hillview Development gravity sewer system to the south. This station was completed in 2005 by the developer of the Hillview Development, who is currently responsible for its operation and maintenance. Upon dedication, Valley Township will assume the responsibilities for operation and maintenance.

As previously stated, the flow from all tributary sewer systems is received at the Rock Run Pump Station, which is located on Williams Way, south of Irish Lane. This station, completed in November 2004, consists of all new facilities including a wet well with two new submersible pumps (one operating and one standby), valve/metering vault, generator building for generator and office space, electrical system, and instrumentation and control system. The pumps are currently permitted by the DEP for 300,000 GPD average flow with an instantaneous peak capacity of 650 GPM. The average metered flow rate at the Pump Station during 2007 was 211,213 GPD. The pumps can be reprogrammed to handle approximately 384,000 GPD average flow with an instantaneous peak capacity of 800 GPM. A Corrective Action Plan to increase the allowable pump capacity to 800 GPM and 384,000 GPD was approved by the DEP on May 14, 2008. Additional planning approval and permitting is required before the pumps can actually be reprogrammed. The physical capacity of the pumps is approximately 830 GPM. The pump station is sized to accommodate a third pump, which will be constructed when additional capacity becomes necessary. With the third pump, the pump station's capacity is estimated to be 576,000 GPD average flow with an instantaneous peak capacity of 1200 GPM. Flows are metered on the discharge side of the pump by a magnetic flow meter. Discharge is into a Township-owned 10-inch force main which runs in a southerly direction along Wagontown Road approximately 3500 feet to the municipality boundary. It then discharges into a newly constructed extension of the 10-inch force main in the City of Coatesville. The force main in the City of Coatesville is owned by PAWC.

The sanitary sewer collection systems in the Rock Run Basin include over 55,000

linear feet of 8-inch sewer. The interceptors consist of 16,345 linear feet of 8-inch sewer, 5303 linear feet of 10-inch sewer, and 626 linear feet of 12-inch sewer. The first tributary system extends to the western boundary of the Township and begins in the Highlands Corporate Center as an 8-inch pipe. Adjacent to the water pump station on Mineral Springs Road, the size increases to 10 inches. From Mount Airy Road to the pumping station, the size increases to 12 inches. South of the Route 30 Bypass, an 8-inch diameter branches off the interceptor portion of the previously described tributary sewer system and goes northeast to the Country Ridge subdivision. Another tributary system, which is from the central part of the Township, begins at Pleasant Valley Drive approximately 800 feet west of Harry Road and continues as an 8-inch pipe along Harry Road, Mary Street, Moody Street, Ash Street, Irish Lane, and Williams Way to the pumping station. The third tributary system extends from the eastern boundary of the Township, beginning in the Hillview Development east of Route 82. It continues as an 8-inch sewer throughout the Hillview development and along both Manor Road and the West Branch of the Brandywine Creek until it joins the first tributary sewer system in the vicinity of the pump station.

The metering of flows from the entire basin is done at the Rock Run Pump Station.

b. Problems with Existing Facilities

There are two manholes located at the sewer crossing of the West Branch of the Brandywine Creek that experience inflow and infiltration (I&I) problems on occasion. Due to creek flooding, one of the manholes becomes inundated with flood waters at times. The stream has somewhat changed course since the manhole was installed. The Township continues to patch the manholes to alleviate the I&I problems while planning for a permanent repair solution. A Sanitary Sewer Manhole Improvement Agreement has been established with the developer of the OTP Corporation Office, Hotel, and Restaurant in which the developer is required to upgrade and partially replace these manholes.

There have been no violations of any permits, rules, or regulations of DEP in the Rock Run Basin.

c. Planned & In-Process Upgrades and Expansions

The following developments in the Rock Run Basin are currently in the planning phase or under construction. The full build-out of these developments are included in the "Current Connections" interceptor model of the Rock Run Basin (refer to Appendix K for the "Current Connections" sewer interceptor model). The developments are discussed in more detail in Chapter IV "Future Needs".

i. Hillview

The interceptor model includes 524 EDU's for the development (including 2 for the clubhouse), although 522 were approved in the Planning Module, and only

512 residences are being constructed. The additional 10 EDU's have been re-allocated to other projects in the January 2008 CMP. 250 EDU's in Hillview remained to be connected to the sewer at the end of 2007. Construction completion is projected to occur in 2009.

ii. Oakcrest

148 EDU's from the development will discharge into the Rock Run Basin. The remaining EDU's will discharge into the Hayti Basin due to site topography and proximity to existing sewer facilities. 128 EDU's remained to be connected to the Rock Run Basin sewer at the end of 2007. Construction completion is projected to occur in 2009.

iii. Valley Farm

81 EDU's from the new development and existing residences on Mt. Airy Road will discharge into the Rock Run Basin. 69 EDU's remained to be connected to the sewer at the end of 2007. Construction completion is projected to occur in 2010.

iv. Highlands Corporate Center

The interceptor model includes a total of 400 EDU's for the entire development, including all three phases, although the CMP only provides for 90 permitted EDU's. 400 EDU's was the original 1988 projection for the full build-out of the Corporate Center based upon site acreage. 400 EDU's remains a reasonable, if not conservative, estimate of the flows for the future build-out of the development. Of the 90 permitted EDU's, 63 EDU's remain to be connected. The only development plans currently before the Township are for a warehouse/distribution facility in Phase III on Lot B. The facility is anticipated to require only a portion of the remaining 63 EDU's. No schedule has been provided for development of Lot B or any other undeveloped parcel in the Highlands Corporate Center. For planning purposes, it is projected that the facility on Lot B will be constructed by 2009.

v. Middleton Subdivision

The subdivision on Harry Road will discharge 1 EDU into the Rock Run Basin. Construction is projected to occur in 2008.

vi. London Tract

All 14 EDU's in the development will discharge into the Rock Run Basin. Construction is projected to occur in 2008.

vii. Koenig Subdivision

The subdivision will discharge 1 EDU into the Rock Run Basin. Construction is projected to occur in 2008.

d. Reserve Capacity in Collection & Conveyance System

There are no sections of the Rock Run sewer system that are currently overcapacity, taking into account full build-out of the developments in Subparagraph 'c' above. Refer to the "Current Connections" interceptor model of the Rock Run Basin in Appendix K.

For the tributary system that originates at the western end of the Township, the controlling section is a 10-inch pipe run, MH 1 to MH 532-13, with an available capacity of 62,270 GPD (83 EDU's). This pipe run is located on Mount Airy Road and is one of the last runs prior to the connection with the eastern tributary sewer at MH 532-15. All other pipe runs in this interceptor system have remaining capacities over 175,000 GPD.

For the tributary system beginning at the eastern end of the Township, the controlling section is an 8-inch pipe run, MH 532-18 to MH 532-17, with a remaining capacity of 50,624 GPD (67 EDU's). This pipe run is just upstream of the connection with the western tributary sewer at MH 532-15. The remainder of this sewer system, which currently services only the Hillview Development, has available capacities in excess of 160,000 GPD.

For the central tributary system that begins on Pleasant Valley Drive, the most restrictive section is an 8-inch pipe run, MH 532-3 to MH 532-5, with an available capacity of 337,819 GPD (450 EDU's). This is the last pipe run for this tributary system before the pump station. All other sections of this tributary system have available capacities in excess of 450,000 GPD, most of which are over 1,000,000 GPD.

There are three pipe runs leading to the pump station after the eastern and western tributary systems merge at MH 532-15. The final pipe run from MH 532-5 to the pump station also includes the central tributary flows. The remaining capacity in these runs is 615,204 GPD (820 EDU's), far greater than the minimum capacities in the contributing sewers. These three runs, therefore, do not control any upstream sewage flow.

The Rock Run Pump Station's current permitted average flow capacity is 300,000 GPD. The projected average flow of existing and approved developments to the Pump Station by the end of 2007 in the previous application for permit amendment was projected to be 298,166 GPD. The DEP granted planning approval for the current permitted capacity based upon that projected flow with the Planning Module

approval for the Valley Farm Subdivision in a letter dated February 16, 2006. Table III-1 identifies the new developments and respective number of connections for each development that were included in the previous projection (Highlands Corporate Center's flow rate is 167 GPD/EDU; all other developments' flow rates are 262.5 GPD/EDU).

Table III-1
Rock Run Pump Station Connections

	Projected Connections by End of 2007	Actual Connections by August 2007	Total Connections Approved for Development
Hillview	364	242	525
Oakcrest & Glencrest Rd	100	20	148*
Highlands Corp. Center	76	27	90
Valley Farm	40	6	60
Mt. Airy Road (Existing Units)	0	0	21
Middleton Subdivision	1	0	1
London Tract	14	0	14

* There are 40 additional connections from Oakcrest and Glencrest Road that will be conveyed through the Hayti Basin and are therefore not included in this table.

The actual number of connections that had been made at the approved developments as of August 2007, as indicated in Table III-1, were less than previously projected, primarily due to the depressed housing market. Additionally, the actual average existing flow in the 12-months preceding August 2007 was 202,910 GPD, which is significantly less than the 298,166 GPD that was previously projected to be the flow at the end of 2007. Furthermore, a number of new developments have been proposed to connect to the Rock Run Basin sewer system and contribute flows to the Pump Station. As a result, revisions to the Rock Run Pump Station capacity requirements were warranted. It was determined that the connection of proposed developments would exceed the permitted capacity of the Pump Station but not the physical capacity.

A Corrective Action Plan (CAP) to increase the permitted capacity of the Rock Run Pump Station was prepared and was approved by the DEP on May 14, 2008. The CAP demonstrated the Pump Station will be able to handle the projected flow in 2010 by reprogramming the variable speed pumps to 800 GPM and increasing the permitted average capacity of the Pump Station to 384,000 GPD. A Special Planning Study for the Rock Run Pump Station Capacity Upgrade has also been prepared to obtain DEP Planning Approval. The Special Planning Study projected the average daily flow to be 343,808 GPD by the end of 2009 and 349,320 GPD by the end of 2010. Following reprogramming, the reserve capacity in the Pump Station would be 34,680 GPD. The Study's projections support the proposed reprogramming in the CAP. The Study must be approved by the DEP before the pumps can be physically reprogrammed.

Table III-2 provides the revised development projections and respective number of full build-out connections as projected in the Special Planning Study for the Rock Run Pump Station Capacity Upgrade (Highlands Corporate Center's flow rate is 167 GPD/EDU; OTP Corporation, Saunders Lot, and Valley Farm Associates' Mineral Springs Lot use a flow rate of 225 GPD/EDU; and all other developments' flow rates are 262.5 GPD/EDU).

Table III-2
Revised Rock Run Pump Station Connections

	Total EDU's
Hillview	512
Oakcrest & Glencrest Rd	148
Highlands Corp. Center	90
Valley Farm	60
Mt. Airy Road (Existing Units)	21
Middleton Subdivision	1
London Tract	14
Koenig Subdivision	1
OTP Corporation	85
Saunders Lot	1
Valley Farm Associates' Mineral Springs Lot	1

After the reprogramming, future flows beyond the proposed 384,000 GPD average and 800 GPM peak permit capacities would require a third pump be added to the Pump Station, which the station can accommodate. The maximum capacity of the Pump Station with a third pump would be approximately 576,000 GPD. As such, the ultimate reserve capacity in the Pump Station with addition of a third pump, after all connections from the revised developments in Table III-2, would be approximately 226,680 GPD.

e. 5-Year Flow Data

i. Average Flows

The recorded Overall Annual Wastewater Flows of the Rock Run Basin indicate a slight increase from 2003 to 2007. The average annual flow for the five-year period is 79,258,337 gallons (217,146 GPD). The sewer run with the most limiting hydraulic pipe capacity is MH 108A to MH 65, which is in the western tributary, with a hydraulic capacity of 362,075 GPD. Only 60% (217,146 GPD/362,075 GPD) of the interceptor's limiting hydraulic capacity is utilized in the average daily loading. (Please note that the average annual flows are the cumulative flows from all three tributary systems. The sewer run with the most limiting hydraulic capacity is upstream in the western tributary, so it would never

experience the average daily flow rate utilized in the above calculation under current loading conditions. This calculation is merely presented to show that in an unrealistic peak loading condition throughout the entire system, each segment would be no more than 60% full.)

Table III-3
Rock Run Basin Annual Flows

Year	Overall Annual Flow (Gallons)
2003	69,049,074
2004	101,987,960[a]
2005	75,806,387
2006	72,739,025
2007	76,709,239[b]

[a] The high recorded flow is suspected to be inaccurate because the old pumping station was experiencing meter equipment problems. The old station wet well may have also developed inflow problems due to the blasting operations associated with construction of the new pump station wet well.

[b] The annual flow is only an approximation because December flows were not yet available. December flow was included as the average of the previous 11 months.

The Rock Run Basin's flow has increased slightly since 2003 primarily due to connections being made in the Hillview, Meadowbrook, and Oakcrest Developments. The amount of precipitation in 2004 is also assumed to have had some impact on the total flow during that year, but the amount of recorded flows for several months at the old Rock Run Pump Station are questionable. Once the new pump station was installed, the recorded flows were significantly lower, indicating the old metering equipment may have been faulty.

Refer to Appendix L for further commentary, graphs, and tabulations of monthly flows, average daily flow, and maximum quarterly and monthly flows.

ii. Peak Wet Weather Flows

A comparison of Average Daily Flows in Appendix L versus the recorded monthly precipitation obtained from the Chester County Water Resources Authority allows for selection of Wet Weather Daily Flows. Generally, the higher average daily flows occur within the same month if the precipitation is extreme, such as June 2003 and April 2007, or within the following months if precipitation is well above average. For instance, in 2005, the peak precipitation occurred in October, and the high flow was recorded in December, although the precipitation in November and December was below average. The high flow in 2004 occurred in December, five months after the highest precipitation month of July. The continued above average precipitation following July may have continued to build up to the higher flows experienced five months later. Lastly, in 2006, the peak flow occurred in January which is consistent with the high flows at

the end of 2005. However, the flow does not seem to be related to precipitation since January's precipitation was not the peak for 2006, and precipitation amounts in the preceding months were below average. Therefore, the peak wet weather flow is considered to have occurred in June, the same month as the peak precipitation, even though it is not the highest flow experienced in 2006.

A relationship between precipitation and sewage flows appears to exist during 2003, 2005, and 2007. However, there is not strong evidence that a precipitation-sewage flows relationship existed in 2004 and 2006. For the five-year period, the months of peak wet weather flows for the Rock Run Basin are generally the same as those for the Hayti and Westwood Basins.

Based on the premise above, the peak wet weather daily flows for 2003 to 2007 in the Rock Run Basin are presented in Table III-4.

Table III-4
Rock Run Basin Peak Wet Weather Daily Flows

Year	Peak Wet Weather Daily Flow (Gallons)
2003	273,575
2004	333,646
2005	265,026
2006	197,267
2007	287,512

Refer to Appendix L for a complete comparison of flows versus precipitation.

iii. Connections

At the end of 2001 (beginning of 2002), there were 1117 connections in the Rock Run Basin as reported in the Wasteload Management Report Survey submitted to PAWC. The average flow per connection was 123 GPD. At the end of 2007, there were 1516 connections, an increase of 399 connections. The 2007 average flow per connection calculates to be 139 GPD.

The number of new connections made each year are presented in Table III-5.

Table III-5
Rock Run Basin Annual Connections

Year	New Connections
2002	3
2003	61
2004	143
2005	77
2006	59

2007	56

Refer to Appendix L for a graph that compares flows to connections.

2. Hayti Basin

a. Description of System

The Hayti service area is located in the central portion of the Township with Lincoln Highway (Business Route 30) running through the middle of it. Along Lincoln Highway, there are parcels zoned for commercial and planned development uses. The southeast corner of the service area is zoned conservation, and the remainder of the area is zoned for residential use.

The Hayti Basin contains one interceptor sewer which runs along Lincoln Highway from west to east. The interceptor begins as an 8-inch diameter line west of Airport Road, becomes a 10-inch line at MH 523-1 at Washington Avenue, and increases to 15 inches in the section prior to the metering pit at Charles Street. The interceptor is 4,866 linear feet of 8-inch pipe, 7,038 linear feet of 10-inch pipe, and 139 linear feet of 15-inch pipe.

The Hayti Basin also contains four pumping stations. The first station, which is located within the Chester County Airport, is owned and maintained by the Airport. The pump station is connected to the Hayti interceptor by a 2½-inch force main. The second pumping station is located on the ALP Industries property, approximately 400 feet east of the Lincoln Highway-Buckthorn Drive intersection. This station is also privately owned and maintained. It has a capacity of 24 GPM and feeds a 2-inch force main which connects to the Hayti interceptor at MH 18. The other two pump stations are located in the Round Hill development, which is currently under construction. Both stations are currently owned and maintained by the developer, but they will eventually be dedicated to Valley Township. Round Hill Pump Station #1, which is located on the north side of the site, is permitted to pump approximately 132 GPM (0.1895 mgd peak instantaneous) and discharges through a 4-inch force main. Round Hill Pump Station #2, which is located on the south side of the site near Lincoln Highway, is permitted to pump approximately 34 GPM (0.0491 mgd peak instantaneous) and discharges through a 2-inch force main. The two force mains from Round Hill connect at the intersection of Robinson Avenue and Buckthorn Drive, where a 4-inch force main then runs to the public sewer at MH 111.

The metering pit is located within the City of Coatesville on Charles Street; however,

the metering pit is owned and maintained by Valley Township. The equipment at the pit consists of an ultrasonic open channel flow meter and appropriate electronic equipment. Flows are recorded on a direct reading 7-day chart.

b. Problems with Existing Facilities

There have been no reported problems with existing facilities in the Hayti Basin. There have been no violations of any permits, rules, or regulations of DEP in the Hayti Basin either. However, the flow rate per connection in the Basin is unusually high (459 GPD/connection in 2007). The Township is performing an inflow and infiltration study of the Basin's sewer system to identify any problems. A strategy for follow-up repairs will be determined based upon the observations and televising.

c. Planned & In-Process Upgrades and Expansions

The following developments are currently in the planning phase or under construction. The full build-out of these developments are included in the "Current Connections" interceptor model of the Hayti Basin (refer to Appendix K for the "Current Connections" sewer interceptor model). The developments are discussed in more detail in Chapter IV "Future Needs".

i. Lambert Subdivision

All 3 EDU's (2 new homes and 1 existing home) will discharge into the Hayti Basin. 1 EDU remained to be connected at the end of 2007, and it is anticipated the connection will be made in 2008.

ii. Oakcrest

40 EDU's from the development will discharge into the Hayti Basin. The remaining EDU's will discharge into the Rock Run Basin due to site topography and proximity to existing sewer facilities. All 40 EDU's remain to be connected to the Hayti Basin sewer. Construction completion is projected to occur in 2009.

iii. Woodland Pointe

All 9 EDU's in the development will discharge into the Hayti Basin. 5 EDU's remained to be connected at the end of 2007. Construction completion is projected to occur in 2008.

iv. Round Hill

All 201 EDU's in the development will discharge into the Hayti Basin. 190 EDU's remained to be connected at the end of 2007. Construction completion is projected to occur in 2010.

The interceptor model of existing conditions also includes the connection of 29 EDU's from existing residences on Robinson Avenue and Oaklyn Lane.

v. Valley Suburban Center

All 340 EDU's in the mixed-use development will discharge into the Hayti Basin. Construction is projected to begin in 2008 and be completed in 2010.

vi. Keystone Foods & Valley View

Keystone Foods will discharge 13 EDU's of sewage flow into the Hayti Basin upon initial build-out, and an additional 2.5 EDU's upon its future expansion. The Hayti Basin interceptor model of current conditions includes only the initial 13 EDU's from Keystone Foods. Construction is projected to occur in 2008.

The development of Lot 5 (434.5 EDU's) and future build-out of Keystone Foods (2.5 EDU's) are not included in the interceptor model of current connections.

vii. New Rainbow Elementary School

The New Rainbow Elementary School will discharge 3,188 GPD into the Hayti Basin. The new school is considered a replacement discharge since the existing school will be demolished. The existing school is already included in the interceptor model of current conditions. Construction completion is projected to occur in 2009.

viii. Concern

The expansion of the Concern School will discharge 3 additional EDU's into the Hayti Basin. Construction is projected to occur in 2008.

ix. John Woodward Lot

One (1) EDU is proposed to connect to the Hayti Basin sewer in 2008.

d. Reserve Capacity in Collection & Conveyance System

There are no sections of the Hayti interceptor that are currently overcapacity. However, upon completion of the Oakcrest, Round Hill, and Valley Suburban Center developments, the interceptor will have a section that is overcapacity. The 10-inch diameter pipe run between MH 512-10 and MH 511-1 will be 21,451 GPD overcapacity. This run is located at the northern intersection of Lincoln Highway and Old Lincoln Highway. The developers of Oakcrest, Round Hill, and Valley Suburban Center have contributed funding for an upgrade of the undersized pipe run, and an

escrow account has been established. A new 12-inch diameter pipe, already permitted by the DEP, will be installed in place of the existing 10-inch pipe. It is anticipated this upgrade will be constructed in 2008. The 12-inch pipe is considered the existing condition in the "Current Connections" interceptor model of the Hayti Basin.

Following the upgrade and full build-out of the developments in Subparagraph 'c' above, the controlling section will be an 8-inch diameter run from MH 4 to MH 3 with an available capacity of 285,869 GPD (381 EDU's). This run is located on Lincoln Highway, 900 feet west of Washington Avenue.

Refer to Appendix K for the "Current Connections" sewer interceptor model for the Hayti Basin.

e. 5-Year Flow Data

i. Average Flows

The recorded Overall Annual Wastewater Flows of the Hayti Basin indicate generally steady flows from 2003 to 2007. The average annual flow of the five-year period is 76,794,587 gallons (210,396 GPD). The sewer run with the most limiting hydraulic pipe capacity is MH 15 to MH 14, which is located toward the western end of Lincoln Highway, with a hydraulic capacity of 494,009 GPD. Only 43% (210,396 GPD/494,009 GPD) of the interceptor's limiting hydraulic capacity is utilized in the average daily loading. (Please note that the average annual flow is the cumulative flow from the entire basin. The sewer run with the most limiting hydraulic capacity is near the upstream end of the interceptor, so it would never experience the average daily flow rate utilized in the above calculation under current loading conditions. This calculation is merely presented to show that in an unrealistic peak loading condition throughout the entire system, each segment would be no more than 43% full.)

Table III-6
Hayti Basin Annual Flows

Year	Overall Annual Flow (Gallons)
2003	81,463,008
2004	75,343,580
2005	74,048,960
2006	74,375,760
2007	76,794,587[a]

[a] The annual flow is only an approximation because December flows were not yet available. December flow was included as the average of the previous 11 months.

The sewage flow decreased from 2003 to 2004, likely due to less precipitation in

2004. The sewage flows have been very steady from 2004 through 2007.

Refer to Appendix L for further commentary, graphs, and tabulations of monthly flows, average daily flow, and maximum quarterly and monthly flows.

ii. Peak Wet Weather Flows

A comparison of Average Daily Flows in Appendix L versus the recorded monthly precipitation obtained from the Chester County Water Resources Authority allows for selection of Wet Weather Daily Flows. The peak average daily flow in 2007 occurred in the same month as the peak precipitation. In the second half of 2005 and the second half of 2006, an increase in flows followed months with high precipitation. The higher flows typically occurred one to two months after the high precipitation. The high flow in 2003 occurred in December, six months after the peak precipitation month. The precipitation throughout 2003 was unusually high, and the high flows at the end of 2003 and the beginning of 2004 are likely attributable to the consistent, above average precipitation in the months preceding. The 2003 peak wet weather flow though, is considered to have occurred in June, which is the same month as the peak precipitation, although it is not the highest flow for the year. This is consistent with the month of the peak wet weather flow in the Rock Run and Westwood Basins in 2003. The high flow in 2004 occurred in December, five months after the peak precipitation month of July. The continued above average precipitation following July may have continued to build up to the higher flows experienced five months later. In 2005, the peak flow occurred in April which does not seem to be related to precipitation since precipitation amounts in the preceding months were generally not above average. Therefore, the peak wet weather flow is considered to have occurred in December, two months after the peak precipitation, even though it is not the highest flow experienced that year. This is also consistent with the month of peak wet weather flow in the Rock Run Basin and Westwood Basins in 2005. Lastly, in 2006, the peak flow occurred in January which is consistent with the above average flows at the end of 2005. However, the flow does not seem to be related to precipitation since January's precipitation was not the peak for 2006, and precipitation amounts in the preceding months were below average. Therefore, the peak wet weather flow is considered to have occurred in July, which is the month following the peak precipitation month, even though it is not the highest flow experienced in 2006.

A relationship between precipitation and sewage flows appears to exist during 2007, and the second halves of 2005 and 2006. However, there is not strong evidence that a precipitation-sewage flows relationship existed in 2003, 2004, or the first halves of 2005 and 2006. For the five-year period, the months of peak wet weather flows for the Hayti Basin are generally the same as those for the

Rock Run and Westwood Basins.

Based on the premise above, the peak wet weather daily flows for 2003 to 2007 in the Hayti Basin are presented in Table III-7.

Table III-7
Hayti Basin Peak Wet Weather Daily Flows

Year	Peak Wet Weather Daily Flow (Gallons)
2003	234,637
2004	284,837
2005	229,732
2006	205,780
2007	318,769

Refer to Appendix L for a complete comparison of flows versus precipitation.

iii. Connections

At the end of 2001 (beginning of 2002), there were 412 connections in the Hayti Basin as reported in the Wasteload Management Report Survey submitted to PAWC. The average flow per connection was 296 GPD. At the end of 2007, there were 470 connections, an increase of 58 connections. The 2007 average flow per connection calculates to be 459 GPD. This high flow rate indicates that there may be infiltration and surface water inflow problems in the Hayti Basin sewer. There may also be inflow issues associated with illegal connections to the sewer, such as sump pumps and roof drains. The Township is currently performing an inflow and infiltration study of the Basin's sewer system to identify problems. A strategy for follow-up repairs will be determined based upon the observations and televising.

The number of new connections made each year are presented in Table III-8.

Table III-8
Hayti Basin Annual Connections

Year	New Connections
2002	12
2003	22
2004	4
2005	0
2006	4
2007	16

Refer to Appendix L for a graph that compares flows to connections.

3. Westwood Basin

a. Description of System

The Westwood service area covers the southern portion of Valley Township, with the Chester County Airport serving as an approximate northern boundary. Nearly all zoning types are included in this service area. The most predominant zone north of the railroad is Conservation, while the most predominant zones south of the railroad are R-2 Residential and Industrial.

There is one interceptor in the Westwood Basin, and it runs along Valley Road from west to east. The interceptor begins as an 8-inch diameter line approximately 800 feet west of Cynthia Road, becomes a 15-inch line at MH 507-5 at Hemlock Avenue, and increases to 18 inches in the section prior to the metering pit. The interceptor includes 5,726 linear feet of 8-inch pipe, 5,961 linear feet of 15-inch pipe, and 42 linear feet of 18-inch pipe.

The metering pit is located on Valley Road, adjacent to Sucker Run and near Seventh Avenue, in the southeast area of the Township. There are no pumping stations in this service area.

b. Problems with Existing Facilities

There have been no reported problems with existing facilities in the Westwood Basin. There have been no violations of any permits, rules, or regulations of DEP in the Westwood Basin either.

c. Planned & In-Process Upgrades and Expansions

There are no developments currently under construction with outstanding sewer connections or developments with approved plans in the Westwood Basin. However, there are three developments in the conceptual planning phase – Zarelli Apartment Building, Moles/Beech Street Subdivision, and Wright Ellsworth Properties – which are addressed in Chapter IV "Future Needs"; they are not included in the "Current Connections" sewer interceptor model for the Westwood Basin.

Refer to Appendix K for the "Current Connections" sewer interceptor model for the Westwood Basin.

d. Reserve Capacity in Collection & Conveyance System

There are no sections of the Westwood interceptor that are currently overcapacity.

The most restrictive section of the interceptor is an 8-inch run between MH 508-1 and MH 508-2 with an available capacity of 236,084 GPD (315 EDU's). This pipe run is located on Valley Road between Mount Carmel Road and Ridge Avenue. All other pipe runs in this interceptor system have remaining capacities over 340,000 GPD.

Refer to Appendix K for the "Current Connections" sewer interceptor model for the Westwood Basin.

e. 5-Year Flow Data

i. Average Flows

The recorded Overall Annual Wastewater Flows of the Westwood Basin indicate a decrease from 2003 to 2004 and an increase from 2004 to 2007. The average annual flow of the five-year period is 70,243,926 gallons (192,449 GPD). The sewer run with the most limiting hydraulic pipe capacity is MH 509-5 to MH 509-4 with a hydraulic capacity of 552,319 GPD. Only 35% (192,449 GPD/552,319 GPD) of the interceptor's limiting hydraulic capacity is utilized in the average daily loading. (Please note that the average annual flow is the cumulative flow from the entire basin. The sewer run with the most limiting hydraulic capacity is toward the western upstream end of the interceptor, so it would never experience the average daily flow rate utilized in the above calculation under current loading conditions. This calculation is merely presented to show that in an unrealistic peak loading condition throughout the entire system, each segment would be no more than 35% full.)

Table III-9
Westwood Basin Annual Flows

Year	Overall Annual Flow (Gallons)
2003	74,846,993
2004	67,463,450
2005	67,660,390
2006	66,365,000
2007	74,883,799

The sewage flow decreased from 2003 to 2004, likely due to less precipitation in 2004. The sewage flows were very steady from 2004 through 2006. A flow increase was experienced in 2007 and may be attributable to increased precipitation.

Refer to Appendix L for further commentary, graphs, and tabulations of monthly flows, average daily flow, and maximum quarterly and monthly flows.

ii. Peak Wet Weather Flows

A comparison of Average Daily Flows in Appendix L versus the recorded monthly precipitation obtained from the Chester County Water Resources Authority allows for selection of Wet Weather Daily Flows. Generally, the higher average daily flows occur within the same month if the precipitation is extreme, such as June 2003, June 2006, and April 2007, or within the following months if precipitation remains above average. For instance, in 2005, the peak precipitation occurred in October, and the high flow was recorded in December, although the precipitation in November and December was below average. Similar to the Rock Run and Hayti Basins, the high flow in 2004 occurred in December, five months after the highest precipitation month of July. The continued above average precipitation following July may have continued to build up to the higher flows experienced five months later.

Unlike the Rock Run and Hayti Basins, a relationship between precipitation and sewage flows appears to exist in each year in the Westwood Basin. For the five-year period, the months of peak wet weather flows for the Westwood Basin are generally the same as those for the Rock Run and Hayti Basins.

Based on the premise above, the peak wet weather daily flows for 2003 to 2007 in the Westwood Basin are presented in Table III-10.

Table III-10
Westwood Basin Peak Wet Weather Daily Flows

Year	Peak Wet Weather Daily Flow (Gallons)
2003	301,004
2004	225,092
2005	223,108
2006	205,112
2007	266,603

Refer to Appendix L for a complete comparison of flows versus precipitation.

iii. Connections

At the end of 2001 (beginning of 2002), there were 736 connections in the Westwood Basin as reported in the Wasteload Management Report Survey submitted to PAWC. The average flow per connection was 248 GPD. At the end of 2007, there were 846 connections, an increase of 110 connections. The 2007 average flow per connection calculates to be 243 GPD.

The number of new connections made each year are presented in Table III-11.

Table III-11
Westwood Basin Annual Connections

Year	New Connections
2002	17
2003	46
2004	0
2005	13
2006	34
2007	0

Refer to Appendix L for a graph that compares flows to connections.

4. Intramunicipal Sewer Connections

Minor amounts of sewage flow into Valley Township from adjacent East Fallowfield Township and West Caln Township for conveyance to the PAWC Treatment Plant in accordance with conveyance agreements with PAWC (see Appendices D and E respectively).

In East Fallowfield Township, the Strasburg Hills subdivision of 56 dwelling units is connected to the Valley Township collector sewer on Mount Carmel Road. There is a January 7, 1992 Sewage Conveyance Agreement between Valley Township and the City of Coatesville Authority (CCA) which contains the terms and conditions governing this intramunicipal connection (see Appendix D). The sewage flow from the subdivision is not metered. Instead, flows are estimated based upon water consumption. The average estimated flow during 2007 from the Strasburg Hills subdivision into Valley Township's sewer was 8,767 GPD. Additionally, there is a single home on South Park Avenue in East Fallowfield Township which is connected to the Valley Township collector sewers per the July 18, 1995 Addendum to Sewage Conveyance Agreement (see Appendix D).

A portion of Highlands Corporate Center is located in West Caln Township and discharges into Valley Township's conveyance system in the Corporate Center. The Coatesville Country Club, as described above, is connected by a force main to the Rock Run Basin interceptor. The sewage flow from the Country Club into Valley Township's sewer is metered, and the average metered flow during 2007 was 3,952 GPD. Lastly, in the Country Ridge subdivision, there are homes in West Caln Township that are considered direct Valley Township customers by agreement.

5. PAWC Conveyance

PAWC owns, operates, and maintains a 15-inch interceptor through Valley Township which conveys sewage from the Borough of Parkesburg and Sadsbury Township to the PAWC Treatment Plant. This line runs parallel to Valley Township's Westwood Basin interceptor along Valley Road. Valley Township does not utilize this interceptor for sewage flows, nor is the Township allocated any capacity in the interceptor for future connections.

B. POLICY FOR ALLOCATION OF RESERVE CAPACITY

1. Reserve Capacity at PAWC Treatment Plant

Valley Township's contracted allocation at the PAWC Treatment Plant will be 1,540,000 GPD following expansion of the plant. The ultimate build-out of Valley Township is projected to generate an average of 94% of the 1,540,000 GPD allocated capacity (the ultimate build-out projection is analyzed in Chapter IV "Future Needs"). Therefore, the Township is not expected to exceed their allocated capacity at the treatment plant, and as such, has not implemented a policy for use of its treatment plant reserve capacity.

2. Reserve Capacity in Valley Township Conveyance System

The existing reserve capacity in the conveyance system of each service area is discussed above.

If only one project is proposed in the foreseeable future in a service area and will not exceed the reserve capacity of the Township's conveyance system, the requested number of connections will be approved by the Township. If the project will exceed the reserve capacity, then that developer will be solely responsible for any upgrades required to prevent the overloaded condition.

In recent years, there have been multiple projects in the same service area requesting connection to the Township's sewer system in the same timeframe. If the new connections will not exceed the conveyance system's reserve capacity, the requested number of connections for each development will generally be approved by the Township. On the other hand, if the connections will cumulatively overload the system, the developers are responsible for upgrading overloaded sections of the system or pump stations downstream of their connection. Each developer must fund a proportional cost of the entire downstream upgrade based upon their amount of contributing sewage flow. An escrow fund is then established with one of the developers being responsible for the construction of the upgrades.

In general, developments for which plans have been submitted to the Township for review or which are on the Connection Management Plan are considered to be occurring in the same timeframe.

C. EXPLANATION OF SEWER INTERCEPTOR MODELS

Sewer interceptor models are utilized to calculate capacities of each sewer run of the interceptors and the flows through each run (see Appendix K). It is important that a description of the sewer interceptor models be provided. The number of EDU's connecting into each sewer run is input into the model. The EDU's are then multiplied by the GPD/EDU rate to obtain the average contributing flow (Total Average Flow in model).

The flow rate input into the Rock Run model varies for each tributary system. The metered

flows through the Rock Run western tributary system were analyzed prior to April 2004, and the actual flow rate was 175 GPD/EDU. Therefore, with the exception of the Valley Farm Development, all connections in the western interceptor use a rate of 175 GPD/EDU in the model. The connections from Valley Farm and Mount Airy Road are input into the model at the Valley Township rate of 300 GPD/EDU. The central tributary system, which originates at Pleasant Valley Drive, also uses the Valley Township rate of 300 GPD/EDU. Lastly, the interceptor from Hillview uses a rate of 271.5 GPD/EDU. The peaking factor used for Hillview is 2.75, whereas the factor for every other connection in all basins is 2.50. The actual 2007 flow rate in the Rock Run Basin was 139 GPD/connection, indicating the design flow rates in the model are conservative, which is the intent.

The metered flows through the Hayti interceptor were analyzed from January 2003 to September 2004, and the actual flow rate was 343 GPD/EDU. Therefore, all existing connections as of September 2004 use a rate of 343 GPD/EDU in the model. Since then, all new connections are input into the model at the previous PAWC rate of 262.5 GPD/EDU. The actual 2007 flow rate in the Hayti Basin was 459 GPD/connection, which is above the typical flow rate per connection.

With the exception of the Timberlane Development, all connections in the Westwood Basin are input into the model at the Valley Township rate of 300 GPD/EDU. The connections from Timberlane are input at the previous PAWC rate of 262.5 GPD/EDU. The actual 2007 flow rate in the Westwood Basin was 243 GPD/connection, indicating the design flow rates in the model are conservative, which is the intent.

The Total Peak Flow is obtained by multiplying the Total Average Flow by a peaking factor of 2.5 (a peaking factor of 2.75 is used for Hillview). The Available EDU's for each run of the interceptor are then calculated by dividing the available system capacity at each run by the peak capacity rate of 750 GPD/EDU. 750 GPD/EDU is obtained by multiplying Valley Township's standard rate of 300 GPD/EDU by a 2.5 peaking factor. The 300 GPD/EDU rate provides a more conservative number of available connections than use of the lower PAWC rate does.

D. OPERATION AND MAINTENANCE

Operation and maintenance of the Township's public sewage facilities is handled by the Township's Public Works Department on a routine basis. The Public Works Department is responsible for maintenance, upkeep and minor repairs to the Rock Run Pump Station. Emergency and major repair items are provided by outside contractors on an as-needed basis. An annual service contract is maintained which provides two preventive maintenance inspections per year of the Rock Run pump station equipment.

Maintenance of the metering pits is also handled by the Township's Public Works Department. This includes weekly inspection of the pit, cleaning of any debris within the flume and changing of the recorder chart. The sewage meters are read monthly by PAWC personnel. Calibration of the meters is performed on a quarterly basis under a contract between the Township and a calibration service company.

Additionally, the collection and conveyance system maintenance is also handled by the Public Works Department. Blockages and broken pipes are resolved to the extent the Township is capable. Major repair items are provided by outside contractors. Televised inspection of the mains and major repairs, when required, is performed by local contractors with Township oversight.

Monthly flow data from the meters are tabulated by the Township Engineer. Analysis of the data is reported to the Board of Supervisors with recommendations regarding the flow levels and the need for I&I inspections in areas experiencing greater than normal flows.

E. ONLOT SEWAGE DISPOSAL

1. Types of Systems

Approximately 94% of the population in Valley Township is currently served by public sewer. The remainder of the Township, approximately 264 residences and 7 commercial facilities, utilize onlot sewage disposal systems.

Nearly all of the onlot systems are individual sewage disposal facilities. With the exception of two sand mound systems in the northwest region, a small community land disposal system near the intersection of Lincoln Highway and Glencrest Road, and several holding tanks, all other onlot disposal systems throughout the Township utilize septic tanks with seepage beds or cesspools alone. The majority of the systems are septic tanks with seepage beds, and a much lesser number of systems consist only of cesspools. Cesspools were constructed before the current standards for on-site disposal were adopted and are considered to be a non-standard form of disposal.

2. Suitability of Systems

In general, the majority of the Township is not well-suited for onlot sewage disposal due to topography, soils, and/or geology. Moderate and steep sloping areas are unsuitable for onlot seepage beds, which are the primary on-site sewage disposal method throughout the Township. These sloping areas are found along the municipal boundary with East Fallowfield Township, to the immediate north of the railroad, and along Rock Run, the West Branch of the Brandywine Creek, and their tributary streams (see Exhibit 2-3). All soils throughout the Township have some limitations to their use for onlot sewage disposal. The truly unsuitable soils are scattered throughout the Township, and are predominant in the same locations as steep slopes (see Exhibit 2-6). Lastly, the entire Township has geologic limitations to onlot sewage disposal. The truly unsuitable geologic formation is Conestoga Limestone, which generally comprises the portion of the Township south of the railroad (see Exhibit 2-8).

Some existing onlot systems are located on slopes, soils, and/or geologic formations that are not well-suited for this purpose, and system failures have occurred. Of particular concern are the onlot systems on Valley Station Road and Brick Street because they are

located on steep slopes and unsuitable soils. Furthermore, the lots on these roads are small which further limits the effectiveness of the onlot systems. Some of the onlot systems on Northview Drive, Peck Drive, and East Drive are also located on steep slopes and unsuitable soils. Additionally, unsuitable soils are found in the locations of some onlot systems on Glencrest Road and the west end of Lincoln Highway. The alternatives presented in Section V evaluate options for providing sewer service to these areas.

Generally, those areas with adequate topography, soil, and geologic conditions should employ a septic tank with seepage bed system as their primary means of subsurface disposal. The system should be adequately sized to handle the projected flows from the residence based on the percolation rate obtained and the required absorption area. However, in those areas with poor soil conditions or percolation rates in excess of ninety (90) minutes per inch, one of the following methods must be employed:

- Holding Tank
- Elevated Sand Mound
- Alternate Methods approved by the Chester County Health Department, Sewage Enforcement Officer, and DEP

3. Problem Areas

Many of the problems encountered with on-lot systems in the past are associated with the age of the system and/or improper maintenance. The Chester County Health Department (CCHD) responds to system problems and has documented several instances in the past of sewage system failure. Many of these failures may be directly related to inadequate maintenance procedures. Because many of these systems were installed before the institution of rules regulating onlot systems, some of these systems may also be inadequately sized. This, combined with infrequent pumping of the tank, may have resulted in the hydraulic overload of the absorption area, and consequent raw sewage overflows.

In addition to the above, some of the onlot failures documented may be at least partially attributable to the soil conditions in the area. Many of the existing onlot systems are in areas with unsuitable soil conditions. In these areas, the hydraulic overload is likely caused primarily by inadequate depth to the limiting zone, particularly a seasonally high water table.

Malfunctioning systems have generally resulted in the discharge of raw sewage onto the ground surface. This is in direct violation of Chapter 500 of the Rules and Regulations of the Chester County Health Department and Title 25 of the Pennsylvania Code, Chapter 73 Pennsylvania Sewage Facilities Act 537.

Corrections to malfunctioning systems have been made on an as-needed basis. The methods generally entail the relocating of the seepage bed to another site, the installation of a holding tank(s), or construction of a sand mound system.

a. Problems Reported and/or Addressed by Chester County Health Department

The following is a list of residences that have experienced an onlot system failure since 2001, as reported by CCHD. These residences have corrected the failure to the satisfaction of CCHD:

i. 1245 West Walnut Street (1995-2006)
ii. 170 Hilltop Lane (Date unknown)
iii. 429 Harry Road (2003)
iv. 12 Jefferson Avenue (2005)
v. 12 Hillcrest Road (2005)

The following residences have experienced an onlot system failure, as reported by CCHD, and are actively being addressed by CCHD:

vi. 145 Glencrest Road
vii. 43 Mineral Springs Road

The failures on Hillcrest Road and Glencrest Road are considered to be associated with clustered failures that were identified in the previous Valley Township Act 537 Official Sewage Facilities Plan (dated August 2000). The other failures are scattered throughout the Township. As such, these failures are considered isolated incidences and do not provide evidence of a geographical prevalence to failure.

b. Areas Identified in Previous Act 537 Official Sewage Facilities Plan (dated August 2000)

The previous Valley Township Act 537 Official Sewage Facilities Plan identified several areas in the Township that were considered high risk for existing onlot disposal system failures (see Exhibit 3-1). These areas were identified as locations where a number of reported onlot system problems were clustered together. The areas were designated to have a high potential for future sanitary sewer extensions.

i. Glencrest Road

The residences along Glencrest Road received Planning Module approval for connection to the public sewer as part of the Oakcrest Development. The collector sewer to service these residences has been installed by the developer of Oakcrest at no cost to the residents. The Township has agreed to take dedication of the sewer prior to completion of the Oakcrest development. Dedication is expected to occur in late 2008 or early 2009. It is anticipated that some residents will connect immediately while others will wait until their onlot systems fail or until they are required to connect by the Township. The Township does not currently intend to require residents to connect immediately because the dedication of the sewer is occurring approximately two years earlier than was originally expected. The Township's "Sewers and Sewage Disposal"

Ordinance requires buildings that become accessible to the sewer system to connect within sixty days after notice to do so is provided by the Township.

ii. North Mount Airy Road

The residences along North Mount Airy Road received Planning Module approval for connection to the public sewer as part of the Valley Farm Development. The collector sewer to service these residences was planned to be installed by the developer of Valley Farm. The Township is seeking methods to fund this sewer installation because the required reimbursement to the developer of Valley Farm was too costly for the residents. Water supply is provided to the residences from individual wells, so there is a risk of water contamination from malfunctioning sewage disposal systems. However, there have been no onlot sewage disposal complaints or malfunctions reported to the CCHD since at least 2001. This area does not currently present a critical public health or environmental concern.

iii. Robinson Avenue & Oaklyn Lane

The previous Valley Township Act 537 Official Sewage Facilities Plan identified this area as having two onlot malfunctions that were repaired in 1996. Although no malfunctions have been reported to the CCHD since then, numerous residents have complained about problems and have expressed a desire to connect to the public sewer. Planning Module approval was requested for connection of these residences as part of the Round Hill Development but was not approved by the DEP. A separate Planning Module for these residences only has since been submitted to and approved by DEP. The collector sewer to service these residences has been installed by the developer of Round Hill. The cost to install the sewer is being shared equally by the developer and the Township. Neither the developer nor the Township is requiring reimbursement by the residents for this sewer. The Township's "Sewers and Sewage Disposal" Ordinance requires buildings that become accessible to the sewer system to connect within sixty days after notice to do so is provided by the Township. The Township provided notice on April 18, 2008 that required the residents to connect by July 30, 2008.

iv. Rainbow Neighborhood

The previous Valley Township Act 537 Official Sewage Facilities Plan identified multiple malfunctions and repairs on Country Club Road and George Street between 1992 and 1997. There was one additional malfunction reported in 2005 in the neighborhood – on Hillcrest Road. There are 30 EDU's included in the Connection Management Plan for this neighborhood; however, planning approval from the DEP has not been pursued. The residents have not expressed a desire to connect to the public sewer. Water supply is provided to the residences from individual wells, so there is a risk of water contamination from

malfunctioning sewage disposal systems. However, since there has only been one isolated malfunction in this neighborhood in the past ten years, this area does not currently present a critical public health or environmental concern.

v. South Mount Airy Road

The previous Valley Township Act 537 Official Sewage Facilities Plan identified this area as having numerous complaints and an unknown pollution source into a stream. However, there have been no complaints or malfunctions reported to the CCHD since at least 2001. Nearly all developed parcels in this area have previously been connected to the public sewer system. There is existing public sewer adjacent to all properties in this area to which the remaining parcels can connect via a sewer lateral at their own expense.

vi. Valley Station Road

The previous Valley Township Act 537 Official Sewage Facilities Plan identified this area as having numerous complaints and an unknown pollution source into a stream. However, there have been no complaints or malfunctions reported to the CCHD since at least 2001. The residents have not expressed a desire to connect to the public sewer. The size of existing lots does not provide adequate area to replace onlot disposal systems, although repairs are feasible. Soils in the area are poor. The residences on Valley Station Road are served by the PAWC water distribution system. The health risk is therefore minimal from malfunctioning disposal systems, although the availability of public water may lead to over-consumption where onlot disposal problems were reported to have occurred. The Township is aware that sewering this area may be necessary in the future. Availability of funding for design, construction, and right-of-way acquisition for a pumping station makes installation of sewer in this area a major endeavor. The Township will continue to explore ways, namely funding methods, to proceed with such a project.

vii. Northview, Peck, and East Drives

The previous Valley Township Act 537 Official Sewage Facilities Plan identified this area as having multiple complaints and one repair in 1995. The residents have expressed a desire to connect to the public sewer. As such, the Township has evaluated the cost for extension of the sewer to this neighborhood; however, no extension is actively being pursued at this time. Water supply is provided to the residences from individual wells, so there is a risk of water contamination from malfunctioning sewage disposal systems. However, there have been no onlot sewage disposal complaints or malfunctions reported to the CCHD since 1995. This area does not currently present a critical public health or environmental concern.

viii. Brick Street

The previous Valley Township Act 537 Official Sewage Facilities Plan identified this area as having several reported malfunctions and repairs in 1995. There have been no complaints or malfunctions reported to the CCHD since then. The residents have not expressed a desire to connect to the public sewer. The size of existing lots does not provide adequate area to replace onlot disposal systems, although repairs are feasible. The residences on Brick Street are served by the PAWC water distribution system. The health risk is therefore minimal from malfunctioning disposal systems, although the availability of public water may lead to over-consumption where onlot disposal problems were reported to have occurred. This area does not currently present a critical public health or environmental concern.

ix. West End of Lincoln Highway

The previous Valley Township Act 537 Official Sewage Facilities Plan identified this area as having nonconforming onlot systems and two reported repairs in 1997. However, there have been no complaints or malfunctions reported to the CCHD since then. One property owner has expressed a desire to connect to the public sewer. According to the CCHD, the soils are poorly drained, and there is a high water table. Some of the facilities are served by the PAWC water main along Lincoln Highway. The health risk is therefore minimal from malfunctioning disposal systems, although the availability of public water may lead to over-consumption where onlot disposal problems were reported to have occurred. A low pressure sewer system will be installed along the frontage of these properties as part of the Keystone Foods (Valley View Subdivision Lot 4) project. It will connect to Valley Township's public sewer system. The low pressure system is anticipated to be constructed in late 2008. The properties will be able to install individual grinder/ejector pumps and connect to the low pressure system at their own expense once the system has been dedicated to Valley Township.

4. Violations

Aside from the aforementioned malfunctioning systems, there have been no violations of local ordinances, the Sewage Facilities Act, the Clean Streams Law, or other regulations.

5. Operation and Maintenance

Onlot systems are privately owned and are operated and maintained by the property owner. Valley Township has recently adopted an ordinance titled "An Ordinance Providing for a Sewage Management Program for Valley Township" (see Appendix J) and is in the process of implementing it. The Township has only been providing general oversight of onlot systems with support from the Chester County Health Department, who is serving as Sewage Enforcement Officer for the Township, and the Township Engineer.

The ordinance names the Chester County Health Department as the Sewage Enforcement Officer for the Township with the responsibility for site assessment and issuance of permits for construction and alteration of onlot disposal systems. The ordinance provides maintenance requirements that are to be performed by the property owner and assigns the Township the responsibility for monitoring. Monitoring shall be performed by an authorized agent of the Township who shall conduct inspections on a regular basis as well as when a system is suspected of malfunctioning.

F. SLUDGE AND SEPTAGE

The only sludge and septage generated with Valley Township is private onlot systems, and disposal is the responsibility of the private property owner. The Township owns and operates only the public sanitary collection and conveyance facilities. The Township does not generate, transport, or dispose of any sludge or septage.

CHAPTER IV
FUTURE NEEDS

A. MUNICIPAL AND COUNTY PLANNING DOCUMENTS

1. Zoning Ordinance & Map

The Valley Township Zoning Ordinance was adopted in January 1991 with amendments through March 2008. The Ordinance provides for nine zones throughout the Township:

a. The **Conservation Zone** is intended to preserve areas of the Township that are characterized by sensitive environmental features. These areas are located in the vicinity of steep sloping areas north of the Amtrak railroad, undeveloped land near Sucker Run south of the railroad, steep sloping areas near the Route 30 Bypass in the central-eastern portion of the Township, and areas through which Rock Run and its tributaries pass. Permitted uses include single-family detached homes and recreation areas.

b. The **R-1 Residential Zone** is intended for suburban detached residential uses. These areas are located in both developed and undeveloped portions of the Township. The zone includes lands north of the Route 30 Bypass, at the municipal boundary with the City of Coatesville near Glencrest Road, the Buckthorn Drive vicinity, and north of the Amtrak railroad at the municipal boundary with Sadsbury Township.

c. The **R-2 Residential Zone** is intended to accommodate medium to high density residential development. The zone consists of existing neighborhoods and some undeveloped lands south of the railroad, in the center of the Township on both sides of Lincoln Highway, south of the Route 30 Bypass on both sides of Wagontown Road, and along the eastern municipal boundary with Caln Township. Permitted uses include single-family detached homes, townhouses, and apartments.

d. The **Neighborhood Commercial Zone** is intended for basic convenience commercial goods and services. The zone consists of one small area to the south of Lincoln Highway near the municipal boundary with the City of Coatesville as well as a few small areas along Valley Road. Permitted uses include offices, banks, restaurants, retail stores, medical clinics, shopping centers, churches, and various residential.

e. The **Highway Commercial Zone** is intended for larger scale and/or highway-oriented retail, service, and entertainment businesses. The zone is located along Lincoln Highway in the center of the Township. Permitted uses include offices, banks, restaurants, retail stores, hotels, vehicle sales, theaters, shops for contractors, laundromats, and churches.

f. The **Regional Commercial Zone** is intended for larger businesses that may service a regional market. The zone is located primarily to the east of Airport Road, between

Lincoln Highway and the Route 30 Bypass. Permitted uses include offices, banks, restaurants, retail stores, theaters, and automobile-related facilities.

g. The **Commercial Office Zone** is intended for a wide range of office uses that are protected from other commercial activities. The zone is located on the south side of Lincoln Highway to the west of Church Street. It is also located on the north side of Lincoln Highway to the east of Glencrest Road, bordering the municipal boundary with the City of Coatesville. Permitted uses include offices, medical clinics, and banks.

h. The **Industrial Zone** is intended for a wide range of industrial activities ranging from small start-up businesses to large, established businesses. The zone consists of existing industrial development in the southeast area of the Township, a few tracts south of the railroad, and an undeveloped area in the west part of the Township to the south of the Airport. Permitted uses include laboratories, manufacturing, packaging, storage, industrial shops, offices, and trade schools.

i. The **Planned Development Zone** is intended for mixed-use employment centers in suburban locations. The zone is located in the west portion of the Township and primarily consists of the Chester County Area Airport and the Highlands Corporate Center. Permitted uses include a wide range of office, research, light industry, warehousing, and related commercial services.

Valley Township's Zoning Map is the untitled, color-coded map in Appendix M.

2. Land Use Plan

Valley Township's 2003 Comprehensive Plan provides for five generalized land uses throughout the Township:

a. The **Natural Landscape** is made of woodlands, stream corridors, steep hillsides, ridge tops, wetlands, and marshes. These resources are essential elements of the physical environment and are the foundation for the livability of all landscapes. This Landscape includes the Route 82 and Wagontown Road corridors as well as all lands along Rock Run, Sucker Run, and their tributaries. Steep sloping lands to the north of the railroad are also considered Natural Landscapes. Development should be restricted in these areas.

b. The **Rural Landscape** includes farms, farm-related businesses and villages, along with some scattered housing sites. Limited development is to be directed to soils not well-suited for agriculture. This Landscape includes the Country Ridge development, developed and undeveloped lands in the central-eastern area of the Township, and undeveloped land south of the Airport. The objective of the Rural Landscape is to support and preserve agriculture as the primary land use while enhancing villages and lower density cluster and conservation-style development.

c. The **Suburban Landscape** provides for low to medium density subdivisions and scattered retail/commercial sites along West Lincoln Highway. The area generally north of West Lincoln Highway, west of Country Club Road, and east of Airport Road has the potential for greater expansion of mixed-used commercial and residential development. Areas to the south of West Lincoln Highway would support development in and around the Chester County Airport.

d. The **Suburban Center Landscape** is the focal point of existing and future growth in the Township. Desirable uses in these centers include community-oriented major retail/commercial, industrial, and office complexes and uses, a mix of community-oriented public services, parks/recreation facilities, and higher density residential development (i.e. apartments/townhouses). This landscape area would generally include most of the Airport land and the area in and around the intersection of West Lincoln Highway and Airport Road.

e. The **Urban Landscape** traditionally serves as the focal point of employment, commercial, and cultural centers for surrounding areas. The Landscape is only found in the southeast area of Valley Township, which is currently developed. Therefore, little to no future Urban development is likely within the Township.

Valley Township's Land Use Goals Plan, from the 2003 Comprehensive Plan, is titled *"Proposed Land Use Goals*" and is included in Appendix M.

3. Lot Size Regulations

Valley Township's Zoning Ordinance establishes the following minimum lot size requirements for principal uses in each zone unless noted otherwise:

Table IV-1
Zoning Ordinance Lot Size Requirements

Zone	Minimum Lot Size	Required Public Utilities
(C) Conservation	1 acre	None
(R-1) Residential	16,000 sq. ft.	Sewer
(R-2) Residential - *Townhouses*	3,000 sq. ft.	Sewer & Water
(NC) Neighborhood Commercial	10,000 sq. ft.	None
(HC) Highway Commercial	20,000 sq. ft.	Sewer & Water
(RC) Regional Commercial	5 acres	None
(CO) Commercial Office	15,000 sq. ft.	None
(I) Industrial	20,000 sq. ft.	Sewer & Water
(PD) Planned Development	2 acres	None

The Zoning Ordinance provides additional lot size restrictions for each zone based upon steep slopes and specific development uses.

4. Limitations and Plans for Floodplain and Stormwater Management

Valley Township's Floodplains Ordinance provides for identification of floodplain areas within the Township. The Floodplains Ordinance also establishes administrative and technical requirements for new development in floodplain areas and for modification of existing structures in floodplain areas.

Valley Township's Grading and Excavation Ordinance establishes minimal regulations for stormwater management, primarily setting forth some general requirements for design of stormwater facilities. A Stormwater Management Ordinance is currently under development by the Township to improve management of stormwater runoff.

B. EXISTING DEVELOPMENT AND PLOTTED SUBDIVISIONS

1. Existing Sewage Flows

The average sewage flow within Valley Township in 2007 was 622,552 GPD. The flow data was provided by PAWC and is compiled from meter readings at the Rock Run, Charles Street, and Valley Road meters. The monthly sewage flows and analysis are included in *Table N-1 "Valley Township 2007 Sewage Flows"* and the accompanying graph in Appendix N.

2. Description of New Developments

The following written analysis is presented in *Table N-2 "Valley Township Projection Summary"* in Appendix N. The table is modeled in a similar format as Table A2 "Projected New Connections with Signed Planning Modules" and Table A3 "Projected New Connections" of the January 2008 PAWC Connection Management Plan (CMP). A more detailed description of each development follows. These developments are depicted on Exhibit 4-1 "Planned Development and Future Growth Areas". In general, the "Planned Developments" in the exhibit are those that are projected to be developed and connected to the public sewer over a 5 or 10-year horizon (year 2012 or 2017 respectively).

Each residence is considered 1 EDU. The number of EDU's for commercial facilities is calculated based upon employees, usage, square footage, or other applicable criteria. The current DEP approved rate for PAWC facilities is 225 GPD/EDU. The same rate is used herein for most new developments. However, some developments received DEP planning approval prior to the current EDU rate becoming effective, so their rate is based upon the previous PAWC rate of 262.5 GPD/EDU.

The following developments, which are on Table A2 of the CMP, are completely constructed:

a. Valley Crossing IV

A cluster development of 60 townhouses was constructed on the 13-acre site, which is located southeast of the Valley Road and Old Wilmington Road intersection. All houses have been connected to the public sewer. Construction was completed in January 2005.

b. Hanscom Subdivision

One new home was constructed on the 2-lot subdivision of one acre. The home was constructed and connected to the public sewer in 2005.

c. Meadowbrook

Eighty-eight (88) single family detached homes were constructed on the 38-acre site, which is located east of Country Club Road and north of Walnut Street. All homes have been connected to the public sewer. Construction was completed in December 2006.

d. Timberlane

Forty-six (46) townhouses have been constructed on the 14-acre site, which is located along the west side of Mount Carmel Road and south of the termini of Linden Avenue, Elm Avenue, and Maple Avenue (south of Valley Road). All houses have been connected to the public sewer in the Westwood Basin. Construction was substantially completed in 2006.

The following developments, which are on Table A2 of the CMP, are currently under construction:

e. Lambert Subdivision

Two (2) new homes are being constructed on this 3-lot subdivision of a 1.3-acre parcel, and 1 existing home will remain. The lots are located in the Hayti neighborhood at the intersection of Front Street and Rainbow Road. Two (2) connections to the public sewer have been made. The other connection is anticipated to occur in 2008.

f. Hillview

An age-qualified residential community is being constructed on the 234-acre site, which is located east of Route 82 and south of the Route 30 Bypass. There are a total of 512 residential units proposed, consisting of 224 single family detached homes, 96 townhouses, 120 duplex houses, and 72 “quad-type” residences. The development is being constructed in two phases. At the end of 2007, 262 residences had been connected to the public sewer. Of the remaining homes, 90 connections to the public

sewer are anticipated in 2008 and 160 connections in 2009.

g. Oakcrest

One hundred sixty-nine (169) single family detached homes are being constructed on the 97-acre site, which is located east of the Meadowbrook Development and west of Glencrest Road. The development is being constructed in two phases. At the end of 2007, 20 homes had been constructed and connected to the public sewer in Phase I. Eighty-seven (87) residences remained to be constructed in Phase I, and all 62 residences in Phase II remained to be constructed. There are 2 existing residences on the tract that will also be connected to the public sewer. Additionally, 17 existing houses along Glencrest Road will be connecting while Oakcrest is being constructed or shortly thereafter. Of the 168 residences remaining to be connected, 60 connections are anticipated in 2008 and 108 connections in 2009.

h. Woodland Pointe

Nine (9) single family detached homes are being constructed on two noncontiguous parcels totaling approximately 3 acres, located in the Hayti Area. Six (6) of the homes are being constructed on the parcel north of Woodland Street between Grant Avenue and Rainbow Road, while the other 3 homes are being constructed on parcels on the east side of Rainbow Road. At the end of 2007, 4 homes had been completed and connected to the public sewer. The 5 remaining homes are anticipated to connect to the public sewer in 2008.

i. Round Hill

A cluster development of 201 townhouses is proposed for this 30-acre site, which is located north of Lincoln Highway and west of Buckthorn Drive. At the end of 2007, 11 homes had been completed and connected to the public sewer. Of the remaining 190 homes, it is anticipated that 60 homes will connect in 2008, 80 homes in 2009, and 50 homes in 2010.

An additional 29 existing detached homes on Oaklyn Lane and Robinson Avenue will also be connected to the public sewer via separate DEP planning approval. It is anticipated that these homes will be connected in 2008 and 2009.

j. Valley Farm

Fifty-eight (58) single family detached homes are being constructed on this 61-acre site, which is located north of the Route 30 Bypass and west of North Mount Airy Road. Two (2) existing homes on the tract will also be connected to the public sewer. At the end of 2007, 12 homes had been connected to the public sewer. Of the remaining 48 homes, it is anticipated that 20 homes will connect in 2008 and 28 homes in 2009.

An additional 21 existing detached homes along North Mount Airy Road are also proposed to be connected to the public sewer. It is anticipated that these homes will be connected in 2010.

The following developments, which are on Table A2 of the CMP, are currently in the planning stages and have been subject to review by the Township:

k. Middleton Subdivision

Plans for this development were approved and signed by the Township in 2005. The development consists of a 2-lot subdivision of a 1.9-acre parcel and construction of 1 new home. The lots are located on the west side of Harry Road between Pleasant Valley Drive and Irish Lane. It is anticipated that the new home will be constructed and connected to the public sewer in 2008.

l. Valley Suburban Center

Plans for this development have been approved by the Township; however, they have not been signed because a financial security account has not been established.

The development is proposed to include 290 residential units and 5 commercial facilities on a 63-acre site, which is located north of Lincoln Highway and east of Airport Road. The site is bisected by the Transcontinental Gas Pipeline Easement along the northern boundary. The Applicant intends to dedicate 9.3 acres on the north side of the pipeline easement along the frontage of Airport Road to the Township. The 290 residential units consist of 192 apartment units within 8 apartment buildings as well as 98 townhouses. The commercial facilities, 3 retail stores and 2 restaurants, total 54,000 square feet. The commercial facilities have been approved to generate a total of 50 EDU's (13,125 GPD) of sewage. (The number of EDU's was approved based upon the previous PAWC rate of 262.5 GPD/EDU.)

The development will be constructed in multiple phases. The first phase is expected to be the townhouses and is anticipated to begin construction in 2008. The apartments and commercial areas are expected to be constructed thereafter. It is projected that 100 EDU's will be connected to the public sewer in 2008, 200 EDU's in 2009, and 40 EDU's in 2010.

m. London Tract

Fourteen (14) single family detached homes are proposed for this 19-acre site, which is located north-northwest of Pleasant Valley Drive and south of the Route 30 Bypass. Each home will have its own individual grinder pump. It is anticipated that all the homes will be constructed and connected to the public sewer in 2008.

n. Keystone Foods (Valley View Development Lot 4)

The Valley View Subdivision (formerly the Bone Tract) is a proposed subdivision of a 90-acre tract of land into five parcels. Lots 1, 2, and 3 are in Sadsbury Township. Lots 4 and 5 are in Valley Township. The Valley View tract is bordered to the west by Washington Lane, to the north by the Chester County Area Airport, to the south by lands of Deborah H. Bone, and to the east by the Runk, Panik, and Hoffman properties.

Keystone Foods proposes to construct a warehouse and distribution center on Lot 4 (20 acres) of the Valley View Subdivision. The lot is bordered by proposed Valley View Lot 1 to the west (in Sadsbury Township), the Chester County Airport and the proposed relocated Rockdale Drive (as proposed by the Chester County Area Airport Authority) to the north, and Valley View Lot 5 to the south and east. The site will be accessed by a proposed road that intersects Washington Lane. The proposed facilities will consist of a 105,338 SF warehouse building with an additional 14,345 SF of attached office space and a 10,000 SF truck maintenance facility. Two future warehouse expansions, totaling 63,655 SF, are also proposed. Keystone Foods received Planning Module approval for 20 EDU's; however, they have transferred 7 of those EDU's to Sadsbury Township. Keystone Foods will only generate 13 EDU's (3384 GPD) in the initial build-out. An additional 2.5 EDU's (667 GPD) will be generated when the facility expands, resulting in a total sewage flow of 15.5 EDU's. (The number of EDU's was approved based upon the previous PAWC rate of 262.5 GPD/EDU.) It is anticipated that the initial build-out and connection to the public sewer will occur in 2008. The expansion and additional sewage generation is estimated to occur after 2012.

The 13 EDU's in the initial build-out of Keystone Foods will not result in a hydraulic overload in the Township's Hayti Basin interceptor sewer. The additional 2.5 EDU's in the facility expansion are addressed as part of the remainder of the Valley View Development in Subparagraph 'v' hereafter.

o. Highlands Corporate Center Phases I, II, III

The Highlands Corporate Center is a partially developed commercial and industrial center in the northwest corner of the Township. The Corporate Center is located north of the Route 30 Bypass from west of Airport Road to Country Club Road. The Corporate Center is being developed in three phases. The Corporate Center has been allocated 90 EDU's by the DEP, of which 27 EDU's have been connected to the public sewer. 63 EDU's remain to be connected; however, it is unlikely that 63 EDU's will be sufficient for the entire build-out of the Corporate Center as discussed below.

Phases I & II comprise the western half of the Corporate Center property. Approximately half of the subdivided parcels within Phases I & II have been built-out and connected to the public sewer. No land development plans for any of the vacant

subdivided lots have been recently submitted to the Township for review. Based upon the commercial/industrial sewage flow rate (defined hereafter) of 2.3 EDU/acre, it is projected that the remaining undeveloped parcels in Phases I & II will generate 115 EDU's. This projection is detailed in the "Planned Developments" section of *Table P-1 "Zoning & Comprehensive Plan Projections"* in Appendix P. For planning purposes, it is estimated that 50 EDU's will connect in 2009, 50 EDU's in 2010, and 15 EDU's in 2011.

Phase III is the 43-acre western portion of the Corporate Center, which is bound by the existing Highlands Corporate Center to the west, residences along Hilltop Lane to the north, Country Club Road to the east, and the Route 30 Bypass to the south. Three subdivided lots are proposed in Subdivision Plans that have received Conditional Approval from the Township. The lots are designated A, B and C, and are 11.46 acres, 21.25 acres, and 9.04 acres respectively. Site access will be via an extension of East Highlands Boulevard, which currently ends in a cul-de-sac. There is an additional 13 acres to the east of proposed Lot B which is not subdivided on the submitted Subdivision Plans. The parcels are to the north and south of the existing Inslee lots. It is anticipated that these parcels will be developed for commercial uses with access off of Country Club Road.

Land Development Plans have been submitted for a warehouse/distribution facility on Lot B of Phase III. Sanitary sewer needs for the facility have not yet been identified by the Applicant. Based upon the commercial/industrial sewage flow rate (defined hereafter) of 2.3 EDU/acre, it is projected that Phase III will generate 126 EDU's. This projection is detailed in the "Planned Developments" section of *Table P-1 "Zoning & Comprehensive Plan Projections"* in Appendix P. It is estimated that 63 EDU's will be connected in 2008, while an additional 33 EDU's will connect in 2010 and 30 EDU's in 2011.

The additional 178 EDU's of sewage flows for the Highlands Corporate Center that is projected in this Plan will <u>not</u> result in a hydraulic overload in the Township's Rock Run Basin interceptor sewer. The 178 EDU's are included in the 400 EDU's that are allocated for the Highlands Corporate Center in the "Current Connections" interceptor model of the Rock Run Basin (refer to Appendix K for the *"Current Connections"* sewer interceptor model). However, the additional 178 EDU's will exceed the remaining capacity of the existing Rock Run Pump Station with two pumps. Therefore, a third pump will likely need to be added to the pump station to handle these additional flows from the Highlands Corporate Center.

p. Koenig Subdivision

One (1) new dwelling is proposed to be constructed on an undeveloped lot located on Mineral Springs Road between Country Club Road and Pinckney Drive. The lot is proposed to be enlarged via the transfer of land from an adjacent lot. The DEP has directed the developer that Planning Modules are not required for connection of the new home to the public sewer. The new home is anticipated to be constructed and

connected to the public sewer in 2008.

q. Concern

Concern is an existing school located at 1225 W. Lincoln Highway. An expansion of the existing school and existing dormitory, including dining area, is proposed. The existing facilities are connected to the public sewer in Lincoln Highway. The expansion is planned to be utilized by 3 additional employees (there are currently 17) and 6 additional students (there are currently 18). The expansion is projected to generate 3 new EDU's of sewage flow. This new flow is included in the "Current Connections" interceptor model of the Hayti Basin and will not result in a hydraulic overload in the Township's Hayti Basin interceptor sewer. The DEP has directed the property owner that Planning Modules are not required for connection of the new EDU's to the public sewer. The addition is anticipated to be constructed and connected to the public sewer in 2008.

r. Laurence Professional Center

An existing 1-acre lot at 1206 W. Lincoln Highway is conceptually proposed for redevelopment into a professional office with related site improvements. The facility is projected to generate 2 EDU's of sewage flow, and it is anticipated to be constructed and connected to the public sewer in 2008. This new flow will not currently result in a hydraulic overload in the Township's Hayti Basin interceptor sewer. An amendment to the DEP permit will be required.

s. John Woodward Lot

The connection of 1 EDU is proposed for a lot (Tax Parcel 38-2P-46) on Acorn Street. The connection is projected to occur in 2008. This new flow is included in the "Current Connections" interceptor model of the Hayti Basin and will not result in a hydraulic overload in the Township's Hayti Basin sewer system. An amendment to the DEP permit will be required.

t. Olinick Lot

One (1) new dwelling is proposed to be constructed on a lot at 990 George Street. The new home is anticipated to be constructed and connected to the public sewer in 2008. This new flow will not result in a hydraulic overload in the Township's Westwood Basin sewer system. An amendment to the DEP permit will be required.

u. Saunders Lot

One (1) new dwelling is proposed to be constructed on an undeveloped lot (Tax Parcel 38-2-135.1F) located on Mineral Springs Road between Country Club Road and Pinckney Drive, adjacent to the Koenig Subdivision. The new home is anticipated to be constructed and connected to the public sewer in 2008. This new

flow will not result in a hydraulic overload in the Township's Rock Run Basin sewer system. An amendment to the DEP permit will be required.

v. OTP Corporation Office, Hotel, and Restaurant in Coatesville

A hotel and restaurant ("Marriott Hotel and Restaurant") are proposed to be constructed within the municipal limits of the City of Coatesville along Route 82 immediately south of the junction with the Route 30 Bypass. An office building ("Pulver Office Building") is proposed to be constructed north of the Route 30 Bypass at the intersection of Route 82 and Kings Highway (Route 340). Because the City of Coatesville has no sewage conveyance facilities near this location, the developer has requested that the buildings connect into Valley Township's public sewer system. The buildings would connect into the Eastern Tributary of the Rock Run Basin at the intersection of Manor Road and Route 82. The developer has stated that the buildings will generate a total of approximately 19,055 GPD (85 EDU's) of sewage flow. Valley Township has agreed to allow the developer to convey the sewage through the Rock Run Basin Eastern Tributary sewer with conditions. The developer has agreed to comply with the conditions which include funding upgrades to the Rock Run Pump Station.

Since the proposed buildings are in the City of Coatesville, the 85 EDU's will come from the City's allocation at the PAWC Treatment Plant, not from Valley Township's treatment allocation. As such, the OTP Corporation buildings are only included in projections regarding Valley Township's conveyance system and not in the Township's projected allocation at the PAWC Treatment Plant. The January 2008 CMP indicates the buildings will all be connected to the public sewer in 2009.

The 19,055 GPD of sewage flow for the proposed facilities will not result in a hydraulic overload in the Township's Rock Run Basin Eastern Tributary interceptor sewer main. However, the connection of the proposed facilities in addition to the build-out of other approved developments in the Rock Run Basin will exceed the current permitted capacity of the Rock Run Pump Station. The two pumps will have to be reprogrammed near their maximum pumping capacity in order to handle the future flows. Therefore, an amendment to the DEP Water Quality Management Permit is necessary. A Sewage Facilities Planning Module for Land Development for the OTP Office, Hotel, and Restaurant was approved by the DEP in a letter dated June 5, 2008. A Corrective Action Plan to reprogram the pumps in the Rock Run Pump Station to their maximum pumping capacity of 384,000 GPD was approved by the DEP in a letter dated May 14, 2008.

This development is not shown in Exhibit 4-1 because it is not located within the limits of Valley Township.

The following developments, which are on Table A2 of the CMP, are currently in the early planning stages and have not been subject to review by the Township:

w. Valley Farm Associates' Property on Mineral Springs & Wagontown Roads

One single-family home is conceptually proposed on a lot owned by Valley Farm Associates, L.P. at the intersection of Mineral Springs Road and Wagontown Road. The lot is approximately 2 acres. Public water and sewer are both available along the rear of the property, adjacent to the Route 30 Bypass. It is estimated that the new home will be constructed and connected to the Rock Run Basin public sewer in 2008.

The 1 EDU of sewage flow for this proposed residence will not result in a hydraulic overload in the Township's Rock Run Basin interceptor sewer. The approved connections of other developments to the Rock Run Basin sewer after 2007 will exceed the current permitted capacity of the Rock Run Pump Station. The two pumps will have to be reprogrammed to their maximum pumping capacity in order to handle the approved future connections. An amendment to the DEP permit will be required. The 1 EDU for this proposed residence can also be handled by the pump station with the reprogramming.

x. Saligman Hangar

A leased airplane hangar at the Chester County Airport is proposed to connect to the public sewer system in Lincoln Highway. The facility is projected to generate 1 EDU of sewage flow, and it is anticipated to be connected to the public sewer in 2008. This new flow will not currently result in a hydraulic overload in the Township's Hayti Basin interceptor sewer. An amendment to the DEP permit will be required.

The following developments, which are on Table A3 of the CMP, are currently in the planning stages and have been subject to review by the Township:

y. Coatesville Area School District

The Coatesville Area School District (CASD) owns three parcels north of Lincoln Highway, between Country Club Road and Valley Suburban Center. The CASD proposes to demolish the existing Rainbow Elementary School and build a New Rainbow Elementary School on the adjacent 63-acre lot (Tax Parcel #38-2-73). The existing school's lot and the new school's lot are proposed to be consolidated into one 70-acre lot.

Subdivision and Land Development Plans have been approved and recorded. The CASD estimates that the new school will have 750 students and 100 staff members for a total of 850 people. This is 130 more people than occupy the existing school, which is connected to the public sewer system. However, low consumption water fixtures, which are considered to reduce water usage by 50%, will be utilized in the new school. The population in the new school can therefore increase by the proposed 130 people without increasing the current sewage flows beyond that at the existing school. The sewage flow allocation for the existing school will therefore be transferred to the new school, since the existing school will be demolished. As such,

no new EDU's are required for the new school. It is anticipated that the new school will be constructed and connected to the public sewer in the Hayti Basin in 2009.

The third tract (Tax Parcel 38-2-48.4A) owned by the CASD is not currently planned for development. The parcel is zoned Regional Commercial with a predominantly Suburban Land Use Goal. Water, sewer, and vehicle access are available from Lincoln Highway. Topographical constraints include a stream and pond. The gas pipeline easement also restricts development near the north boundary of the parcel. A future school use is envisioned for the parcel and is projected to occur in the post-2012 timeframe.

Tax Parcel 38-2-48.4A is projected to generate 91 EDU's according to the Zoning Projection. This projection is detailed in the "Planned Developments" section of *Table P-1 "Zoning & Comprehensive Plan Projections"* in Appendix P. However, the CASD is allocated 200 EDU's on the January 2008 CMP for development of all three parcels. Therefore, 200 EDU's is used as the projection for all CASD development instead of that from this Plan's Zoning Projection. It is anticipated that the New Rainbow Elementary School will connect to the Hayti Basin public sewer in 2009. Although the other CASD parcel is not envisioned to be developed until post-2012, for planning purposes the projected number of annual CASD connections are consistent with that of the CMP with 50 EDU's in 2010, 50 EDU's in 2011, 50 EDU's in 2012, and 50 EDU's after 2012.

The 200 EDU's of total sewage flows for the CASD parcels will not currently result in a hydraulic overload in the Township's Hayti Basin interceptor sewer when considered independent of other proposed development. However, there are a few other planned developments – Valley View Development, the Airport, and Green Trees – that will likely connect to the interceptor prior to CASD Tax Parcel 38-2-48.4A and that may cumulatively cause a hydraulic overload in the interceptor. As a result, there may be upgrades to the interceptor resulting from these developments that will alter the sewer's conveyance capacity. The effect of the future CASD development on the sewer system will have to be evaluated at the time development is proposed for the property.

z. Remainder of Valley View Development (Lot 5)

No plans for development of Lot 5 in the Valley View Development have been submitted to the Township for consideration. However, the Applicant, All County Properties, has indicated that the lot will be further subdivided for business center and residential development. The Applicant, All County Properties, previously reserved 450 EDU's of allocation at the PAWC Treatment Plan. However, the Applicant has since revised their sewage projection based upon more detailed planning. They have stated that only 300 EDU's will be needed to complete the entire Valley View Development within Valley Township. This includes 15.5 EDU's for Keystone Foods, so the remainder of Valley View is anticipated to be 284.5 EDU's. For planning purposes, though, the entire Valley View Development is being considered

as generating 450 EDU's for treatment at the PAWC Plant because they have purchased that capacity and have not "returned" the extra 150 EDU's of allocation to Valley Township. Therefore, Lot 5 is considered to generate 434.5 EDU's for treatment at the PAWC Plant. For planning purposes, it is estimated that 130 EDU's will connect to the public sewer in 2009, 50 EDU's in 2010, 50 EDU's in 2011, 54.5 EDU's in 2012, and 150 EDU's after 2012. The additional 2.5 EDU's for the full build-out of Keystone Foods are projected to connect to the public sewer after 2012.

If the entire Valley View Development generates 300 EDU's, it will not currently result in a hydraulic overload in the Township's Hayti Basin interceptor sewer when considered independent of other proposed development. Alternatively, if the entire Valley View Development generates 450 EDU's, it will result in a hydraulic overload in the Township's Hayti Basin interceptor sewer by 912 GPD (1 EDU) even when considered independent of other proposed development. However, there are a few other developments that may connect into the Hayti Basin interceptor in the same timeframe – the Airport and Green Trees. In certain scenarios, the combination of new connections will cumulatively result in a hydraulic overload in the interceptor downstream of the Valley View connection. If the Valley View Development generates 300 EDU's in addition to the Airport and/or Green Trees, there will be no resultant hydraulic overload in the Hayti Basin interceptor. If the Valley View Development generates 450 EDU's and no other developments connect, one 8-inch diameter pipe from MH 4 to MH 3, which is 150 feet, would have to be upgraded to a 10-inch pipe. If the Valley View Development generates 450 EDU's in addition to the Airport (with or without Green Trees), the six 8-inch diameter pipes between MH 6 and MH 523-1, totaling 1415 feet, would have to be upgraded to 10-inch pipes. Along with other applicable developers, the developer of Valley View may be required to make a contribution for any necessary upgrades to the interceptor.

aa. Chester County Airport

The Chester County Area Airport Authority has proposed a significant expansion of the Airport including new hangars, aprons and taxiways, runways, control tower, and a terminal. They have projected a sewage increase of 111 EDU's from this expansion. Development will be phased, and it is estimated for planning purposes that 30 EDU's will connect to the Hayti Basin public sewer in 2009, 20 EDU's in 2010, 20 EDU's in 2011, 20 EDU's in 2012, and 21 EDU's after 2012.

The 111 EDU's of sewage flows for the Airport will not currently result in a hydraulic overload in the Township's Hayti Basin interceptor sewer when considered independent of other proposed development. However, there are a couple other developments that may connect to the Hayti Basin interceptor in the same timeframe – the Valley View Development and Green Trees. In certain scenarios, the combination of new connections will result in a hydraulic overload in the interceptor downstream of the Airport connection. If the Valley View Development generates 300 EDU's in addition to the Airport and/or Green Trees, there will be no resultant hydraulic overload in the Hayti Basin interceptor. If the Valley View Development

generates 450 EDU's in addition to the Airport (with or without Green Trees), the six 8-inch diameter pipes between MH 6 and MH 523-1, totaling 1415 feet, would have to be upgraded to 10-inch pipes. Along with the other applicable developers, the Airport may be required to make a contribution for any necessary upgrades to the interceptor.

bb. Rainbow Neighborhood

The Rainbow neighborhood is an existing residential neighborhood located in the central region of the Township, north of Franklin Street and east of Country Club Road. This neighborhood is included as an "Existing Needs" area in Part III of this Act 537 Plan. There is existing public sewer in the southern part of the neighborhood. There are 30 EDU's included in the January 2008 CMP; however planning approval from the DEP has not been pursued. The residents in the Rainbow neighborhood have not expressed an interest in connecting to the public sewer. It is therefore anticipated that the Rainbow neighborhood will connect sometime after the planned CASD, Valley View Development, and Airport have connected. However, for planning purposes and to be consistent with the CMP, it is estimated that 15 EDU's would connect in 2010 and 15 EDU's in 2011. There are additional undeveloped lots in the area that are not currently planned for development and are included in the Growth Areas forecast that follows.

The 30 EDU's of sewage flows for the Rainbow neighborhood will not currently result in a hydraulic overload in the Township's Hayti Basin interceptor sewer when considered independent of other proposed development. However, there are a few other planned developments – Valley View Development, the Airport, and Green Trees – that will likely connect to the interceptor prior to the Rainbow neighborhood and that may cumulatively cause a hydraulic overload in the interceptor. As a result, there may be upgrades to the interceptor resulting from these developments that will alter the sewer's conveyance capacity. The effect of the Rainbow neighborhood on the sewer system will have to be evaluated at the time connections are proposed.

cc. Heagy Tract

This 52-acre property, located south of the Route 30 Bypass and west of Country Club Road, has been conceptually planned for residential development; however, there are no formal plans currently before the Township for consideration. Its layout is such that unless development takes place on the western portion of this area off of Airport Road, there would be only one point of access and egress, via Country Club Road. Due to cul-de-sac limitations in the Zoning Ordinance, development would be limited. Additionally, the site is constrained by moderately steep slopes and a stream throughout, as well as the Transcontinental Gas Pipeline easement along its southern boundary.

Potable water from the Township system could be supplied to the site from a number of nearby water mains, most likely from the main across Country Club Road in the

Country Club Valley development. In concept, sewer flow was previously proposed to be via sewage pump station and force main to the Hayti Basin interceptor. However, the gravity sewer in Country Club Valley could be extended to service the Heagy Tract, thereby carrying wastewater through the Rock Run Basin. An evaluation would have to be performed in the plan review stage of the proposed development.

Based upon past discussions with interested developers, the Zoning Projection (townhouses) for this tract provides a more realistic forecast of future sewage needs than does the Comprehensive Plan Projection (detached homes). Anticipating a cluster development, the Zoning Projection forecasts a future sewage flow that amounts to 215 EDU's. This projection is detailed in the "Planned Developments" section of *Table P-1 "Zoning & Comprehensive Plan Projections"* in Appendix P. However, the Heagy Tract is allocated 250 EDU's on the January 2008 CMP, based upon a projection from the project consultant. Therefore, 250 EDU's is used as the projection instead of that from this Plan's Zoning Projection. For planning purposes, it is estimated that 50 EDU's would connect to the Hayti Basin public sewer in 2010, 50 EDU's in 2011, 50 EDU's in 2012, and 100 EDU's after 2012.

The 250 EDU's of total sewage flows for the Heagy Tract will not currently result in a hydraulic overload in the Township's Hayti Basin interceptor sewer when considered independent of other proposed development. However, there are a few other planned developments – Valley View Development, the Airport, and Green Trees – that will likely connect to the sewer prior to the Heagy Tract and that may cumulatively cause a hydraulic overload in the interceptor. As a result, there may be upgrades to the interceptor resulting from these developments that will alter the sewer's conveyance capacity. The effect of the Heagy Tract on the sewer system will have to be evaluated at the time development is proposed for the property.

dd. Green Trees

There are two tracts totaling 16 acres that are bound to the west by Lincoln Highway, the north by Glencrest Road, and the east by the municipal boundary with the City of Coatesville. The parcels, which are zoned Commercial, are being proposed for residential development. A change to the zoning of the area will be necessary. A sketch plan has been submitted to the Township for consideration. 38 detached single-family dwellings are proposed. The developer had previously proposed 92 high density residential units for the tract. Green Trees is allocated 80 EDU's on the January 2008 CMP, based upon previous projections from the project consultant. Since a zoning change would have to be approved and the EDU projections have varied, this Plan's projection will remain consistent with the previous projection and the CMP at 80 EDU's. For planning purposes, it is estimated that 27 EDU's will connect to the Hayti Basin public sewer in 2009, 20 EDU's in 2010, 20 EDU's in 2011, and 13 EDU's in 2012. There are a couple of physical constraints to developing the tracts, including steep slopes. Excavated soil from the Timberlane development has been stockpiled on these lots and is uncompacted, which may

further limit the development area.

