

Appendix A:

DEP 2006 Act 537 Approval Letter



Pennsylvania Department of Environmental Protection

2 East Main Street
Norristown, PA 19401
January 26, 2006

RECEIVED
JAN 30 2006
URS CORPORATION

Southeast Regional Office

484-250-5970
Fax: 484-250-5971

Mr. Robert Layman, Manager
Westtown Township
P.O.Box 79
Westtown, PA 19395

Re: Act 537 Plan Update
Westtown-Chester Creek Study Area
APS Id. 28370; Auth. Id. 616698
Westtown Township
Chester County

Dear Mr. Layman:

We have completed our review of your municipality's updated official sewage facilities plan entitled "Westtown Township Act 537 Sewage Facilities Plan" as prepared by URS Corporation, dated May 2002 as amended by the document entitled "Westtown Township Act 537 Plan Addendum", dated March 2005, and as amended by additional information dated December 27, 2005. 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. The Westtown-Chester Creek Wastewater Treatment Facility will be expanded, via a rerate, to 629,250 gallons per day annual average, as outlined in Table III-3. According to your current annual average/maximum monthly ratio, your permit application may also request a monthly maximum number of 786,500 gallons per day.
2. Public sewers will be extended in phases into existing communities of the Westtown-Chester Creek Study Area utilizing an all gravity collection system with associated 13 pump stations to convey sewage to the Westtown-Chester Creek wastewater treatment facility. The details regarding the design of the entire collection/conveyance system will be provided as part of the Water Quality Management Part II permit applications. The aggregate design of the facilities must conform to the annual average capacities outlined in item 2 above, consistent with the Map III-1, submitted with the plan and dated February 3, 2005.

The location of these communities are provided on Map III-1, as prepared by URS Corporation, dated February 3, 2005. Map III-2, as prepared by URS Corporation, dated April 1, 2004, shows the following phases:

- a. Phase One (129,500 gpd) - Westtown Farms, West Wynn I, Grandview West, Grandview S.E. Butternut, and Grandview N.E. West Lynn.

- b. Phase Two (136,250 gpd) – Edgewood Chase, Avonlea, Cardinal Dr. East, Land Grant South, Plumly Farm, Kilduff Circle, Shiloh Hills, Carolyn Drive, and Hummingbird.
3. Westtown Township will implement a phased on-lot sewage management program as described on page VI-23 and in Table VI-5. Public education component of the program shall be implemented immediately for all property owners not part of Phase 1, outlined under item 2 above. Please forward your adopted ordinance consistent with the approved sewage management program.

The Township has committed to additional sewage facilities planning to address the following:

- A. Regarding the Route 202 Study Area, the Township will address proposed new connections from both existing neighborhoods and for new land development proposals;
- B. Regarding the West Goshen Study Area, the Township will address proposed new connections from both existing neighborhoods and for new land development proposals;

Consistent with the Township's March 2005 Chapter 94 Report, the Township is committed to continue with inflow and infiltration (I&I) reduction, targeting specific areas of the collection system annually. The Chapter 94 Report also indicates that I&I reduction will become an integral part of accomplishing Act 537 Plans. Please be advised that the Township must submit an Act 537 Plan of Study and Task Activity Report for any I&I activities related to Act 537 planning, if the Township intends to apply for planning reimbursement for I&I investigations. Please read carefully the enclosed guidance regarding eligible and ineligible costs for I&I studies associated with Act 537 planning.

If you have any questions, please contact John M. Venezia of this office.

Sincerely,



Jenifer L. Fields, P.E.
Regional Manager
Water Management

Enclosure: I&I guidance

cc: Chester County Planning Commission
Chester County Health Department
URS Corporation
Mr. Venezia
Ms. Moore
Ms. Grant
Planning Section
Re 30

Appendix B:

DEP/Westtown Township Consent Order and Agreement

**COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION**

In the Matter of:

Westtown Township	:	Submission of Act 537 Plan Update
1039 Wilmington Pike	:	Sewage Facilities Act
West Chester, PA 19382	:	Westtown Township
	:	Chester County

CONSENT ORDER AND AGREEMENT

This Consent Order and Agreement (“CO&A”) is entered into this 16th day of August 2011, by and between the Commonwealth of Pennsylvania, Department of Environmental Protection (hereinafter “Department”) and Westtown Township (hereinafter “Township”).

The Department has found and determined the following:

A. The Department is the agency with the duty and authority to administer and enforce the Pennsylvania Sewage Facilities Act, Act of January 24, 1966, P.L. 1535, as amended, 35 P.S. § 750.1 et. seq. (“Pennsylvania Sewage Facilities Act” or “Act 537”) and Section 1917-A of the Administrative Code of 1929, Act of April 9, 1929, P.L. 177, as amended, 71 P.S. § 510-17 (“Administrative Code”), and the rules and regulations promulgated thereunder.

B. The Township is a municipality located within the County of Chester that exists under the laws of the Commonwealth of Pennsylvania and maintains its offices at 1039 Wilmington Pike, West Chester, Pennsylvania 19382 and has a mailing address of P.O. Box 79, Westtown, Pennsylvania 19395-0079. The Township is considered a “municipality” as that term is defined in Section 2 of the Pennsylvania Sewage Facilities Act, 35 P.S. § 750.2.

C. Section 5(a) of the Sewage Facilities Act, 35 P.S. § 750.5(a), requires each municipality to submit to the Department an official plan for sewage services (“Act 537 Plan” or “sewage facilities plan”), for areas within its jurisdiction and revise such plan, as required by law or order of the Department.

D. Section 10(3) of the Sewage Facilities Act, 35 P.S. § 750.10(3), authorizes the Department to order a municipality to implement its Act 537 Plan and any revisions to the sewage facilities plan,

E. The regulation at 25 Pa. Code § 71.11 requires a municipality to develop and implement an Act 537 Plan, which resolves existing sewage disposal problems and provides for the future sewage disposal needs of new land development and the municipality.

F. The regulation at 