The 80 EDU's of sewage flows for Green Trees will not currently result in a hydraulic overload in the Township's Hayti Basin interceptor sewer when considered independent of other proposed development. There are a couple other planned developments – Valley View Development and the Airport – that may connect to the sewer in the same timeframe as Green Trees. These Valley View Development and the Airport may cumulatively result in a hydraulic overload in the Hayti Basin interceptor upstream of the Green Trees connection. Even in the most aggressive scenario, in which the Valley View Development would generate 450 EDU's and the Airport 111 EDU's, the addition of 80 EDU's for Green Trees would not cumulatively cause a hydraulic overload downstream of Green Trees' connection. The only development scenario that would cumulatively cause a hydraulic overload in the interceptor downstream of Green Trees is if the Valley View Development generates 450 EDU's, the Airport generates 111 EDU's, and CASD Tax Parcel 38-2-48.4A generates 200 EDU's; however, the CASD development is not anticipated to occur in the same timeframe as Green Trees. The developer of Green Trees would only be required to make a contribution for any necessary upgrades to the interceptor downstream of the connection, which is not anticipated to be necessary when Green Trees connects.

ee. Zarelli Apartment Building

A 22-unit apartment building is conceptually proposed on the 4-acre tract located along Valley Road in the southwest region of the Township. The building is proposed to be two stories with a 17,905-square foot footprint. Public water and sewer are both available along the lot's frontage with Valley Road. For planning purposes, it is estimated that all 22 EDU's will be connected to the Westwood Basin public sewer in 2010.

The 22 EDU's of sewage flows for the Zarelli Apartment Building will not result in a hydraulic overload in the Township's Westwood Basin interceptor sewer, even when considered in conjunction with the proposed Wright-Ellsworth Properties and the Moles/Beech Street Subdivision (see Subparagraphs 'gg' and 'hh' respectively).

The following developments are not included in the January 2008 CMP, but they are currently in the planning stages and have been subject to review by the Township:

ff. Tomaski Subdivision

Plans for this 5-lot residential subdivision in the Hayti neighborhood have been previously approved by Valley Township. DEP planning approval for this project was not required because this was considered to be an existing subdivision, as stated in a letter from DEP dated August 25, 2004. Therefore, this subdivision is not included in the CMP. Four (4) homes have been constructed and connected to the public sewer. The 1 remaining home is anticipated to be constructed and connected

to the sewer in 2008. The 1 EDU of sewage flows will not result in a hydraulic overload in the Township's Hayti Basin interceptor sewer.

gg. Wright-Ellsworth Properties

A residential development is conceptually proposed on these two lots in the southwest region of the Township. The lots, which total 37.5 acres, are located on the south side of Valley Road immediately to the east of Valley Crossing. The development is proposed to consist of 200 homes. The development is also proposed to consist of two lots in neighboring East Fallowfield Township totaling 18 acres. The property in East Fallowfied Township will be park/recreation land, and no homes will be constructed there. Public water and sewer are both available along the frontage with Valley Road. For planning purposes, it is estimated that 50 EDU's would connect to the Westwood Basin public sewer in 2010, 50 EDU's in 2011, and 100 EDU's in 2012.

The 200 EDU's of sewage flows for the Wright-Ellsworth Properties will not result in a hydraulic overload in the Township's Westwood Basin interceptor sewer, even when considered in conjunction with the proposed Zarelli Apartment Building and Moles/Beech Street Subdivision.

hh. Moles/Beech Street Subdivision

A residential development is conceptually proposed on six lots in the Westwood neighborhood in Valley Township. The lots, which total 8 acres, are located on the south side of Beech Street along the Township boundary with East Fallowfield Township. The development is proposed to consist of approximately 75 townhouses. The tracts are landlocked, so an access easement will be necessary. Public sewer is available along either Beech Street or South Park Avenue. There is no public water in the immediate vicinity of these lots. For planning purposes, it is estimated that 25 EDU's will connect to the Westwood Basin public sewer in 2010, 25 EDU's in 2011, and 25 EDU's in 2012.

The 75 EDU's of sewage flows for the Moles/Beech Street Subdivision will not result in a hydraulic overload in the Township's Westwood Basin interceptor sewer, even when considered in conjunction with the proposed Zarelli Apartment Building and Wright-Ellsworth Properties.

ii. Township Municipal Complex

Valley Township owns a 7.5-acre lot (Tax Parcel 38-2-48) on the north side of Lincoln Highway in between the Valley Suburban Center and the CASD parcels. The property was recently transferred from the CASD. The Township intends to develop the parcel into a municipal complex, although no planning has been developed yet. The area is zoned Regional Commercial with a Land Use Goal of Suburban. Water, sewer, and vehicle access are available from Lincoln Highway, along the lot's

frontage. The Zoning Projection and Comprehensive Plan Projection both forecast sewage flows that amount to 21 EDU's from commercial uses at this site. This projection is detailed in the "Planned Developments" section of *Table P-1 "Zoning & Comprehensive Plan Projections"* in Appendix P. Construction is projected to occur in 2010.

The 21 EDU's of sewage flows for the Township Municipal Complex will not currently result in a hydraulic overload in the Township's Hayti Basin interceptor sewer when considered independent of other proposed development. However, there are a few other planned developments – Valley View Development, the Airport, and Green Trees – that may connect to the interceptor prior to the Municipal Complex and that may cumulatively cause a hydraulic overload in the interceptor. As a result, there may be upgrades to the interceptor resulting from these developments that will alter the sewer's conveyance capacity. The effect of the Municipal Complex on the sewer system will have to be evaluated at the time connections are proposed.

3. Composite Sewage Flows to PAWC Treatment Plant

At the end of 2007, there were 2,844 planned EDU's remaining to be connected to Valley Township's public sewer system. Only 2,759 planned EDU's are considered part of Valley Township's allocation at the PAWC Treatment Plant because the OTP Corporation Office, Hotel & Restaurant counts against the City of Coatesville's allocation. 2,021 of these EDU's are new residential EDU's, 97 EDU's are connections of existing residences, and the remainder are commercial-oriented. Table IV-2 summarizes the total existing and planned flows to the PAWC Treatment Plant (excluding the OTP Corporation Office, Hotel & Restaurant). Refer to *Table N-2 "Valley Township Projection Summary"* in Appendix N for a more detailed summary.

Table IV-2
Existing and Planned Flows to PAWC Treatment Plant

	GPD (@ 225 GPD/EDU)
2007 Average Sewage Flow	622,552
Planned Developments	620,775
Total Existing & Planned	**1,243,327**

The total sewage flow at the current PAWC rate of 225 GPD/EDU is 103,327 GPD greater than the 1,140,000 GPD that the Township has currently been allocated at the Treatment Plant. However, the flow rate is less than the total potential allocation of 1,540,000 GPD which PAWC has agreed to make available to the Township following expansion of the Treatment Plant.

C. FUTURE GROWTH AREAS

The future unplanned sewage needs of the Township were projected using two methods of

analysis: (1) based upon the Valley Township Zoning Ordinance and Zoning Map, and (2) based upon the Valley Township Comprehensive Plan.

1. Zoning Projection Methodology

a. Analysis of Recent Developments

i. Recent Residential Developments

Recent residential developments within the Township were analyzed to determine an average density for various residential development types. Refer to *Table O-1 "Analysis of Recent Residential Developments"* in Appendix O for a summary of the results. This analysis yielded the average number of EDU's (since 1 residential lot/home = 1 EDU) that have actually been created per acre of developable tract acreage. Undevelopable acreage, including steep slopes, wetlands, floodplains, easements, and right-of-ways were excluded from the developable tract acreage. For single-family detached homes, the recent average is 1.7 homes per acre of developable tract. For townhouses, the average is 5.0 townhouses per acre. The specific application of each of these densities for each method of analysis is explained in the respective discussions hereafter.

ii. Recent Commercial & Industrial Developments

The analysis for recent residential developments would yield questionable results if utilized for commercial and industrial developments. Different commercial and industrial uses generate significantly different sewage flows. Also, there has been minimal commercial and industrial development within Valley Township in recent years so there is an insufficient sample size. Therefore, the sewage projection for commercial & industrial developments has been based upon average building coverage, capita per building area, and sewage flow rates per person.

Recent commercial and industrial developments within and around the Township were found to have building footprints with an average area of 25% of the developable tract acreage. Refer to *Table O-2 "Analysis of Recent Commercial & Industrial Building Coverage"* in Appendix O for a summary of the results.

The average density of people per area for commercial use-facilities was calculated to be approximately 1 person / 250 SF (square feet). Refer to *Table O-3 "People per Building Area for Commercial Uses"* in Appendix O. The "1 Person / __ SF" densities are the number of parking spaces for each facility use as required by the Valley Township Zoning Ordinance. The number of parking spaces will be approximately equal to the number of people within each facility for which sewage usage should be based. The number of parking spaces accounts for non (or minimal)-sewage generating people such as visitors and customers so this analysis results in a conservative density. The commercial facility uses

included in the analysis are those most expected to occur within the Township. The average density of people per area for industrial use-facilities is 1 person / 1000 square feet. This density was obtained from the Zoning Ordinance similar to that for commercial facilities; however there is only one industrial use facility in the parking space schedule so no averaging was necessary.

PA Code Chapter 73 "Standards for Onlot Sewage Treatment Facilities" identifies the sewage flow in an office use as 10 GPD per person. This flowrate is generally applicable to other commercial uses as well. However, to be conservative, our analysis utilizes a flow rate of 15 GPD per person for commercial uses. PA Code Chapter 73 also identifies the sewage flow in an industrial use (factories, plants, and warehouses) as 35 GPD per person.

The resultant commercial sewage flow rate is 653 GPD/acre (1 acre × 25% × 43,560 SF/acre × 1 person/250 SF × 15 GPD/person) which is equivalent to 2.9 EDU/acre (1 EDU = 225 GPD). The resultant industrial sewage flow rate is 381 GPD/acre (1 acre × 25% × 43,560 SF/acre × 1 person/1000 SF × 35 GPD/person) which is equivalent to 1.7 EDU/acre (1 EDU = 225 GPD).

b. Sewage Flow Rates for Zones

The largest sewage generating development use for each Zone, as allowed by the Township Zoning Ordinance, is applied to result in a sewage projection per acre for each Zone. The analysis is summarized in *Table O-4 "Summary of Act 537 Planning Densities for Zoning-Based Projections"* in Appendix O.

i. **Conservation (C) Zone** – The largest sewage generating "permitted use" within the Zone is single-family detached dwellings. The recent, actual average density for detached homes is 1.7 lots/acre, but the maximum density allowed by the Zoning Ordinance is 1.0 lot/acre. The more restrictive density of 1.0 lot/acre (1.0 EDU/acre) is therefore utilized for sewage projections within this Zone.

ii. **R-1 Residential Zone** – The largest sewage generating "permitted use" within the Zone is single-family detached dwellings. The recent, actual average density for detached homes is 1.7 lots/acre, and the density allowed by the Zoning Ordinance is 2.7 lots/acre. Since the Zoning Ordinance allows more than the recent average density, the density for sewage projections is increased to 2.0 lots/acre (2.0 EDU/acre). This is a reasonable and conservative projection since all of the recent detached home developments in the R-1 Zone have densities less than 2.0 lots/acre.

iii. **R-2 Residential Zone** – The largest sewage generating "permitted use" within the Zone is townhouses. The recent, actual average density for townhouse developments is 5.0 houses/acre, and the maximum density allowed by the Zoning Ordinance is 5.5 houses/acre. Although the Zoning Ordinance allows a greater density, the density for sewage projections is 5.0 houses/acre. This is a

reasonable projection since all of the recent townhouse developments, with the exception of an extreme outlier in Round Hill, have densities equal to or less than 5.0 houses/acre.

iv. **Regional Commercial (RC), Neighborhood Commercial (NC), Highway Commercial (HC), Commercial Office (CO) Zones** – The "permitted uses" within these Zones are all commercial. The sewage projection for these Zones is therefore 2.9 EDU/acre.

v. **Industrial (I) Zone** – The "permitted uses" within the Zone are both commercial and industrial; however, the primary intent of the Zone is for industrial development. Therefore, the sewage projection for the Zone is 1.7 EDU/acre.

vi. **Planned Development (PD) Zone** – The "permitted uses" within the Zone are both commercial and industrial. Since both development types are likely to occur on an equal basis, the average of the commercial and industrial sewage projections, 2.3 EDU/acre, is utilized for this Zone.

2. Comprehensive Plan Projection Methodology

a. Analysis of Recent Developments

i. Recent Residential Developments

See respective narrative under the preceding Subparagraph 1 "Zoning Projection Methodology".

ii. Recent Commercial & Industrial Developments

The results of the analysis in the Zoning projection were also utilized for the Comprehensive Plan projections. Although the analysis relies partly upon people/building area densities from the Zoning Ordinance, the basis of those densities is relatively standard design criteria. The densities would have been similar had the Zoning Ordinance not been utilized. Therefore, the projections of the Comprehensive Plan can generally be considered independent of the Zoning projections.

b. Sewage Flow Rates for Land Use Goals

The 2003 Comprehensive Plan sets forth Land Use Goals for all areas of the Township. The description of each Land Use Goal provides for development uses. The largest sewage generating development use for each Land Use Goal is applied to result in a sewage projection per acre. The analysis is summarized in *Table O-5 "Summary of Act 537 Planning Densities for Comprehensive Plan-Based Projections"* in Appendix O.

The *Proposed Land Use Goals* map from the 2003 Comprehensive Plan is included in Appendix M.

i. **Natural Land Use** – The intent of this landscape is to preserve existing woodlands, streams, hillsides, ridge tops, wetlands, and marshes. No development (0 EDU/acre) is projected within this landscape.

ii. **Rural Land Use –** Limited development of "scattered housing sites" is permitted within this landscape. The sewage projection density is therefore based upon single-family detached homes. However, the recent, actual average density of 1.7 lots/acre would result in a greater density than the definition is encouraging. As a result, the density for planning purposes is reduced to 1.0 lots/acre, thereby providing for limited development and "scattered housing".

iii. **Suburban Land Use** – This landscape permits low to medium density residential subdivisions, so the sewage projection density is based upon single-family detached homes. The sewage projection is the recent, actual average density of 1.7 lots/acre.

iv. **Suburban Center Land Use** – This landscape is intended to be the focal point of future development including commercial uses and high density residential subdivisions. Undeveloped parcels fronting Lincoln Highway are projected to be developed into commercial uses, so their sewage projection is 2.9 EDU/acre. Other undeveloped parcels within this landscape are projected to be residential townhouse developments, so the sewage projection is the recent, actual average density of 5.0 houses/acre.

v. **Urban Center Land Use –** There is only minimal Urban landscape within the Township, and it is anticipated that there will be no future sewage needs within these areas.

3. Future Needs Forecast

a. Analysis

All properties within the Township were grouped into one of four development categories: (1) Currently Sewered, (2) Planned Developments, (3) Growth Areas, and (4) Unsewered Residences & Businesses. A detailed analysis of the following narrative is provided in *Table P-2* "*Zoning and Comprehensive Plan Projections"* in Appendix P. Refer to Exhibit 4-1 for a map of these areas.

i. Currently Sewered Parcels

These parcels are currently connected to the public sewer and comprise the 2007 average sewage flow of 622,552 GPD. These parcels are therefore not individually addressed as part of the Future Needs Forecast. The existing sewer

service area within the Township is depicted on Exhibit 3-1 "Existing Sanitary Sewer Facilities".

ii. Planned Developments

Planned Developments are developments that are currently planned or under construction but have not been connected to the public sewer. These developments are individually addressed previously in Section B "Existing Development and Plotted Subdivisions" and are projected to generate 620,775 GPD of sewage flow. These developments are depicted on Exhibit 4-1 "Planned Development and Future Growth Areas". The "Planned Developments" in the exhibit are generally projected to be developed and connected to the public sewer over a 5-year horizon (year 2012), although some are projected over a 10-year horizon (year 2017).

iii. Growth Areas

Growth Areas are lots that are entirely undeveloped, or have at least 2 acres that are undeveloped, and for which plans have not been submitted to the Township for development. All undeveloped parcels within the Township were first evaluated for development constraints, primarily wetlands, floodplains, steep slopes, and easements. Sewage projections were then calculated based upon the unconstrained area of each parcel. All parcels with unconstrained areas of 2 acres or less were projected to generate only 1 EDU. The projected sewage flow for larger parcels was determined utilizing the aforementioned Zoning sewage projection densities. There will likely be upgrades to the Township's sanitary sewer facilities prior to development of any of these Growth Areas that will alter the sewer facilities' conveyance capacities. The effect of these Growth Areas on the sewer facilities will have to be evaluated at the time development is proposed for each property. These projections are detailed in the "Growth Areas" section of *Table P-1 "Zoning & Comprehensive Plan Projections"* in Appendix P. These developments are depicted on Exhibit 4-1 "Planned Development and Future Growth Areas". The "Growth Areas" in the exhibit are all projected to be developed and connected to the public sewer in the 10 to 20-plus-year horizon (2018-2027+).

A Zoning Projection and Comprehensive Plan Projection are provided for each area. The Zoning Projections are ultimately used as the basis for this Plan. Refer to Paragraph C.3.d "Selection of Projection" for the rationale supporting this selection.

- Railroad Area Tracts

  There are several large tracts between the Amtrak Railroad and the Chester County Airport. These tracts are in areas zoned as Conservation, R-1 Residential, and Industrial. The Land Use Goals are a combination of

Natural, Rural, and Suburban. The tracts are within reasonable distances of available water supply and public sewer, thus making some development of this area feasible. Access could be provided via Lincoln Highway (near Old Lincoln Highway) or an extension of roads within the Lincoln Heights neighborhood. The topography of these properties is such that development is limited by steep slopes as well as streams. Future detached residential uses are projected to occur in this area.

Zoning Projection = 90 EDU's
Comprehensive Plan Projection = 60 EDU's

- Southwest Area of Township

  There are a number of large and generally undeveloped tracts south of the Amtrak Railroad and west of Red Road. These tracts are in areas zoned as Conservation and R-2 Residential. The Land Use Goals are predominantly Rural with some Natural. Potable water and public sewer both exist along Valley Road, adjacent to these tracts. Access could easily be provided from Valley Road. Sucker Run passes through these properties but only presents a minimal development constraint. The future development uses are primarily residential.

  Zoning Projection = 111 EDU's
  Comprehensive Plan Projection = 56 EDU's

- Chester County Airport Area

  There are a number of generally undeveloped tracts south of the Airport and north of the Railroad Area Tracts. These tracts are in areas zoned as Planned Development, Conservation, R-2 Residential, and Industrial. The Land Use Goals are a combination of all the landscapes. The Airport proposes an expansion into four of the parcels in their Concept Master Plan. Therefore, no sewage is projected from these four parcels. For the remainder of the lots, public sewer would have to be conveyed north to Lincoln Highway via pump station or south, under the railroad, to Valley Road. Neither option is desirable, but there may be reasonable access to water and sewer once the Valley View Development is constructed. Vehicle access could be provided from Rockdale Drive, although the Airport intends to petition the Township to allow conversion of Rockdale Drive to a private road upon their expansion. Additionally, steep slopes, streams, and wetlands are present. Therefore, only minimal development, projected to be residential, will be possible in this area.

  Zoning Projection = 42 EDU's
  Comprehensive Plan Projection = 40 EDU's

- West End of Lincoln Highway

  There are a few small lots on the south side of Lincoln Highway, near the western boundary of the Township, that are zoned Planned Development with a Land Use Goal of Suburban Center. There are no constraints to development. Future commercial uses are projected in this area.

  Zoning Projection = 23 EDU's
  Comprehensive Plan Projection = 28 EDU's

- Buckthorn Drive Area

  There are a few generally undeveloped parcels north of the terminus of Buckthorn Drive as well as one undeveloped parcel on Buckthorn Drive between Robinson Avenue and Oaklyn Lane. These parcels are all zoned R-1 Residential with a Land Use Goal of Suburban Center. Potable water is available from a water main on Airport Road, and sanitary sewer is available via the sewer extension constructed for the Round Hill Development. Buckthorn Drive provides vehicle access. There are no topographical constraints to development. Future residential uses are projected in this area.

  Zoning Projection = 28 EDU's
  Comprehensive Plan Projection = 69 EDU's

- Airport Road – Route 30 Bypass Area

  There are two undeveloped parcels totaling 20 acres that are bordered to the west by Airport Road and to the north by the Route 30 Bypass. The parcels are zoned Commercial with Land Use Goals of Suburban, Suburban Center, and Natural. Potable water is currently available on Airport Road, and sanitary sewer is available on Lincoln Highway. The Round Hill Development and Valley Suburban Center will also be extending sanitary sewer in the vicinity of this area. Access to this site is extremely limited due to the proximity of the Route 30 Bypass and the on-ramp from Airport Road. However, access could be provided via an extension of development on the Heagy Tract. Another point of access would likely have to be constructed onto Airport Road, possibly through the Valley Suburban Center Open Space (see below). There are also wetlands that are constraining development on this property. Future commercial uses are projected in this area.

  Zoning Projection = 58 EDU's
  Comprehensive Plan Projection = 51 EDU's

- Valley Suburban Center Open Space

  A 9.3-acre portion of the Valley Suburban Center tracts is proposed to be

dedicated to Valley Township. This area is located on the north side of the pipeline easement along the frontage of Airport Road. It is not currently proposed for development. The area is zoned Regional Commercial with a Land Use Goal of Suburban/Suburban Center. Potable water is currently available on Airport Road, and sanitary sewer is available within a reasonable distance on Lincoln Highway. Additionally, the Round Hill Development and Valley Suburban Center will be constructing sanitary sewer in the vicinity of this Open Space. Vehicle access is available from Airport Road. There are no topographical constraints to development. Future commercial uses, possibly for Township facilities, are projected in this area.

Zoning Projection = 27 EDU's
Comprehensive Plan Projection = 27 EDU's

- Rainbow Neighborhood

The Rainbow neighborhood is an existing residential neighborhood located in the central region of the Township, north of Franklin Street and east of Country Club Road. Most of the existing homes in this neighborhood are included above in Section B "Existing Development and Plotted Subdivisions". There are additional undeveloped lots in the area that are not currently planned for development and are included in this Growth Areas forecast. The area is mostly zoned R-2 Residential with a Suburban or Rural Land Use Goal. There are existing sanitary sewer facilities in the southern portion of the neighborhood. There are some steep slopes and wetlands that constrain development of some of the larger parcels.

Zoning Projection = 74 EDU's
Comprehensive Plan Projection = 25 EDU's

- Hayti Neighborhood

There are numerous small undeveloped lots in the Hayti neighborhood, which is located to the south of Lincoln Highway and east of the Airport. Most of the lots are zoned R-2 Residential with a Suburban Land Use Goal. The majority of the parcels are less than 2 acres, so they are projected to generate only 1 EDU each. However, there are a few Commercial-zoned lots that have a higher projected flow rate. All the lots included in this projection are within a reasonable distance of existing public water and sewer and have minimal topographical constraints. These undeveloped parcels are not depicted on Exhibit 4-1 because they are generally small lots scattered throughout the neighborhood.

Zoning Projection = 135 EDU's
Comprehensive Plan Projection = 74 EDU's

- Lincoln Heights

  There are a number of small undeveloped lots in the Lincoln Heights neighborhood, which is located to the south of the Hayti neighborhood. The lots are all zoned R-2 Residential with a Suburban Land Use Goal. All parcels are less than 2 acres, so they are projected to generate only 1 EDU each. All the lots included in this projection are within a reasonable distance of existing public water and sewer and have no topographical constraints. These undeveloped parcels are not depicted on Exhibit 4-1 because they are generally small lots scattered throughout the neighborhood.

  Zoning Projection = 13 EDU's
  Comprehensive Plan Projection = 13 EDU's

- Old Lincoln Highway

  There are a few small undeveloped lots along Old Lincoln Highway. The lots are all zoned R-2 Residential with Land Use Goals of Natural and Rural. All parcels are less than 2 acres, so they are projected to generate only 1 EDU each. There is existing public water and sewer on Old Lincoln Highway. None of the lots have topographical constraints.

  Zoning Projection = 4 EDU's
  Comprehensive Plan Projection = 3 EDU's

- West End Neighborhood

  There are a few small undeveloped lots in the West End Neighborhood, which is located at the east boundary of the Township to the north of Valley Road and south of the railroad. The lots are all zoned R-2 Residential and Industrial with a Suburban Land Use Goal. All parcels are less than 2 acres, so they are projected to generate only 1 EDU each. All the lots included in this projection are within a reasonable distance of existing public water and sewer and have no topographical constraints.

  Zoning Projection = 3 EDU's
  Comprehensive Plan Projection = 3 EDU's

- East Glencrest Road / Northview Drive Area

  There are a number of generally undeveloped tracts located in this area east of Glencrest Road, north of East Glencrest Road, and south of Irish Lane. The parcels are all zoned R-1 Residential with a Rural Land Use Goal. Public water supply could be provided from the Oakcrest development, and sanitary sewer is available from numerous adjacent locations. Vehicle access could be provided from East Glencrest Road. Some of the tracts are partially

constrained by steep slopes. Future detached residential uses are projected in this area.

Zoning Projection = 35 EDU's
Comprehensive Plan Projection = 19 EDU's

- Irish Lane / Mary Street Area

  There are a number of small undeveloped lots in this area, which is located east of Glencrest Road and west of Wagontown Road in the vicinity of Irish Lane and Mary Street. The lots are all zoned R-2 Residential with a variety of Land Use Goals. All parcels are less than 2 acres, so they are projected to generate only 1 EDU each. Although there is no reasonably accessible public water supply, there is public sewer in the roads fronting all of these lots. Additionally, there are no topographical constraints. These undeveloped parcels are not depicted on Exhibit 4-1 because they are generally small lots scattered throughout the area.

  Zoning Projection = 5 EDU's
  Comprehensive Plan Projection = 3 EDU's

- Wagontown Road / Mineral Springs Area

  There are a few generally undeveloped tracts located in this area north of the Route 30 Bypass between the Beacon Hill and Valley Farm developments. The parcels are all zoned Conservation with Land Use Goals of Natural and Rural. Public water and sewer can both be obtained from existing services along the Route 30 Bypass. Vehicle access is available from Wagontown Road and Mineral Springs Road. Development is constrained by Rock Run to the east of Wagontown Road and steep slopes on both sides of Wagontown Road. Future detached residential uses are projected in this area.

  Zoning Projection = 23 EDU's
  Comprehensive Plan Projection = 14 EDU's

- Route 82 Area

  There is one undeveloped 3-acre tract located south of Route 82 along the Township boundary with the City of Coatesville. The parcel is zoned R-2 Residential with a Suburban Land Use Goal. Public water is not available; however, public sewer is accessible in Manor Road. Vehicle access is available off of Route 82. The parcel has steep slopes throughout, but a portion of it could be developed for a residential use.

  Zoning Projection = 13 EDU's
  Comprehensive Plan Projection = 4 EDU's

- Wagontown Road / South Mount Airy Road

  There are two undeveloped parcels located east of Wagontown Road and west of South Mount Airy Road, north of the intersection of the two roads. The lots are zoned Conservation with a Natural Land Use Goal. Public water is not available; however, public sewer is accessible adjacent to Wagontown Road. Vehicle access is available off of Wagontown Road. The parcels are constrained by steep slopes and have developable areas of 2 acres or less. Therefore, the lots are projected to generate only 1 EDU each. Residential uses are projected in this area.

  Zoning Projection = 2 EDU's
  Comprehensive Plan Projection = 0 EDU's

- City of Coatesville Tracts

  The City of Coatesville owns 3 large tracts located south of the Route 30 Bypass, east of Wagontown Road, and west of the railroad. A fourth large tract is located north of the Route 30 Bypass between the residences on the east side of North Mount Airy Road and the railroad. The parcels are all zoned Conservation. The parcels south of the Route 30 Bypass have a Natural Land Use Goal, while the parcel north of the Route 30 Bypass has a Rural Land Use Goal.

  The tracts south of the Route 30 Bypass had previously been planned for development as a golf course, but the proposed use is no longer being pursued. Therefore, the parcels are included in the sewage projections based upon other permitted uses. A capped landfill exists on the 78-acre parcel (UPI #38-2-29). As a result, it is not anticipated that residential development would occur on this tract. Since commercial development is not permitted in this zone, the projected use is recreation/park with no future sewage flows. The other two tracts are projected for detached residential development although they are constrained by steep slopes, Rock Run, and the gas pipeline easement. Public water and sewer are both available within a reasonable distance, and vehicle access is available from South Mount Airy Road.

  The 38-acre tract north of the Route 30 Bypass is also projected for development of detached residential homes. Public water and sewer are both available within a reasonable distance, and vehicle access is available from North Mount Airy Road. The site is partially constrained by steep slopes.

  Zoning Projection = 44 EDU's
  Comprehensive Plan Projection = 36 EDU's

- Northeast Corner

  There are a few generally undeveloped tracts located in the northeast corner of the Township – north of the Route 30 Bypass and east of Route 82. The parcels are all zoned Conservation with Land Use Goals of Natural and Suburban. Neither public water nor sewer are currently within a reasonable distance; however, future development of adjacent lands could result in availability of public water and sewer. Vehicle access is available from Kings Highway (Route 340). Development is constrained by a stream and steep slopes on the southern portion of these parcels. Future detached residential uses are projected in this area.

  Zoning Projection = 24 EDU's
  Comprehensive Plan Projection = 14 EDU's

Table IV-3 summarizes the total projected sewage flows for Growth Areas.

Table IV-3
Projected Sewage Flows for Growth Areas

Growth Area	Zoning Projection (EDU's)	Comprehensive Plan Projection (EDU's)
Railroad Area Tracts	90	60
Southwest Area of Township	111	56
Chester County Airport Area	42	40
West End of Lincoln Highway	23	28
Buckthorn Drive Area	28	69
Airport Rd – Rt 30 Bypass Area	58	51
Valley Sub. Center Open Space	27	27
Rainbow Neighborhood	74	25
Hayti Neighborhood	135	74
Lincoln Heights	13	13
Old Lincoln Highway	4	3
West End Neighborhood	3	3
E. Glencrest Rd / Northview Dr	35	19
Irish Lane / Mary Street Area	5	3
Wagontown Rd / Mineral Springs	23	14
Route 82 Area	13	4
Wagontown Rd / S. Mt. Airy Road	2	0
City of Coatesville Tracts	44	36
Northeast Corner	24	14
Total Growth Areas	**754 EDU's**	**539 EDU's**
Total Growth Areas (@ 225 GPD/EDU)	**169,650 GPD**	**121,275 GPD**

Of the 754 EDU's for Growth Areas projected by the Zoning Projection, 622 are residential, and the remainder are commercial-oriented. Of the 539 EDU's for Growth Areas projected by the Comprehensive Plan Projection, 422 are residential, and the remainder are commercial-oriented.

iv. Unsewered Residences & Businesses

Unsewered Residences & Businesses are lots with existing uses that are not currently sewered, but they are in close proximity to the public sewer and can be reasonably expected to connect in the future. All such parcels have unconstrained areas of 2 acres or less and are therefore projected to generate only 1 EDU each. Such lots exist in nearly all the neighborhoods in the Township.

The projection also includes a few small, undeveloped lots in existing neighborhoods. Due to the different development types associated with certain Zones and Land Use Goals, the projections for these few small, undeveloped lots are slightly different for the Zoning and Comprehensive Plan projections.

The Zoning Projection projects 126 EDU's of total sewage flow for existing Unsewered Residences & Businesses, which is equivalent to 28,350 GPD @ 225 GPD/EDU. Of these 126 EDU's, only 16 EDU's are the result of new residential

construction. The Comprehensive Plan Projection projects 122 EDU's of total sewage flow for existing Unsewered Residences & Businesses, which is equivalent to 27,450 GPD @ 225 GPD/EDU. Of these 122 EDU's, only 15 EDU's are the result of new residential construction. All Unsewered Residences & Businesses are projected to connect to the public sewer in the 10 to 20-plus-year horizon (2018-2027+).

b. Summary of Forecasts

The following tables summarize all of the future sewage needs of Valley Township based upon respective projections:

Table IV-4
Zoning Projection Total Future Sewage Flows

	EDU's	GPD (@ 225 GPD/EDU)
2007 Average Sewage Flow		622,552
Planned Developments	2,759	620,775
Growth Areas	754	169,650
Unsewered Residences & Businesses	126	28,350
Total Future Flows		**1,441,327**

Table IV-5
Comprehensive Plan Projection Total Future Sewage Flows

	EDU's	GPD (@ 225 GPD/EDU)
2007 Average Sewage Flow		622,552
Planned Developments	2,822	634,950
Growth Areas	539	121,275
Unsewered Residences & Businesses	122	27,450
Total Future Flows		**1,406,227**

PAWC has agreed to make a total allocation of 1,540,000 GPD available to Valley Township following expansion of the Plant. The Township's total future sewage flow to the Plant is projected to be an average of 94% of this total allocation according to the Zoning Projection and 91% according to the Comprehensive Plan Projection.

c. Population

Valley Township's population in 2030 is projected to be dramatically greater than 9,084, as stated in Chapter II "Physical and Demographic Analysis". Table IV-6

summarizes the population projections based upon the Zoning and Comprehensive Plan development projections. The future population increase is calculated by multiplying the number of projected future residential EDU's by the 2.65 people/EDU density. The population increase is then added to the estimated 2007 population (refer to Table II-1).

Table IV-6
Population Projections

	Zoning Projection	**Comprehensive Plan Projection**
Projected, Future Residential EDU's	2,659 EDU's	2,458 EDU's
Future Population Increase (= Future EDU's × 2.65 people/EDU)	7,046 People	6,514 People
2007 Estimated Population	6,730 People	6,730 People
Future Population	**13,776 People**	**13,244 People**

The two projection methods result in estimated future populations that are similar. Both projections estimate the Township's future population being significantly greater than 9,084. This is in accordance with the population projection in Chapter II "Physical and Demographic Analysis" and is verification that the future development estimates by each projection method are reasonable.

d. Selection of Projection

The Zoning Projection and Comprehensive Plan Projection yield future sewage flows that are very similar. The Comprehensive Plan Projection results in slightly less future sewage flows than the Zoning Projection, primarily due to restricted development on lands with Natural Land Use Goals. Most of the Natural landscapes are zoned Conservation, and the Zoning Ordinance allows restricted development in this zone. Neglecting these areas from future sewage projections would be unrealistic and overly conservative. A significant portion of these lands have topographical constraints which the Zoning Projection takes into account. The Zoning Projection only accounts for lands that can be realistically developed and is not considered an overly aggressive estimate of future sewage needs. The Zoning Projection therefore provides a future forecast that is considered to be somewhat more accurate and realistic than that of the Comprehensive Plan.

CHAPTER V
ALTERNATIVES FOR NEW OR IMPROVED SEWAGE FACILITIES

This Part discusses the viability of various sewage disposal alternatives for the problems areas in Valley Township. Section A.1 is the only section which provides a specific alternative for each problem area. The remainder of the sections do not address the viability of each alternative for specific problem areas because the general viability of each alternative applies to all problem areas. Section J provides a conceptual disposal scheme for each area.

A. CONVENTIONAL COLLECTION & CONVEYANCE

1. Extension of Existing Municipal Facilities

The primary alternative for wastewater disposal for the current and future needs of the Township is extension of the existing public collection and conveyance systems. Wastewater is treated at PAWC's treatment plant in the Borough of South Coatesville. There is existing collection and conveyance sewer throughout the Township. All areas of the Township, both developed and undeveloped, are within a reasonable distance of the existing sewer so extensions are very feasible.

Some of the conveyance runs within the Township are close to their maximum capacity under current loading conditions. Therefore, some runs would have to be upgraded as new connections are made. The Rock Run Basin contains a sewage pump station that conveys all of the Basin's wastewater to PAWC's conveyance system. The pump station generally has capacity only for currently approved developments in the Rock Run Basin. However, the addition of a third pump will provide capacity for future developments.

The Township's ultimate build-out is projected to generate less sewage flows than the Township's available allocation at the PAWC Treatment Plant upon expansion of the Plant. Therefore, no additional expansion of the treatment facilities would be necessary to service sewer extensions within Valley Township.

Additionally, repairs will continue to be made to the existing collection and conveyance facilities as problems arise. No repairs are necessary for extension of the systems though.

The following subparagraphs provide a conceptual sewer extension scheme for each unsewered problem area:

a. North Mount Airy Road

These homes can be connected to the existing sewer via gravity sewer extension. Two separate extensions would be required due to the topography of the roadway. The first would begin in the roadway at 132/134 North Mount Airy Road and would run under North Mount Airy Road to the north then under North Ridge View Drive to the west. The sewer would connect to the existing sewer system at existing Manhole

4 in North Ridge View Drive. The second extension would begin in the roadway at 140 North Mount Airy Road and run to the south. The sewer would connect to the recently constructed Valley Farm subdivision gravity sewer system at a manhole at the intersection of North Mount Airy Road and Coleridge Lane. Some of the residences would be able to utilize gravity laterals to connect to the new collector while others would have to install a grinder pump and low-pressure service line.

b. Rainbow Neighborhood

The topography in the neighborhood precludes the connection of these homes to the existing sewer in the southern portion of the neighborhood via gravity sewer extension. The homes could be serviced by a gravity sewer extension that connects to the existing Country Club Valley system to the north. However, this alternative is considered unrealistic due to stream crossings, utility easements through numerous properties, and cost. Therefore, a force main system is required. Community pumping stations are not considered realistic because two stations would be necessary due to the topography in the neighborhood. Two pumping stations would be extremely expensive and would require acquisition of undeveloped land, which is scarce in the neighborhood. Additionally, the Township does not desire to operate and maintain pump stations if another alternative is available. The most likely sewer extension alternative involves individual grinder pumps on each lot and low-pressure force mains that connect to the existing sewer in the southern portion of the neighborhood. It is envisioned that there would be three low-pressure force mains with connections to the existing sewer at Manholes 519-6A, 519-8, and 519-9.

c. Valley Station Road

The topography of the roadway precludes the connection of these homes to the existing sewer in Manor Road via gravity sewer extension. Therefore, a force main system is required. Individual grinder pumps with a low-pressure force main are an option, but are not considered feasible due to the small lot sizes and proximity of the homes to the roadway. A community pumping station is the most realistic sewer extension alternative. The pumping station could be located between the homes and the bridge, and sewage could be conveyed from the homes to the pumping station via gravity sewer. A force main could then be routed from the pumping station, along the underside of the bridge, and along Valley Road to Manhole 531-2 in Manor Road.

d. Northview, Peck, and East Drives

The topography in the neighborhood precludes the connection of these homes to the existing sewer in Glencrest Road via gravity sewer extension. Therefore, a force main system is required. A community pumping station is an option but is not the Township's preference. A community pumping station would require acquisition of undeveloped land, which is scarce in the neighborhood. Additionally, the Township does not desire to operate and maintain pumping stations if another alternative is available. The most likely sewer extension alternative involves individual grinder

pumps on each lot and a low-pressure force main that connects to the existing sewer at a new doghouse manhole in Glencrest Road.

e. Brick Street

The nearest existing sanitary sewer to Brick Street is approximately 2500 feet north of the roadway near the Rock Run Pump Station. There is rolling terrain between Brick Street and the point-of-connection, so a force main would be required. Individual grinder pumps with a low-pressure force main are an option, but are not considered to be the best alternative because the pumps would have to be oversized in order to pump the required distance. The grinder pumps would likely be very costly. Additionally, grinder pumps are unrealistic due to the small lot sizes and proximity of the homes to the roadway. A community pumping station is the most realistic sewer extension alternative. The pumping station could be located south of the homes at the end of the street. Sewage could be conveyed from the homes to the pumping station via gravity sewer. A force main could then be routed generally along the West Branch of the Brandywine Creek and connect to the existing sewer at Manhole 532-4 on Williams Way. Utility easements would have to be obtained through numerous properties in order to construct the force main.

2. **Regional Wastewater Treatment**

Continued and expanded use of the existing PAWC regional wastewater treatment facility is the primary alternative for the current and future wastewater needs of Valley Township. Future needs can be provided for by extending existing collection and conveyance facilities within the Township as addressed in Subparagraph 1 above.

New regional wastewater treatment is not considered an option within Valley Township. Most of the facilities with existing needs are in developed neighborhoods adjacent to existing public sewer where there is no location for a regional treatment facility. There is also existing public sewer that is generally accessible to all undeveloped lands within the Township for future growth. Additionally, there is not enough undeveloped land within the Township for a regional treatment facility to be installed to service existing and/or future sewage needs.

3. **Community Sewage Systems**

Similar to regional wastewater treatment, community sewage systems are not considered an option within Valley Township. Most of the facilities with existing needs are in developed neighborhoods adjacent to existing public sewer where there is very limited, if any, land for a community sewage treatment system. Community treatment systems can be economical methods of servicing remote areas; however, the existing needs areas are not in isolated or remote sections of the Township. Similarly, there is also existing public sewer that is generally accessible to all undeveloped lands within Valley Township for future growth. The undeveloped lands in the Township would generally not be considered remote either.

B. INDIVIDUAL SEWAGE DISPOSAL SYSTEMS

Provision of new on-lot disposal systems, including spray irrigation, has limited feasibility. The majority of the soils underlying undeveloped parcels throughout the Township are considered unsuitable for onlot sewage disposal (see Exhibit 2-6). Additionally, most of the undeveloped properties with unsuitable soils also contain slopes in excess of 25%. Onlot systems on these properties, such as the tracts immediately north of the railroad, are not feasible. Third, the majority of land south of the railroad is underlain by limestone geology, which is also unsuitable for onlot disposal. There are suitable soils without slope constraints on undeveloped lands in the western portion of the Township that could be suitable for onlot systems. However, all of these properties are in close proximity to an existing or proposed public sewer.

Repair or replacement of existing malfunctioning onlot systems is considered viable. There is public sewer within a reasonable distance of most existing properties with onlot systems. Some of the property owners may opt for repair or replacement of their onlot system though. Continued use of existing onlot systems is only viable if the sewage management program is implemented as discussed hereafter.

Spray irrigation is not a viable option for consideration within the problem areas of the Township. The lots with malfunctioning systems are generally 0.5-1.0 acre in size, which is too small for spray irrigation to be utilized.

C. SMALL FLOW SEWAGE TREATMENT FACILITIES

Small community treatment systems are not considered an option in Valley Township. Most of the facilities with existing needs are in developed neighborhoods adjacent to existing public sewer where there is very limited, if any, land for a community sewage treatment system. The DEP currently approves small systems, typically defined as treatment of up to 2000 GPD, through the use of two septic tanks connected in series, sand filtration, disinfection, and stream discharge. These systems, constructed and maintained by either a municipality or a utility authority, can be economical methods of servicing remote areas. The existing needs areas in Valley Township are not isolated or remotely located though. Since small community systems are typically limited to 2000 GPD, only five EDU's could be connected to each such system based upon 400 GPD/EDU, thus making this alternative not feasible for the populated areas in Valley Township.

There is also existing public sewer that is generally accessible to all undeveloped lands within Valley Township for future growth. The undeveloped lands in the Township would generally not be considered remote.

Package treatment plants are not a viable option in Valley Township either. Package treatment plants using stream discharge and/or spray irrigation are presently an acceptable sewage disposal method in accordance with State Regulations; however, there is limited land available for such a facility in the problem areas as well as predominantly unsuitable soils

throughout the Township and limestone geology south of the railroad.

D. COMMUNITY LAND DISPOSAL

There is one small community land disposal system in Valley Township, located near the intersection of Lincoln Highway and Glencrest Road. Continued use of the existing system is only viable if a sewage management program is implemented as discussed hereafter.

New community land sewage disposal systems are not considered an option in Valley Township. Community land disposal systems resemble individual on-lot systems; although, instead of serving one unit, the waste from multiple lots is collected and disposed in a single location. This type of system is feasible in areas where there are cluster subdivisions in isolated areas and suitable soils available for seepage beds. Most of the facilities with existing needs are in developed neighborhoods adjacent to existing public sewer where there is very limited, if any, land for a community land disposal system. Additionally, the majority of the soils underlying undeveloped parcels throughout the Township are considered unsuitable for onlot sewage disposal (see Exhibit 2-6). Most of the undeveloped properties with unsuitable soils also contain slopes in excess of 25%. Furthermore, the majority of land south of the railroad is underlain by limestone geology, which is also unsuitable for land disposal. Alternatively, the land disposal can be preceded by a package-treatment plant. However, package-treatment plants are not considered an option in the Township, as discussed in Section C above.

E. HOLDING (RETAINING) TANKS

Holding tank systems are retaining tanks that are pumped and hauled on a frequent routine basis. Continued usage of holding tanks as an absolute last alternative and on a case-by-case basis is a viable option in the Township for both residential and commercial uses. Although Valley Township is not an advocate of holding tanks, they are considered an acceptable measure to remedy a failing onlot system that cannot be repaired or replaced when public sewer is not available. Holding tank usage for new development on a temporary basis is considered an absolute last alternative on a case-by-case basis if a more desirable and permanent disposal method is not immediately available.

The Township does not have a holding tank ordinance, but a policy has been implemented for approval and use of such systems. The policy stipulates the following conditions for holding tank use and approval:

1. Written approval from the Chester County Health Department is required.
2. The holding tank may only be used until public sewer becomes available. The facility must be connected to the public sewer within forty-five (45) days of sewer availability. The Township may use various methods to ensure the sewer connection occurs, which is determined on a case-by-case basis. If public sewer is planned to be constructed and available to the property within a reasonable period of time, the property owner has been required to establish an escrow account to include the cost of connection, including installation of piping and

facilities and connection fees, before the holding tank is approved. If the holding tank is in use prior to planning or construction of public sewer and the property owner does not connect within 45 days of availability, the Township may have to fund the connection and place a lien on the property to recover the expenditure. Valley Township is sensitive to homeowners' costs of connecting to sewers and will also assist in seeking grants and obtaining low cost financing.

3. A pump and haul contract must be established and maintained with a qualified, licensed hauler. The contract is subject to review and approval by the Valley Township Board of Supervisors. If the contract is terminated at any point, the Use & Occupancy permit for the property will be revoked.
4. If the property is sold or a lease is abandoned while a holding tank is still being utilized, the Township must be notified immediately. The new owner or lessee must request approval from the Valley Township Board of Supervisors for continued use of a holding tank with pump and haul services subject to the same conditions of the previous owner or lessee.

The ultimate disposal location varies for each pump and haul company per the company's agreement with a treatment plant.

F. SEWAGE MANAGEMENT PROGRAMS

Valley Township has recently adopted and is in the process of implementing an ordinance titled "An Ordinance Providing for a Sewage Management Program for Valley Township" (see Appendix J) which establishes the management program for privately-owned onlot sewage disposal systems. Implementation of the ordinance is necessary in order for continued use of individual and community onlot disposal systems in the Township.

The ordinance provides for the following:

1. The Chester County Health Department is named as the Sewage Enforcement Officer for the Township with the responsibility for site assessment and issuance of permits for construction and alteration of onlot disposal systems.
2. An authorized agent of Valley Township shall perform routine inspections and be responsible for reporting and monitoring. An initial inspection shall be conducted by the agent within one year of the effective date of the ordinance as well as when a system is suspected of malfunctioning. A routine inspection schedule shall also be established. It is noted that the one year timeframe for the initial inspection has passed, and no inspections have been conducted.
3. Maintenance requirements, including pumping of septic tanks within six months of the effective date of the ordinance and at least every three years thereafter, submission of receipts from the pumper/hauler to the Township, written statement from the pumper/hauler that the septic tank's baffles are in good working order, adherence to the manufacturer's maintenance recommendations for aerobic treatment tanks, and sewage disposal in accordance with applicable laws and regulations.

4. Required timeframes for repair or replacement of malfunctioning systems.
5. The Township Board of Supervisors may establish a fee schedule and authorize the collection of fees to cover the cost to the Township of administering this program.
6. The Township has the authority to perform, or have contracted to perform, necessary maintenance, repair, or replacement of an onlot sewage disposal system as required by the Sewage Enforcement Officer in the event the property owner fails to do so. The Township can impose fines for noncompliance and shall charge the owner for any necessary work performed or lien the property to recover the cost.

The Township should also establish public education programs to encourage proper operation and maintenance and repair of sewage disposal systems. At a minimum, the program should include provision of educational materials to property owners on the proper use and maintenance of onlot disposal systems.

G. INFLOW & INFILTRATION REDUCTION PROGRAM

Inflow and Infiltration (I&I) is undesirable groundwater or surface water entering the sanitary sewer system. Inflow describes flows other than wastewater entering the system primarily from surface water leakage through manhole covers and illegal connections of sump pumps and roof drains to the sanitary sewers. Infiltration describes groundwater entering the system through sub-surface openings in sewer facilities such as cracks, separated or leaking joints, broken pipe, faulty seals in pipes and manholes, and poorly laid or broken sewer laterals.

Valley Township has taken steps to address I&I problems, but a more focused program should be implemented. The program should include the following:

1. Continued monthly monitoring of each sewage basin's flows and graphical presentation to assist in identifying trends in the gallons per day flow from previous months. Precipitation for the month is also monitored on the same graphical presentation.
2. If the trend line shows increased or excessive flows in a basin, consideration should be given to any known abnormal occurrence which would cause the increased flows, namely precipitation. If there are no known causes, the trend line for the following month will be analyzed to confirm continuation of excessive flows.
3. If the monitoring identifies excessive flows and an I&I problem is suspected, an inspection of the basin(s) in question should be performed. This inspection is best performed between the hours of midnight and 6:00 AM, when flows are generally at a minimum and excessive flows are likely to be from undesired sources. The inspection should be performed in such a way as to isolate the location(s) where a pronounced increase in flow is observed between two or more manholes.
4. Sections found with high flows should be flushed (cleaned) and internally televised, typically through a contracted sewer inspection service, to obtain a

narrated video of the conditions so the exact location of groundwater infiltration can be determined.

5. The section(s) of sewer experiencing I&I problems can then be repaired. Repairs are performed by either excavating, removing, and replacing the pipe or manhole or using trenchless technologies such as lining the interior of the pipe.

Costs for repairs to sanitary sewer collection and conveyance mains and associated manholes are generally the responsibility of the Township. Costs for repairs to laterals are the property owner's responsibility. In the event a property owner fails to correct a problem, repairs are performed by the Township, and the cost is added to the property owner's sewer usage bill.

H. COMPREHENSIVE PLANNING ALTERNATIVES

The Valley Township Comprehensive Plan was last updated in 2003, and no modifications are necessary to meet existing and future sewage disposal needs.

The Valley Township Zoning Ordinance should be modified in accordance with the recommendations of the 2003 Comprehensive Plan. The Zoning Ordinance should be revised to come into compliance with the Comprehensive Plan's land use goals and objectives. The Zoning Ordinance should set forth regulations and criteria to achieve those land use goals including associated sewage disposal guidelines for the various land uses. The Zoning Ordinance should also reflect the Township's current vision for development.

I. NO-ACTION ALTERNATIVE

A no-action structural alternative is viable for the remaining problem areas in Valley Township. However, the Township will continue to monitor the conditions within these areas. The Township is aware that sewer extensions to these areas may be necessary in the future and will continue to explore ways, namely funding methods, to accomplish the work. Onlot system malfunctions identified by the Chester County Health Department have been corrected on an as-needed basis without causing a health hazard or an adverse impact to the surrounding environment. Therefore, at this time, a no-action structural alternative is reasonable, but the Sewage Management Program and an I&I Reduction Program need to be implemented.

J. SUMMARY

Table V-1 summarizes the feasibility of the various sewage disposal alternatives in Valley Township.

Table V-1
Alternatives Summary

ALTERNATIVE	VIABLE (Yes/No)
A. Conventional Collection & Conveyance	
Extension of Existing Municipal Facilities	Yes
Continued Use of Existing Regional Wastewater Treatment (PAWC)	Yes
New Regional Wastewater Treatment	No
Community Sewage Systems	No
B. Individual Onlot Sewage Disposal Systems	Yes-Limited
C. Small Flow Sewage Treatment Facilities	No
D. Community Land Disposal	No
E. Retaining Tanks	Yes-Limited
F. Sewage Management Programs	Yes
G. I&I Reduction Program	Yes
H. Comprehensive Planning	Yes
I. No-Action Alternative	Yes

CHAPTER VI
EVALUATION OF ALTERNATIVES

The following wastewater disposal methods are the only structural alternatives considered feasible within the Township, as evaluated in Chapter V "Alternatives for New or Improved Sewage Facilities":

1. Extension of the existing collection and conveyance system
2. Repair or replacement of existing malfunctioning onlot systems
3. Holding tanks

A. CONSISTENCY EVALUATION

1. Sections 4 and 5 of the Clean Streams Law or Section 208 of the Clean Water Act

The recommended alternatives do not conflict with the Clean Streams Law or Clean Water Act. The primary alternative is to extend the existing public sewer to problem areas and new developments. Wastewater from these areas will therefore be conveyed to the PAWC Treatment Plant for treatment and disposal. According to the future needs analysis in Chapter IV "Future Needs", Valley Township's ultimate future sewage generation will be less than that which PAWC has agreed to allocate the Township after expansion of the Plant. Therefore, no further treatment facilities beyond the currently planned Plant expansion would be necessary to service the Township's wastewater. Similarly, pump and haul systems will also result in treatment and disposal at wastewater treatment plants. Additionally, repair or replacement of existing onlot systems will only improve water quality because problematic disposal systems will now function more effectively.

2. Corrective Action Plans or Annual Reports

Valley Township does not submit Chapter 94 Wasteload Management Reports directly to the DEP. Instead, the Township provides information annually to PAWC, who then submits one report for all contributing communities. The recommended alternatives are consistent with the Chapter 94 information that has been provided to PAWC as well as with PAWC's Act 537 Plan. The primary alternative is to extend the existing public sewer to problem areas and new developments. Wastewater from these areas will therefore be conveyed to the PAWC Treatment Plant for treatment and disposal. According to the future needs analysis in Chapter IV "Future Needs", Valley Township's ultimate future sewage generation will be less than that which the Township has been allocated at the Treatment Plant upon expansion of the Plant. Therefore, no further treatment facilities beyond the currently planned Plant expansion would be necessary to service the Township's wastewater.

Sections of Valley Township's interceptor sewer in the Hayti Basin are likely to be upgraded as part of currently proposed developments that will cause hydraulic overloads.

Necessary upgrades will be determined at the time the developers submit plan applications to the Township. Depending on the actual number of connections and timing of currently proposed developments, upgrades may or may not be required to extend the sewer to the problem areas. Additionally, the Rock Run Pump Station is near its currently permitted capacity. Currently proposed developments utilizing the Rock Run Basin conveyance system are envisioned to use up most of the remaining capacity of the two pumps in the pump station. A third pump would then have to be added to the pump station to service future connections beyond that capacity.

3. Title II of the Clean Water Act or Titles II and VI of the Water Quality Act of 1987

Not applicable. There have been no previous plans in Valley Township developed under Title II of the Clean Water Act or Titles II and VI of the Water Quality Act of 1987.

4. Comprehensive Plans

a. Valley Township's 2003 Comprehensive Plan

Valley Township's 2003 Comprehensive Plan states that the Township's existing sanitary sewer systems should be extended to service areas with malfunctioning onlot systems and new development. The Comprehensive Plan is also utilized as the basis for one set of wastewater needs projections in this Plan. The proposed alternatives are therefore consistent with the Comprehensive Plan.

b. Chester County *Landscapes*

Chester County's Comprehensive Plan, titled *Landscapes*, provides for 4 general land classifications (landscapes) and the use and development objectives in each landscape area. The majority of Valley Township is located within the Suburban, Suburban Center, and Urban landscapes, all of which are recommended to contain higher density development and be serviced by sanitary sewer systems. This Plan generally proposes higher density development and extension of the existing public sewer system to these areas in accordance with *Landscapes*' objectives. There are also smaller portions of the Township located within Rural and Natural landscapes. Rural landscapes are recommended to have less dense development with sewer systems provided only to rural centers. Since the Rural areas in the Township are generally already developed with existing public sewer, this Plan proposes extension of the sewer to any future development in the areas, which is consistent with the recommendation for rural centers. Lastly, Natural landscapes are recommended to remain undeveloped and not be provided with sewer. In general, this Plan proposes only minimal new development in Natural landscapes. Public sewer is proposed to be extended to existing and new development in this landscape due to the proximity of existing sewer facilities. As stated by the Chester County Planning Commission in their review letter (see Appendix Q), "the plan is generally consistent with *Landscapes*. [The Plan] supports the following *Landscapes* Policies:

6.1.1 Encourage coordination between municipalities and authorities to ensure consistency with land use plans.

6.1.2 Maintain or expand existing sewer and water facilities to support development in Urban and Suburban Landscapes."

c. Chester County *Watersheds*

Watersheds is an Integrated Water Resources Plan for Chester County and is the water resources element of *Landscapes*. It provides guidance for existing land use and development to protect streams and aquifers. Valley Township proposes to continue to convey wastewater from its existing sewer system to the PAWC Treatment Plant as well as wastewater from future developments. The Plant treats and disposes of effluent through stream discharge into the West Branch Brandywine Creek. As stated by the Chester County Planning Commission in their review letter (see Appendix Q), "The Draft Plan, as proposed is consistent with the following *Watersheds* Objectives:

Objective 6-3, Develop and coordinate planning for new or expanded water/or wastewater facilities and water sources in conjunction with the affected municipalities.

Objective 7-2, Concentrate planned utility service areas to support designated growth areas."

5. Antidegradation Requirements

Antidegradation requirements are provided in PA Code, Title 25, Chapters 93, 95, and 102. Chapters 93 and 95 specify wastewater treatment and surface water discharge criteria, and Chapter 102 specifies erosion and sedimentation control regulations. The proposed alternatives do not conflict with the antidegradation requirements since the primary alternative is extension of Valley Township's existing public sewer system with treatment and disposal at the PAWC Treatment Plant.

6. State Water Plans

The State Water Plan regulates both water quality and quantity in subbasins throughout the Commonwealth. The proposed alternatives do not conflict with the State Water Plan developed under the Resources Planning Act since the primary alternative is extension of Valley Township's existing public sewer system with treatment and disposal at the PAWC Treatment Plant.

7. Pennsylvania Prime Agricultural Land Policy

The proposed alternatives do not conflict with Prime Agricultural Land Policy of Valley Township or as contained in Title 4 of the PA Code, Chapter 7, Subchapter W. Although

there are prime agricultural soils identified by the Chester County Planning Commission Map Series (see Exhibit 2-7) in the Township, there are no lands used for agricultural purposes. As such, there are no lands within the Township that are being preserved for agriculture.

8. County Stormwater Management Plans

Chester County does not have a Stormwater Management Plan for the Brandywine Creek Watershed.

9. Wetland Protection

The proposed alternatives are generally not envisioned to impact any wetlands. Sewer extensions to service currently planned developments and the problem areas will not impact wetlands. Sewer extensions for future growth areas may require stream crossings in order to tie a new collection sewer into an interceptor. These sewer extensions will be reviewed upon submission of Land Development Plan applications to the Township, and permitting would be required in the event a stream crossing is unavoidable. Additionally, some existing sewer facilities are located in hydric soils, but no future sewer extensions are anticipated to be constructed in hydric soils.

10. Protection of Rare, Endangered or Threatened Plant and Animal Species

Impacts on natural resources and animals associated with the proposed alternatives, primarily sewer extensions, will be identified through the Pennsylvania Natural Diversity Inventory (PNDI) and resolved at the time a sewage alternative is proposed for a problem area or new development.

11. Historical and Archaeological Resource Protection

Impacts on historical and archaeological resources under Pennsylvania Consolidated Statutes Title 37, Section 507 associated with the proposed alternatives, primarily sewer extensions, will be identified and resolved at the time a sewage alternative is proposed for a problem area or new development.

B. RESOLUTION OF INCONSISTENCIES

The proposed alternatives do not present any foreseeable inconsistencies with the policies, acts, and laws referenced in Section A.

C. WATER QUALITY STANDARDS, EFFLUENT LIMITATIONS, AND OTHER TECHNICAL, LEGISLATIVE, OR LEGAL REQUIREMENTS

The primary proposed alternative is extension of Valley Township's public sewer system, which conveys wastewater to the PAWC Treatment Plant for treatment and disposal. Since the Township does not own or operate the Treatment Plant, the water quality standards,

effluent limitations, and other technical, legislative and legal requirements contained in PA Code Chapter 71, Subchapter D do not apply.

D. COST ESTIMATES

Summary cost estimates using present worth analysis for construction, financing, on-going administration, operation and maintenance, and user fees for public sewer extensions to problem areas are provided in the following table. Construction costs are based upon 2008 estimated construction unit prices.

Table VI-1
Summary of Cost Estimates

	Construction Cost for Public Facilities	Annual Costs	Present Worth
North Mount Airy Road	$298,969	$4,050	$354,010
Rainbow Neighborhood	$471,630	$7,043	$567,340
Valley Station Road	$353,434	$2,588	$388,599
Northview, Peck, and East Drives	$268,470	$4,500	$329,626
Brick Street	$467,571	$6,750	$559,306

Detailed cost estimates for each problem area are included at the end of this chapter. The detailed estimates also provide estimated costs for property owners to connect homes/facilities to the sewer and abandon existing onlot systems, but these private costs are not included in Table VI-1.

E. FUNDING METHODS

1. Sewer Extensions

The cost for sanitary sewer extensions would likely be shared by both Valley Township and the property owners for whom the extension will provide service. However, the property owners would be solely responsible for costs associated with construction of laterals between the cleanout/shut-off valve and the home/building, grinder pumps, abandonment of existing onlot systems, plumbing, and connection fees. The Township would likely apply for grants and possibly loans from one of the following potential funding sources:

a. Community Development Block Grant Program (CDBG)

The CDBG Program offers grants to communities of varying sizes throughout the Commonwealth for community development projects, particularly infrastructure improvements. CDBG Competitive Program Grants are available up to a maximum of $500,000 and are awarded based upon seriousness of the problem, benefit to low and moderate income persons, administrative capacity of the community, and

timeliness to construct the improvements. At least 70 percent of CDBG funds must benefit low and moderate income persons.

b. Pennsylvania Infrastructure Investment Authority (PENNVEST)

PENNVEST offers low interest loans for water, wastewater, and stormwater projects as well as a limited amount of grants. Loans are available for 100 percent of project cost, including design and engineering, up to $11 million for one project in a municipality. Loan rates vary between 1 and 5 percent depending on user rates within a community, and the life of the loan is based upon the useful life of the infrastructure. PENNVEST's Growing Greener grant is offered through the Pennsylvania Department of Environmental Protection (DEP). These grants are awarded based upon a project's impact on public health, the environment, economic development, and the community's ability to pay for the project.

c. USDA Rural Development Agency

The USDA offers loans and grants for community development projects for communities with populations less than 20,000. Grants are available for a maximum of 75 percent of project cost. Grants are provided on a priority scale and are also based upon available USDA funding. Valley Township would not be considered a "high priority" community because the population is in excess of 5,000, and the Township is not considered low income. Loans are also available with a maximum repayment schedule of 40 years and interest rates based upon the market rate (which is indexed to the eleventh bond buyers rate as determined by the U. S. Treasury Department) and the community's median household income.

2. Repair or Replacement of Onlot Systems

Costs associated with the continued use of individual onlot sewage disposal systems, including repair or replacement, are the sole responsibility of the individual property owner.

3. Holding Tanks

Costs associated with the continued use of holding tanks, including repair or replacement, are the sole responsibility of the individual property owner.

F. NEED FOR IMPLEMENTATION

There are no critical public health hazards within Valley Township. As discussed in Part III "Existing Needs", there are nine areas in the Township in which multiple onlot system malfunctions or failures have been reported to the Chester County Health Department and addressed over the past twelve-plus years. Three areas – Glencrest Road, Robinson Avenue & Oaklyn Lane, and the West End of Lincoln Highway – are currently having sewer extensions constructed. One area – South Mount Airy Road – has public sewer available,

and some properties have connected. Therefore, there are only five remaining problem areas. There has been one malfunction in the Rainbow Neighborhood and no complaints or malfunctions in the other five areas over the past six-plus years (since at least 2001). As such, none of these areas are in need of immediate or phased sanitary sewer extensions. Any future individual onlot system malfunctions can be corrected on an as-needed basis without causing a critical health hazard or adverse impact to the environment. However, the Township will continue to monitor the conditions within these areas and is aware that sewer extensions may eventually be needed.

The ordinance titled "An Ordinance Providing for a Sewage Management Program for Valley Township" (see Appendix J), which establishes the management program for privately-owned onlot sewage disposal systems, needs to be implemented in order for continued use of such systems. The Inflow & Infiltration (I&I) Reduction Program also needs to be implemented to reduce unnecessary flow through the sanitary sewer collection and conveyance facilities and unnecessary treatment at PAWC's Treatment Plant. Additionally, the Valley Township Zoning Ordinance needs to be modified to come into compliance with the 2003 Comprehensive Plan and establish enforceable sewage disposal guidelines for various land uses.

G. AUTHORITY FOR PLAN IMPLEMENTATION

The Valley Township Board of Supervisors has authority to implement the Sewage Management Program, I&I Reduction Program, and modifications to the Zoning Ordinance. The Zoning Ordinance would then be modified by the Valley Township Planning Commission, reviewed by local agencies, and ultimately adopted by the Valley Township Board of Supervisors.

Approval of the Act 537 Plan requires review by the Valley Township Planning Commission, Chester County Planning Commission, and Chester County Health Department. The Valley Township Board of Supervisors must then pass a resolution adopting the Plan. Lastly, approval by the DEP is required.

Refer to Appendix Q for agency review correspondence and Proof of Public Notice. Refer to Appendix R for the resolution adopting the Plan.

CHAPTER VII
INSTITUTIONAL EVALUATION

A. VALLEY TOWNSHIP

There are no wastewater authorities in Valley Township. The Valley Township Authority, which was responsible for operation and maintenance of the sanitary sewer collection and conveyance facilities in the Township, was previously disbanded. The sanitary sewer collection and conveyance system in Valley Township is now owned, operated, and maintained by Valley Township.

1. Financial and Debt Status

Valley Township does not have any outstanding debts in regards to overall management of the Township nor the sanitary sewer system. The Township charges quarterly fees to property owners connected to the sanitary sewer as well as initial connection fees. The user fees are utilized to fund operation and maintenance of the facilities, treatment at the Pennsylvania American Water Company (PAWC) Treatment Plant, permitting, planning, infrequent sewer extensions and upgrades, etc. The Township's user fees have not been adjusted for several years.

2. Staff and Administrative Resources

Valley Township's public works staff operates and maintains the sanitary sewer system on a part-time basis.

Valley Township's administrative staff performs administrative functions for the overall Township as well as the sanitary sewer and public water supply systems. The Township utilizes the Township Engineer to assist in administrative functions, such as permitting and reporting, as-needed. The Township Engineer also performs engineering-related services associated with the sanitary sewer system such as planning, analysis of new development impacts, flow monitoring, and repair and upgrade recommendations and designs, and construction inspections. The Township's administrative staff coupled with the Township Engineer is able to adequately handle the administrative needs of the sanitary sewer system.

3. Legal Authority

As the owner, Valley Township has legal authority over the sanitary sewer system to implement wastewater planning recommendations, implement system-wide operation and maintenance activities, set user fees and take purchasing actions, take enforcement actions against ordinance violators, negotiate agreements with other parties, and raise capital for construction and operation and maintenance of facilities. Similarly, as set forth in "An Ordinance Providing for a Sewage Management Program for Valley Township" (see Appendix J), which is currently in the process of being implemented by

the Township, Valley Township has legal authority to enforce inspections, maintenance, and repairs as well as charge fines and set fees for the Sewage Management Program for onlot disposal systems. Approvals from the DEP, Chester County Planning Commission, and Chester County Health Department are also typically necessary for all planning and construction activities regarding the sanitary sewer systems and onlot disposal systems.

B. NECESSARY INSTITUTIONAL ALTERNATIVES

1. New Municipal Departments

a. The establishment of a Township crew for full-time operation and maintenance of the sanitary sewer system should be considered.

b. As set forth in "An Ordinance Providing for a Sewage Management Program for Valley Township", the Township needs to employ or contract an authorized agent to carry out the Sewage Management Program for onlot disposal systems. The authorized agent could be an independent third party or an existing Township employee who has received necessary training.

c. There is no need for re-establishment of a municipal authority since Valley Township will continue to own, operate, and maintain the sanitary sewer collection and conveyance facilities in the Township, PAWC will continue to provide treatment at their Treatment Plant, and the Chester County Health Department will remain the Sewage Enforcement Officer for the Township.

2. Functions of Organizations

There is no need to alter the functions of existing wastewater organizations.

3. Cost and Capability to Address Future Needs

a. Valley Township

Valley Township's sanitary sewer user fees should be evaluated on a regular basis to ensure there is a sufficient revenue base to cover current and anticipated ownership costs as well as to maintain an adequate reserve for extensions, upgrades, and emergencies. When existing fees will not cover current or anticipated costs and will diminish the reserve, user fees should be raised. The evaluation of user fees should be conducted on an annual basis.

The Township will need to determine a funding method(s) for implementation of the Sewage Management Program. In accordance with the draft ordinance titled "An Ordinance Providing for a Sewage Management Program for Valley Township", the Township may assess fees to onlot disposal system owners to cover the costs associated with the Program.

b. PAWC Treatment Plant

The PAWC Treatment Plant needs to be expanded so that there will be capacity for the future sewage needs of Valley Township. PAWC has agreed to make a total allocation of 1,540,000 GPD available to Valley Township at the Treatment Plant upon plant expansion. The total allocation is projected to satisfy the ultimate build-out of Valley Township.

C. NECESSARY ADMINISTRATIVE & LEGAL ACTIVITIES

The Valley Township Zoning Ordinance needs to be modified.

CHAPTER VIII
IMPLEMENTATION SCHEDULE & JUSTIFICATION

A. PREFERRED ALTERNATIVES

1. Technical Alternative

The technical wastewater disposal alternative that is preferred in Valley Township is extension of the existing sanitary sewer collection and conveyance system to problem areas and for future development. All areas of the Township, both developed and undeveloped, are generally within a reasonable distance of the existing sewer system. Sewer extensions are therefore considered to be cost-effective. The Township's established operation and maintenance, management, and administrative systems for the existing sanitary sewer can remain in place with sanitary sewer extensions, although expanded staffing and increased user fees may be necessary. An I&I Reduction Program also needs to be implemented. Wastewater in the sewer system is treated and disposed at the Pennsylvania American Water Company (PAWC) Treatment Plant. PAWC has agreed to provide sufficient capacity at the Treatment Plant for treatment and disposal of the ultimate (20-plus year) build-out of Valley Township once the planned Plant expansion is constructed.

In areas where sanitary sewer has not yet been extended, any malfunctioning onlot systems will be repaired or replaced. Alternatively, a pump and haul system with a holding tank could be utilized. The Sewage Management Program ordinance must be implemented and the Township's holding tank policy must be complied with in order for continued use of onlot systems and holding tanks.

2. Institutional Alternatives

As discussed in Chapter VII, the institutional alternatives to be pursued by Valley Township are:

a. Evaluation of a full-time operation and maintenance crew for the sanitary sewer system.
b. Determination of funding method(s) for implementation of the Sewage Management Program.
c. Employment or contracting of an authorized agent to carry out the Sewage Management Program.
d. Provide educational materials to owners of onlot disposal systems about the proper use and maintenance of onlot systems. Amongst other possible materials, the Township will consider referencing the Chester County Health Department publication titled "An Owner's Manual".
e. Evaluation of sanitary sewer user fees and possible rate adjustment.
f. Implementation of an Inflow & Infiltration Reduction Program.

3. Administrative Activities

As discussed in Chapter VII, the administrative activities to be pursued by Valley Township are updating and approval of the following documents:

a. Valley Township Zoning Ordinance

B. FINANCING PLAN

Sanitary sewer extensions to service new developments are to be funded by the Developer.

The cost of sanitary sewer extensions to existing developments is to be shared by both Valley Township and the property owners for whom the extension will provide service. The Township would likely apply for grants and possibly loans from one of the following sources: Community Development Block Grant (CDBG) Program, Pennsylvania Infrastructure Investment Authority (PENNVEST), or USDA Rural Development Agency. Since no sewer extensions to existing developments are currently proposed, there is no specific financing plan proposed.

Costs associated with the continued use of individual onlot sewage disposal systems, including repair or replacement, and holding tanks are the sole responsibility of the individual property owner.

C. IMPLEMENTATION SCHEDULE

1. Technical Alternative

There are no proposed sanitary sewer extensions to existing developments. Extensions will be pursued and scheduled when a critical health or environmental problem arises, when the property owners are willing to commit to an extension, and/or when funding becomes available.

2. Institutional Alternatives

The need for a full-time operation and maintenance crew for the sanitary sewer system should be evaluated within one (1) year of DEP approval of the Act 537 Plan. The determination of necessity of the crew will also provide an implementation schedule if applicable.

Implementation of the Sewage Management Program should also occur within one (1) year of DEP approval of the Act 537 Plan including employment or contracting of an authorized agent to carry out the Program, determination of funding methods for the Program, and provision of educational materials to onlot system owners.

The evaluation of the sanitary sewer user fees should be performed as part of the first

annual Township budgeting (typically in early Autumn) following DEP approval of the Act 537 Plan. If rate adjustments are deemed necessary, an implementation schedule will be established.

Implementation of the I&I Reduction Program should occur immediately following DEP approval of the Act 537 Plan.

3. Administrative Activities

The Valley Township Zoning Ordinance should be revised and approved by Valley Township via resolution within two (2) years of DEP approval of the Act 537 Plan.

4. Summary

Table VIII-1 summarizes the deadlines for implementation of the various alternatives. The timeframes in the table are the amount of time following DEP approval of the Act 537 Plan.

Table VIII-1
Implementation Schedule

Alternative	Timeframe (following DEP approval)
1. Evaluate Full-Time O&M Crew	1 year
2. Implement Sewage Management Program	
a. Determine Funding Method(s)	1 year
b. Employ/Contract Authorized Agent	1 year
c. Educational Materials to Property Owners	1 year
3. Evaluate Sanitary Sewer User Fees	1st Budgeting Cycle
4. Implement I&I Reduction Program	Immediately
5. Adopt Revised Zoning Ordinance	2 years

APPENDIX A

SEWAGE TREATMENT AGREEMENT (1992)

SEWAGE TREATMENT AGREEMENT

THIS AGREEMENT, is made on 7th day of January, 1992, between the CITY OF COATESVILLE AUTHORITY, Chester County, Pennsylvania (CCA) and VALLEY TOWNSHIP AND THE VALLEY TOWNSHIP AUTHORITY, Chester County, Pennsylvania (hereinafter referred to collectively as Township).

WHEREAS, CCA is a municipal corporation, organized and existing under the laws of the Commonwealth of Pennsylvania, and owns and operates a sewage treatment plant for service providing public sewer service to various municipalities in and near the City of Coatesville; and

WHEREAS, the Township is also a municipal corporation, organized and existing under the laws of the Commonwealth of Pennsylvania, and desires to provide sewage collection service to residential, commercial, and industrial users within the Township and to connect its collection system to CCA's sewage treatment plant so that sewage and industrial wastes discharged by said users may be received in said plant for treatment and disposal; and

WHEREAS, a Sanitary Sewerage Agreement was reached between the City of Coatesville and the Township, said agreement dated October 22, 1959, which provided for sewer service to the Valley Township sewer district consisting of areas of the Township fronting on Gap Road and Strode Avenue; and

WHEREAS, a second agreement was reached between the City of Coatesville, the Coatesville Sewage Plant Authority and the Township, said agreement dated May 6, 1970, providing for receipt and treatment of sewage flows from other locations in the Township; and

WHEREAS, it is the intent that this agreement shall supercede those earlier agreements; and

WHEREAS, the sewage treatment and collection system was acquired from the City of Coatesville by CCA on July 7, 1988, along with all the obligations related to the ownership of the system; and

WHEREAS, it is in the public interest of both CCA and the Township that a new agreement to provide for the treatment of sewage from the Township at the CCA treatment plant be reached; and

WHEREAS, it is in the interests of both CCA and the Township that their respective facilities be used in the most feasible manner to provide for public sewer service to adjoining municipalities.

NOW THEREFORE, it is agreed as follows:

ARTICLE I - DEFINITIONS.

The terms defined in this Article, wherever used or referred to in this Agreement, shall have the following respective meanings unless a difference clearly appears from the context.

Average Daily Flow - Average number of gallons per day of sanitary sewage determined by taking the total quantity of flow delivered to a point during a ninety (90) day period of time, and dividing by ninety (90) days.

Five Day Biochemical Oxygen Demand (BOD) - Quantity of oxygen expressed in milligrams per liter (mg/l), utilized in the biochemical oxidation of organic matter under standard laboratory procedures for five days at 20 degrees Centigrade.

Cost of Operation and Maintenance - A term used in the calculation of conveyance cost of jointly used sewage facilities in Valley Township. All costs incident to the operation of sewage collection lines and pumping stations which are commonly used by the parties for the conveyance of sewage from and by Valley Township as well as the conveyance of sewage through Valley Township by CCA, said operation to be performed in an efficient and economical manner and to the maintenance thereof in a state of good repair during such period. Such costs shall include the cost of all maintenance labor, repairs, normal recurrent replacements, and reconstruction (repairs to basic construction) as may be necessary, all taxes, engineering, legal and superintendence expenses, and casualty and other insurance premiums during the previous calendar year divided by four (4) for the purpose of calculating quarterly billing.

Domestic Waste - Customary wastes from kitchens, water closets, lavatories and laundries.

Industrial User - Any user or users identified in the Standard Industrial Classification Manual, 1972, Office of Management and Budget, as amended and supplemented under one of the following divisions:

Division A. Agriculture, Forestry, and Fishing
Division B. Mining
Division D. Manufacturing
Division E. Transportation, Communications, Electric, Gas, and Sanitary Services
Division I. Services

Industrial Waste - The liquid waste or liquid borne waste resulting from the processing employed by an industrial user, whether treated or untreated, is discharged into the Treatment Works.

pH - Logarithm of the reciprocal of the concentration of hydrogen ion, indicating the degree of acidity or alkalinity of a substance.

Point of Connection - Point or points at which CCA receives and conducts sanitary sewage or industrial waste from the Township's system to a point for treatment or disposal or where the Township receives sanitary sewage or industrial waste from CCA for conveyance through the Township's system.

Sanitary Sewage - All water-carried domestic waste from residences, offices, hotels, stores, restaurants, commercial establishments, industrial establishments, and similar users within the Township.

Slug - Any sanitary sewage discharge which, for a period of fifteen minutes, shall exceed five times the average daily flow. The term particularly applies to the sudden emptying of large vats, tanks or swimming pools into the sewerage system.

Standard Laboratory Procedure - For any laboratory analyses herein listed, it shall be that found in the latest edition of "Standard Methods for the Examination of Water and Sewerage" published by the American Public Health Association.

Total Kjeldahl Nitrogen (TKN) - Sum of free ammonia and organic nitrogen compounds which are converted to ammonium sulfate, as determined by Standard Laboratory Procedure; it does not include nitrite and nitrate nitrogen.

Total Solids - Solids that either float on the surface of or are in suspension or dissolved in water, sanitary sewage or other liquids, as determined by Standard Laboratory Procedure.

Total Suspended Solids - Quantity of material deposited when a

quantity of sanitary sewage is filtered; it includes settleable and all suspended (including volatile) solids.

Treatment Plant - Existing sewage treatment plant and facilities owned and operated by CCA, together with any additions, modifications and/or improvements thereto.

Unmetered Unit - With respect to individual units or areas of Valley Township connected to CCA facilities without measurement of total flows through metering facilities, each single-family residential customer connected to a sewage collection system shall be considered an unmetered unit. With respect to nonsingle-family dwellings, flats, or apartments having the use of the sewage collection system through one sewer lateral, each and every residential unit, flat, or apartment shall be considered an unmetered unit as if each such unit had a direct and separate connection to the sewage collection system. For commercial or industrial properties, the number of unmetered units shall be equal to the daily water usage divided by two hundred (200). The daily water usage shall be determined from metering or, where this is not possible, a mutually acceptable means of estimating daily water usage shall be determined by the Township and CCA.

ARTICLE II - STATEMENT OF INTENT.

The parties hereto agree that it is the intent of this Agreement to provide for the conveyance and treatment of sanitary sewage and industrial waste from within the Township to a treatment plant owned by CCA for treatment and disposal of those wastes in common with other wastes flowing from and through the CCA system; and where appropriate, to further provide for the conveyance of wastes from municipalities or other customers of CCA beyond the boundaries of Valley Township to and through the system of sewage

lines within and belonging to Valley Township for discharge and treatment within the CCA system.

ARTICLE III - TERMS OF AGREEMENT

Section 1 - This Agreement shall be effective as of the above date and shall continue for a period of thirty (30) years from said date and thereafter it shall continue until CCA shall have given the Township, or vice versa, five years' written notice of intention to terminate this Agreement. Any conveyance agreements reached between the Township and CCA shall be affected by this Agreement in that, should CCA terminate this Agreement, any conveyance agreement between CCA and the Township shall be subject to renegotiation at that time, but the Township shall have no obligation to continue the conveyance agreements. Should the Township terminate this agreement, the conveyance agreement between CCA and the Township shall continue in full force and effect.

Section 2 - At any time during the term of this Agreement, a meeting or meetings may be held at the request of either party to discuss such matters as may be of mutual interest and concern, particularly any inequities which are alleged to exist under the terms of the Agreement. If such inequities are found to exist, the parties agree to correct them promptly by means of the procedure set forth in Article XII, Section 6.

Section 3 - CCA hereby grants to the Township the right to discharge sanitary sewage up to 550,000 gallons average daily flow, subject to the limitations and payment of charges set forth in this Agreement. CCA agrees to convey and treat and dispose of such sewage in a manner approved by the Pennsylvania Department of Environmental Resources and in accordance with the terms and provisions set forth herein. The above limitation shall not include flows at the unmetered connections provided for by the City of Coatesville/Township agreement of October 22, 1959.

Section 4 - It is agreed that, once connection has been made from the Township collection system, which results in sanitary sewage or industrial waste being delivered therefrom to the point of connection to the CCA conveyance system, and from there to the CCA treatment plant for final disposition, such sanitary sewage shall not thereafter be diverted therefrom by the Township unless mutually agreed upon by the parties hereto in writing. However, the right shall be reserved by the Township to establish such other treatment of sanitary sewage originating in the Township which, by good engineering practice, cannot be delivered to the CCA treatment plant on a practical and economical basis, or which in the event CCA cannot provide additional treatment capacity, exceeds the 550,000 gallons per day limitation imposed by this Agreement.

Section 5 - The Township hereby grants to CCA the right to connect at mutually agreeable points on its system for the purpose of conveying sanitary sewage or industrial wastes through the Valley Township system from municipal or other customers of CCA beyond the boundaries of Valley Township, subject to the provision of adequate conveyance capacity and further subject to the payment of equitable fees to provide for the operation and maintenance of the jointly used lines as provided herein. Such connections shall be subject to separate conveyance agreements prepared in compliance with the terms of this agreement and may include provisions for improvements to the Valley Township system to be paid for by CCA where increased capacity of facilities are required to accommodate the additional flows to be imposed by CCA in the Valley Township system. Where reimbursement agreements are in effect involving the Township or its Authority, CCA shall be subject to the provisions of the reimbursement agreements. Sewage flows conveyed through the Township system for CCA shall be deducted from, and not included in, the limitation on the Township's right to discharge sanitary sewage as provided in Section 3 of Article 3 and shall not be included in the

calculation of any tapping fees as provided in Section 7 of Article 7.

Section 6 - The Township agrees that it will not offer sewage service to customers or other municipalities beyond its borders. Any request for sewage service originating outside Township borders shall be directed to CCA.

Section 7 - If the Township, at any future time, shall transfer title to its sewage system to any municipality or authority by deed or otherwise, it shall assign all its rights and interests in and under this Agreement to said municipality or authority and, upon such assignment, the assignee shall be subject to all obligations and entitled to receive all the rights and benefits of this Agreement, and the Township thereafter shall cease to be a party to this Agreement. This Agreement also shall be binding upon and inure to the successors and assigns of any party to this Agreement. However, any such transfer shall not be made without notice to CCA. In the event of transfer of title of the sewage system to a private, non-municipal party, in addition to the requirements stated above, such transfer shall not be made without the written consent of CCA.

Section 8 - The Township agrees that, within sixty (60) days of execution of this Agreement, it will adopt an ordinance or ordinances establishing rules and regulations for the making of connections, and use of the sewage system in conformance with this Agreement. The Township also agrees to enforce the provisions of such ordinance or ordinances at all times, and the Township agrees that CCA or its duly authorized representative shall have the right, at all reasonable times, to inspect the said sewage system connections, other than those connections to residential properties, and Township agrees to compel the discontinuance of any connection which CCA finds to be in violation of this Agreement, such inspection shall be made without cost to Valley Township or Valley Township customers.

Section 9 - CCA agrees that, within sixty (60) days of execution of this Agreement, it will adopt rules and regulations for the making of connections, and use of the sewage system in conformance with this Agreement. CCA also agrees to enforce the provisions of such rules and regulations at all times, and CCA agrees that the Township or its duly authorized representative shall have the right, at all reasonable times, to inspect sewage systems connected to Valley Township for conveyance and to compel the discontinuance of any connection which it finds to be in violation of this Agreement. Insofar as the Rules and Regulations adopted by the requirements of this section and Section 8 above apply to the use of the sanitary sewer system are concerned, the Township and CCA agree that the provisions of said Rules and Regulations shall be the same for both parties.

Section 10 - The parties hereto agree to comply with all applicable present and future Pennsylvania or United States laws, rules, regulations, permits, orders and requirements lawfully made by any governmental body having jurisdiction and all applicable grant agreements, unless the same are being contested in good faith by appropriate proceedings.

Section 11 - It is understood and agreed by both parties that the rights and responsibilities of the respective parties under the provisions of this Agreement are not in any way contingent upon the execution of other agreements between CCA and other municipalities; moreover, the Township understands and agrees that CCA may find it prudent and necessary to enter into sewage treatment agreements with other municipalities; it is further agreed by the Township that such other agreements may differ materially from the provisions of this Agreement.

ARTICLE IV - CONSTRUCTION OF COLLECTION AND CONVEYANCE FACILITIES - INTERCONNECTION

Section 1 - The parties hereto understand and agree it is and will be necessary for the Township to design, layout, finance, and construct sanitary sewers within Valley Township as needed. Said sewers will be owned by the Township, will be the sole responsibility of the Township, and will be maintained by the Township.

Section 2 - The Township shall have control over assessments charged each property owner with regard to the Township sewage collection system. The Township shall also have control as to all manner and means of procuring financing for the construction of said sanitary sewers.

Section 3 - The Township covenants to use its best efforts to obtain the necessary approvals and financing and thereafter to use its best efforts to construct its sanitary sewers, all in accordance with plans and specifications prepared by its consulting engineer at its own cost and approved by the Department of Environmental Resources of the Commonwealth of Pennsylvania.

Section 4 - The parties hereto understand and agree it is and will be necessary for CCA to design, layout, finance, and construct sanitary sewers within CCA areas of service other than Valley Township as needed. Said sewers will be owned by CCA and will be the sole responsibility of CCA, and will be maintained by CCA.

Section 5 - CCA shall have control over the assessments charged each property owner with regard to the CCA sewage collection system within the CCA areas of service other than Valley Township. CCA shall also have control as to all manner and means

of procuring financing for the construction of said sanitary sewers.

Section 6 - CCA covenants to use its best efforts to obtain the necessary approvals and financing and thereafter to use its best efforts to construct its sanitary sewers within the CCA areas of service other than Valley Township, all in accordance with plans and specifications prepared by its consulting engineer at its own cost and approved by the Department of Environmental Resources of the Commonwealth of Pennsylvania.

Section 7 - Sanitary sewage from the respective sewage collection systems shall be collected and conveyed to points of connection, as outlined on the final plans, approved by the consulting engineers for both parties to this Agreement.

Prior to the institution of a construction program by either party which would result in a new point of interconnection or upon the cumulative increase in flow of more than five (5) percent at any existing connection between CCA and the Township sewage collection systems, the following activities will be carried out to determine the practicality of such an interconnection or increase in flow:

A. The respective engineers of each party will meet to exchange technical data regarding the proposed interconnection. This data will include:

   1. The proposed point of connection.

   2. Anticipated initial flow.

   3. Rate and frequency of discharge.

   4. Anticipated ultimate flow.

5. Adequacy of receiving sewer.

6. Type of control and/or metering device.

7. Available capacity of receiving sewers.

8. Estimated cost of downstream improvement, if required.

B. No point of interconnection or increase in flow will be approved where the proposed discharge will overload the receiving sewer or pumping station(s) unless the party delivering the sewage agrees to compensate adequately the party receiving the flow for corrective measures necessary to make the receiving sewer or pumping station(s) adequate for the proposed discharge. If the receiving sewer or pumping station(s) is limited in capacity, discharge will be limited to the available capacity until such time as adequate capacity is made available.

The Township shall secure all necessary easements, rights-of-way, and permits from all sources whatsoever as may be required to deliver sewage to the points of connection to the CCA sewage collection system. The consulting engineer of CCA shall have the right to approve the plans and to inspect the manner of the making of such connections between CCA and the Township sewers; the same shall not be used until such time as CCA shall receive written notice from CCA's consulting engineer that the construction of such connections has been accomplished in accordance with the approved plans and specifications relating thereto. Neither CCA nor its consulting engineer shall unnecessarily delay approval.

CCA shall secure all necessary easements, rights-of-way, and permits from all sources whatsoever as may be required to deliver sewage to the points of connection to the Township sewage collection system. The consulting engineer of the Township shall

have the right to approve the plans and to inspect the manner of the making of such connections between CCA and the Township sewers; the same shall not be used until such time as the Township shall receive written notice from the Township's consulting engineer that the construction of such connections has been accomplished in accordance with the approved plans and specifications relating thereto. Neither the Township nor its consulting engineer shall unnecessarily delay approval.

Section 9 - At or before the commencement of actual sewage disposal service and at each and every point of connection (at which point it has been mutually agreed by the parties to this Agreement that metering is feasible), the party making the connection shall cause to have installed and thereafter at all times maintain (a) sewage meter(s) or provide such other means of measuring flows as shall be agreed upon between the Township and CCA. Where appropriate, said meter(s) shall employ a flow recorder using seven-day charts, and shall be subject to the approval of the receiving party. The expense of procurement, installation, and maintenance thereof shall be borne by the party making the connection. Said meter(s) shall be placed at each point of connection as may be mutually agreed upon by the parties hereto and subject to the following conditions:

A. The device(s) shall be inspected and calibrated, and tested for accuracy at least once every six months by a person or entity competent in the inspection and testing of such devices. Certified reports of such inspections shall be mailed directly to the receiving party. The cost of such inspection and the cost of any repair or replacement shall be borne by the party delivering wastewater. All repairs of meters of any type shall be accomplished within 30 calendar days of receipt of the inspection company's report attesting to the meter's malfunction.

B. In the case of missing flow records due to faulty meter registration or otherwise, an estimate of flows will be made for the purposes of determining volume of sewage discharged. This estimate will be based on an evaluation of past flow records as applied to present conditions, and as reviewed and approved by the engineers for both CCA and the Township.

C. Meter records and meter installations of the Township shall be made available and accessible to CCA and conversely meter records and installations of CCA shall be made available and accessible to the Township. The record of sewage flow through recording meters operated and maintained by the party delivering wastewater will be read by CCA upon 24 hours telephone notice on the first days of January, April, July and October, showing the total and daily sewage flows discharged during the previous three-month period.

D. Either party shall have the right, upon written request, to a calibration check of the other's meter(s) at any time outside the normal scheduled calibration time for the purpose of checking its accuracy. This non-scheduled calibration will be carried out as described in Section 9.A hereof. If results of such non-scheduled calibrations show that the meter(s) was malfunctioning by variations from actual flow of more than five (5) percent, then all costs of the non-scheduled calibration and any repair or replacement will be paid by the party delivering wastewater. If no violation is found, then the receiving party shall pay all costs for the calibration.

Section 10 - Where it has been mutually agreed upon by the parties to this Agreement that in making a new point of interconnection where metering of total sewage flow is not feasible, a calculation will be made to determine the number of unmetered units which contribute to the wastewater flow at that connection. Any nonresidential customer may be required by CCA

or the Township to install, at its own expense, a water meter or other approved measuring device to determine volume for billing purposes. If water source is from a well, the meter shall measure water flows from the well. Meters shall conform to meter requirements of the billing agency, Township or CCA. The number of unmetered units to be billed for nonresidential customers shall be equal to the daily water usage divided by two hundred (200). The sewer consumption charges for residential unmetered units shall be as provided in the rates and charges of the City of Coatesville Authority (CCA), Section IV.B as the same may be published from time to time, subject nevertheless to the provisions of Article VII, Section 4 of this Agreement. The provisions of this Section 10 shall also apply to the existing sanitary sewer district established by the agreement between the City of Coatesville and the Township dated October 22, 1959. This district is denoted by Exhibits "A" and "B" attached hereto and incorporated herein by reference.

Section 11 - Maximum flow rates at any point of interconnection shall not exceed 3.0 times the average daily flow rate at any time. Maximum flow rates equal to 3.0 times the average flow rate shall be limited to a duration of not more than 30 minutes in any day.

Section 12 - In the event that CCA requests a connection point for conveyance of domestic sewage or industrial wastes through a conveyance agreement from an adjoining municipality regardless of whether the collection system connecting thereto is owned and operated by the connecting municipality, CCA or a private party, then the connection point and metering facilities shall be owned and maintained by CCA and all matters relative to the design of the connecting system and metering points shall be in accordance with this Agreement. The Township reserves the right to inspect and read meters upon notice to CCA.

ARTICLE V - TREATMENT PLANT.

Section 1 - The parties hereto understand and agree that in order to attain or maintain the quality of sewage effluent required by CCA's NPDES Permit, it may become necessary for CCA to modify the treatment plant and to make additions and improvements thereto. To accomplish the purposes herein contemplated, the parties hereto agree that additions, improvements, and/or modifications to the treatment plant shall be undertaken and shall be the sole responsibility of CCA. The existing treatment plant and any additions thereto shall be maintained exclusively by CCA.

Section 2 - CCA covenants and agrees to acquire and construct or cause to be acquired and constructed, from time to time, such additions, improvements, and/or modifications to the sewage treatment plant, if determined by CCA to be financially feasible. Provisions for determination of the need for such additions, improvements, and/or modifications shall be made by CCA. The Township shall be notified thereof in writing. In the event that the construction of additional facilities is necessitated by a change in the degree of treatment as required by the Pennsylvania Department of Environmental Resources and is financed by cash appropriations of CCA, then the rates provided for in Article VII, Section 3 hereof may be increased to the Township to reflect the Township's portion of the additional capital expenditures of CCA. In the event the construction of additional facilities is necessitated:

A. By the increase in demand or by the necessity to treat industrial wastes eminating from Valley Township, the Township shall pay the full cost thereof under conditions of an amendment to this Agreement. The Township shall have the right of engineering review and audit of construction costs.

B. By an increase in demand or by the necessity to treat industrial wastes eminating partially from Valley Township,

then Township shall pay its proportionate share thereof under conditions of an amendment to this Agreement.

C. By an increase in demand or by the necessity to treat industrial wastes for the sole benefit of CCA or customers other than Valley Township, Township shall not be required to participate in the cost of expansion.

Section 3 - The parties hereto authorize CCA to apply for and accept any grants or contributions from any federal, state, or local government having such funds at their disposal for projects of this type.

ARTICLE VI - MAINTENANCE, SAVE HARMLESS AGREEMENT, INSURANCE.

Section 1 - CCA and the Township agree, in regard to their respective collection systems, to operate continuously and keep and maintain the same at all times in first-class repair and order, and in good and efficient operating condition, and to meet the standards prescribed by the Pennsylvania Department of Environmental Resources or of any other governmental authority having jurisdiction thereof.

Section 2 - The Township agrees to indemnify and save harmless CCA against all losses, costs, or damages on account of any injury to persons or property occurring in the performance of this Agreement because of the negligence of the Township, its respective servants, agents, or employees, or resulting from the failure of the treatment plant and lines leading thereto to function properly because of such negligence.

Section 3 - CCA agrees to indemnify and save harmless the Township against all losses, costs, or damages on account of any injury to persons or property occurring in the performance of this Agreement because of the negligence of CCA, its respective servants, agents, or employees, or resulting from the failure of

the treatment plant and lines leading thereto to function properly because of such negligence.

Section 4 - In the event of damage to the sewage treatment plant of CCA resulting from the discharge of improper sewage from the sewage collection system of the Township into the sewage treatment plant of CCA, the discharge of improper sewage to be determined in accordance with the Rules and Regulations of CCA and Township, the Township agrees to act in concert with CCA in enforcing their respective Rules and Regulations to cause the abatement of the violation and to require reimbursement of CCA for the full cost of damage done to CCA's sewage treatment plant, by the offending user. In order to minimize the likelihood of discharge of waste which may cause damage to the operation of the sewage treatment plant, the provisions of Article VIII, Sections 4 through 7 shall apply. To resolve any dispute as to improper sewage having been or so being discharged, the procedure set forth under Article XII, Section 6 of this Agreement, shall be used. The Township shall not be responsible if it is determined that improper sewerage originated from outside the Township and was merely conveyed through the Township lines pursuant to a conveyance agreement.

Section 5 - CCA and the Township shall insure or cause to be insured their respective facilities (i.e., including but not limited to treatment plant, capital additions and interceptors) in a responsible company or companies authorized and qualified to do business under the laws of the Commonwealth of Pennsylvania against loss or damage by fire and against such other risks in such amounts as usually are carried upon, or with respect to, like property in Pennsylvania. Immediately after any loss or damage to either parties' facilities or any part thereof, the affected party will commence and duly prosecute the repair, replacement, or reconstruction of the damaged or destroyed portion of its facilities, all according to the provisions as previously defined. Both parties will also maintain liability

insurance against any loss or injury to third persons or property of third persons as a result of fire, explosion, and other risk and casualty occurring to their respective facilities.

ARTICLE VII - CHARGES AND PAYMENTS.

Section 1 - In all instances where fees are required or use rates are applicable (including the tapping fees established pursuant to this Agreement in Paragraph 8 of this Article VII), these rates and fees shall be such as are provided in the published rate and fee schedule of CCA prevailing at the time.

Whenever CCA increases rates by more than 10 percent in the aggregate over a 3 year period, or in excess of 6 percent in any given year, the Township shall have the option of requesting that CCA engage a qualified third party rate consulting engineer to review the rationale for the rate increase and the appropriateness of said increase. CCA shall advise the Township of the consulting engineer or firm it desires to engage within thirty (30) days of receipt of the request from the Township. The Township shall have thirty (30) days to either accept the third party engineer or firm selected by CCA or provide CCA with the name of another qualified third party rate consulting engineer. If CCA does not accept the Township's suggested consulting engineer, CCA and the Township shall submit the choice of the consulting rate engineer to arbitration within thirty (30) days. CCA and the Township shall each select one arbitrator and the two arbitrators shall select a third arbitrator and this arbitration panel shall select the third party consulting engineer from lists submitted by CCA and the Township. Whenever either party fails to exercise its right to select the consulting engineer or to invoke the arbitration process within any of the thirty (30) day periods specified above, such failure by that party to act shall constitute a waiver of the right.

In the event that the process of selecting a third party rate consulting engineer shall extend into the time period for which the increased rate would go into effect, CCA shall maintain its previous rate and fees. In the event that the third party rate consulting engineer concurs or recommends a rate increase, the Township shall pay CCA the difference between the new rate retroactive to the initial date of rate increase less the amount already paid CCA by the Township under the previous rate. In the event of sums owed CCA by the Township, said sums shall be paid to CCA within thirty (30) days of the date the rate has been determined and recommended by the third party rate consulting engineer without penalty or interest. After thirty (30) days, CCA's prevailing penalty and interest rates shall apply.

Section 2 - Quarterly billings to the Township under this Agreement for the conveyance and treatment of Township sewage shall commence upon the first discharge into the CCA system. Said billings will be based on the total gallonage of wastewater discharged by the Township, as measured by the flow meters located at the points of connection which are metered, after deduction of all flows from points connected to the Township system for conveyance of sewage for CCA from sources outside of the Township which readings shall be shown on Township bills, calculated in the same manner. To this billing, CCA will add charges calculated for unmetered connections in agreement with Section 10, Article IV.

Section 3 - Bills shall be delivered by CCA to the Township on or about the tenth day of January, April, July and October, reflecting the appropriate charges for the preceding calendar quarters.

Section 4 - Bills shall be payable to the office of CCA by the last business day of the month in which the bill is issued. There shall be added a penalty of five percent to bills remaining unpaid after the close of the last business day of the month.

Section 5 - If sewer rentals or charges imposed upon other users of CCA facilities shall be increased, the rates provided in Section 1 hereof shall be increased in accordance with the same percentage as the percentage of increase of the sewer rentals or charges imposed upon other users of CCA facilities. Such increase shall take effect concurrently with increase of sewer rentals or charges imposed upon users of CCA facilities subject to Paragraph 1 of this Article VII.

Section 6 - Before the Township shall permit connection to the Township collection system of any sewer user who has an average anticipated daily sanitary sewage flow greater than 10 percent of the Township's allocation, the Township shall notify CCA of such potential connection.

Section 7 - This Agreement contemplates an average daily flow of sewage of not more than 550,000 gallons. Furthermore, at no time shall the average sewage flow during a 24-hour period exceed 825,000 gallons. If the aforementioned allotment is exceeded by the Township, CCA shall give written notice to the Township. The Township, in turn, will have thirty (30) days to commence investigations and ninety (90) days to correct the causes of such excess flow. The Township may request and CCA may grant approval of the use of additional capacity, subject to Section 8 of this Article VII or an extension of time for compliance with the Agreement. If the Township does not comply within the time limitations above, or any extension thereof, CCA shall have the right to deny the Township increased use of CCA's system. The aforementioned allotment of 550,000 gallons shall be available for use by the Township until December 31, 2010 when, at such time, if the Township shall have not used 90 percent of this allotment, then the remaining portion of the allocation over the then existing use as determined below shall revert to CCA and the provisions of Paragraph 8 below shall apply to increased capacity granted to the Township over the then existing use. The term

"then existing use" shall be the total average daily flow emanating from the Township to CCA (not including sewage conveyed by the Township for CCA) from all connection points as measured over the four quarters prior to December 31, 2010.

Section 8 - In the event that the Township requests an increase in allotment of sewage capacity over that set forth in Paragraph 6 above, said increased allotment shall be subject to the payment of a tapping fee which shall be calculated on the capacity portion of CCA's sewage collection and treatment system in the amount of the current tapping fee rate per gallon of increased daily usage of the CCA sewage treatment capacity. Said increases shall also be subject to the provisions of Section 7 of Article IV of this Agreement, relating to interconnection between the systems and to the provisions of Article V of this Agreement, relating to the treatment plant. If under the provisions of Section 2 of Article V, the Township contributes to the cost of increase of plant capacity to accommodate their needs, then the tapping fee required by this paragraph shall be waived. Unless the tapping fee as calculated exceeds the amount of contribution for plant improvements, then the Township shall pay the difference plus the improvement contribution.

Section 9 - The above-mentioned sewage treatment charges pertain to the treatment of domestic waste only. Industrial wastes may be more concentrated in nature and, as a result, the treatment thereof becomes more complex. It is understood and agreed that additional charges shall be made for all sewage treated at the CCA plant having total suspended solids, biochemical oxygen demand, or ammonia nitrogen, in excess of the following concentrations:

A.	Total Suspended Solids (TSS)	-	250 mg/l
B.	Five-Day Biochemical Oxygen Demand (BOD)	-	250 mg/l
C.	Ammonia Nitrogen as N (AN)	-	25 mg/l
D.	Phosphorus as P (P)	-	4.5 mg/l

The additional charge for wastewater having concentrations in excess of the foregoing shall be assessed against the cost of treating that portion of the total of sewage flows from Valley Township attributed to the measured flow or water usage of the industrial facility discharging such waste times an industrial waste treatment factor (IWTF) to be calculated as follows:

IWTF= BOD/250 x .35 + TSS/250 x .30 + AN/25 x .175 + P/4.5 x .175

Additional charge equals (IWTF - 1) x quarterly flow from industrial facility/total quarterly flow from Valley Township x quarterly bill.

Where mutually agreed upon by the parties, in cases where the suspended solids and/or ammonia nitrogen do not represent the true characteristics of the solids or nitrogen loading respectively, CCA reserves the right to use total solids in the surcharge formula instead of suspended solids and total kjeldahl nitrogen (TKN), instead of ammonia nitrogen.

Additional charges for treatment of special industrial wastes or for damages or upsets caused by the discharge of industrial wastes inimical to the sewage treatment and disposal process shall be in accordance with the Rules and Regulations established by CCA as provided in Section 2, Article VIII of this Agreement.

Section 10 - CCA hereby covenants that rates for sewage treatment, fees and charges, and the capacity portion of tapping fees imposed hereunder will be in conformation with its schedule of rates, fees and charges, and tapping fees charged in other similar areas throughout its system, and will not be greater than the rates, fees and charges, and the capacity portion of tapping fees charged similar customers under similar circumstances in CCA's system. The Township shall have the right to review the business records of CCA with regard to the establishment of rates, fees and charges, and the capacity portion of tapping fees

as the same affect these rates, fees and charges, or the capacity portion of tapping fees charged in the Township from time to time to substantiate the same. Likewise, with respect to rules and regulations of CCA which affect the Township, CCA covenants that said rules and regulations will be the same that are imposed upon other uses throughout its system, and the same shall be applied to the Township as they are applied to other users throughout the CCA system.

Section 11 - Quarterly billings to CCA for the conveyance of CCA sewage through the Township system shall be delivered by the Township and shall be payable according to the same terms as provided in Article VII, Sections 2 and 3 above. Billing shall be based upon the proportionate share of the operating and maintenance costs of the commonly used lines to be determined by the following formula:

$$\text{Cost of Conveyance} = OM \times L1/L2 + OM \times F1/F2$$

OM is the cost of operating and maintenance for sanitary sewage collection lines in Valley Township. OM shall be determined by the Township subject to the review of the appropriate financial records by CCA.

L1 is the total length of commonly used lines.

L2 is the total length of all sewage collection lines in Valley Township.

L1 and L2 shall be determined from the mapping of the Township sewer system.

F1 is the flow into Valley Township as metered by CCA meters at connecting points for conveyance of sewage. F1 shall be determined by meter readings.

F2 is the total flow in the commonly used lines. F2 shall be calculated by the Township subject to review and approval by CCA and using where appropriate metering records at the downstream Township points of connection with the CCA system.

The cost of conveyance shall be calculated on an annual basis or at the time of any connection made by CCA to the Township system or where significant changes (more than 10% of total connected daily flow) occur within the Valley Township system. Calculation for cost of conveyance shall be available for confirmation no less than thirty days before taking effect.

ARTICLE VIII - INFILTRATION AND INDUSTRIAL WASTES.

Section 1 - The Township and CCA agree that the sewage and wastes discharged by any user into either of their collection systems shall not contain stormwater, roof, subsurface, or surface drainage. Both CCA's and the Township's sewer construction specifications shall require infiltration, exfiltration, and/or air pressure tests made at the time of construction. The infiltration or exfiltration of the sewer system at the time of the test shall not exceed 100 gallons per one-inch diameter of pipe per mile in 24 hours. Air test results for acceptance shall be in accordance with techniques for new pipe systems current at the time of construction.

Section 2 - CCA and the Township shall enact rules and regulations and/or ordinances, within 60 days of execution of this Agreement, prohibiting the discharge of surface and/or subsurface stormwater into their respective systems. Such rules and regulations and/or ordinances shall prohibit the construction, installation, or use of any facility which causes surface and/or subsurface stormwater or groundwater to be discharged to the sanitary sewer system. Facilities prohibited shall include, but not be limited to, sump pumps, area drains, yard drains, perimeter drains, foundation drains, roof leaders,

downspouts, street inlets, storm sewers, cross connections, etc. Restrictions contained within the ordinances enacted through the Township shall be equal to or stricter than those enacted by CCA.

Section 3 - The Township agrees to take appropriate measures to prohibit any connection to the Township collection system of any industrial establishment from which industrial waste is or may be discharged into the system, except in accordance with the Sewer Use Rules and Regulations adopted by CCA which Sewer Use Rules and Regulations are made a part of this Agreement as if appended thereto.

Section 4 - Whenever an existing or new user of the Valley Township sewer system proposes to alter the character of a waste from that previously discharged to introduce industrial waste or proposes to discharge any new industrial waste into the sewer system, CCA shall be so notified in writing by the Township and such notification shall be made prior to such change or new discharge to enable the waste to be analyzed by CCA to determine its acceptability before such change or new discharge takes place, and such discharge shall not occur prior to the granting of approval by CCA.

Section 5 - In order to facilitate the control of industrial waste into the sewage collection system and thus to the treatment plant, the rules and regulations of CCA and Valley Township shall contain the provision "If industrial waste is proposed to be introduced into any sewer system tributary to CCA's Treatment Works, whether the sewer system is maintained by CCA or by any other municipality or private party, the customer or user shall obtain a sewer service agreement with CCA before commencing the discharge of such industrial waste". In issuing such permits and requiring such an agreement, CCA shall incorporate the provisions of the Rules and Regulations requiring the provision of control manholes, testing, reports and other relevant controls over the discharger of industrial waste. The agreement shall provide,

among other things, that CCA shall be reimbursed a reasonable cost of monitoring, testing and otherwise determining the character of wastes which are to be discharged. Charges imposed by CCA for the testing and monitoring of waste discharges shall be separate and apart from charges imposed by Valley Township for the collection and conveyance of sewage and for payment for treatment by CCA. It is not intended by this provision that CCA shall in any way alter the customer relationship between the party discharging the waste and Valley Township. Sewer use rates shall be continued to be paid by the user to Valley Township and in all respects the user shall be a customer of the Township. If as a result of testing conducted by CCA it is determined that the wastes are concentrated in nature, then CCA shall so advise the Township of any additional charges which will be made for sewage treatment at the CCA plant in accordance with the measures adopted by Section 9 of Article VII of this Agreement.

Section 6 - After examination of all relevant information as required by this article above, CCA reserves the right to refuse acceptance, and the Township will not permit the discharge of any industrial or other process waste whose quality may be deemed to have a harmful effect on the sewage treatment or sludge handling process and which cannot be processed by the treatment plant in the normal and ordinary course of operation.

Section 7 - CCA shall provide to the Township copies of all test information, reports, conclusions made by CCA, and any other relevant information relating to the acceptance or denial of discharges of industrial wastes.

ARTICLE IX - PARTICULAR COVENANTS OF VALLEY TOWNSHIP

Upon the execution of this Agreement, the Township covenants as follows:

A. To design and construct modifications and extensions to the sewage collection system so as to contain no stormwater thereof or subsurface drainage whatsoever.

B. To maintain its collection system in good repair and operating condition and to operate it continuously as provided in other sections of this Agreement.

C. To take any and all action by ordinance, or in any otherwise necessary and appropriate manner, to fulfill the provisions of this Agreement.

ARTICLE X - PARTICULAR COVENANTS OF CITY OF COATESVILLE AUTHORITY.

Section 1 - Upon the execution of this Agreement, CCA covenants as follows:

A. To maintain the interceptor, sewers, and treatment plant in good repair and operating condition and to operate them continuously.

B. To readily accept and treat up to 550,000 gallons per day of sewage coming into CCA from the Township, subject to the provisions of this Agreement.

ARTICLE XII - MISCELLANEOUS.

Section 1 - The failure of any party hereto to insist upon strict performance of this Agreement or any of the terms or conditions thereof shall not be construed as a waiver of any of its rights hereunder.

Section 2 - This writing constitutes the entire Agreement between the parties, and there are no other representations or agreements, verbal or written, other than those contained herein.

Section 3 - Whenever a notice is required to be given by mail, the following addresses shall be used unless a different address is specifically called for:

City of Coatesville Authority
114 East Lincoln Highway
Coatesville, Pennsylvania 19320

Valley Township
890 West Lincoln Highway
Coatesville, Pennsylvania 19320

Section 4 - This Agreement may be executed in any number of counterparts, each of which shall be properly executed by the Township and CCA, and all of which shall be regarded for all purposes as the original.

Section 5 - In the event that the Department of Environmental Resources of the Commonwealth of Pennsylvania, or any other regulatory body or governmental agency, shall fail or refuse to issue any permits for conveyance or treatment which may be necessary to accomplish the intent and purpose of this Agreement, the parties shall be relieved from further compliance with the terms of this Agreement until such time when such permit or permits shall be issued.

Section 6 - In the event that any disputes shall arise relative to the interpretation and/or application of the terms of this Agreement, the parties hereof do hereby agree to the following procedure to settle such matters:

A. The parties, operators, and/or managers will attempt to discuss and solve the problem.

B. If Step "A" does not prove satisfactory, a joint committee comprised of three members (the solicitor, engineer, and a councilman or supervisor) for each party will meet to attempt to solve the problem.

C. If neither of the above steps proves successful, the dispute shall be resolved by decision of a panel consisting of the consulting engineer of each of the respective parties to the dispute, and an additional consulting engineer chosen by and acceptable to the parties.

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be executed by their appropriate officers and their respective seals to be hereunto affixed on the day and year first above written.

CITY OF COATESVILLE AUTHORITY

Attest: _____ By: _____

VALLEY TOWNSHIP

By: _____

_____

_____

Attest: _____ _____

_____

APPENDIX B

ADDENDUM TO SEWAGE TREATMENT AGREEMENT (1997)

ADDENDUM TO SEWAGE TREATMENT AGREEMENT

THIS ADDENDUM TO THE SEWAGE TREATMENT AGREEMENT is made on the 16th day of SEPTEMBER, 1997, between the CITY OF COATESVILLE AUTHORITY, Chester County, Pennsylvania (CCA) and VALLEY TOWNSHIP, Chester County, Pennsylvania (Township).

WHEREAS, CCA and the Township entered into a Sewage Treatment Agreement on January 7, 1992, said agreement setting forth the terms and conditions for the conveyance and treatment of sanitary sewage and industrial waste from within the Township to CCA; and

WHEREAS, the Township does not presently have nor does the Township plan in the near future to extend a sewer main on Valley Road (Route 372) west of their existing sewer main ending at the Valley Crossing Subdivision on Valley Road; and

WHEREAS, there is a residential property including a single family dwelling at 521 Valley Road located west of the Valley Crossing Subdivision which has a failing on-lot septic system that is not practical to repair or replace; and

WHEREAS, CCA recently completed the construction of a sewer main on Valley Road known as the Parkesburg Sewer Main, which extends from Parkesburg to the City of Coatesville, and which has capacity available to connect the residential property at 521 Valley Road into the said main; and

WHEREAS, CCA and the Township mutually agree to allow the residential property at 521 Valley Road to connect to the Parkesburg Sewer Main.

NOW, THEREFORE, it is agreed as follows:

1. The property at 521 Valley Road (Route 372) in Valley Township shall be allowed to connect to CCA's Parkesburg Sewer Main.

2. The property shall become the sewer customer of CCA which shall charge and collect sewer fees in accordance with its sewer rate schedule in effect now and in the future.

3. It is agreed and understood that this Addendum to the Sewage Treatment Agreement aforesaid mentioned, is for the property at 521 Valley Road only and does not include any other property within the Township.

4. This Addendum shall constitute an amendment to the said Sewage Treatment Agreement. To the extent that provisions contained in the said Sewage Treatment Agreement are inconsistent with the terms contained herein, the terms of this Addendum shall govern, solely pertaining to the property at 521 Valley Road. All other terms and provisions of the said Sewage Treatment Agreement shall remain in full force and effect.

IN WITNESS WHEREOF, the parties hereto have caused this Addendum to the Sewage Treatment Agreement to be executed by their appropriate officers and their respective seals to be hereunto affixed on the day and year first above written.

VALLEY TOWNSHIP

By: Grover E. Koon

Attest:

Secretary

CITY OF COATESVILLE AUTHORITY

By: Charles T. Williams
Chairman

Attest:

Asst. Secretary

APPENDIX C

SECOND AMENDMENT TO THE SEWAGE TREATMENT AGREEMENT BETWEEN VALLEY TOWNSHIP AND PENNSYLVANIA-AMERICAN WATER COMPANY (2004)

SECOND AMENDMENT TO THE SEWAGE TREATMENT AGREEMENT BETWEEN VALLEY TOWNSHIP AND PENNSYLVANIA-AMERICAN WATER COMPANY

THIS SECOND AMENDMENT is made and entered into as of the 14th day of December, 2004, by and between VALLEY TOWNSHIP, a Pennsylvania municipal corporation, and PENNSYLVANIA-AMERICAN WATER COMPANY, a Pennsylvania public utility corporation.

WITNESSETH

WHEREAS, Valley Township, (hereinafter referred to as the "Township"), owns and operates, a sewage collection and conveyance system in Valley Township, Chester County, Pennsylvania; and

WHEREAS, Pennsylvania-American Water Company (hereinafter referred to as ("Pennsylvania-American") owns and operates a sewage treatment plant and a collection and conveyance system, providing public sewer service to various municipalities in and near Chester County, Pennsylvania, which sewage treatment plant was previously owned and operated by the City of Coatesville Authority; and

WHEREAS, the Township entered into a Sewage Treatment Agreement (hereinafter referred to as the "Sewage Treatment Agreement"), dated January 7, 1992, with the City of Coatesville Authority (hereinafter referred to as "CCA") which provided for the treatment of sewage from the Township at the CCA treatment plant; and

WHEREAS, CCA's sewer plant and sewage treatment and collection systems were acquired by Pennsylvania-American on March 22, 2001, along with all CCA's rights and obligations under the January 7, 1992 Sewage Treatment Agreement; and

WHEREAS, on June 29, 2001, Valley Township, Valley Township Municipal Authority and Pennsylvania-American Water Company entered into a First Amendment to the Sewage Treatment Agreement dated January 7, 1992; and

WHEREAS, by letter dated May 8, 2002, the Township requested additional sewer capacity in Pennsylvania-American's sewer system, as provided in the Sewage Treatment Agreement; and

WHEREAS, by letter dated May 20, 2002, Pennsylvania-American approved the Township's request to increase the Average Daily Flow to 707,500 gallons as defined in the Sewage Treatment Agreement; and

WHEREAS, the parties desire to further clarify and amend the Sewage Treatment Agreement by, among other things, revising the definition of "Average Daily Flow" and allowing for increases in the Average Daily Flow.

NOW THEREFORE, this Second Amendment witnesseth that for and in consideration of the respective covenants and agreements of the parties hereinafter set forth, the parties hereto, intending to be legally bound hereby, do covenant, contract and agree as follows:

1. The Sewage Treatment Agreement dated January 7, 1992 between the Township and CCA, now Pennsylvania-American and the First Amendment to the Sewage Treatment Agreement dated June 29, 2001, are incorporated herein by reference.

2. Article 1, of the Sewage Treatment Agreement, providing for the definition of the term "Average Daily Flow", is hereby amended to read as follows:

> *"Average Daily Flow - Average number of gallons per day of sanitary sewage determined by taking the total quantity of flow delivered to all points of connection during a "rolling" twelve (12)*

month period divided by the total number of days in that period."

3. Article III, Section 3 of the Sewage Treatment Agreement is hereby amended to read as follows:

"Section 3 -Pennsylvania-American hereby grants to the Township, an increased average daily flow of sanitary sewage from 707,500 gallons per day (GPD) granted by letter dated May 20, 2002, to 1,140,000 GPD, subject to the limitations and payment of charges set forth in this Agreement. After Pennsylvania-American has expanded treatment capacity at the wastewater plant, an additional 400,000 GPD will be made available to the Township for a total average daily flow of 1,540,000 GPD, at such fee as shall be applicable at that time. Pennsylvania-American agrees to convey and treat and dispose of such sewage in a manner approved by the Pennsylvania Department of Environmental Protection, formerly known as the Pennsylvania Department of Environmental Resources, and in accordance with the terms and provisions set forth herein. The above limitation shall not include flows at the unmetered connections provided for by the City of Coatesville/Township agreement of October 22, 1959".

4. The parties understand and agree that the amount due from the Township to Pennsylvania-American under Article VII, Section 8 of the Sewage Treatment Agreement as a result of the increase granted in this Second Addendum is Seven Hundred Sixty-Eight Thousand Nine

Hundred Eighty-Five ($768,985) Dollars which amount is due upon the execution of this Second Addendum.

5. Article IV, of the Sewage Treatment Agreement is hereby amended to add the following:

> *Section 13 - Within thirty (30) days of the execution of this Second Addendum, for One ($1.00) Dollar and other good and valuable compensation, ownership and maintenance responsibility for the three meters at the connection points used for monitoring and billing shall transfer from the Township to Pennsylvania-American. The Township hereby grants Pennsylvania-American the right to enter upon the facilities to read and maintain the meters. Pennsylvania-American will maintain the meters at its sole expense.*

6. Article VII of the Sewage Treatment Agreement is hereby amended to add the following:

> *Section 12 - In the event the quantity of flow from the Township exceeds the allowable Average Daily Flow during any billing period, the Township shall pay two times the current rate effective at the time, for discharges in excess of the Average Daily Flow times a peaking factor of 1.2 during the billing period. (For example, the Maximum Monthly Flow would be 1,140,000 GPD times 30 days in the billing period times 1.2 peaking factor equals 41,040,000 gallons. The Township, at current rates, would pay $2.13 per 1,000 gallons*

up to 41,040,000 gallons. For any flow in excess of that amount, the Township, at current rates, would pay $4.26 per 1,000 gallons). The rate of two times the existing rate is in lieu of any additional capacity fees for exceeding the granted capacity.

7. The parties recognize and expressly agree that this Second Amendment of the Sewage Treatment Agreement is conditioned upon (a) the approval of the Pennsylvania Public Utility Commission (the "Pennsylvania PUC "), and (b) the Township's adoption of a resolution approving Pennsylvania-American's Act 537 Sewage Facilities Plan - Tributary Municipalities of Pennsylvania-American Water Company, as prepared by URS Corporation, Project No. 20592391.AT.537.

8. All other terms and conditions of the Sewage Treatment Agreement and First Amendment shall be and remain in effect, and the Sewage Treatment Agreement is only amended as set forth in this Second Amendment.

IN WITNESS WHEREOF, the parties hereto have caused this Second Amendment of the Sewage Treatment Agreement between Valley Township and Pennsylvania-American Water Company to be executed on the day and year first above written.

PENNSYLVANIA AMERICAN WATER COMPANY

By: _____
Name:
Title: (Vice) President

VALLEY TOWNSHIP

By: Edward Hammond
Name:
Title: ~~(Vice-)~~ Chairman

Amended Appendix A-22-b

VALLEY TOWNSHIP
SEWER FUND
P.O. BOX 467
COATESVILLE, PA 19320

FIRST FINANCIAL
SAVINGS BANK PaSA
COATESVILLE, PENNSYLVANIA 19320

60-7217/2313

C

The Sum of 768,985.00
PAY

TO THE ORDER OF

December 15, 2004
DATE

****$768,985.00
AMOUN

PENNSYLVANIA-AMERICAN WATER CO.
P.O. BOX 371412
PITTSBURG PA 15250-7412

AUTHORIZED SIGNATURE

"008575" :231372170:000 006 2000705"

VALLEY TOWNSHIP
December 15, 2004

0

CAPACITY FEES 768985.00

PENNSYLVANIA-AMERICAN WATER CO. ****$768,985.00

APPENDIX D

EAST FALLOWFIELD TOWNSHIP AGREEMENTS

SEWAGE CONVEYANCE AGREEMENT

East Fallowfield Connection, Mt. Carmel Road

THIS AGREEMENT, is made on 7th day of January, 1992 ~~1991~~, between the CITY OF COATESVILLE AUTHORITY, Chester County, Pennsylvania (CCA) and VALLEY TOWNSHIP, Chester County, Pennsylvania (hereinafter referred to collectively as Township).

WHEREAS, CCA is a municipal corporation, organized and existing under the laws of the Commonwealth of Pennsylvania, and owns and operates a sewage treatment plant for service providing public sewer service to various municipalities in and near the City of Coatesville; and

WHEREAS, the Township is also a municipal corporation, organized and existing under the laws of the Commonwealth of Pennsylvania, and provides sewage collection service to residential, commercial, and industrial users within the Township connecting its collection system to CCA's sewage treatment plant so that sewage and industrial wastes discharged by said users may be received in said plant for treatment and disposal; and

WHEREAS, CCA and the Township have pending the execution of a new Sewage Treatment Agreement between the municipalities, to replace existing Sanitary Sewage Agreements reached between The City of Coatesville and the Township, and the City of Coatesville and Coatesville Sewage Plant Authority and the Township, as cited in the pending Sewage Treatment Agreement.

NOW THEREFORE, it is agreed as follows:

ARTICLE I - DEFINITIONS.

The terms defined in this Article, wherever used or referred to in this Agreement, shall have the following respective meanings unless a difference clearly appears from the context.

Average Daily Flow - Average number of gallons per day of sanitary sewage determined by taking the total quantity of flow delivered to a point during a ninety (90) day period of time, and dividing by ninety (90) days.

Cost of Operation and Maintenance - A term used in the calculation of conveyance cost of jointly used sewage facilities in Valley Township. All costs incident to the operation of sewage collection lines and pumping stations which are commonly used by the parties for the conveyance of sewage from and by Valley Township as well as the conveyance of sewage through Valley Township by CCA, said operation to be performed in an efficient and economical manner and leading to the maintenance thereof in a state of good repair during such period. Such costs shall include the cost of all maintenance labor, repairs, normal recurrent replacements, and reconstruction (repairs to basic construction) as may be necessary, all taxes, engineering, legal and superintendence expenses, and casualty and other insurance premiums during the previous calendar year divided by four (4) for the purpose of calculating quarterly billing.

Domestic Waste - Customary wastes from kitchens, water closets, lavatories and laundries.

Industrial Waste - The liquid waste or liquid borne waste resulting from the processing employed by an industrial user, whether treated or untreated, is discharged into the Treatment Works.

Point of Connection - Point or points at which CCA receives and conducts sanitary sewage or industrial waste from the Township's system to a point for treatment or disposal or where the Township receives sanitary sewage from CCA for conveyance through the Township's system.

Sanitary Sewage - All water-carried domestic waste from residences, offices, hotels, stores, restaurants, commercial establishments, industrial establishments, and similar users within the Township.

Slug - Any sanitary sewage discharge which, for a period of fifteen minutes, shall exceed five times the average daily flow. The term particularly applies to the sudden emptying of large vats, tanks or swimming pools into the sewerage system.

Treatment Plant - Existing sewage treatment plant and facilities owned and operated by CCA, together with any additions, modifications and/or improvements thereto.

ARTICLE II - STATEMENT OF INTENT.

The parties hereto agree that it is the intent of this Agreement to provide for the conveyance of sanitary sewage from a sanitary sewer system in East Fallowfield Township operated by CCA through a portion of the Valley Township Sewer System to the CCA sewer system in Coatesville and from there to the Treatment Plant owned by CCA for treatment and disposal of those wastes, in common with other wastes flowing through the CCA system and to provide for payment to the Township by CCA for an equitable share of the cost of operation and maintenance of the jointly used conveyance facilities.

ARTICLE III - TERMS OF AGREEMENT

Section 1 - This Agreement shall be effective as of the above date and shall continue for an indefinite period from said date. Any sewage treatment agreements now existing or to be reached by the Township and CCA shall affect this Agreement in that, should CCA terminate a Sewage Treatment Agreement, this conveyance agreement between CCA and the Township shall be subject to renegotiation at that time, but the Township shall have no obligation to continue the conveyance agreements. Should the Township terminate the existing or proposed sewage treatment agreement, the conveyance agreement between CCA and the Township shall continue in full force and effect.

Section 2 - The Township hereby grants to CCA the right to connect a sanitary sewer emanating from East Fallowfield Township to Manhole Number 509-1 shown on plans by Roy F. Weston, Inc., dated 5/28/69, located at the intersection of Valley Road and Mount Carmel Road for the purpose of conveying sewage through the Valley Township system from the connection point to the Valley Township Sewage Meter Pit at the connection to CCA system located at Valley Road and 16th Street in Coatesville. The agreement by Valley Township to convey sewage shall be subject to the payment of equitable fees to the Township to provide for the operation and maintenance of the jointly used lines as provided herein. Sewage flows conveyed through the Township system for CCA shall be deducted from, and not included in, metered flow used for billing of Valley Township by CCA, this metered flow being measured at the connection to CCA's system at the above mentioned location on Valley Road, and the limitation on the Township's right to discharge sanitary sewage as provided in existing or proposed sewage treatment agreements and shall not be included in the calculation of any future tapping fees. For the purpose of determining the quantities of sewage to be conveyed from CCA's East Fallowfield Township Sewage Collection System through the Valley Township Sewage System. Maintenance of such a meter and

responsibility for determining the flows registered on the meter shall be as provided hereinafter. A water meter installed in the water pumping station for service to East Fallowfield Township shall be used to measure flows of water in and through the sanitary sewage system.

Section 3 - If the Township, at any future time, shall transfer title to its sewage system to any municipality or authority by deed or otherwise, it shall assign all its rights and interests in and under this Agreement to said municipality or authority and, upon such assignment, the assignee shall be subject to all obligations and entitled to receive all the rights and benefits of this Agreement, and the Township thereafter shall cease to be a party to this Agreement. This Agreement also shall be binding upon and inure to the successors and assigns of any party to this Agreement.

Section 4 - CCA and the Township agree that rules and regulations which may be adopted for making of connections and use of the sewage system in conformance with the pending Sewage Treatment Agreement shall apply to the sewage system operated by CCA in East Fallowfield Township. CCA also agrees to enforce the provisions of such rules and regulations at all times, and CCA agrees that the Township or its duly authorized representative shall have the right, at all times, to inspect sewage systems connected to Valley Township for conveyance and to compel the discontinuance of any connection which it finds to be in violation of this Agreement.

Section 5 - The parties hereto agree to comply with all applicable present and future Pennsylvania or United States laws, as well as any rules, regulations, permits, orders and requirements lawfully made by any governmental body having jurisdiction and all applicable grant agreements, unless the same are being contested in good faith by appropriate proceedings.

ARTICLE IV - CONSTRUCTION OF COLLECTION AND CONVEYANCE FACILITIES - INTERCONNECTION

Section 1 - The parties hereto understand and agree it will be necessary for CCA to design, layout, and cause to have constructed sanitary sewers within the CCA areas of service in East Fallowfield Township as required. The ownership of said sewers will be by Agreement between CCA and East Fallowfield Township.

Section 2 - The sanitary sewer connection from the Valley Township/East Fallowfield Township line to Manhole 509-1, the connecting point cited above, shall be constructed or caused to be constructed by CCA and shall be offered for dedication to Valley Township. If said offer is accepted, Valley Township shall own and maintain the said sewer line connection from the East Fallowfield Township line to Manhole 509-1 and the cost of maintenance of such shall be included in the calculation of conveyance fees. Otherwise, if the offer of dedication is not accepted, CCA shall continue to own and maintain said line but no connections from Valley Township shall be permitted thereto and the calculation of cost of conveyance shall be made only from the point of connection at Manhole 509-1.

Section 3 - Sanitary sewage from the respective sewage collection systems shall be collected and conveyed to points of connection, as outlined on the final plans, approved by Valley Township and CCA.

Prior to the institution of a construction program by CCA to complete this interconnection, the following activities will be carried out to determine the practicality of such an interconnection or increase in flow:

A. The respective engineers of each party will meet to exchange technical data regarding the proposed interconnection. This data will include:

1. The proposed point of connection.

2. Anticipated initial flow.

3. Rate and frequency of discharge.

4. Anticipated ultimate flow.

5. Adequacy of receiving sewer.

6. Type of control and/or metering device.

7. Estimated cost of downstream improvement, if required.

B. The proposed interconnection flow will not be approved if the proposed discharge will overload the receiving sewer unless the CCA agrees to compensate adequately the Township for corrective measures necessary to make the receiving sewer adequate for the proposed discharge. If the receiving sewer is limited in capacity, discharge will be limited to the available capacity until such time as adequate capacity is made available.

C. CCA shall secure all necessary easements, rights-of-way, and permits from all sources whatsoever as may be required to deliver sewage to the point of connection to the Township sewage collection system. The consulting engineer of the Township shall have the right to approve the plans and to inspect the manner of the making of such connections between CCA and the Township sewers; the same shall not be used until such time as the Township shall receive written notice from the Township's consulting engineer that the

construction of such connections has been accomplished in accordance with the approved plans and specifications relating thereto. Neither the Township nor its consulting engineer shall unjustifiably delay approval.

Section 4 - At or before the commencement of actual sewage disposal service CCA shall cause to have installed and thereafter at all times maintain the system water meter cited in Section 2, Article III above. Said meter shall be subject to the approval of the Township. The expense of procurement, installation, and maintenance thereof shall be borne by CCA. Said meter shall be placed at the Township line on Mount Carmel Road.

A. The device(s) shall be inspected and calibrated, and tested for accuracy at least once every six months by a person or entity competent in the inspection and testing of such devices. Certified reports of such inspections shall be mailed directly to the Township. The cost of such inspection and the cost of any repair or replacement shall be borne by CCA. All repairs of meters of any type shall be accomplished within 30 calendar days of receipt of the inspection company's report attesting to the meter's malfunction.

B. In the case of missing flow records due to faulty meter registration or otherwise, an estimate of flows will be made for the purposes of determining volume of sewage discharged. This estimate will be based on an evaluation of past flow records as applied to present conditions, and as reviewed and approved by the engineers for both CCA and the Township.

C. Meter records and the meter installations shall be made available and accessible to the Township. The record of sewage flow through recording meters operated and maintained by CCA will be read by CCA on the first days of January, April, July and October, showing the total and daily sewage

flows discharged during the previous three-month period. The Township reserves the right to inspect and read meters upon 24 hour notice to CCA.

D. The Township shall have the right, upon written request, to a calibration check of CCA's meter(s) at any time outside the normal scheduled calibration time for the purpose of checking its accuracy. This non-scheduled calibration will be performed by CCA as described in Section 4.a hereof. If results of such non-scheduled calibrations show that the meter(s) was malfunctioning by variations from actual flow of more than five (5) percent, then all costs of the non-scheduled calibration and any repair or replacement will be paid by CCA. If no violation is found, then the Township shall pay all costs for the calibration.

Section 5 - Maximum flow rates at any point of interconnection shall not exceed 3.0 times the average daily flow rate at any time. Maximum flow rates equal to 3.0 times the average flow rate shall be limited to a duration of not more than 30 minutes in any day.

ARTICLE V - MAINTENANCE, SAVE HARMLESS AGREEMENT, INSURANCE.

Section 1 - CCA and the Township agree, in regard to their respective collection systems, to operate continuously and keep and maintain the same at all times in good repair and order, and in good and efficient operating condition, and to meet the standards prescribed by the Pennsylvania Department of Environmental Resources or of any other governmental authority having jurisdiction thereof.

Section 2 - The Township agrees to indemnify and save harmless CCA against all losses, costs, or damages on account of any injury to persons or property occurring in the performance of

this Agreement because of the negligence of the Township, its respective servants, agents, or employees, or resulting from the failure of the treatment plant and lines leading thereto to function properly because of such negligence.

Section 3 - CCA agrees to indemnify and save harmless the Township against all losses, costs, or damages on account of any injury to persons or property occurring in the performance of this Agreement because of the negligence of CCA, its respective servants, agents, or employees, or resulting from the failure of the treatment plant and lines leading thereto to function properly because of such negligence.

Section 4 - CCA and the Township shall insure or cause to be insured their respective facilities (i.e., including but not limited to treatment plant, capital additions and interceptors) in a responsible company or companies authorized and qualified to do business under the laws of the Commonwealth of Pennsylvania against loss or damage by fire and against such other risks in such amounts as usually are carried upon, or with respect to, like property in Pennsylvania. Immediately after any loss or damage to either parties' facilities or any part thereof, the affected party will commence and duly prosecute the repair, replacement, or reconstruction of the damaged or destroyed portion of its facilities, all according to the provisions as previously defined. Both parties will also maintain liability insurance with an aggregate limit in the amount of $2,000,000 against any loss or injury to third persons or property of third persons as a result of fire, explosion, and other risk and casualty occurring to their respective facilities.

ARTICLE VI - CHARGES AND PAYMENTS.

Section 1 - Quarterly billings to CCA for the conveyance of CCA sewage through the Township system shall be delivered by the Township and shall be payable as provided hereinafter. Billing

shall be based upon the proportionate share of the operating and maintenance costs of the commonly used lines to be determined by the following formula:

$$\text{Cost of Conveyance} = OM \times L1/L2 + OM \times F1/F2$$

OM is the cost of operating and maintenance for sanitary sewage collection lines in Valley Township. OM shall be determined by the Township subject to the review of the appropriate financial records by CCA.

L1 is the total length of commonly used lines.

L2 is the total length of all sewage collection lines in Valley Township.

L1 and L2 shall be determined from the mapping of the Township sewer system.

F1 is the flow into Valley Township as metered by CCA for determination of sewage flow. F1 shall be determined by meter readings.

F2 is the total flow in the commonly used lines. F2 shall be calculated by the Township subject to review and approval by CCA and using where appropriate metering records at the downstream Township points of connection with the CCA system.

The cost of conveyance shall be calculated on an annual basis or at the time of the connection made by CCA to the Township system or where significant changes (more than 10% of total connected daily flow) occur within the Valley Township system. Calculation for cost of conveyance shall be available for confirmation no less than thirty days before taking effect.

ARTICLE VII - MISCELLANEOUS.

Section 1 - The failure of any party hereto to insist upon strict performance of this Agreement or any of the terms or conditions thereof shall not be construed as a waiver of any of its rights hereunder.

Section 2 - This writing constitutes the entire Agreement between the parties, and there are no other representations or agreements, verbal or written, other than those contained herein.

Section 3 - Whenever a notice is required to be given by mail, the following addresses shall be used unless a different address is specifically called for:

City of Coatesville Authority
114 East Lincoln Highway
Coatesville, Pennsylvania 19320

Valley Township
890 West Lincoln Highway
Coatesville, Pennsylvania 19320

Section 4 - This Agreement may be executed in any number of counterparts, each of which shall be properly executed by the Township and CCA, and all of which shall be regarded for all purposes as the original.

Section 5 - In the event that the Department of Environmental Resources of the Commonwealth of Pennsylvania, or any other regulatory body or governmental agency, shall fail or refuse to issue any permits for conveyance which may be necessary to accomplish the intent and purpose of this Agreement, the parties shall be relieved from further compliance with the terms of this Agreement until such time when such permit or permits shall be issued.

Section 6 - In the event that any disputes shall arise relative to the interpretation and/or application of the terms of this Agreement, the parties hereof do hereby agree to the following procedure to settle such matters:

A. The parties, operators, and/or managers will attempt to discuss and solve the problem.

B. If Step "A" does not prove satisfactory, a joint committee comprised of three members (the solicitor, engineer, and an Authority Board member or supervisor) for each party will meet to attempt to solve the problem.

C. If neither of the above steps proves successful, the dispute shall be resolved by decision of a panel consisting of the consulting engineer of each of the respective parties to the dispute, and an additional consulting engineer chosen by and acceptable to the parties.

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be executed by their appropriate officers and their respective seals to be hereunto affixed on the day and year first above written.

Attest: _____ CITY OF COATESVILLE AUTHORITY
By: _____

VALLEY TOWNSHIP
By: _____

Attest: _____

ADDENDUM TO SEWAGE CONVEYANCE AGREEMENT

THIS AGREEMENT is made on the 18th day of July, 1995, between the CITY OF COATESVILLE AUTHORITY, Chester County, Pennsylvania (CCA), and VALLEY TOWNSHIP, Chester County, Pennsylvania (hereinafter "Township").

WHEREAS, CCA is a municipal corporation, organized and existing under the laws of the Commonwealth of Pennsylvania, and owns and operates a sewage treatment plant for service providing public sewer service to various municipalities in and near the City of Coatesville; and

WHEREAS, the Township is also a municipal corporation, organized and existing under the laws of the Commonwealth of Pennsylvania, and provides sewage collection service to residential, commercial, and industrial users within the Township connecting its collection system to CCA's sewage treatment plant so that sewage and industrial wastes discharged by said users may be received in said plant for treatment and disposal; and

WHEREAS, the Township and CCA have a currently binding agreement dated January 7, 1992 regarding the connection of East Fallowfield Township CCA customers into the Valley Township system; and

WHEREAS, Mr. and Mrs. Steven Pierson own a certain parcel in East Fallowfield Township with an address of 157 South Park Avenue (also known as Tax Parcel #47-4-65), which parcel is in a district which CCA is obligated to serve under an agreement between the CCA and East Fallowfield Township dated December 9, 1992 and amended on March 10, 1993; and

WHEREAS, the Pierson's property would be most conveniently served by a sewage line owned and operated by Valley Township, which line is closer in proximity to the property than any line owned by CCA and it is the desire of both the CCA and Township for the Pierson's to connect to and be customers of the Valley Township sewer system.

NOW, THEREFORE, CCA and TOWNSHIP, for and in consideration of covenants, promises and agreements herein contained to be kept and observed, each intending to be legally bound hereby, covenant and agree as follows:

1. CCA hereby assigns all of its rights and duties for sewage collection from the property owned by Mr. and Mrs. Steven Pierson and addressed 157 South Park Avenue (also known as Tax Parcel #47-4-65) to the Township. The Piersons will be Township sewage customers, and the CCA will have neither the duty to provide services to them, nor the right to charge fees.

2. This agreement relates exclusively to the property known as Tax Parcel #47-4-65, 157 South Park Avenue in East Fallowfield

township. Nothing herein shall be construed to affect the rights or duties of CCA to provide sewage services to any other property in East Fallowfield township. Nothing in this agreement is intended to create a change in the agreement between CCA and Valley Township dated January 7, 1992 beyond the assignment in paragraph 1.

INTENDING TO BE BOUND HEREBY, the respective parties herein have executed this Agreement as of the date and year first written above.

ATTEST:

CITY OF COATESVILLE AUTHORITY

By: Charles T. Williams

ATTEST:

VALLEY TOWNSHIP

By:

APPENDIX E

WEST CALN TOWNSHIP AGREEMENTS

SEWER & Water SERVICE AGREEMENT BETWEEN WEST CALN TOWNSHIP, VALLEY TOWNSHIP AND VALLEY TOWNSHIP AUTHORITY REGARDING SERVICE TO HIGHLANDS CORPORATE CENTER

THIS AGREEMENT, made this 16 day of November, 1988, between WEST CALN TOWNSHIP, having its principal office located at P. O. Box 175, Wagontown, PA 19376, VALLEY TOWNSHIP, having its principal office located at 890 West Lincoln Highway, Coatesville, PA 19320; and VALLEY TOWNSHIP AUTHORITY, having its principal office located at 890 West Lincoln Highway, Coatesville, PA 19320, and existing under the Pennsylvania Municipalities Act of 1945 , as amended and supplemented, and HIGHLANDS CORPORATE CENTER (Developer), having its principal office located at 1861 William Penn Way, Lancaster, PA 17601.

WITNESSETH:

WHEREAS, Highlands Corporate Center ("Developer") has filed, or is about to file, a plan for real estate development to be known as "Highlands Corporate Center"; and

WHEREAS, said plan contemplates a corporate real estate development which lies mostly in Valley Township and partly in West Caln Township; and

WHEREAS, West Caln Township desires to have a specific agreement for sewage treatment and water distribution, if available, for all parts of said proposed plan which will lie in West Caln Township; and

WHEREAS, Valley Township Authority is the owner of a sewer collection system in Valley Township, Chester County,

Pennsylvania and is willing to provide service to Highlands Corporate Center for service in that portion of the said development physically located in West Caln Township.

WHEREAS, if Valley Township Authority has not, within thirty (30) days prior to the first building in Highlands Corporate Center being ready for occupancy, extended water service from the Airport Road 12" water main to Highlands Corporate Center in Valley Township Water and Sewer Authority's water pit located at the intersection of Airport Road and Higlands Boulevard East in the volume then needed, then in that event Developer is free to use such water as it requires from the Airport Road 12" water main on any terms it may negotiate with the Coatesville Water Authority. Subsequent buildout will be handled in exactly the same way as herinabove provided for.

NOW, THEREFORE, the parties intending to be legally bound, agree as follows:

1. Valley Authority shall cause, or permit, the extension of its sewer service to that portion of Highlands Corporate Center lying in West Caln Township.

2. Highlands Corporate Center shall be bound by all rules, regulations and specifications of the Authority now existing, or which will be adopted, and as are changed from time to time without notice by Authority.

3. The Township of Valley, lessee of Valley Township Authority, shall establish rates for use for, and collect sewage and water charges in accordance with the established rates as applied, if applicable, from Highlands Corporate Center who agree to pay said charges. All billings will be per connection per lot per the rates schedules of Valley Township.

4. Valley Township shall assume jurisdiction over said lines and equipment by acceptance or dedication thereof when all portions of said system are in place and operating to the satisfaction of Valley Township Authority engineers and West Caln Township engineers. Said sewage shall flow through the Valley Township Authority system. All cost including any engineering fees incurred by the Township of West Caln relative to the terms of the Agreement shall be borne by Highlands Corporate Center.

The charges shall be based on the rates for similar collections in Valley Township.

5. West Caln hereby approves the assessment of that portion of the High Associates Corporate Center lying in West Caln Township benefited by the installationthereof and consents to the assessment of said properties and collection thereof by any method adopted by Valley Township Authority or Valley Township.

6. The plans and estimated costs for and plans of said system have heretofore been submitted to and approved by West Caln Township.

7. West Caln Township and Highlands Corporate Center hereby agree that no other sewer service provider, and water service provider, if applicable, shall serve the Highlands Corporate Center.

8. A copy of the Resolution of West Caln Township approving the ownerships of said lines by Valley Township Authority and the operation of said lines and related equipment by Valley Township is attached hereto and made part hereof.

9. This is an agreement for service by Valley Township and Valley Township Authority only for the limited connections to Highlands Corporate Center and in no way shall be construed as an attempt by either Valley Township or Valley Township Authority to extend their service areas beyond the boundaries of Valley Township or Highlands Corporate Center, or generally into West Caln Township. The large majority of the Highlands Corporate Center lies in Valley Township.

10. This Agreement shall be construed in accordance with the laws of the Commonwealth of Pennsylvania which are in effect as of the date of execution of this Agreement and shall bind the successors and assigns of the parties hereto.

IN WITNESS WHEREOF, the parties hereto have hereunto set their hands and seals the day and year first above written.

ATTEST:

WEST CALN TOWNSHIP

BY: _____

VALLEY TOWNSHIP

BY: _____

VALLEY TOWNSHIP AUTHORITY

BY: _____

HIGHLANDS CORPORATE CENTER

BY: _____

CCA

Amended Ap received b
4/29/92

Public Water & Sewer Service to Portions of Chester & Lancaster Counties

City of Coatesville Authority

April 28, 1992

Mr. John Emerson High, Attorney
28 North New Street
West Chester, PA 19380

Dear John:

Enclosed is a copy of the proposed Sewer Conveyance Agreement between CCA and Valley Township for the sewer connection by the Coatesville Country Club. This agreement was approved by the CCA Board of Directors last Thursday night. Please let me know before your next meeting on May 5 if you have any questions. We would appreciate your Board considering this at your earliest convenience.

The CCA Board did consider Valley's suggestion that they be allowed to serve the Coatesville Country Club individually. The Board decided to respectfully decline the suggestion. It is their belief the intermunicipal agreement should be kept in tact. As you remember, the intermunicipal agreements stipulate that Valley will not serve any water or sewer customers outside their corporate limits.

I would be happy to discuss this agreement with you and the Board of Supervisors if you wish. Thank you for your consideration

With best regards, I am

Sincerely,

Ted

Wayne G. "Ted" Reed
Executive Director

WGR/llm

Enclosure

cc: Mr. Alan P. Novak, CCA Solicitor
Mr. Alan Jarvis, Valley Township Solicitor

114 East Lincoln Highway P.O. Box 791 Coatesville, PA 19320 215/384-4400 FAX: 215/380-8532

SEWAGE CONVEYANCE AGREEMENT

WEST CALN CONNECTION

THIS AGREEMENT, is made on day of , 1992, between the CITY OF COATESVILLE AUTHORITY, Chester County, Pennsylvania (CCA) and VALLEY TOWNSHIP, Chester County, Pennsylvania (hereinafter referred to as Township).

WHEREAS, CCA is a municipal corporation, organized and existing under the laws of the Commonwealth of Pennsylvania, and owns and operates a sewage treatment plant for service providing public sewer service to various municipalities in and near the City of Coatesville; and

WHEREAS, the Township is also a municipal corporation, organized and existing under the laws of the Commonwealth of Pennsylvania, and provides sewage collection service to residential, commercial, and industrial users within the Township connecting its collection system to CCA's sewage treatment plant so that sewage and industrial wastes discharged by said users may be received in said plant for treatment and disposal; and

WHEREAS, CCA and the Township entered into a Sewage Treatment Agreement between the municipalities, which provides for the conveyance of sewage from CCA customers from points outside of Valley Township through the Valley Township sewage system, subject to certain terms and conditions;

NOW THEREFORE, it is agreed as follows:

ARTICLE I - DEFINITIONS.

The terms defined in this Article, wherever used or referred to in this Agreement, shall have the following respective meanings unless a difference clearly appears from the context.

Average Daily Flow - Average number of gallons per day of sanitary sewage determined by taking the total quantity of flow delivered to a point during a ninety (90) day period of time, and dividing by ninety (90) days.

Cost of Operation and Maintenance - A term used in the calculation of conveyance cost of jointly used sewage facilities in Valley Township. All costs incident to the operation of sewage collection lines and pumping stations which are commonly used by the parties for the conveyance of sewage from and by Valley Township as well as the conveyance of sewage through Valley Township by CCA, said operation to be performed in an efficient and economical manner and leading to the maintenance thereof in a state of good repair during such period. Such costs shall include the cost of all maintenance labor, repairs, normal recurrent replacements, and reconstruction (repairs to basic construction) as may be necessary, all taxes, engineering, legal and superintendence expenses, and casualty and other insurance premiums during the previous calendar year divided by four (4) for the purpose of calculating quarterly billing.

Domestic Waste - Customary wastes from kitchens, water closets, lavatories and laundries.

Industrial Waste - The liquid waste or liquid borne waste resulting from the processing employed by an industrial user, whether treated or untreated, is discharged into the Treatment Works.

Point of Connection - Point or points at which CCA receives and conducts sanitary sewage or industrial waste from the Township's system to a point for treatment or disposal or where the Township receives sanitary sewage from CCA for conveyance through the Township's system.

Sanitary Sewage - All water-carried domestic waste from residences, offices, hotels, stores, restaurants, commercial establishments, industrial establishments, and similar users within the Township.

Slug - Any sanitary sewage discharge which, for a period of fifteen minutes, shall exceed five times the average daily flow. The term particularly applies to the sudden emptying of large vats, tanks or swimming pools into the sewerage system.

Treatment Plant - Existing sewage treatment plant and facilities owned and operated by CCA, together with any additions, modifications and/or improvements thereto.

ARTICLE II - STATEMENT OF INTENT.

The parties hereto agree that it is the intent of this Agreement to provide for the conveyance of sanitary sewage from a sanitary sewer system originating at the Coatesville Country Club in West Caln Township through a portion of the Valley Township Sewer System to the CCA sewer system in Coatesville and from there to the Treatment Plant owned by CCA for treatment and disposal of those wastes, in common with other wastes flowing through the CCA system and to provide for payment to the Township by CCA for an equitable share of the cost of operation and maintenance of the jointly used conveyance facilities.

ARTICLE III - TERMS OF AGREEMENT

Section 1 - This Agreement shall be effective as of the above date and shall continue for an indefinite period from said date. Any sewage treatment agreements now existing or to be reached by the Township and CCA shall affect this Agreement in that, should CCA terminate a Sewage Treatment Agreement, this conveyance agreement between CCA and the Township shall be subject to renegotiation at that time, but the Township shall have no obligation to continue the conveyance agreements. Should the Township terminate the sewage treatment agreement, the conveyance agreement between CCA and the Township shall continue in full force and effect.

Section 2 - The Township hereby grants to CCA the right to connect a sanitary sewer emanating from the Coatesville Country Club located in West Caln Township to a manhole located at the intersection Country Club Road and Mineral Springs Road in Valley Township for the purpose of conveying sewage through the Valley Township system from the connection point to the Valley Township Sewage Meter Pit at the connection to CCA system located in Rock ~~Rock~~ Run in Valley Township. The agreement by Valley Township to convey sewage shall be subject to the payment of equitable fees to the Township to provide for the operation and maintenance of the jointly used lines as provided herein. Sewage flows conveyed through the Township system for CCA shall be deducted from, and not included in, metered flow used for billing of Valley Township by CCA, this metered flow being measured at the connection to CCA's system at the above mentioned location in Rock Run, and shall not be included in the limitation on the Township's right to discharge sanitary sewage as provided in existing or future sewage treatment agreements and shall not be included in the calculation of any future tapping fees. For the purpose of determining the quantities of sewage to be conveyed from the Country Club Connection through the Valley Township Sewage System, a metering system, approved by Valley Township shall be

installed on the Country Club property. Maintenance of such a meter and responsibility for determining the flows registered on the meter shall be as provided hereinafter.

Section 3 - If the Township, at any future time, shall transfer title to its sewage system to any municipality or authority by deed or otherwise, it shall assign all its rights and interests in and under this Agreement to said municipality or authority and, upon such assignment, the assignee shall be subject to all obligations and entitled to receive all the rights and benefits of this Agreement, and the Township thereafter shall cease to be a party to this Agreement. This Agreement also shall be binding upon and inure to the successors and assigns of any party to this Agreement.

Section 4 - CCA and the Township agree that rules and regulations which may be adopted for making of connections and use of the sewage system in conformance with the Sewage Treatment Agreement shall apply to the sewage system operated by CCA in West Caln. CCA also agrees to enforce the provisions of such rules and regulations at all times, and CCA agrees that the Township or its duly authorized representative shall have the right, at all times, to inspect sewage systems connected to Valley Township for conveyance and to compel the discontinuance of any connection which it finds to be in violation of this Agreement.

Section 5 - The parties hereto agree to comply with all applicable present and future Pennsylvania or United States laws, as well as any rules, regulations, permits, orders and requirements lawfully made by any governmental body having jurisdiction and all applicable grant agreements, unless the same are being contested in good faith by appropriate proceedings.

ARTICLE IV - CONSTRUCTION OF COLLECTION AND CONVEYANCE FACILITIES - INTERCONNECTION

Section 1 - The parties hereto understand and agree it will be necessary for the Coatesville Country Club to design, layout, and cause to have constructed a sanitary sewer connection from the Club facilities in West Caln Township, such facilities to be subject to the approval of Valley Township. The ownership of said sewer connection shall be private and its maintenance and operation the responsibility of the Coatesville Country Club.

Section 2 - The sanitary sewer connection from the Country Club to the manhole at Country Club Road and Mineral Springs Road, the connecting point cited above, shall be constructed or caused to be constructed by the Coatesville Country Club.

Section 3 - Sanitary sewage from Coatesville Country Club shall be collected and conveyed to point of connection, as outlined on the final plans, approved by Valley Township and CCA.

Prior to the connection of the referenced facilities by the Coatesville Country Club (under the auspices of CCA) to complete this interconnection, the following activities will be carried out to determine the practicality of such an interconnection or increase in flow:

A. The respective engineers of each party will meet to exchange technical data regarding the proposed interconnection. This data will include:

1. The proposed point of connection.

2. Anticipated initial flow.

3. Rate and frequency of discharge.

4. Anticipated ultimate flow.

5. Adequacy of receiving sewer.

6. Type of control and/or metering device.

7. Estimated cost of downstream improvement, if required.

B. The proposed interconnection flow will not be approved if the proposed discharge will overload the receiving sewer unless the CCA agrees to compensate adequately the Township for corrective measures necessary to make the receiving sewer adequate for the proposed discharge. If the receiving sewer is limited in capacity, discharge will be limited to the available capacity until such time as adequate capacity is made available.

C. CCA or the Coatesville Country Club shall secure all necessary easements, rights-of-way, and permits from all sources whatsoever as may be required to deliver sewage to the point of connection to the Township sewage collection system. The consulting engineer of the Township shall have the right to approve the plans and to inspect the manner of the making of such connections between CCA and the Township sewers; the same shall not be used until such time as the Township shall receive written notice from the Township's consulting engineer that the construction of such connections has been accomplished in accordance with the approved plans and specifications relating thereto. Neither the Township nor its consulting engineer shall unjustifiably delay approval.

Section 4 - At or before the commencement of actual sewage disposal service CCA shall cause to have installed and thereafter at all times maintain the meter system cited in Section 2, Article III above. Said meter shall be subject to the approval

of the Township. The expense of procurement, installation, and maintenance thereof shall be borne by CCA and the Coatesville Country Club.

A. The device(s) shall be inspected and calibrated, and tested for accuracy at least once every six months by a person or entity competent in the inspection and testing of such devices. Certified reports of such inspections shall be mailed directly to the Township. The cost of such inspection and the cost of any repair or replacement shall be borne by CCA. All repairs of meters of any type shall be accomplished within 30 calendar days of receipt of the inspection company's report attesting to the meter's malfunction.

B. In the case of missing flow records due to faulty meter registration or otherwise, an estimate of flows will be made for the purposes of determining volume of sewage discharged. This estimate will be based on an evaluation of past flow records as applied to present conditions, and as reviewed and approved by the engineers for both CCA and the Township.

C. Meter records and the meter installations shall be made available and accessible to the Township. The record of sewage flow through recording meters operated and maintained by CCA will be read by CCA on the first days of January, April, July and October, showing the total and daily sewage flows discharged during the previous three-month period. The Township reserves the right to inspect and read meters upon 24 hour notice to CCA.

D. The Township shall have the right, upon written request, to a calibration check of CCA's meter(s) at any time outside the normal scheduled calibration time for the purpose of checking its accuracy. This non-scheduled calibration will flows discharged during the previous three-month period.

The Township reserves the right to inspect and read meters upon 24 hour notice to CCA.

D. The Township shall have the right, upon written request, to a calibration check of CCA's meter(s) at any time outside the normal scheduled calibration time for the purpose of checking its accuracy. This non-scheduled calibration will be performed by CCA as described in Section 4.a hereof. If results of such non-scheduled calibrations show that the meter(s) was malfunctioning by variations from actual flow of more than five (5) percent, then all costs of the non-scheduled calibration and any repair or replacement will be paid by CCA. If no violation is found, then the Township shall pay all costs for the calibration.

Section 5 - Maximum flow rates at any point of interconnection shall not exceed 3.0 times the average daily flow rate at any time. Maximum flow rates equal to 3.0 times the average flow rate shall be limited to a duration of not more than 30 minutes in any day.

ARTICLE V - MAINTENANCE, SAVE HARMLESS AGREEMENT, INSURANCE.

Section 1 - CCA and the Township agree, in regard to their respective collection systems, to operate continuously and keep and maintain the same at all times in good repair and order, and in good and efficient operating condition, and to meet the standards prescribed by the Pennsylvania Department of Environmental Resources or of any other governmental authority having jurisdiction thereof.

Section 2 - The Township agrees to indemnify and save harmless CCA against all losses, costs, or damages on account of any injury to persons or property occurring in the performance of this Agreement because of the negligence of the Township, its

respective servants, agents, or employees, or resulting from the failure of the treatment plant and lines leading thereto to function properly because of such negligence.

Section 3 - CCA agrees to indemnify and save harmless the Township against all losses, costs, or damages on account of any injury to persons or property occurring in the performance of this Agreement because of the negligence of CCA, its respective servants, agents, or employees, or resulting from the failure of the treatment plant and lines leading thereto to function properly because of such negligence.

Section 4 - CCA and the Township shall insure or cause to be insured their respective facilities (i.e., including but not limited to treatment plant, capital additions and interceptors) in a responsible company or companies authorized and qualified to do business under the laws of the Commonwealth of Pennsylvania against loss or damage by fire and against such other risks in such amounts as usually are carried upon, or with respect to, like property in Pennsylvania. Immediately after any loss or damage to either parties' facilities or any part thereof, the affected party will commence and duly prosecute the repair, replacement, or reconstruction of the damaged or destroyed portion of its facilities, all according to the provisions as previously defined. Both parties will also maintain liability insurance with an aggregate limit in the amount of $2,000,000 against any loss or injury to third persons or property of third persons as a result of fire, explosion, and other risk and casualty occurring to their respective facilities.

ARTICLE VI - CHARGES AND PAYMENTS.

Section 1 - Quarterly billings to CCA for the conveyance of CCA sewage through the Township system shall be delivered by the Township and shall be payable as provided hereinafter. Billing shall be based upon the proportionate share of the operating and

maintenance costs of the commonly used lines to be determined by the following formula:

$$\text{Cost of Conveyance} = OM \times L1/L2 + OM \times F1/F2$$

OM is the cost of operating and maintenance for sanitary sewage collection lines in Valley Township. OM shall be determined by the Township subject to the review of the appropriate financial records by CCA.

L1 is the total length of commonly used lines.

L2 is the total length of all sewage collection lines in Valley Township.

L1 and L2 shall be determined from the mapping of the Township sewer system.

F1 is the flow into Valley Township as metered by CCA for determination of sewage flow. F1 shall be determined by meter readings.

F2 is the total flow in the commonly used lines. F2 shall be calculated by the Township subject to review and approval by CCA and using where appropriate metering records at the downstream Township points of connection with the CCA system.

The cost of conveyance shall be calculated on an annual basis or at the time of the connection made by CCA to the Township system or where significant changes (more than 10% of total connected daily flow) occur within the Valley Township system. Calculation for cost of conveyance shall be available for confirmation no less than thirty days before taking effect.

ARTICLE VII - MISCELLANEOUS.

Section 1 - The failure of any party hereto to insist upon strict performance of this Agreement or any of the terms or conditions thereof shall not be construed as a waiver of any of its rights hereunder.

Section 2 - This writing constitutes the entire Agreement between the parties, and there are no other representations or agreements, verbal or written, other than those contained herein.

Section 3 - Whenever a notice is required to be given by mail, the following addresses shall be used unless a different address is specifically called for:

City of Coatesville Authority
114 East Lincoln Highway
Coatesville, Pennsylvania 19320

Valley Township
890 West Lincoln Highway
Coatesville, Pennsylvania 19320

Section 4 - This Agreement may be executed in any number of counterparts, each of which shall be properly executed by the Township and CCA, and all of which shall be regarded for all purposes as the original.

Section 5 - In the event that the Department of Environmental Resources of the Commonwealth of Pennsylvania, or any other regulatory body or governmental agency, shall fail or refuse to issue any permits for conveyance which may be necessary to accomplish the intent and purpose of this Agreement, the parties shall be relieved from further compliance with the terms of this Agreement until such time when such permit or permits shall be issued.

Section 6 - In the event that any disputes shall arise relative to the interpretation and/or application of the terms of this Agreement, the parties hereof do hereby agree to the following procedure to settle such matters:

A. The parties, operators, and/or managers will attempt to discuss and solve the problem.

B. If Step "A" does not prove satisfactory, a joint committee comprised of three members (the solicitor, engineer, and an Authority Board member or supervisor) for each party will meet to attempt to solve the problem.

C. If neither of the above steps proves successful, the dispute shall be resolved by decision of a panel consisting of the consulting engineer of each of the respective parties to the dispute, and an additional consulting engineer chosen by and acceptable to the parties.

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be executed by their appropriate officers and their respective seals to be hereunto affixed on the day and year first above written.

CITY OF COATESVILLE AUTHORITY

Attest: _____ By: _____

VALLEY TOWNSHIP

By: _____

_____

Attest: _____ _____

APPENDIX F

SEWER MAIN EXTENSION AGREEMENT – ROCK RUN PUMP STATION SEWER EXTENSION (2006)

SEWER MAIN EXTENSION AGREEMENT

ROCK RUN PUMP STATION SEWER EXTENSION

THIS AGREEMENT, made this 7th day of March, 2006, by and between Pennsylvania-American Water Company, with offices at 800 West Hershey Park Drive, Hershey, Pennsylvania 17033 ("PAWC"), DHLP – Oakcrest, L.P., 435 Devon Park Drive, Building 200, Wayne, Pennsylvania 19087, 610-535-6000 ("Developer"), Valley Township, 890 West Lincoln Highway, Coatesville, Pennsylvania 19320, 610-384-5751 ("Township").

WHEREAS, PAWC, Developer, and Township have agreed upon terms and conditions pursuant to which sewer service will be supplied by PAWC for the new pump station already constructed known as Rock Run Pump Station in Valley Township, Chester County, Pennsylvania, which is located at _____ in Valley Township;

WHEREAS, PAWC is willing to provide sewer service to the new pump station constructed by Valley Township; and

WHEREAS, Township has requested PAWC to extend its sewer mains to replace the existing Township forcemain connection that falls within the City of Coatesville as identified on the plan attached hereto as Exhibit "A"; and

WHEREAS, Township is willing and desires to assist in the installation of such extension and desires to bear the cost with funds provided by the developer.

NOW, THEREFORE, IN CONSIDERATION OF THESE PRESENTS, the parties intending to be legally bound hereby, mutually promise, covenant and agree as follows:

1. Upon execution of this Agreement, the Developer on behalf of the Township will deposit with PAWC the sum of $5,000.00 as indicated in the estimate attached hereto as Exhibit "B". This sum represents the remaining balance for the estimated engineering, inspection, contingencies, administrative and legal costs as well as deposit for security for the receipt of as-built drawings, computer as-built drawing files, and easements (if applicable) associated with the installation of the sewer service for the pump station referenced above. Completion of the project includes receipt by PAWC of as-built drawings and dedication of the system with required easements and bill of sale. Any unused portion of the escrow deposit will be released to the Developer upon acceptance of dedication of the Sewer System.

   With respect to the portion of the project Developer will construct pursuant to the provisions of Paragraph 2 below, Developer shall provide PAWC with assurances in the amount of $419,888.70 by a performance bond or letter of credit or escrow account in form and content acceptable to PAWC. PAWC shall have the right to call upon such letter of credit, bond or escrow account to pay for the unfinished portion of the project at the termination of the term unless renewed at an appropriate amount to provide for the work remaining to be done. The Developer may request, and PAWC shall authorize, the reduction of the amount of the performance bond or letter of credit, from time to time

(with a maximum of monthly draw-down) by the amount(s) representing the value of work completed at the time of the request and since any previous request and reduction.

PAWC may elect to terminate this Agreement if the Developer fails to deposit with PAWC the escrow and assurances listed above within one (1) calendar year from the date of this Agreement. PAWC shall provide sixty (60) days written notice to the Developer of the intent to terminate this Agreement. If a satisfactory response or action is not received by PAWC after the sixty (60) days, the Agreement may be terminated.

2. The Developer shall perform the following work pursuant to this Agreement at the Developer's expense:

   a. Construct an extension of an existing sewer main, services and other facilities as indicated on the drawings, Exhibit "A", and in estimates attached hereto as Exhibit "B"; said installation to be completed according to PAWC specifications for the construction of sewer mains attached hereto as Exhibit "D" . These Exhibits are made a part hereof as if completely incorporated herein. This installation of the main shall be under PAWC's direction and observation and shall include all required appurtenances to complete the system according to PAWC's specifications.
   b. Install approximately 2,450 linear feet of 10"force main, 440 linear feet of 15" gravity sewer main, 2 manholes, 2 air-release manholes.
   c. Excavate, backfill and restore all areas consistent with the regulations of PAWC and the regulations of the City of Coatesville and the Pennsylvania Department of Transportation (PennDOT), if applicable. Developer shall prepare applications on behalf of PAWC and in the name of PAWC, for the proper road and construction permits from the City of Coatesville and PennDOT.
   d. Provide connection to the existing sewer main as indicated on the drawings, Exhibit "A".
   e. Install all sewer main appurtenances as shown on the plans, Exhibit "A" and "D".

3. Developer agrees to advise PAWC before installing sewer services as provided in this Agreement. Developer shall apply for service applications and pay the fee for all sewer services installed hereafter. Developer agrees to pay all other applicable charges and fees in connection with Rock Run Pump Station Sewer extension. New service connections must be in a currently approved Act 537 service territory and be in accordance with PAWC's Connection Management Plan as approved by PADEP.

4. Developer covenants and agrees to indemnify PAWC against any and all loss or damage which PAWC may suffer as a result of any damage to its sewer lines or service lines caused by Developer, its employees, agents servants or workmen or any contractors or subcontractors employed by it: (a) in the development of and construction upon the premises abutting on the streets in which sewer mains are to be constructed pursuant to this Agreement; or (b) in the construction or surfaces of any of the streets in which the sewer mains are to be installed pursuant to this Agreement.

5. Developer will be responsible for any damage to any private property incurred that is incidental to the construction work being performed pursuant to this Agreement. Developer shall be responsible for any restoration necessary to private property that is affected in any way by the construction undertaken pursuant to the extension of sewer service pursuant to this Agreement. Developer agrees to indemnify PAWC against any and all loss or damage to private property which may occur as a result of or incidental to the construction of the sewer main extension, the installation of sewer service lines and connections and all work performed therewith.

6. It is further understood and agreed by and between the parties hereto that the Developer shall be responsible for obtaining all necessary consents, orders, permits and approvals of public officers or public bodies having jurisdiction over or lawful interest in any of the subject matters herein.

7. Developer agrees that it will not build at any time hereafter on, in or over any utility easement or structure, the construction or presence of which will endanger or render ineffective or difficult access the sewer mains to appurtenances of PAWC.

8. Upon completion and acceptance of the aforesaid sewer main construction and other work referenced in this Agreement on the plans attached hereto, PAWC, upon proper application, shall: (a) provide sewer service to Township in accordance with its rules and regulations, and (b) provide service as approved by PADEP and in accordance with PADEP regulations. Pursuant to this Agreement, proper application shall include payment of all applicable fees by the developer and charges in effect at the time of application provided in PAWC's rules and regulations for the extension of sewer service to customers.

9. Any difference between the actual cost of installing the sewer service and main extension and the amount escrowed by the Developer for the installation of the system described in this Agreement and the plans attached hereto will be borne by the Developer. The Developer understands that the estimates attached hereto are simply estimates and are not a guarantee of certification of the cost of the system, which is the subject of this Agreement. Such cost variation might be caused by (but not limited to) unforeseen rock excavation or other unusual-soil conditions. Other unforeseen conditions could cause additional cost beyond the estimates attached hereto. PAWC assumes no responsibility for additional costs over and above the estimated amounts provided and attached to this Agreement as Exhibits.

10. PAWC and both Township and Developer hereby agree that the cost of construction shall include the cost of the materials and labor to be supplied for the construction of the sewer main and appurtenances thereto, the engineering and inspection costs related to the construction thereof, and the administrative and legal costs incurred by PAWC in the construction and installation of said main and all appurtenances thereto.

11. Construction of the system will be deemed completed on the date (the "Completion Date") when PAWC notifies Developer of the satisfactory results of a performance test of the system performed by the Developer, which will be conducted under supervision of

Valley Township promptly following Developer's notice to PAWC that the system has been installed in accordance with the plans and specifications.

Promptly following the completion date, Developer shall deliver to PAWC a certification of the construction costs of the system, as well as "as-built" drawings of the system, in form and content satisfactory to PAWC, including the computer drawing files associated with the "as-built" drawings. As a condition precedent to the furnishing of service after the completion of the system, the Developer shall pay to PAWC an amount equal to its reasonable and customary administrative, engineering and construction overhead costs that were incurred by PAWC in connection with the system and this Agreement, provided said sums have not been previously paid to PAWC by Developer.

12. Developer shall warrant the construction and materials used, in the construction of the Sewer System for a period of eighteen (18) months after PAWC has certified that the Sewer System has been completed, tested, and found to conform with the requirements of this Agreement. In order to guarantee this warranty, Developer shall provide PAWC with a bond or other form of surety acceptable to PAWC and its solicitor in the amount of fifteen (15) percent of the estimated construction cost as outlined in Exhibit "B" attached hereto. This bond shall remain in effect for a period of eighteen (18) months (warranty period) from the date of dedication.

    Developer shall repair or replace any defects in materials or construction of which Developer is given written notice by PAWC during said warranty periods, and in the event that Developer fails to diligently commence or pursue said repairs or replacement, or if PAWC exclusively determines the defects in materials or construction constitute an emergency that adversely impacts PAWC's ability to provide service, PAWC has the right (but not the obligation) to undertake said repairs and replacement and to use the bond or other accepted surety to pay for the work to correct the defects. If the cost of making the repairs exceeds the amount of the bond, PAWC shall have the right to recover the additional costs from Developer.

13. Until the Dedication Date, Developer shall maintain and operate the undedicated portions of the Sewer System to ensure such will be in good condition and repair at the Dedication Date, and shall pay PAWC for the use of any sewer consumed in accordance with its rules and regulations.

14. Dedication of the sewer main extension by both the Township and Developer to PAWC shall be accomplished by the execution and delivery by the Developer to PAWC of the following documents in the form and format acceptable to PAWC:

    a. A Bill of Sale;
    b. A Grant of Easement for the easement area with a legal metes and bounds description of the easement (if required);
    c. As-Built Drawings and computer drawing files indicating the location of the main and appurtenances thereto and also, indicating the location of any easements;

At or prior to the aforesaid dedication, the parties hereto may mutually agree to amend the aforesaid documents or to execute and deliver additional documents in connection with said dedication, without the necessity of amending this Agreement.

The Developer agrees that good and marketable title to the system will be dedicated by said Bill of Sale, and that, by said Grant of Easement (if required), an easement in the easement area shall be granted to PAWC, free and clear of all liens and encumbrances, except for existing road and utility easements, building restrictions and like matters of record. The date on which the system and easement area shall be dedicated to and accepted by PAWC is herein referenced as the "Dedication Date".

15. Upon dedication of the sewer main as hereinbefore described with the necessary valves, connection fittings and other appurtenances, these facilities (but not service laterals) at all times shall be the property of PAWC and no charge or lien upon them shall arise as a result of this Agreement. PAWC shall also have the right, by virtue of its ownership of said mains, to make any additions or extensions in its sole and absolute discretion.

16. This Agreement contains the entire agreement of the parties hereto, and there are no other understandings, written or oral, between the parties relating to the subject matter of this Agreement that supersede, cancel, or terminates any and all rights or obligations that may have arisen between the parties.

17. All representations, warranties, and agreements of PAWC, Township, and Developer set forth in this Agreement shall survive the dedication date and the parties shall be entitled to rely upon such representations, warranties and agreements.

18. This Agreement may not be amended except by instrument in writing signed by the parties hereto, and no claimed amendment, modification, termination or waiver shall be binding unless in writing and signed by the parties against whom such claimed amendment, modification, termination or waiver is sought to be enforced.

19. The Township's and Developer's obligations hereunder may not be assigned to any other person or entity without the prior written consent of PAWC; provided that, this Agreement shall be terminated and the Township and Developer shall be released from any further liability or obligations hereunder, if, and at such time, as any other developer with Township concurrence executed and delivers an agreement with PAWC in the same form as this Agreement, or such other form as is approved by PAWC, together with financial security in the form required hereby or such other form as is approved by PAWC.

20. This Agreement shall be binding, and inure to the benefit of, the parties as well as their successor and assigns.

21. Nothing herein shall be construed as an agreement by PAWC to furnish additional sewerage capacity outside that which is currently contracted for with Valley Township.

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be duty executed and delivered as of the date first above written.

WITNESS:

PENNSYLVANIA-AMERICAN WATER COMPANY

By: _____
Manager

WITNESS:

VALLEY TOWNSHIP

By: _____
Chairman, Board of Supervisors

WITNESS:

DEVELOPER: (DHLP – Oakcrest, L.P.)

By: _____

SUMMARY OF EXHIBITS

ROCK RUN PUMP STATION SEWER EXTENSION

Exhibit	Description
A	Proposed Sanitary Force Main Plans for Pennsylvania American Water Company
B	Cost Estimate
C	Bill of Sale
D	Technical Specifications and Standard Details

EXHIBIT A

ROCK RUN PUMP STATION SEWER EXTENSION

DRAWING LIST

The sewer main extension drawings referred to as Exhibit "A" in the above mentioned agreement were prepared by:

Company Name:

Conver and Smith Engineering, Inc.

Company Address:

358 Main Street
Royersford, PA 19468

Phone and Fax:

Phone – (610) 948-8947 Fax – (610) 948-3261

The drawing information is as follows:

Plan Date:	August 24, 2004
Latest Revisions:	January 19, 2005
Total Number of Sheets:	1 through 6
Project Number:	Plan No. C-04-056

EXHIBIT B

ROCK RUN PUMP STATION SEWER EXTENSION

SEWER COST ESTIMATE

The following estimate is to be incorporated into the Sewer Main Extension Agreement for this project. The basis for the costs is from a cost proposal submitted by the Developer on behalf of the Township, which was received from his Contractor. The Developer will submit a signed Contract with the Contractor to PAWC when available. The costs represent off site work.

Estimated Construction Cost for Sewer Main		$381,717.00
Contingency (10%)		$ 38,171.70
	Subtotal	$419,888.70
(1) Total to be Deposited with PAWC via Bond or Letter of Credit		**$419,888.70**
Inspection		$ 4,000.00
As-Built Drawings & Dedication Documents		$ 500.00
Legal, Engineering, and Administrative		$ 500.00
	Subtotal	$ 5,000.00
Escrow Deposit Received		(-) $ 0.00
(2) Additional Funds to be Deposited with PAWC in Escrow Account (Prior to construction beginning)		**$ 5,000.00**

EXHIBIT C

ROCK RUN PUMP STATION SEWER EXTENSION

BILL OF SALE

KNOW ALL MEN BY THESE PRESENTS that DHLP – Oakcrest, L.P. ("Seller"), for and in consideration of the sum of ONE DOLLAR ($1.00) and other good and valuable consideration paid unto it by Pennsylvania-American Water Company ("Buyer"), receipt of which is hereby acknowledged, has granted, bargained, sold, and delivered and by these presents does grant, bargain, sell and deliver unto Buyer, all of Seller's right title and interest in and to all and singular the personal property, including, without limitation, all machinery, equipment, sewer storage facilities, and pipe, placed or located by Seller, pursuant to a certain Agreement between Seller and Buyer dated _____, 20_____, on or within a certain strip of land located within City of Coatesville, Chester County, Pennsylvania;

TO HAVE AND TO HOLD the said personal property until the Buyer, its successors and assigns, to and for its own proper use, benefit, and behoove forever;

AND the said Seller does hereby covenant with the Buyer that it is the lawful owner of said personal property, that said personal property is free from all encumbrances, that it has the power, right and authority to sell and dispose of said property, and that it will warrant and defend the same against all claims and demands of all persons claiming or demanding the same by, from or under it.

IN WITNESS WHEREOF, the Seller has caused this Bill of Sale to be duly executed on this day of _____ _____, 20_____.

ATTEST:

_____ By: _____

(CORPORATE SEAL)

EXHIBIT D

TECHNICAL SPECIFICATIONS AND STANDARD DETAIL
FOR THE INSTALLATION
OF SEWER MAINS

APPENDIX G

WATER SERVICE AGREEMENT (1990)

WATER SERVICE AGREEMENT
VALLEY TOWNSHIP

THIS AGREEMENT, dated the 6th day of MARCH, 1990, by and between CITY OF COATESVILLE AUTHORITY (CCA), a Pennsylvania Municipal Authority organized and existing under the Pennsylvania Municipal Authorities Act of 1945, located at 114 East Lincoln Highway, Coatesville, Pennsylvania, and the Township of Valley (Township), a Second Class Township organized and existing under the laws of the Commonwealth of Pennsylvania with its principal office located at 890 West Lincoln Highway, Coatesville, Pennsylvania.

WITNESSETH:

WHEREAS, the City of Coatesville has caused to be incorporated the City of Coatesville Authority, a Pennsylvania Municipal Authority; and

WHEREAS, CCA, pursuant to the authority vested in it by law has developed water resources and is in the process of developing additional water resources in the Coatesville region, is treating such water as needed and is providing for the transmission and distribution of such water to general areas of need in the Coatesville region; and

WHEREAS, the Board of Supervisors of Valley Township has ordained and enacted a resolution requesting CCA to provide bulk water service to the Township pursuant to the terms of this Agreement; and

WHEREAS, there is need for a safe and adequate supply of public water in parts of the Township; and

WHEREAS, the Township desires to acquire bulk water from CCA and provide said water directly to its residents pursuant to the terms of this Agreement; and

WHEREAS, the parties hereto desire to set forth the terms and conditions which shall be applicable to the sale and delivery of water by CCA to the Township and within the Township; and

WHEREAS, CCA and the Township have agreed to areas as shown on Exhibit "A" and listed on Exhibit "B" within the Township where CCA will provide water directly to water users in the Township pursuant to the terms of this Agreement.

NOW, THEREFORE, CCA and the Township for and in consideration of covenants, promises and agreements contained to be kept and observed, each intending to be legally bound hereby, covenant and agree as follows:

1. CCA covenants and agrees to sell bulk water to the Township to enable the Township to directly serve public water to all users within the boundaries of the Township, except those locations indicated by the shaded areas on the map of Valley Township attached hereto as Exhibit "A" and incorporated herein by reference and those tax parcels listed on a Schedule of Tax Parcels Serviced by CCA attached hereto as Exhibit "B" and incorporated herein by reference as if fully set forth herein. Those shaded areas on Exhibit "A", except as hereafter modified, and those tax parcels appearing on Exhibit "B" are and will during the term of this Agreement be served by CCA. In addition, that shaded area of Exhibit "A" west of Airport Road and north of Lincoln Highway, as well as Highlands Corporate Center shall be served by CCA.

It is understood and agreed between CCA and Valley Township that with respect to Exhibit "A" attached hereto that the shaded surface area south of Valley Road and north of Valley Crossing contains a present customer or customers of CCA. That customer or those customers shall continue to be serviced by CCA. All new customers in this shaded area, however, are to be served by public water from Valley Township.

2. Bulk water will be served to the Township for this purpose through connections made to existing CCA mains generally shown on Exhibit "A" and through meter pits to be constructed at each connection point, said connection points are also listed on Exhibit "A". Said meter pits shall be constructed in accordance with designs provided by CCA and in accordance with CCA specifications. The meter pits and other equipment will be purchased and installed by the Township including the construction of all connecting lines. The construction of connecting lines shall include excavation around the CCA main to be tapped and the provision and installation of the appropriate tapping sleeve. All work performed by the Township will be subject to inspection by CCA. Valley Township will pay a $2,500.00 connection fee to CCA for each of the three taps agreed upon in this agreement. CCA will perform the connections. The size of the meters at each connection point shall be mutually determined by CCA and the Township engineers. Thereafter, CCA will own and maintain the meters. The Township will own and maintain connecting lines, meter pit, and appurtenant facilities except for facilities installed on the CCA system.

With respect to the connection fee(s) of $2,500.00 due from the Township to CCA for each of the three taps specifically mentioned in this Agreement, namely (1) Red Road North, (2) Airport Road and Route 30 and (3) Highlands, the parties do hereby acknowledge that the connections may already be in place for one or more of the three taps. For any such connection that is currently in place the Township shall not be obligated for the payment of $2,500.00 to CCA at the time of the tap.

3. In order to determine the continuing adequacy of supply at the various tapping points undertaken between the Township and CCA as new development and/or interconnections are made within the Township system, the Township, through its' engineer, will supply plans relative to serving additional areas of the Township or for interconnections internally within the system which may reinforce, loop or otherwise affect the flow of water from CCA's system. Any plans for extension of the Township system should be accompanied by a summary of additional units to be connected and of any additional substantial fire demands which may be imposed upon the system. Water System design and inspection of the Township water system shall be performed by, or as directed by the Township's engineer. Design will be in accordance with standard practice, looping systems where possible and practical. Distribution design and drawings will be made available at no cost to CCA; however, any review costs by CCA or its engineer will be at CCA's expense.

4. The first tap CCA will provide Valley Township will be located on Red Road north of Valley Road in Valley Township, and this tap shall be known as the Red Road tap. Valley Township will pay CCA a capacity fee of $116,000.00 for this tap, and said sum shall be payable in five equal annual installments of $23,200.00. The first of the 5 equal annual installments of $23,200.00 shall be due immediately prior to the time the tap is performed, or by December 30, 1990, which ever date occurs first. The capacity fee shall be due and payable to CCA regardless of whether the tap has been actually made as of December 30, 1990. The Township will receive a bill for $23,200.00 on the anniversary month in each of the four years following the initial payment of the capacity fee pursuant to this tap. Payment shall be due thirty days after the invoice date and the prevailing CCA penalty rate will be applied to late payments.

With respect to the Red Road Tap, once the peak daily usage exceeds 150,000 gallons per day, individual users in excess of 10,000 gallons per day will be assessed an additional capacity fee by Valley Township, said fee to be determined according to CCA's rate schedule and Valley Township will pay said capacity fee to CCA. Valley shall notify CCA of any user of more than 10,000 gallons per day when such a user comes onto the Valley system, at which time the user shall be obligated to pay the additional capacity fee to Valley Township, which will, in turn, pay such additional capacity fee to CCA.

5. CCA shall provide a second tap to Valley Township and said tap shall be located at Airport Road and Route 30 and said tap shall be known as the Lincoln Highway tap. Valley Township shall pay CCA a capacity fee of $100,000.00 for this tap, payable in five equal annual installments of $20,000.00 each. The first of the five equal annual installments of $20,000.00 shall be due immediately prior to the time the tap is made or by August 30,

1991, which ever date occurs first regardless of whether the tap has been made or not. The Township will receive a bill for $20,000.00 on the anniversary month in each of the four years following the initial installment payment of the capacity fee with respect to this tap. Payment shall be due thirty days after the invoice date and the prevailing CCA penalty rate will be applied to late payments.

With respect to the Lincoln Highway tap, once the peak daily usage exceeds 400,000 gallons per day, individual users in excess of 10,000 gallons per day will be assessed an additional capacity fee by Valley Township, said fee to be set according to CCA's rate schedule, and Valley Township shall pay said capacity fee to CCA. Valley shall notify CCA of any user or more than 10,000 gallons per day when such a user comes onto the Valley system, at which time the user shall be obligated to pay the additional capacity fee to Valley Township, which will, in turn, pay CCA such additional capacity fee.

6. CCA shall provide a third tap to Valley Township and said tap shall be known as the Highlands tap, and said tap shall be located as indicated on Exhibit "A". Valley Township shall pay CCA a capacity fee of $116,000.00 for this tap, said capacity fee shall be payable in five equal annual installments of $23,200.00 each. The first of the five equal annual installments of $23,200.00 shall be due immediately prior to the time the tap is made, or by December 30, 1993, whichever date occurs first, regardless of whether the tap has been made. The Township will receive a bill for $23,200.00 in the anniversary month in each of the four years following the year the initial installment payment was made for the capacity fee for this Highlands tap. Payment shall be due thirty days after the invoice date and the prevailing CCA penalty rate will be applied to late payments.

With respect to the Highlands tap, once the peak daily usage exceeds 400,000 gallons per day, individual users in excess of 10,000 gallons per day will be assessed an additional capacity fee by Valley Township, said fee to be according to CCA's rate schedule and Valley Township shall pay said capacity fee to CCA. Valley shall notify CCA of any user of more than 10,000 gallons per day when such a user comes onto the Valley system, at which time the user shall be obligated to pay the additional capacity fee to Valley Township, which will, in turn pay CCA such additional capacity fee.

7. CCA and the Township agree that any service area east of Route 82 will be served by a fourth tap and the Township will pay CCA an additional capacity fee to be negotiated by Township and CCA for this tap. Said capacity fee shall be negotiated at a future date when the details of this tap have been disclosed.

8. Unless otherwise provided by subsequent agreement, CCA shall have available to the Township for emergency purposes a fire flow of 1,500 gallons per minute to be sustained for a two hour period with a minimum residual pressure at the point of connection of 40 psi at the Red Road tap. Available fire flows at the Lincoln Highway tap will be 750 gallons per minute for a two hour duration at a minimum residual pressure of 40 psi and 500 gallons per minute for a two hour duration at a minimum residual pressure of 40 psi at the Highlands tap. The Township shall be responsible for providing adequate system capacity for fire protection purposes beyond the interconnection point. The provision of emergency fire protection water for hydrants owned and maintained by the Township within the Township service territory shall be at rates for water service applying to the bulk metering points. Charges for hydrants owned and maintained by CCA in CCA service territory shall be billed to the Township at rates provided in Paragraph 9 below.

9. In all instances where fees are required or use rates are applicable (except the capacity fees established pursuant to this Agreement in paragraphs 4, 5, and 6 and future capacity fees to be negotiated pursuant to paragraph 7 hereof), these rates and fees shall be such as are provided in the published rate and fee schedule of CCA prevailing at the time.

Whenever CCA increases rates by more than 10% in the aggregate over a 3 year period, or in excess of 6% in any given year, Township shall have the option of requesting that CCA engage a qualified third party rate consulting engineer to review the rationale for the rate increase and the appropriateness of said increase. CCA shall advise the Township of the consulting engineer or firm it desires to engage within thirty days of receipt of the request from Township. Township shall have thirty days to either accept the third party engineer or firm selected by CCA or provide CCA with the name of another qualified third party rate consulting engineer. If CCA does not accept Township's suggested consulting engineer, CCA and Township shall submit the choice of the consulting rate engineer to arbitration within thirty days. CCA and Township shall each select one arbitrator and the two arbitrators shall select a third arbitrator and this arbitration panel shall select the third party consulting engineer from lists submitted by CCA and the Township. Whenever either party fails to exercise its right to select the consulting engineer or to invoke the arbitration process within any of the thirty day periods specified above, such failure by that party to act shall constitute a waiver of the right.

In the event that the process of selecting a third party rate consulting engineer shall extend into the time period for which the increased rate would go into effect, CCA shall maintain its previous rates and fees. In the event that the third party

rate consulting engineer concurs or recommends a rate increase, Township shall pay CCA the difference between the new rate retroactive to the initial date of rate increase less the amount already paid CCA by the Township under the previous rate. In the event of sums owed CCA by the Township, said sums shall be paid to CCA within thirty days of the date the rate has been determined and recommended by the third party rate consulting engineer without penalty or interest. After thirty days, CCA's prevailing penalty and interest rates shall apply.

10. CCA agrees to read the bulk meter(s) on a monthly basis and to submit bills to the Township on said monthly basis. The Township agrees to pay promptly in accordance with said bulk meter reading subject to provisions of this Agreement. CCA agrees to maintain and calibrate the meters in accordance with standard practice of CCA for maintenance and operation of bulk meters. The Township may request at any time a special accuracy test to be performed by a certified meter testing laboratory to verify the accuracy of the meter(s). Should meters as a result of such tests be found to be inaccurate and require recalibration, the test and calibration will be the responsibility of CCA. If meters are found to be accurate or to read low, the Township will pay the testing costs. CCA agrees to maintain the accuracy limits of the meters to within normal allowable industry standards. The Township and CCA shall have full and complete access to all meters to read meters and to verify their accuracy. Duplicate keys shall be issued to each party. All fee or rate changes during the term of this Agreement, or any extension thereof, shall be in accordance with paragraph 9. At least sixty days prior to the implementation of any rate increase, CCA shall notify the Township of its intent to change rates. In no event shall a disputed rate increase be justifiable cause for the Township to withhold payment for bulk water provided to the Township by CCA. At a minimum, should the Township dispute or challenge a rate increase, the Township shall be obligated to pay the previous rate until said dispute or challenge is resolved.

11. In order to maintain control of pipe installations and maintenance thereof within its boundaries, the Township requires that CCA apply for all permits and easements in public streets or roads and rights of way owned by the Township. The Township agrees to issue permits to CCA for access to easements in Township streets, roads and in rights of way in other properties owned by the Township, necessary for maintaining, improving and constructing of new water mains and appurtenances within its service areas of the Township (reference Exhibit "A"). The Township will also issue permits to CCA upon applications for excavation to repair existing water mains and appurtenances. The Township will require that permits be obtained in all cases and that the requisite permit fee be paid prior to work being performed. A permit for emergency work shall be obtained on the

next normal work day for work done on weekends or after office hours. It is also necessary that all trench repairs be made in accordance with the Township Standard Specifications.

12. In recognition of the fact that the policy of the Commonwealth of Pennsylvania through the Municipality Authorities Act and the Pennsylvania Public Utility Commission (PUC) is to avoid competition among providers of public utility services within given service areas, the Township covenants and agrees that it will not extend its lines beyond its Township borders to service any customers in other municipalities. CCA covenants that it will not extend its lines within the Township to directly serve customers within the Township in areas other than those areas CCA is entitled to serve pursuant to the terms of this Agreement as said areas are indicated on Exhibits "A" or "B" as mentioned in Section 1 hereof unless specifically requested by the Township and upon signed amendment to this Agreement. Further, Township agrees to enter into mutually agreeable conveyancing agreements with CCA where necessary to facilitate CCA's service of areas outside the borders of Valley Township.

13. In the event that CCA finds that it is necessary to curtail deliveries to its customers within CCA's service areas, the quantities of water to be delivered to the Township shall be curtailed in the same proportion and to the same extent and in common with all other customers purchasing water from CCA. In the event of drought restrictions either imposed by CCA or imposed upon CCA by the Department of Environmental Resources, the Delaware River Basin Commission, or other regulatory commissions and agencies regulating water supply, CCA covenants to impose said restrictions within the Township in the same manner and the same proportion as said restrictions are imposed throughout CCA's water service system and territories.

14. It is hereby specifically agreed by the Township and CCA that there will be occasions when, because of failure of facilities, leaks, required repairs to facilities, strikes, acts of God, and other emergency circumstances beyond the control of CCA when interruptions or fluctuations in service will occur, and that during the period of such interruption or fluctuations, it is hereby specifically agreed that the only obligation CCA shall have is to use ordinary and reasonable care to maintain the water service and supply herein provided, and that CCA shall not be liable in any way to the Township for any interruption or diminishing of water service or supply caused by circumstances beyond its control. CCA shall make every effort to work without interruption to repair the problem causing the service interference and take steps to notify the affected customers of the reason for the interruption, the expected length of time of interruption, recommended safe steps to be taken, and any special instructions necessary following resumption of service. For bulk

water sales, notification of the interruption shall be made to at least one of the Township officials listed on Exhibit "C" attached hereto and incorporated herein by reference.

15. CCA agrees that the water to be furnished by it hereunder shall be potable and meet all required standards of federal and Commonwealth of Pennsylvania Regulatory Agencies.

16. CCA and the Township agree that their respective systems will be maintained in good operating order and any leaks detected on such systems will be promptly repaired in order to conserve water and to reduce the cost of operating the system. CCA and the Township further agree that any restrictions imposed upon CCA by any governmental regulatory agency with respect to requiring the use of water saving devices in all new construction will likewise be imposed by the Township on its customers and that the Township will adopt such rules and regulations as are customarily imposed upon the use of water in public water systems, particularly as they relate to the use of water saving devices, back flow prevention, and other measures intended to protect the integrity and quality of public water supply. CCA and the Township agree that neither party will operate valves, perform excavations or otherwise take actions that might affect the operation and integrity of the other party's system.

17. This Agreement shall remain in effect for a period of fifteen (15) years from the date hereof and shall automatically be renewed for additional periods of five (5) years each after the initial term hereof, unless terminated at the expiration of the original term or at the expiration of any renewed term by either party giving written notice to the other of its intention to terminate at least twenty-four (24) months prior to the expected termination date.

18. This Agreement shall be binding upon the respective successor and assigns of the parties hereto and the benefits hereunder shall inure to the same.

19. This Agreement embodies the entire agreement between the parties hereto with reference to the subject matter and there are no agreements, understandings, conditions, warranties or representations, oral or written, expressed or implied, with reference to the subject matter hereof that are not merged in this Agreement and superseded hereby.

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be executed and delivered, and their respective corporate seals to be hereunto affixed by their respective duly authorized officers, the day and year first above mentioned.

ATTEST:

CITY OF COATESVILLE AUTHORITY

By: ____________________
Chairman, Board of Directors and all members

ATTEST:

VALLEY TOWNSHIP

By: ____________________
Chairman, Board of Supervisors and all Supervisors

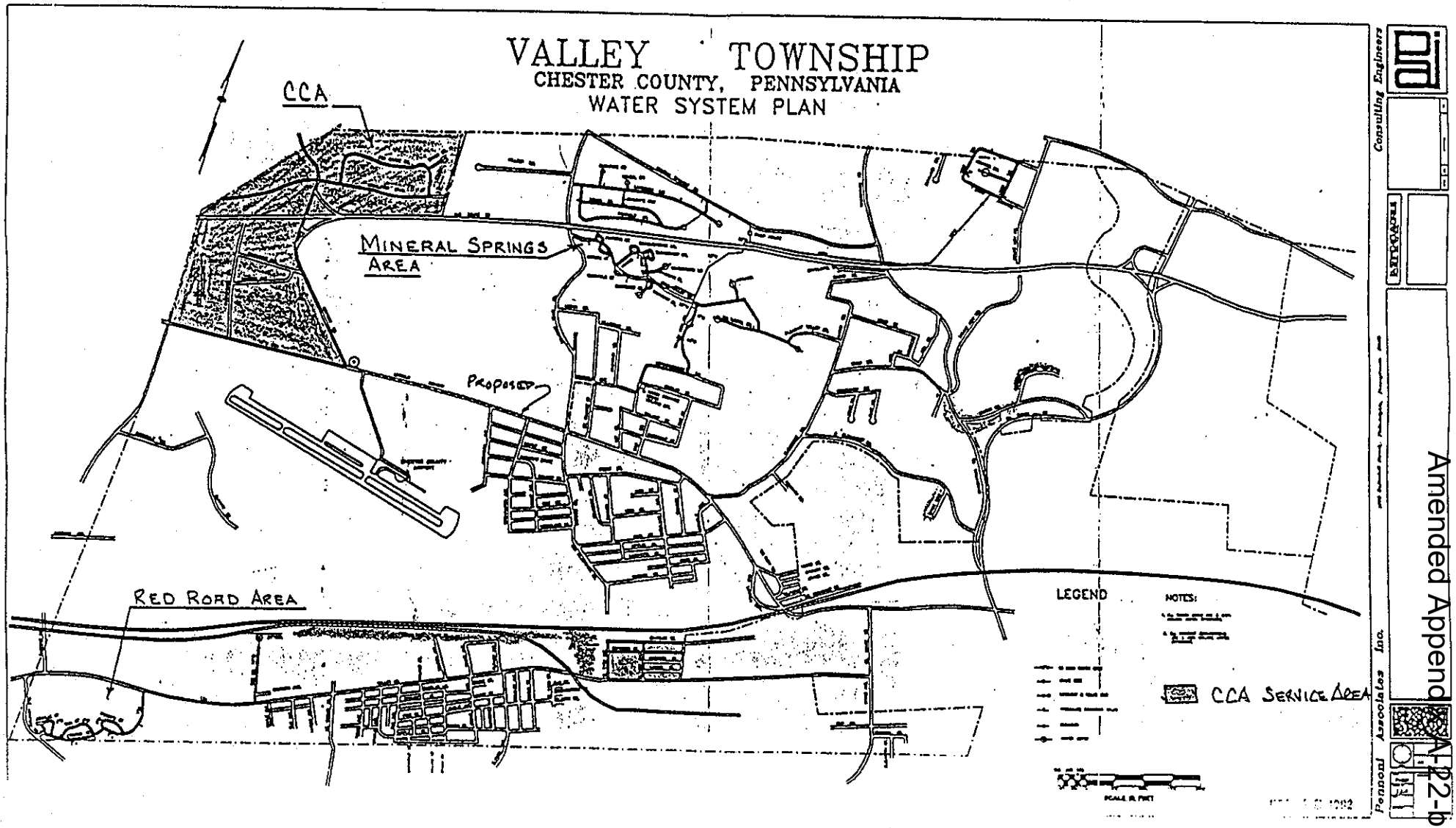
VALLEY TOWNSHIP
CHESTER COUNTY, PENNSYLVANIA
WATER SYSTEM PLAN
CCA
MINERAL SPRINGS AREA
PROPOSED
RED ROAD AREA
LEGEND
NOTES:
CCA SERVICE AREA
Consulting Engineers
Personal Associates Inc.
Amended Append
A-22-b

EXHIBIT A

Amended Appendix A-22-b

Revised - December 8, 1989

VALLEY TOWNSHIP CUSTOMERS

ADDRESS	NAME	ACCOUNT NO.	PARCEL NO.
1407 Brick Row	Donald Campbell	43265023	38-2-192
1408 Brick Row	Leon Peszko	43270033	38-2-193
1409 Brick Row	Lisa Marie Jordan	43257023	38-2-194
1410 Brick Row	William Chernecky	43240013	38-2-195
1411 Brick Row	New Account	43232033	38-2-196
1412 Brick Row	New Account	43224033	38-2-197
1413 Brick Row	New Account	43216043	38-2-198
1414 Brick Row	New Account	43208033	38-2-199
900 Charles St.	Edward Wright	33340013	38-5C-83
902 Charles St.	Patricia Restrepo	33357013	38-5C-82
903 Charles St.	Robert Weinrich	33360013	38-5C-86-13
904 Charles St.	Denise Garrett	33365023	38-5C-81
905 Charles St.	Christie Burrell	33367013	38-5C-86-12
906 Charles St.	Beanie & Gary Bogush	30076502	38-5C-80
907 Charles St.	Mary Durham	33349027	38-5C-86-11
908 Charles St.	Havard Townsend	33381013	38-5C-79
909 Charles St.	Larry Dovin	33385013	38-5C-86-10
910 Charles St.	New Account	33399043	38-5C-78
911 Charles St.	David Smith	33405013	38-5C-86-9
912 Charles St.	Dale Collins	33407033	38-5C-77
913 Charles St.	Joseph Scheider	33410023	38-5C-86-8
914 Charles St.	Mark Welsh	33415013	38-5C-76
915 Charles St.	Philip Hemcher	33417023	38-5C-86-7
916 Charles St.	Sarah Miller	33423013	38-5C-75
918 Charles St.	Marlene B. Jones	33431013	38-5C-74
920 Charles St.	Eugene Sabatini	33449023	38-5C-73
922 Charles St.	Gloria Lyons	33456013	38-5C-72
924 Charles St.	Thomas Wayne	33464013	38-5C-71
926 Charles St.	Albert G. Hanna Jr.	33472013	38-5C-70
928 Charles St.	Nicholas Kirylyck	33480013	38-5C-69
1000 Charles St.	Allen Armentrout	33498013	38-5C-68
1002 Charles St.	Steve & Anita Wood	33506043	38-5C-67
1004 Charles St.	Wayne Aungst	33514013	38-5C-66
1006 Charles St.	Catherine McCarraher	33522013	38-5C-65
1008 Charles St.	William Killian	33530013	38-5C-64
1009 Charles St.	Roxanne Barnes	33606013	38-5C-86-6
1010 Charles St.	William Eshleman	33548023	38-5C-63
1011 Charles St.	Bernard Kefer	33549013	38-5C-86-5
1012 Charles St.	Russell Hayes	33555013	38-5C-62
1013 Charles St.	Robert D. Cruickshank	33607013	38-5C-86-4
1014 Charles St.	Joseph Lemire	33563013	38-5C-61
1016 Charles St.	Jos. J. Dray	33571013	38-5C-60
1017 Charles St.	Osborn Gen. Cont.	98039006	38-5C-86-2
1018 Charles St.	Carmen Vergara	33589013	38-5C-59
1020 Charles St.	Charles E. Holston	33597023	38-5C-59.1
1022 Charles St.	Jeffrey Hoffman	33605013	38-5C-59.2

ADDRESS	NAME	ACCOUNT NO.	PARCEL NO.
1110 W. Eleventh Ave.	New Account	033639023	38-5C-93
Eleventh Ave.	Paulson Serv & Equip.	33613013	38-5C-17.1
W. Eleventh Ave.	Harry Johnston	33621033	38-5C-94
W. Eleventh Ave.&Valley	Delaware Container	98035506	38-5-17
W. Eleventh Ave.&Valley	Delaware Container	98036006	38-5-17
225 N. First Ave.	Ralph Henry	43174013	38-3-35
Gap & Strode Ave.	BVM Catholic Church	33035013	38-6A-6
46 Gap Road	Robert Beard	32870033	38-6A-19
50 Gap Road	Bruce Reese	32888033	38-6A-18
52 Gap Road	Joseph&Arlene Rubincam	32896013	38-6A-17
54 Gap Road	Warren Butler	32904023	38-6A-16
56 Gap Road	Hudson Beard	32920013	
58 Gap Road	William Grubb	32938023	38-6A-14
60 Gap Road	New Account	32946023	38-6A-13
61 Gap Road	New Account	32854023	16-6A-3
62 Gap Road	Hudson Beard	32953013	38-6A-13-1
63 Gap Road	Stephen Kocik	32862013	38-6A-2
64 Gap Road	New Account	32961023	38-6A-12
70 Gap Road	Paul Gregor	32979013	38-6A-11
72 Gap Road	Richard L. Bard	32987053	38-6A-11-1
74 Gap Road	Steve Mudry	32995013	38-6A-10
76 Gap Road	Irene Pashesnik	33001013	38-6A-9
82 Gap Road	BVM Greek Cath. Ch.	33019013	38-6A-8
84 Gap Road	Donald Yeoman	33027013	38-6A-7
1251 Hefner St.	John Gill	98021006	38-5B-36
23 Irish Lane	Edward Clark	42838013	38-2M-111
Irish Lane&Wagontown Rd	Soloman Drawhorn	44180013	38-2M-71
1046 Manor Road	William Robinson	430000101	38-2M-133
608 Old Lincoln Hwy.	Alberta White	29421012	38-5-36
612 Old Lincoln Hwy.	Robert Shesko	16493012	16-6-451
614 Old Lincoln Hwy.	Albert Steen	29447012	38-5-34
615 Old Lincoln Hwy.	B. Schwartzentruber		38-5-35
901 W. Madison St.	Francis Seyman	33928013	38-5C-84.1
903 W. Madison St.	Steve Miller	33910033	38-5C-84.2
905 W. Madison St.	Durphey Poe	33902023	38-5C-84.3
907 W. Madison St.	Dominick Angradi	33894013	38-5C-84.4
909 W. Madison St.	Charles Beems	33886023	38-5C-84
911 W. Madison St.	George Ray Siver	33878023	38-5C-85-1
913 W. Madison St.	Eric Sitler	33860033	38-5C-86-8
915 W. Madison St.	Gary Leslie	33852023	38-5C-85
917 W. Madison St.	Mary Lou Fisher	33845023	38-5C-87.2
919 W. Madison St.	Bernard Soloman	33837043	38-5C-87.1
921 W. Madison St.	Linda Shank	33829013	38-5C-87.3
923 W. Madison St.	Joseph Misiewicz	33811013	38-5C-87
925 W. Madison St.	David Bicking	33803013	38-5C-88.2
927 W. Madison St.	Robert Newlin	33795013	38-5C-88.1
929 W. Madison St.	James Kauffman	33787013	38-5C-88.3
931 W. Madison St.	Mike Murray	33779033	38-5C-88

Amended Appendix A-22-b

ADDRESS	NAME	ACCOUNT NO.	PARCEL NO.
933 W. Madison St.	Andrew Kissel	33761013	38-5C-89.2
935 W. Madison St.	Debra Taylor	33753013	38-5C-89.1
937 W. Madison St.	Catherine Daniels	33746023	38-5C-89
939 W. Madison St.	Lawrence Urbine	33738013	38-5C-89.3
941 W. Madison St.	Frederick Kerr	33720023	38-5C-90.1
943 W. Madison St.	Charles S. Thompson III	33712033	38-5C-90.2
945 W. Madison St.	Joseph Sabastean	33704013	38-5C-90.3
947 W. Madison St.	Edward Kasian	33696013	38-5C-90
949 W. Madison St.	Robert Lasak	33688013	38-5C-91.2
951 W. Madison St.	Kathleen Zaleski	33670033	38-5C-91.3
953 W. Madison St.	Mark Quinn	33662033	38-5C-91.4
955 W. Madison St.	Betty Miller	33654013	38-5C-91
957 W. Madison St.	Gerald Weaver	33647013	38-5C-91.1
1033 Manor Road	Edgar Baynard	4500123	
1033 1/2 Manor Road	Lydia Sims	4500213	
1038 Manor Road	Ronald Delahoy	42952013	38-2M-127
1039 Manor Road	Willard Middleton	42960013	38-2M-128
1045 Manor Road	Wesley James	42994013	38-2M-132
1046 Manor Road	William Robinson	43000013	38-2M-133
1047 Manor Road	Philip Cline	43018013	38-2M-134
1049 Manor Road	George Taylor	43034013	38-2M-136
1050 Manor Road	Margaret Clark	43042013	38-2M-137
1051 Manor Road	Joe Brown	43059013	38-2M-138
1052 Manor Road	Clifford Pittman	43067013	38-2M-139
1053 Manor Road	Paul Schlimme	43075013	38-2M-140
1054 Manor Road	Steven Deveaux	43083013	38-2M-141
1055 Manor Road	Loretta Wilson	43091013	38-2M-142
1056 Manor Road	Helen Lawrence	43109013	38-2M-143
1058 Manor Road	Willie Jackson	43125013	38-2M-145
Mt. Airy Road	New Account	42879043	38-2-38-1
Mt. Airy Road	Roll Form Inc.	42861033	38-2-38-2
174 Mt. Airy Road	William Heath	42945023	38-2-18
176 Mt. Airy Road	Frederick Shuler	43422013	38-2-34
166 Mt. Airy Road	Samuel & Ruth Alston	43414013	38-2-37
172 Mt. Airy Road	Stephen Olinick	43430013	38-2-35.1
173 Mt. Airy Road	Thomas &Ethel Middleton	44172013	38-2-35
178 Mt. Airy Road	Calvin Stokes	43588013	38-2-33
171 Mt. Airy Road	Witmer Middleton	43539013	
1066 Mt. Airy Road	Ossie Brown	42804013	38-2M-84
1072 Mt. Airy Road	George Grove Sr.	42895013	38-2M-152
1073 Mt. Airy Road	Sherman Taltoan	42903013	38-2M-151
1074 Mt. Airy Road	Arnold Mattson	42911013	38-2M-150
1075 Mt. Airy Road	Eugene Clark	42929013	38-2M-149
1076 Mt. Airy Road	Joanne Prouse	42937023	38-2M-148
Mt. Airy Road & Wagontown Rd	Soloman Drawhorn	44180013	38-2M-71
Telegraph Road (44 Beech St.)	John London	40436013	9-10-63
10 W. 10th Ave.	Shirley Fryberger	33326013	
20 W. 10th Ave.	Susan Woodcock	33327013	38-5C-97

Amended Appendix A-22-b

ADDRESS	NAME	ACCOUNT NO.	PARCEL NO.
22 W. 10th Ave.	David Coladonato	33324133	
24 W. 10th Ave.	Mario Charriez	33325023	38-5C-97.4
26 W. 10th Ave.	Charles Hughes III	33251013	
1403 Valley Road	Westwood Fire Co.	98003006	
Valley Road	L.F. Lambert Spawn Co.	85024007	
Valley Road	Eileen Lake	89086816	38-4-13
Valley Road	Samuel Smoker	89087016	38-4-16.1
1009 Valley Station Rd.	Lewis Rokins Jr.	43140013	38-3-3
1010 Valley Station Rd.	Harry Osbeck	43133013	38-3-4
1011 Valley Station Rd.	Martin Scull	43141023	38-3-5
1012 Valley Station Rd.	Robert Irwin	43158013	38-3-6
1013 Valley Station Rd.	Douglas Lambert Sr.	43331033	38-3-7
1014 Valley Station Rd.	Mousa&Lorraine Shihadeh	43349013	38-3-18
1015 Valley Station Rd.	Patricia Root	43356023	
1016 Valley Station Rd.	Daniel Fellenbaum	43364013	
1018 Valley Station Rd.	Tenant	43372013	
1019 Valley Station Rd.	B.J. Skiles	43380013	38-3-9
1020 Valley Station Rd.	Marvin McGinnis	43398013	38-3-22
1021 Valley Station Rd.	James D. Collins	43406013	
1022 Valley Station Rd.	Patricia Wilson	43166013	38-3-14
1201 Valley Rd.	New Account	85026027	
1251 Valley Rd. & (Heffner St.)	John Gill	98021006	38-5B-34
1059 Wagontown Rd.	T.H. & P.M. Fairbanks	44175013	38-2M-164
1060 Wagontown Rd.	New Account	42788023	
145 Wagontown Rd.	Harry Mackey	42713013	38-2H-1
1064 Wagontown Rd.	Scott DiBerardinis	42796023	38-2M-82
1080 Wagontown Rd.	Benjamin Wilson	42846013	38-2-22.2
150 Wagontown Rd.	Jonathan Inslee	42762013	38-2-22.1
Wagontown Rd.	Rudy Mareno	42721013	38-2H-2
147 Wagontown Rd.	Robert Clifton	42747013	38-2H-5
146 Wagontown Rd.	Charles Rodgers	42739013	38-2H-4
119 Waterworks Rd.	James Burke	42697013	28-9-50
117 Waterworks Rd.	Candace Thompson	42663033	
Wagontown Rd.	John MacDonald	43455013	
1094 Rock Run Road	Cornetta Miller	42820013	38-2-5
150A Wagontown Rd.	Peter Knecht	43521013	38-2M-163
1079 Wagontown Rd.	Edward Clark	42821013	38-2M-120
149 Wagontown Rd.	John March	42754013	38-2-22

LIST OF VALLEY TOWNSHIP OFFICIALS

The following officials of Valley Township shall be contacted in the order of priority listed whenever an interruption of bulk service to the Township occurs:

1. Lloyd Simmers
   Coatesville, Pa 19320
   383-5562 business telephone
   380-1405 home telephone
   350-4314 truck telephone

2. John E. High, Esquire
   245 Glencrest Road
   Coatesville, Pa 19320
   431-7155 business telephone
   431-4929 business telephone
   384-3167 home telephone

3. Paul Neff
   1603 Valley Road
   Coatesville, Pa 19320
   384-3199 home telephone

4. Doris Darlington, Township Secretary
   6 Betsy Lane
   Thorndale, Pa 19372
   384-4071

5. Gary Swiger, Chief of Police
   1035 B West Lincoln Highway
   Coatesville, Pa 19320
   384-8133 office telephone
   380-1429 home telephone

Exhibit "C"

APPENDIX H

PLANNING MODULE APPROVAL LETTERS

Amended Appendix A-22-b

Pennsylvania Department of Environmental Protection

Lee Park, Suite 6010
555 North Lane
Conshohocken, PA 19428

VLTW 7740 13.21

MAY 2 1 2002

Southeast Regional Office

610-832-6130
Fax 610-832-6133

Karen E. Chandler, Secretary
Valley Township
P.O. Box 467
890 W Lincoln Highway
Coatesville, PA 19320

Re: Planning Module for Land Development
Valley Crossing 4 Subdivision
Code No. 1-15956-118-3H
APS Id. 369818, Site Id. 559792
Valley Township, Chester County

Dear Ms. Chandler:

Approval is hereby granted by the Department of Environmental Protection for the above referenced revision to the Valley Township Official Sewage Facilities Plan. In accordance with the Pennsylvania Sewage Facilities Act and Title 25, Chapter 71 of the Department's Rules and Regulations, Valley Township is responsible for implementing this revision as per the approved planning module.

This revision provides for adequate sewage facilities planning to permit the development of 60 townhouses on 13 acres. This project is located at Old Wilmington Road and Route 372, in Valley Township, Chester County.

This project will be connected to the Valley Township collection system and will generate 18,000 gallons of sewage per day to be treated at the Pennsylvania American Water Co. Wastewater Treatment Facility.

As a result of enactment of Act 40, collector sewers which will not serve more than 250 single family dwelling units or their equivalent sewage flow do not need a permit for construction and operation under the Pennsylvania Clean Streams Law. This planning approval, as it applies to these facilities, is given on the condition that collector sewers qualifying for the permit exemption must be designed, constructed and operated in accordance with the technical standards and practices contained in the Department's Domestic Wastewater Facilities Manual. All portions of new or modified sewage facilities included in this planning approval which do not qualify for the permit exemption, such as trunk lines, pump stations, force mains, and treatment plants must obtain a Clean Streams Law permit from the Department prior to construction or modifications. The permit exemption created by Act 40 applies only to permits under the Clean Streams Law. Other Department permits may be required for construction of collector sewers if encroachments to streams or wetlands will result.

Amended Appendix A-22-b

MAY 2 1 2002

If you have any questions, please feel free to contact Elizabeth Mahoney of our office at 610-832-6079.

Sincerely,

James Newbold, P.E.
Regional Manager
Water Management

cc: Chester County Planning Commission
Chester County Health Department
Valley Crossing Development, LLC
Mr. Bryan
Pennsylvania American Water Co.
Ms. Mahoney
Ms. Moore
Ms. Grant
Planning Section
Re 30

VLIN 0405

Amended Appendix A-22-b

Pennsylvania Department of Environmental Protection

Lee Park, Suite 6010
555 North Lane
Conshohocken, PA 19428

Southeast Regional Office

610-832-6130
Fax 610-832-6133

JUL 12 2002

RECEIVED
NN #96103
JUL 17 2002
PEL
CF

Mr. Greg Newell
Nave Newell, Inc.
550 American Avenue
P.O. Box 61542
King of Prussia, PA 19406-0942

Re: Highlands Corporate Center
Code No. 1-15961-306-4
Valley Township & West Caln Township
Chester County

Dear Mr. Newell:

This letter is in reference to your request to modify the previously approved planning module (Code no. 1-15961-306-4) that provided adequate sewage facilities planning to permit the development of an office park on 181.7 acres. This project is located on Airport Road, approximately 1,000 feet north of its intersection with Route 30, in both Valley Township and West Caln Township, Chester County.

The modifications involve two pump stations, changing from separate points of discharge to being connected in series and one point of discharge to gravity sewers. This modification may be made without any additional sewage facilities planning, since the capacity at Pump Station No. 1 will be in compliance with the existing Sewerage Permit No.1588447. However, before buildout of the referenced project can occur, additional sewage facilities planning, as outlined below, will be required to provide additional capacity in these pumping stations

Pump Station No. 2, which was originally planned and permitted to discharge 59,321 gallons per day to gravity sewers of the Hayti Basin, will now discharge to existing Pump Station No. 1. Pump Station No. 2 will initially be sized to handle 3,000 gallons per day.

Pump Station No. 1 will continue to discharge into the gravity collection system located in Hilltop Lane. The Hilltop Lane sewers are part of the gravity sewers which connect to the Valley Township Rock Run Pump Station. Pump Station No. 1 will initially remain unchanged from its current planning and permit design of 52,743 gallons per day. However, before any flows greater than 52,743 gallons per day may be accepted at Pump Station No. 1, the Act 537 plan approval and Sewerage Permit No. 1588447 must both be amended.

The Rock Run Pump Station conveys sewage to the PA American Water Company's Coatesville Wastewater Treatment Facility. Please note the Department is aware of the ongoing modifications of the

Rock Run Pump Station to handle peak flows. While there is existing capacity at the Rock Run Pump Station for this amendment, this project's estimated sewage flows at full build-out will exceed the Rock Run Pump Station's current capacity.

This letter does not relieve the project sponsor of the responsibility to provide the Department with a revised set of plans for the construction and operation of Pump Station No. 2, as modified.

We strongly recommend that you proceed with obtaining Act 537 plan approval and a modification of Sewerage Permit No. 1588447, now, before the need arises.

If you have any questions, please feel free to contact me at 610-832-6078.

Sincerely,

John M. Veneziale
Sewage Planning Specialist II
Water Management

cc: Chester County Planning Commission
Chester County Health Department
Valley Township
West Caln Township
High Associates Ltd.
Pennsylvania-American Water Company
Ms. Moore
Ms. Grant
Planning Section
Re 30

Lee Park, Suite 6010
555 North Lane
Conshohocken, PA 19428

DEC 04 2002

Southeast Regional Office

610-832-6130
Fax 610-832-6133

Ms. Karen E. Handler, Secretary
Valley Township
P.O. Box 467
Coatesville, PA 19320

Re: Planning Module for Land Development
Meadowbrook Subdivision
Code No. 1-15956-119a-3H
APS Id. 459891, Site Id. 604082
Valley Township, Chester County

Dear Ms. Handler:

Approval is hereby granted by the Department of Environmental Protection for the above referenced revision to the Valley Township Official Sewage Facilities Plan. In accordance with the Pennsylvania Sewage Facilities Act and Title 25, Chapter 71 of the Department's Rules and Regulations, Valley Township is responsible for implementing this revision as per the approved planning module.

This revision provides for adequate sewage facilities planning to permit the development of 49 residential lots on 38 acres. This project is located on the north side of Walnut Street, east of Andrews Lane, in Valley Township, Chester County.

This project will be connected to the Valley Township collection system and will generate 14,700 gallons of sewage per day to be treated at the Pennsylvania American Water Company City of Coatesville Wastewater Treatment Facility.

Capacity for this project is provided consistent with the Pennsylvania American Water Company's Chapter 94 Wasteload Management Plan for the City of Coatesville Wastewater Treatment Facility.

As a result of enactment of Act 40, collector sewers which will not serve more than 250 single family dwelling units or their equivalent sewage flow do not need a permit for construction and operation under the Pennsylvania Clean Streams Law. This planning approval, as it applies to these facilities, is given on the condition that collector sewers qualifying for the permit exemption must be designed, constructed and operated in accordance with the technical standards and practices contained in the Department's Domestic Wastewater Facilities Manual. All portions of new or modified sewage facilities included in this planning approval which do not qualify for the permit exemption, such as trunk lines, pump stations, force mains, and treatment plants must obtain a Clean Streams Law permit from the Department prior to construction or modifications. The permit exemption created by Act 40 applies only to permits under the Clean Streams Law. Other Department permits may be required for construction of collector sewers if encroachments to streams or wetlands will result.

DEC 0 4 2002

If there are mapped wetlands within your proposed development, you are hereby notified that an encroachment permit under Title 25, Chapter 105, of the Rules and Regulations of the Department must be obtained from the Department prior to any construction which will encroach on wetlands.

If you have any questions, please feel free to contact Kelly Sweeney of our office at 610-832-6077.

Sincerely,

James Newbold, P.E.
Regional Manager
Water Management

cc: Chester County Planning Commission
Chester County Health Department
Caldera Properties, L.P.
Mr. Houtmann, G. D. Houtmann & Son, Inc.
Pennsylvania American Water Company
Ms. Sweeney
Mr. Veneziale
Ms. Moore
Ms. Grant
Planning Section
Re 30

Lee Park, Suite 6010
555 North Lane
Conshohocken, PA 19428

Southeast Regional Office

610-832-6130
Fax 610-832-6133

RECEIVED
DEC 23 2002
DEC 30 2002
GILMORE & ASSOCIATES, INC.

Ms. Karen Chandler, Secretary
Valley Township
890 W. Lincoln Highway
P.O. Box 467
Coatesville, PA 19320

Re: Planning Module for Land Development
Hill Farm Development Phase I
Code No. 1-15956-117-3H
APS Id. 459859, Site Id. 604062
Valley Township, City of Coatesville
Chester County

Dear Ms. Chandler:

Approval is hereby granted by the Department of Environmental Protection for the above referenced revision to the Valley Township Official Sewage Facilities Plan. In accordance with the Pennsylvania Sewage Facilities Act and Title 25, Chapter 71 of the Department's Rules and Regulations, Valley Township is responsible for implementing this revision as per the approved planning module.

This project, located on the southeast corner of Route 82 and Route 30, has requested sewage facilities planning approval in two phases, Phase 1 in Valley Township and Phase 2 in Caln Township, Chester County.

This revision provides for adequate sewage facilities planning to permit the development of Phase 1 of this project, which is restricted to 522 residential dwelling units on 234.3 acres in Valley Township.

This project will be connected to the Valley Township collection system and will generate 104,400 gallons of sewage per day to be treated at the Pennsylvania American Water Company Coatesville Wastewater Treatment Facility.

Capacity for this project is provided consistent with the Pennsylvania American Water Company's Chapter 94 Wasteload Management Plan.

Planning approval is also granted through this revision for the construction of the Valley Township Phase 1 portion of the development and its associated sewage facilities to proceed in two separate stages. The first stage of this project involves the construction of a gravity sewer line from the southerly portion of the site, which will cross through a section of the City of Coatesville and then back into Valley Township, to an existing sewer line in Manor Road. This stage of Phase 1 will serve 216 residential units, generating 43,200 gallons per day. The second stage of Phase 1 includes the construction of a sewage pumping station and a force main, which will convey sewage flows from the northerly portion of the site to the gravity collection system in the southern portion of the site. This stage of the Valley Township Phase 1 portion of the project will serve 306 residential units, generating 61,200 gallons per day.

All of the proposed sewage facilities for Phase 1 of this project will be owned by Valley Township. Valley Township must secure a Department permit for the construction and operation of the sewage pumping station, the force main, and the entire collection system.

Please review the enclosed Sewage Pumping Station Guidance before submitting your Part II Permit Application. The Department recommends a minimum peaking factor of 3.9 for pumping stations with this proposed design flow. Individual pumps must be capable of handling peak instantaneous flows without employing the backup pump. Detailed justification must be submitted with permit applications for proposals that use alternate design standards from the enclosed guidance.

Additional sewage facilities planning must be adopted by Caln Township and approved by the Department for the Caln Township Phase 2 portion of this development.

The Department has determined that there are mapped wetlands within your proposed development. You are hereby notified that an encroachment permit under Title 25, Chapter 105, of the Rules and Regulations of the Department must be obtained from the Department prior to any construction that will encroach on wetlands.

If you have any questions, please contact John M. Veneziale of our office at 610-832-6078.

Sincerely,

James Newbold, P.E.
Regional Manager
Water Management

Enclosure: Pumping Station Guidance

cc: Chester County Planning Commission
Chester County Health Department
City of Coatesville
Caln Township
Hill Farm Associates, LP
Gilmore Associates, Inc.
Pennsylvania-American Water Company
Ms. Moore
Ms. Grant
Planning Section
Re 30

Amended Appendix A-22-b

Pennsylvania Department of Environmental Protection

Lee Park, Suite 6010
555 North Lane
Conshohocken, PA 19428

Southeast Regional Office

610-832-6131
Fax 610-832-6133

FEB 0 3 2004

Ms. Karen E. Chandler, Secretary
Valley Township
890 West Lincoln Highway
PO Box 467
Coatesville, PA 19320

Re: Planning Module for Land Development
Lambert Subdivision
Code No. 1-15956-124-3J
APS Id. 501669, Site Id. 626088
Valley Township, Chester County

Dear Ms. Chandler,

Approval is hereby granted by the Department of Environmental Protection for the above referenced revision to the Valley Township Official Sewage Facilities Plan. In accordance with the Pennsylvania Sewage Facilities Act and Title 25, Chapter 71 of the Department's Rules and Regulations, Valley Township is responsible for implementing this revision as per the approved planning module.

This revision provides for adequate sewage facilities planning to permit the development of a 3 lot residential subdivision on 1.292 acres. This project is located at 1058 Front Street, in Valley Township, Chester County.

This project will be connected to the Valley Township collection system and will generate 900 gallons of sewage per day to be treated at the Pennsylvania American Water Company Coatesville Wastewater Treatment Facility.

If you have any questions, please feel free to contact Donna Ulan Smith of our office at 610-832-6082.

Sincerely,

James Newbold, P.E.
Regional Manager
Water Management

cc: Chester County Planning Commission
Chester County Health Department
Douglas Lambert
Pennsylvania American Water Company
Ms. Moore
Planning Section

Amended Appendix A-22-b

* * IMPORTANT NOTICE * *

On February 9, 2004, the Southeast Regional Office (SERO) will be relocating to Norristown. The new mailing address for the SERO will be as follows:

Department of Environmental Protection
Southeast Regional Office
2 East Main Street
Norristown, PA 19401

The new telephone numbers for the SERO will be as follows:

Main Telephone and 24-hour emergency number		**484-250-5900**
Air Quality		**484-250-5920**
Environmental Cleanup / Waste Management		**484-250-5960**
Regional Director's Office		**484-250-5940**
Radiation Protection		**484-250-5950**
Water Management		**484-250-5970**
Water Supply Management		**484-250-5980**

Amended Appendix A-22-b

Pennsylvania Department of Environmental Protection
2 East Main Street
Norristown, PA 19401

MAY 1 4 2004

Southeast Regional Office

484-250-5970
Fax 484-250-5971

Ms. Karen E. Chandler, Secretary
Valley Township
890 West Lincoln Highway
PO Box 467
Coatesville, PA 19320

Re: Planning Module for Land Development
Timber Lane Subdivision
Code No. 1-15956-123-3J
APS Id. 499372, Site Id. 624871
Valley Township, Chester County

Dear Ms. Chandler:

Approval is hereby granted by the Department of Environmental Protection for the above referenced revision to the Valley Township Official Sewage Facilities Plan. In accordance with the Pennsylvania Sewage Facilities Act and Title 25, Chapter 71 of the Department's Rules and Regulations, Valley Township is responsible for implementing this revision as per the approved planning module.

This revision provides for adequate sewage facilities planning to permit the development of 46 townhouses on 14 acres. This project is located on the west side of Mt. Carmel Road, 750 feet from Route 372, in Valley Township, Chester County.

This project will be connected to the Valley Township collection system and will generate 13,800 gallons of sewage per day to be treated at the Pennsylvania American Water Company City of Coatesville Wastewater Treatment Facility.

Capacity for this project is provided consistent with the pending Pennsylvania American Water Company Chapter 94 Wasteload Management Plan.

Amended Appendix A-22-b

MAY 1 4 2004

If you have any questions, please feel free to contact Donna Ulan Smith of our office at 484-250-5179.

Sincerely,

James Newbold, P.E.
Regional Manager
Water Management

cc: Chester County Planning Commission
Chester County Health Department
Edward Moore
Vollmer Associates, LLP
Pennsylvania American Water Company
Donna Ulan Smith
Ms. Moore
Planning Section
Re 30

Amended Appendix A-22-b 01

Pennsylvania Department of Environmental Protection

2 East Main Street
Norristown, PA 19401

Southeast Regional Office

NOV 0 1 2004

Phone: 484-250-5970
Fax: 484-250-5971

Ms. Karen E. Chandler, Secretary
Valley Township
890 West Lincoln Highway
PO Box 467
Coatesville, PA 19320

Re: Planning Module for Land Development
Hanscom Subdivision
Code No. 1-15956-127-3J
APS Id. 520965, Site Id. 635177
Valley Township, Chester County

Dear Ms. Chandler:

Approval is hereby granted by the Department of Environmental Protection for the above referenced revision to the Valley Township Official Sewage Facilities Plan. In accordance with the Pennsylvania Sewage Facilities Act and Title 25, Chapter 71 of the Department's Rules and Regulations, Valley Township is responsible for implementing this revision as per the approved planning module.

This revision provides for adequate sewage facilities planning to permit the development of a two lot residential subdivision (1 existing and 1 proposed dwelling unit) on 0.95 acres. This project is located at 1120 Willow Street, in Valley Township, Chester County.

This project will be connected to the Valley Township collection system and will generate 300 additional gallons of sewage per day to be treated at the Pennsylvania American Water Company's Coatesville District Wastewater Treatment Facility.

Capacity for this project is provided consistent with the Pennsylvania American Water Company's Chapter 94 Connection Management Plan.

NOV 0 1 2004

If you have any questions, please feel free to contact John M. Veneziale of our office at 484-250-5175.

Sincerely,

James Newbold, P.E.
Regional Manager
Water Management

cc: Chester County Planning Commission
Chester County Health Department
Mr. Hanscom
Lake, Roeder, Hillard & Associates
Pennsylvania American Water Company
Mr. Veneziale
Ms. Moore
Planning Section
Re 30

Pennsylvania Department of Environmental Protection
2 East Main Street
Norristown, PA 19401

Southeast Regional Office

Phone: 484-250-5970
Fax: 484-250-5971

JUN 0 1 2005

Ms. Karen E. Chandler, Secretary
Valley Township
890 West Lincoln Highway
PO Box 467
Coatesville, PA 19320

Re: Planning Module for Land Development
Oakcrest Subdivision
Code No. 1-15956-134-3IJ
APS Id. 545599, Site Id. 650983
Valley Township
Chester County

Dear Ms. Chandler:

Approval is hereby granted by the Department of Environmental Protection for the above referenced revision to the Valley Township Official Sewage Facilities Plan. In accordance with the Pennsylvania Sewage Facilities Act and Title 25, Chapter 71 of the Department's Rules and Regulations, Valley Township is responsible for implementing this revision as per the approved planning module.

This revision provides for adequate sewage facilities planning to permit the development of a 170-lot residential subdivision (169 proposed dwellings with 2 existing dwellings on the residual tract, for a total of 171 dwellings) on 93 acres. Seventeen existing dwellings will also be connected to public sewers including 11 dwellings connecting via grinder pumps and a proposed low-pressure sanitary force main on Glencrest Road. This project is located north of the intersection of Lincoln Highway and Glencrest Road in Valley Township, Chester County.

This project will be connected to the Valley Township collection system and will generate 49,350 gallons of sewage per day to be treated at the Pennsylvania American Water Company Coatesville Wastewater Treatment Facility.

Capacity for this project is provided consistent with the Pennsylvania American Water Company December 2004 Connection Management Plan (CMP) for the Wastewater Treatment Plant and East End Trunk Line for the Coatesville District, Chester County. This CMP provides for 35 connections in 2005, 50 connections in 2006, 50 connections in 2007 and 53 connections in 2008 for a total number of connections of 188 for the Oakcrest Subdivision.

Planning approval is also granted through this revision for the use of grinder pumps and a municipally owned force main, which will convey sewage flows from the development to an existing

manhole on Glencrest Road south of Northview Drive. Valley Township must secure a Department permit for the construction and operation of the proposed force main.

Please review the enclosed grinder pump sample ordinance before submitting your Part II Permit Application. The Department recommends adoption of an ordinance to assure the proper long-term operation and maintenance of grinder pumps. Properly designed and installed grinder pump systems may ultimately fail without continuing operation and maintenance. An effective grinder pump sewage management program is vital for the successful long-term operation of these systems. By providing a management program, Valley Township can assure permanent sewage services for residential and commercial properties that rely on grinder pump systems. Public education, water conservation, and regular site inspections of the grinder pumps are all part of a successful management program. Valley Township should consider providing a sewage management program as a service to all grinder pump owners within the municipality.

If you have any questions, please feel free to contact Kelly Boettlin of our office at 484-250-5184.

Sincerely,

James Newbold, P.E.
Regional Manager
Water Management

cc: Chester County Planning Commission
Chester County Health Department
Mr. Moore
Vollmer Associates LLP
Pennsylvania American Water Company
Ms. Boettlin
Ms. Moore
Planning Section
Re 30

VLTW 0411
Amended Appendix A-22-b

Pennsylvania Department of Environmental Protection
2 East Main Street
Norristown, PA 19401

Southeast Regional Office

Phone: 484-250-5970
Fax: 484-250-5971

NOV 2 1 2005

Ms. Karen E. Chandler, Secretary
Valley Township
890 West Lincoln Highway
PO Box 467
Coatesville, PA 19320

Re: Planning Module for Land Development
Woodland Pointe Subdivision
Code No. 1-15956-132-3J
APS Id. 550196, Site Id. 653488
Valley Township, Chester County

Dear Ms. Chandler:

Approval is hereby granted by the Department of Environmental Protection for the above referenced revision to the Valley Township Official Sewage Facilities Plan. In accordance with the Pennsylvania Sewage Facilities Act and Title 25, Chapter 71 of the Department's Rules and Regulations, Valley Township is responsible for implementing this revision as per the approved planning module.

This revision provides for adequate sewage facilities planning to permit the development of 9 new residential dwellings and the connection of one existing dwelling to public sewers. This project is located at the intersection of Rainbow Road and Woodland Street, in Valley Township, Chester County.

This project will be connected to the Pennsylvania American Water Company collection system and will generate 2,625 gallons of sewage per day to be treated at the Pennsylvania American Water Company Wastewater Treatment Facility.

Capacity for this project is provided consistent with the Pennsylvania American Water Company's November 2005 Connection Management Plan (CMP) approved November 18, 2005. This CMP provides for 3 connections in 2005 and 6 connections in 2006. Valley Township is to coordinate building permits consistent with the number of connections in the approved CMP.

If you have any questions, please feel free to contact Kelly Boettlin of our office at 484-250-5184.

Sincerely,

James Newbold, P.E.
Regional Manager
Water Management

cc: Chester County Planning Commission
Chester County Health Department
Mr. Risbon
E. B. Walsh & Associates, Inc.
Pennsylvania American Water Company
Ms. Boettlin
Ms. Moore
Planning Section
Re 30

Pennsylvania Department of Environmental Protection

2 East Main Street
Norristown, PA 19401

NOV 21 2005

Southeast Regional Office

Phone: 484-250-5970
Fax: 484-250-5971

Ms. Karen E. Chandler, Secretary
Valley Township
890 West Lincoln Highway
PO Box 467
Coatesville, PA 19320

Re: Planning Module for Land Development
Middleton Subdivision
Code No. 1-15956-131-3IJ
APS Id. 555625, Site Id. 656532
Valley Township, Chester County

Dear Ms. Chandler:

Approval is hereby granted by the Department of Environmental Protection for the above referenced revision to the Valley Township Official Sewage Facilities Plan. In accordance with the Pennsylvania Sewage Facilities Act and Title 25, Chapter 71 of the Department's Rules and Regulations, Valley Township is responsible for implementing this revision as per the approved planning module.

This revision provides for adequate sewage facilities planning to permit the development of two residential lots (1 existing dwelling and 1 proposed) on 2.7 acres. This project is located at 342 Harry Road, in Valley Township, Chester County.

This project will be connected to the Pennsylvania American Water Company collection system and will generate 262 additional gallons of sewage per day to be treated at the Pennsylvania American Water Company Wastewater Treatment Facility.

Company's November 2005 Connection Management Plan (CMP) approved November 18, 2005. This CMP provides for 1 connection in 2005.

If you have any questions, please feel free to contact Donna Ulan Smith of our office at 484-250-5179.

Sincerely,

James Newbold, P.E.
Regional Manager
Water Management

cc: Chester County Planning Commission
Chester County Health Department
Ms. Terry Middleton
Christopher R. Dellapena, P.E.
Pennsylvania American Water Company
Donna Ulan Smith
Ms. Moore
Planning Section
Re 30

Amended Appendix A-22-b VLTW 0303

Pennsylvania Department of Environmental Protection

2 East Main Street
Norristown, PA 19401

Southeast Regional Office

JAN 2 5 2006

Phone: 484-250-5970
Fax: 484-250-5971

Ms. Karen E. Chandler, Secretary
Valley Township
890 West Lincoln Highway
PO Box 467
Coatesville, PA 19320

Re: Planning Module for Land Development
Valley Suburban Center
Code No. 1-15956-125-3J
APS Id. 555972, Site Id. 656705
Valley Township, Chester County

Dear Ms. Chandler:

Approval is hereby granted by the Department of Environmental Protection for the above referenced revision to the Valley Township Official Sewage Facilities Plan. In accordance with the Pennsylvania Sewage Facilities Act and Title 25, Chapter 71 of the Department's Rules and Regulations, Valley Township is responsible for implementing this revision as per the approved planning module.

This revision provides for adequate sewage facilities planning to permit the development of 192 apartment units in eight buildings, 98 townhouses, 3 retail stores and 2 restaurants on 62.9 acres. This project is located on the northeast corner of Route 30 and Airport Road, in Valley Township, Chester County.

This project will be connected to the Valley Township collection system and will generate 89,250 gallons of sewage per day to be treated at the Pennsylvania American Water Company Coatesville Wastewater Treatment Facility.

Planning approval is also granted through this revision for a municipally-owned sewage pumping station and a force main, which will convey sewage flows from the proposed townhouses and apartment buildings to an existing manhole at the intersection of Lincoln Highway and Walter Johnson Boulevard. The pumping station will be located adjacent to Townhouse Lot No. 35 and will have average design flows of 76,650 gallons per day. Valley Township must secure a Department permit for the construction and operation of the proposed sewage pumping station.

Please review the enclosed Sewage Pumping Station Guidance before submitting your Part II Permit Application. The Department recommends a minimum peaking factor of 3.9 for pumping stations with this proposed design flow. Individual pumps must be capable of handling peak

instantaneous flows without employing the backup pump. Detailed justification must be submitted with permit applications for proposals that use alternate design standards from the enclosed guidance.

Capacity for this project is provided consistent with the November 2005 Pennsylvania American Water Company Chapter 94 Wasteload Management Plan.

If you have any questions, please feel free to contact Elizabeth Mahoney of our office at 484-250-5177.

Sincerely,

Jenifer Fields, P.E.
Regional Manager
Water Management

Enclosure: Sewage Pumping Station Guidance

cc: Chester County Planning Commission
Chester County Health Department
Mr. Bolstein - Fox Rothschild L.L.P.
Mr. Shafkowitz - Elliott Building Group
Ms. Maz - Nave Newell
Mr. DeBalko - Pennsylvania American Water Company
Mr. Kaplin - Kaplin Stewart Meloff Reiter & Stein, P.C.
Mr. Auxer - Kaplin Stewart Meloff Reiter & Stein, P.C.
Mr. McGreevey - Caldera Properties, L.P.
Mr. Bram
Ms. Mahoney
Ms. Moore
Planning Section
Re

Pennsylvania Department of Environmental Protection

2 East Main Street
Norristown, PA 19401

FEB 16 2006

Southeast Regional Office

Phone: 484-250-5970
Fax: 484-250-5971

Ms. Karen E. Chandler, Secretary
Valley Township
890 West Lincoln Highway
PO Box 467
Coatesville, PA 19320

Re: Planning Module for Land Development
Valley Farm Subdivision
Code No. 1-15956-128-3IJ
APS Id. 554478, Site Id. 655852
Valley Township, Chester County

Dear Ms. Chandler:

Approval is hereby granted by the Department of Environmental Protection for the above referenced revision to the Valley Township Official Sewage Facilities Plan. In accordance with the Pennsylvania Sewage Facilities Act and Title 25, Chapter 71 of the Department's Rules and Regulations, Valley Township is responsible for implementing this revision as per the approved planning module.

This revision provides for adequate sewage facilities planning to permit the development of 58 new single family dwellings on 60.7 acres. This project is located on the north side of the Route 30 Bypass, in Valley Township, Chester County. Twenty-one existing residences along Mt. Airy Road will also be connected to public sewers.

This project will be connected to the Valley Township collection system and will generate 21,263 gallons of sewage per day to be treated at the Pennsylvania American Water Company Coatesville Wastewater Treatment Facility.

Capacity for this project is provided consistent with the November 2005 Pennsylvania American Water Company Chapter 94 Connection Management Plan/Corrective Action Plan.

Planning approval is also granted for the expansion of the Township's Rock Run Pump Station. The Rock Run Pump Station will be expanded from its current permitted capacity of 230,400 gpd annual average flow to a capacity of 300,000 gpd annual average flow. This expansion will be adequate to accommodate the two-year projected new connections in the pump station's drainage basin, as listed in the table titled Valley Township Rock Run Basin – Proposed New Flows to Pump Station. This table is found on the site plan titled Exhibit VIII(a) Existing and Proposed Rock Run Service Area New and Proposed Developments, prepared by Pennoni Associates, Inc., revised January 10, 2006.

Valley Township must secure a Department permit for the expansion of the Rock Run Pump Station. The Township must obtain an amendment to Permit No. 1502419-A-1, issued July 25, 2005,

which limited the capacity of the Rock Run Pump Station to an annual average capacity of 230,400 gpd. Please review the enclosed Sewage Pumping Station Guidance before submitting your Part II Permit Application. The Department recommends a minimum peaking factor of 4.0 for pumping stations with this proposed design flow. Individual pumps must be capable of handling peak instantaneous flows without employing the backup pump. Detailed justification must be submitted with permit applications for proposals that use alternate design standards from the enclosed guidance.

We note that the proposed expansion of the Rock Run Pump Station may not be adequate to accommodate the connections proposed from this project beyond the year 2007. Valley Township should closely monitor the flows to this pump station. The annual average flows from a pump station may not exceed its permitted annual average capacity, regardless of the pump station's actual physical capacity. The Township is required to prevent the occurrence of overloaded sewerage facilities and to limit new connections to sewerage facilities when a 5-year projected overload occurs, pursuant to Chapter 94 of the Department's regulations.

Valley Township must conduct further, detailed Act 537 planning to address the needs of the Rock Run Pump Station Basin beyond a two-year period. This planning must be included in the Act 537 plan required to address the expansion of the Pennsylvania American Water Company's Coatesville Wastewater Treatment Facility. Valley Township was advised of this requirement in Item No. 6 of the Department's letter of December 20, 2005, which was sent to all municipalities that contribute flows to the Pennsylvania American Water Company Coatesville Wastewater Treatment Facility.

We note that the existing residences at 119 Mt. Airy Road and 137 Mt. Airy Road will be connected to public sewers with individual grinder pumps and force mains. Please be advised that Valley Township must provide long-term operation and maintenance for the proposed grinder pumps and associated low-pressure laterals that will serve these properties. As advised in Item No. 5 of our December 20, 2005 letter, Valley Township must address sewage management for grinder pumps in the Township's required Act 537 Plan for the expansion of the PAWC Treatment Facility. Please review the enclosed grinder pump sample ordinance. The Department recommends adoption of an ordinance to assure the proper long-term operation and maintenance of grinder pumps. Properly designed and installed grinder pump systems may ultimately fail without continuing operation and maintenance. An effective grinder pump sewage management program is vital for the successful long-term operation of these systems. By providing a management program, Valley Township can assure permanent sewage services for residential and commercial properties that rely on grinder pump systems. Public education, water conservation, and regular site inspections of the grinder pumps are all part of a successful management program. The program should include the following:

a. The ordinance should clarify how the municipality will handle any enforcement necessary to abate any nuisance or public health hazard that may occur in the privately owned facilities, if they are to be privately owned.

b. The ordinance should clarify how the municipality will control the type of pump units that will be used, so that full service capability is available locally on short notice. Typically, the municipality or municipal authority should specify the model of pump to be used. The municipality should consider having replacement pumps available for emergency replacement (at the expense of the homeowner).

c. Maintenance responsibilities for low pressure laterals or force mains must also be established.

An appropriate homeowner education program should also be provided. Grinder pump impellers are susceptible to damage from the flushing of bulky paper materials, even those materials advertised as biodegradable in septic systems.

The Department has determined that there are mapped wetlands within your proposed development. You are hereby notified that an encroachment permit under Title 25, Chapter 105, of the Rules and Regulations of the Department must be obtained from the Department prior to any construction that will encroach on wetlands.

If you have any questions, please feel free to contact Elizabeth Mahoney of our office at 484-250-5177.

Sincerely,

Jenifer Fields

Jenifer Fields, P.E.
Regional Manager
Water Management

cc: Chester County Planning Commission
Chester County Health Department
Mr. Wright - Valley Farm Assoc., L.P.
Mr. Newell - Nave Newell
Mr. Rasiul – Pennoni Associates, Inc.
Ms. Mahoney
Ms. Moore
Planning Section
Re

Amended Appendix A-22-b VLTW 2805

Pennsylvania Department of Environmental Protection

2 East Main Street
Norristown, PA 19401

Southeast Regional Office

MAR 15 2006

Phone: 484-250-5970
Fax: 484-250-5971

Ms. Karen E. Chandler, Secretary
Valley Township
890 West Lincoln Highway
PO Box 467
Coatesville, PA 19320

Re: Planning Module for Land Development
Round Hill Development
Code No. 1-15956-126-3J
APS Id. 550484, Site Id. 653652
Valley Township, Chester County

Dear Ms. Chandler:

Approval is hereby granted by the Department of Environmental Protection for the above referenced revision to the Valley Township Official Sewage Facilities Plan. In accordance with the Pennsylvania Sewage Facilities Act and Title 25, Chapter 71 of the Department's Rules and Regulations, Valley Township is responsible for implementing this revision as per the approved planning module.

This revision provides for adequate sewage facilities planning to permit the development of 201 multi-family dwellings on 30.5 acres. This project is located on the northwest corner of Buckthorn Road and Lincoln Highway, in Valley Township, Chester County.

This project will be connected to the Valley Township collection system and will generate 55,762 gallons of sewage per day to be treated at the Pennsylvania American Water Company Wastewater Treatment Facility.

Planning approval is also granted through this revision for two municipally owned sewage pumping stations and associated force mains and an eight-inch gravity line that will convey sewage flows from the proposed subdivision to the existing gravity sewers at an existing manhole on the north side of West Lincoln Highway near its intersection with Buckthorn Drive. The above described gravity lines are shown on plans entitled "Offsite Sanitary Sewer Plan, Round Hill Development", as prepared by McCarthy Engineering Associates, PC, dated August 19, 2004, last revised November 8, 2004. Pumping station No.1 will be located on the northwest corner of the project site and will have average design flows of 45,525 gallons per day. Pumping station No. 2 will be located on the southeast corner of the project site and will have average design flows of 10,237 gallons per day. These two pumping

stations are shown on plans entitled "Grading/Utility Plan, Round Hill Development", as prepared by McCarthy Engineering Associates, PC, dated September 15, 2003, last revised October 7, 2004.

Please review the enclosed Sewage Pumping Station Guidance before submitting your Part II Permit Application. The Department recommends a minimum peaking factor of 3.9 for pumping station #1 and 4.2 for pumping station #2. Individual pumps must be capable of handling peak instantaneous flows without employing the backup pump. Detailed justification must be submitted with permit applications for proposals that use alternate design standards from the enclosed guidance.

Planning approval is also granted through this revision for expansion of segments of existing gravity lines that convey sewage flows from the Hyati Basin in Valley Township to the Pennsylvania American Water Company existing gravity sewers in the City of Coatesville. The above described gravity line segments are shown on maps found in the planning module submission information dated February 9, 2006.

Valley Township must obtain Water Quality Management permits from the Department for the construction and operation of the conveyance lines segments, replacing a ten-inch sewer line with a twelve-inch sewer line, between manhole 512-10 and 511-1, located near the intersection of Old Lincoln Highway and Alto Street. The Pennsylvania American Water Company must obtain Water Quality Management permits from the Department for the construction and operation of the conveyance lines segments, replacing an eight-inch sewer line with a twelve-inch sewer line between manhole 1017 and 1016, located at the end of Charles Street in the City of Coatesville.

Capacity for this project is provided consistent with the Pennsylvania American Water Company's Chapter 94 Wasteload Management Plan's Connection Management Plan.

The submitted Sewage Facilities Planning Modules show a sewer line extending through an existing neighborhood with 29 dwellings. The submission indicates that the project sponsor will provide the gravity main, manholes, and lateral stubs for future connections to the existing homes. Please be advised, no connections may be made for the 29 existing homes, the existing property owners may not be assessed fees, and the Township may not commit to reimbursing the developer with connection fee assessments from these properties until complete sewage facilities planning for this existing neighborhood has been adopted by Valley Township and approved by the Department.

As agreed with the Department's Sewage Planning Supervisor, Clinton Cleaver, in the PAWC regional service area meeting at West Brandywine Township on February 9, 2006, please contact Mr. Cleaver as soon as possible to schedule a Plan of Study meeting for the Township's required Act 537 Plan to support the expansion of the PAWC Wastewater Treatment Facility. Planning for the 29 existing dwellings referenced above may be included in the Township's Official Sewage Facilities Plan Update.

If you have any questions, please feel free to contact John M. Veneziale of our office at 484-250-5175.

Sincerely,

Jenifer Fields, P.E.
Regional Manager
Water Management

cc: Chester County Planning Commission
Chester County Health Department
City of Coatesville
Elon Group, Ltd.
McCarthy Engineering Associates
Pennsylvania American Water Company
Mr. Veneziale
Ms. Moore
Planning Section
Re

Amended Appendix A-22-b

Pennsylvania Department of Environmental Protection

2 East Main Street
Norristown, PA 19401
January 19, 2007

Southeast Regional Office

Phone: 484-250-5970
Fax: 484-250-5971

Ms. Karen E. Chandler, Secretary
Valley Township
890 West Lincoln Highway
P.O. Box 467
Coatesville, PA 19320

Re: Planning Module for Land Development
Keystone Foods, LLC
Code No. 1-15956-133-3IJ
Status: ISSUED
APS ID No. 591678, Site ID No. 676709
Valley Township
Chester County

Dear Ms. Chandler:

Approval is hereby granted by the Department of Environmental Protection (Department) for the above-referenced revision to the Valley Township Official Sewage Facilities Plan. In accordance with the Pennsylvania Sewage Facilities Act and Title 25, Chapter 71 of the Department's Rules and Regulations, Valley Township is responsible for implementing this revision as per the approved planning module.

This revision provides for adequate sewage facilities planning to permit the development of Lot No. 4 of the Valley View Business Center. A distribution center for Keystone Foods, LLC, is proposed. This project is located at 190 Washington Street in Valley Township, Chester County.

This project will generate 5,250 gallons of sewage per day to be treated at the Pennsylvania American Water Company's Coatesville Wastewater Treatment Facility.

Planning approval is also granted through this revision for a municipally-owned temporary sewage pumping station to be located on Lot No. 5, sections of associated 2-inch and 4-inch force mains located in Valley Township between the temporary pumping station and the Sadsbury Township line, and an eight-inch gravity line that will convey sewage flows from proposed Lot No. 4 to the proposed temporary pump station for Lot No. 4. The above described facilities are shown on plans entitled "Sewage Facilities Planning Module Plan for Keystone Foods Lot 4 Valley View Business Park," as prepared by Commonwealth Engineers, Inc., dated March 22, 2006, last revised October 20, 2006. Valley Township must secure a Department permit for the construction and operation of the proposed sewage pumping station, force mains, and gravity line.

Amended Appendix A-22-b

Please review the enclosed Sewage Pumping Station Guidance before submitting your Part II Permit Application. The Department recommends a minimum peaking factor of 4.2 for the temporary pumping station. Individual pumps must be capable of handling peak instantaneous flows without employing the backup pump. Detailed justification must be submitted with permit applications for proposals that use alternate design standards from the enclosed guidance.

Treatment capacity for this project is provided consistent with the Pennsylvania American Water Company's Chapter 94 Wasteload Management Plan's Connection Management Plan.

This approval is conditioned as follows:

1. The submitted Plot Plan shows portions of the force mains proposed to serve this project to be located in Sadsbury Township. No sewage facilities planning has been adopted by Sadsbury Township. Additional sewage facilities planning must be adopted by Sadsbury Township and approved by the Department for the proposed force mains.

2. Sewage facilities planning must also be adopted by Sadsbury Township and approved by the Department for Lot Nos. 1, 2, and 3, which are shown on the submitted Plot Plan to be located in Sadsbury Township. No building permits may be issued and no sewer construction may occur in Sadsbury Township until sewage facilities planning has been approved by the Department and permits have been issued for the proposed force mains in Sadsbury Township.

3. Sewage facilities planning must be adopted by Valley Township and approved by the Department for Lot No. 5 and the proposed future permanent pumping station, which is shown on the submitted Plot Plan to be located in Valley Township. No conveyance or treatment capacity has been provided in the submitted planning modules for Lot No. 5. Therefore, until appropriate sewage planning has been provided for this lot, it is considered a residual lot. No building permits may be issued for Lot No. 5 and no permits can be issued for the future permanent pumping station until sewage facilities planning has been approved by the Department and permits have been issued for the proposed pumping station.

4. Valley Township may issue building permits for Lot No. 4. However, because no planning has been submitted for the required conveyance system in Sadsbury Township, the proposed temporary pumping station may not be used until the required conveyance facilities have been approved, permitted, and constructed. Valley Township may wish to submit an application for a temporary pump and haul for this project until the required conveyance facilities have been constructed. Please review the enclosed Pump and Haul Guidance before submitting your pump and haul approval request.

Amended Appendix A-22-b

Any person aggrieved by this action may appeal, pursuant to Section 4 of the Environmental Hearing Board Act, 35 P.S. Section 7514, and the Administrative Agency Law, 2 Pa.C.S. Chapter 5A, to the Environmental Hearing Board, Second Floor, Rachel Carson State Office Building, 400 Market Street, P.O. Box 8457, Harrisburg, PA 17105-8457, 717-787-3483. TDD users may contact the Board through the Pennsylvania Relay Service, 800-654-5984. Appeals must be filed with the Environmental Hearing Board within 30 days of receipt of written notice of this action unless the appropriate statute provides a different time period. Copies of the appeal form and the Board's rules of practice and procedure may be obtained from the Board. The appeal form and the Board's rules of practice and procedure are also available in braille or on audiotape from the Secretary to the Board at 717-787-3483. This paragraph does not, in and of itself, create any right of appeal beyond that permitted by applicable statutes and decisional law.

IF YOU WANT TO CHALLENGE THIS ACTION, YOUR APPEAL MUST REACH THE BOARD WITHIN 30 DAYS. YOU DO NOT NEED A LAWYER TO FILE AN APPEAL WITH THE BOARD.

IMPORTANT LEGAL RIGHTS ARE AT STAKE, HOWEVER, SO YOU SHOULD SHOW THIS DOCUMENT TO A LAWYER AT ONCE. IF YOU CANNOT AFFORD A LAWYER, YOU MAY QUALIFY FOR FREE PRO BONO REPRESENTATION. CALL THE SECRETARY TO THE BOARD (717-787-3483) FOR MORE INFORMATION.

If you have any questions, please feel free to contact Mr. John M. Veneziale of our office at 484-250-5175.

Sincerely,

Jenifer Fields, P.E.
Regional Manager
Water Management

cc: Chester County Planning Commission
Chester County Health Department
Sadsbury Township
Mr. Reading - All County Partnership
Commonwealth Engineers, Inc.
Pennsylvania American Water Company
Mr. Veneziale
Ms. Moore
Planning Section
Re 30 (joh07wqm)019-2

Amended Appendix A-22-b

Pennsylvania Department of Environmental Protection

2 East Main Street
Norristown, PA 19401
March 28, 2007

Southeast Regional Office

Phone: 484-250-5970
Fax: 484-250-5971

Ms. Karen E. Chandler, Secretary
Valley Township
890 West Lincoln Highway
P.O. Box 467
Coatesville, PA 19320

Re: Planning Module for Land Development
D. London Tract Subdivision
Code 1-15956-135-3J
Status: ISSUED
APS ID 600611, SITE ID 681909
Valley Township
Chester County

Dear Ms. Chandler:

Approval is hereby granted by the Department of Environmental Protection (Department) for the above referenced revision to the Valley Township Official Sewage Facilities Plan. In accordance with the Pennsylvania Sewage Facilities Act and Title 25, Chapter 71 of the Department's Rules and Regulations, Valley Township is responsible for implementing this revision as per the approved planning module.

This revision provides for adequate sewage facilities planning to permit the development of a 14-lot residential subdivision. This revision provides for the construction of a 4-bedroom single-family dwelling unit on each new building lot. This project is located on Pleasant Valley Drive, 500 feet west of Glencrest Road in Valley Township, Chester County.

This project will be connected to the Valley Township collection system and will generate 3,150 gallons of sewage per day to be treated at the Pennsylvania American Water Company Wastewater Treatment Facility.

This revision also provides for grinder pumps and a low pressure collection system to serve the proposed homes. Valley Township will own and operate the common forcemain associated with the system. A Department permit for the construction and operation of the low pressure sewer system is required.

Any person aggrieved by this action may appeal, pursuant to Section 4 of the Environmental Hearing Board Act, 35 P.S. Section 7514, and the Administrative Agency Law, 2 Pa.C.S. Chapter 5A, to the Environmental Hearing Board, Second Floor, Rachel Carson State Office Building, 400 Market Street, P.O. Box 8457, Harrisburg, PA 17105-8457, 717-787-3483. TDD users may contact the Board through the Pennsylvania Relay Service, 800-654-5984. Appeals must be filed with the Environmental Hearing Board within 30 days of receipt of written notice of this action unless the appropriate statute provides a different time period. Copies of the appeal form and the Board's rules of practice and procedure may be obtained from the Board. The appeal form and the Board's rules of practice and procedure are also available in braille or on audiotape from the Secretary to the Board at 717-787-3483. This paragraph does not, in and of itself, create any right of appeal beyond that permitted by applicable statutes and decisional law.

IF YOU WANT TO CHALLENGE THIS ACTION, YOUR APPEAL MUST REACH THE BOARD WITHIN 30 DAYS. YOU DO NOT NEED A LAWYER TO FILE AN APPEAL WITH THE BOARD.

IMPORTANT LEGAL RIGHTS ARE AT STAKE, HOWEVER, SO YOU SHOULD SHOW THIS DOCUMENT TO A LAWYER AT ONCE. IF YOU CANNOT AFFORD A LAWYER, YOU MAY QUALIFY FOR FREE PRO BONO REPRESENTATION. CALL THE SECRETARY TO THE BOARD (717-787-3483) FOR MORE INFORMATION.

If you have any questions, please feel free to contact Mr. John M. Veneziale of our office at 484-250-5175.

Sincerely,

Jenifer Fields, P.E.
Regional Manager
Water Management

cc: Chester County Planning Commission
Chester County Health Department
Mr. O'Neill - Wickford Chase, L.L.C.
Commonwealth Engineers, Inc.
Pennsylvania American Water Company
Mr. Veneziale
Ms. Moore
Planning Section
Re 30 (GJE07WQ)086-11

Amended Appendix A-22-b

Pennsylvania Department of Environmental Protection

2 East Main Street
Norristown, PA 19401
March 26, 2008

Southeast Regional Office

Phone: 484-250-5970
Fax: 484-250-5971

Ms. Karen Chandler, Secretary
Valley Township
890 West Lincoln Highway
P.O. Box 467
Coatesville, PA 19320

Re: Act 537 Plan Update
Robinson Avenue/Oaklyn Lane
Special Study
Status: ISSUED
DEP Code 1-15956-143-3m
APS ID 312575, SITE ID 528378
Valley Township
Chester County

Dear Ms. Chandler:

We have completed our review of your municipality's updated Official Sewage Facilities Plan titled "Robinson Avenue/Oaklyn Lane Project" as prepared by Pennoni Associates, Inc., dated October 2007. The review was conducted in accordance with the provisions of the Pennsylvania Sewage Facilities Act.

Approval of the plan is hereby granted.

The plan provides for connecting 29 existing residences on Robinson Avenue and Oaklyn Lane to public sewers. The sewer lines were previously installed as part of the adjacent Round Hill development.

Any person aggrieved by this action may appeal, pursuant to Section 4 of the Environmental Hearing Board Act, 35 P.S. Section 7514, and the Administrative Agency Law, 2 Pa.C.S. Chapter 5A, to the Environmental Hearing Board, Second Floor, Rachel Carson State Office Building, 400 Market Street, P.O. Box 8457, Harrisburg, PA 17105-8457, 717-787-3483. TDD users may contact the Board through the Pennsylvania Relay Service, 800-654-5984. Appeals must be filed with the Environmental Hearing Board within 30 days of receipt of written notice of this action unless the appropriate statute provides a different time period. Copies of the appeal form and the Board's rules of practice and procedure may be obtained from the Board. The appeal form and the Board's rules of practice and procedure are also available in braille or on audiotape from the Secretary to the Board at 717-787-3483. This paragraph does not, in and of itself, create any right of appeal beyond that permitted by applicable statutes and decisional law.

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If you have any questions, please contact Mr. John M. Veneziale of this office.

Sincerely,

Jenifer Fields, P.E.
Regional Manager
Water Management

cc: Chester County Planning Commission
Chester County Health Department
Pennoni Associates, Inc.
Pennsylvania American Water Company
Mr. Veneziale
Ms. Moore
Ms. Grant
Mr. McHale - RCSOB, 11th Floor, Sewage Facilities Planning Section
Re 30 (AR08WQM)084-1

Amended Appendix A-22-b

Pennsylvania Department of Environmental Protection

2 East Main Street
Norristown, PA 19401

Southeast Regional Office

Phone: 484-250-5970
Fax: 484-250-5971

MAR 3 1 2008

Ms. Karen E. Chandler, Secretary
Valley Township
890 West Lincoln Highway
P.O. Box 467
Coatesville, PA 19320

Re: Planning Module for Land Development
Rainbow Elementary School
DEP Code 1-15956-141-3J
Status: ISSUED
APS ID 635972 Site ID 443599
Valley Township
Chester County

Dear Ms. Chandler:

Approval is hereby granted by the Department of Environmental Protection for the above referenced revision to the Valley Township Official Sewage Facilities Plan. In accordance with the Pennsylvania Sewage Facilities Act and Title 25, Chapter 71 of the Department's Rules and Regulations, Valley Township is responsible for implementing this revision as per the approved planning module.

This revision provides for adequate sewage facilities planning to permit the development of a new elementary school that will replace an existing elementary school and will serve 750 students and employ 100 staff. This project is located at 1127 W Lincoln Highway, in Valley Township, Chester County.

This project will be connected to the Valley Township collection system and will generate 3,188 gallons of sewage per day to be treated at the Pennsylvania American Water Company Wastewater Treatment Facility.

This project is a replacement discharge to the conveyance and treatment facilities of Pennsylvania American Water Company and therefore not required to be listed on the Pennsylvania American Water Company's Connection Management Plan.

Any person aggrieved by this action may appeal, pursuant to Section 4 of the Environmental Hearing Board Act, 35 P.S. Section 7514, and the Administrative Agency Law, 2 Pa.C.S. Chapter 5A, to the Environmental Hearing Board, Second Floor, Rachel Carson State Office Building, 400 Market Street, P.O. Box 8457, Harrisburg, PA 17105-8457, 717-787-3483. TDD users may contact the Board through the Pennsylvania Relay Service, 800-654-5984. Appeals must be filed with the Environmental

Hearing Board within 30 days of receipt of written notice of this action unless the appropriate statute provides a different time period. Copies of the appeal form and the Board's rules of practice and procedure may be obtained from the Board. The appeal form and the Board's rules of practice and procedure are also available in braille or on audiotape from the Secretary to the Board at 717-787-3483. This paragraph does not, in and of itself, create any right of appeal beyond that permitted by applicable statutes and decisional law.

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If you have any questions, please contact Stefanie Yosmanovich of our office at 484-250-5186.

Sincerely,

Jenifer Fields, P.E.
Regional Manager
Water Management

cc: Chester County Planning Commission
Chester County Health Department
Chester County Conservation District
William Androwick - CASD
CMX
Pennsylvania American Water Company
Ms. Yosmanovich
Ms. Moore
Planning Section
Re 30

APPENDIX I

PENNSYLVANIA-AMERICAN WATER COMPANY
CONNECTION MANAGEMENT PLAN
REPORTING 4TH QUARTER 2007 DATA
REVISED: JANUARY 2008

Pennsylvania American Water

COATESVILLE DISTRICT
CHESTER COUNTY

CONNECTION MANAGEMENT PLAN

WASTEWATER TREATMENT PLANT

AND

COLLECTION SYSTEM

REPORTING 4th Quarter 2007 Data REVISED: January 2008

PLEASE NOTE
CMP SUBMITTAL DATES BY PAWC TO PADEP:
1/15/2008

PADEP APPROVAL DATES:
PENDING

PREPARED BY:
PENNSYLVANIA - AMERICAN WATER COMPANY
COATESVILLE DISTRICT
GERALD A. DeBALKO, P.E.
4 WELLINGTON BLVD.
WYOMISSING, PA 19610
T: (610) 670-7789 EXT 127
F: (610) 678-6057

Amended Appendix A-22-b

Pennsylvania American Water

CONNECTION MANAGEMENT PLAN

WASTEWATER TREATMENT PLANT (WWTP)

&

COLLECTION SYSTEM

REPORTING 4th Quarter 2007 Data REVISED: January 2008

SUMMARY OF MANAGEMENT PLAN GOALS FOR WWTP

PAWC, in coordination with tributary municipalities, provides on-going and revised projections through PAWC's Connection Management Plan (CMP) which is submitted to DEP on a quarterly basis as set forth in the Consent Order & Agreement (CO&A). The CMP has two summaries of projections on Table A2 in the report and reflects those developments approved by DEP for construction and connection to the sewer system which is located within the 2001 DEP approved Act 537 service areas of the tributary municipalities. These developments may be connected prior to the completion of the sewer plant expansion pending final DEP approval of the applicable sewer planning modules. The 5 year projected annual flows approved by DEP at this time project total flows in Summary # 1 of 4.790 mgd with a total construction of 4,783 EDUs by 2012. Summary # 2 is a PAWC projection of projects with Planning Modules signed by PAWC or pending submission by PAWC which is 74 EDU's more than Summary #1 in this submission, 14 EDU's is because PAWC is proposing the addition of several small projects in Valley Township and one in Caln Township while reducing other projects that do not require the quantity originally listed on Table A2. 57 of the 74 EDU's is because PAWC is requesting the movement of 57 EDU's from the Parkesburg Borough Miscellaneous to West Sadsbury to serve two existing industrial facilities. 71 of the 74 pending EDU's were listed on the October 2007 CMP, however no official approval of that submission was received. The addition of these projects on Table A2 of the CMP is consistent with DEP's March 27, 2007 and September 5, 2007 Letters to PAWC in that the municipalities remain under their respective allocation approved with the addition of these two projects.

On the CMP, Table A3, Summary #1 indicates all units as requested by developers and townships, and is a highly aggressive growth number which would produce an average flow in 2012 of 5.862 mgd. Summary #2 indicates all units requested which have planning modules signed by PAWC or pending, and is a more conservative and realistic growth number which would produce an average flow in 2012 of 4.790 mgd. Summary #3 shows the difference between Summary #1, the aggressive EDU projection, and Summary #2; and represents the remaining EDU's not yet signed by PAWC.

Table A1A is composed of two (2) different projections. The first projection at the top of the page (Projected Total per CMP Table A2 (2007 Q4, Revised January 2008), Summary No. 2) begins with the 2006 actual average flow of 3,552,763 gpd as reported in the 2006 Chapter 94 report and projects flow in 2007 based off the actual connections for each municipality and then projects flows for the five year period of 2008-2012 resulting in a 2012 average flow of 4,687,438 gpd.

The second projection at the bottom of the page Summary No. 2 – Based on adjusted 5 Year Average refers to the CMP Table A2, Summary #2 for which PAWC has approved planning modules or considers to be pending. Starting with the most recent adjusted five year average flow of 3,713,892 gpd, the average flow in 2012 is projected to be 4,806,717 gpd. Table A1B shows the derivation of the adjusted 5 year average flow based on flow adjustments for prior year connections.

Looking at both summaries, PAWC anticipates the actual flow in the next five years will most realistically follow this second projection for pre-plant expansion. Once the expanded plant is completed and new, additional capacity provided, flows will be able to exceed the pre-plant capacity limits.

CORRECTIVE ACTIONS TO ADDRESS PROJECTED HYDRAULIC OVER LOAD:

PAWC has been developing a Regional Act 537 Plan since 2001 and distributed the draft plan to the tributary municipalities, the Chester County Planning Commission and the Chester County Health Department for review and comment in 2005. Most of the municipalities and the County agencies did respond and their comments were reflected in a revised draft Plan. PAWC submitted this plan to DEP for review in the 4th Quarter of 2005. At a meeting with the tributary municipalities on December 7, 2005, in which PAWC and representatives from DEP attended, DEP explained it had made the decision that each tributary municipality must submit its own revised Act 537 Plan from which certain elements of these plans must be incorporated into PAWC's Regional Act 537 Plan.

East Fallowfield submitted its revised Act 537 Plan to DEP in 2004; however, DEP determined it was not administratively complete. East Fallowfield is in the process of revising and updating the Plan for submission in late 2007 or early 2008.

Caln Township submitted its revised Act 537 to DEP on November 7, 2005, and has met a number of times with DEP to resolve issues pertaining to a proposed pump station which would separate flows to the Downingtown Area Regional Authority ("DARA") and PAWC's Coatesville Plant. By letter dated September 27, 2007, DEP advised Caln Township that it "…will be unable to issue an approval for the Townships Act 537 plan update until we have approved the PAWC Regional Plan that provides the expansion of the PAWC Regional Plant and will release the approval of the Township's plan concurrently with our approval of the regional plan."

Only minor revisions were required to the City of Coatesville's and the Borough of Parkesburg's Act 537 Plan which pertains to projected capacity needs. The City of Coatesville planning effort has been submitted to DEP for final approval pending approval of the PAWC Act 537 Plan. The Borough of Parkesburg planning effort has been included as an appendix in the PAWC Act 537 Plan and concurrent DEP approvals are subsequently anticipated.

Sadsbury Township has determined there are no changes needed in its existing, approved Act 537 Plan at this time. Its Plan provides for present and future needs and is still appropriate for its planning period; therefore, their Plan will not need revisions.

Valley, West Brandywine, West Caln and West Sadsbury Townships are in various stages of Act 537 revisions which are anticipated to be completed most likely in 2008. Highland Township is also considering proceeding with its first Act 537 Plan but has yet to authorize its preparation. All ten tributary municipalities are aware that their projected, future sewer capacity needs cannot be approved until PAWC's Act 537 Plan, as well as the individual municipality's Plan, is approved by DEP and, further, until the Coatesville sewage treatment plant expansion is completed.

PAWC has successfully worked with all tributary municipalities in the development of the needs analysis for sewer capacity which we are including in our ACT 537 Plan. We completed our Plan draft in August 2006 and sent it to the tributary municipalities and to South Coatesville Borough, the host municipality for our sewage treatment plant, for their review and comment. Draft Plan copies were also sent to the Chester County Planning Commission ("CCPC") and the Chester County Health Department ("CCHD").

PAWC and our consulting firm, URS, have met with each of the eleven municipal planning commissions (including South Coatesville) to discuss and respond to questions regarding our Plan. All ten of the tributary municipal planning commissions have sent their comments and recommendations to their respective governing bodies for consideration of the approval of the PAWC Act 537 Plan. The South Coatesville Borough Planning Commission has not made their recommendations yet although PAWC has met with the Borough Planning Commission several times. We continue to work with this planning body to encourage their recommendations.

It should be noted here that on September 11, 2007, the South Coatesville Borough Council approved the issuance to PAWC of a Letter of Consistency indicating compliance with its Chapter 52 Flood Management Ordinance. The Letter of Consistency dated September 28, 2007, was sent to PAWC. PAWC forwarded a copy of this letter to DEP for the final approval needed for the issuance of the construction permit.

We will finalize additional information for the Plan which will be sent to all municipal governing bodies in the first or second quarter of 2008. We will then request meetings with all eleven governing bodies to make a formal presentation of the Plan and respond to questions and comments. We will present a sample resolution for the governing bodies to consider for adoption of the PAWC Plan. We anticipate receiving all municipal approvals by late fall.

Due to many scheduling problems in setting up meetings with the planning commissions, we have had to move the submission of the Plan to DEP to late summer. We continue working with all municipalities to lend any assistance requested in the development of their individual ACT 537 Plans to try to assure continuity with all Plans. Because of time constraints and delays we have faced throughout this whole process, we will be requesting that DEP assist us by expediting its review and approval.

On December 7, 2005, DEP directed that sewer connections would be allowed only in those sewer service areas of the Act 537 Plan approved by DEP on March 15, 2001. Any developments proposed in areas outside the 2001 service area will not be approved until after the plant expansion unless the municipality's limited scope Act 537 Plan revision is first approved by DEP and, further, provided the additional capacity requested does not exceed the CMP allocation of 4.6 mgd prior to the Plant expansion. For four projects (Bone Tract, London Tract, Southwoods, and Ridgecrest) that are outside the Act 537 2001 service areas, PAWC requested and DEP approved to move these projects from Table A3 to A2 in the Q2 2006 CMP revised July 2006. At this time there are no other requests for connections outside the 2001 sewer service areas.

PAWC submitted a re-rating study to DEP which shows the organic and hydraulic capacity of the facility to be 4.86 MGD. As part of the CO&A, DEP will permit flow allocations up to the average annual flow rate of 4.6 MGD to be used in the CMP projections prior to the completion of the sewer plant expansion. DEP received the Part I NPDES permit for the proposed 7.0 MGD facility on September 17, 2005. DEP received the Part II NPDES permit for the proposed 7.0 MGD facility on March 31, 2006. PAWC has completed the design engineering for the WWTP expansion. PAWC anticipates having the WWTP expanded capacity online by early 2010 pending issuance of Part 2 permit by DEP.

SUMMARY OF MANAGEMENT PLAN GOALS FOR COLLECTION SYSTEM

Previous Connection Management Plans (CMP) identified MH #16 to #18 as the most critical section of the East End Trunk Line (EETL) and allocated new connections as shown in Table B2 of the CMP, until the line upgrade of this critical section was completed. Construction of this upgrade was substantially completed and placed into service on 5/10/06. There is no need for further allocation of new connections as it pertains to this section.

Previous Connection Management Plans (CMP) identified MH #20 to #21 as the most critical section of the East End Trunk Line (EETL) and allocated new connections as shown in Table B2 of the CMP, until the line upgrade of this critical section was completed. Construction of this upgrade was substantially completed and placed into service on 1/25/07. There is no need for further allocation of new connections as it pertains to this section.

All EETL segments previously awarded for replacement (sections 19 through 26 and 29 through 31) are now complete.

Utilizing flow projections for the next five years, and based on system flows as monitored in May 2002, Table B1 shows the next critical section of the Collection System to be between manholes 10 and 9. Peak flows are based on projections of average daily flow, which correlate to the increase in projected new connections based on Table A2 – summary #2, times a peaking factor of 2.8. The projected EDU's are based on the EDU's as submitted by the contributing municipalities and currently signed Planning Modules and PAW/developer estimates of buildout. Provided that all projected EDU's on Table A2 become active, we project a hydraulic overload in this critical section in 2010. The full pipe design capacity of the line is 10,741,680 gpd, and the present peak flow if 7,691,600 gpd. The projected EDU's remaining based on the average daily flow would be 4,841 EDU's.

As shown in Table 2, PAW currently has capacity to accept 4,841 new EDU's through this critical section of the collection system. All proposed connections on Table A2 are upstream of this section. Table B2 indicates that a total of 4,723 new EDU's through 2009 are projected to flow through this section and 196 have connected since establishing the limit, leaving a total of 4,527 EDU's remaining to be connected. The total EDU allowed through 2009 is consistent with DEP's September 5, 2007 approving the July 2007 submission of the CMP. PAWC is limiting connection until this critical section is upgraded and placed into service.

Manhole segment 10 to 9 is located within the Mittal Steel Property just north of the existing sewage treatment plant. The sewer main is part of the 30" interceptor that collects the sewage from the East and West End trunk lines which combine at manhole 15. The 30" interceptor conveys all the sewage in the Coatesville sewer service area from manhole 15 to the headworks of the existing treatment plant.

PAWC plans to upgrade this section in conjunction with its planned upgrades to the Coatesville WWTP. The following action items are underway with regards to this project.

PAWC installed surcharge level indicators at MH locations 9, 10, 12, 20, 21 and 22 to monitor operating conditions during wet weather conditions. Buchart Horn and PAWC has monitored them since July 28, 2006 and has not recorded any sewer overflows during the monitoring period.

- PAWC has completed plan and profile drawing of the proposed improvement.
- PAWC has funding for upgrade of this critical section and EDU's are allocated in accordance with this agreement as shown in Table A2.
- PAWC has received the Part II Permit January 8, 2007 for this upgrade. Permit No. 1506416.
- PAWC has received bids for construction on July 17, 2007.
- PAWC awarded the contract on October 12, 2007 and issued a Notice to Proceed on December 3, 2007.
- Estimated completion of construction is fall 2008 in conjunction with the treatment plant expansion.

PAWC has recently signed planning modules for three developments with the Borough of Parkesburg, the Davis Tract 324 EDU's, Crystal Springs 129 EDU's, and HDC Site 75 EDU's. PAWC performed a capacity analysis and identified the combined total of the additional EDU's will cause specified segments to be greater than its design capacity. A restriction shall be placed upon these three developments that prior to connection of a combined total of 232 EDU's, pipe segments must be replaced. To assist the developers, PAWC will coordinate the design, permitting and construction of the improvements and offer the following Corrective Action Plan (CAP).

- PAWC will begin design efforts in October 2007 pending developers commitment.
- PAWC will submit Part II permit to DEP in January 2008.
- PAWC will receive bids for construction in April 2008.
- Notice of Award and Proceed issued by June 2008.
- Construction timeframe June 2008 through October 2008.

Amended Appendix A-22-b

Pennsylvania American Water

CONNECTION MANAGEMENT PLAN - REPORTING 4th Quarter 2007 Data REVISED: January 2008

WASTEWATER TREATMENT PLANT (WWTP) CAPACITY PROJECTIONS

TABLE 1

CAPACITY BASED ON ACT 537 PLANNING			
Line/Note			
A	ANNUAL AVERAGE FLOW PER ACT 537	3.85	mgd
B	AVAILABLE ALLOCATION LIMIT PER CONSENT ORDER	4.60	mgd
C	ADJUSTED 5 YEAR ANNUAL AVERAGE FLOW	3.714	mgd
D	AVAILABLE CAPACITY TO ALLOCATE	0.886	mgd
E	AVAILABLE EDUS BASED ON AVAILABLE CAPACITY	**3,938**	**edu**
1	PERMITTED 3-MONTH MAXIMUM FLOW PER NPDES PERMIT	4.600	mgd
2	5 YEAR MAXIMUM 3-MONTH AVERAGE FLOW	4.057	mgd
3	5 YEAR AVERAGE PEAKING FACTOR: 3-MONTH MAXIMUM TO ANNUAL AVERAGE	1.092	

Note

All referenced tables are located in Appendix

EDU = 225 gpd/edu

(A) Annual Average Flow per 1995 ACT 537 Plan

(B) Available capacity to be allocated per November 30, 2005 Consent Order prior to facilty expansion in 2008.

(C) Calculated using the running Adjusted 5 Year Equivalent Base Flows from Table A1B.

(D) Calculated as Line A - Line B

(E) Calculated as (Line C * 1,000,000) divided by (225 gpd/edu). Available EDU's could be greater when lower EDU vaules for for senior housing are factored in.

(1) 4.60 mgd is the Maximum Month Flow per the NPDES permit which is used to help determine hydraulic loading at WWTP. Hydraulic overload does not occur until the maximum month average is exceeded for 3 consecutive months.

(2) From Table A1A, calculated as Adjusted 5 year annual average flow times peak factor from Table A1.

(3) 5 Year Peak factor from Table A1.

Amended Appendix A-22-b

Pennsylvania American Water

CONNECTION MANAGEMENT PLAN - REPORTING 4th Quarter 2007 Data REVISED: January 2008

30" INTERCEPTOR CAPACITY PROJECTIONS

TABLE 2

CAPACITY BASED ON MOST CRITICAL SECTION			
Line/Note			
1	HYDRAULIC PEAK CAPACITY AT CRITICAL SECTION (MH# 10 to MH# 9)	10,741,680	gpd
2	INTERCEPTOR AVERAGE DAILY FLOW	2,747,000	gpd
3	INTERCEPTOR PEAK DAILY FLOW	7,691,600	gpd
4	AVAILABLE CAPACITY AS PEAK FLOW	3,050,080	gpd
5	AVAILABLE CAPACITY AS AVERAGE FLOW	1,089,314	gpd
6	AVAILABLE EDUS AT AVERAGE FLOW	4,841	edu
7	NUMBER OF CONNECTIONS MADE	196	edu

Note	
	All referenced tables are located in Appendix
(1)	Critical Section as indicated on Table B1
(2)	Average Daily Flow as indicated in Table B1 for critical section. Average Daily Flow values as indicated on Table B1 are obtained from the I&I Program's May 2002 metering of basins.
(3)	Peak Daily Flow as calculated by multiplying Line 2 by 2.8
(4)	Available Capacity as indicated on Table B1 for critical section.
(5)	Calculated by removing peaking factors from Peak Flow on Line 4.
(6)	Calculated as Line 5 divided by 225 gpd/EDU
(7)	Connections made as detailed on Table B2

APPENDIX A

Amended Appendix A-22-b

Pennsylvania American Water

CONNECTION MANAGEMENT PLAN - REPORTING 4th Quarter 2007 Data REVISED: January 2008
WASTEWATER TREATMENT PLANT FLOWS

TABLE A1

Annual Average 3.85 MGD
3 Consecutive Month Maximum 4.6 MGD

MONTH	YEAR	MONTHLY FLOW AVERAGE (MGD)			
		2003	**2004**	**2005**	**2006**
JANUARY		2.965	**3.546**	3.776	**3.939**
FEBRUARY		3.195	**3.749**	**3.652**	**3.901**
MARCH		4.011	**3.183**	**3.688**	**3.472**
APRIL		3.421	3.315	**4.337**	3.411
MAY		3.204	3.296	3.402	3.189
JUNE		4.501	3.251	3.124	3.891
JULY		3.449	3.118	3.530	3.811
AUGUST		3.696	3.422	3.171	3.353
SEPTEMBER		4.266	3.408	2.905	3.403
OCTOBER		**3.719**	3.288	3.663	3.292
NOVEMBER		**4.072**	3.269	3.297	3.593
DECEMBER		**4.296**	3.371	3.609	3.379
AVERAGE		3.733	3.351	3.513	3.553
3 Month MAX		4.029	3.493	3.892	3.771

2007

	MONTHLY FLOW AVERAGE (MGD)	3 MONTH MAXIMUM (MGD)	RAIN TOTAL (in.)
JANUARY	3.795		4.84
FEBRUARY	3.517		1.17
MARCH	**4.154**	3.822	3.86
APRIL	**4.657**	4.109	7.98
MAY	**3.966**	**4.259**	2.42
JUNE	3.692	4.105	3.69
JULY	3.568	3.742	6.52
AUGUST	3.468	3.576	5.72
SEPTEMBER	3.015	3.350	0.05
OCTOBER	3.191	3.225	8.13
NOVEMBER	3.199	3.135	3.33
DECEMBER	3.572	3.321	5.43
AVERAGE	3.650	--	4.43
3 MTH. MAX.		4.259	

Number of Connections During Quarter 2007	
1st Quarter	40
2nd Quarter	53
3rd Quarter	48
4th Quarter	45
Total for Year	186

5 YEAR FLOW HISTORY

	ANNUAL AVERAGE	3 MONTH MAXIMUM	PEAKING FACTOR
2007	3.650	4.259	1.167
2006	3.553	3.771	1.061
2005	3.513	3.892	1.108
2004	3.351	3.493	1.042
2003	3.733	4.029	1.079

.

RUNNING ANNUAL AVERAGE FLOW

3.650 **MGD** January 2007 through December 2007

RUNNING 5 YEAR AVERAGE

3.560 **3.889** **1.092**

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CONNECTION MANAGEMENT PLAN - REPORTING 4th Quarter 2007 Data REVISED: January 2008
WASTEWATER TREATMENT PLANT FLOWS

TABLE A1A

PROJECTED TOTAL PER CMP, TABLE A2 (2007 Q4, REVISED JANUARY 2008), SUMMARY NO. 2

	Act 537 Approved Contracted Allocation	Chapter 94 Flow 2006	2007 Projected Based off Actual Connections	2008	2009	2010	2011	2012	5-year Net Increase
City of Coatesville	*	1,911,615	1,915,215	1,989,015	2,083,965	2,117,940	2,123,565	2,123,565	211,950
Valley Township	550,000	572,815	585,640	689,815	818,965	843,940	843,940	843,940	271,125
Caln Township	167,000	183,521	183,521	185,996	193,646	211,421	229,421	236,171	52,650
West Brandywine Township	345,000	136,826	136,826	182,951	222,551	240,776	252,251	270,476	133,650
Sadsbury Township	410,750	115,747	115,747	143,647	185,272	230,272	261,997	261,997	146,250
West Sadsbury Township	*	47,109	47,109	47,109	59,934	59,934	59,934	59,934	12,825
East Fallowfield Township	*	100,190	118,190	154,190	187,265	203,915	203,915	203,915	103,725
Borough of Parkesburg	*	365,041	368,641	453,016	545,716	545,716	545,716	545,716	180,675
West Caln Township	*	15,267	18,867	27,867	36,867	36,867	36,867	36,867	21,600
Veterans Hospital	*	100,566	100,566	100,566	100,566	100,566	100,566	100,566	-
Highland Township		0	225	225	225	225	225	225	225
Bulk Delivery		4,066	4,066	4,066	4,066	4,066	4,066	4,066	-
Ave. Total Flow (MGD)		**3,552,763**	**3,594,613**	**3,978,463**	**4,439,038**	**4,595,638**	**4,662,463**	**4,687,438**	**1,092,825**
3-Month Max (MGD)		**3,770,667**	**3,815,083**	**4,222,476**	**4,711,300**	**4,877,505**	**4,948,429**	**4,974,935**	**1,159,852**
Peak Factor		**1.061**	**1.061**	**1.061**	**1.061**	**1.061**	**1.061**	**1.061**	

PROJECTED TOTAL PER CMP (revised 1/08), TABLE A2 (SUMMARY NO. 2)- BASED ON 5 YEAR ADJUSTED AVERAGES

Ave. Total Flow (MGD)			**3,713,892**	**4,097,742**	**4,558,317**	**4,714,917**	**4,781,742**	**4,806,717**	**1,092,825**
3-Month Max (MGD)			**4,056,969**	**4,476,278**	**4,979,399**	**5,150,466**	**5,223,464**	**5,250,746**	**1,193,776**
Peak Factor			**1.092**	**1.092**	**1.092**	**1.092**	**1.092**	**1.092**	

Contract and Planning Allocations For WWTF Expansion

	Allocation	Contracted Capacity		
City of Coatesville	2,391,490			
Valley Township		1,540,000		
Caln Township		800,000		
West Brandywine Township		345,000	(1)	
Sadsbury Township		410,750		
West Sadsbury Township	111,951			
East Fallowfield Township	329,232			
Borough of Parkesburg	633,416			
West Caln Township	251,089			
Veterans Hospital	74,271			
Highland Township	56,438			
Totals:	3,847,887	3,095,750		6,943,637

NOTE (1) Draft Sewer Agreement 4/25/05 pending with requested amounts of 473,000 gpd and 835,000 gpd post plant

TABLE A1B
SUMMARY OF CONNECTIONS

SOURCE	2003 New Flow	2003 Equiv. EDU's	2004 New Flow	2004 Equiv. EDU's	2005 (2) New Flow	2005 (2) Equiv. EDU's	2006 New Flow	2006 Equiv. EDU's	2007 New Flow	2007 Equiv. EDU's	5 Year Totals New Flow	5 Year Totals Equiv. EDU's
Bulk Customers												
Valley Twp.	29,025	129	33,075	147	17,325	77	20,475	91	12,825	57	112,725	501
Caln Twp.	0		0	0	675	3	0	0	0	0	675	3
W. Brandywine Twp.	5,850	26	1,350	6	225	1	0	0	0	0	7,425	33
Sadsbury	26,325	117	25,200	112	31,500	140	7,650	34	0	0	90,675	403
Subtotal	61,200	272	59,625	265	49,725	221	28,125	125	12,825	57	211,500	940
Billed Customers [1]	65,250	290	53,100	236	55,125	245	41,175	183	29,025	129	243,675	1083
Veteran's Hospital	(4,525)	(20)	(3,542)	(16)	4,606	20	21,689	96		0	18,228	81
TOTAL	121,925	542	109,183	485	109,456	486	90,989	404	41,850	186	473,403	2104

[1] Net EDU addition for City of Coatesville, East Fallowfield Twp., Parkesburg Boro, West Sadsbury, West Caln, & Bulk Haulers

(2) The 2005 total was previously reported at 859 EDU's, however 2004 EDU's were counted as 2005 when updating the CMP to date.

Note: One EDU = 225 GPD

Base Flow Determination

	2003	2004	2005	2006	2007	5-YR Adjusted Average
Actual Annual Average	3.733	3.351	3.513	3.554	3.650	
Flow Adjustments 2004	0.109					
Flow Adjustments 2005	0.109	0.109				
Flow Adjustments 2006	0.091	0.091	0.091			
Flow Adjustments 2007	0.042	0.042	0.042	0.042		
Total Adjustment	0.351	0.242	0.133	0.042	0	
Equivalent Flow	4.084	3.593	3.646	3.596	3.650	3.714

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CONNECTION MANAGEMENT PLAN - REPORTING 4th Quarter 2007 Data REVISED: January 2008

PROJECTED NEW CONNECTIONS WITH SIGNED PLANNING MODULES

PLEASE NOTE - CMP WAS SUBMITTED BY PAWC BUT NOT APPROVED BY DEP

TABLE A2

LINE	DEP Code No.	NAME	TOTAL EQ. EDU's	EDUS EQ. ACTIVE	EDUS REMAINING	EST. GPD REMAINING	PLANNING (b) MODULE	EETL &WETL MH	TYPE	PROJECTED NEW CONNECTIONS (c) 2008	2009	2010	2011	2012	TOTAL IN 5 YEARS	TOTAL BEYOND 2010
1	**City of Coatesville**															
2	1-15001-036-3IJ	Cambria Terrace	69	14	55	12,375	Y	16	R	24	22	9			55	-
3	1-15001-029-3H	Penn Crossing	78	78	-	-	Y	40	R	*	*	*			-	-
4	1-15001-023-3H	Millview	187	187	-	-	Y	523	R	*	*	*			-	-
5	1-15001-032-3J	Millview Apartments	350	350	-	-	Y	523	R	*	*	*			-	-
6		Cox II	11	11	-	-	Y	37	R	*	*	*			-	-
7	1-15001-037-3IJ	Bond House (Mount Pleasant Street)	13	10	3	675	Y	523	R	3	*	*			3	-
8		Brandywine View	638		638	143,550	Y	23	R	205	205				410	228
9		Pulver Office Building 1	8		8	1,800	Y	578	C	-	8				8	-
10		Marriott Hotel & Resturant	78		78	17,550	Y	578	C	-	78				78	-
11		Chetty Towers 1 - Residential	60		60	13,500	Y	23	R	60		*			60	-
12		Chetty Towers 1 - Commercial	10		10	2,250	Y	23	C	10		*			10	-
13		Chetty Towers 2 - Residential	150		150	33,750	Y	16	R	-	60	90			150	-
14		Chetty Towers 2 - Commercial	25		25	5,625	Y	16	C	-	5	20			25	-
15		ChesPenn - Residential	15		15	3,375	Y	33	R	5	10				15	-
16		ChesPenn - Commercial	4		4	900	Y	33	C	4		*			4	-
17		701 ELH - Residential	7		7	1,575	Y	33	R	7		*			7	-
18		731 ELH - Residential	9		9	2,025	Y	33	R	9		*			9	-
19		Williams Tract	80		80	18,000		16	R		25	31	24		80	-
20		Coatesville VoTech	4		4	900	Y		R	1	1	1	1		4	-
21		McColl-Coatesville Condominium	8		8	1,800	Y		R		8				8	-
22																
23		Total EDU	1,804	650	1,154	259,650			EDU	328	422	151	25	-	926	228
24		Total Flow	405,900	146,250	259,650				FLOW	73,800	94,950	33,975	5,625	-	208,350	51,300
25	**Valley Township (d)**															
26	1-15956-117-3H	Hillview	512	278	234	52,650	Y	16	R	90	144				234	-
27	1-15956-119-3H	Meadow Brook	88	88	-	-	Y	16	R	*	*	*			-	-
28	1-15956-134-3IJ	Oak Crest (Dague)	188	20	168	37,800	Y	16	R	60	108				168	-
29	1-15956118-3H	Valley Crossing IV	49	49	-	-	Y	578	R	*	*	*			-	-
30	1-15956-123-3J	Timberlane	46	46	-	-	Y	581	R		*	*			-	-
31	1-15956-126-3J	Round Hill (Buckthorn Area)	230	11	219	49,275	Y	581	R	75	94	50			219	-
32	1-15956-127-3J	Hanscom Subdivision	1	-	1	225	Y	578	R	1	*	*			1	-
33	1-15956-124-3J	Lambert Subdivision	3	2	1	225	Y	578	R	1	*	*			1	-
34	1-15961-306-4	Highlands Corp. Center Phase I, II, III	90	27	63	14,175	Y	16	C	63		*			63	-
35	1-15956-132-3J	Woodland Point (Risbon)	9	4	5	1,125	Y	581	R	5	*	*			5	-
36	1-15956-125-3J	Valley Suburban (Stoltzfus Commercial)	340	-	340	76,500	Y	578	R/C	100	200	40			340	-
37	1-15956-128-3IJ	Valley Farm & Mt. Airy Road	81	12	69	15,525	Y	16	R	20	28	21			69	-
38	1-15956-131-3IJ	Terry Middleton	1	1	-	-	Y	578	R		*	*			-	-
39	1-15956-135-3J	London Tract	14	-	14	3,150	Y	578	R	14	*	*			14	-
40	1-15956-133-3IJ	Bone Tract (Keystone Foods Portion)	20	-	20	4,500	Y	578	C	20					20	-
41	1-15956-140-X	Albert Koenig	1	-	1	225	Y	581	R	1	*				1	-
42		Concern	3		3	675	**P**	581	R	3					3	-
43		Valley Farm Associates	1		1	225	**P**	581	R	1					1	-
44		Lawrence Professional Center	2		2	450	**P**	581	C	2					2	-
45	1-15956-144-X	Saligman Hangar	1		1	225	**P**	581	C	1					1	-
46		John Woodward	1		1	225	**P**	581	R	1					1	-
47		Olinick Lot	1		1	225	**P**	582	R	1					1	-
48		Saunders Lot	1		1	225	**P**	583	R	1					1	-
49		Valley Miscellaneous	3	-	3	675	**P**	584	R	3					3	-
50																
51		Total EDU	1,686	538	1,148	258,300			EDU	463	574	111	-	-	1,148	-
52		Total Flow	379,350	121,050	258,300				FLOW	104,175	129,150	24,975	-	-	258,300	-
53	**Caln Township (d)**															
54	1-15912-186-3J	Hillview (aka Hill Farm)	99		99	22,275	Y	26	R	-	-	49	50	*	99	-
55		Southwoods (Weiss)	20		20	4,500	Y	54	R	10	10	*			20	-
56	1-15912-159-E	Loew/Southdown (Ducca/Haron)	300		300	67,500	Y	54	R		24	30	30	30	114	186
57		Croft - 110 Walnut Street	1		1	225	**P**	54	R	1					1	-
58																
59		Total EDU	420	-	420	94,500			EDU	11	34	79	80	30	234	186
60		Total Flow	94,500	-	94,500				FLOW	2,475	7,650	17,775	18,000	6,750	52,650	41,850
61	**West Brandywine Township (d)**															
62		Monacy Manor	42		42	9,450	Y	46	R	21	21	*			42	-
63		Freedom Village	297	269	28	6,300	Y	46	R	28	*	*			28	-
64		YMCA	67	19	48	10,800	Y	46	C	20	20	8			48	-
65		Brandywine Hospital	416	210	206	46,350	Y	46	C	50	50	55	51		206	-
66		CASD	100	32	68	15,300	Y	46	C					68	68	-
67		Nunemaker Subdivision	2	1	1	225	Y	46	R	1	*	*			1	-
68		MSI	13		13	2,925	Y	46	R					13	13	-
69		Culbertson Residential	178		178	40,050	Y			45	45				90	88
70		Swinehart Residential	113		113	25,425	Y			25	25				50	63
71		West Brandywine Twp MA	305	257	48	10,800	Y	46	R/C	15	15	18			48	-
72																
72		Total EDU	1,533	788	745	167,625			EDU	205	176	81	51	81	594	151
73		Total Flow	344,925	177,300	167,625				FLOW	46,125	39,600	18,225	11,475	18,225	133,650	33,975
73	**Highland Township**															
74	1-15930-113-X	Siti Crook property	1	1	-	-	Y	638	R		-	-			-	-
75						-	-		R	-	-	-	-	-	-	-

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			Total EDU	1	1	-	-			EDU	-		-	-	-	-	-	-
			Total Flow	225	225	-				FLOW	-	-	-	-	-	-	-	-
Sadsbury Township (d)																		
1-15947-086-3H	Sadsbury Village		149	149	-	-	Y	638	R	*	*				-	-		
1-15947-079-E	Quarry Ridge		165	165	-	-	Y	638	R	*	*				-	-		
1-15947-088-3H	AIM Business Park - Bellaire		132	96	36	8,100	Y	638	C	36					36	-		
1-15947-094-3J	Octoraro Glen		44	44	-	-	Y	638	R	*	*				-	-		
1-15947-092-3J	Morris Farm		12	11	1	225	Y	638	C	1	*				1	-		
1-15947-104-3J	Sadsbury Park		461		461	103,725	Y	638	R	75	110	135	141		461	-		
	Bone Tract (Sadsbury Portion)		20		20	4,500	Y	638	C	10	10				20	-		
	D&S Developers		-		-	-	Y	638	C	0	*				-	-		
	Lafayette Square		130		130	29,250	Y	638	R		65	65			130	-		
	Pomeroy Partnership		2		2	450	Y	638	R	2	*				2	-		
		Total EDU	1,115	465	650	146,250			EDU	124	185	200	141	-	650	-		
		Total Flow	250,875	104,625	146,250				FLOW	27,900	41,625	45,000	31,725	-	146,250	-		
East Fallowfield Township																		
1-15918-159-3H	Stone Creek (Robins Cove)		53	52	1	225	Y	37	R	1		*			1	-		
1-15918-194-3J	Harkins Farm		21		21	4,725	Y	37	R	12	9	*			21	-		
	Brinton Station		87	87	-	-	Y	37	R	*	*	*			-	-		
	Branford Village		247	247	-	-	Y	523	R	*	*	*			-	-		
	Brook Crossing		166	166	-	-	Y	523	R	*	*	*			-	-		
1-15918-207-3I	North Woods (Thompson North)		27	16	11	2,475	Y	37	R	7	4	*			11	-		
1-15918-208-3I	Mendenhall Tract		74	7	67	15,075	Y	37	R	25	25	17			67	-		
1-15918-211-3IJ	Providence Hill (Chen Tract)		218	113	105	23,625	Y	37	R	35	35	35			105	-		
1-15918-196-3J	Manchester Farms (Thompson South)		112	86	26	5,850	Y	37	R	20	6	*			26	-		
1-15918-213-3J	Ridgecrest (Martin)		72		72	16,200	Y	37	R	25	25	22			72	-		
	Cardinal Drive Area		78		78	17,550	Y	37	R	35	43				78	-		
		Total EDU	1,155	774	381	85,725			EDU	160	147	74	-	-	381	-		
		Total Flow	259,875	174,150	85,725				FLOW	36,000	33,075	16,650	-	-	85,725	-		
Parkesburg Borough																		
1-15807-051-3J	Harkins Property		10		10	2,250	Y	638	R	10	*				10	-		
1-15807-037-3H	Parkesburg Knoll		171	99	72	16,200	Y	638	R	32	40				72	-		
1-15807-050-3J	Crystal Springs Expansion (Heritage)		129		129	29,025	Y	638	R	65	64				129	-		
1-15807-046-3H	Lindale Village		31		31	6,975	Y	638	R	16	15				31	-		
	Davis Tract		324		324	72,900	Y	638	R	162	162				324	-		
	MK Builders		3	-	3	675	Y	638	R	3	*				3	-		
	Phillips Site		4	-	4	900	Y	638	R	4					4	-		
	Library Site		131	-	131	29,475	Y	638	R		131				131	-		
	Minch Park East		1	-	1	225	Y	638	R	1					1	-		
	HDC Site		75	-	75	16,875	Y	638	R/C	75					75	-		
	CON-LYN		2		2	450	Y	638	R	2					2	-		
	Church - 94 East 2nd Avenue		1		1	225	Y	638	C	1					1	-		
	19 Boro Line Road		1		1	225	Y	638	R	1					1	-		
1-15930-120-X	Ross Property - 30 Boroline Road		1		1	225	**P**	639	R	1					1	-		
	Williams Subdivision Rosemont Ave		2		2	450	**P**	640	R	2					2	-		
		Total EDU	886	99	787	177,075			EDU	375	412	-	-	-	787	-		
		Total Flow	199,350	22,275	177,075				FLOW	84,375	92,700	-	-	-	177,075	-		
West Caln Township																		
1-15961-554-3Hrev	Calnshire West		124	57	67	15,075	Y	638	R	27	40				67	-		
1-15961-554-3Hrev	Sandy Hill		87	74	13	2,925	Y	638	R	13					13	-		
					-	-							-	-				
		Total EDU	211	131	80	18,000			EDU	40	40	-	-	-	80	-		
		Total Flow	47,475	29,475	18,000				FLOW	9,000	9,000	-	-	-	18,000	-		
West Sadsbury Township																		
	JD Eckman		7		7	1,575.0	**P**	638	I		7	*	*	*	7	-		
	Lower Valley Road Partners, LP		100		100	22,500.0	**P**	638	I		50				50	50		
		Total EDU	107	-	107	24,075			EDU	-	57	-	-	-	57	50		
		Total Flow	24,075	-	24,075				FLOW	-	12,825	-	-	-	12,825	11,250		

	PROJECTED EDUS		REMAINING EDUS		Summary							TOTAL IN	TOTAL BEYOND
	TOTAL	ACTIVE	TOTAL	FLOW	#1	CURRENT	2008	2009	2010	2011	2012	5 YEARS	2009
Total EDU	8,918	3,446	5,472	1,231,200	TOTAL EDU'S		1,689	1,990	696	297	111	4,783	565
Total Flow	2,006,550	775,350	1,231,200		TOTAL FLOW		380,025	447,750	156,600	66,825	24,975	1,076,175	127,125
					TOTAL PROJECTED	WWTP FLOW	3,713,892	4,093,917	4,541,667	4,698,267	4,765,092	4,790,067	4,790,067	4,917,192

EDU = 225.0

(a) Status Legend: 0=Completed, 1=Under Construction, 2=Under Agreement,
3=Under PAWC Plan Review, 4=Initial Planning, 5=Speculative

(b) Signed by PAWC, does not indicated approval by DEP

(c) * indicates project completion. Other developments are projected to extend beyond 5 years.

(d) Municipal agreements will be governed the CMP.

#2	PROJECTED EDU's WITH PM SIGNED BY PAW AND PENDING PROJECTS							
TOTAL EDU'S	1,706	2,047	696	297	111	4,857	615
TOTAL FLOW	383,850	460,575	156,600	66,825	24,975	1,092,825	138,375
TOTAL PROJECTED WWTP FLOW	3,713,892	4,097,742	4,558,317	4,714,917	4,781,742	4,806,717	4,806,717	4,945,092

"P" - Indicates PAWC has not signed planning modules and is requesting approval by DEP to move the projects from Table A3 to A2, and upon approval PAWC will then sign the planning modules.

Apartments= 225

Senior Housing= 225

CONNECTION MANAGEMENT PLAN - REPORTING 4th Quarter 2007 Data REVISED: January 2008
PROJECTED NEW CONNECTIONS
PLEASE NOTE - CMP WAS SUBMITTED BY PAWC BUT NOT APPROVED BY DEP
TABLE A3

LINE	DEP Code No.	NAME	TOTAL EQ. EDU's	EDUS EQ. ACTIVE	EDUS REMAINING	EST. GPD REMAINING	PLANNING (b) MODULE	EETL MH	TYPE	PROJECTED NEW CONNECTIONS (c) 2008	2009	2010	2011	2012	TOTAL IN 5 YEARS	TOTAL BEYOND 2011
1	**City of Coatesville**															
2	1-15001-036-3IJ	Cambria Terrace	69	12	57	12,825	Y	16	R	26	22	9			57	-
3	1-15001-029-3H	Penn Crossing	78	78	-	-	Y	40	R	*	*	*			-	-
4	1-15001-023-3H	Millview	187	187	-	-	Y		R	*	*	*			-	-
5	1-15001-032-3J	Millview Apartments	350	350	-	-	Y		R	*	*	*			-	-
6		Cox II	11	11	-	-	Y	37	R	*	*	*			-	-
7	1-15001-037-3IJ	Bond House (Mount Pleasant Street)	13	1	12	2,700	Y	x	R	12	*	*			12	-
8		Brandywine View	638		638	143,550	Y	x	R	205	205				410	228
9		Pulver Office Building 1	8		8	1,800	Y		C	-		8			8	-
10		Marriott Hotel & Resturant	78		78	17,550	Y		C	-		78			78	-
11		Chetty Towers 1 - Residential	60		60	13,500	Y	x	R	60		*			60	-
12		Chetty Towers 1 - Commercial	10		10	2,250	Y	x	C	10		*			10	-
13		Chetty Towers 2 - Residential	150		150	33,750	Y	x	R	-	60	90			150	-
14		Chetty Towers 2 - Commercial	25		25	5,625	Y	x	C	-	5	20			25	-
15		Chetty Tower 3 - Residential	325		325	73,125		x	R	-	-	-	-	50	50	275
16		Chetty Tower 3 - Commercial	66		66	14,850		x	C	-	-	-	-	-	-	66
17		Chetty Tower 4 - Residential	48		48	10,800		x	R	-	-	-	-	-	-	48
18		Chetty Tower 4 - Commercial	6		6	1,350		x	C	-	-	-	-	-	-	6
19		Chetty Tower 5 - Residential	195		195	43,875		x	R	-	-	-	-	50	50	145
20		Chetty Tower 5 - Commercial	34		34	7,650		x	C	-	-	-	-	-	-	34
21		Chetty Tower 6 - Residential	85		85	19,125		x	R	-	-	-	-	-	-	85
22		Chetty Tower 6 - Commercial	9		9	2,025		x	C	-	-	-	-	-	-	9
23		Flats Tract - Residential	950		950	213,750			R	-	75	80	150	150	455	495
24		Flats Tract - Commercial	90		90	20,250			C	-	10	15	20	45	90	-
25		Pulver Office Building 2	25		25	5,625			C	-	-	-	25	*	25	-
26		Pulver Office Building 3	25		25	5,625			C	-	-	-	-	15	15	10
27		Pulver Office Building 4	25		25	5,625			C	-	-	-	-	15	15	10
28		Pulver Office Building 5	12		12	2,700			C	-	-	-	-	6	6	6
29		Pulver Office Building 6	12		12	2,700			C	-	-	-	-	6	6	6
30		129-133 ELH - Residential	32		32	7,200		x	R	-	32	*	*	*	32	-
31		129-133 ELH - Commercial	3		3	675		x	C	-	3	*	*	*	3	-
32		ChesPenn - Residential	15		15	3,375	Y	x	R	5	10				15	-
33		ChesPenn - Commercial	4		4	900	Y	x	C	4		*			4	-
34		701 ELH - Residential	7		7	1,575	Y	x	R	7		*			7	-
35		731 ELH - Residential	9		9	2,025	Y	x	R	9		*			9	-
36		Cansler Tower East - Residential	65		65	14,625		x	R	-	-	-	-	30	30	35
37		Cansler Tower East - Commerical	9		9	2,025		x	C	-	-	-	-	5	5	4
38		Cansler Tower West - Residential	40		40	9,000		x	R	-	-	-	-	20	20	20
39		Cansler Tower West - Commerical	6		6	1,350		x	C	-	-	-	-	3	3	3
40		Regional Recreation Complex	20		20	4,500			C	-	20	*	*	*	20	-
41		Steel Heritage Musemum	20		20	4,500		x	C	-	-	-	20	*	20	-
42		G.O. Carlson/Mittal Steel Tract	30		30	6,750		x	C	-	10	20	*	*	30	-
43		Train Station	5		5	1,125			C	-	-	-	5	*	5	-
44		Williams Tract	80		80	18,000	Y	x	R		25	31	24		80	-
45		Coatesville VoTech	4		4	900	Y		R	1	1	1	1		4	-
46		McColl-Coatesville Condominium	8		8	1,800	Y		R		8				8	-
47		City Request Other	60	-	60	13,500	-	x	R	10	10	10	10	10	50	10
48		Total EDU	4,001	639	3,362	756,450			EDU	349	496	362	255	405	1,867	1,495
49		Total Flow	900,225	143,775	756,450				FLOW	78,525	111,600	81,450	57,375	91,125	420,075	336,375
50	**Valley Township (d)**															
51	1-15956-117-3H	Hillview	525	278	247	55,575	Y	16	R	90	144				234	13
52	1-15956-119-3H	Meadow Brook	88	88	-	-	Y	16	R	*	*	*			-	-
53	1-15956-134-3IJ	Oak Crest (Dague)	188	20	168	37,800	Y	16	R	60	108				168	-
54	1-15956118-3H	Valley Crossing IV	49	49	-	-	Y		R	*	*	*			-	-
55	1-15956-123-3J	Timberlane	46	46	-	-	Y		R		*	*			-	-
56	1-15956-126-3J	Round Hill (Buckthorn Area)	230	11	219	49,275	Y		R	75	94	50			219	-
57	1-15956-127-3J	Hanscom Subdivision	1	-	1	225	Y		R	1	*	*			1	-
58	1-15956-124-3J	Lambert Subdivision	3	2	1	225	Y		R	1	*	*			1	-
59		Highlands Corp. Center Phase I, II, III	90	27	63	14,175	Y	16	C	63		*			63	-
60	1-15956-132-3J	Woodland Point (Risbon)	9	4	5	1,125	Y		C	5	*	*			5	-
61	1-15956-125-3J	Valley Suburban (Stoltzfus Commercial)	340	-	340	76,500	Y		C	100	200	40			340	-
62	1-15956-128-3IJ	Valley Farm & Mt. Airy Road	81	12	69	15,525	Y	16	R	20	28	21			69	-
63		Terry Middleton	1	1	-	-	Y		R		*	*			-	-
64		Rainbow	30	-	30	6,750	-		R	-	-	15	15		30	-

65		London Tract	14	-	14	3,150	Y	16	R	14	*	*	*	-	14	-
66		Bone Tract (Valley Portion)	430	-	430	96,750			R/C	80	50	50	50	50	280	150
67		Bone Tract (Keystone Foods Portion)	20	-	20	4,500	Y		C	20				-		
68		Airport	111	-	111	24,975	-		C	10	20	20	20	20	90	21
69		Green Trees	80	-	80	18,000			R	14	13	13	20	20	80	-
70		CASD	200	-	200	45,000	-		C	-	-	50	50	50	150	50
71		Heagy Residential	250	-	250	56,250	-	16	R	-	-	50	50	50	150	100
72		Albert Koenig	1	-	1	225	Y		R	1					1	-
73		Concern - 3 EDU	3		3	675	**P**	581	R	3					3	-
74		Valley Farm Associates - 1 EDU	1		1	225	**P**	581	R	1					1	-
75		Lawrence Professional Center - 2 EDU	2		2	450	**P**	581	C	2					2	-
76		Saligman Hangar - 1 EDU	1		1	225	**P**	581	R	1					1	-
77		Zarelli Apartment Building - 22 EDU	22		22	4,950	**P**		R	6	16				22	-
78		John Woodward	6		6	1,350	**P**		R	6						
79		Township Request Other	90	-	90	20,250	-		R	30	15	15	15	15	90	-
80		Total EDU	2,912	538	2,374	534,150			EDU	603	688	324	220	205	2,040	334
81		Total Flow	655,200	121,050	534,150				FLOW	135,675	154,800	72,900	49,500	46,125	459,000	75,150
82	**Caln Township (d)**															
83	1-15912-186-3J	Hillview (aka Hill Farm)	99		99	22,275	Y	26	R	-	-	49	50	*	99	-
84		Southwoods (Weiss)	20		20	4,500	Y	54	R	10	10	*			20	-
85	1-15912-159-E	Loew/Southdown (Ducca/Haron)	300		300	67,500	Y	54	R		25	30	30	30	115	185
86		Caln Road	40		40	9,000	-	54	R	-		-	40	*	40	-
87		Township Flow Diverted from DARA	952		952	214,200	-	54	R	-	-	-	250	250	500	452
88		Township Request Other	608		608	136,800	-	54	R	50	75	85	85	85	380	228
89		Total EDU	2,019	-	2,019	454,275			EDU	60	110	164	455	365	1,154	865
90		Total Flow	454,275	-	454,275				FLOW	13,500	24,750	36,900	102,375	82,125	259,650	194,625
91	**West Brandywine Township (d)**															
92		Monacy Manor	42		42	9,450	Y	46	R	21	21	*			42	-
93		Freedom Village	297	269	28	6,300	Y	46	R	28	*	*			28	-
94		YMCA	67	19	48	10,800	Y	46	C	20	20	8			48	-
95		West Brandywine Hospital	416	210	206	46,350	Y	46	C	50	50	56	50		206	-
96		CASD	100	32	68	15,300	Y	46	C					68	68	-
97		Nunemaker Subdivision	2	1	1	225	Y	46	R	1	*	*			1	-
97		MSI	13		13	2,925	Y	46	R					13	13	-
92		Culbertson Residential	178		178	40,050	Y	46	R	45	45	45	43		178	-
93		Culbertson Commercial	33		33	7,425		46	C	-	-	-	15	18	33	-
94		Swinehart Residential	113		113	25,425	Y	46	R	25	25	36	27		113	-
95		Beaver Creek Apartments	260		260	58,500		46	R	-	-		30	60	90	170
96		Beaver Creek Commercial	30		30	6,750		46	C	-	-	-	-	15	15	15
97		Janiec Residential	32		32	7,200		46	R	-	-		32		32	-
98		Janiec Commercial	2		2	450		46	C	-	-		2		2	-
99		West Brandywine Twp MA	305	257	48	10,800	-	46	R/C	15	15	18			48	-
100		Total EDU	1,890	788	696	156,600			EDU	205	176	163	199	174	917	185
101		Total Flow	425,250	177,300	156,600				FLOW	46,125	39,600	36,675	44,775	39,150	206,325	41,625
102	**Highland Township**															
103	1-15930-113-X	Siti Crook property	1		1	225	Y		R	1	-	-			1	-
104		Boor Property	58		58	13,050	-		R	-	-	20	20	18	58	-
105		Genterra (Meadow Ridge)	82		82	18,450	-		R	-	-	30	30	22	82	-
106		Township Request Other	75		75	16,875	-		R	-	-	25	25	25	75	-
107		Total EDU	215	-	215	48,375			EDU	-	-	75	75	65	215	-
108		Total Flow	48,375	-	48,375				FLOW	-	-	16,875	16,875	14,625	48,375	-
109	**Sadsbury Township (d)**															
110	1-15947-086-3H	Sadsbury Village	149	149	-	-	Y		R	*	*				-	-
111	1-15947-079-E	Quarry Ridge	165	165	-	-	Y		R	*	*				-	-
112	1-15947-088-3H	AIM Business Park - Bellaire	132	96	36	8,100	Y		C	36					36	-
113	1-15947-094-3J	Octoraro Glen	44	44	-	-	Y		R	*	*				-	-
114	1-15947-092-3J	Morris Farm	12	11	1	225	Y		C	1	*				1	-
115	1-15947-104-3J	Sadsbury Park	461		461	103,725	Y		R	75	110	135	141		461	-
116		Bone Tract (Sadsbury Portion)	20		20	4,500	Y		C	10	10				20	-
117		D&S Developers	-		-	-	Y		C		*				-	-
118		Lafayette Square	130		130	29,250	Y		R		65	65			130	-
119		Pomeroy Partnership	2		2	450	Y		R	2	*					
120		Township Request Other	828		828	186,300	-		R	88	83	91	100	100	462	366
121		Total EDU	1,943	465	1,478	332,550			EDU	212	268	291	241	100	1,112	366
122		Total Flow	437,175	104,625	332,550				FLOW	47,700	60,300	65,475	54,225	22,500	250,200	82,350
123	**East Fallowfield Township**															
124	1-15918-159-3H	Stone Creek (Robins Cove)	53	47	6	1,350	Y	37	R	6		*			6	-
125	1-15918-194-3J	Harkins Farm	21		21	4,725	Y	37	R	12	9	*			21	-
126		Brinton Station	87	87	-	-	Y	37	R	*	*	*			-	-
127		Branford Village	247	247	-	-	Y		R	*	*	*			-	-
128		Brook Crossing	166	166	-	-	Y		R	*	*	*			-	-
129	1-15918-207-3I	North Woods (Thompson North)	27	6	21	4,725	Y	37	R	14	7	*			21	-
130	1-15918-208-3I	Mendenhall Tract	74		74	16,650	Y	37	R	20	30	24			74	-
131	1-15918-211-3IJ	Providence Hill (Chen Tract)	218	91	127	28,575	Y	37	R	27	70	30			127	-

132	1-15918-213-3J	Ridgecrest (Martin)	112	67	45	10,125	Y	37	R	7	38	*			45	-
133	1-15918-196-3J	Manchester Farms (Thompson South)	72		72	16,200	Y	37	R	25	25	22			72	-
134	1-15918-212-3J	Scott Farm	78		78	17,550	-		R	-	-	-	25	25	50	28
135		Beagle Club	181		181	40,725	-		R	-	-	-	70	70	140	41
136		Etteleson Development	32		32	7,200	-		R	-	-	-	-	10	10	22
137		Cardinal Drive Area	78		78	17,550	-	37	R	35	43		*	-	78	-
138		Bonsall Farm	20		20	4,500	-		R	-	-	-	20	-	20	-
139		Township Request Other	100		100	22,500	-		-	5	5	5	5	5	25	75
140		Total EDU	1,566	711	855	192,375			EDU	151	227	81	120	110	689	166
141		Total Flow	352,350	159,975	192,375				FLOW	33,975	51,075	18,225	27,000	24,750	155,025	37,350
142	**Parkesburg Borough**															
143	1-15807-051-3J	Harkins Property	10		10	2,250	Y		R	10	*				10	-
144	1-15807-037-3H	Parkesburg Knoll	171	86	85	19,125	Y		R	42	43				85	-
145	1-15807-050-3J	Crystal Springs Expansion (Heritage)	250		250	56,250	Y		R	125	125				250	-
146	1-15807-046-3H	Lindale Village	31		31	6,975	Y		R	16	15				31	-
147		Davis Tract	368		368	82,800	Y		R	183	185				368	-
148		MK Builders	3	-	3	675	Y		R	3	*				3	-
149		Phillips Site	4	-	4	900	Y		R	4					4	-
150		Library Site	131	-	131	29,475	Y		R		131				131	-
151		Minch Park East	1	-	1	225	Y		R	1					1	-
152		HDC Site	75	-	75	16,875	Y		R/C	75					75	-
153		CON-LYN	2		2	450	Y	638	R	2					2	-
154		Church - 94 East 2nd Avenue	1		1	225	Y	638	C	1					1	-
155		Township Request Other	256	6	250	56,250	-		R	5	5	5	5	5	25	225
156		Total EDU	1,303	92	1,211	272,475			EDU	467	504	5	5	5	986	225
157		Total Flow	293,175	20,700	272,475				FLOW	105,075	113,400	1,125	1,125	1,125	221,850	50,625
158	**West Caln Township**															
159	1-15961-554-3Hrev	Calnshire West	124	48	76	17,100	Y		R	36	40				76	-
160	1-15961-554-3Hrev	Sandy Hill	87	73	14	3,150	Y		R	14					14	-
161	1-15961-533-3	Country Meadows (Lawrence)	171		171	38,475	Y		R	-	-	-	50	50	100	71
162	1-15961-624-3J	Crane Tract	542		542	121,950	Y	16	R	-	-	-	50	50	100	442
163		Township Request Other	60	4	56	12,600	-		C	5	5	5	5	5	25	31
164		Total EDU	984	125	859	193,275			EDU	55	45	5	105	105	315	544
165		Total Flow	221,400	28,125	193,275				FLOW	12,375	10,125	1,125	23,625	23,625	70,875	122,400
166	**West Sadsbury Township**															
167		Mast Property	600		600	135,000	-		R	-	-	-	50	50	100	500
168		Springer Development	20		20	4,500			R	20	*	*	*	*	20	-
169		JD Eckman	7		7	1,575	**P**	638	I		7					
170		Lower Valley Road Partners, LP	100		100	22,500	**P**	638	I		50		50			
171		Township Request Other	25		25	5,625	-		-	5	5	5	5	5	25	-
172		Total EDU	752	-	752	169,200			EDU	25	62	5	105	55	252	500
173		Total Flow	169,200	-	169,200				FLOW	5,625	13,950	1,125	23,625	12,375	56,700	112,500
174																

175		PROJECTED EDUS		REMAINING EDUS		Summary							TOTAL IN	TOTAL BEYOND
176		TOTAL	ACTIVE	TOTAL	FLOW	#1	CURRENT	2008	2009	2010	2011	2012	5 YEARS	2010
177	Total EDU	17,585	3,358	13,821	3,109,725	TOTAL EDU'S		2,127	2,576	1,475	1,780	1,589	9,547	4,680
178	Total Flow	3,956,625	755,550	3,109,725		TOTAL FLOW		478,575	579,600	331,875	400,500	357,525	2,148,075	1,053,000
179						TOTAL PROJECTED	WWTP FLOW	3,713,892	4,192,467	4,772,067	5,103,942	5,504,442	5,861,967	5,861,967	6,914,967
180														
181	EDU = 225.0					#2	**PLANT PROJECTED FLOW - PROJECTED EDU's WITH PLANNING MODULES SIGNED BY PAW**							
182	(a) Status Legend: 0=Completed, 1=Under Construction, 2=Under Agreement,					TOTAL EDU'S		1,689	1,990	696	297	111	4,783	565
183	3=Under PAWC Plan Review, 4=Initial Planning, 5=Speculative					TOTAL FLOW		380,025	447,750	156,600	66,825	24,975	1,076,175	127,125
184	(b) Signed by PAWC, does not indicated approval by DEP					TOTAL PROJECTED	WWTP FLOW	3,713,892	4,093,917	4,541,667	4,698,267	4,765,092	4,790,067	4,790,067	4,917,192
185	(c) * indicates project completion. Other developments are projected to extend beyond 5 years.													
186	(d) Municipal agreements will be governed the CMP.					#3	**REMAINING EDU's NOT SIGNED BY PAWC**							
187	Apartments= 225					TOTAL EDU'S		438	586	779	1,483	1,478	4,764	4,115
188	Senior Housing= 225					TOTAL FLOW		98,550	131,850	175,275	333,675	332,550	1,071,900	925,875
189						TOTAL PROJECTED	WWTP FLOW		98,550	230,400	405,675	739,350	1,071,900	1,071,900	1,997,775

APPENDIX B

CONNECTION MANAGEMENT PLAN - COLLECTION SYSTEM
COLLECTION SYSTEM HYDRAULIC MODEL USING MAY 2002 METERED FLOWS

TABLE B1

Upstream Manhole	Upstream Invert Elevation	Downstream Manhole	Downstream Invert Elevation	Pipe Diameter	Pipe Length	Pipe Slope	n	Nominal Capacity	Metered ADF (2002)	Metered ADF + Proj. ADF(2008)	Metered ADF + Proj. ADF(2009)	Metered ADF + Proj. ADF(2010)	Metered ADF + Proj. ADF(2011)	Metered ADF + Proj. ADF(2012)	Metered ADF + Proj. ADF (Beyond 2012)	Peak Calculated Flow (2008)	Peak Calculated Flow (2009)	Peak Calculated Flow (2010)	Peak Calculated Flow (2011)	Peak Calculated Flow (2012)	Peak Calculated Flow (Beyond 2012)	Available Capacity	% of capacity used
				in.	ft.	ft./ft.		gpd.	gpd	gpd	gpd	gpd	gpd	gpd	gpd	gpd	gpd	gpd	gpd	gpd	gpd.	gpd.	
54	374.33	53	370.89	10	200.68	0.0171	0.013	2,005,560	141,000	143,250	150,900	157,650	164,400	171,150	213,000	401,100	422,520	441,420	460,320	479,220	596,400	1,409,160	29.7%
53	370.89	52	369.07	10	186.32	0.0098	0.013	1,518,480	142,000	144,683	152,409	159,227	166,044	172,862	215,130	405,111	426,745	445,834	464,923	484,012	602,364	916,116	39.7%
52	369.07	51	366.03	10	198.53	0.0153	0.013	1,896,480	143,000	146,129	153,933	160,819	167,704	174,590	217,281	409,162	431,013	450,293	469,572	488,852	608,388	1,288,092	32.1%
51	366.03	50	364.05	10	211.77	0.0093	0.013	1,478,520	144,000	147,591	155,472	162,427	169,381	176,336	219,454	413,254	435,323	454,795	474,268	493,741	614,472	864,048	41.6%
50	364.05	49	353.68	10	540.00	0.0192	0.013	2,124,360	145,000	149,067	157,027	164,051	171,075	178,099	221,649	417,386	439,676	459,343	479,011	498,678	620,616	1,503,744	29.2%
49	353.68	48	350.94	10	308.00	0.0089	0.013	1,447,200	146,000	150,557	158,597	165,692	172,786	179,880	223,865	421,560	444,073	463,937	483,801	503,665	626,822	820,378	43.3%
48	350.94	47	346.92	10	298.00	0.0135	0.013	1,782,000	147,000	152,063	160,183	167,349	174,514	181,679	226,104	425,776	448,513	468,576	488,639	508,702	633,091	1,148,909	35.5%
47	346.92	46	344.4	10	299.00	0.0084	0.013	1,405,080	148,000	153,583	161,785	169,022	176,259	183,496	228,365	430,033	452,999	473,262	493,525	513,789	639,422	765,658	45.5%
46	344.4	45	344.35	12	2.2	0.0227	0.013	3,757,320	375,000	421,275	468,525	493,500	511,725	536,700	612,525	1,179,570	1,311,870	1,381,800	1,432,830	1,502,760	1,715,070	2,042,250	45.6%
45	344.35	44	342.8	12	229.47	0.0068	0.013	2,056,320	380,000	425,488	473,210	498,435	516,842	542,067	618,650	1,191,366	1,324,989	1,395,618	1,447,158	1,517,788	1,732,221	324,099	84.2%
44	342.8	43	340.53	12	283.85	0.0080	0.013	2,230,200	400,000	433,998	482,674	508,404	527,179	552,908	631,023	1,215,193	1,351,488	1,423,530	1,476,101	1,548,143	1,766,865	463,335	79.2%
43	340.53	42	336.65	12	172.85	0.0224	0.013	3,732,480	500,000	520,797	579,209	610,084	632,615	663,490	757,228	1,458,232	1,621,786	1,708,236	1,771,322	1,857,772	2,120,238	1,612,242	56.8%
42	336.65	41	332.4	12	252.54	0.0168	0.013	3,232,440	510,000	526,005	585,001	616,185	638,941	670,125	764,800	1,472,814	1,638,004	1,725,319	1,789,035	1,876,350	2,141,441	1,090,999	66.2%
41	332.4	40	329.57	12	262.28	0.0108	0.013	2,590,920	525,000	536,525	596,701	628,509	651,720	683,527	780,096	1,502,270	1,670,764	1,759,825	1,824,816	1,913,877	2,184,269	406,651	84.3%
40	329.57	39	327.22	15	263.7	0.0089	0.013	4,264,920	575,000	547,256	608,635	641,079	664,754	697,198	795,698	1,532,316	1,704,179	1,795,022	1,861,312	1,952,154	2,227,955	2,036,965	52.2%
39	327.22	38	326.24	15	161.84	0.0061	0.013	3,531,600	600,000	570,240	634,198	668,004	692,674	726,480	829,117	1,596,673	1,775,755	1,870,413	1,939,487	2,034,145	2,321,529	1,210,071	65.7%
38	326.24	37	325.81	18	71.01	0.0061	0.013	5,742,360	625,000	594,190	660,835	696,061	721,766	756,992	863,940	1,663,733	1,850,337	1,948,970	2,020,946	2,119,579	2,419,033	3,323,327	42.1%
37	325.81	36	325.62	18	31.27	0.0061	0.013	5,742,360	800,000	874,400	945,050	986,675	1,004,900	1,029,875	1,105,700	2,448,320	2,646,140	2,762,690	2,813,720	2,883,650	3,095,960	2,646,400	53.9%
36	325.62	35	324.5	18	183.6	0.0061	0.013	5,742,360	869,000	883,144	954,501	996,542	1,014,949	1,040,174	1,116,757	2,472,803	2,672,601	2,790,317	2,841,857	2,912,487	3,126,920	2,615,440	54.5%
35	324.5	34	323.35	18	188.43	0.0061	0.013	5,742,360	875,000	891,975	964,046	1,006,507	1,025,098	1,050,575	1,127,925	2,497,531	2,699,327	2,818,220	2,870,276	2,941,611	3,158,189	2,584,171	55.0%
34	323.35	33	322.25	18	179.79	0.0061	0.013	5,742,360	880,000	900,895	973,686	1,016,572	1,035,349	1,061,081	1,139,204	2,522,507	2,726,321	2,846,402	2,898,979	2,971,027	3,189,771	2,552,589	55.5%
33	322.25	32	321.06	18	194.79	0.0061	0.013	5,742,360	885,000	964,650	1,036,800	1,078,425	1,096,650	1,121,625	1,197,450	2,701,020	2,903,040	3,019,590	3,070,620	3,140,550	3,352,860	2,389,500	58.4%
32	321.06	31	320.25	18	133.03	0.0061	0.013	5,742,360	895,000	969,473	1,041,984	1,083,817	1,102,133	1,127,233	1,203,437	2,714,525	2,917,555	3,034,688	3,085,973	3,156,253	3,369,624	2,372,736	58.7%
31	320.25	30	316.29	18	252.72	0.0157	0.013	9,212,400	905,000	974,321	1,047,194	1,089,236	1,107,644	1,132,869	1,209,454	2,728,098	2,932,143	3,049,861	3,101,403	3,172,034	3,386,472	5,825,928	36.8%
30	316.29	29	315.63	18	189.36	0.0035	0.013	4,349,160	915,000	979,192	1,052,430	1,094,682	1,113,182	1,138,534	1,215,502	2,741,738	2,946,804	3,065,111	3,116,910	3,187,894	3,403,405	945,755	78.3%
29	315.63	28	314.32	18	175.24	0.0075	0.013	6,366,600	920,000	984,088	1,057,692	1,100,156	1,118,748	1,144,226	1,221,579	2,755,447	2,961,538	3,080,436	3,132,495	3,203,834	3,420,422	2,946,178	53.7%
28	314.32	27	312.82	18	224.34	0.0067	0.013	6,017,760	930,000	989,009	1,062,980	1,105,657	1,124,342	1,149,947	1,227,687	2,769,224	2,976,345	3,095,838	3,148,157	3,219,853	3,437,524	2,580,236	57.1%
27	312.82	26	310.51	18	572.28	0.0040	0.013	4,649,400	935,000	993,954	1,068,295	1,111,185	1,129,963	1,155,697	1,233,826	2,783,070	2,991,227	3,111,318	3,163,898	3,235,952	3,454,712	1,194,688	74.3%
26	310.51	25	309.17	18	148.12	0.0090	0.013	6,974,640	945,000	1,024,650	1,096,800	1,145,775	1,171,500	1,196,475	1,287,150	2,869,020	3,071,040	3,208,170	3,280,200	3,350,130	3,604,020	3,370,620	51.7%
25	309.16	24	308.39	18	164.05	0.0047	0.013	5,040,360	954,000	1,034,897	1,107,768	1,157,233	1,183,215	1,208,440	1,300,022	2,897,710	3,101,750	3,240,252	3,313,002	3,383,631	3,640,060	1,400,300	72.2%
24	308.39	23	308	18	159.69	0.0024	0.013	3,601,800	1,000,000	1,045,245	1,118,846	1,168,805	1,195,047	1,220,524	1,313,022	2,926,687	3,132,768	3,272,654	3,346,132	3,417,468	3,676,461	(74,661)	102.1%
23	308	22	306.23	18	165.7	0.0093	0.013	7,090,200	1,328,000	1,469,525	1,587,800	1,636,775	1,662,500	1,687,475	1,829,450	4,114,670	4,445,840	4,582,970	4,655,000	4,724,930	5,122,460	1,967,740	72.2%
22	305.95	21	304.78	24	263.9	0.0044	0.013	10,503,000	1,328,000	1,469,525	1,587,800	1,636,775	1,662,500	1,687,475	1,829,450	4,114,670	4,445,840	4,582,970	4,655,000	4,724,930	5,122,460	5,380,540	48.8%
21	304.78	20	303.59	24	323.69	0.0037	0.013	9,631,440	1,328,000	1,469,525	1,587,800	1,636,775	1,662,500	1,687,475	1,829,450	4,114,670	4,445,840	4,582,970	4,655,000	4,724,930	5,122,460	4,508,980	53.2%
20	303.59	19A (siphon in)	301.24	24	301.36	0.0078	0.013	13,983,840	1,328,000	1,469,525	1,587,800	1,636,775	1,662,500	1,687,475	1,829,450	4,114,670	4,445,840	4,582,970	4,655,000	4,724,930	5,122,460	8,861,380	36.6%
19A (siphon in)	301.2	19B (siphon out)	300.4	16",12",10"	138		0.013	8,400,000	1,328,000	1,469,525	1,587,800	1,636,775	1,662,500	1,687,475	1,829,450	4,114,670	4,445,840	4,582,970	4,655,000	4,724,930	5,122,460	3,277,540	61.0%
19B (siphon out)	300.1	18	299.1	24	438.00	0.0023	0.013	7,593,480	1,328,000	1,469,525	1,587,800	1,636,775	1,662,500	1,687,475	1,829,450	4,114,670	4,445,840	4,582,970	4,655,000	4,724,930	5,122,460	2,471,020	67.5%
18	299	17	298.79	24	64.00	0.0033	0.013	9,095,760	1,328,000	1,469,525	1,587,800	1,636,775	1,662,500	1,687,475	1,829,450	4,114,670	4,445,840	4,582,970	4,655,000	4,724,930	5,122,460	3,973,300	56.3%
17	298.5	16	298.45	24	22.00	0.0023	0.013	7,593,480	1,328,000	1,469,525	1,587,800	1,636,775	1,662,500	1,687,475	1,829,450	4,114,670	4,445,840	4,582,970	4,655,000	4,724,930	5,122,460	2,471,020	67.5%
16	298.36	15	292.36	18	780.00	0.0077	0.013	6,450,840	1,834,000	2,026,600	2,222,275	2,309,725	2,340,850	2,365,825	2,507,800	5,674,480	6,222,370	6,467,230	6,554,380	6,624,310	7,021,840	(571,000)	108.9%
15	292.36	14	291.59	30	235.53	0.0033	0.013	16,491,600	2,747,000	3,130,850	3,591,425	3,748,025	3,814,850	3,839,825	3,978,200	8,766,380	10,055,990	10,494,470	10,681,580	10,751,510	11,138,960	5,352,640	67.5%
14	291.59	13	291.03	30	241.13	0.0023	0.013	13,767,840	2,747,000	3,130,850	3,591,425	3,748,025	3,814,850	3,839,825	3,978,200	8,766,380	10,055,990	10,494,470	10,681,580	10,751,510	11,138,960	2,628,880	80.9%
13	291.03	12	290.67	30	130.14	0.0028	0.013	15,191,280	2,747,000	3,130,850	3,591,425	3,748,025	3,814,850	3,839,825	3,978,200	8,766,380	10,055,990	10,494,470	10,681,580	10,751,510	11,138,960	4,052,320	73.3%
12	290.67	11	290.36	30	119.03	0.0026	0.013	14,638,320	2,747,000	3,130,850	3,591,425	3,748,025	3,814,850	3,839,825	3,978,200	8,766,380	10,055,990	10,494,470	10,681,580	10,751,510	11,138,960	3,499,360	76.1%
11	290.36	10	290.11	30	89.23	0.0028	0.013	15,191,280	2,747,000	3,130,850	3,591,425	3,748,025	3,814,850	3,839,825	3,978,200	8,766,380	10,055,990	10,494,470	10,681,580	10,751,510	11,138,960	4,052,320	73.3%
10	290.11	9	289.82	30	200.85	0.0014	0.013	10,741,680	2,747,000	3,130,850	3,591,425	3,748,025	3,814,850	3,839,825	3,978,200	8,766,380	10,055,990	10,494,470	10,681,580	10,751,510	11,138,960	(397,280)	103.7%
9	289.82	8	289.44	30	144.60	0.0026	0.013	14,638,320	2,747,000	3,130,850	3,591,425	3,748,025	3,814,850	3,839,825	3,978,200	8,766,380	10,055,990	10,494,470	10,681,580	10,751,510	11,138,960	3,499,360	76.1%
8	289.44	7	288.51	30	298.70	0.0031	0.013	15,984,000	2,747,000	3,130,850	3,591,425	3,748,025	3,814,850	3,839,825	3,978,200	8,766,380	10,055,990	10,494,470	10,681,580	10,751,510	11,138,960	4,845,040	69.7%
7	288.51	6	288.03	30	193.26	0.0025	0.013	14,354,280	2,747,000	3,130,850	3,591,425	3,748,025	3,814,850	3,839,825	3,978,200	8,766,380	10,055,990	10,494,470	10,681,580	10,751,510	11,138,960	3,215,320	77.6%
6	288.03	5	287.57	30	270.36	0.0017	0.013	11,836,800	2,747,000	3,130,850	3,591,425	3,748,025	3,814,850	3,839,825	3,978,200	8,766,380	10,055,990	10,494,470	10,681,580	10,751,510	11,138,960	697,840	94.1%
5	287.57	4	287.26	30	96.94	0.0032	0.013	16,239,960	2,747,000	3,130,850	3,591,425	3,748,025	3,814,850	3,839,825	3,978,200	8,766,380	10,055,990	10,494,470	10,681,580	10,751,510	11,138,960	5,101,000	68.6%

Notes:

1 The calculated pipe slopes have been rounded off to four decimal places.
2 The pipe capacity is calculated by the Mannings equation.
3 The peak calculated flow equals the metered flow times 1.12 (seasonal peaking factor) times 2.5 (regulatory peaking factor) = 2.8
4 The ADF/Peak flow projections are based off Table A2.

Amended Appendix A-22-b

TABLE B2

30" Interceptor Allocation until Expansion is Complete from MH 10 to MH 9

Township	Development	Total Connections (1)	Connections Allowed (2)	Connections Made (3)	Connections Remaining (3)
City of Coatesville					
	Cambria Terrace	69	60	5	55
	Bond House (Mount Pleasant Street)	13	13	10	3
	Brandywine View	638	410	0	410
	Pulver Office Building 1	8	25	0	8
	Marriott Hotel & Resturant	78	40	0	78
	Chetty Towers 1 - Residential	60	60	0	60
	Chetty Towers 1 - Commercial	10	10	0	10
	Chetty Towers 2 - Residential	150	150	0	150
	Chetty Towers 2 - Commercial	25	25	0	25
	ChesPenn - Residential	15	15	0	15
	ChesPenn - Commercial	4	4	0	4
	701 ELH - Residential	7	4	0	7
	731 ELH - Residential	9	9	0	9
	Williams Tract	80	80	0	48
	Coatesville VoTech	4	3	0	3
	McColl-Coatesville Condominium	8	0	0	8
		Subtotal	**908**	**15**	**893**
Valley Township					
	Hillview	512	270	23	234
	Oak Crest (Daque)	188	174	6	168
	Timberlane	46	11	11	0
	Round Hill (Buckthorn Area)	230	180	11	169
	Hanscom Subdivision	1	1	0	1
	Lambert Subdivision	3	3	2	1
	Highlands Corp. Center Phase I, II, III	90	63	0	63
	Woodland Point (Risbon)	9	7	2	5
	Valley Suburban (Stoltzfus Commercial)	340	300	0	300
	Valley Farm & Mt. Airy Road	81	60	12	48
	London Tract	14	14	0	14
	Bone Tract (Keystone Foods Portion)	20	20	0	20
	Albert Koenig	1	1	0	1
	Concern	3	0	0	3
	Valley Farm Associates	1	0	0	1
	Lawrence Professional Center	2	0	0	2
	Saligman Hangar	1	0	0	1
	John Woodward	1	0	0	1
	Olinick Lot	1	0	0	1
	Saunders Lot	1	0	0	1
	Valley Miscellaneous	3	0	0	3
		Subtotal	**1104**	**67**	**1037**
Caln Township					
	Hillview (aka Hill Farm)	99	99	0	99
	Southwoods (Weiss)	20	20	0	20
	Loew/Southdown (Ducca/Haron)	300	85	0	84
	Croft - 110 Walnut Street	1	0	0	1
		Subtotal	**204**	**0**	**204**
West Brandywine Township					
	Monacy Manor	42	42	0	42
	Freedom Village	297	28	0	28
	YMCA	67	48	0	48
	Brandywine Hospital	416	155	0	155
	Nunemaker Subdivision	2	2	1	1
	Culbertson Residential	178	90	0	90
	Swinehart Residential	113	50	0	50
	West Brandywine Twp MA	305	48	0	48
		Subtotal	**463**	**1**	**462**
Highland Township					
	Siti Crook Property	1	1	1	0
Sadsbury Township					
	AIM Business Park - Bellaire	132	82	0	36
	Morris Farm	12	1	0	1
	Sadsbury Park	461	320	0	320
	Bone Tract (Sadsbury Portion)	20	20	0	20
	D&S Developers	0	25	0	0
	Lafayette Square	130	60	0	130
	Pomeroy Partnership	2	2	0	2
	Sadsbury Township Misc.		0	0	1
		Subtotal	**510**	**0**	**510**
East Fallowfield Township					
	Stone Creek (Robins Cove)	53	9	8	1
	Harkins Farm	21	21	0	21
	North Woods (Thompson North)	27	24	13	11
	Mendenhall Tract	74	74	7	67
	Providence Hill (Chen Tract)	218	135	30	105
	Manchester Farms (Thompson South)	112	48	22	26
	Ridgecrest (Martin)	72	72	0	72
	Cardinal Drive Area	78	78	0	78
		Subtotal	**461**	**80**	**381**
Parkesburg Borough					
	Harkins Property	10	10	0	10
	Parkesburg Knoll	171	88	16	72
	Crystal Springs Expansion (Heritage)	129	250	0	129
	Lindale Village	31	31	0	31
	Davis Tract	324	366	0	324
	MK Builders	3	3	0	3
	Phillips Site	4	4	0	4
	Library Site	131	131	0	131
	Minch Park East	1	1	0	1
	HDC Site	75	92	0	75
	CON-LYN	2	0	0	2
	Church - 94 East 2nd Avenue	1	0	0	1
	19 Boro Line Road	1	0	0	1
	Ross Property - 30 Boroline Road	1	0	0	1
	Williams Subdivision Rosemont Ave	2	0	0	2
	Parkesburg Borough Misc.	116	0	0	116
		Subtotal	**976**	**16**	**903**
West Caln Township					
	Calnshire West	124	81	14	67
	Sandy Hill	87	15	2	13
		Subtotal	**96**	**16**	**80**
West Sadsbury Township (4)					
	JD Eckman	7	0	0	7
	Lower Valley Road Partners, LP	100	0	0	50
		Subtotal	**0**	**0**	**57**
Total Connections			**4723**	**196**	**4527**
Total Connections Available			**4841**		

NOTE (1) - Total projected new connections, both pre and post plant expansion from Table A2 upstream of critical section.

(2) - Connection allowed prior to completion of Interceptor replacement of Manhole 10 to Manhole 9 as per DEP's March 27, 2007 and September 5, 2007 Letters.

(3) - Connections made and remaining since the CMP revised January 2007.

APPENDIX J

"AN ORDINANCE PROVIDING FOR A SEWAGE MANAGEMENT PROGRAM FOR VALLEY TOWNSHIP"

ORDINANCE No. ~~2000~~ 2006 - 01

AN ORDINANCE RESCINDING VALLEY TOWNSHIP ORDINANCE NO. 98 - 4 AND AMENDING CHAPTER 18 OF THE VALLEY TOWNSHIP CODE OF ORDINANCES BY ADDING PART 4, AN ORDINANCE GOVERNING THE MUNICIPAL MANAGEMENT OF ON-LOT SUBSURFACE SEWAGE DISPOSAL FACILITIES INCLUDING THE INSPECTION OF SUCH SYSTEMS BY THE TOWNSHIP, THE REQUIRED MAINTENANCE FOR SUCH SYSTEMS, THE REHABILITATION OF MALFUNCTIONING SYSTEMS, AND FURTHER PROVIDING FOR PENALTIES FOR NONCOMPLIANCE WITH THE ORDINANCE REQUIREMENTS, AND LIENS FOR WORK PERFORMED BY THE TOWNSHIP.

BE IT ENACTED AND ORDAINED, this 5th day of FEBRUARY, 2006, by the Valley Township Board of Supervisors as follows:

Section 1. Valley Township Ordinance No. 98 – 4 is hereby rescinded in its entirety.

Section 2. Chapter 18 of the Code of Ordinances is hereby amended by adding a Part 4, which shall provide as follows:

PART 4

INSPECTION AND REQUIRED MAINTENANCE OF ON-LOT SUBSURFACE SEWAGE DISPOSAL FACILITIES.

§401. Short Title: Introduction: Purpose

1. This ordinance shall be known and may be cited as "An ordinance providing for a Sewage Management Program for Valley Township."

2.. In accordance with municipal codes, the Clean Streams Law (Act of June 27, 1937, P.L.1987., No. 394 as amended, 35 P.S. §§691.1 to 691.1001), and the Pennsylvania Sewage Facilities Act (Act of January 24, 1966, P.L. 1535 as amended, 35 P.S. §750.1 et seq., known as Act 537), it is the power and the duty of Valley Township to provide for adequate sewage treatment facilities and for the protection of the public health by preventing the discharge of untreated or inadequately treated sewage. The Official Sewage Facilities Plan for Valley Township indicates that it is necessary to formulate and implement a sewage management program to effectively prevent and abate water pollution and hazards to the public health caused by improper treatment and disposal of sewage.

3.. The purpose of this ordinance is to provide for the regulation, inspection, maintenance and rehabilitation of on-lot sewage disposal systems; and to provide for intervention in situations which may constitute a public nuisance or

hazard to the public health; and to establish penalties and appeal procedures necessary for the proper administration of a sewage management program.

§402. Definitions

1. **Authorized Agent**: A qualified or licensed person who is authorized to function within specified limits as an agent of Valley Township to administer or enforce the provisions of this ordinance.

2. **Board**: The Board of Supervisors, Valley Township, Chester County, Pennsylvania.

3. **Community Sewage System**: Any system, whether publicly or privately owned, for the collection of sewage from two or more lots, and the treatment and/or disposal of the sewage on one or more lots or at any other site.

4. **Department**: The Department of Environmental Protection of the Commonwealth of Pennsylvania (DEP).

5. **Individual Sewage System**: A system of piping, tanks or other facilities serving a single lot and collecting and disposing of sewage in whole or in part into the soil or into any waters of this Commonwealth.

6. **Local Agency**: A municipality, county, County Department of Health or Joint County Department of Health. Where used or referred to in this ordinance, the Local Agency shall be the Chester County Department of Health.

7. **Malfunction**: A condition which occurs when an on-lot sewage disposal system discharges sewage onto the surface of the ground, into ground waters of this Commonwealth, into surface waters of this Commonwealth, backs up into a building connected to the system or in any manner causes a nuisance or hazard to the public health or pollution of ground or surface water or contamination of public or private drinking water wells. Systems shall be considered to be malfunctioning if any condition noted above occurrs for any length of time during any period of the year.

8. **Official Sewage Facilities Plan**: A comprehensive plan for the provision of adequate sewage disposal systems, adopted by the Board and approved by the Pennsylvania Department of Environmental Protection (DEP), pursuant to the Pennsylvania Sewage Facilities Act.

9. **On-lot Sewage Disposal System**: Any system for disposal of domestic sewage involving pretreatment and subsequent disposal of the clarified sewage into a subsurface soil absorption area or retaining tank; this term includes both individual sewage systems and community sewage systems.

10. **Person**: Any individual, association, public or private corporation for profit or not for profit, partnership, firm, trust, estate, department, board, bureau or

agency of the Commonwealth, political subdivision, municipality, district, authority, or any other legal entity whatsoever which is recognized by law as the subject of rights and duties. Whenever used in any clause prescribing and imposing a penalty or imposing a fine or imprisonment, the term person shall include the members of an association, partnership or firm and the officers of any local agency or municipal, public or private corporation for profit or not for profit.

11. **Rehabilitation**: Work done to modify, alter, repair, enlarge or replace an existing on-lot sewage disposal system.

12. **Sewage**: Any substance that contains any of the waste products or excrement or other discharge from the bodies of human beings or animals and any noxious or deleterious substances being harmful or inimical to the public health, or to animal or aquatic life, or to the use of water for domestic water supply or for recreation or which constitutes pollution under the Act of June 22, 1937 (PL 1987, No. 394), known as "The Clean Streams Law," as amended.

13. **Sewage Enforcement Officer (SEO)**: A person certified by DEP who is employed by Chester County Health Department. Such person authorized to conduct investigations and inspections, review permit applications, issue or deny permits and do all other activities as may be provided for such person in the Sewage Facilities Act, the rules and regulations promulgated thereunder and this or any other ordinance adopted by Valley Township.

14. **Sewage Management District**: Any area or areas of Valley Township designated in the Official Sewage Facilities Plan adopted by Valley Township as an area for which a Sewage Management program is to be implemented.

15. **Sewage Management Program**: A comprehensive set of legal and administrative requirements encompassing the requirements of this ordinance, the Sewage Facilities Act, the Clean Streams Law, the regulations promulgated thereunder and such other requirements adopted by the Board of Supervisors to effectively enforce and administer this ordinance

16. **Subdivision**: The division or redivision of a lot, tract or other parcel of land into two or more lots, tracts, parcels or other divisions of land, including changes in existing lot lines. The enumerating of lots shall include as a lot that portion of the original tract or tracts remaining after other lots have been subdivided therefrom.

17. **Township**: The Township of Valley, Chester County, Pennsylvania.

For the purposes of this ordinance, any term which is not defined herein shall have that meaning attributed to it under the Sewage Facilities Act and the Regulations promulgated thereto.

§403. Applicability

1. From the effective date of this ordinance, its provisions shall apply in any portion of Valley Township identified in the Official Sewage Facilities Plan as a Sewage Management District. Within such an area or areas, the provisions of this ordinance shall apply to all persons owning any property serviced by an on-lot sewage disposal system and to all persons installing or rehabilitating on-lot sewage disposal systems.

§404. Permit Requirements

1. No person shall install, construct, or alter an individual sewage system or a community sewage system, or install or occupy any building or structure for which an individual sewage system or community sewage system is to be installed without first obtaining a permit from the Chester County Health Department (Local Agency). The properly issued permit shall indicate that the site, and the plans and specifications of such system are in compliance with the provisions of the Clean Streams Law and the Pennsylvania Sewage Facilities Act and the regulations adopted pursuant to those Acts.

2. No system or structure designed to provide individual or community sewage disposal shall be covered from view until approval to cover the same has been given by a sewage enforcement officer employed by and authorized by the Local Agency. If 72 hours have elapsed, excepting Sundays and Holidays, since the sewage enforcement officer issuing the permit received notification of completion of construction, the applicant may cover said system or structure unless permission has been specifically refused by the sewage enforcement officer.

3. Applicant with a valid on-lot sewage permit is required to notify **in writing,** the Local Agency and Valley Township of the schedule for construction of the permitted on-lot sewage disposal system. This notification must be made so that inspection(s), in addition to the final inspection required by the Sewage Facilities Act, may be scheduled and performed by a sewage enforcement officer from the Local Agency.

4. No Building Permit shall be issued for a new building which will contain sewage generating facilities until a valid sewage permit has been obtained.

   No Occupancy Permit shall be issued for a new building being served by an on-lot sewage disposal system until the system has been installed and approved by the Local Agency.

5. No Building or Occupancy Permits shall be issued and no work shall begin on any alteration or conversion of any existing structure if said alteration or conversion will result in the increase or potential increase in sewage flows from the structure, until either the structure's owner receives a permit for alteration or replacement of the existing sewage disposal system or until the structure's owner

and the appropriate officials of the Township receive written notification from a sewage enforcement officer that such a permit will not be required. The Local Agency shall determine whether the proposed alteration or conversion of the structure will result in increased sewage flows. The Municipality shall verify that the information supplied to the Local Agency SEO, for the purpose of making an addition or alteration to a property, is correct.

6. Sewage permits may be issued only by the Chester County Health Department

§405. Inspections By Valley Township

1. Any on-lot sewage disposal system may be inspected by an authorized agent of Valley Township at any reasonable time.

2. Such inspection may include a physical tour of the property, the taking of samples from surface water, wells, other ground water sources, the sampling of the contents of the sewage disposal system itself and/or the introduction of a traceable substance into the interior plumbing of the structure served to ascertain the path and ultimate destination of wastewater generated in the structure.

3. An authorized agent shall have the right to enter upon land for the purposes of inspections described in this section.

4. An initial inspection shall be conducted by an authorized agent within one year of the effective date of this ordinance for the purpose of determining the type and functional status of each sewage disposal system in the sewage management district. A written report shall be furnished to the owner of each property inspected and a copy of said report shall be maintained in the Township records.

5. A schedule of routine inspections shall be established to assure the proper functioning of the sewage systems in the sewage management district.

6. An authorized agent shall inspect systems known to be, or alleged to be, malfunctioning. Should said inspections reveal that the system is indeed malfunctioning, the authorized agent shall contact the Chester County Health Department to order action to be taken to correct the malfunction. If total correction cannot be done in accordance with the regulations of DEP including, but not limited to, those outlined in Chapter 73 of Title 25 of the Pennsylvania Code or is not technically or financially feasible in the opinion of the authorized agent and a representative of DEP, then action by the property owner to mitigate the malfunction shall be required.

7. There may arise geographic areas where numerous on-lot sewage disposal systems are malfunctioning. A resolution of these area-wide problems may necessitate detailed planning and a revision to the portion of the Sewage Facilities Plan pertaining to areas affected by such malfunctions. When a DEP authorized Official Sewage Facilities Plan Revision has been undertaken, mandatory repair or replacement of individual malfunctioning sewage disposal

systems within the area affected by the revision may be delayed, pending the outcome of the plan revision process. However, immediate corrective action may be compelled whenever a malfunction, as determined by Valley Township officials, Chester County Health Department and/or the Department, represents a serious public health or environmental threat.

§406. Operation

1. Only normal domestic wastes shall be discharged into any on-lot sewage disposal system. The following shall not be discharged into the system.

   a. Industrial Waste.

   b. Automobile oil and other non-domestic oil.

   c. Toxic or hazardous substances or chemicals, including but not limited to pesticides disinfectants (excluding household cleaners), acids, paints, paint thinners, herbicides, gasoline and other solvents.

   d. Clean surface or ground water, including water from roof or cellar drains, springs, basement sump pumps and French drains.

§407. Maintenance

1. Each person owning a building served by an on-lot sewage disposal system which contains a septic tank, shall have the septic tank pumped by a qualified pumper/hauler within six months of the effective date of this ordinance. Thereafter that person shall have the tank pumped at least once every three years or whenever an inspection reveals that the septic tank is filled with solids or with scum in excess of 1/3 of the liquid depth of the tank. Receipts from the pumper/hauler shall be submitted to the Township within the prescribed six months and three-year pumping periods.

2. The required pumping frequency may be increased at the discretion of an authorized agent if the septic tank is undersized, if solids buildup in the tank is above average, if the hydraulic load on the system increases significantly above average, if a garbage grinder is used in the building, if the system malfunctions or for other good cause shown. If any person can prove that such person's septic tank had been pumped within three years of the six-month anniversary of the effective date of this ordinance, then that person's initial required pumping may be delayed to conform to the general three-year frequency requirement except where an inspection reveals a need for more frequent pumping frequency.

3. Any person owning a property served by a septic tank shall submit, with each required pumping receipt, a written statement, from the pumper/hauler or from any other qualified individual acceptable to the Township, that the baffles in the septic tank have been inspected and found to be in good working order. Any

person whose septic tank baffles are determined to require repair or replacement shall first contact the Local Agency for approval of the necessary repair.

4. Any person owning a building served by an on-lot sewage disposal system, which contains an aerobic treatment tank, shall follow the operation and maintenance recommendations of the equipment manufacturer. A copy of the manufacturer's recommendations and a copy of the service agreement shall be submitted to the Township within six months of the effective date of this ordinance. Thereafter, service receipts shall be submitted to the Township at the intervals specified by the manufacturer's recommendations. In no case may the service or pumping intervals for aerobic treatment tanks exceed those required for septic tanks.

5. Any person owning a building served by a cesspool or dry well in an area of numerous malfunctions or in an area where a repair is not technically feasible, shall have that system pumped according to the schedule prescribed for septic tanks to mitigate potential pollution. As an alternative to this scheduled pumping of the cesspool or dry well, and pending any scheduled replacement of the substandard system as identified in the Official Sewage Facilities Plan, the owner may apply for a sewage permit from the Chester County Health Department for a septic tank to be installed preceding the cesspool or dry well. For this interim repair system consisting of a cesspool or dry well proceeded by an approved septic tank, only the septic tank must be pumped at the prescribed interval.

6. Additional maintenance activity may be required as needed including, but not necessarily limited to, cleaning and unclogging of piping, servicing and the repair of mechanical equipment, leveling of distribution boxes, tanks and lines, removal of obstructing roots or trees, the diversion of surface water away from the disposal area, etc.

7. All septage originating within Valley Township shall be disposed of in accordance with the requirements of the Solid Waste Management Act (Act 97 of 1980, 35 P.S. §§6018.101 et seq.), the regulations of the Chester County Health Department and all other applicable laws and at sites or facilities approved by DEP. Approved sites or facilities shall include septage treatment facilities, wastewater treatment pollutant composting sites, and approved farmlands.

8. Pumper/haulers of septage operating within the sewage management district shall operate in a manner consistent with the provisions of the Pennsylvania Solid Waste Management Act (Act 97 of 1980, 35 P.S. §§6018.101-6018.1003) and all other applicable laws.

§408. System Rehabilitation

1. No person shall maintain or operate a sewage disposal system in a manner inconsistent with the the original design. All liquid wastes, including kitchen

and laundry wastes and water softener backwash, shall be discharged to a treatment tank. No sewage system shall discharge untreated or partially treated sewage to the surface of the ground or into the waters of the Commonwealth unless a permit for such discharge has been obtained from DEP. Any system modification must be pre-approved by the Chester County Health Department.

2. A written notice of violation shall be issued by the Chester County Health Department to any person who is the owner of any property which is found to be served by a malfunctioning on-lot sewage disposal system or a system that was constructed without obtaining a permit from the Chester County Health Department.

3. Within seven (7) days of notification by the Chester County Health Department that a malfunction has been identified, the property owner shall make application to the sewage enforcement officer for a permit to repair or replace the malfunctioning system. Within thirty (30) days of initial notification, construction of the permitted repair or replacement shall commence. Within sixty (60) days of the original notification, the construction shall be completed unless seasonal or unique conditions mandate a longer period, in which case an extended completion date may be established.

4. A sewage enforcement officer shall have the authority to require the repair of any malfunction by the following methods: cleaning, repair or replacement of components of the existing system, adding capacity or otherwise altering or replacing the system's treatment tank, expanding the existing disposal area, replacing the existing disposal area, replacing a gravity distribution system with a pressurized system, replacing the system with a holding tank, or any other alternative appropriate for the specific site.

5. In lieu of, or in combination with, the remedies described in Subsection 4. above, a sewage enforcement officer, in cooperation with the Municipality, may require the installation of water conservation equipment and the institution of water conservation practices in structures served. Water using devices and appliances in the structure may be required to be retrofitted with water saving appurtenances or they may be required to be replaced by water conserving devices in accordance with Pennsylvania Statewide Building Codes adopted in 1999.

6. In the event that the rehabilitation measures in Subsections 1 through 5 above, are not feasible or effective, the owner may be required to apply to the Chester County Health Department for a permit to install a holding tank. Upon receipt of said permit, the owner shall complete construction of the system within thirty (30) days, unless seasonal or unique conditions mandate a longer period, in which case the sewage enforcement officer shall set an extended completion date.

7. Should none of the remedies described in this Section be totally effective in eliminating the malfunction of an existing on-lot sewage disposal system, the property owner is not absolved of responsibility for that malfunction. The

Township may require whatever action is necessary to lessen or mitigate the malfunction to the extent necessary.

§409. Administration

1. The Township shall fully utilize those powers it possesses through enabling statutes and ordinances to effect the purposes of this ordinance.

2. The Township shall employ qualified individuals to carry out the provisions of this ordinance. Those employees may include a knowledgeable inspector and may include an administrator and such other persons as may be necessary. The Township may also contract with private qualified persons or firms as necessary to carry out the provisions of this ordinance.

3. All permits, records, reports, files and other written material relating to the installation, operation and maintenance and malfunction of on-lot sewage disposal systems in the sewage management district shall be maintained by the Township. These files shall be available for public inspection during regular business hours at the official office of the Township, with prior written request addressed to the Township Secretary.

4. The Township Board of Supervisors shall establish all administrative procedures necessary to properly carry out the provisions of this ordinance.

5. The Township Board of Supervisors may establish a fee schedule, and authorize the collection of fees, to cover the cost to the Township of administering this program.

§410. Penalties

Any person failing to comply with any provision of this Ordinance shall be subject to a fine of not more than one thousand dollars ($1000.00) together with court costs and reasonable attorney's fees.

§411. Liens

The Township, upon written notice from a sewage enforcement officer that an imminent health hazard exists due to failure of a property owner to maintain, repair or replace an on-lot sewage disposal system as provided under the terms of this ordinance, shall have the authority to perform, or contract to have performed, the work required by the sewage enforcement officer. The owner shall be charged for the work performed and, if necessary, a lien shall be entered therefore in accordance with law.

§412. Appeals

1. Appeals from final decisions of the Township or any of its authorized agents under this ordinance shall be made to the Township Board of Supervisors in

writing within thirty (30) days from the date of written notification of the decision in question.

2. The appellant shall, upon payment of the required fees, be entitled to a hearing before the Township Board of Supervisors at its next regularly scheduled meetings if a written appeal is received at least fourteen (14) days prior to that meeting. The municipality shall thereafter affirm, modify, or reverse the aforesaid decision. The hearing may be postponed for a good cause shown by the appellant or the Township. Additional evidence may be introduced at the hearing provided that it is submitted with the written notice of appeal. Fees for appeal hearings shall be as adopted from time to time by the Board of Supervisors

3. A decision shall be rendered in writing within thirty (30) days of the date of the hearing.

§413. Repealer

All ordinances or parts of ordinances inconsistent with the provisions of this ordinance are hereby repealed to the extent of such inconsistency.

§414. Severability

If any section or clause of this ordinance shall be adjudged invalid, such adjudication shall not affect the validity of the remaining provisions which shall be deemed severable therefrom.

Section 3. This Ordinance shall be effective five (5) days after enactment by the Board of Supervisors of Valley Township, Chester County, Pennsylvania from the date above written.

VALLEY TOWNSHIP, CHESTER COUNTY

Chairman, Board of Supervisors

ATTEST:
By _____
Township Secretary

APPENDIX K

"CURRENT CONNECTIONS" SEWER INTERCEPTOR MODELS

ROCK RUN BASIN

TABLE K-1
VALLEY TOWNSHIP
SEWER INTERCEPTOR MODEL
ROCK RUN BASIN
CURRENT CONNECTIONS
(ALL FLOWS IN GPD)

REVISION:
2/24,5/25/88: Format adjustment
3/17/88: As-built Info.
4/26/88: Enter contributing EDU's
existing @480, new @300gpd
5/25/88: MH 1 to 3213, size 12"
3/9/92: REVISE ALL EDU'S @ 300 GPD.
4/16/04: ADD VALLEY FARM - 81 EDU @300GPD
4/16/04:REVISE ALL EXISTING EDU'S TO ACTUAL FLOW @ 175 GDP

MANHOLE NUMBER		SIZE (IN)	LENGTH (FEET)	UPPER INVERT	LOWER INVERT	SLOPE (%)	'N' FACTOR	PIPE CAPACITY	CONTRIB. E.D.U.	FLOW	TOTAL AVE FLOW	TOTAL PEAK FLOW	AVAIL. CAPACITY	AVAIL SYS CAPACITY	AVAIL. E.D.U.	LOCATION OF FIRST MH
WESTERN TRIBUTARY TO ROCK RUN PUMP STATION																
From Highlands Corporate Center, 400 EDU @ 175 GPD									400	70,000	70,000	175,000	803,408	62,270	83	MH 100 CUL-DE-SAC HILL TOP
100	to 101	8	268	602.88	600.85	0.757	0.011	803,408	3	525	70,525	176,313	627,095	62,270	83	HILL TOP LANE
101	to 102	8	299	600.85	592.08	2.933	0.011	1,580,956	2	350	70,875	177,188	1,403,768	62,270	83	HILL TOP LANE
102	to 103	8	300	592.08	590.37	0.570	0.011	696,936	2	350	71,225	178,063	518,874	62,270	83	HILL TOP LANE
103	to 104	8	300	590.37	588.25	0.707	0.011	776,002	4	700	71,925	179,813	596,189	62,270	83	HILL TOP LANE
104	to 105	8	301	585.54	584.19	0.449	0.011	618,214	4	700	72,625	181,563	436,652	62,270	83	HILL TOP LANE
105	to 106	8	271	584.19	583.22	0.358	0.011	552,277	3	525	73,150	182,875	369,402	62,270	83	HILL TOP & COUNTRY CLUB RD
106	to 107	8	381	583.22	571.70	3.024	0.011	1,605,163	1	175	73,325	183,313	1,421,851	62,270	83	COUNTRY CLUB RD.
107	to 108	8	401	566.80	564.73	0.516	0.011	663,237	2	350	73,675	184,188	479,049	62,270	83	COUNTRY CLUB RD.
108	to 108A	8	275	565.00	555.00	3.636	0.011	1,760,310	1	175	73,850	184,625	1,575,685	62,270	83	COUNTRY C. & MINERAL SPR.
108A	to 65	8	13	555.00	554.98	0.154	0.011	362,075	0	0	73,850	184,625	177,450	62,270	83	MINERAL SPRINGS RD.
								SUBTOTAL	422							
Valley Springs Sewer System									E.D.U.	@175gpd			VALLEY SPRINGS PLAN			
65	to 64	8	105	551.80	547.40	4.190	0.011	1,889,675	1	175	74,025	185,063	1,704,613	62,270	83	MINERAL SPRINGS RD.
64	to 63	8	300	547.40	536.20	3.733	0.011	1,783,626	1	175	74,200	185,500	1,598,126	62,270	83	MINERAL SPRINGS RD.
63	to 62	8	300	536.20	522.50	4.567	0.011	1,972,673	1	175	74,375	185,938	1,786,736	62,270	83	MINERAL SPRINGS RD.
62	to 61	8	300	522.50	506.30	5.400	0.011	2,145,124	1	175	74,550	186,375	1,958,749	62,270	83	MINERAL SPRINGS RD.
61	to 60	8	200	506.30	494.50	5.900	0.011	2,242,237	2	350	74,900	187,250	2,054,987	62,270	83	MINERAL SPRINGS RD.
60	to 59	8	300	493.30	477.90	5.133	0.011	2,091,487	2	350	75,250	188,125	1,903,362	62,270	83	MINERAL SPRINGS RD.
59	to 58	8	300	475.00	456.00	6.333	0.011	2,323,120	3	525	75,775	189,438	2,133,683	62,270	83	MINERAL SPRINGS RD.
58	to 7	8	300	454.00	440.50	4.500	0.011	1,958,221	1	175	75,950	189,875	1,768,346	62,270	83	MINERAL SPRINGS RD.
7	to 6	8	228	440.17	438.78	0.610	0.011	720,768	137	23,975	99,925	249,813	470,955	62,270	83	MINERAL SPRINGS RD.
										0						(FROM V. SPRINGS)
6	to 5	8	225	438.78	437.43	0.600	0.011	715,041	2	350	100,275	250,688	464,354	62,270	83	MINERAL SPRINGS RD.
5	to 4	8	300	437.43	433.00	1.477	0.011	1,121,752	128	22,400	122,675	306,688	815,064	62,270	83	BEACON HILL
4	to 3	8	300	429.50	421.25	2.750	0.011	1,530,812	2	350	123,025	307,563	1,223,249	62,270	83	MINERAL SPRINGS RD.
3	to 2	8	178	420.00	411.20	4.944	0.011	2,052,517	0	0	123,025	307,563	1,744,955	62,270	83	EASEMENT
2	to 20	8	158	409.20	407.10	1.329	0.011	1,064,233	0	0	123,025	307,563	756,670	62,270	83	EASEMENT & RT. 30.
Rock Run Sewer Extension									E.D.U.	@175gpd			VALLEY SPRINGS SEWER EXT. PLANS			
20	to 19	10	352	407.27	404.19	0.875	0.011	1,565,631	295	51,625	174,650	528,813	1,036,819	62,270	83	RT. 30 BYPASS
										0						(FROM C.C.V. & V.VIEW)
19	to 18	10	335	404.19	402.06	0.636	0.011	1,334,605	2	350	175,000	530,313	804,293	62,270	83	EASEMENT & RT. 30.
18	to 17	10	245	398.11	396.41	0.694	0.011	1,394,206	0	0	175,000	530,313	863,893	62,270	83	STREAM &EASEMENT
17	to 16	10	402	396.41	391.12	1.316	0.011	1,919,996	1	175	175,175	531,063	1,388,933	62,270	83	EASEMENT
16	to 15	10	242	390.81	377.77	5.388	0.011	3,885,228	1	175	175,350	531,813	3,353,416	62,270	83	EASEMENT
15	to 14	10	77	376.89	375.72	1.519	0.013	1,745,751	0	0	175,350	531,813	1,213,939	62,270	83	EASEMENT & STREAM
14	to 13	10	200	375.72	374.54	0.590	0.011	1,285,616	0	0	175,350	531,813	753,804	62,270	83	EASEMENT
13	to 12	10	398	374.54	367.80	1.693	0.011	2,178,080	0	0	175,350	531,813	1,646,267	62,270	83	SLOPE EASEMENT
12	to 11	10	227	365.95	364.93	0.449	0.011	1,121,948	0	0	175,350	531,813	590,135	62,270	83	WAGONTOWN RD. & SLOPE EASE
11	to 10	10	291	364.33	362.98	0.464	0.011	1,140,002	5	875	176,225	535,563	604,440	62,270	83	WAGONTOWN RD. & EASEMENT

TABLE K-1
VALLEY TOWNSHIP
SEWER INTERCEPTOR MODEL
ROCK RUN BASIN
CURRENT CONNECTIONS
(ALL FLOWS IN GPD)

REVISION:
2/24,5/25/88: Format adjustment
3/17/88: As-built Info.
4/26/88: Enter contributing EDU's
existing @480, new @300gpd
5/25/88: MH 1 to 3213, size 12"
3/9/92: REVISE ALL EDU'S @ 300 GPD.
4/16/04: ADD VALLEY FARM - 81 EDU @300GPD
4/16/04:REVISE ALL EXISTING EDU'S TO ACTUAL FLOW @ 175 GDP

MANHOLE NUMBER		SIZE (IN)	LENGTH (FEET)	UPPER INVERT	LOWER INVERT	SLOPE (%)	'N' FACTOR	PIPE CAPACITY	CONTRIB. E.D.U.	FLOW	TOTAL AVE FLOW	TOTAL PEAK FLOW	AVAIL. CAPACITY	AVAIL SYS CAPACITY	AVAIL. E.D.U.	LOCATION OF FIRST MH
10	to 9	10	316	362.98	347.80	4.804	0.013	3,104,038	48	8,400	184,625	571,563	2,532,476	62,270	83	EASEMENT & ROCKRUN
9	to 8	10	259	347.80	346.48	0.510	0.011	1,194,875	111	33,300	217,925	654,813	540,063	62,270	83	EASEMENT & ROCKRUN (C.R.) (FROM COUNTRY RIDGE)
8	to 7	10	396	346.48	341.62	1.227	0.011	1,854,197	0	0	217,925	654,813	1,199,385	62,270	83	EASEMENT & ROCKRUN
7	to 6	10	88	339.08	338.44	0.727	0.013	1,207,768	0	0	217,925	654,813	552,955	62,270	83	EASEMENT & ROCKRUN
6	to 5	10	383	338.44	336.78	0.433	0.011	1,101,895	1	175	218,100	655,563	446,332	62,270	83	EASEMENT & ROCKRUN
5	to 4	10	171	336.78	334.92	1.088	0.011	1,745,596	0	0	218,100	655,563	1,090,034	62,270	83	EASEMENT & ROCKRUN
4	to 3.1	10	45	334.92	329.67	11.667	0.011	5,716,876	1	175	218,275	656,313	5,060,564	62,270	83	EASEMENT & ROCKRUN
3.1	to 3	10	143	326.19	325.17	0.713	0.013	1,196,098	0	0	218,275	656,313	539,786	62,270	83	EASEMENT & ROCKRUN
3	to 2	10	234	325.17	322.38	1.192	0.011	1,827,593	5	875	219,150	660,063	1,167,531	62,270	83	MT AIRY RD & EASEMENT
2	to 1	10	228	319.48	316.06	1.500	0.011	2,049,892	5	875	220,025	663,813	1,386,080	62,270	83	MT AIRY RD & EASEMENT
1	to 532-13	10	271	316.06	315.55	0.188	0.011	726,082	0	0	220,025	663,813	62,270	62,270	83	MT AIRY RD & EASEMENT
____Coatesville Plate & Washer Co. Branch of Rock Run Basin_____									E.D.U	@175gpd	_____	_____	WESTON PLAN NO. 532	_____	_____	_____
532-13	to 532-12	12	55	323.00	322.72	0.509	0.013	1,643,180	0	0	220,025	663,813	979,367	616,973	823	MT AIRY RD & ROCKRUN
532-12	to 532-14	12	150	320.62	319.22	0.933	0.013	2,224,876	5	875	220,900	667,563	1,557,313	616,973	823	MT AIRY RD & EASEMENT
532-14	to 532-15	12	73	319.22	317.87	1.849	0.013	3,131,791	0	0	220,900	667,563	2,464,229	616,973	823	EASEMENT & ROCK RUN
532-15	to 532-6	12	288	317.52	315.94	0.549	0.013	1,705,767	564	149,266	370,166	1,088,794	616,973	616,973	823	Rock Run&Brandywine Creek (+Hillview)
532-6	to 532-5	12	50	315.84	315.56	0.560	0.013	1,723,381	20	3,500	373,666	1,103,794	619,587	619,587	826	BRANDYWINE CR & PUMP STA
532-5	to P.S.	12	10	312.46	311.75	7.100	0.013	6,136,441	386	103,300	476,966	1,393,294	4,743,147	4,743,147	6,324	PUMPING STATION (+Central Tributary)

TABLE K-1
VALLEY TOWNSHIP
SEWER INTERCEPTOR MODEL
ROCK RUN BASIN
CURRENT CONNECTIONS
(ALL FLOWS IN GPD)

REVISION:
2/24,5/25/88: Format adjustment
3/17/88: As-built Info.
4/26/88: Enter contributing EDU's
existing @480, new @300gpd
5/25/88: MH 1 to 3213, size 12"
3/9/92: REVISE ALL EDU'S @ 300 GPD.
4/16/04: ADD VALLEY FARM - 81 EDU @300GPD
4/16/04:REVISE ALL EXISTING EDU'S TO ACTUAL FLOW @ 175 GDP

EASTERN TRIBUTARY FROM HILLVIEW

MANHOLE NUMBER			SIZE (IN)	LENGTH (FEET)	UPPER INVERT	LOWER INVERT	SLOPE (%)	'N' FACTOR	PIPE CAPACITY	CONTRIB. E.D.U.	FLOW	TOTAL AVE FLOW	TOTAL PEAK FLOW	AVAIL. CAPACITY	AVAIL SYS CAPACITY	AVAIL. E.D.U.	LOCATION OF FIRST MH
531-6	to	531-5A	8	213	360.8	357.88	1.37	0.013	914,548	524	142,266	142,266	391,232	523,316	50,624	67	HILLVIEW SUBDIVISION
531-5A	to	531-5	8	90	355.88	353.77	2.34	0.013	1,195,982		0	142,266	391,232	804,751	50,624	67	
531-5	to	531-4	8	143	353.67	352.95	0.50	0.013	554,247		0	142,266	391,232	163,015	50,624	67	
531-4	to	531-3	8	228	352.88	350.07	1.23	0.013	867,143		0	142,266	391,232	475,911	50,624	67	
531-3	to	531-2	8	206	349.97	337.26	6.17	0.013	1,940,189		0	142,266	391,232	1,548,957	50,624	67	
531-2	to	531-2A	8	120	337.16	336.46	0.58	0.013	596,572		0	142,266	391,232	205,341	50,624	67	
531-2A	to	531-1	8	95	336.36	327.94	8.86	0.013	2,325,407		0	142,266	391,232	1,934,176	50,624	67	
531-1	to	532-22	8	206	327.84	323.88	1.92	0.013	1,082,976		0	142,266	391,232	691,744	50,624	67	
532-22	to	532-21	8	78	323.78	323.36	0.54	0.013	573,168		0	142,266	391,232	181,937	50,624	67	
532-21	to	532-20	8	151.9	323.26	322.49	0.51	0.013	556,124		0	142,266	391,232	164,892	50,624	67	
532-20	to	532-19	8	105.9	322.39	321.58	0.76	0.013	683,124		0	142,266	391,232	291,892	50,624	67	
532-19	to	53218	8	110	321.48	320.68	0.73	0.013	666,122		0	142,266	391,232	274,890	50,624	67	
532-18	to	532-17	8	125	320.58	320.18	0.32	0.013	441,855		0	142,266	391,232	50,624	50,624	67	
532-17	to	532-16	8	130	320	318.37	1.25	0.013	874,635		0	142,266	391,232	483,404	276,292	368	
532-16	to	532-15	8	89	318.27	317.62	0.73	0.013	667,523		0	142,266	391,232	276,292	276,292	368	

TABLE K-1
VALLEY TOWNSHIP
SEWER INTERCEPTOR MODEL
ROCK RUN BASIN
CURRENT CONNECTIONS
(ALL FLOWS IN GPD)

REVISION:
2/24,5/25/88: Format adjustment
3/17/88: As-built Info.
4/26/88: Enter contributing EDU's
existing @480, new @300gpd
5/25/88: MH 1 to 3213, size 12"
3/9/92: REVISE ALL EDU'S @ 300 GPD.
4/16/04: ADD VALLEY FARM - 81 EDU @300GPD
4/16/04:REVISE ALL EXISTING EDU'S TO ACTUAL FLOW @ 175 GDP

MANHOLE NUMBER			SIZE (IN)	LENGTH (FEET)	UPPER INVERT	LOWER INVERT	SLOPE (%)	'N' FACTOR	PIPE CAPACITY	CONTRIB. E.D.U.	FLOW	TOTAL AVE FLOW	TOTAL PEAK FLOW	AVAIL. CAPACITY	AVAIL SYS CAPACITY	AVAIL. E.D.U.	LOCATION OF FIRST MH
CENTRAL TRIBUTARY																	
Pleasant Valley Rd to MH 51																	
54	to	53	8	140	572.38	560.72	8.33	0.013	2,254,188	2	600	600	1,500	2,252,688	337,819	450	Country Club
53	to	52	8	299	560.72	534.79	8.67	0.013	2,300,226	4	1,200	1,800	4,500	2,295,726	337,819	450	
52	to	51	8	239	534.79	520.87	5.82	0.013	1,885,061	16	4,800	6,600	16,500	1,868,561	337,819	450	London(14)
Baltusrol to MH-51 in Pleasant Valley to MH 528-4 in Harry Road.																	
58	to	57	8	236	572.54	565.62	2.93	0.013	1,337,525	7	2,100	2,100	5,250	1,332,275	337,819	450	
57	to	56	8	229	565.62	549.13	7.20	0.013	2,096,030	2	600	2,700	6,750	2,089,280	337,819	450	
56	to	55	8	249	549.13	529.79	7.77	0.013	2,176,874	0	0	2,700	6,750	2,170,124	337,819	450	
55	to	51	8	182	529.79	520.87	4.90	0.013	1,729,225	0	0	2,700	6,750	1,722,475	337,819	450	
51	to	50	8	280	520.87	519.39	0.53	0.013	567,880	24	7,200	9,900	24,750	543,130	337,819	450	
50	to	528-4	8	204	519.39	515.19	2.06	0.013	1,120,765	0		9,900	24,750	1,096,015	337,819	450	
Harry Road, Mary St., Moody St., Ash Rd. to Irish Lane																	
527-2	to	527-1	8	176	537.60	525.10	7.10	0.013	2,081,630	2	600	600	1,500	2,080,130	337,819	450	
527-1	to	528-4	8	400	525.00	523.00	0.50	0.013	552,319	8	2,400	3,000	7,500	544,819	337,819	450	
528-4	to	528-1	8	268	522.90	521.83	0.40	0.013	493,548	33	9,900	12,900	32,250	461,298	337,819	450	Harry Road to Mary
528-1	to	528-2	8	400	521.73	520.13	0.40	0.013	494,009	3	900	13,800	34,500	459,509	337,819	450	
528-2	to	528-3	8	370	520.03	518.55	0.40	0.013	494,009	6	1,800	15,600	39,000	455,009	337,819	450	
528-3	to	530-1	8	180	518.45	510.55	4.39	0.013	1,636,372	3	900	16,500	41,250	1,595,122	337,819	450	
530-1	to	530-2	8	288	510.45	491.44	6.60	0.013	2,006,779	6	1,800	18,300	45,750	1,961,029	337,819	450	
530-2	to	529-1	8	390	488.80	471.60	4.41	0.013	1,640,351	5	1,500	19,800	49,500	1,590,851	337,819	450	
529-1	to	529-2	8	291	471.50	460.91	3.64	0.013	1,490,069	4	1,200	21,000	52,500	1,437,569	337,819	450	
529-2	to	529-3	8	251	460.81	453.00	3.11	0.013	1,377,823	3	900	21,900	54,750	1,323,073	337,819	450	
Irish Lane to MH 532-3 to Rock Run Pump Station																	
526-1	to	527-4	8	380	576.80	567.98	2.32	0.013	1,190,001	152	45,600	45,600	114,000	1,076,001	337,819	450	Oakcrest (+148)
527-4	to	527-3	8	174	567.88	548.88	10.92	0.013	2,581,113	3	900	46,500	116,250	2,464,863	337,819	450	
527-3	to	527-5	8	110	548.78	535.98	11.64	0.013	2,664,486	2	600	47,100	117,750	2,546,736	337,819	450	
527-5	to	527-6	8	300	535.88	510.38	8.50	0.013	2,277,269	6	1,800	48,900	122,250	2,155,019	337,819	450	
527-6	to	527-7	8	375	510.28	477.28	8.80	0.013	2,317,107	9	2,700	51,600	129,000	2,188,107	337,819	450	
527-7	to	529-3	8	211	477.18	453.02	11.45	0.013	2,643,091	2	600	52,200	130,500	2,512,591	337,819	450	
529-3	to	529-4	8	101	452.90	442.09	10.70	0.013	2,555,389	73	21,900	74,100	185,250	2,370,139	337,819	450	
529-4	to	529-5	8	260	441.99	420.80	8.15	0.013	2,229,891	4	1,200	75,300	188,250	2,041,641	337,819	450	
529-5	to	529-6	8	177	420.30	409.79	5.94	0.013	1,903,354	4	1,200	76,500	191,250	1,712,104	337,819	450	
529-6	to	529-7	8	53	409.69	408.19	2.83	0.013	1,314,052	5	1,500	78,000	195,000	1,119,052	337,819	450	
529-7	to	532-1	8	355	408.09	360.57	13.39	0.013	2,857,780	5	1,500	79,500	198,750	2,659,030	337,819	450	
532-1	to	532-2	8	126	360.00	341.86	14.40	0.013	2,963,727	17	5,100	84,600	211,500	2,752,227	337,819	450	
532-2	to	532-3	8	219	341.00	331.37	4.40	0.013	1,637,932	4	1,200	85,800	214,500	1,423,432	337,819	450	
532-3	to	532-5	8	38	328.27	328.08	0.50	0.013	552,319	0	0	85,800	214,500	337,819	337,819	450	

HAYTI BASIN

TABLE K-2
VALLEY TOWNSHIP
SEWER INTERCEPTOR MODEL
HAYTI BASIN
CURRENT CONNECTIONS
(ALL FLOWS IN GPD)

REVISION:
2/24,5/25/88:Format adjust
2/11/88:Enter contributing EDU'S @ 265 GPD
3/2/92: ADD FLOWS FROM HIGHLANDS & AIRPORT VILLAGE
3/9/92: REVISE EDU'S @ 300 GPD
7/25/92: ENTER CURRENT CONNECTIONS.
7/25/92 Include Airport & Laundromat
10/18/94 Oasis Conv. Str. Approved
9/19/03 Enter Meadowbrook & Valley Suburban Center
11/19/04 ENTER MEADOW BROOK EXISTING- 24 EDU
REMOVE VALLEY SUBURBAN AND LINCOLN HWY FUTURE(45)
SET EDU = 343 GPD BASED ON ACTUAL FLOW FOR HAYTI 1/03 TO 9/04
4/18/05: ENTER ROUND HILL - 230 EDU@262.5GPD
4/18/05: ENTER VALLEY SUBURBAN - 340 EDU@262.5GPD
4/18/05: ENTER WOODLAND POINTE - 9 EDU@262.5GPD
4/8/05: ENTER MEADOW BROOK - 19 EDU@262.5GPD
4/18/05: ENTER OAKCREST - 40 EDU@262.5GPD
4/18/05:LINCOLN HWY FUTURE(45) @262.5GPD
11/19/04: INCREASE 512-10 TO 511-1 PIPE SIZE TO 12"
11/22/04: ENTER 20 EDU FOR AIRPORT FUTURE
11/8/06: ADD MH 18 TO 17 - CONSTRUCTED W/ ALP PROPERTY IN 1992
11/29/06: ENTER KEYSTONE FOODS - 13 EDU@262.5 (MH 18)
8/3/07: DELETE PROPOSED 13 EDU'S FROM HIGHLANDS P.S. #2
6/27/08: ENTER CONCERN (3) & WOODWARD (1) @ 262.5 GPD

MANHOLE NUMBER			SIZE (IN)	LENGTH FT	UPPER INVERT	LOWER INVERT	SLOPE (%)	'N' FACTOR	PIPE CAPACITY	CONTRIB. E.D.U.	CONTRIB. FLOW	TOTAL AVG FLOW	TOTAL PEAK FLOW	AVAIL. CAPACITY	AVAIL SYS CAPACITY	AVAIL. E.D.U.	LOCATION OF FIRST MANHOLE
1983 Lincoln Hwy. Sewer Extension																	
18	to	17	8	230	643.08	641.93	0.50	0.011	652,740	23.0	6,843	6,843	17,106	635,634	285,869	381	LINCOLN HWY, NORTH SIDE + KEYSTONE FOODS
17	to	16	8	200	641.93	641.13	0.40	0.011	583,829	3	788	7,630	19,075	564,754	285,869	381	LINCOLN HWY, NORTH SIDE + CONCERN
16	to	15	8	340	641.13	637.75	0.99	0.013	778,796	243	64,834	72,464	181,160	597,636	285,869	381	LINCOLN HWY + ROUND HILL
15	to	14	8	340	637.75	636.39	0.40	0.013	494,009	0	0	72,464	181,160	312,849	285,869	381	LINCOLN HWY
14	to	13	8	340	636.39	635.02	0.40	0.013	495,822	2	686	73,150	182,875	312,947	285,869	381	LINCOLN HWY
13	to	12	8	400	635.02	629.49	1.38	0.013	918,412	5	1,715	74,865	187,163	731,249	285,869	381	LINCOLN HWY & AIRPORT RD
12	to	11	8	400	629.49	625.34	1.04	0.013	795,607	52	16,226	91,091	227,728	567,880	285,869	381	FLO CHESCO AIRPORT
11	to	10	8	400	625.34	621.06	1.07	0.013	807,973	0	0	91,091	227,728	580,245	285,869	381	LINCOLN HWY
10	to	9	8	325	621.06	614.98	1.87	0.013	1,068,353	340	89,250	180,341	450,853	617,501	285,869	381	LINCOLN HWY+VALLEY SUB.
9	to	8	8	63	614.98	613.78	1.90	0.013	1,078,016	0	0	180,341	450,853	627,163	285,869	381	LINCOLN HWY
8	to	7	8	207	613.78	606.23	3.65	0.013	1,491,740	0	0	180,341	450,853	1,040,887	285,869	381	LINCOLN HWY
7	to	6	8	206	606.23	598.71	3.65	0.013	1,492,382	0	0	180,341	450,853	1,041,530	285,869	381	LINCOLN HWY
6	to	5	8	300	598.71	595.39	1.11	0.013	821,700	45	11,813	192,154	480,384	341,316	285,869	381	LINCOLN HWY,FUTURE
5	to	4	8	120	595.39	594.09	1.08	0.013	812,991	1	343	192,497	481,241	331,750	285,869	381	LINCOLN HWY
4	to	3	8	150	594.09	592.64	0.97	0.013	767,968	1	343	192,840	482,099	285,869	285,869	381	LINCOLN HWY
3	to	2	8	45	592.64	592.14	1.11	0.013	823,348	4	1,372	194,212	485,529	337,819	301,841	402	LINCOLN HWY, NORTH SIDE
2	to	1	8	400	592.14	588.04	1.03	0.013	790,800	4	1,372	195,584	488,959	301,841	301,841	402	LINCOLN HWY, SOUTH SIDE
1	to	523-1	8	400	588.04	579.24	2.20	0.013	1,158,554	2	686	196,270	490,674	667,880	486,532	649	LINCOLN HWY
SUBTOTALS				4,866						725	196,270						

MANHOLE NUMBER			SIZE (IN)	LENGTH FT	UPPER INVERT	LOWER INVERT	SLOPE (%)	'N' FACTOR	PIPE CAPACITY	CONTRIB. E.D.U.	CONTRIB. FLOW	TOTAL AVG FLOW	TOTAL PEAK FLOW	AVAIL. CAPACITY	AVAIL SYS CAPACITY	AVAIL. E.D.U.	LOCATION OF FIRST MANHOLE
Hayti Basin Interceptor																	
523-1	to	520-4	10	400	576.83	574.83	0.50	0.013	1,001,428	15	5,145	201,415	503,536	497,892	486,532	649	LINCOLN HWY & WASHINGTON AV
520-4	to	520-5	10	290	574.73	573.28	0.50	0.013	1,001,428	0	0	201,415	503,536	497,892	486,532	649	LINCOLN HWY(MASON TRACT)
520-5	to	520-6	10	380	573.18	571.28	0.50	0.013	1,001,428	4	1,372	202,787	506,966	494,462	486,532	649	LINCOLN HWY & COUNTRY CLUB
520-6	to	517-4	10	400	571.18	569.18	0.50	0.013	1,001,428	1	343	203,130	507,824	493,604	486,532	649	LINCOLN HWY & ST. GEORGE ST
517-4	to	517-5	10	240	569.08	566.92	0.90	0.013	1,343,557	0	0	203,130	507,824	835,733	486,532	649	LINCOLN HWY
517-5	to	517-6	10	400	566.82	560.82	1.50	0.013	1,734,524	3	1,029	204,159	510,396	1,224,128	486,532	649	LINCOLN HWY & FIRST AV
517-6	to	513-3	10	335	560.72	551.31	2.81	0.013	2,373,598	5	1,715	205,874	514,684	1,858,914	486,532	649	LINCOLN HWY
513-3	to	513-4	10	86	551.21	550.35	1.00	0.013	1,416,233	1	343	206,217	515,541	900,692	486,532	649	LINCOLN HWY
513-4	to	513-5	10	333	550.25	548.58	0.50	0.013	1,002,931	1	343	206,560	516,399	486,532	486,532	649	LINCOLN HWY
513-5	to	513-16	10	41	548.48	548.07	1.00	0.013	1,416,233	75	24,920	231,480	578,699	837,534	489,575	653	LINCOLN HWY & CHURCH ST, S+WOODLAND POINTE
513-16	to	513-17	10	170	543.60	542.13	0.86	0.013	1,316,949	290	99,470	330,950	827,374	489,575	489,575	653	LINCOLN HWY & CHURCH ST, N +OAKCREST(16 EDU)
513-17	to	513-18	10	190	542.03	536.80	2.75	0.013	2,349,680	19	4,988	335,937	839,843	1,509,838	491,062	655	LINCOLN HWY +MEADOWBROOK 19EDU
513-18	to	513-19	10	305	536.70	523.93	4.19	0.013	2,897,879	24	6,300	342,237	855,593	2,042,287	491,062	655	LINCOLN HWY + OAKCREST(24)
513-19	to	512-2	10	385	520.94	500.50	5.31	0.013	3,263,208	0	0	342,237	855,593	2,407,616	491,062	655	LINCOLN HWY & NICHOLS AV
512-2	to	512-4	10	259	500.40	491.50	3.44	0.013	2,625,306	6	2,058	344,295	860,738	1,764,568	491,062	655	LINCOLN HWY
512-4	to	512-5A	10	83	491.40	489.94	1.76	0.013	1,878,331	1	343	344,638	861,595	1,016,736	491,062	655	LINCOLN HWY
125A	to	512-5	10	230	489.94	485.90	1.76	0.013	1,876,988	2	686	345,324	863,310	1,013,678	491,062	655	LINCOLN HWY
512-5	to	512-8	10	84	485.80	482.22	4.26	0.013	2,923,726	1	343	345,667	864,168	2,059,558	491,062	655	LINCOLN HWY
512-8	to	512-7	10	42	482.22	481.42	1.90	0.013	1,954,587	0	0	345,667	864,168	1,090,420	491,062	655	LINCOLN HWY, NORTH SIDE
512-7	to	512-9B	10	51	481.42	479.65	3.47	0.013	2,638,374	142	48,706	394,373	985,933	1,652,441	491,062	655	LINCOLN HWY, SOUTH SIDE
129B	to	512-9A	10	27	479.65	478.85	2.96	0.013	2,437,799	1	343	394,716	986,790	1,451,009	491,062	655	LINCOLN HWY
129A	to	512-9	10	45	478.85	477.60	2.78	0.013	2,360,388	0	0	394,716	986,790	1,373,598	491,062	655	LINCOLN HWY
512-9	to	512-10	10	146	477.60	470.64	4.77	0.013	3,092,167	0	0	394,716	986,790	2,105,377	491,062	655	LINCOLN HWY
512-10	to	511-1	12	203	470.54	469.49	0.52	0.013	1,656,281	0	0	394,716	986,790	669,491	491,062	655	LINCOLN HWY
511-1	to	511-2A	10	200	468.87	466.51	1.18	0.013	1,538,423	0	0	394,716	986,790	551,633	491,062	655	OLD LINCOLN HWY
511-2A	to	511-2	10	189	466.41	464.34	1.10	0.013	1,482,139	5	1,715	396,431	991,078	491,062	491,062	655	OLD LINCOLN HWY
511-2	to	511-3	10	184	464.24	457.50	3.66	0.013	2,710,540	8	2,744	399,175	997,938	1,712,602	746,937	996	OLD LINCOLN HWY
511-3	to	511-4	10	144	457.39	447.48	6.88	0.013	3,715,269	0	0	399,175	997,938	2,717,332	746,937	996	OLD LINCOLN HWY
511-4	to	511-5	10	203	447.38	435.46	5.87	0.013	3,431,823	0	0	399,175	997,938	2,433,885	746,937	996	OLD LINCOLN HWY
511-5	to	511-6	10	74	435.36	422.60	17.24	0.013	5,880,906	0	0	399,175	997,938	4,882,968	746,937	996	OLD LINCOLN HWY
511-6	to	511-6A	10	183	422.60	409.60	7.10	0.013	3,774,686	4	1,372	400,547	1,001,368	2,773,319	746,937	996	EASEMENT
116A	to	510-3	10	282	409.50	389.91	6.95	0.013	3,732,737	1	343	400,890	1,002,225	2,730,512	746,937	996	EASEMENT
510-3	to	511-7	10	65	385.10	372.30	19.69	0.013	6,284,678	0	0	400,890	1,002,225	5,282,453	746,937	996	EASEMENT
511-7	to	510-1	10	330	371.90	363.20	2.64	0.013	2,299,521	0	0	400,890	1,002,225	1,297,296	746,937	996	EASEMENT
510-1	to	510-2	10	59	359.77	358.87	1.53	0.013	1,749,162	0	0	400,890	1,002,225	746,937	746,937	996	EASEMENT & RAIL ROAD TRACKS
510-2	to	MP#2	15	139	358.67	357.10	1.13	0.013	4,437,718	0	0	400,890	1,002,225	3,435,493	3,435,493	4,581	CHARLES ST & METER PIT # 2
TOTAL				12,043						1,334	400,890						

WESTWOOD BASIN

TABLE K-3
VALLEY TOWNSHIP
SEWER INTERCEPTOR MODEL
WESTWOOD BASIN
CURRENT CONNECTIONS
(ALL FLOWS IN GPD)

NOTES:
Model considers:
- Valley Township EDU Flow Rate of 300 GPD
- EDU's from East Fallowfield Township conveyed Thru Valley Township
- Full Build-out of Timberlane - 46 EDU's @ 262.5 GPD/EDU

MANHOLE NUMBER			SIZE (IN)	LENGTH (FEET)	UPPER INVERT	LOWER INVERT	SLOPE (%)	'N' FACTOR	PIPE CAPACITY	CONTRI E.D.U.	CONTRIB. FLOW	TOTAL AVE FLOW	TOTAL PEAK FLOW	AVAIL. CAPACITY	AVAIL SYS CAPACITY	AVAIL. E.D.U.	STREET
Valley Crossing Convenience Center and Valley Crossing Subdivision																	
3	to	2	8	340	436.00	434.00	0.59	0.011	707,996	7	2,100	2,100	5,250	702,746	236,084	315	AUGUSTUS LANE
2	to	510-11	8	238	430.50	422.85	3.21	0.011	1,654,999	0	0	2,100	5,250	1,649,749	236,084	315	V.C.C./VALLEY ROAD
510-11	to	510-10	8	180	422.65	421.60	0.58	0.011	705,040	0	0	2,100	5,250	699,790	236,084	315	VALLEY RD/CONVENIENCE CTR
510-10	to	510-9	8	202	421.09	420.07	0.50	0.011	655,964	0	0	2,100	5,250	650,714	236,084	315	VALLEY ROAD
510-9	to	510-8	8	346	419.97	417.51	0.71	0.011	778,368	257	77,100	79,200	198,000	580,368	236,084	315	VALLEY ROAD/CYNTHIA ROAD
510-8	to	510-7	8	354	417.31	415.54	0.50	0.011	652,740	0	0	79,200	198,000	454,740	236,084	315	VALLEY ROAD
510-7	to	510-6	8	399	415.34	413.64	0.43	0.011	602,551	0	0	79,200	198,000	404,551	236,084	315	VALLEY ROAD
510-6	to	510-5	8	153	413.44	412.64	0.52	0.011	667,505	0	0	79,200	198,000	469,505	236,084	315	VALLEY ROAD
510-5	to	510-4	8	102	412.44	411.64	0.78	0.011	817,524	0	0	79,200	198,000	619,524	236,084	315	VALLEY ROAD
510-4	to	510-3	8	150	411.44	407.40	2.69	0.011	1,514,958	0	0	79,200	198,000	1,316,958	236,084	315	VALLEY ROAD
510-3	to	510-2	8	278	407.20	404.91	0.82	0.011	837,820	0	0	79,200	198,000	639,820	236,084	315	VALLEY ROAD
510-2	to	510-1	8	352	404.71	402.40	0.66	0.011	747,808	0	0	79,200	198,000	549,808	236,084	315	VALLEY ROAD
510-1	to	509-5	8	17	402.20	399.80	14.12	0.011	3,468,460	0	0	79,200	198,000	3,270,460	236,084	315	VALLEY RD / RED RD
509-5	to	509-4	8	130	400.00	399.35	0.50	0.013	552,319	7	2,100	81,300	203,250	349,069	236,084	315	VALLEY RD & RED RD
509-4	to	509-3	8	345	399.25	397.08	0.63	0.013	619,477	13	3,900	85,200	213,000	406,477	236,084	315	VALLEY RD & MAPLE AV.
509-3	to	509-2	8	340	396.40	392.83	1.05	0.013	800,386	20	6,000	91,200	228,000	572,386	236,084	315	VALLEY RD & ELM ST.
509-2	to	509-1	8	370	392.73	389.40	0.90	0.013	741,013	16	4,800	96,000	240,000	501,013	236,084	315	VALLEY RD & LINDEN ST.
509-1	to	508-1	8	120	389.30	388.34	0.80	0.013	698,634	107	30,375	126,375	315,938	382,697	236,084	315	VALLEY RD, MT. CARMEL, TIMBERLN
508-1	to	508-2	8	419	388.24	386.09	0.51	0.013	559,522	10	3,000	129,375	323,438	236,084	236,084	315	VALLEY RD
508-2	to	508-3	8	356	385.99	379.40	1.85	0.013	1,062,729	16	4,800	134,175	335,438	727,291	508,723	678	VALLEY RD & RIDGE AV.
508-3	to	507-6	8	276	379.30	368.24	4.01	0.013	1,563,608	19	5,700	139,875	349,688	1,213,920	508,723	678	VALLEY RD & STEEL AV.
507-6	to	507-5	8	259	368.14	364.99	1.22	0.013	861,411	4	1,200	141,075	352,688	508,723	508,723	678	VALLEY RD & OAK ST.
507-5	to	507-4	15	111	364.58	363.24	1.21	0.013	4,587,839	1	300	141,375	353,438	4,234,402	1,635,160	2,180	VALLEY RD
507-4	to	507-3	15	144	363.14	361.44	1.18	0.013	4,536,914	1	300	141,675	354,188	4,182,726	1,635,160	2,180	VALLEY RD & WALNUT ST.
507-3	to	507-2	15	22	361.34	360.90	2.00	0.013	5,905,169	0	0	141,675	354,188	5,550,981	1,635,160	2,180	VALLEY RD
507-2	to	507-1	15	375	360.80	358.87	0.51	0.013	2,995,576	1	300	141,975	354,938	2,640,638	1,635,160	2,180	VALLEY RD

MANHOLE NUMBER			SIZE (IN)	LENGTH (FEET)	UPPER INVERT	LOWER INVERT	SLOPE (%)	'N' FACTOR	PIPE CAPACITY	CONTRI E.D.U.	CONTRIB. FLOW	TOTAL AVE FLOW	TOTAL PEAK FLOW	AVAIL. CAPACITY	AVAIL SYS CAPACITY	AVAIL. E.D.U.	STREET
507-1	to	505-1	15	401	358.77	355.00	0.94	0.013	4,048,702	16	4,800	146,775	366,938	3,681,764	1,635,160	2,180	VALLEY RD & SENECA RD
505-1	to	505-2	15	85	353.00	352.63	0.44	0.013	2,754,918	103	30,900	177,675	444,188	2,310,731	1,635,160	2,180	VALLEY RD & GROVE AV.
505-2	to	505-3	15	396	352.40	350.91	0.38	0.013	2,561,314	22	6,600	184,275	460,688	2,100,627	1,635,160	2,180	VALLEY RD & SCOTT AV.
505-3	to	505-4	15	79	350.81	350.50	0.39	0.013	2,615,680	1	300	184,575	461,438	2,154,242	1,635,160	2,180	VALLEY RD
505-4	to	505-5	15	320	350.40	349.31	0.34	0.013	2,437,000	67	20,100	204,675	511,688	1,925,313	1,635,160	2,180	VALLEY RD & N. PARK AVE
505-5	to	503-3	15	240	349.21	346.20	1.25	0.013	4,676,220	14	4,200	208,875	522,188	4,154,032	1,635,160	2,180	VALLEY RD & BRADLEY
503-3	to	503-4	15	234	346.10	345.28	0.35	0.013	2,471,817	19	5,700	214,575	536,438	1,935,379	1,635,160	2,180	VALLEY RD & GREEN ST
503-4	to	503-5	15	169	345.18	344.60	0.34	0.013	2,446,177	0	0	214,575	536,438	1,909,740	1,635,160	2,180	VALLEY RD
503-5	to	503-6	15	129	344.50	344.03	0.36	0.013	2,520,411	0	0	214,575	536,438	1,983,974	1,635,160	2,180	VALLEY RD
503-6	to	503-7	15	37	343.93	343.80	0.35	0.013	2,475,074	0	0	214,575	536,438	1,938,636	1,635,160	2,180	VALLEY RD
503-7	to	503-8	15	182	343.70	343.05	0.36	0.013	2,495,389	0	0	214,575	536,438	1,958,952	1,635,160	2,180	VALLEY RD & R. R.
503-8	to	503-9	15	34	342.95	342.83	0.35	0.013	2,480,667	0	0	214,575	536,438	1,944,229	1,635,160	2,180	VALLEY RD & R. R.
503-9		503-10	15	173	342.73	342.13	0.35	0.013	2,459,064	0	0	214,575	536,438	1,922,627	1,635,160	2,180	VALLEY ROAD
503-10	to	502-5	15	400	342.03	340.63	0.35	0.013	2,470,309	0	0	214,575	536,438	1,933,872	1,635,160	2,180	VALLEY ROAD
502-5	to	502-6	15	363	340.53	339.27	0.35	0.013	2,460,080	213	63,900	278,475	696,188	1,763,893	1,635,160	2,180	VALLEY RD & 11TH AVE
502-6	to	502-7	15	316	339.17	338.05	0.35	0.013	2,485,895	2	600	279,075	697,688	1,788,207	1,635,160	2,180	VALLEY ROAD
502-7	to	501-1	15	403	337.95	336.55	0.35	0.013	2,461,097	30	9,000	288,075	720,188	1,740,910	1,635,160	2,180	VALLEY RD & 10TH AVE
501-1	to	501-2	15	290	336.45	335.43	0.35	0.013	2,476,386	0	0	288,075	720,188	1,756,199	1,635,160	2,180	VALLEY ROAD
501-2	to	501-3	15	360	335.33	334.07	0.35	0.013	2,470,309	0	0	288,075	720,188	1,750,122	1,635,160	2,180	VALLEY ROAD
501-3	to	501-4	15	185	333.97	333.22	0.41	0.013	2,658,655	0	0	288,075	720,188	1,938,468	1,635,160	2,180	VALLEY ROAD
501-4	to	501-5	15	330	333.12	332.07	0.32	0.013	2,355,347	0	0	288,075	720,188	1,635,160	1,635,160	2,180	VALLEY RD & 8TH AVE
501-5	to	501-6	15	183	331.97	331.33	0.35	0.013	2,469,345	0	0	288,075	720,188	1,749,157	1,749,157	2,332	VALLEY ROAD
501-6	to	MP#1	18	42	330.23	330.08	0.36	0.013	4,057,803	0	0	288,075	720,188	3,337,615	3,337,615	4,450	VALLEY RD & METER PIT #1
TOTAL				11,729					**552,319**	966	288,075			**236,084**			

APPENDIX L

SEWAGE FLOW DATA & ANALYSIS FOR THE PAST 5 YEARS

ROCK RUN BASIN

VALLEY TOWNSHIP
ROCK RUN BASIN
RECORDS OF FIVE-YEAR TOTAL FLOWS

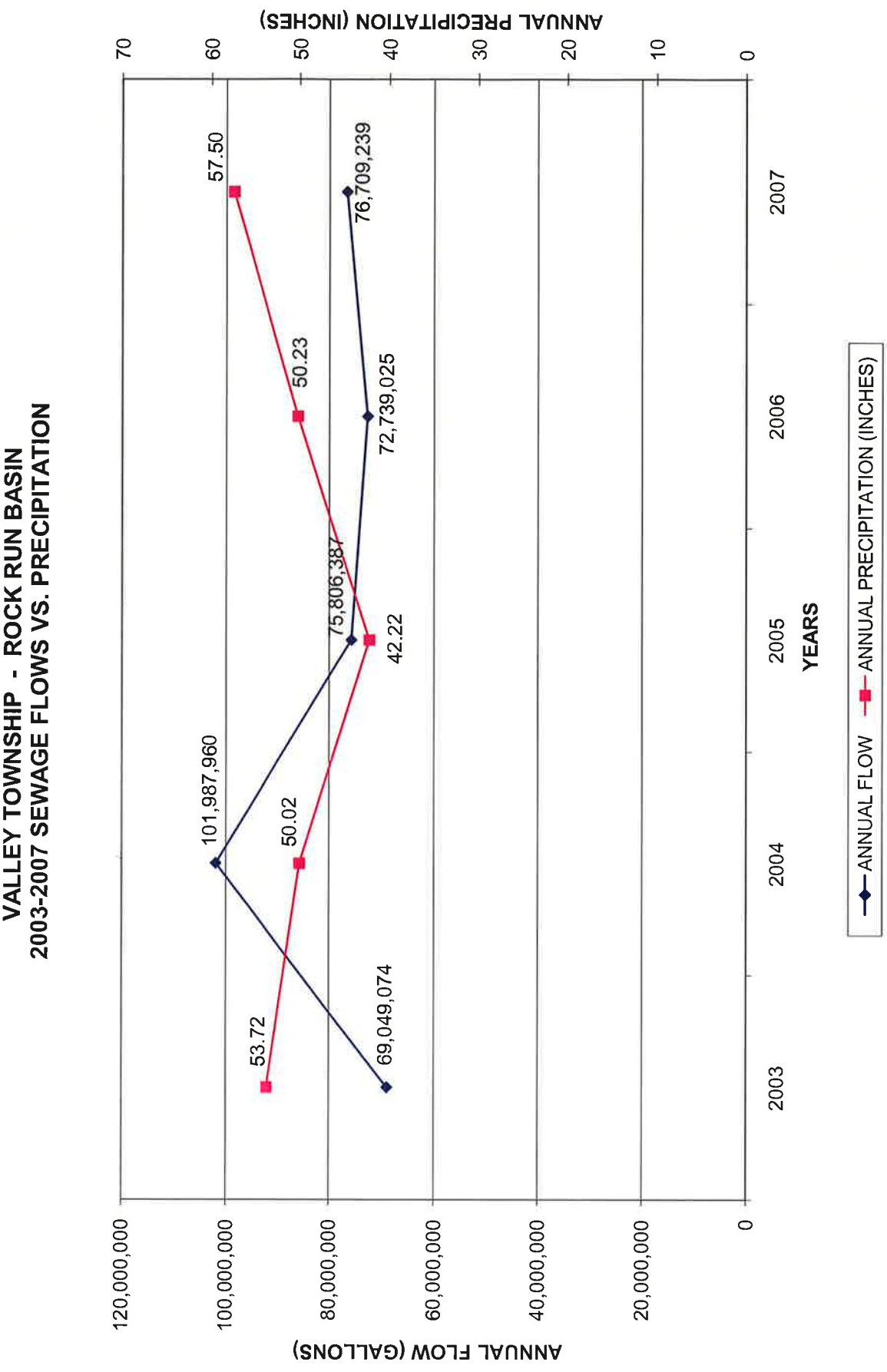
2003 Precipitation in 2003 was 8.33 inches greater than recorded in 2002, primarily due to the 10.38 inches that was registered in June. Increased sewage flows for the year can likely be attributed to a number of factors. Connections in the Meadowbrook and Hillview Developments contributed to the increase in flows, along with possible illegal sump pump discharges and infiltration. The high flow for the year was recorded in June at 273,575 GPD (average). The low flow for the year was 116,167 GPD (average) recorded in September.

2004 Total flow for the year was approximately 33 million gallons greater than recorded in 2003 even though precipitation was slightly less. High flows were reported in all three months of the second quarter. It is suspected that the reported high flows were the result of incorrect meter readings and that the actual sewage flows were much less than reported. The meter was broken during the first three months of the year also, so it is likely that the problems may have continued into the second quarter. Blasting for the new pump station may have also caused inflow and infiltration problems in the old wet well which would have increased flow rates in the second quarter. The reported high flow for the year occurred in the month of June at 600,597 GPD (average); however, the actual high flow is more likely to have occurred in July at 190,284 GPD (average). The low flow occurred in the month of November during which a flow of 78,038 GPD (average) was recorded.

2005 Total flow for the year was significantly lower (26.2 million gallons) than the total flow in 2004. Because it is likely that the 2004 flow was incorrectly metered, the 2004 flow should not be used as a basis of comparison for 2005. A better comparison is to 2003. Total flow for 2005 was approximately 7 million gallons more than the total flow in 2003, which is likely the result of over 200 new connections in the Meadowbrook and Hillview Developments. The high flow for the year occurred in December at 265,026 GPD (average), and the low flow occurred in September at 157,274 GPD (average).

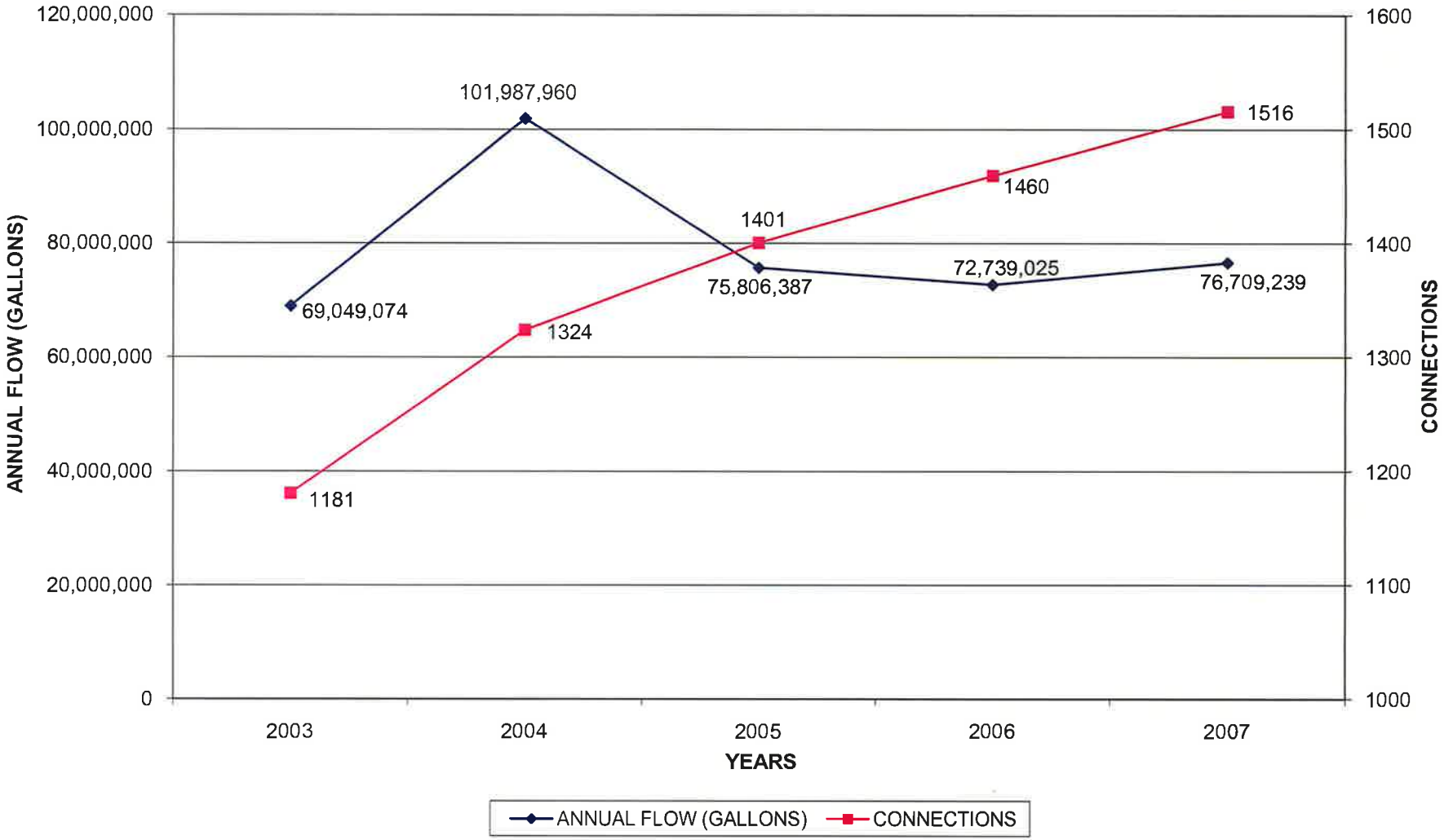
2006 Although total precipitation was 8 inches greater in 2006 than 2005, the total flow decreased slightly. The reported high flow for the year occurred in January at 290,518 GPD (average), and the low flow occurred in September at 129,109 GPD (average).

2007 Total flow for the year was steady with the 2005 and 2006 flows. The slight increase from the 2006 total is likely the result of increased precipitation and over 50 new connections in the Hillview, Oakcrest, and Valley Farm developments. The high flow for the year occurred in April at 287,512 GPD (average), and the low flow occurred in September at 159,117 GPD (average).



G:\Municipal\VLTW\SEWER DATA\ROCRUNBASINCHARTS; 03-07 Flow-Precip

VALLEY TOWNSHIP - ROCK RUN BASIN
2003-2007 SEWAGE FLOWS VS. CONNECTIONS



Amended Appendix A-22-b

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Rock Run P.S. Meter Valley Township

Annual Flow History **2003**

Rock Run Basin

2003

Month	Flow Gallons	Days	Average Daily Flow	3 Month Maximum	1 Month Maximum	Monthly Precipitation
Jan	4,129,220	32	129,038			1.76
Feb	5,606,570	28	200,235			4.93
Mar	7,108,320	29	245,114			5.77
Apr	5,867,760	30	195,592			2.84
May	5,759,140	32	179,973			5.25
Jun	7,933,680	29	273,575	19,560,580	7,933,680	10.38
Jul	5,722,680	31	184,603			2.01
Aug	5,820,710	31	187,765			3.26
Sep	3,485,000	30	116,167			6.50
Oct	5,871,998	31	189,419			4.45
Nov	5,303,740	28	189,419			2.27
Dec	6,440,256	34	189,419			4.30
	69,049,074		2,280,320			53.72
			190,027			

Rock Run P.S. Meter Valley Township

Annual Flow History **2004**

Rock Run Basin

2004

Month	Flow Gallons	Days	Average Daily Flow	3 Month Maximum	1 Month Maximum	Monthly Precipitation
Jan	8,679,349	31	279,979			2.30
Feb	7,839,412	28	279,979			2.50
Mar	8,679,349	31	279,979			3.80
Apr	13,846,800	30	461,560			6.02
May	10,426,400	31	336,335			3.63
Jun	18,017,900	30	600,597	42,291,100	18,017,900	4.54
Jul	5,898,789	31	190,284			7.91
Aug	5,852,707	31	188,797			4.17
Sep	5,521,351	30	184,045			5.19
Oct	4,541,736	31	146,508			2.24
Nov	2,341,134	30	78,038			4.55
Dec	10,343,033	31	333,646			3.17
	101,987,960		3,359,746			50.02
			279,979			

Note: January, February, & March Flows are based on average of remaining year. Meter was broken during this period.

Rock Run P.S. Meter Valley Township

Annual Flow History **2005**

Rock Run Basin

2005

Month	Flow Gallons	Days	Average Daily Flow	3 Month Maximum	1 Month Maximum	Monthly Precipitation
Jan	7,634,694	31	246,280			4.45
Feb	5,694,351	28	203,370			2.61
Mar	7,049,561	31	227,405			3.66
Apr	7,021,620	30	234,054			5.32
May	5,868,413	31	189,304			1.27
Jun	5,093,035	30	169,768			3.31
Jul	5,475,604	31	176,632			4.31
Aug	5,210,792	31	168,090			2.57
Sep	4,718,231	30	157,274			0.21
Oct	6,988,182	31	225,425			8.68
Nov	6,836,108	30	227,870			2.86
Dec	8,215,796	31	265,026	22,040,086	8,215,796	2.97
	75,806,387		2,490,499			42.22
			207,542			

Rock Run P.S. Meter Valley Township

Annual Flow History **2006**

Rock Run Basin

2006

Month	Flow Gallons	Days	Average Daily Flow	3 Month Maximum	1 Month Maximum	Monthly Precipitation
Jan	10,168,116	35	290,518		10,168,116	5.13
Feb	5,824,718	25	232,989			3.30
Mar	7,060,773	34	207,670	23,053,607		0.93
Apr	5,909,418	28	211,051			3.92
May	5,566,175	32	173,943			2.03
Jun	5,523,487	28	197,267			10.92
Jul	5,779,135	31	186,424			4.33
Aug	4,580,607	28	163,593			2.07
Sep	4,131,480	32	129,109			5.62
Oct	5,279,673	31	170,312			4.32
Nov	6,215,849	32	194,245			5.14
Dec	6,699,594	35	191,417			2.52
	72,739,025		2,348,537			50.23
			195,711			

Rock Run P.S. Meter Valley Township

Annual Flow History **2007**

Rock Run Basin

2007

Month	Flow Gallons	Days	Average Daily Flow	3 Month Maximum	1 Month Maximum	Monthly Precipitation
Jan	5,451,914	24	227,163			3.91
Feb	5,359,565	28	191,413			2.70
Mar	8,365,537	32	261,423			5.04
Apr	8,050,348	28	287,512			8.03
May	8,745,428	35	249,869	25,161,313	8,745,428	1.80
Jun	5,282,827	28	188,672			4.95
Jul	5,087,788	28	181,707			7.83
Aug	6,292,040	35	179,773			5.64
Sep	4,455,280	28	159,117			0.48
Oct	6,552,400	35	187,211			7.54
Nov	5,500,269	28	196,438			4.79*
Dec	7,565,843*	36	210,162*			4.79*
	76,709,239		2,520,461			57.50
			210,038			

*Values are the average of the previous months in 2007. Actual flow and precipitation were not yet available at the time of this document.

HAYTI BASIN

VALLEY TOWNSHIP
HAYTI BASIN
RECORDS OF FIVE-YEAR TOTAL FLOWS

2003 The reported sewage flow for the year increased by 45 million gallons (125%) over the 2003 flow. The increase likely occurred as a result of a number of factors. First, the total flow in 2003 was unusually low. Second, there was an 8.33-inch increase in precipitation. Lastly, new connections in the Meadowbrook Development contributed slightly to the increase. The high flow for 2003 was recorded in December at 330,047 GPD (average). The low flow for the year was 166,340 GPD (average) recorded in February.

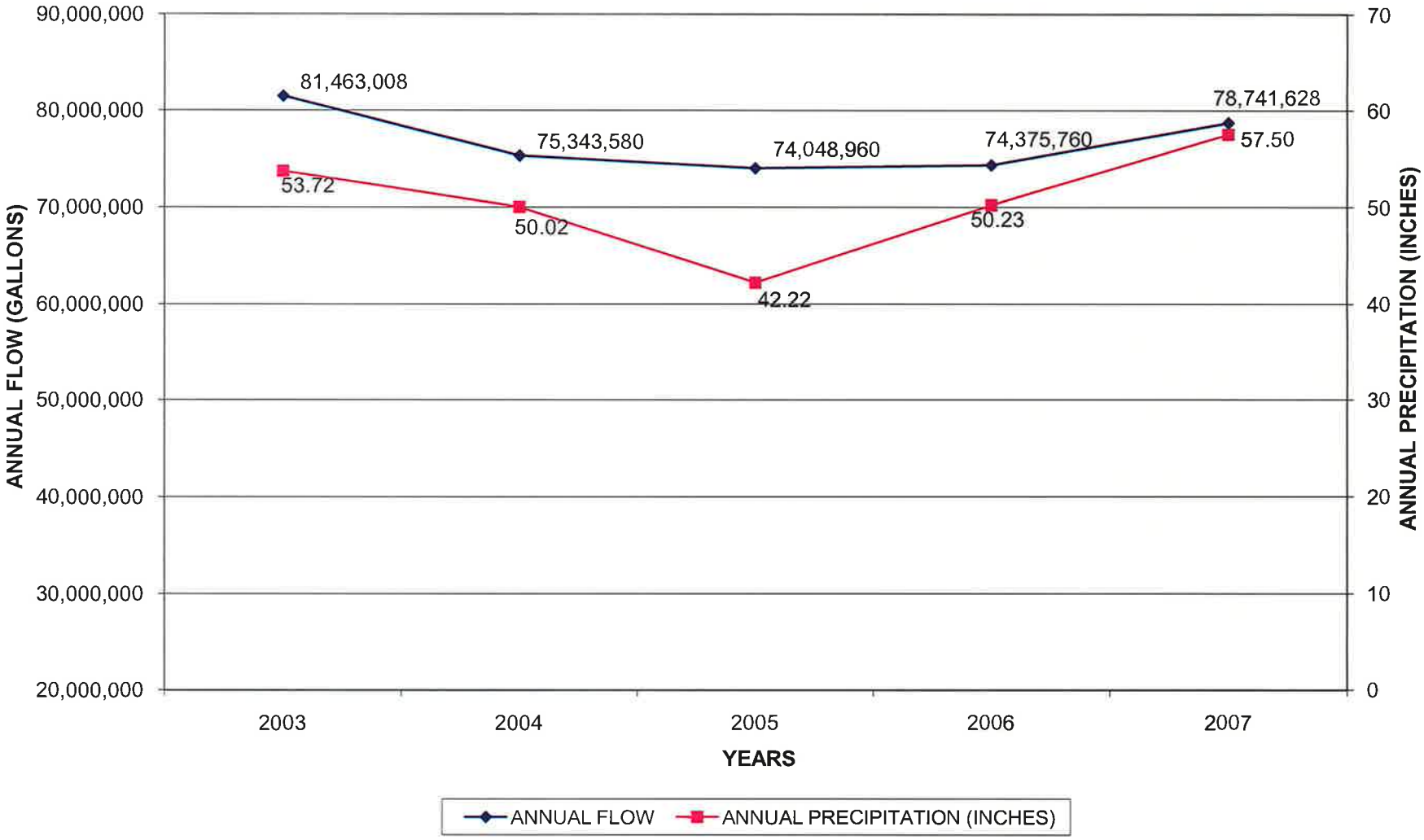
2004 Total flow for the year was approximately 6.1 million gallons less than recorded in 2003 which may be the result of decreased precipitation. High flows continued from the fourth quarter of 2003 through the first four months of 2004. The high flow for the year, though, occurred in the month of December at 284,837 GPD (average), and the low flow occurred in the month of August at 166,701 GPD (average).

2005 Even with a drop in the total precipitation during the year of 7.8 inches, the sewage flow stayed at approximately the same level as 2004. High flows continued from December of 2004 through the first five months of 2005. The high flow for the year occurred in the month of April at 286,987 GPD (average), and the low flow occurred in the month of September at 121,471 GPD (average).

2006 The sewage flow for the year remained at the same level as that of 2004 and 2005, despite an 8-inch increase in precipitation in 2006. The reported high flow for the year occurred in January at 274,018 GPD (average), and the low flow occurred in August at 150,557 GPD (average).

2007 Total flow for the year increased slightly from the 2006 flow, but it was generally consistent with the annual flows experienced between 2003 and 2006. The slight increase is likely the result of increased precipitation and 16 new connections, primarily in the Round Hill development. The high flow for the year occurred in April at 318,769 GPD (average), and the low flow occurred in September at 150,229 GPD (average).

VALLEY TOWNSHIP - HAYTI BASIN
2003-2007 SEWAGE FLOWS VS. PRECIPITATION



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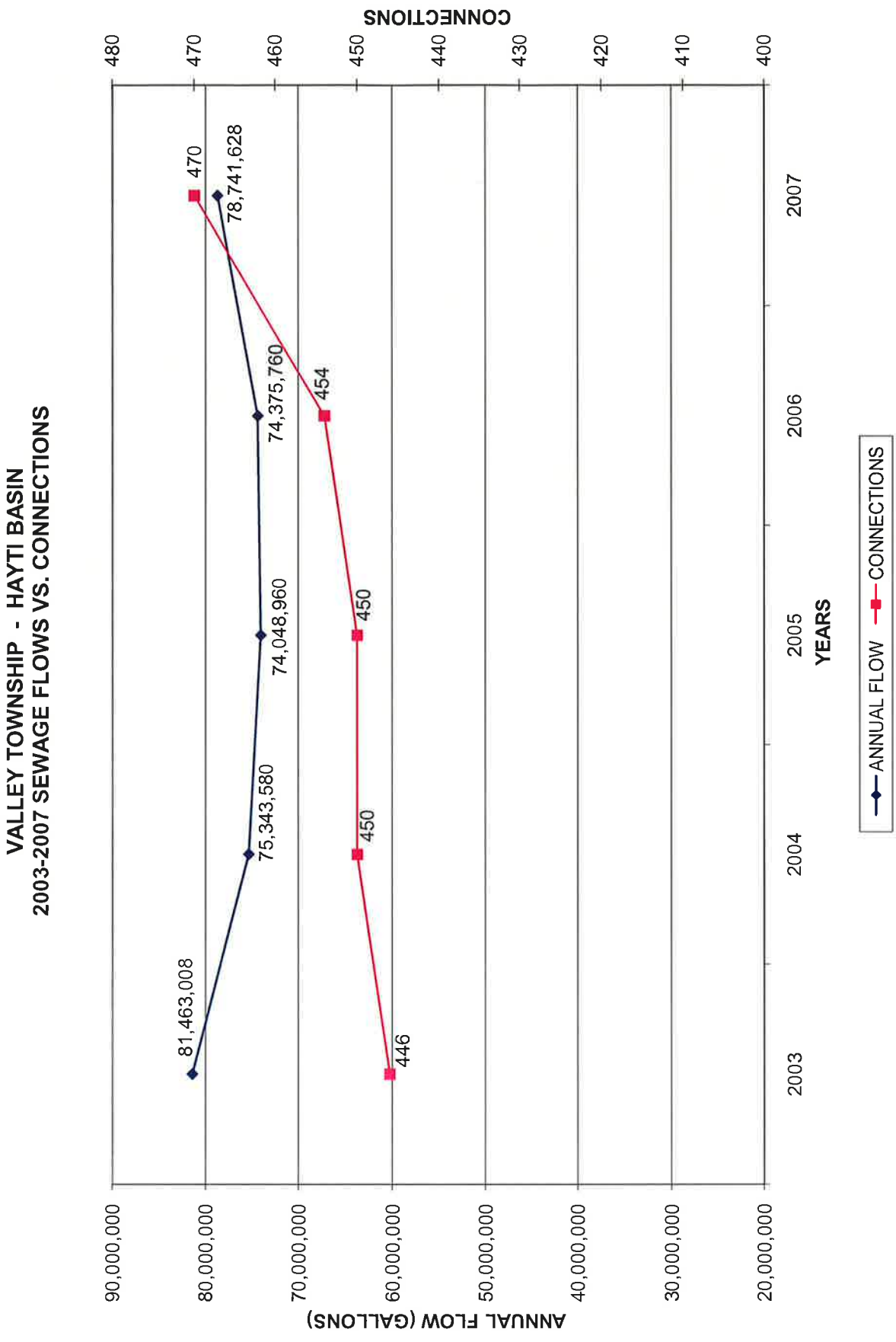

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Charles Street Meter Valley Township

Annual Flow History **2003**

Hayti Basin

2003

Month	Flow Gallons	Days	Average Daily Flow	3 Month Maximum	1 Month Maximum	Monthly Precipitation
Jan	5,731,490	32	179,109			1.76
Feb	4,657,520	28	166,340			4.93
Mar	7,199,890	29	248,272			5.77
Apr	6,227,930	30	207,598			2.84
May	6,203,930	32	193,873			5.25
Jun	6,804,460	29	234,637			10.38
Jul	6,260,730	31	201,959			2.01
Aug	6,265,700	31	202,119			3.26
Sep	6,252,650	30	208,422			6.50
Oct	6,762,579	31	218,148			4.45
Nov	7,874,519	28	281,233			2.27
Dec	11,221,610	34	330,047	25,858,708	11,221,610	4.30
	81,463,008		2,671,756			53.72
			222,646			

Charles Street Meter Valley Township

Annual Flow History **2004**

Hayti Basin

2004

Month	Flow Gallons	Days	Average Daily Flow	3 Month Maximum	1 Month Maximum	Monthly Precipitation
Jan	7,730,620	31	249,375			2.30
Feb	6,603,890	28	235,853			2.50
Mar	6,632,210	31	213,942	20,966,720		3.80
Apr	6,270,690	30	209,023			6.02
May	5,840,700	31	188,410			3.63
Jun	6,195,130	30	206,504			4.54
Jul	5,230,600	31	168,729			7.91
Aug	5,167,740	31	166,701			4.17
Sep	5,540,760	30	184,692			5.19
Oct	5,879,230	31	189,653			2.24
Nov	5,422,060	30	180,735			4.55
Dec	8,829,950	31	284,837		8,829,950	3.17
	75,343,580		2,478,455			50.02
			206,538			

Charles Street Meter Valley Township

Annual Flow History **2005**

Hayti Basin

2005

Month	Flow Gallons	Days	Average Daily Flow	3 Month Maximum	1 Month Maximum	Monthly Precipitation
Jan	7,428,630	31	239,633			4.45
Feb	6,889,080	28	246,039			2.61
Mar	7,807,110	31	251,842			3.66
Apr	8,609,620	30	286,987		8,609,620	5.32
May	7,003,500	31	225,919	23,420,230		1.27
Jun	5,563,610	30	185,454			3.31
Jul	4,272,050	31	137,808			4.31
Aug	4,403,900	31	142,061			2.57
Sep	3,644,140	30	121,471			0.21
Oct	5,521,490	31	178,113			8.68
Nov	5,784,130	30	192,804			2.86
Dec	7,121,700	31	229,732			2.97
	74,048,960		2,437,864			42.22
			203,155			

Charles Street Meter Valley Township

Annual Flow History **2006**

Hayti Basin

2006

Month	Flow Gallons	Days	Average Daily Flow	3 Month Maximum	1 Month Maximum	Monthly Precipitation
Jan	9,590,640	35	274,018		9,590,640	5.13
Feb	6,518,730	25	260,749			3.30
Mar	8,024,050	34	236,001	24,133,420		0.93
Apr	5,674,990	28	202,678			3.92
May	5,567,300	32	173,978			2.03
Jun	5,621,280	28	200,760			10.92
Jul	6,379,170	31	205,780			4.33
Aug	4,215,590	28	150,557			2.07
Sep	5,054,580	32	157,956			5.62
Oct	4,684,570	31	151,115			4.32
Nov	6,125,600	32	191,425			5.14
Dec	6,919,260	35	197,693			2.52
	74,375,760		2,402,711			50.23
			200,226			

Charles Street Meter Valley Township

Annual Flow History **2007**

Hayti Basin

2007

Month	Flow Gallons	Days	Average Daily Flow	3 Month Maximum	1 Month Maximum	Monthly Precipitation
Jan	5,906,030	24	246,085		5,906,030	3.91
Feb	5,490,630	28	196,094			2.70
Mar	8,120,540	32	253,767			5.04
Apr	8,925,540	28	318,769			8.03
May	9,877,410	35	282,212	26,923,490	9,877,410	1.80
Jun	5,262,130	28	187,933			4.95
Jul	4,993,830	28	178,351			7.83
Aug	6,488,860	35	185,396			5.64
Sep	4,206,400	28	150,229			0.48
Oct	6,687,730	35	191,078			7.54
Nov	5,016,230	28	179,151			4.79*
Dec	7,766,298*	36	215,731*			4.79*
	78,741,628		2,584,795			57.50
			215,400			

*Values are the average of the previous months in 2007. Actual flow and precipitation were not yet available at the time of this document.

WESTWOOD BASIN

VALLEY TOWNSHIP
WESTWOOD BASIN
RECORDS OF FIVE-YEAR TOTAL FLOWS

2003 Total sewage flows for the year in the Westwood Basin were significantly higher than in 2002, which was most likely due to a combination of factors. Connections in the Valley Crossing Development contributed to the increase in flows along with possible illegal sump pump discharges and infiltration. Additionally, precipitation in 2003 was 8.3 inches greater than that recorded in 2002. The high flow for the year was recorded in June at 301,004 GPD (average). The low flow for the year was 167,133 GPD (average) recorded in October.

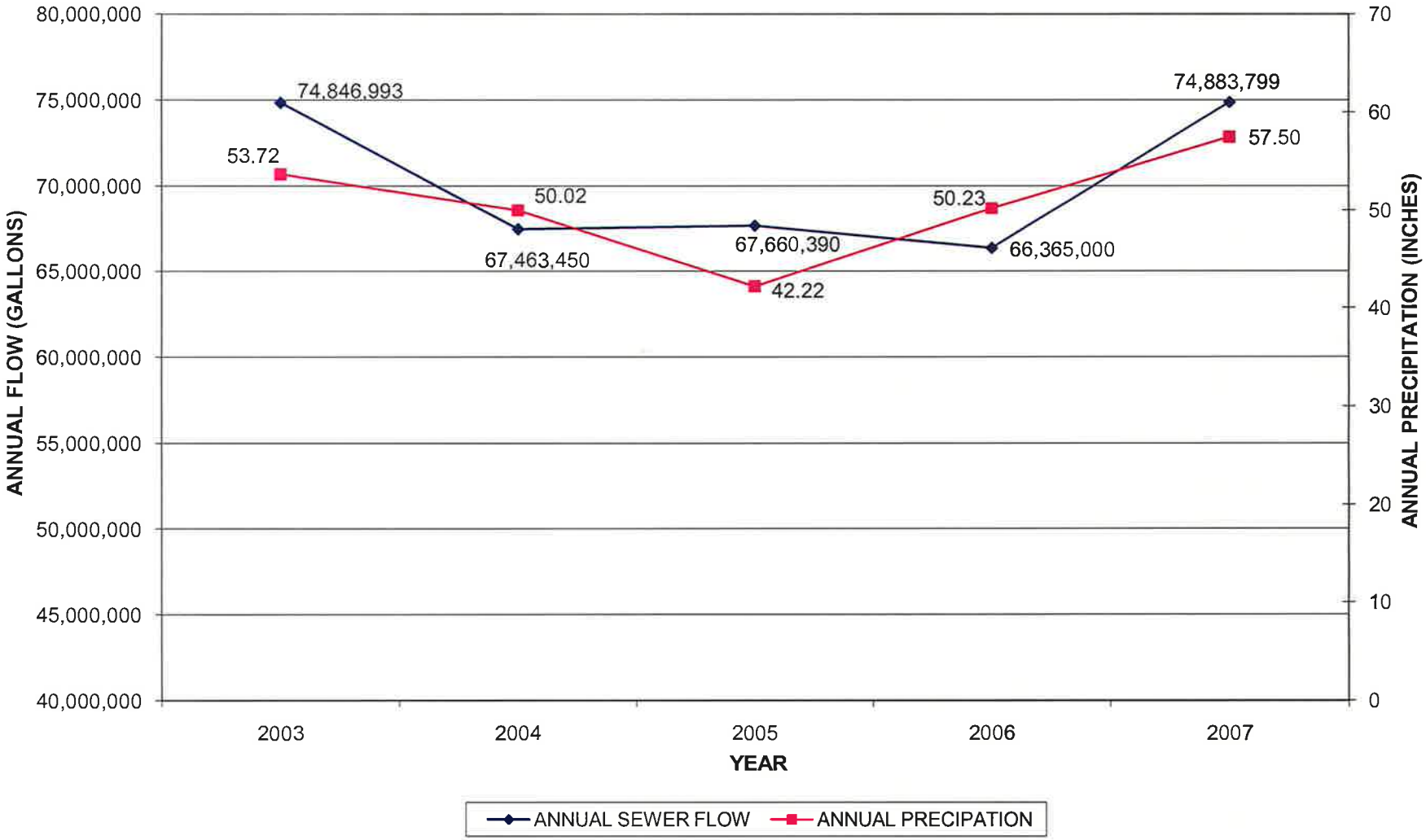
2004 Total flow for the year was approximately 7.4 million gallons less than that recorded in 2003. Total precipitation for the year was 3.7 inches less than that in 2003. The high flow for the year occurred in the month of December at 225,092 GPD (average), and the low flow occurred in the month of May at 162,575 GPD (average).

2005 Even with a drop in the total precipitation during the year of 7.8 inches, the sewage flow stayed at approximately the same level as 2004. Higher precipitation of 8.68 inches in October along with other above average monthly precipitation could have contributed to higher flows. The high flow for the year occurred in December at 223,108 GPD (average), and the low flow occurred in September at 137,960 GPD (average).

2006 The sewage flow for the year remained at the same level as that of 2004 and 2005, despite an 8-inch increase in precipitation in 2006. The reported high flow for the year occurred in June at 205,112 GPD (average), and the low flow occurred in August at 164,791 GPD (average).

2007 Total flow for the year increased approximately 7.5 million gallons from the flows experienced in 2004 through 2006. However, the flow is consistent with the 2003 flow. There were no new connections in the Westwood Basin in 2007, so the increased flow is likely to be due to the 7.3-inch increase in precipitation from 2006. The high flow for the year occurred in April at 266,603 GPD (average), and the low flow occurred in February at 175,311 GPD (average).

VALLEY TOWNSHIP - WESTWOOD BASIN
2003-2007 SEWAGE FLOWS VS. PRECIPITATION



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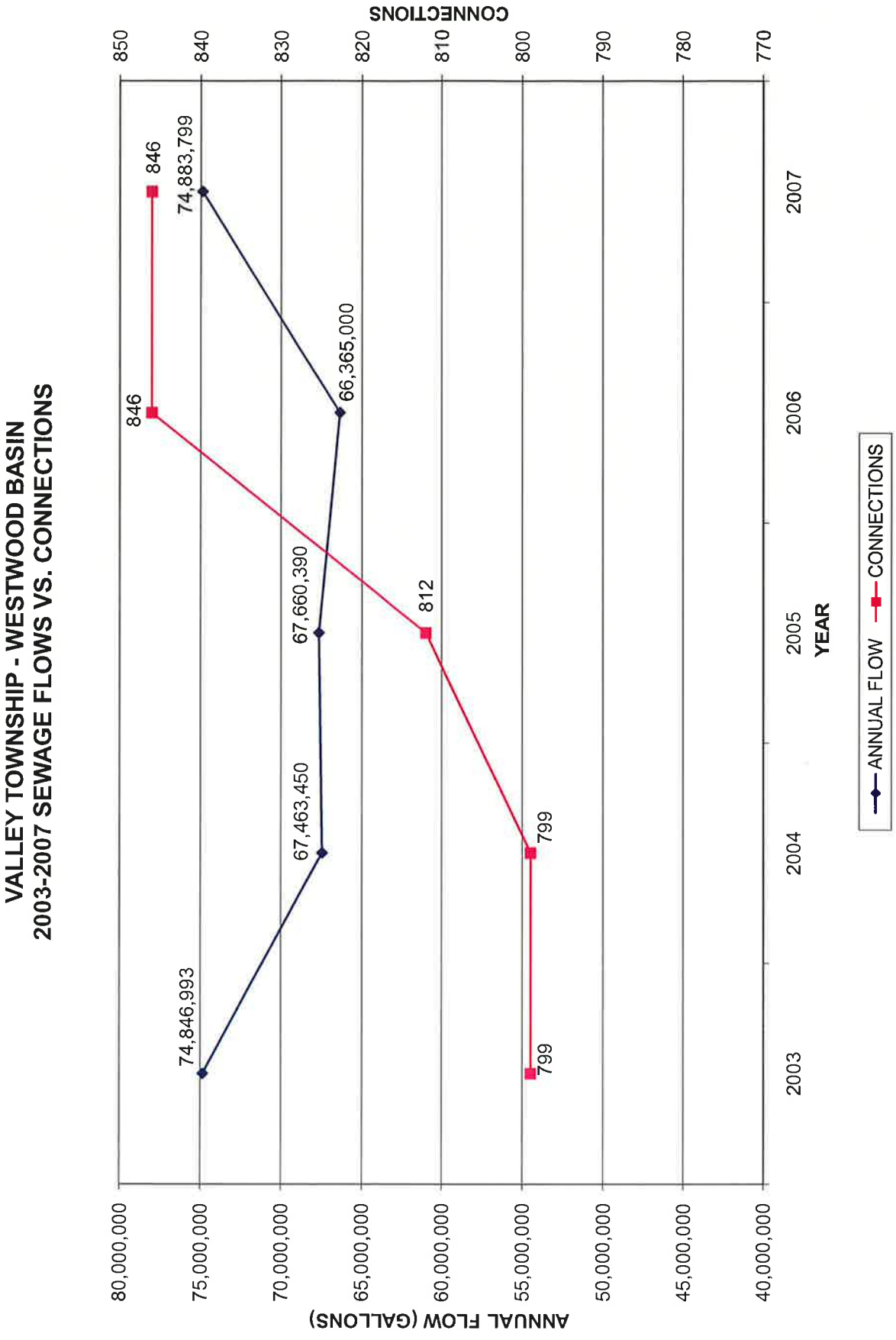

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Valley Road Meter Valley Township

Annual Flow History **2003**

Westwood Basin

2003

Month	Flow Gallons	Days	Average Daily Flow	3 Month Maximum	1 Month Maximum	Monthly Precipitation
Jan	5,834,910	32	182,341			1.76
Feb	5,570,240	28	198,937			4.93
Mar	6,979,610	29	240,676			5.77
Apr	6,715,690	30	223,856			2.84
May	5,786,060	32	180,814			5.25
Jun	8,729,130	29	301,004	21,230,880	8,729,130	10.38
Jul	5,531,500	31	178,435			2.01
Aug	5,805,460	31	187,273			3.26
Sep	5,527,443	30	184,248			6.50
Oct	5,181,130	31	167,133			4.45
Nov	5,601,920	28	200,069			2.27
Dec	7,583,900	34	223,056			4.30
	74,846,993		2,467,844			53.72
			205,654			

Valley Road Meter Valley Township

Annual Flow History **2004**

Westwood Basin

2004

Month	Flow Gallons	Days	Average Daily Flow	3 Month Maximum	1 Month Maximum	Monthly Precipitation
Jan	5,774,850	31	186,285			2.30
Feb	5,620,100	28	200,718			2.50
Mar	6,009,230	31	193,846	17,404,180		3.80
Apr	5,685,600	30	189,520			6.02
May	5,039,820	31	162,575			3.63
Jun	5,665,870	30	188,862			4.54
Jul	5,321,960	31	171,676			7.91
Aug	5,380,980	31	173,580			4.17
Sep	5,795,720	30	193,191			5.19
Oct	5,274,470	31	170,144			2.24
Nov	4,916,990	30	163,900			4.55
Dec	6,977,860	31	225,092		6,977,860	3.17
	67,463,450		2,219,390			50.02
			184,949			

Valley Road Meter Valley Township

Annual Flow History **2005**

Westwood Basin

2005

Month	Flow Gallons	Days	Average Daily Flow	3 Month Maximum	1 Month Maximum	Monthly Precipitation
Jan	5,778,320	31	186,397			4.45
Feb	5,464,530	28	195,162			2.61
Mar	6,367,920	31	205,417			3.66
Apr	6,617,100	30	220,570			5.32
May	5,776,000	31	186,323	18,761,020		1.27
Jun	5,816,170	30	193,872			3.31
Jul	4,352,630	31	140,407			4.31
Aug	4,858,680	31	156,732			2.57
Sep	4,138,790	30	137,960			0.21
Oct	5,709,700	31	184,184			8.68
Nov	5,864,190	30	195,473			2.86
Dec	6,916,360	31	223,108		6,916,360	2.97
	67,660,390		2,225,605			42.22
			185,467			

Valley Road Meter Valley Township

Annual Flow History **2006**

Westwood Basin

2006

Month	Flow Gallons	Days	Average Daily Flow	3 Month Maximum	1 Month Maximum	Monthly Precipitation
Jan	6,204,990	35	177,285			5.13
Feb	4,553,130	25	182,125			3.30
Mar	5,958,080	34	175,238			0.93
Apr	4,924,150	28	175,863			3.92
May	5,375,530	32	167,985			2.03
Jun	5,743,140	28	205,112			10.92
Jul	5,927,140	31	191,198			4.33
Aug	4,614,140	28	164,791			2.07
Sep	5,465,970	32	170,812			5.62
Oct	5,165,010	31	166,613			4.32
Nov	6,064,980	32	189,531			5.14
Dec	6,368,740	35	181,964	17,598,730	6,368,740	2.52
	66,365,000		2,148,516			50.23
			179,043			

Valley Road Meter Valley Township

Annual Flow History **2007**

Westwood Basin

2007

Month	Flow Gallons	Days	Average Daily Flow	3 Month Maximum	1 Month Maximum	Monthly Precipitation
Jan	4,722,380	24	196,766			3.91
Feb	4,908,710	28	175,311			2.70
Mar	7,179,400	32	224,356			5.04
Apr	7,464,880	28	266,603			8.03
May	7,610,790	35	217,451	22,255,070	7,610,790	1.80
Jun	5,213,050	28	186,180			4.95
Jul	5,057,280	28	180,617			7.83
Aug	6,834,880	35	195,282			5.64
Sep	5,563,320	28	198,690			0.48
Oct	7,462,460	35	213,213			7.54
Nov	5,480,850	28	195,745			4.79*
Dec	7,385,799*	36	205,161*			4.79*
	74,883,799		2,455,376			57.50
			204,615			

*Values are the average of the previous months in 2007. Actual flow and precipitation were not yet available at the time of this document.

APPENDIX M

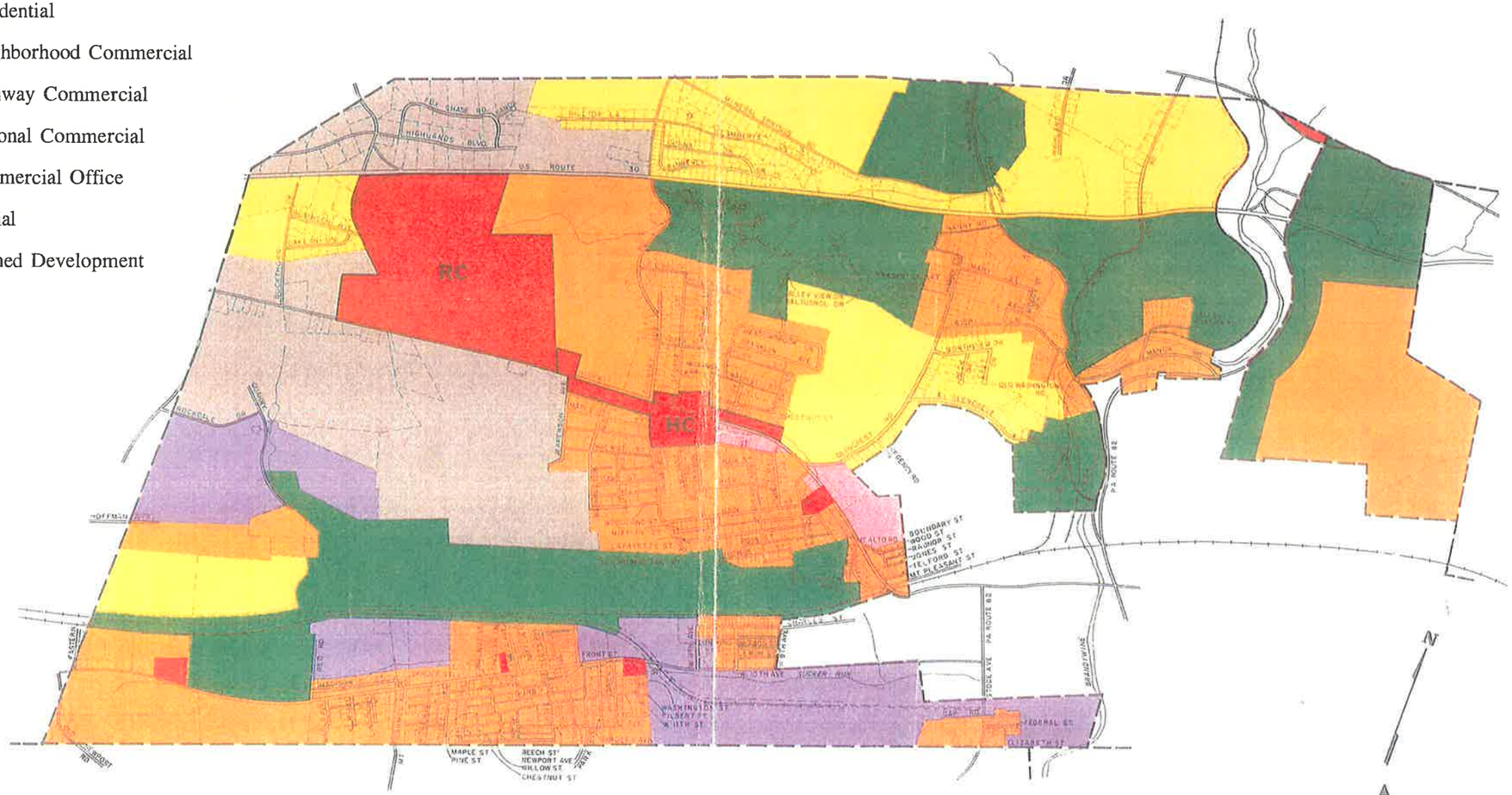
ZONING MAP & PROPOSED LAND USE GOALS MAP

VALLEY TOWNSHIP

CHESTER COUNTY, PENNSYLVANIA

ZONING INDEX

- (C) Conservation
- (R-1) Residential
- (R-2) Residential
- (NC) Neighborhood Commercial
- HC (HC) Highway Commercial
- RC (RC) Regional Commercial
- (CO) Commercial Office
- (I) Industrial
- (PD) Planned Development



N

Gehringer-Roth Associates
Planning Consultants

1000 0 1000 2000

SCALE IN FEET

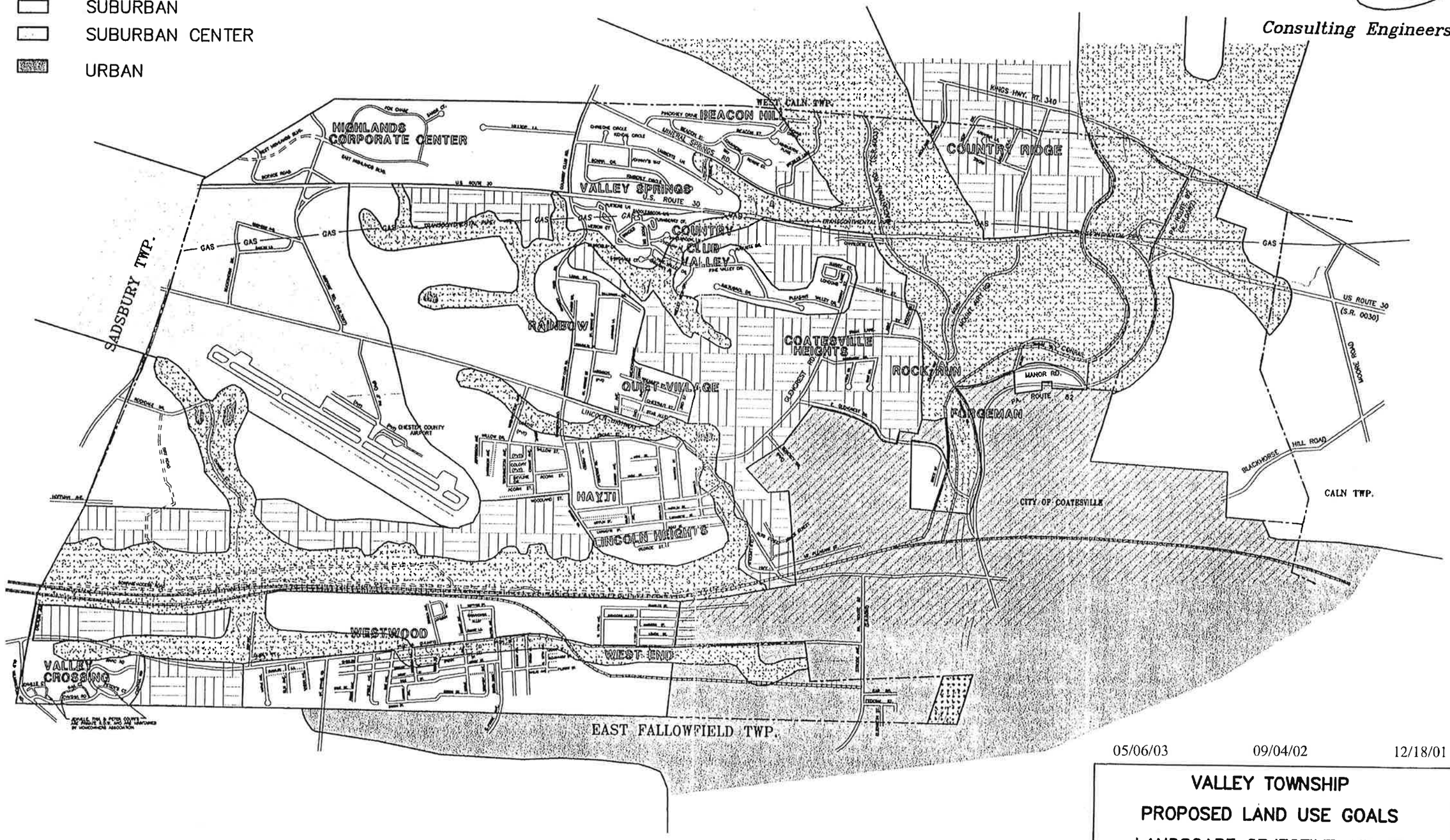
LEGEND

- NATURAL
- RURAL
- SUBURBAN
- SUBURBAN CENTER
- URBAN

Pennoni Associates Inc.

Pennoni

Consulting Engineers



05/06/03 09/04/02 12/18/01

VALLEY TOWNSHIP

PROPOSED LAND USE GOALS

LANDSCAPE OBJECTIVE AREAS

APPENDIX N

SEWAGE PROJECTION SUMMARY TABLES

TABLE N-1
VALLEY TOWNSHIP
2007 SEWAGE FLOWS

Month	Days in Cycle	Total Metered Sewer Flows (gallons)	Strasburg Hunt Deduct (gallons)	Coatesville Country Club Deduct (gallons)	Total minus Strasburg Hunt & Country Club	
					(gallons)	(GPD)
Jan	24	16,080,324	(248,000)	(7,400)	15,824,924	659,372
Feb	28	15,758,905	(250,000)	(40,000)	15,468,905	552,461
Mar	32	23,665,477	(247,000)	(26,800)	23,391,677	730,990
Apr	28	24,440,768	(277,000)	(39,300)	24,124,468	861,588
May	35	26,233,628	(218,000)	(351,000)	25,664,628	733,275
Jun	28	15,758,007	(278,100)	(239,400)	15,240,507	544,304
Jul	28	15,138,898	(318,000)	(173,000)	14,647,898	523,139
Aug	35	19,615,780	(246,100)	(227,200)	19,142,480	546,928
Sep	28	14,225,000	(280,500)	(91,500)	13,853,000	494,750
Oct	35	20,702,590	(270,200)	(68,400)	20,363,990	581,828
Nov	28	15,997,349	(251,300)	(36,100)	15,709,949	561,070
Dec	35	23,457,221	(240,200)	(40,600)	23,176,421	662,183
Total	364	231,073,947	(3,124,400)	(1,340,700)	226,608,847	**622,552**

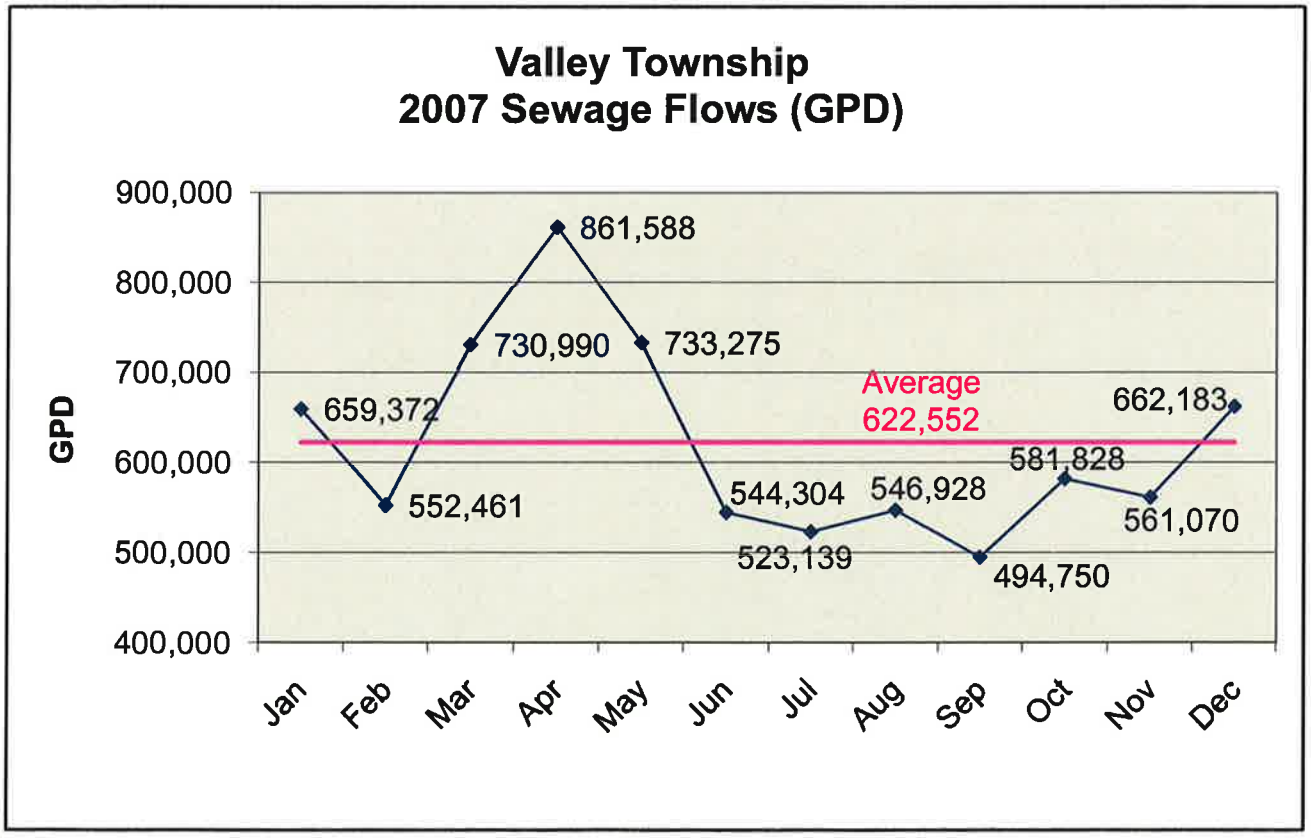


TABLE N-2
VALLEY TOWNSHIP
PROJECTION SUMMARY

DEP Code No.	DEVELOPMENT	TOTAL EQ. EDU's	EDU'S EQ. ACTIVE (@ END 2007)	EDU'S REMAINING (@ END 2007)	EST. GPD REMAINING (225 GPD/EDU)	START	BUILD OUT	TYPE	PROJECTED NEW CONNECTIONS 2008	2009	2010	2011	2012	TOTAL IN 5 YEARS	5-10 YEAR CONN.'S (2013-2017)	10-20+ YEAR CONN.'S (2018-2027+)
PLANNED DEVELOPMENTS																
DEVELOPMENTS ON TABLE A2 OF JANUARY 2008 CMP																
1-15956118-3H	Valley Crossing IV	60	60	-	-	2002	2005	R	*	*	*	*	*	-	-	-
1-15956-127-3J	Hanscom Subdivision	1	1	-	-	2005	2005	R	*	*	*	*	*	-	-	-
1-15956-119-3H	Meadowbrook	88	88	-	-	2003	2005	R	*	*	*	*	*	-	-	-
1-15956-123-3J	Timberlane	46	46	-	-	2005	2006	R	*	*	*	*	*	-	-	-
1-15956-124-3J	Lambert Subdivision	3	2	1	225	2006	2007	R	1	*	*	*	*	1	-	-
1-15956-117-3H	Hillview	512	262	250	56,250	2003	2009	R	90	160	*	*	*	250	-	-
1-15956-134-3IJ	Oakcrest & Glencrest Road	188	20	168	37,800	2005	2009	R	60	108	*	*	*	168	-	-
1-15956-132-3J	Woodland Pointe	9	4	5	1,125	2005	2008	R	5	*	*	*	*	5	-	-
1-15956-126-3J	Round Hill	201	11	190	42,750	2007	2010	R	60	80	50	*	*	190	-	-
1-15956-143-3m	Robinson Ave & Oaklyn Ln (Round Hill)	29	-	29	6,525	2009	2010	R	15	14	*	*	*	29	-	-
1-15956-128-3IJ	Valley Farm & Mt. Airy Road	81	12	69	15,525	2006	2010	R	20	28	21	*	*	69	-	-
1-15956-131-3IJ	Middleton Subdivision	1	-	1	225	2007	2007	R	1	*	*	*	*	1	-	-
1-15956-125-3J	Valley Suburban Center	340	-	340	76,500	2008	2010	R / C	100	200	40	*	*	340	-	-
1-15956-135-3J	London Tract	14	-	14	3,150	2008	2008	R	14	*	*	*	*	14	-	-
1-15956-133-3IJ	Keystone Foods (Valley View Development Lot 4	15.5	-	15.5	3,488	2008	Post-2011	C	13	*	*	*	*	13	2.5	-
1-15961-306-4	Highlands Corp. Center Phase I, II, III	90	27	63	14,175	1988	2010	C	63	*	*	*	*	63	-	-
1-15956-142-X	Koenig Subdivision	1	-	1	225	2008	2008	R	1	*	*	*	*	1	-	-
1-15956-145-X	Concern	3	-	3	675	2008	2008	R	3	*	*	*	*	3	-	-
	Laurence Professional Center	2	-	2	450	2008	2008	C	2	*	*	*	*	2	-	-
	John Woodward Lot	1	-	1	225	2008	2008	R	1	*	*	*	*	1	-	
	Olinick Lot	1	-	1	225	2008	2008	R	1	*	*	*	*	1	-	
	Saunders Lot	1	-	1	225	2008	2008	R	1	*	*	*	*	1	-	
	OTP Corporation Office, Hotel & Restaurant *	85	-	85	19,055	2009	2009	C	*	85	*	*	*	85	-	-
	Valley Farm Assoc. Min Springs-Wagontown Rd	1	-	1	225	2008	2008	R	1	*	*	*	*	1	-	-
	Saligman Hangar	1	-	1	225	2008	2008	C	1	*	*	*	*	1	-	-
DEVELOPMENTS ON TABLE A3 OF JANUARY 2008 CMP																
	CASD	200	-	200	45,000	2009	Post-2011	C	*	*	50	50	50	150	50	-
	Remainder of Valley View Dev (Lot 5)	434.5	-	434.5	97,763	2009	Post-2011	R / C	*	130	50	50	54.5	284.5	150	-
	Airport	111	-	111	24,975	2009	Post-2011	C	*	30	20	20	20	90	21	-
	Rainbow Neighborhood	30	-	30	6,750	2010	2011	R	*	*	15	15	*	30	-	-
	Heagy Tract	250	-	250	56,250	2010	Post-2011	R	*	*	50	50	50	150	100	-
	Green Trees	80	-	80	18,000	2009	Post-2011	R / C	*	27	20	20	13	80	-	-
	Zarelli Apartment Building	22	-	22	4,950	2009	2009	R	*	*	22	*	*	22	-	-
PLANNED DEVELOPMENTS NOT IN JANUARY 2008 CMP																
	Highlands Corp. Center Phase I, II, III (Additional	178	-	178	40,050	2009	2010	C	*	50	83	45	*	178	-	-
	Tomaski Subdivision	5	4	1	225	2008	2008	R	1	*	*	*	*	1	-	-
	Wright-Ellsworth Properties	200	-	200	45,000	2010	2012	R	*	*	50	50	100	200	-	-
	Moles/Beech Street Subdivision	75	-	75	16,875	2010	2012	R	*	*	25	25	25	75	-	-
	Township Municipal Complex	21	-	21	4,725	2010	2010	C	*	*	21	*	*	21	-	-
	Total EDU	3,296	537	2,759				EDU	454	827	517	325	313	2,436	323.5	-
	Total Flow	741,600	120,825		620,775			FLOW	102,150	186,075	116,325	73,125	70,313	547,988	72,788	-

* The OTP Corporation Office, Hotel & Restaurant is located in the City of Coatesville and is to be accounted for in the City of Coatesville's allocation at the PAWC Treatment Facility, not in Valley Township's allocation. The flow from this development is therefore not included in the "Total EDU" and "Total Flow" numbers above.

TABLE N-2
VALLEY TOWNSHIP
PROJECTION SUMMARY

DEP Code No.	DEVELOPMENT	TOTAL EQ. EDU's	EDU'S EQ. ACTIVE (@ END 2007)	EDU'S REMAINING (@ END 2007)	EST. GPD REMAINING (225 GPD/EDU)	START	BUILD OUT	TYPE	PROJECTED NEW CONNECTIONS 2008	2009	2010	2011	2012	TOTAL IN 5 YEARS	5-10 YEAR CONN.'S (2013-2017)	10-20+ YEAR CONN.'S (2018-2027+)
GROWTH AREAS																
(Based on Zoning Projections)																
	Railroad Area Tracts	90	-	90	20,250	Post-2017	Post-2017	R / C	*	*	*	*	*	-	-	90
	Southwest Area of Township	111	-	111	24,975	Post-2017	Post-2017	R / C	*	*	*	*	*	-	-	111
	Chester County Airport Area	42	-	42	9,450	Post-2017	Post-2017	R / C	*	*	*	*	*	-	-	42
	West End of Lincoln Highway	23	-	23	5,175	Post-2017	Post-2017	C	*	*	*	*	*	-	-	23
	Buckthorn Drive Area	28	-	28	6,300	Post-2017	Post-2017	R	*	*	*	*	*	-	-	28
	Airport Road - Route 30 Bypass Area	58	-	58	13,050	Post-2017	Post-2017	C	*	*	*	*	*	-	-	58
	Valley Suburban Center Open Space	27	-	27	6,075	Post-2017	Post-2017	C	*	*	*	*	*	-	-	27
	Rainbow Neighborhood	74	-	74	16,650	Post-2017	Post-2017	R	*	*	*	*	*	-	-	74
	Hayti Neighborhood	135	-	135	30,375	Post-2017	Post-2017	R / C	*	*	*	*	*	-	-	135
	Lincoln Heights	13	-	13	2,925	Post-2017	Post-2017	R	*	*	*	*	*	-	-	13
	Old Lincoln Highway	4	-	4	900	Post-2017	Post-2017	R	*	*	*	*	*	-	-	4
	West End Neighborhood	3	-	3	675	Post-2017	Post-2017	R / C	*	*	*	*	*	-	-	3
	East Glencrest Road / Northview Drive	35	-	35	7,875	Post-2017	Post-2017	R	*	*	*	*	*	-	-	35
	Irish Lane / Mary Street Area	5	-	5	1,125	Post-2017	Post-2017	R	*	*	*	*	*	-	-	5
	Wagontown Road / Mineral Springs	23	-	23	5,175	Post-2017	Post-2017	C	*	*	*	*	*	-	-	23
	Route 82 Area	13	-	13	2,925	Post-2017	Post-2017	R	*	*	*	*	*	-	-	13
	Wagonton Road / South Mount Airy Road	2	-	2	450	Post-2017	Post-2017	C	*	*	*	*	*	-	-	2
	City of Coatesville Tracts	44	-	44	9,900	Post-2017	Post-2017	C	*	*	*	*	*	-	-	44
	Northeast Corner	24	-	24	5,400	Post-2017	Post-2017	C	*	*	*	*	*	-	-	24
UNSEWERED RESIDENCES & BUSINESSES																
(Based on Zoning Projections)																
	Township Request Other	126	-	126	28,350	Post-2017	Post-2017	R	*	*	*	*	*	-	-	126
	Total EDU	880	-	880				EDU	-	-	-	-	-	-	-	880
	Total Flow	198,000	-		198,000			FLOW	-	-	-	-	-	-	-	198,000

APPENDIX O

DENSITY ANALYSIS TABLES

TABLE O-1
ANALYSIS OF RECENT RESIDENTIAL DEVELOPMENTS

Development Use	Development Name	Zoning	Developable Tract Area (Acres)	# Lots / Units	Lots / Units per Acre
Single-Family Detached Homes	Valley Springs	R-1	69.97	137	1.96
Single-Family Detached Homes	Hillview	C & R-2	172	224	1.30
Single-Family Detached Homes	Meadowbrook	R-2	36.77	88	2.39
Single-Family Detached Homes	Oakcrest	R-1	87.77	169	1.93
Single-Family Detached Homes	Valley Farm	R-1	54.17	58	1.07
Single-Family Detached Homes	London Tract	C	8.36	14	1.68
				Average	**1.7**
Townhouses	Hillview	R-2	12.31	60	4.87
Townhouses	Valley Crossing Phase 4	R-2	87	288	3.31
Townhouses	Timberlane	R-2	9.13	46	5.04
Townhouses	Round Hill	PD & R-1	29.26	201	6.87
Townhouses	Valley Suburban Center	RC	20.42	98	4.80
				Average	**5.0**

Amended Appendix A-22-b

TABLE O-2
ANALYSIS OF RECENT COMMERCIAL & INDUSTRIAL BUILDING COVERAGE

Development Use	Development Name	Zoning	Total Tract Area (Acres)	Building Footprint (SF)	Bldg Coverage
Commercial	Highlands Corp. Cntr. Lot 2 Inner Loop (Full Build-Out)	PD	8.40	136,773	37%
Commercial/Industrial (Warehouse)	Keystone Foods	PD	20.36	193,338	22%
Commercial	Valley Suburban Center	RC	10.72	54,000	12%
Commercial/Industrial	Highlands Corp. Cntr. Phase III Lot A	PD	11.46	140,625	28%
Commercial/Industrial	Highlands Corp. Cntr. Phase III Lot B	PD	21.25	301,250	33%
Commercial/Industrial	Highlands Corp. Cntr. Phase III Lot C	PD	9.04	77,700	20%
Commercial	Valley View Lot 1 (Sadsbury Township)		3.38	33,600	23%
				Average	**25%**

Amended Appendix A-22-b

TABLE O-3
PEOPLE PER BUILDING AREA FOR COMMERCIAL USES

Use	1 Person / __ SF *
Automobile Repair, Filling & Washing Facilities	400
Convenience Stores	75
Grocery Stores	150
Funeral Homes	100
Furnitures & Decor Sales	500
Office	300
Retail	200
Shopping Centers	182
Other Commercial Buildings	400
Average	**256**

* The *1 Person / __ SF* densities are the number of parking spaces for each facility use as required by the Valley Township Zoning Ordinance. The number of parking spaces will be approximately equal to the number of people within each facility for which sewage usage should be based.

Amended Appendix A-22-b

TABLE O-4
SUMMARY OF ACT 537 PLANNING DENSITIES FOR ZONING-BASED PROJECTIONS

Zoning	Development Use for Act 537 Planning	Max. Density per Zoning Ordinance	Average Density of Recent Developments	Density for Act 537 Plan (No Constraints)
C	Single-Family Detached Homes	1 lot / acre	1.7 lots / acre	**1.0 lot / acre**
R-1	Single-Family Detached Homes	2.7 lots / acre (16,000 SF lots)	1.7 lots / acre	**2.0 lots / acre**
R-2	Townhouses	5.5 units / acre	5.0 units / acre	**5.0 lots / acre**

Zoning	Development Use for Act 537 Planning	Historical Average Building Coverage	1 Person per ___ SF	GPD / Person	GPD / SF	GPD / Acre	EDU / Acre*
RC	Commercial	10,890 SF / acre	250	15	0.06	653	**2.9**
NC	Commercial	10,890 SF / acre	250	15	0.06	653	**2.9**
HC	Commercial	10,890 SF / acre	250	15	0.06	653	**2.9**
CO	Commercial	10,890 SF / acre	250	15	0.06	653	**2.9**
I	Industrial	10,890 SF / acre	1000	35	0.035	381	**1.7**
PD	Commercial / Industrial	10,890 SF / acre	-	-	-	-	**2.3****

* The EDU / Acre density was calculated using a flow rate of 225 GPD / EDU.

** The EDU / acre flow rate for Commercial / Industrial is the average of the Commercial and Industrial flow rates.

G:\Municipal\VLTW\0605_ACT537_UD\Final Plan\Needs\Future Needs Forecast_rev070108.xls; Lot Usage Tab

TABLE O-5
SUMMARY OF ACT 537 PLANNING DENSITIES
FOR COMPREHENSIVE PLAN-BASED PROJECTIONS

Land Use Objective	Development Use for Act 537 Planning	EDU / Acre*
Natural	No Development	**0.0**
Rural	Single-Family Detached Homes	**1.0**
Suburban	Single-Family Detached Homes	**1.7**
Suburban Center	Townhouses	**5.0**
Suburban Center	Commercial	**2.9**
Urban	Not Applicable within Township	

* EDU / Acre densities are based upon actual densities of similar types of recent development within the Township.

Amended Appendix A-22-b

APPENDIX P

ZONING & COMPREHENSIVE PLAN PROJECTIONS TABLES

TABLE P-1
VALLEY TOWNSHIP
ZONING AND COMPREHENSIVE PLAN PROJECTIONS

						ZONING PROJECTION				COMPREHENSIVE PLAN PROJECTION				
DEP CODE NO.	NAME	TAX PARCEL NO.	TOTAL ACREAGE	DEVELOPMENT CONSTRAINT(S)	DEVELOPABLE ACREAGE	ZONING	TYPE OF DEVELOPMENT	EDU'S PER ACRE	TOTAL EQ. EDU'S	LAND USE	NON-NATURAL, DEVELOPABLE ACREAGE	TYPE OF DEVELOPMENT	EDU'S PER ACRE	TOTAL EQ. EDU'S
PLANNED DEVELOPMENTS														
Table A2	Highlands Corp. Cntr. Phases I & II	38-1-2	2.2		2.2	PD	Commercial / Industrial	2.3	5.1	Suburban	2.2	Commercial / Industrial	2.9	6.4
		38-1-3.3	2.0		2.0	PD	Commercial / Industrial	2.3	4.6	Suburban	2.0	Commercial / Industrial	2.9	5.8
		38-1-3.4	2.0		2.0	PD	Commercial / Industrial	2.3	4.6	Suburban	2.0	Commercial / Industrial	2.9	5.8
		38-1-3.5	2.3		2.3	PD	Commercial / Industrial	2.3	5.3	Suburban	2.3	Commercial / Industrial	2.9	6.7
		38-1-3.6	2.1		2.1	PD	Commercial / Industrial	2.3	4.8	Suburban	2.1	Commercial / Industrial	2.9	6.1
		38-1-3.7	2.2		2.2	PD	Commercial / Industrial	2.3	5.1	Suburban	2.2	Commercial / Industrial	2.9	6.4
		38-1-3.8	2.2		2.2	PD	Commercial / Industrial	2.3	5.1	Suburban	2.2	Commercial / Industrial	2.9	6.4
		38-1-3.9	2.2		2.2	PD	Commercial / Industrial	2.3	5.1	Suburban	2.2	Commercial / Industrial	2.9	6.4
		38-1-3.10	2.7		2.7	PD	Commercial / Industrial	2.3	6.2	Suburban	2.7	Commercial / Industrial	2.9	7.8
		38-2-49	7.0		7.0	PD	Commercial / Industrial	2.3	16.1	Suburban	7.0	Commercial / Industrial	2.9	20.3
		38-2-372	2.1		2.1	PD	Commercial / Industrial	2.3	4.8	Suburban	2.1	Commercial / Industrial	2.9	6.1
		38-2-373	2.7		2.7	PD	Commercial / Industrial	2.3	6.2	Suburban	2.7	Commercial / Industrial	2.9	7.8
		38-2-374	2.2		2.2	PD	Commercial / Industrial	2.3	5.1	Suburban	2.2	Commercial / Industrial	2.9	6.4
		38-2-375	2.5		2.5	PD	Commercial / Industrial	2.3	5.8	Suburban	2.5	Commercial / Industrial	2.9	7.3
		38-2-376	2.1		2.1	PD	Commercial / Industrial	2.3	4.8	Suburban	2.1	Commercial / Industrial	2.9	6.1
		38-2-377	2.0		2.0	PD	Commercial / Industrial	2.3	4.6	Suburban	2.0	Commercial / Industrial	2.9	5.8
		38-2-395	4.8		4.8	PD	Commercial / Industrial	2.3	11.0	Suburban	4.8	Commercial / Industrial	2.9	13.9
		38-2-400	4.7		4.7	PD	Commercial / Industrial	2.3	10.8	Suburban	4.7	Commercial / Industrial	2.9	13.6
	TOTAL								115.0					145.0
Table A2	Highlands Corp. Cntr. Phase III - Lot A	38-2-63	11.5		11.5	PD	Commercial / Industrial	2.3	26.5	Suburban	11.5	Commercial / Industrial	2.9	33.4
	Highlands Corp. Cntr. Phase III - Lot B	38-2-63	21.3		21.3	PD	Commercial / Industrial	2.3	49.0	Suburban	21.3	Commercial / Industrial	2.9	61.8
	Highlands Corp. Cntr. Phase III - Lot C	38-2-63	9.0		9.0	PD	Commercial / Industrial	2.3	20.7	Suburban	9.0	Commercial / Industrial	2.9	26.1
	Highlands Corp. Cntr. Phase III - Eastern Unplanned Area	38-2-63	13.0		13.0	PD	Commercial / Industrial	2.3	29.9	Suburban	13.0	Commercial / Industrial	2.9	37.7
	TOTAL								126.0					158.9
Table A3	Coatesville Area School District	38-2-73	64.8	SS, W, E	59.4	R-2	School		0.0	Natural / Suburban	40.6	School		0.0
Not Assigned		38-2-48.4A	37.5	W, E	31.3	RC	Commercial	2.9	90.8	Natural / Suburban	29.5	Commercial	2.9	85.6
	TOTAL								90.8					85.6
Table A3	Heagy Tract	38-2-63.1	52.0	SS, W, E	43.0	R-2	Residential - Townhouses	5	215.0	Natural / Rural	23.8	Residential - Detached	1.0	23.8
Table A3	Green Trees	38-2-201	7.9	SS, W	6.3	CO	Commercial	2.9	18.3	Rural	6.3	Residential - Detached	1.0	6.3
		38-2-208	8.3	SS	6.7	CO	Commercial	2.9	19.4	Rural	6.7	Residential - Detached	1.0	6.7
	TOTAL								37.7					13.0
Table A3	Rainbow Area	38-2-65 to 67, 66.1	<2 each			R-2	Existing Residential		4.0	Suburban				4.0
		38-2-99, 100, 100.1	<2 each			R-2	Existing Residential		3.0	Suburban				3.0
		38-2-109 to 116, 118, 119	<2 each			R-2	Existing Residential		10.0	Suburban				10.0
		38-2-121 to 127, 127.1	<2 each			R-2	Existing Residential		8.0	Suburban				8.0
		38-2-131.1 to 131.5	<2 each			R-2	Existing Residential		5.0	Suburban				5.0
	TOTAL								30.0					30.0
Not Assigned	Township Municipal Complex	38-2-48	7.5	W	7.1	RC	Commercial	2.9	20.6	Suburban	7.1	Commercial	2.9	20.6
TOTALS FOR PLANNED DEVELOPMENTS									**635**					**477**

SS = Steep Slopes; W = Stream, Waterbody, or Floodplain; E = Transcontinental Pipeline Easement

TABLE P-1
VALLEY TOWNSHIP
ZONING AND COMPREHENSIVE PLAN PROJECTIONS

						ZONING PROJECTION				COMPREHENSIVE PLAN PROJECTION				
DEP CODE NO.	NAME	TAX PARCEL NO.	TOTAL ACREAGE	DEVELOPMENT CONSTRAINT(S)	DEVELOPABLE ACREAGE	ZONING	TYPE OF DEVELOPMENT	EDU'S PER ACRE	TOTAL EQ. EDU'S	LAND USE	NON-NATURAL, DEVELOPABLE ACREAGE	TYPE OF DEVELOPMENT	EDU'S PER ACRE	TOTAL EQ. EDU'S
GROWTH AREAS														
Not Assigned	Railroad Area Tracts	38-4-12.1	42.2	SS, W	11.1	R-1	Residential - Detached	2	22.2	Natural / Rural	11.1	Residential - Detached	1.0	11.1
		38-5-21.1	31.5	SS	5.1	R-1	Residential - Detached	2	10.2	Natural / Rural	5.1	Residential - Detached	1.0	5.1
		38-5-21.2	128.3	SS	26.7	C	Residential - Detached	1	26.7	Natural / Rural	26.7	Residential - Detached	1.0	26.7
		38-5-21.3	22.2	W	21.3	C	Residential - Detached	1	21.3	Natural	0.0	None		0.0
		38-5-23	36.0	SS	5.8	C	Residential - Detached	1	5.8	Natural / Suburban	5.8	Residential - Detached	1.7	9.9
		38-5-24	31.2	SS	4.0	C	Residential - Detached	1	4.0	Natural / Suburban	4.0	Residential - Detached	1.7	6.8
	TOTAL								90.2					59.6
Not Assigned	Southwest Area	38-4-12.2	8.3	W	7.2	C	Residential - Detached	1	7.2	Natural	0.0	None		0.0
		38-4-15.2	4.2		4.2	R-2	Residential - Townhouses	5	21.0	Rural	4.2	Residential - Detached	1.0	4.2
		38-4-15	7.9	W	7.6	R-2	Residential - Townhouses	5	38.0	Rural	7.6	Residential - Detached	1.0	7.6
	(New Horizons Subdivision)	38-4-15.2A	3.5		3.5	R-2	Residential - Detached		0.0	Natural / Rural	3.5			0.0
		38-5-3	52.0	W	44.5	C	Residential - Detached	1	44.5	Rural	44.5	Residential - Detached	1.0	44.5
	TOTAL								110.7					56.3
Not Assigned	Airport Area	38-4-19	<2		<2	PD	Airport Expansion	0	0.0	Suburban Center		Airport Expansion		0.0
	Airport Area	38-5-1	22.3	W	20.1	I	Airport Expansion	0	0.0	Natural / Suburban		Airport Expansion		0.0
	Airport Area	38-5-1.5	23.8	W	22.2	I	Airport Expansion	0	0.0	Natural / Suburban		Airport Expansion		0.0
	Airport Area	38-5-1.2	5.2	W	4.6	C	Airport Expansion	0	0.0	Natural / Suburban		Airport Expansion		0.0
	Airport Area	38-5-1.3	18.3		18.3	C	Residential - Detached	1	18.3	Suburban	18.3	Residential - Detached	1.7	31.1
	Airport Area	38-5-2	<2		<2	R-2	Residential		1.0	Suburban	<2	Residential - Detached		1.0
	Airport Area	38-5-58	16.1	SS, W	4.6	R-2	Residential - Townhouses	5	23.0	Nat / Sub / Rural	4.6	Residential - Detached	1.7	7.8
	TOTAL								42.3					39.9
Not Assigned	West End Lincoln Hwy	38-1-21	2.6		2.6	PD	Commercial / Industrial	2.3	6.0	Suburban Center	2.6	Commercial / Industrial	2.9	7.5
		38-2-157, 159	<2 each			PD	Residential / Commercial		2.0	Suburban Center		Residential / Commercial		2.0
		38-2-163	6.4		6.4	PD	Commercial / Industrial	2.3	14.7	Suburban Center	6.4	Commercial / Industrial	2.9	18.6
	TOTAL								22.7					28.1
Not Assigned	Buckthorn Drive Area	38-1-1	6.2		6.2	R-1	Residential - Detached	2	12.4	Suburban Center	6.2	Residential - Townhouses	5.0	31.0
		38-1-3.1A	2.5		2.5	R-1	Residential - Detached	2	5.0	Suburban Center	2.5	Residential - Townhouses	5.0	12.5
		38-1-3.1B	2.3		2.3	R-1	Residential - Detached	2	4.6	Suburban Center	2.3	Residential - Townhouses	5.0	11.5
		38-1-3.1	2.6		2.6	R-1	Residential - Detached	2	5.2	Suburban Center	2.6	Residential - Townhouses	5.0	13.0
		38-1-64	<2		<2	R-1	Residential - Detached		1.0	Suburban Center	<2	Residential - Detached		1.0
	TOTAL								28.2					69.0
Not Assigned	Airport Rd. - U.S. 30 Area	38-2-49.1	21.7	W	16.0	RC	Commercial	2.9	46.4	Nat / Sub / Sub Cntr	13.5	Commercial	2.9	39.2
		38-2-49.2	4.0		4.0	RC	Commercial	2.9	11.6	Suburban Center	4.0	Commercial	2.9	11.6
	TOTAL								58.0					50.8
Not Assigned	Valley Suburban Center - Open Space	38-2-48.4	9.3		9.3	RC	Commercial	2.9	27.0	Sub / Sub Center	9.3	Commercial	2.9	27.0
Table A3	Rainbow Area	38-2-108, 117	<2 each			R-2	Residential		2.0	Suburban		Residential - Detached		2.0
		38-2-130	5.5	SS	5.5	R-2	Residential - Townhouses	5	27.5	Rural	5.5	Residential - Detached	1.0	5.5
		38-2-131	3.2	SS, W	<2	R-2	Existing Residential		1.0	Natural / Rural	<2			1.0
		38-2-131.1B, 131.1C	<2 each			R-2	Existing Residential		2.0	Suburban				2.0
		38-2-131.1A	6.9	SS, W	6.1	R-2	Residential - Townhouses	5	30.5	Natural / Rural	4.1	Residential - Detached	1.0	4.1
		38-2-131.6 to 131.11	<2 each			R-2	Existing Residential		6.0	Suburban				6.0
		38-2-132	7.1	SS, W, E	3.4	C	Residential - Detached	1	3.4	Natural / Rural	2.1	Residential - Detached	1.0	2.1
		38-2-132.1, 132.2	<2 each			C	Existing Residential		2.0	Rural				2.0
	TOTAL								74.4					24.7
Not Assigned	Western Hayti Neighborhood	38-2P-4.1, 6, 7, 30 to 33	<2 each		<2 each	R-2	Residential		7.0	Natural	0.0	None		0.0
		38-2P-21, 39, 39.1	<2 each		<2 each	R-2	Residential		3.0	Suburban	<2 each	Residential - Detached		3.0
		38-2P-45.2, 54	<2 each		<2 each	R-2	Residential		2.0	Suburban	<2 each	Residential - Detached		2.0
		38-2P-19	2.6	W	<2	R-2	Residential		1.0	Natural	0.0	None		0.0
		38-2-173	2.6		2.6	HC	Commercial	2.9	7.5	Suburban	2.6	Commercial	2.9	7.5
		38-2-176	<2		<2	HC	Commercial		1.0	Natural	0.0	None		0.0
		38-2-178	4.1	W	3.2	HC	Commercial	2.9	9.3	Natural	0.0	None		0.0
	TOTAL								30.8					12.5

SS = Steep Slopes; W = Stream, Waterbody, or Floodplain; E = Transcontinental Pipeline Easement

TABLE P-1
VALLEY TOWNSHIP
ZONING AND COMPREHENSIVE PLAN PROJECTIONS

						ZONING PROJECTION				COMPREHENSIVE PLAN PROJECTION				
DEP CODE NO.	NAME	TAX PARCEL NO.	TOTAL ACREAGE	DEVELOPMENT CONSTRAINT(S)	DEVELOPABLE ACREAGE	ZONING	TYPE OF DEVELOPMENT	EDU'S PER ACRE	TOTAL EQ. EDU'S	LAND USE	NON-NATURAL, DEVELOPABLE ACREAGE	TYPE OF DEVELOPMENT	EDU'S PER ACRE	TOTAL EQ. EDU'S
Not Assigned	Eastern Hayti Neighborhood	38-2Q-43, 57	<2 each		<2 each	CO	Commercial		2.0	Natural / Suburban	<2 each	Commercial		2.0
		38-2Q-45.1, 53	<2 each		<2 each	CO	Commercial		2.0	Natural	0.0	None		0.0
		38-2Q-145	<2		<2	CO	Commercial		1.0	Suburban	<2	Commercial		1.0
		38-2Q-156, 158, 159.2	<2 each		<2 each	CO	Commercial		3.0	Natural	0.0	None		0.0
		38-2Q-60, 61, 65, 66.3	<2 each		<2 each	R-2	Residential		4.0	Suburban	<2 each	Residential - Detached		4.0
		38-2Q-67 to 69, 70, 72, 78	<2 each		<2 each	R-2	Residential		6.0	Suburban	<2 each	Residential - Detached		6.0
		38-2Q-79, 88, 91, 92, 95	<2 each		<2 each	R-2	Residential		5.0	Suburban	<2 each	Residential - Detached		5.0
		38-2Q-109, 116.1, 117.1, 128	<2 each		<2 each	R-2	Residential		4.0	Suburban	<2 each	Residential - Detached		4.0
		38-2Q-130, 131, 140.1, 146	<2 each		<2 each	R-2	Residential		4.0	Suburban	<2 each	Residential - Detached		4.0
		38-2Q-147.1, 150, 154, 163	<2 each		<2 each	R-2	Residential		4.0	Suburban	<2 each	Residential - Detached		4.0
		38-2Q-169, 171, 172, 178	<2 each		<2 each	R-2	Residential		4.0	Suburban	<2 each	Residential - Detached		4.0
		38-2Q-184, 190, 193, 194	<2 each		<2 each	R-2	Residential		4.0	Suburban	<2 each	Residential - Detached		4.0
		38-2Q-198 to 200, 201	<2 each		<2 each	R-2	Residential		4.0	Suburban	<2 each	Residential - Detached		4.0
		38-2Q-209	<2		<2	R-2	Residential		1.0	Natural	0.0	None		0.0
		38-2Q-110	11.7	SS	11.3	R-2	Residential - Townhouses	5	56.5	Suburban	11.3	Residential - Detached	1.7	19.2
	TOTAL								104.5					61.2
Not Assigned	Lincoln Heights	38-5C-19, 27	<2 each		<2 each	R-2	Residential		2.0	Suburban	<2 each	Residential - Detached		2.0
		38-5C-31 to 34, 31.1	<2 each		<2 each	R-2	Residential		5.0	Suburban	<2 each	Residential - Detached		5.0
		38-5C-38, 44, 53, 54, 57, 58	<2 each		<2 each	R-2	Residential		6.0	Suburban	<2 each	Residential - Detached		6.0
	TOTAL								13.0					13.0
Not Assigned	Old Lincoln Hwy	38-5-25	<2		<2	R-2	Residential		1.0	Natural	0.0	None		0.0
		38-5-40 to 42	<2 each		<2 each	R-2	Residential		3.0	Rural	<2 each	Residential - Detached		3.0
	TOTAL								4.0					3.0
Not Assigned	West End Neighborhood	38-5C-86.1, 98	<2 each		<2 each	R-2	Residential		2.0	Suburban	<2 each	Residential - Detached		2.0
		38-5C-92	<2		<2	I	Industrial		1.0	Suburban	<2	Commercial		1.0
	TOTAL								3.0					3.0
Not Assigned	E. Glencrest / Northview Drive Area	38-2-149	22.0	SS	6.4	R-1	Residential - Detached	2	12.8	Rural	6.4	Residential - Detached	1.0	6.4
		38-2-149.19	2.3		2.3	R-1	Ex. Res / Res - Detached		2.0	Rural		Ex. Res / Res - Detached		2.0
		38-2-150	8.0	SS	5.9	R-1	Residential - Detached	2	11.8	Rural	5.9	Residential - Detached	1.0	5.9
		38-2-152	3.5	SS	3.5	R-1	Residential - Detached	2	7.0	Rural	3.5	Residential - Detached	1.0	3.5
		38-2-153	<2		<2	R-1	Residential - Detached		1.0	Rural	<2	Residential - Detached		1.0
	TOTAL								34.6					18.8
Not Assigned	Irish Ln / Mary St Area	38-2M-17, 18	<2 each		<2 each	R-2	Residential		2.0	Natural	0.0	None		0.0
		38-2M-65, 66, 93	<2 each		<2 each	R-2	Residential		3.0	Suburban / Rural	<2 each	Residential - Detached		3.0
	TOTAL								5.0					3.0
Not Assigned	Wagontown / Mineral Springs Area	38-2-2.2	3.3		3.3	C	Residential - Detached	1	3.3	Rural	3.3	Residential - Detached	1.0	3.3
		38-2-3	10.2		10.2	C	Residential - Detached	1	10.2	Rural	10.2	Residential - Detached	1.0	10.2
		38-2-5	14.6	SS	7.6	C	Residential - Detached	1	7.6	Natural	0.0	None		0.0
		38-2-23.4	11.4	SS, W	2.2	C	Residential - Detached	1	2.2	Natural	0.0	None		0.0
	TOTAL								23.3					13.5
Not Assigned	Route 82 Area	38-3-38.1	3.4	SS	2.5	R-2	Residential - Townhouses	5	12.5	Suburban	2.5	Residential - Detached	1.7	4.3
Not Assigned	Wagontown Rd / S. Mount Airy Road	38-2-22.1	<2		<2	C	Residential		1.0	Natural	0.0	None		0.0
		38-2-38.2	4.2	SS	<2	C	Residential - Detached		1.0	Natural	0.0	None		0.0
	TOTAL								2.0					0.0
Not Assigned	City of Coatesville Tracts	38-2-29	77.6	SS, E, LANDFILL	48.8	C	Recreation / Park	0	0.0	Natural	0.0	None		0.0
		38-2-29.1	38.2	SS	35.6	C	Residential - Detached	1	35.6	Rural	35.6	Residential - Detached	1.0	35.6
		38-2-23.1	13.0	SS, W, E	2.6	C	Residential - Detached	1	2.6	Natural	0.0	None		0.0
		38-2-23.2	9.4	SS, W, E	5.3	C	Residential - Detached	1	5.3	Natural	0.0	None		0.0
	TOTAL								43.5					35.6
Not Assigned	Northeast Corner	38-3-40	14.4		14.4	C	Residential - Detached	1	14.4	Natural	0.0	None		0.0
		38-3-40.4	5.0		5.0	C	Residential - Detached	1	5.0	Suburban	5.0	Residential - Detached	1.7	8.5
		38-3-40.8A	3.7	SS, W	2.1	C	Residential - Detached	1	2.1	Natural / Suburban	<2	Residential - Detached		1.0
		38-3-40.10	8.0	SS, W	2.9	C	Residential - Detached	1	2.9	Natural / Suburban	2.9	Residential - Detached	1.7	4.9
	TOTAL								24.4					14.4
TOTALS FOR GROWTH AREAS									**754**					**538**

SS = Steep Slopes; W = Stream, Waterbody, or Floodplain; E = Transcontinental Pipeline Easement

TABLE P-1
VALLEY TOWNSHIP
ZONING AND COMPREHENSIVE PLAN PROJECTIONS

						ZONING PROJECTION				COMPREHENSIVE PLAN PROJECTION				
DEP CODE NO.	NAME	TAX PARCEL NO.	TOTAL ACREAGE	DEVELOPMENT CONSTRAINT(S)	DEVELOPABLE ACREAGE	ZONING	TYPE OF DEVELOPMENT	EDU'S PER ACRE	TOTAL EQ. EDU'S	LAND USE	NON-NATURAL, DEVELOPABLE ACREAGE	TYPE OF DEVELOPMENT	EDU'S PER ACRE	TOTAL EQ. EDU'S
UNSEWERED RESIDENCES & BUSINESSES														
Not Assigned	Southwest Area	38-4-13, 14, 15.1, 15.1A	<2 each			R-2	Existing Residential		4.0	Rural		Residential - Detached		4.0
Not Assigned	Valley Crossing	38-4-16.1	<2			R-2	Existing Residential		1.0	Suburban				1.0
Not Assigned	West End Lincoln Hwy	38-1-15 to 20, 22	<2 each			PD	Existing Res. / Comm.		7.0	Suburban Center				7.0
		38-2-156, 158, 160, 161	<2 each			PD	Existing Res. / Comm.		4.0	Suburban Center				4.0
Not Assigned	Heagy Residential Area	38-2-63.1A	<2			R-2	Residential		1.0	Natural / Suburban		Residential - Detached		1.0
		38-2-64	<2			R-2	Existing Residential		1.0	Natural / Suburban				1.0
Not Assigned	Hilltop Ln	38-2-55, 56, 58, 60, 63.3	<2 each			R-1	Existing Residential		5.0	Suburban				5.0
		38-2-63.4, 63.4A, 63.6	<2 each			R-1	Existing Residential		3.0	Suburban				3.0
Not Assigned	Beacon Hill & Valley Springs	38-2-1.1, 1.3	<2 each			R-1	Existing Residential		2.0	Suburban				2.0
		38-2-135.1C	<2			R-1	Existing Residential		1.0	Suburban				1.0
		38-2-135.1D	<2			R-1	Residential		1.0	Suburban				1.0
Not Assigned	Quiet Village	38-2Q-14.7, 31.5	<2 each			R-2	Residential		2.0	Suburban		Residential - Detached		2.0
Not Assigned	Western Hayti Area	38-2P-8	<2		<2	R-2	Existing Residential		1.0	Natural				1.0
		38-2P-36, 40, 50.1	<2 each			R-2	Existing Residential		3.0	Suburban				3.0
		38-2P-41	<2			R-2	Existing Residential		15.0	Suburban				15.0
Not Assigned	Eastern Hayti Area	38-2Q-62, 87	<2 each			R-2	Existing Residential		2.0	Suburban				2.0
Not Assigned	Westwood Area	38-5-6.1D, 6.1E, 6.1F	<2 each			R-2	Residential		3.0	Natural	0.0	None		0.0
		38-5F-48, 58, 132	<2 each			R-2	Existing Residential		3.0	Suburban				3.0
		38-5G-30, 36	<2 each			R-2	Existing Residential		2.0	Suburban				2.0
Not Assigned	E. Glencrest / Northview Drive Area	38-2-149.2 to 149.4	<2 each			R-1	Existing Residential		3.0	Rural				3.0
		38-2-149.6 to 149.13, 149.15	<2 each			R-1	Existing Residential		9.0	Rural				9.0
		38-2-149.17, 149.18, 149.20	<2 each			R-1	Existing Residential		3.0	Rural				3.0
		38-2-149.5, 149.14, 149.16	<2 each			R-1	Residential		3.0	Rural		Residential - Detached		3.0
		38-2-151	<2			R-1	Existing Residential		1.0	Rural				1.0
Not Assigned	Irish Ln / Mary St Area	38-2M-7, 34	<2			R-2	Existing Residential		2.0	Suburban				2.0
Not Assigned	London Tract Area	38-2-138	2.0			C	Residential		1.0	Rural		Residential - Detached		1.0
		38-2-143	<2			R-2	Residential		1.0	Rural		Residential - Detached		1.0
		38-2-143.1, 143.3	<2 each			R-2	Existing Residential		2.0	Rural				2.0
Not Assigned	Wagontown Rd	38-2H-1, 2	<2 each		<2 each	R-2	Existing Residential		2.0	Natural / Rural				2.0
		38-2-22	<2			C	Existing Residential		1.0	Natural				1.0
Not Assigned	Wagontown / Mineral Springs	38-2-2, 2.1, 3.1	<2 each			C	Existing Residential		3.0	Rural				3.0
		38-2-5.1, 6	<2 each		<2 each	C	Existing Residential		2.0	Natural				2.0
		38-2-8	4.6	SS	<2	C	Existing Residential		1.0	Natural / Rural				1.0
		38-2-23.4A	<2			R-1	Existing Residential		1.0	Natural				1.0
		38-2-23.4B	10.8	SS, W	<2	C	Existing Residential		1.0	Natural				1.0
		38-2-136, 137.1	<2 each			R-1	Existing Residential		2.0	Natural				2.0
		38-2-137	2.9	W	<2	R-1	Residential		1.0	Natural	0.0	None		0.0
Not Assigned	Valley Station Rd	38-3-4 to 14, 10.1	<2 each			R-2	Existing Residential		12.0	Natural				12.0
Not Assigned	Country Ridge	Lots 42 & 43 in West Caln	<2 each			N/A	Residential		2.0	Rural				2.0
Not Assigned	N. Mount Airy Rd	38-2-11, 11.1, 11.7, 17	<2 each			R-1	Existing Residential		4.0	Rural				4.0
Not Assigned	Northeast Corner	38-3-40.3, 40.5 to 40.7	<2 each			C	Existing Residential		4.0	Suburban				4.0
		38-3-40.2	11.5	SS, W	0.0	C	Existing Residential		1.0	Natural				1.0
		38-3-40.3A	2.3	SS	<2	C	Existing Residential		1.0	Suburban				1.0
		38-3-40.8	3.9	SS, W	<2	C	Existing Residential		1.0	Natural / Suburban				1.0
		38-3-40.9	<2			C	Residential		1.0	Suburban		Residential - Detached		1.0
TOTALS FOR UNSEWERED RESIDENCES & BUSINESSES									**126**					**122**
RAND TOTALS									**1,515**					**1,137**

SS = Steep Slopes; W = Stream, Waterbody, or Floodplain; E = Transcontinental Pipeline Easement

APPENDIX Q

AGENCY REVIEWS AND PROOF OF PUBLICATION

VALLEY TOWNSHIP PLANNING COMMISSION

Amended Appendix A-22-b

Valley Township

BOARD OF SUPERVISORS

Board Members
Patrice Proctor, Chairwoman
Walter P. Johnson, Vice-chair
Yolanda R. Beattie
Edward Hammond
Christopher Lehenky

890 W. Lincoln Highway
P.O. Box 467
Coatesville, PA. 19320
(610)384-5751 FAX(610)384-2746
Karen Chandler, Sec./Tres.

September 22, 2008

PA Department of Environmental Protection
Sewage Planning Specialist
2 East Main St.
Norristown, PA 19401

RE: Valley Township 537 plan
Valley Township Planning Commission Comments

Dear Sewer planning specialist:

During the Valley Township planning commission meeting of November 13, 2007, the township 537 plan was reviewed and approved. There were no comments of the planning commission.

Sincerely,

Walter Pietschmann
Chair, Valley Township planning commission

cc: Board of Supervisors
Ed Rasiul, Pennoni

CHESTER COUNTY PLANNING COMMISSION

Amended Appendix A-22-b

THE COUNTY OF CHESTER

COMMISSIONERS
Carol Aichele
Terence Farrell
Kathi Cozzone

RONALD T. BAILEY, AICP
Executive Director

PLANNING COMMISSION
Government Services Center, Suite 270
601 Westtown Road
P.O. Box 2747
West Chester, PA 19380-0990
(610) 344-6285 Fax: (610) 344-6515

March 13, 2008

Patrice Proctor, Chairwoman
Valley Township Board of Supervisors
890 W. Lincoln Highway
P.O. Box 467
Coatesville, PA 19320

Re: Valley Township Act 537 Official Sewage Facilities Plan

Dear Mr. Johnson:

The Chester County Planning Commission (CCPC) has reviewed the proposed Valley Township Act 537 Official Sewage Facilities Plan, dated January 2008, as required by Section 71.53(a)(2) of the Pennsylvania Sewage Facilities Act (Act 537). The Plan was prepared by Pennoni Associates, Inc. The plan was received on January 14, 2008.

This Plan was prepared in conjunction with the previously reviewed Pennsylvania American Water Company (PAWC) Plan Update, to plan for the future sewage flows from Valley Township. The CCPC supports this Plan as it relates to Valley Township, and its efforts to accommodate the needs of the Township. The CCPC recommends the Plan be adopted after addressing the comments presented in Section C.

A. Consistency with the County Plan – ***Landscapes***:

1. ***Landscapes***, through the *Livable Landscapes Map*, identifies four general land patterns, or Landscapes, of future development in the County – Urban, Suburban, Rural and Natural. The study area is located primarily in the Suburban Landscape, with smaller portions located in the Urban, Suburban Center, and Rural Landscapes. There is, however, a corridor of the Natural Landscape that extends through the southern and eastern portion of the study area. The Suburban Landscape is to contain a mix of uses and higher densities of development than those found in the Rural Landscape. In order for this pattern to occur, ***Landscapes*** supports the provision of infrastructure and public services, such as public sewer systems, in the Suburban, Suburban Center, and Urban Landscape portions of the study area. As such, the plan is generally consistent with ***Landscapes***. Valley Township's Draft Act 537 Plan supports the following ***Landscapes*** Policies:

   6.1.1 Encourage coordination between municipalities and authorities to ensure consistency with land use plans.

   6.1.2 Maintain or expand existing sewer and water facilities to support development in Urban and Suburban Landscapes.

2. The PAWC treatment plant is located in the West Branch Brandywine Creek watershed, a tributary to the Christina River, where the treated effluent for the PAWC is ultimately treated and disposed of through stream discharge. ***Watersheds***, through its goals and objectives, identifies Part 6, *Planning for Future Water and Wastewater Needs*, as guidelines that municipalities and utility providers should consider an Integrated Water Resources Plan to more effectively link infrastructure and land use planning. The Draft Plan, as proposed is consistent with the following ***Watersheds*** Objectives:

   Objective 6-3, "Develop and coordinate planning for new or expanded water/or wastewater facilities and water sources in conjunction with the affected municipalities."

   Objective 7-2, "Concentrate planned utility service areas to support designated growth areas."

B. Selection of Alternative:

1. Valley Township recognizes all three of their Study Areas (the Hayti Basin, the Westwood Basin, and the Rock Run Basin) as being ultimately served by public sewer. Because the Study Areas are mostly within the Suburban Landscape, ***Landscapes*** Sewer and Water Policy 6.1.2 states: "Maintain or expand existing sewer and water facilities to support development in Urban and Suburban Landscapes," the Plan is generally consistent with ***Landscapes***. We commend the Municipality as well as the PAWC for addressing the wastewater disposal needs of the planning area through a regional approach. Furthermore, we commend the Township for the implementation of a Sewage Management Program and ordinance for those areas of the Township that are planned for the continued use of individual and community on-lot disposal systems.

C. General Comments.

1. Page i. Plan Summary. The Plan states that the PAWC has currently granted Valley Township an allocation of 1,140,000 gpd and that an additional 400,000 gpd of allocation will be made available after the planned expansion of the treatment plant occurs. Please include whether this additional allocation will be made available at once, or at certain allotments per year, for clarity.

2. Page ii. Plan Summary. For clarity, please include in the draft ordinance how the assessed fees to on-lot disposal system owners will be established, and how existing on-lot systems that become part of the public system will affect the fees to other on-lot system owners.

3. Page I-3. Previous Wastewater Planning. PAWC Act 537 Sewage Facilities Plan Update. Please include in this narrative whether PAWC will be updating their existing plan information to include the updated information from Valley Township, and if there are any planning conflicts, which of the two plans will supersede the other.

4. Page I-4. Previous Wastewater Planning. The Plan states that PAWC has granted Valley Township a total allocation of 1,540,000, even though the total allocation recognized by DEP is 926,012 gpd. Please indicate how the discrepancy in allocation will be dealt with by the Township and DEP, if this Plan is approved. If DEP will recognize the total allocation, please include information regarding that in this section.

5. Page I-6. Lambert Subdivision. Please include where the generated available capacity of the generated flows can be found, as all other subdivisions listed, include either the associated PAWC Chapter 94 Report or the PAWC Connection Management Plan.

6. Pages I-5 – I-9. Please include the current status of these projects, as to whether or not they are already being served by the PAWC and Valley Township systems.

7. Page I-8. 14. Keystone Foods. Please include the status of this project as it was listed as conditional upon approval action by Sadsbury Township.

8. Page I-9. E. Other Municipal and County Planning Documents. Please include any status information on the needed updates to the Township's Zoning Ordinance and Subdivision and Land Development Ordinance, as they were scheduled to be updated within three years of the adoption of the 2003 Comprehensive Plan.

9. Page I-10. E. Other Municipal and County Planning Documents. Please include consistency information for ***Landscapes***, including the different Landscape classifications and how this proposed document is or is not consistent with the goals and policies.

10. I-10. E. Other Municipal and County Planning Documents. Please include consistency information with ***Watersheds***, including the goals and objectives with which this document is consistent.

11. I-10. E. Other Municipal and County Planning Documents. Please include information on consistency with Sadsbury Township planning documents, as a joint sewage disposal planning project is planned for the western boundary of the Township and involves approvals from Sadsbury Township.

12. II-4. F. Potable Water Supplies. Please indicate whether those developments listed as being served by the interconnected system are all receiving the same amount of water, per unit, and what one unit equals in gallons per day.

13. Page II-6. PAWC Franchise Area. Please indicate whether the homes that are adjacent to the Round Hill development will be, if not already, receiving water supply from PAWC, as they will be included in the sewer service area in the near future.

14. Page III-2. Existing Needs. The text states that 48 of the 51 lots in the Country Ridge subdivision are served by the public system. Please include information on the remaining three lots are served.

15. Page III-2. Existing Needs. The text states that the Rock Run Pump Station is permitted to have an average flow of 300,000 gpd. Please include whether the pump station is flowing at its maximum capacity, and if not, what the actual flows are.

16. Page III-3. Planned and In-Process Upgrades and Expansions. The Hillview subdivision is listed as having an approved allocation in excess of what it will require. If Valley Township plans to allocate these flows elsewhere in the Township, please include that information for clarity.

17. Page III-6. Table III-1 Rock Run Pump Station Connections. The table states that there are 40 connections from Oakcrest and Glencrest Road that are being conveyed through the Hayti Basin, while the rest is conveyed through the Rock Run Basin. Please include any supporting information, such as geographic location or available capacity, as to why these flows are being conveyed through a different Basin.

18. Page III-19. Explanation of Sewer Interceptor Models. The text states that the 2006 flow rate in the Hayti Basin was 449 gpd per connection, while the PAWC utilizes a rate of 262.5 gpd per connection, which ultimately averages out to the estimated flow for the Basin. Please include any additional information on whether this higher daily flow will have any negative effect on the life expectancy and performance of the system.

19. Page IV-14. Future Needs. The Rainbow neighborhood text states that it "will not result in a hydraulic overload in the interceptor downstream." This language appears in several other areas of the text. Please indicate whether the effects are considered on a cumulative level or only on an individual basis, for clarity.

20. Page IV-20. Sewage Flow Rates for Zones. Please include what the title of each zone is, for clarity. For instance, what the "RC, NC, HC, CO zones" stand for.

21. Page IV-23. Growth Areas. The growth areas have listed out EDU projections based upon the Zoning Ordinance and the Comprehensive Plan. Most of these projections are not consistent with each other, as the Zoning Ordinance shows a higher estimated projection. Please indicate which projection will be used, in the event that a land development proposal is within the projection of the Zoning Ordinance, but is higher than the more conservative EDU projections found in the Comprehensive Plan.

22. Page V-6. Alternatives for New or Improved Sewage Facilities. Please include additional information regarding the connection to public sewer within 45 days of availability, and how the connections will be funded in the event that a homeowner cannot fund the connection.

23. Page V-9. Table V-1 Alternatives Summary. The table notes that Regional Wastewater Treatment is listed as "not viable." If the Regional Wastewater Treatment system is the PAWC treatment plant, please clarify why this is not a viable alternative. Please include any supporting information regarding this, for clarity.

24. Page VI-2. Evaluation of Alternatives. Comprehensive Plans. Please include consistency information for both ***Landscapes*** and *Watersheds* in this section.

25. Page VI-7. Tables VI-2 – VI-7. Cost Estimate for Sewer Extension. If there is any estimated cost for homeowners to abandon their on-lot system and connect to the system, please include it here.

We trust that these comments will be of assistance to you as you prepare the final document for submission to PADEP. Upon approval by PADEP, please send our office an adopted version of the plan, as it will aid staff in reviewing future projects in Valley Township. Thank you for the opportunity to offer comments on this plan. If you have any questions, please do not hesitate to contact Carrie Conwell of my staff at 610-344-6285.

Sincerely,

Ronald T. Bailey, AICP
Secretary

RTB/CC/yg

cc: Clinton Cleaver, PA Department of Environmental Protection
Ralph DeFazio, Chester County Health Department
Karen Chandler, Valley Township
Valley Township Planning Commission
Edward Rasiul, P.E., P.L.S., Pennoni Associates, Inc. ✓

Pennoni
PENNONI ASSOCIATES INC.
CONSULTING ENGINEERS

VLTW 0605

July 15, 2008

Ms. Ronald T. Bailey, AICP
Chester County Planning Commission
Government Services Center, Suite 270
601 Westtown Road
P.O. Box 2747
West Chester, PA 19380-0990

Re: Valley Township
Act 537 Official Sewage Facilities Base Plan Update
Comment Response Letter

Dear Mr. Bailey:

We received your review comment letter on Valley Township's Act 537 Plan Update. Our responses to your comments follow (the original comment is in *italics*; our response is in regular font):

Section C – General Comments

1. *Page i. Plan Summary. The Plan states that the PAWC has currently granted Valley Township an allocation of 1,140,000 gpd and that an additional 400,000 gpd of allocation will be made available after the planned expansion of the treatment plant occurs. Please include whether this additional allocation will be made available at once, or at certain allotments per year, for clarity.*

   The agreement which established the additional 400,000 gpd after the expansion of the treatment plant did not specify when the allocation had to be purchased by Valley Township nor whether it had to be purchased in a lump sum or in specific regular (i.e. annual) allotments. Therefore, Valley Township intends to make partial purchases as the need arises. A sentence clarifying this was added to the Plan.

2. *Page ii. Plan Summary. For clarity, please include in the draft ordinance how the assessed fees to on-lot disposal system owners will be established, and how existing on-lot systems that become part of the public system will affect the fees to other on-lot system owners.*

   Valley Township adopted the ordinance prior to receipt of this CCPC review letter. Therefore, the adopted ordinance does not include the suggested fee-related information. The Township is in the process of implementing the ordinance, and a determination of the funding method is part of that process. Please note that one of the Township's commitments as part of this Plan Update is to implement the ordinance and determine the funding method.

3. *Page I-3. Previous Wastewater Planning. PAWC Act 537 Sewage Facilities Plan Update. Please include in this narrative whether PAWC will be updating their existing plan information to include the updated information from Valley Township, and if there are any planning conflicts, which of the two plans will supersede the other.*

We have provided PAWC's planning consultant, URS, with copies of our draft Plan Updates and been in contact with them to coordinate information. They have indicated that the PAWC Plan Update will generally correspond to Valley Township's Plan Update, but that there will be some differences, such as the distribution of EDU's from 10 to 20-year horizons and the flow rate of GPD/EDU. However, the Township has not received a revised PAWC Plan Update to determine if and what the differences are. A statement of our understanding has been added to the Plan Update.

In regards to which plan governs: Valley Township is required to approve PAWC's Plan Update, and if any differences negatively impact the Township, PAWC's Plan Update will likely not be approved by Valley Township. Similarly, DEP is requiring PAWC's Plan Update to be consistent with the tributary municipality's Plans, so we would expect that PAWC's Plan Update would not be approved by DEP if there are non-agreed upon differences. Valley Township and PAWC would each likely suggest that their respective Plan Update governs. Ultimately, DEP would determine which Plan governs. Given this uncertainty, it is not appropriate for Valley Township to state in their Plan Update which Plan governs. However, a statement has been added that the Township anticipates DEP would ultimately determine which Plan governs in the event of conflicts.

4. *Page I-4. Previous Wastewater Planning. The Plan states that PAWC has granted Valley Township a total allocation of 1,540,000, even though the total allocation recognized by DEP is 926,012 gpd. Please indicate how the discrepancy in allocation will be dealt with by the Township and DEP, if this Plan is approved. If DEP will recognize the total allocation, please include information regarding that in this section.*

   Please note that PAWC has only granted Valley Township 1,140,000 gpd but has agreed to make an additional 400,000 gpd available following expansion of the treatment plant. This Plan justifies Valley Township's need for more than 1,140,000 gpd at the treatment plant. As a result, the Township anticipates that DEP will recognize the Township's granted allocation of 1,140,000 gpd following approval of this Plan and expansion of the Plant. The following statement has been added to the Plan: "Once the Township has purchased part or all of the additional 400,000 gpd following expansion, it is anticipated that DEP will recognize the additional allocation since this Plan justifies the need and since the expanded Plant should have sufficient capacity in accordance with the PAWC-Valley Township agreement." Also, the total recognized allocation has been revised to account for recently approved Planning Modules.

5. *Page I-6. Lambert Subdivision. Please include where the generated available capacity of the generated flows can be found, as all other subdivisions listed, include either the associated PAWC Chapter 94 Report or the PAWC Connection Management Plan.*

   The following statement has been added: "Although the DEP approval letter did not specifically state that this project is proposed consistent with PAWC planning documents, the project is included in PAWC's Chapter 94 Connection Management Plan."

6. *Pages I-5 – I-9. Please include the current status of these projects, as to whether or not they are already being served by the PAWC and Valley Township systems.*

   There is additional detail on each project, including the current connection status, in Part IV "Future Needs" Section B "Existing Development and Plotted Subdivisions". A reference to that section was added to the introductory paragraph of this section.

7. *Page I-8. 14. Keystone Foods. Please include the status of this project as it was listed as conditional upon approval action by Sadsbury Township.*

   The paragraph has been revised to note that both Sadsbury Township and the DEP have both granted planning approval for the force main in Sadsbury Township, and the DEP has also issued a Part II permit.

8. *Page I-9. E. Other Municipal and County Planning Documents. Please include any status information on the needed updates to the Township's Zoning Ordinance and Subdivision and Land Development Ordinance, as they were scheduled to be updated within three years of the adoption of the 2003 Comprehensive Plan.*

   The following statement has been added: "Valley Township has updated the Subdivision and Land Development Ordinance a few times since adoption of the Comprehensive Plan. The Zoning Ordinance has also had a few minor updates, but it has not been amended to comply with the Comprehensive Plan. One of the Township's commitments as part of this Plan Update is to amend the Zoning Ordinance accordingly."

9. *Page I-10. E. Other Municipal and County Planning Documents. Please include consistency information for* ***Landscapes****, including the different Landscape classifications and how this proposed document is or is not consistent with the goals and policies.*

   Landscapes has been added to this section along with a very brief summary of the document. A reference to the more detailed discussion of the consistency of this Plan with *Landscapes* in Part VI Para A.4.b (which was added per Comment #24) has also been added, in lieu of writing the same information twice.

10. *I-10. E. Other Municipal and County Planning Documents. Please include consistency information with* ***Watersheds****, including the goals and objectives with which this document is consistent.*

    Watersheds has been added to this section along with a very brief summary of the document. A reference to the more detailed discussion of the consistency of this Plan with *Watersheds* in Part VI Para A.4.c (which was added per Comment #24) has also been added, in lieu of writing the same information twice.

11. *I-10. E. Other Municipal and County Planning Documents. Please include information on consistency with Sadsbury Township planning documents, as a joint sewage disposal planning project is planned for the western boundary of the Township and involves approvals from Sadsbury Township.*

    Please note that the lots in Valley Township will be serviced solely by Valley Township's sewer system, while the lots in Sadsbury Township will be serviced by a separate system. Sadsbury Township is required to provide Planning Module approval for the sewer extension that will service the lots in Valley Township because a section of the extension passes through Sadsbury Township; however, the entire extension will be owned by Valley Township and serve only Valley Township properties. Per Comment #7, a statement that Sadsbury Township approved the Keystone Food's Planning Module was added to Para D.14. There are no other planning documents related to the project that would be appropriate to list in Para E.

12. *II-4. F. Potable Water Supplies. Please indicate whether those developments listed as being served by the interconnected system are all receiving the same amount of water, per unit, and what one unit equals in gallons per day.*

    The explanation of the interconnected system has been revised for clarity, and the average water usage per tributary unit in 2007 has been added. A statement has also been added that the usage per unit varies.

13. *Page II-6. PAWC Franchise Area. Please indicate whether the homes that are adjacent to the Round Hill Development will be, if not already, receiving water supply from PAWC, as they will be included in the sewer service area in the near future.*

    A statement that PAWC has already constructed water mains to service the existing residences on Robinson Avenue and Oaklyn Lane has been added. Please note that PAWC received indication from those properties willing to connect before proceeding with installation of the water mains, and the majority desiring public water have already connected.

14. *Page III-2. Existing Needs. The text states that 48 of the 51 lots in the Country Ridge subdivision are served by the public system. Please include information on the remaining three lots are served.*

    The reference to 48 lots was incorrect. There are actually 49 lots that are connected to the public sewer. The other two lots are undeveloped. The paragraph has been revised accordingly, and the remaining two lots have been added to the "Unsewered Residences & Businesses" projection in Part IV and Table N-2.

15. *Page III-2. Existing Needs. The text states that the Rock Run Pump Station is permitted to have an average flow of 300,000 gpd. Please include whether the pump station is flowing at its maximum capacity, and if not, what the actual flows are.*

    A statement of the average daily flow rate has been added. Please note that a detailed explanation of the flows and of a recently approved Corrective Action Plan for the Pump Station are included in Para A.1.d "Reserve Capacity in Collection & Conveyance System".

16. *Page III-3. Planned and In-Process Upgrades and Expansions. The Hillview subdivision is listed as having an approved allocation in excess of what it will require. If Valley Township plans to allocate these flows elsewhere in the Township, please include that information for clarity.*

    A statement has been added that the excess EDU's were re-allocated to other projects in the January 2008 CMP. A more detailed statement of the specific projects receiving the re-allocated EDU's has been added to Part I Para D.4 "Hillview".

17. *Page III-6. Table III-1 Rock Run Pump Station Connections. The table states that there are 40 connections from Oakcrest and Glencrest Road that are being conveyed through the Hayti Basin, while the rest is conveyed through the Rock Run Basin. Please include any supporting information, such as geographic location or available capacity, as to why these flows are being conveyed through a different Basin.*

    Statements indicating that the conveyance through two basins was the result of existing site topography and proximity to existing sewage facilities were added to Para A.1.c.ii "Oakcrest" and A.2.c.ii "Oakcrest". The purpose of Table III-1 and the associated narrative

is to show exactly what was approved as part of previous Corrective Action Plans for the Rock Run Pump Station, so it is more appropriate to add the requested information to the discussions of the Oakcrest development. Please note that Exhibit 3-1 depicts the Township's sanitary sewer facilities and basins, including sewers associated with Oakcrest.

18. *Page III-19. Explanation of Sewer Interceptor Models. The text states that the 2006 flow rate in the Hayti Basin was 449 gpd per connection while the PAWC utilizes a rate of 262.5 gpd per connection, which ultimately averages out to the estimated flow for the Basin. Please include any additional information on whether this higher daily flow will have any negative effect on the life expectancy and performance of the system.*

    The high flow per connection indicates that there may already be structural and performance problems, namely inflow and infiltration. This section of the Plan is intended to solely explain the sewer models. The following sentences have been added more appropriately to Para A.2.e.iii: "This high flow rate indicates that there may be infiltration and surface water inflow problems in the Hayti Basin sewer. There may also be inflow issues associated with illegal connections to the sewer, such as sump pumps and roof drains. The Township is currently performing an inflow and infiltration study of the Basin's sewer system to identify problems. A strategy for follow-up repairs will be determined based upon the observations and televising." A similar statement has also been added to Para A.2.b "Problems with Existing Facilities".

19. *Page IV-14. Future Needs. The Rainbow neighborhood text states that it "will not result in a hydraulic overload in the interceptor downstream." This language appears in several other areas of the text. Please indicate whether the effects are considered on a cumulative level or only on an individual basis, for clarity.*

    Text has been added to clarify whether the effects are independent of other proposed development or considered cumulatively with other developments. If considered cumulatively, the other developments are identified, and in some cases a few different development scenarios are specifically explained.

20. *Page IV-20. Sewage Flow Rates for Zones. Please include what the title of each zone is, for clarity. For instance, what the "RC, NC, HC, CO zones" stand for.*

    The title of each zone has been added.

21. *Page IV-23. Growth Areas. The growth areas have listed out EDU projections based upon the Zoning Ordinance and the Comprehensive Plan. Most of these projections are not consistent with each other, as the Zoning Ordinance shows a higher estimated projection. Please indicate which projection will be used, in the event that a land development proposal is within the projection of the Zoning Ordinance, but is higher than the more conservative EDU projections found in the Comprehensive Plan.*

    Sentences have been added stating that the Zoning Projection is ultimately used as the basis of the Plan. A reference to the rationale in Para C.3.d "Selection of Projection" has also been added. Please note that the DEP required the dual projections.

22. *Page V-6. Alternatives for New or Improved Sewage Facilities. Please include additional information regarding the connection to public sewer within 45 days of availability, and how the connections will be funded in the event that a homeowner cannot fund the connection.*

The following information has been added to the Plan: "The Township may use various methods to ensure the sewer connection occurs, which is determined on a case-by-case basis. If public sewer is planned to be constructed and available to the property within a reasonable period of time, the property owner has been required to establish an escrow account to include the cost of connection, including installation of piping and facilities and connection fees, before the holding tank is approved. If the holding tank is in use prior to planning or construction of public sewer and the property owner does not connect within 45 days of availability, the Township may have to fund the connection and place a lien on the property to recover the expenditure. Valley Township is sensitive to homeowners' costs of connecting to sewers and will also assist in seeking grants and obtaining low cost financing."

23. *Page V-9. Table V-1 Alternatives Summary. The table notes that Regional Wastewater Treatment is listed as "not viable." If the Regional Wastewater Treatment system is the PAWC treatment plant, please clarify why this is not a viable alternative. Please include any supporting information regarding this, for clarity.*

    The intent regarding Regional Wastewater Treatment was not clearly explained in the Plan and has been revised in Table V-1 and Para A.2. A new Regional Wastewater Treatment facility is not considered a viable option within Valley Township. However, continued use of PAWC's regional facility is considered an option and is in fact the recommended option in the Plan.

24. *Page VI-2. Evaluation of Alternatives. Comprehensive Plans. Please include consistency information for both **Landscapes** and **Watersheds** in this section.*

    Consistency information for both documents has been added.

25. *Page VI-7. Tables VI-2 – VI-7. Cost Estimate for Sewer Extension. If there is any estimated cost for homeowners to abandon their on-lot system and connect to the system, please include it here.*

    The tables have been revised to include estimates of costs for connecting homes to the system and abandoning existing onlot systems, which is all to be solely the responsibility of the home/property owner.

We thank you for your feedback on the Act 537 Base Plan Update. An adopted copy of the Plan will be provided to your office following approval by the DEP.

If you have any questions or need additional information, please call Mike Ellis in my office.

Very Truly Yours,

Edward F. Rasiul. P.E., P.L.S.
Associate Vice President
PENNONI ASSOCIATE INC.
Township Engineer

/mje

cc: Valley Township Board of Supervisors
Valley Township Planning Commission
Karen E. Chandler, Valley Township Secretary
Debra Town, Chester County Health Department
Gerry DeBalko, PAWC
Stan Corbett, URS

Amended Appendix A-22-b

CHESTER COUNTY HEALTH DEPARTMENT

Amended Appendix A-22-b

THE COUNTY OF CHESTER

COMMISSIONERS:
Carol Aichele
Terence Farrell
Kathi Cozzone

CHESTER COUNTY HEALTH DEPARTMENT
Bureau of Environmental Health Protection
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695 W. Baltimore Pike
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JOHN P. MAHER, M.D., M.P.H.
County Health Director

MARGARET C. RIVELLO, M.B.A.
Public Health Administrator

13 March 2008

Karen E. Chandler
Valley Township
890 W. Lincoln Highway
PO Box 467
Coatesville, PA 19320

Dear Ms. Chandler:

Chester County Health Department (CCHD) has reviewed Valley Township's 537 Plan Draft. The Plan Draft was prepared by Pennoni Associates, Inc. and was received in this Department on 18 January 2008.

The purpose of the Plan Draft was to update the 2006 Township-wide Act 537 Official Sewage Facilities Plan. The Plan Draft discusses the planned expansion of the Pennsylvania-American Water Company (PAWC) Treatment Plant and identifies and discusses existing and future sewage needs within the Township.

Overall, Valley Township's Act 537 Plan Draft is comprehensive and well organized. It appears that the Township is mostly over 90% sewered and fewer than 500 individual on-lot sewage disposal systems reside within its borders.

Listed below are CCHD's comments:

Plan Summary

- E. (c) (page iii) – CCHD has a publication titled An Owner's Manual. It covers the major types of sewage disposal systems and is very user-friendly. It can be downloaded from CCHD's website at: http://dsf.chesco.org/health/lib/health/sewage/ownersmanual.pdf

- Chapter III, page III-22, North Mt. Airy Road – There have been several repairs made over the past few years. This area does have several old homes with aging sewage disposal systems that may need replacement soon. The Plan Draft does seem to show that it's an area for future growth with public sewers.

- Chapter III, page III-24, v, South Mt. Airy Road – According to the CCHD Environmental Health Specialist who covered Valley Township, not all homes in South Mt. Airy were sewered. If they aren't, consideration should be given to putting them on public sewer.

- Chapter III, page III-24, vi, Valley Station Rd. – According to the CCHD Environmental Health Specialist who covered Valley Township, the soils are poor and it is very difficult to find replacement areas for failing sewage disposal systems. Consideration should be given to putting this area on public sewer.

- Chapter III, page III-25, ix, West End of Lincoln Highway - According to the CCHD Environmental Health Specialist who covered Valley Township, this seems to be a problem area. Soils are really poorly drained and in areas a high water table (10 inches below ground surface) is present. Consideration should be given to putting this area on public sewer.

- Chapter IV, page IV-6, g – Oakcrest - the math appears to be inaccurate in the tally of connections for 2008 and 2009. CCHD counts 87 (phase I) + 62 (phase 2) +17 (existing) for 166 future connections. The Plan Draft's tally is 168. Please check the math in this section.

- Chapter IV, page IV-7, l – Valley Suburban Center – the math appears to be inaccurate in the tally of connections for 2008, 2009, and 2010. CCHD counts 192 apartment units + 98
  townhouses + 3 retail stores + 2 restaurants for a total of 295 future connections. However, the description of the development tallies 100 (2008 connections) + 200 (2009 connections) + 40 (2010 connections) for 340 future connections. Please check the math in this section.

- Chapter IV, page IV-8, n, Keystone Foods (Valley View Development Lot 4) – this appears to be the first mention of EDUs. It is unclear how the number of GPD was determined. In one case (667 GPD/2.5 EDUs = 266 GPD), 266 GPD seems to equal 1 EDU; in another (3384 GPD/13 EDUs = 260 GPD) 260 GPD seems to equal 1 EDU. Please specify what the equivalent to 1 EDU is in GPD and revisit the calculations in this section to verify their accuracy.

- Chapter IV, page IV-10 & IV-11, u, Coatesville Area School District – it is inadvisable to consider doubling the school's population simply based on a 50% water usage reduction gained by low consumption water fixtures. CCHD recommends that the Plan Draft take into account leaking fixtures which can add considerably to water usage and would be a likely event in a school environment.

- In general, it is a good idea to always include units of measurement (EDU, GPD, etc.) whenever mentioning numbers. There are a few instances, such as in IV-12 v. Remainder of Valley view Development (Lot 5) where the planned number of connections is not followed by the unit EDU.

- Chapter IV, page IV-13, w, Chester County Airport – the same amount of EDUs (111 EDUs) is listed in this section as is in u. CASD. The numbers seem to add up, but it seems coincidental that the same number EDUs would be projected. Please verify both numbers.

- Chapter IV, page IV-3, Table IV-3, Projected Sewage Flows for Growth Areas – this table uses 225 GPD = 1 EDU. This equivalent seems inconsistent with previous ones. Please explain why the equivalent is different or make the equivalents consistent within the Plan Draft.

- Chapter V, page V-5, E, Retaining Tanks – it is suggested that the terms *retaining tank systems* and *holding tanks* be reversed and the title of E be changed to *Holding Tanks*. A holding tank is only one of several types of retaining tanks. So from a technical point of view, it is correct to write *Holding tanks are retaining tanks that are pumped*... An analogy would be "All trout are fish, but not all fish are trout." Holding tanks being the trout, retaining tanks being the fish.

- Valley Township Ordinance, Section 405. Inspections by Valley Township - ...*Should that inspection reveal a regulatory malfunction or sewage violation (sewage backing up into the structure,*...
  Please remember that sewage backing up into a structure does not necessarily constitute a regulatory malfunction. The cause could be a plumbing problem such as a blockage in the pipes leading from the toilet fixture.

I understand that Mike Ellis of Pennoni asked Ralph DeFazio (CCHD) to review Valley Township's Septage Management Ordinance that is contained within this Plan Draft. Therefore, I will cut and paste Mr. DeFazio's response in its entirety here. If there are any questions from this point to the end, they should be directed to Ralph DeFazio. Anything preceding this paragraph can be directed to me.

Review of Valley Township Ordinance by Ralph DeFazio

1.) In the title area, remove the reference to municipal management of on-lot "subsurface" sewage disposal facilities. You want this to cover any on-lot system and that should encompass any variety (subsurface, elevated sand mound, at-grade, or IRSIS (spray)). Carry this throughout the text of this ordinance for precision and clarity.

2.) **Section 401.**

#2.) Modify the text: it is the power and duty of Valley Township to provide for adequate sewage treatment "and disposal" facilities. This will cover the entire system, not just the treatment, which could be misinterpreted to be only the tanks.

3.) **Section 402. Definitions:**

Add a definition for the following terms:

Chester County Septage Management Data System: This is the electronic database maintained by Chester County, into which Chester County Health Department Licensed Liquid Waste Haulers are required, by Chester County Law, to enter a record for every septic or holding tank that they pump. The data is intended for municipal use in the administration of Municipal Septage Management Programs.

Liquid Waste Hauler: Anyone person who engages in the business of pumping and transporting of liquid waste within Chester County. Each vehicle used for such purpose shall be licensed by the Chester County Health Department.

Liquid Waste: Sewage pumped from septic tanks, cesspools, holding tanks, privies or chemical toilets and does not include any toxic, industrial or hazardous wastes.

#1.) Authorized Agent: remove the word "licensed" and replace it with "certified". There are no licenses associated with the people who you would use; they are all generally certified or otherwise empowered to do this sort of thing.

#9.) On-lot Sewage Disposal System: rewrite to read "disposal of sewage effluent to a retaining tank, or clarified effluent to a soil absorption area utilizing

individual or community sewage disposal technology, which includes subsurface, surface or IRSIS (individual residential spray irrigation) installations.

#15.) Sewage Management Program: consider inclusion of the language used in Chapter 71 and 72. There is a slight difference in each of these definitions. However, the intent of them is the same. Inclusion of some part of these "official language" definitions would be more legally correct and add some clarity.

#17.) Township: DEP tends to use the term "Municipality" throughout their regulations. In Chapter 71, Subsection 71.71, the reference is to the Department (DEP), the Local Agency (CCHD) and the Municipality (Valley).

It might be a better idea to define municipality and equate it with the term Township.

4.) Section 404. Permit Requirements

#4.) Suggest it be rewritten this way: "No building permit shall be issued for a new building which will utilize on-lot sewage facilities until a valid permit for the installation of such sewage facilities has been obtained from the Chester County Health Department, and proof thereof has been presented to the municipality in the form of a properly executed permit signed by the Local Agency Sewage Enforcement Officer".

#5.) This is a great statement just the way that it is written. I just had to acknowledge that!!

5.) Section 405. Inspections by Valley Township

#6.) This reads awkwardly. How about this: "An authorized agent of the municipality shall inspect systems known to be, or alleged to be, malfunctioning. Should that inspection reveal a regulatory malfunction or sewage violation (sewage backing up into the structure, overflowing onto the ground surface, or discharging into the Waters of the Commonwealth), the authorized agent shall report this finding to the Chester County Health Department. The Chester County Health Department shall verify the condition and order the property owner to initiate actions to abate the condition. Corrective actions will include system pumping and repair or replacement of the malfunctioning component(s) of the

system according to the current requirements of Title 25, PA Code, Chapter 73. When considering corrective measures for malfunctioning sewage disposal systems which have been constructed in accordance with Chapter 73 or applicable regulations at the time of construction, the efforts of the local agency or the Department will not be strictly restricted by the requirements of Chapter 73 if the requirements cannot be met. In such cases the Sewage Enforcement Officer shall consider the best technical guidance available in resolving the condition." (This text comes right out of Chapter 73.3.)

#7.) The 2nd, 3rd and 4th sentences would be better if they read: "A resolution of these area-wide problems may necessitate detailed planning and a revision to the municipality's Official Sewage Facilities Plan pertaining to the area(s) affected by such malfunctions. When an Official Sewage Facilities Plan revision has been initiated, mandatory repair or replacement of malfunctioning individual sewage disposal systems within the effected area(s) may be delayed, pending the outcome of the plan revision process. However, immediate corrective action will be required whenever Valley Township, the Chester County Health Department and/or DEP have determined that the condition represents a serious public health or environmental threat.

6.) **Section 406: Operation**

Item c. : comma between pesticides, disinfectants.....

Item d. : Clean surface water or groundwater, including water from foundation drains, springs, sump pumps and French Drains.

7.) **Section 407: Maintenance**

#1.) Each person owning a building served by an on-lot sewage disposal system that contains a septic tank or retaining tank shall have such tank pumped by a Chester County Health Department licensed Liquid Waste Hauler. All septic tanks shall be pumped within six months of the effective date of this ordinance.

Add this as the last sentence: Liquid Waste Haulers are required to enter an electronic record in the Chester County Septage Management Data System of each pumping they perform for any property within Chester County. These records may be utilized by the municipality in the administration of its Municipal Septage Management Program.

#2.) Modify the first sentence to read: "...at the discretion of the municipality or authorized agent..... if the system malfunctions, or for any other good cause.

Sentence 2 concerning "systems that have been pumped within 3 years of the effective date of the ordinance, and a receipt submitted and/or a record is found in the Chester County Septage Management Data System, then..."

Item #3. Change the word "repair" at the end of this item to rehabilitation" for consistency.

Item #5. Remove the term "dry-well". This term is often used to reference rainwater seepage pits. Your current text associates them with a sewage system. You don't want that. It would also be good if you removed the entire last sentence from this item.

Item #6. Modify the text to read: "servicing and the repair of mechanical, electrical and electronic equipment".

Item #8. Replace "Pumpers / haulers of septage" with "All Liquid Waste Haulers"..... At the end of the Solid Waste Act statutes add ", the Rules and Regulations of the Chester County Health Department", and all other applicable laws.

8.) **Section 408. System Rehabilitation**

Item #3. Modify the first sentence to include: "..Chester County Health Department that a malfunction or violation has been identified,.....

Second sentence: Within thirty (30) days of the initial notification, weather conditions permitting, construction....

Item #5. Add after the year 1999 ", to be verified by the municipality or its authorized agent."

9.) **Section 409. Administration**

Item #3. Include the fact that pumping records will also be maintained in the Chester County Septage Management Data System database and are available for

use by the municipality in the administration of this Septage Management Program.

Item #5. Just a note to remind the municipality that almost any expense they incur in the course of administering their Septage Management Program is reimbursable up to 85% of their eligible total cost. This would include any fees paid to Chester County Health Department for the Septage Management data. However, any revenue is deducted from eligible expense (logically) so the lower their fees are, the more they can get back in "eligible" expense reimbursement.

Chester County Health Department hopes that these comments will be of help to you as you prepare this Plan Draft for submission to PA DEP. Thank you for the opportunity to review this Plan Draft and offer Valley Township this Department's comments.

Sincerely,

Debra A. Town

Debra A. Town

Cc: E. Mahoney, PA DEP
C. Conwell, Planning Commission
S. Corbett, URS Corporation
M. Ellis, Pennoni Associates, Inc.
file

Pennoni
PENNONI ASSOCIATES INC.
CONSULTING ENGINEERS

VLTW 0605

July 15, 2008

Ms. Debra A. Town
Chester County Health Department
Government Services Center, Suite 288
601 Westtown Road
West Chester, PA 19380

Re: Valley Township
Act 537 Official Sewage Facilities Base Plan Update
Comment Response Letter

Dear Ms. Town:

We received your review comment letter on Valley Township's Act 537 Plan Update. Our responses to your comments follow (the original comment is in *italics*; our response is in regular font):

Plan Summary

- *E.(c)(page iii) – CCHD has a publication titled An Owner's Manual. It covers the major types of sewage disposal systems and is very user-friendly. It can be downloaded from CCHD's website at: http://dsf.chesco.org/health/lib/health/sewage/ownersmanual.pdf.*

  Acknowledged. A reference to the publication has been added to the discussion of educational materials in Chapter VIII Para A.2.d.

- *Chapter III, page III-22, North Mt. Airy Road – There have been several repairs made over the past few years. This area does have several old homes with aging sewage disposal systems that may need replacement soon. The Plan Draft does seem to show that it's an area for future growth with public sewers.*

  Acknowledged.

- *Chapter III, page III-24, v, South Mt. Airy Road – According to the CCHD Environmental Health Specialist who covered Valley Township, not all homes in South Mt. Airy were sewered. If they aren't, consideration should be given to putting them on public sewer.*

  Upon further review, not all homes on South Mt. Airy Road have been connected. However, nearly all of the homes are connected. There is existing public sewer adjacent to all properties in this area to which the remaining parcels can connect via a sewer lateral at their own expense. The paragraph has been revised accordingly.

- *Chapter III, page III-24, vi, Valley Station Rd. – According to the CCHD Environmental Health Specialist who covered Valley Township, the soils are poor and it is very difficult to find replacement areas for failing sewage disposal systems. Consideration should be given to putting this area on public sewer.*

A reference to the poor soils has been added to the narrative. The following has also been added to the paragraph: "The Township is aware that sewering this area may be necessary in the future. Availability of funding for design, construction, and right-of-way acquisition for a pumping station makes installation of sewer in this area a major endeavor. The Township will continue to explore ways, namely funding methods, to proceed with such a project."

- *Chapter III, page III-25, ix, West End of Lincoln Highway – According to the CCHD Environmental Health Specialist who covered Valley Township, this seems to be a problem area. Soils are really poorly drained and in areas a high water table (10 inches below ground surface) is present. Consideration should be given to putting this area on public sewer.*

  A reference to the poorly drained soils and high water table has been added to the narrative. A developer will be installing a low pressure sewer system along the frontage of these properties to which the properties can connect after the system is dedicated to the Township. An explanation has been added to the paragraph.

- *Chapter IV, page IV-6, g – Oakcrest – the math appears to be inaccurate in the tally of connections for 2008 and 2009. CCHD counts 87 (phase I) + 62 (phase 2) + 17 (existing) for 166 future connections. The Plan Draft's tally is 168. Please check the math in this section.*

  Please note that the narrative states there are 2 existing residences on the tract that will also be connected to the public sewer, resulting in 168 remaining connections.

- *Chapter IV, page IV-7, 1 – Valley Suburban Center – the math appears to be inaccurate in the tally of connections for 2008, 2009 and 2010. CCHD counts 192 apartment units + 98 townhouses + 3 retail stores + 2 restaurants for a total of 295 future connections. However, the description of the development tallies 100 (2008 connections) + 200 (2009 connections) + 40 (2010 connections) for 340 future connections. Please check the math in this section.*

  The narrative incorrectly used the word "connections" instead of "EDUs". It has been revised accordingly. The commercial facilities were approved to generate 50 EDU's of sewage flow, and a reference of such was added to the narrative. Additionally, the sentence now states that 100 EDU's are projected to be connected in 2008, 200 in 2009, and 40 in 2010.

- *Chapter IV, Page IV-8, n, Keystone Foods (Valley View Development Lot 4) – this appears to be the first mention of EDUs. It is unclear how the number of GPD was determined. In one case (667 GPD/2.5 EDUs = 266 GPD), 266 GPD seems to equal 1 EDU; in another (3384 GPD/13 EDUs = 260 GPD), 260 GPD seems to equal 1 EDU. Please specify the equivalent to 1 EDU is in GPD and revisit the calculations in this section to verify their accuracy.*

  The DEP-approved flow rate of an EDU has changed over the past couple years. The approved rate was 262.5 GPD/EDU at the time of Keystone Foods planning approval. The approved number of EDU's was rounded to the nearest 0.5 EDU's. The stated flows and EDU's are accurate and in accordance with DEP planning approvals. To clarify the different GPD/EDU rates in the Plan, a paragraph has been added at the beginning of Para B.2 that describes the rates. A sentence has also been added to each approved commercial project stating the flow rate upon which the number of approved EDU's was based.

- *Chapter IV, page IV-10 & IV-11, u, Coatesville Area School District – it is inadvisable to consider doubling the school's population simply based on a 50% water usage reduction gained by low consumption water fixtures. CCHD recommends that the Plan Draft take into account leaking fixtures which can add considerably to water usage and would be a likely event in a school environment.*

  The intent of the statement in the narrative was that the low consumption fixtures will allow for 130 additional people without having increased sewage flows. The narrative has been revised accordingly, and the statement regarding doubling the population has been deleted. Please note that the DEP has already granted planning approval and a permit for the proposed population at the new school as a sewage replacement of the existing school.

- *In general, it is a good idea to always include units of measurement (EDU, GPD, etc.) whenever mentioning numbers. There are a few instances, such as in IV-12 v. Remainder of Valley View Development (Lot 5) where the planned number of connections is not followed by the unit EDU.*

  The Plan has been revised accordingly throughout.

- *Chapter IV, page IV-13, w, Chester County Airport – the same amount of EDUs (111 EDUs) is listed in this section as is in u. CASD. The numbers seem to add up, but it seems coincidental that the same number EDUs would be projected. Please verify both numbers.*

  As suggested, the numbers were accurate, and it was merely coincidental that the number of EDU's was the same for both projects. Please note that CASD Tax Parcel 38-2-48 is no longer included in the projection for CASD. The parcel is now addressed separately in new Para ii. "Township Municipal Complex". As a result, the projected EDU's for the CASD have been revised and are no longer the same as that for the Airport.

- *Chapter IV, page IV-30, Table IV-3, Projected Sewage Flows for Growth Areas – this table uses 225 GPD = 1 EDU. This equivalent seems inconsistent with previous ones. Please explain why the equivalent is different or make the equivalents consistent within the Plan Draft.*

  All future connections, including remaining connections in developments that are currently under construction, use a rate of 225 GPD/EDU in the Plan projections. This includes Planned Developments (refer to Table IV-2), Growth Areas (refer to Table IV-3), and Unsewered Residences & Businesses. Tables IV-4 and IV-5 provide a summation of future connections at that same rate. As mentioned in a previous comment response, the DEP-approved flow rate of an EDU has changed over the past couple years. A number of developments currently approved and/or under construction, such as Oakcrest, Valley Suburban Center, Valley Farm, and Keystone Foods, received DEP planning approval based upon 262.5 GPD/EDU. More recently approved developments such as London Tract and Robinson Avenue & Oaklyn Lane received DEP planning approval based upon 225 GPD/EDU. At the time of preparation of this Plan, the DEP approved rate for areas tributary to the PAWC Treatment Plant is 225 GPD/EDU. That is also the rate that is used in PAWC's January 2008 CMP (and prior CMP's). To be consistent with DEP approvals and PAWC, this Plan consistently utilizes a rate of 225 GPD/EDU for all projections (refer to Table N-2).

- *Chapter V, page V-5, E, Retaining Tanks – it is suggested that the terms 'retaining tank systems' and 'holding tanks' be reversed and the title of E be changed to 'Holding Tanks'. A holding tank is only one of several types of retaining tanks. So from a technical point of*

view, it is correct to write 'Holding tanks are retaining tanks that are pumped'... An analogy would be "All trout are fish, but not all fish are trout." Holding tanks being the trout, retaining tanks being the fish.

The title has been revised to 'Holding (Retaining) Tanks', and the first sentence has been revised as suggested.

- *Valley Township Ordinance, Section 405. Inspections by Valley Township – '...Should that inspection reveal a regulatory malfunction or sewage violation (sewage backing up into the structure,...'*
  Please remember that sewage back up into a structure does not necessarily constitute a regulatory malfunction. The cause could be a plumbing problem such as a blockage in the pipes leading from the toilet fixture.

  Acknowledged. Please note that the ordinance included with this Draft Plan was a draft. The ordinance has since been adopted by Valley Township, and the adopted ordinance section does not refer to "sewage violations (sewage backing up in the structure)". The adopted ordinance section states "Should said inspections reveal that the system is indeed malfunctioning,...".

Review of Valley Township Ordinance by Ralph DeFazio

Valley Township has acknowledged the comments provided by Mr. DeFazio on the On-Lot Sewage Management Program ordinance. As discussed with Mr. DeFazio, the ordinance was adopted by the Township as originally written, but the Township intends to incorporate his comments via future amendment to the ordinance.

We thank you for your feedback on the Act 537 Base Plan Update. An adopted copy of the Plan will be provided to your office following approval by the DEP.

If you have any questions or need additional information, please call Mike Ellis in my office.

Very Truly Yours,

Edward F. Rasiul. P.E., P.L.S.
Associate Vice President
PENNONI ASSOCIATE INC.
Township Engineer

/mje

cc: Valley Township Board of Supervisors
Valley Township Planning Commission
Karen E. Chandler, Valley Township Secretary
Ronald Bailey, Chester County Planning Commission
Gerry DeBalko, PAWC
Stan Corbett, URS

PUBLIC NOTICE & COMMENTS

Proof of Publication of Notice in the Daily Local News

Under Newspaper Advertising Act No. 587, Approved May 16, 1929

State of Pennsylvania
County of Chester {ss: {No. Term, 2008

Patricia Sigda, Legal Representative of the Daily Local News Company, a corporation, of the County and State aforesaid, being duly affirmed, deposes and says that the Daily Local News, a newspaper of general circulation, published at 250 N. Bradford, Ave., West Chester, PA, County and State aforesaid, was established November 19, 1872, and Incorporated December 11, 1911, since which date the Daily Local News has been in said county, and that the printed notice or publication attached hereto is exactly the same as shed in the regular editions and issues of the said Daily Local News on the following dates viz:

August 8 **A.D. 2008**

poses that he/she is the proper person duly authorized by the Daily Local News Company, a lishers of said Daily Local News, a newspaper of general circulation, to verify the foregoing oath, and that affiant is not interested in the subject matter of the aforesaid notice or nd that all allegations in the foregoing statements as to time, place and character of publication

NOTICE OR PUBLICATION

affirmed to and subscribed before me this 8

day of August 2008

Notary Public

My Commission Expires:
Notarial Seal
Beverly A. Wolfe, Notary Public
East Bradford Twp., Chester County
My Commission Expires June 4th, 2009
Member, Pennsylvania Association of Notaries

Valley Township

Attn: Karen Chandler, Secretary/Treasurer

P.O. Box 467

Coatesville, PA 19320

To DAILY LOCAL NEWS COMPANY, Dr.
For publishing the notice or publication attached
hereto on the above stated dates .....$
Probating same .....$
Total .....$

PUBLIC NOTICE
for
VALLEY TOWNSHIP ACT 537
OFFICIAL SEWAGE FACILITIES
PLAN UPDATE

A revision to Valley Township's Official Sewage Facilities Plan is available for a 30-calendar day public review and comment period, during the hours of 9:00 AM to 3:00 PM weekdays, Township holidays excluded, beginning August 11, 2008 and ending September 10, 2008, at the Valley Township Building, 890 W. Lincoln Highway, Coatesville, PA.

The major structural and non-structural alternatives considered in the revision for both new developments and existing unsewered properties are:
- Extension of the existing sanitary sewer system
- New regional treatment facility
- Small flow (community) treatment systems and land disposal
- Individual disposal systems
- Holding tanks
- Sewage management programs
- I&I reduction program
- Comprehensive planning
- No action (status quo)

The revision recommends ultimately extending sanitary sewer throughout the entire Township. As such, the entire Township is proposed to become part of the tributary sewer service area to Pennsylvania American Water Company's Wastewater Treatment Plant in South Coatesville. Sewage projections for undeveloped and unsewered tracts in the Township are established.

The revision addresses the following on-lot subsurface sewage disposal problem areas, in addition to others that are currently being sewered: Valley Station Road, the Northview Heights area, the south side of Lincoln Highway at the western side of the Township, Brick Street, and the Rainbow neighborhood. The Plan proposes ultimately extending sanitary sewer to service these areas, but generally no extensions are being immediately pursued.

The revision recommends implementation of the Sewage Management Program for on lot sewage disposal systems as contained in the adopted ordinance titled "An Ordinance Providing for a Sewage Management Program for Valley Township". Valley Township will determine the funding method for implementation of the Program and may assess fees to on lot disposal system owners to cover the costs associated with the Program.

The revision also recommends that Valley Township evaluate the need for a full-time operation and maintenance crew for the Township's sanitary sewer system, perform annual evaluations of sanitary sewer user fees, re-establish focus on an inflow and infiltration reduction program, and modify the Zoning Ordinance to comply with the Township's Comprehensive Plan.

All comments shall be in writing and addressed to Karen Chandler, Secretary, Valley Township, P.O. Box 467, Coatesville, PA 19320 no later than the close of business on September 10, 2008.

Publisher's Receipt for Advertising Costs

cal News Company, a corporation, publishers of the Daily Local News, a newspaper of general
/ acknowledges receipt of the aforesaid notice and publication costs and certifies that the same has been duly paid.

IEWS, a Corporation, Publishers of the DAILY LOCAL NEWS, a newspaper of General Circulation.

Valley Township

Amended Appendix A-22-b

BOARD OF SUPERVISORS

Board Members
Patrice Proctor, Chairwoman
Walter P. Johnson, Vice-chair
Yolanda R. Beattie
Edward Hammond
Christopher Lehenky

890 W. Lincoln Highway
P.O. Box 467
Coatesville, PA. 19320
(610)384-5751 FAX(610)384-2746
Karen Chandler, Sec./Tres.

September 22, 2008

PA Department of Environmental Protection
Sewage Planning Specialist
2 East Main St.
Norristown, PA 19401

RE: Valley Township 537 plan
Public Comments

Dear Sewer planning specialist:

The Valley Township 537 plan was advertised in the daily local and was available for review in the Township for public inspection and comment from August 11, 2008 to September 11, 2008. The Township did not receive any written public comments regarding the Township 537 plan.

Sincerely,

Karen E. Chandler
Secretary/Treasurer

cc: Board of Supervisors
Ed Rasiul, Pennoni

APPENDIX R

RESOLUTION ADOPTING THE PLAN

Amended Appendix A-22-b

RESOLUTION FOR PLAN REVISION

RESOLUTION OF THE SUPERVISORS OF VALLEY TOWNSHIP, CHESTER COUNTY, PENNSYLVANIA (hereinafter "the municipality").

WHEREAS, Section 5 of the Act of January 24, 1966, P.L. 1535, No. 537, known as the "Pennsylvania Sewage Facilities Act", as amended, and the Rules and Regulations of the Department of Environmental Protection (Department) adopted thereunder, Chapter 71 of Title 25 of the **Pennsylvania Code**, requires the municipality to adopt an Official Sewage Facilities Plan providing for sewage services adequate to prevent contamination of waters and/or environmental health hazards from sewage wastes, and to revise said plan whenever it is necessary to meet the sewage disposal needs of the municipality, and

WHEREAS Pennoni Associates, Inc., Township Engineer has prepared an Act 537 Official Sewage Facilities Plan, which provides for sewage facilities in a portion of Valley Township, and

The alternative of choice to be implemented is sewering the entire municipality with Township sanitary sewers with treatment at the Pennsylvania-American Water Company Treatment Plant.
The key implementation activities/dates include evaluation of a full-time operation and maintenance crew for the municipality's sanitary sewer system within one (1) year of DEP approval of the Facility Plan; implementation of the Sewage Management Program for onlot sewage disposal systems within one (1) year of DEP approval of the Facility Plan; evaluation of sanitary sewer user fees on an annual basis; and modification and adoption of revisions to the Valley Township Zoning Ordinance for compliance with the Township's Comprehensive Plan within two (2) years of DEP approval of the Facility Plan.

WHEREAS, Valley Township finds that the Facility Plan described above conforms to applicable zoning, subdivision, other municipal ordinances and plans and to a comprehensive program of pollution control and water quality management. .

NOW, THEREFORE, BE IT RESOLVED that the Supervisors of the Township of Valley hereby adopt and submit to the Department of Environmental Protection for its approval as a revision to the "Official Plan" of the municipality, the above referenced Facility Plan. The municipality hereby assures the Department of the complete and timely implementation of the said plan as required by law. (Section 5, Pennsylvania Sewage Facilities Act as amended).

I, Karen E. Chandler, Secretary, Valley Township Board of Supervisors, hereby certify that the foregoing is a true copy of the Township's Resolution No. 2008-12, adopted, September 16, 2008.

AUTHORIZED SIGNATURE

Patricia L Preston

TOWNSHIP SEAL

VALLEY TOWNSHIP

AERIAL MAP

APPROXIMATE SCALE: 1" = 800'
(DO NOT SCALE FROM DRAWING)

PROJECT NO.: VLTW 0605	DATE: 9-24-07
SOURCES: – CHESTER COUNTY GIS DEPARTMENT	

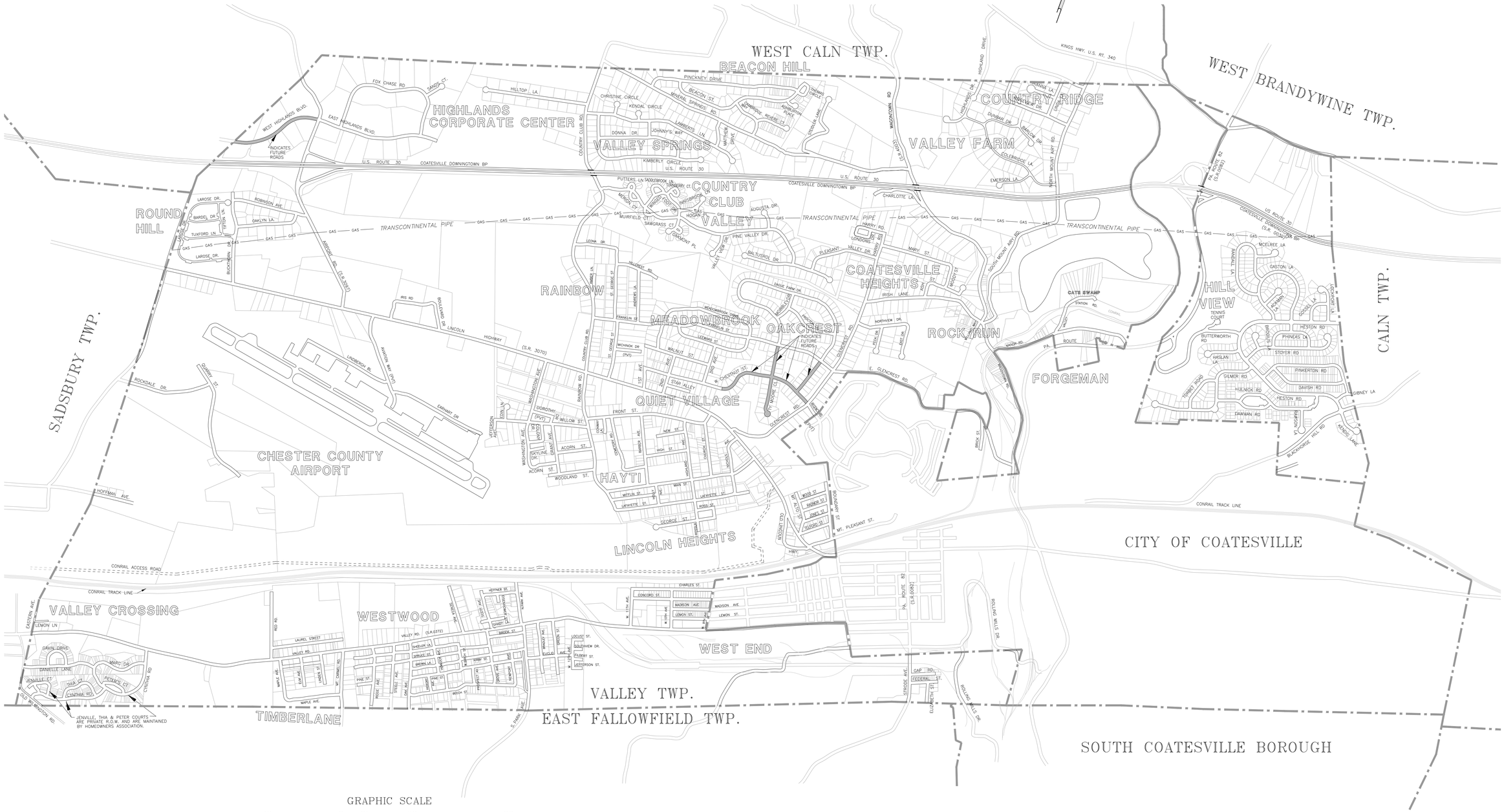
VALLEY TOWNSHIP ACT 537 PLAN
VALLEY TOWNSHIP – CHESTER COUNTY – PENNSYLVANIA

AERIAL MAP | EXHIBIT 2-1

Pennoni
Engineers • Surveyors • Planners • Landscape Architects
Pennoni Associates Inc.
62 Rockford Road – Suite 201
Wilmington, Delaware 19806
Tel: (302) 655-4451 Fax: (302) 654-2895

VALLEY TOWNSHIP

ROADS MAP



GRAPHIC SCALE

800 0 400 800 1600 3200

(IN FEET)
1 inch = 800 ft.

VALLEY TOWNSHIP ACT 537 PLAN	
VALLEY TOWNSHIP – CHESTER COUNTY – PENNSYLVANIA	
ROADS MAP	EXHIBIT 2–2

Revised 1–3–08

PROJECT NO.:	DATE
VLTW 0605	9–24–07

Pennoni Associates Inc.
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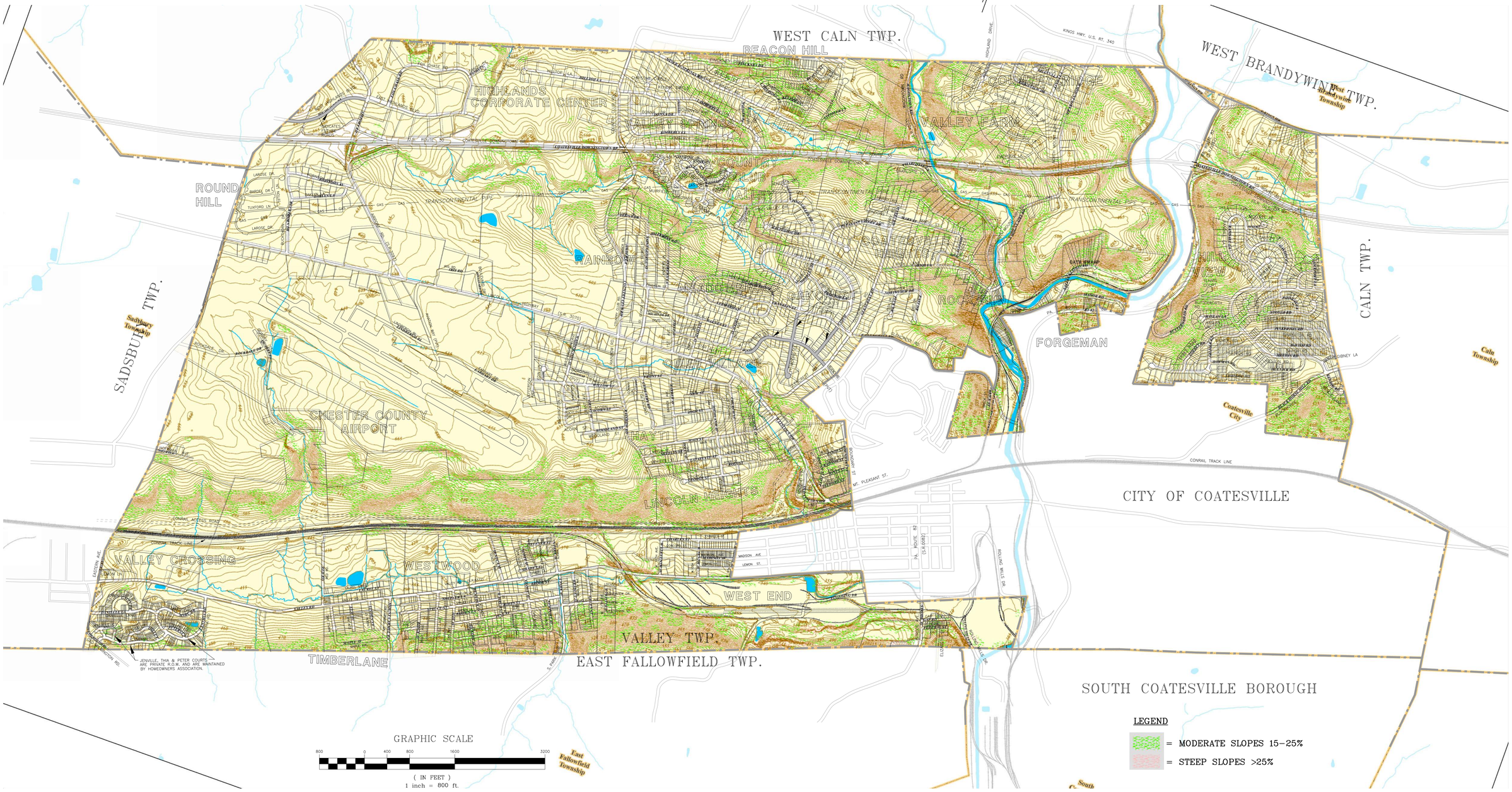
Wilmington, Delaware 19806
Tel: (302) 655–4451 Fax: (302) 654–2895

VALLEY TOWNSHIP

TOPOGRAPHY MAP



Revised 1-3-08

PROJECT NO.:	DATE
VLTW 0605	9-24-07

SOURCES:
- CHESTER COUNTY GIS DEPARTMENT

VALLEY TOWNSHIP ACT 537 PLAN
VALLEY TOWNSHIP - CHESTER COUNTY - PENNSYLVANIA

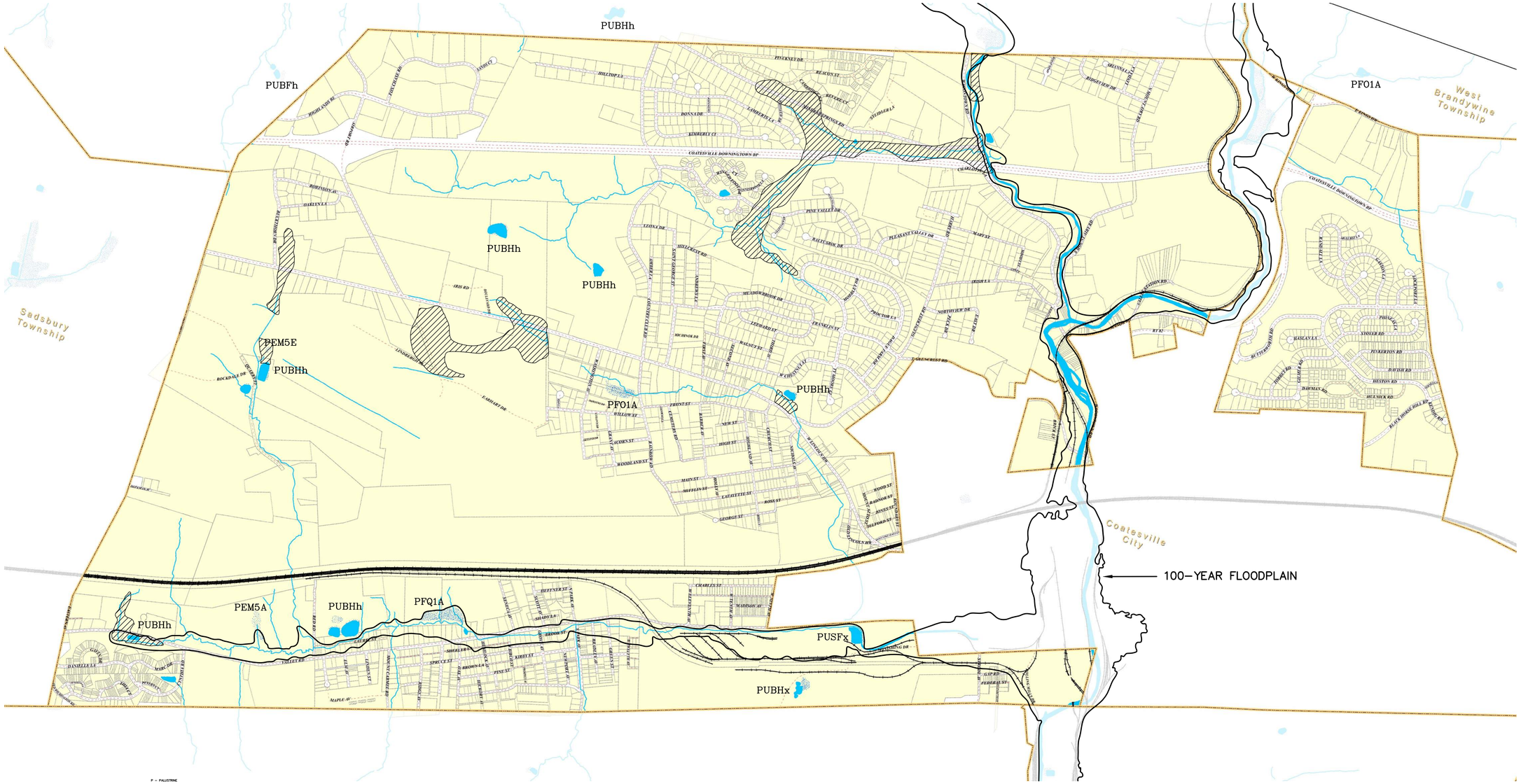
TOPOGRAPHY MAP | EXHIBIT 2-3

Pennoni Associates Inc.
Engineers • Surveyors • Planners • Landscape Architects
62 Rockford Road - Suite 201
Wilmington, Delaware 19806
Tel: (302) 655-4451 Fax: (302) 654-2895

VALLEY TOWNSHIP

HYDROLOGY MAP

Pennoni



Legend

- ▨ Hydric Soils
- —— 100–Year Floodplain
- Rivers & Streams
- Road Centerlines
- Railroads
- Ponds & Lakes
- Wetlands
- Parcel Boundaries
- Municipal Boundaries

Feet
0 700 1,400 2,100 2,800 3,500

ECOLOGICAL SYSTEM P – PALUSTRINE

NO SUBSYSTEM									
CLASS	RB ROCK BOTTOM	UB UNCONSOLIDATED BOTTOM	AB AQUATIC BED	FL FLAT	ML MOSS, LICHEN	EM EMERGENT	SS SCRUB/SHRUB	FO FORESTED	OW OPEN WATER
SUBCLASS	1 BEDROCK 2 BOULDER	1 COBBLE/GRAVEL 2 SAND 3 MUD 4 ORGANIC	1 SUBMERGENT ALGAL 2 SUBMERGENT VASCULAR 3 SUBMERGENT MOSS 4 FLOATING LEAVED 5 FLOATING 6 UNKNOWN SUBMERGENT 7 UNKNOWN SURFACE	1 COBBLE/GRAVEL 2 SAND 3 MUD 4 ORGANIC 5 VEGETATED PIONEER 6 VEGETATED NON–PIONEER	1 MOSS 2 LICHEN	1 PERSISTENT 2 NON PERSISTENT 3 NARROW–LEAVED NON PERSISTENT 4 BROAD–LEAVED NON PERSISTENT 5 NARROW–LEAVED PERSISTENT 6 BROAD–LEAVED PERSISTENT	1 BROAD–LEAVED DECIDUOUS 2 NEEDLE_LEAVED DECIDUOUS 3 BROAD–LEAVED EVERGREEN 4 NEEDLE–LEAVED EVERGREEN 5 DEAD 6 DECIDUOUS 7 EVERGREEN	1 BROAD–LEAVED DECIDUOUS 2 NEEDLE_LEAVED DECIDUOUS 3 BROAD–LEAVED EVERGREEN 4 NEEDLE–LEAVED EVERGREEN 5 DEAD 6 DECIDUOUS 7 EVERGREEN	UNKNOWN BOTTOM

SYSTEM R – RIVERINE

ECOLOGICAL SUBSYSTEM	1–TIDAL	2–LOWER PERENNIAL		3–UPPER PERENNIAL		4–INTERMITTENT			5–UNKNOWN PERENNIAL
CLASS	EM EMERGENT (1)	RB ROCK BOTTOM	UB UNCONSOLIDATED BOTTOM	AB AQUATIC BED	FL FLAT	SB STREAMBED	RS ROCKY SHORE	BB BEACH/BAR	OW OPEN WATER UNKNOWN BOTTOM
SUBCLASS	2 NON PERSISTENT 3 NARROW–LEAVED NON PERSISTENT 4 BROAD–LEAVED NON PERSISTENT	1 BEDROCK 2 BOULDER	1 COBBLE/GRAVEL 2 SAND 3 MUD 4 ORGANIC	1 SUBMERGENT ALGAL 2 SUBMERGENT VASCULAR 3 SUBMERGENT MOSS 4 FLOATING LEAVED 5 FLOATING 6 UNKNOWN SUBMERGENT 7 UNKNOWN SURFACE	1 COBBLE/GRAVEL 2 SAND 3 MUD 4 ORGANIC 5 VEGETATED PIONEER 6 VEGETATED NON–PIONEER	1 COBBLE/GRAVEL 2 SAND 3 MUD 4 ORGANIC	1 BEDROCK 2 BOULDER	1 COBBLE/GRAVEL 2 SAND	

MODIFYING TERMS

In order to more adequately describe wetland and aquatic habitats one or more of the water regime, water chemistry soil, or special modifiers may be applied at the class or lower level in the hierarchy. The farmed modifier may also be applied to the ecological system

WATER REGIME (1)				WATER CHEMISTRY			SOIL	SPECIAL MODIFIERS	
NON–TIDAL		TIDAL		COASTAL SALINITY	INLAND SALINITY	pH MODIFIERS for all FRESH WATER			
A–TEMPORARY B–SATURATED C–SEASONAL D–SEASONAL WELL DRAINED E–SEASONAL SATURATED F–SEMIPERMANENT G–INTERMITTENTLY EXPOSED	H–PERMANENT J–INTERMITTENTLY FLOODED K–ARTIFICIAL Z–INTERMITTENTLY EXPOSED PERMANENT W–INTERMITTENTLY FLOODED TEMPORARY Y–SATURATED SEMIPERMANENT SEASONALS U–UNKNOWN	K–ARTIFICIAL L–SUBTIDAL M–IRREGULARLY EXPOSED N–REGULAR P–IRREGULAR	R–SEASONAL TIDAL S–TEMPORARY TIDAL T–SEMIPERMANENT TIDAL V–PERMANENT TIDAL U–UNKNOWN	1 HYPERHALINE 2 EUHALINE 3 MIXOHALINE (BRACKISH) 4 POLYHALINE 5 MESOHALINE 6 OLIGOHALINE 0 FRESH	7 HYPERSALINE 8 EUSALINE 9 MIXOSALE 0 FRESH	a–ACID CIRCUMNEUTRAL ALKALINE	g–ORGANIC n–MINERAL	b–BEAVER d–PARTIALLY DRAINED DITCHED f–FARMED	h–DUKED/IMPOUNDED t–ARTIFICIAL s–SPOIL z–EXCAVATED

(1) Information on the water regime modifiers found on this legend but not found in the classification system may be obtained from the above listed source

PROJECT NO.:	DATE
VLTW 0605	9–24–07

SOURCES:
- CHESTER COUNTY GIS DEPARTMENT
- NATIONAL WETLAND INVENTORY MAP
- FLOODPLAINS FROM 6/29/06 FEMA FLOOD INSURANCE RATE MAPS

VALLEY TOWNSHIP ACT 537 PLAN

VALLEY TOWNSHIP – CHESTER COUNTY – PENNSYLVANIA

HYDROLOGY MAP

EXHIBIT 2–4

Pennoni Associates Inc.
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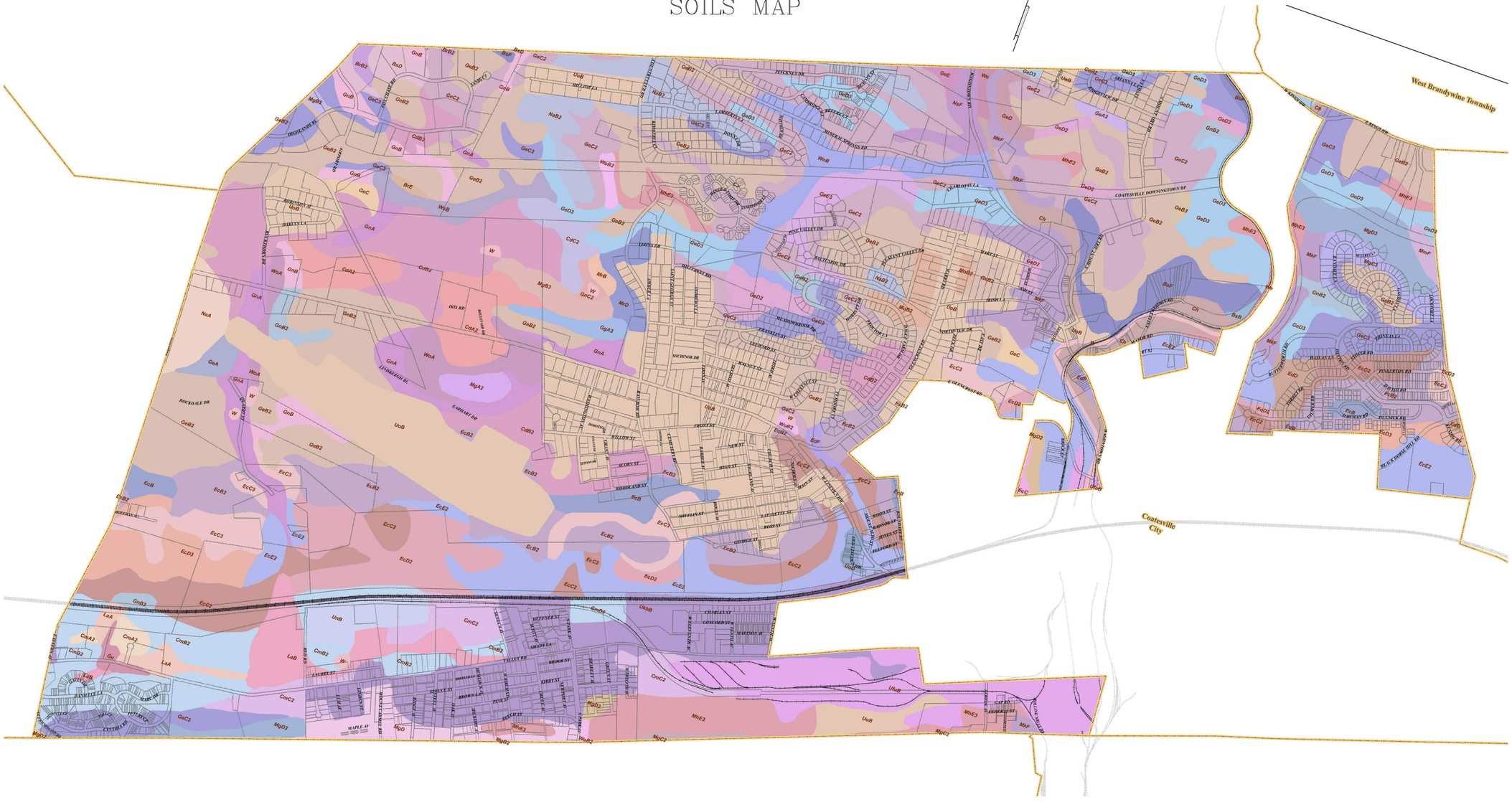
62 Rockford Road – Suite 201
Wilmington, Delaware 19806
Tel: (302) 655–4451 Fax: (302) 654–2895

VALLEY TOWNSHIP

SOILS MAP



Legend

- Road Centerlines
- Railroads
- Municipal Boundaries
- Parcel Boundaries

Soils

BrB2
BrE
BsB
BsD
BsF
CdA2
CdB2
CdC2
Ch
CmA2
CmB2
CmC2
EcB
EcB2
EcC
EcC2
EcC3
EcD2
EcD3
EcE2
EdB
EdD
EdF
GeA
GeA2
GeB2
GeB3
GeC
GeC2
GeC3
GeD
GeD2
GeD3
GeE
GeE3
GgA3
GnA
GnB
GnB2
GnC2
Gu
LaA
LaB
MgA2
MgB2
MgB3
MgC2
MgC3
MgD
MgD2
MgD3
MhE3
MkF
MmF
MoB2
MrB
MrD
NaA
NaB2
NsF
UfuB
UkbB
UnB
UoB
UoD
W
We
WoA
WoB
WoB2
WsB

0 700 1,400 2,100 2,800 3,500 4,200 4,900 Feet

VALLEY TOWNSHIP ACT 537 PLAN
VALLEY TOWNSHIP – CHESTER COUNTY – PENNSYLVANIA

PROJECT NO.: VLTW 0605
DATE 9-24-07
SOURCES:
– CHESTER COUNTY GIS DEPARTMENT

SOILS MAP

EXHIBIT 2-5

Pennoni Associates Inc.
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VALLEY TOWNSHIP

UNSUITABLE SOILS

GRAPHIC SCALE

800 0 400 800 1600 3200

(IN FEET)
1 inch = 800 ft.

LEGEND

= UNSUITABLE ONLOT SOILS

Revised 1-3-08

PROJECT NO:	DATE
VLTW 0605	9-24-07

SOURCES:
- SOIL DELINEATIONS FROM CHESTER CO. GIS DEPARTMENT
- UNSUITABLE & HYDRIC SOILS FROM NRCS WEB SOIL SURVEY

VALLEY TOWNSHIP ACT 537 PLAN
VALLEY TOWNSHIP - CHESTER COUNTY - PENNSYLVANIA

UNSUITABLE SOILS

EXHIBIT 2-6

Pennoni Associates Inc.
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Tel: (302) 655-4451 Fax: (302) 654-2985

VALLEY TOWNSHIP

PRIME AGRICULTURAL SOILS

GRAPHIC SCALE

800 0 400 800 1600 3200

(IN FEET)
1 inch = 800 ft.

LEGEND

= PRIME AGRICULTURAL SOILS

Revised 1-3-08

PROJECT NO.:	DATE
VLTW 0605	2-15-07

SOURCES:
- CHESTER COUNTY PLANNING COMMISSION MAP SERIES "PRIME AGRICULTURAL SERIES"

VALLEY TOWNSHIP ACT 537 PLAN
VALLEY TOWNSHIP - CHESTER COUNTY - PENNSYLVANIA

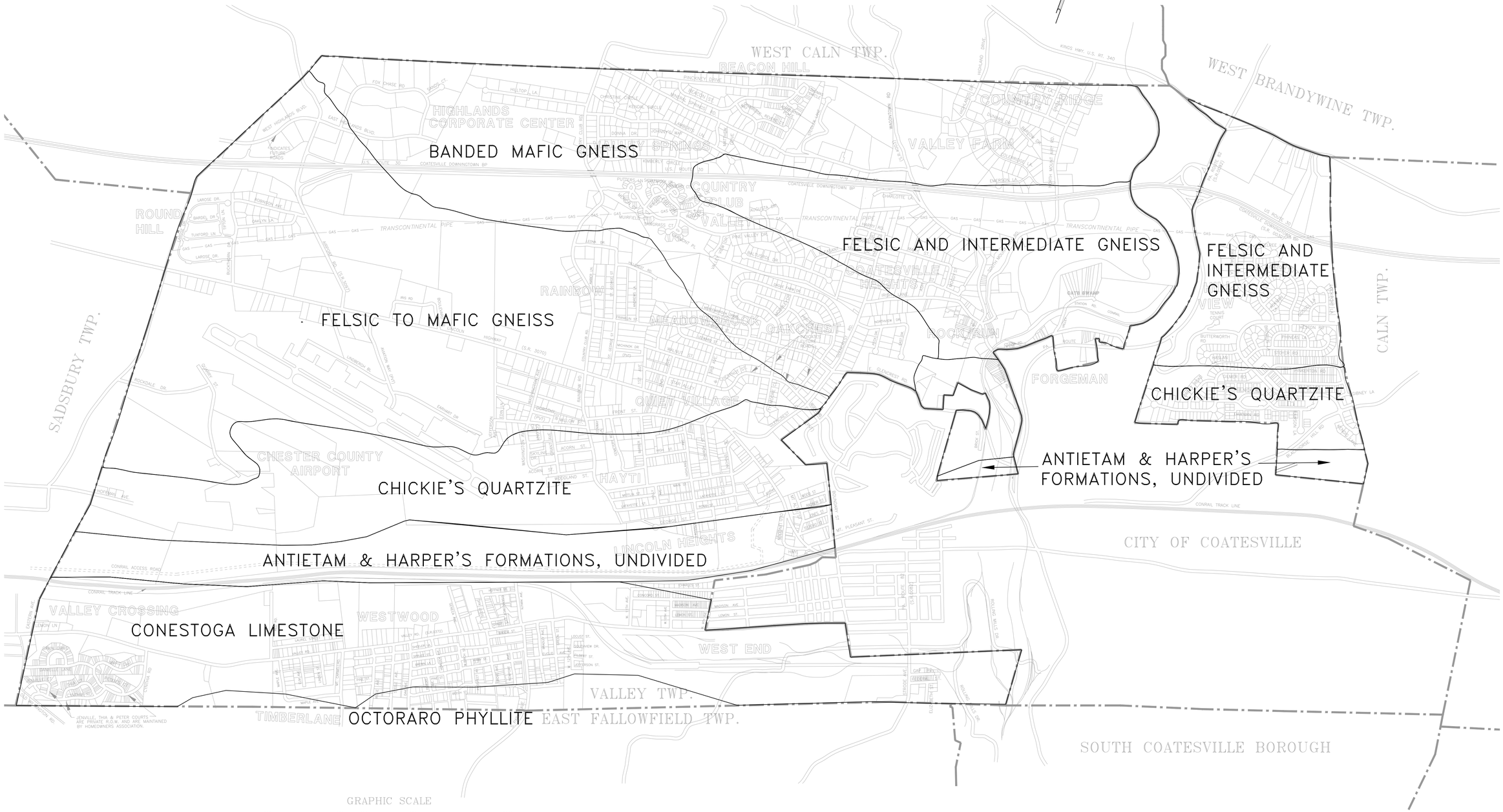
PRIME AGRICULTURAL SOILS

EXHIBIT 2-7

Pennoni Associates Inc.
Engineers • Surveyors • Planners • Landscape Architects
62 Rockford Road – Suite 201
Wilmington, Delaware 19806
Tel: (302) 655-4451 Fax: (302) 654-2895

VALLEY TOWNSHIP

GEOLOGY MAP



GRAPHIC SCALE

800 0 400 800 1600 3200

(IN FEET)

1 inch = 800 ft.

Revised 1-3-08

PROJECT NO.:	DATE
VLTW 0605	9-24-07

SOURCES:
- CHESTER COUNTY PLANNING COMMISSION MAP SERIES "GEOLOGIC FORMATIONS"

VALLEY TOWNSHIP ACT 537 PLAN

VALLEY TOWNSHIP - CHESTER COUNTY - PENNSYLVANIA

GEOLOGY MAP

EXHIBIT 2-8

Pennoni Associates Inc.
Engineers • Surveyors • Planners • Landscape Architects
62 Rockford Road - Suite 201
Wilmington, Delaware 19806
Tel: (302) 655-4451 Fax: (302) 654-2885

VALLEY TOWNSHIP

WATER SYSTEM

Pennoni

WEST CALN TWP.

WEST BRANDYWINE TWP.

SADSBURY TWP.

CALN TWP.

CITY OF COATESVILLE

LINCOLN HEIGHTS

VALLEY TWP.

EAST FALLOWFIELD TWP.

SOUTH COATESVILLE BOROUGH

BEACON HILL

HIGHLANDS CORPORATE CENTER

VALLEY SPRINGS

COUNTRY RIDGE

VALLEY FARM

ROUND HILL

COUNTRY CLUB VALLEY

RAINBOW

COATESVILLE HEIGHTS

OAKCREST

ROCK RUN

FORGEMAN

HILL VIEW

CHESTER COUNTY AIRPORT

QUIET VILLAGE

HAYTI

VALLEY CROSSING

WESTWOOD

TIMBERLANE

WEST END

VALLEY SPRINGS - PUMP HOUSE
WUDS-18480

128 LOT SUBDIVISION

139 LOT SUBDIVISION

167 LOT SUBDIVISION

WUDS 18515 PWSFID 57143

AIRPORT RD. METER

AIRPORT SERVICE METER

OASIS METER

INTERCONNECT WATER LINE

150,000 GAL. STORAGE TANK
WUDS 18480 PWSFID 13417

METER & CONTROL PIT w/ PRV

FUTURE METER

HILLVIEW - METER
WUDS 18515 PWSFID 57203

RED ROAD METER

WUDS-18515 PWSFID 43594

7 LOT SUBDIVISION

MT. PLEASANT ST. - METER
WUDS 18515 PWSFID 57205

JENVILLE, THIA & PETER COURTS ARE PRIVATE R.O.W. AND ARE MAINTAINED BY HOMEOWNERS ASSOCIATION.

STRASBURG SUBDIVISION CONNECTED VIA 12" MAIN OWNED BY VALLEY TWP. METERED DIRECTLY BY PAWC

GRAPHIC SCALE

800 0 400 800 1600 3200

(IN FEET)
1 inch = 800 ft.

LEGEND

- 12"W — 12 INCH WATER MAIN
- VALVE BOX
- HV-10 — HYDRANT & VALVE BOX
- PRESSURE REDUCING VALVE
- REDUCER
- WATER METER W/ SIZE DESIGNATION
- PENNSYLVANIA AMERICAN WATER COMPANY (PAWC) SERVICE AREA
- MUNICIPAL BOUNDARY

NOTES:

1. ALL WATER MAINS ARE 8 INCH UNLESS NOTED OTHERWISE
2. ALL HYDRANT CONNECTIONS ARE 6 INCH UNLESS NOTED OTHERWISE
3. ALL HOMES NOT SERVICED BY PAWC OR VALLEY TOWNSHIP HAVE INDIVIDUAL ON-LOT WATER WELLS.

Revised 4-8-09
Revised 7-1-08
Revised 1-3-08

PROJECT NO.:	DATE
VLTW 0605	9-24-07

VALLEY TOWNSHIP ACT 537 PLAN

VALLEY TOWNSHIP – CHESTER COUNTY – PENNSYLVANIA

WATER SYSTEM

EXHIBIT 2-9

Pennoni Associates Inc.
Engineers • Surveyors • Planners • Landscape Architects
62 Rockford Road – Suite 201
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VALLEY TOWNSHIP

EXISTING SANITARY SEWER FACILITIES

Pennoni

RAINBOW NEIGHBORHOOD

HIGHLANDS CORP. CTR. PUMP STATION #2 150 GPM PERMITTED PEAK FLOW

HIGHLANDS CORP. CTR. PUMP STATION #1 150 GPM PERMITTED PEAK FLOW

COATESVILLE COUNTRY CLUB PUMP STATION 50 GPM PERMITTED PEAK FLOW

COUNTRY RIDGE PUMP STATION 65 GPM PERMITTED PEAK FLOW

N. MOUNT AIRY ROAD

S. MOUNT AIRY ROAD

VALLEY STATION ROAD

ROUND HILL PUMP STATION #1 132 GPM PERMITTED PEAK FLOW

ROBINSON AVENUE & OAKLYN LANE

ROUND HILL PUMP STATION #2 34 GPM PERMITTED PEAK FLOW

WEST END OF LINCOLN HIGHWAY

HILLVIEW PUMP STATION 220 GPM PERMITTED PEAK FLOW

AIRPORT PUMP STATION

ROCK RUN PUMP STATION METER #3 ROCK RUN-FLOWS 650 GPM PERMITTED PEAK FLOW

NORTHVIEW, PECK & EAST DRIVES

BRICK STREET

GLENCREST ROAD

CHARLES STREET METER PIT #2 HAYTI BASIN FLOWS

VALLEY ROAD METER PIT #1 WESTWOOD BASIN FLOWS

CCA SEWAGE TREATMENT PLANT

JENVILLE, THIA & PETER COURTS ARE PRIVATE R.O.W. AND ARE MAINTAINED BY HOMEOWNERS ASSOCIATION.

INDICATES FUTURE ROADS

WEST BRANDYWINE TWP.

CALN TWP.

SADSBURY TWP.

VALLEY TWP.

EAST FALLOWFIELD TWP.

CITY OF COATESVILLE

SOUTH COATESVILLE BOROUGH

WEST CALN TWP.

CONRAIL TRACK LINE

CONRAIL ACCESS ROAD

U.S. ROUTE 30

COATESVILLE DOWNINGTOWN BP

TRANSCONTINENTAL PIPE

GAS

ROCK RUN BASIN

HAYTI BASIN

WESTWOOD BASIN

BEACON HILL

HIGHLANDS CORPORATE CENTER

VALLEY SPRINGS

COUNTRY CLUB VALLEY

COUNTRY RIDGE

VALLEY FARM

ROUND HILL

RAINBOW

MEADOWBROOK

OAKCREST

ROCK RUN

COATESVILLE HEIGHTS

FORGEMAN

HILL VIEW

CHESTER COUNTY AIRPORT

HAYTI

LINCOLN HEIGHTS

WEST END

VALLEY CROSSING

WESTWOOD

TIMBERLANE

GRAPHIC SCALE

800 0 400 800 1600 3200

(IN FEET)
1 inch = 800 ft.

LEGEND

EXISTING SANITARY SEWER SERVICE AREA

HIGH RISK ONLOT SYSTEM AREAS IDENTIFIED IN 2000 ACT 537 PLAN

Revised 1-3-08

PROJECT NO.:	DATE
VLTW 0605	9-24-07

VALLEY TOWNSHIP ACT 537 PLAN

VALLEY TOWNSHIP – CHESTER COUNTY – PENNSYLVANIA

EXISTING SANITARY SEWER FACILITIES

EXHIBIT 3-1

Engineers • Surveyors • Planners • Landscape Architects

Pennoni Associates Inc.

62 Rockford Road – Suite 201
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VALLEY TOWNSHIP

PLANNED DEVELOPMENT & FUTURE GROWTH AREAS

Pennoni

KOENIG SUBDIVISION

HIGHLANDS CORPORATE CENTER PHASES I & II

COATESVILLE AREA SCHOOL DISTRICT

HIGHLANDS CORPORATE CENTER PHASE III

SAUNDERS LOT

WAGONTOWN ROAD / MINERAL SPRINGS AREA

LONDON TRACT

VALLEY FARM & MOUNT AIRY RD

AIRPORT ROAD – RT. 30 BYPASS AREA

TOWNSHIP MUNICIPAL COMPLEX

HEAGY TRACT

RAINBOW NEIGHBORHOOD

VALLEY FARM ASSOC. MIN SPRINGS / WAGONTOWN PROPERTY

CITY OF COATESVILLE TRACTS

VALLEY SUBURBAN CENTER

NORTHEAST CORNER

BUCKTHORN DRIVE AREA

ROUND HILL AND ROBINSON & OAKLYN

CONCERN

WEST END LINCOLN HIGHWAY

LAURENCE PROFESSIONAL CENTER

AIRPORT

AIRPORT AREA

VALLEY VIEW

RAILROAD AREA TRACTS

SOUTHWEST AREA

ZARELLI APARTMENT BUILDING

WRIGHT–ELLSWORTH PROPERTIES

TOMASKI SUBDIVISION

MOLES/BEECH STREET SUBDIVISION

JOHN WOODWARD LOT

WOODLAND POINTE

WEST END NEIGHBORHOOD

OLINICK LOT

LAMBERT SUBDIVISION

HILLVIEW

WAGONTOWN / S. MT. AIRY ROAD AREA

ROUTE 82 AREA

MIDDLETON SUBDIVISION

E. GLENCREST / NORTHVIEW DR. AREA

OAKCREST AND GLENCREST ROAD

GREEN TREES

OLD LINCOLN HIGHWAY

WEST CAIN TWP.

EAST BRANDYWINE TWP.

CAIN TWP.

SADSBURY TWP.

CITY OF COATESVILLE

SOUTH COATESVILLE BOROUGH

VALLEY TWP

EAST FALLOWFIELD TWP.

BEACON HILL

HIGHLANDS CORPORATE CENTER

VALLEY SPRINGS

COUNTRY CLUB

VALLEY

RAINBOW

MEADOWBROOK

OAKCREST

GLENCREST

COATESVILLE HEIGHTS

ROCKFLUM

FORGEMAN

COUNTRY RIDGE

VALLEY FARM

HILL VIEW

QUIET VILLAGE

HAYTI

LINCOLN HEIGHTS

WESTWOOD

WEST END

VALLEY CROSSING

TIMBERLANE

CHESTER COUNTY AIRPORT

TRANSCONTINENTAL PIPE

JENVILLE (AKA & PETER COURTS ARE PRIVATE R.O.W. AND ARE MAINTAINED BY HOMEOWNERS ASSOCIATION.

LEGEND

- 5 YEAR PLANNED DEVELOPMENTS
- 5 TO 10 YEAR PLANNED DEVELOPMENTS
- 10 TO 20+ YEAR UNPLANNED FUTURE DEVELOPMENT AREAS
- CAPPED SANITARY LANDFILL OWNED BY CITY OF COATESVILLE

* AREAS NOT COLORED TO INDICATE PLANNED DEVELOPMENTS OR FUTURE GROWTH ARE GENERALLY CURRENTLY ON PUBLIC SEWER (SEE EXHIBIT 3–1)

GRAPHIC SCALE

800 0 400 800 1600 3200

(IN FEET)

1 inch = 800 ft.

Revised 7–1–08
Revised 12–21–07

PROJECT NO.:	DATE
VLTW 0605	9–24–07

SOURCES:

VALLEY TOWNSHIP ACT 537 PLAN

VALLEY TOWNSHIP – CHESTER COUNTY – PENNSYLVANIA

PLANNED DEVELOPMENT & FUTURE GROWTH AREAS

EXHIBIT 4–1

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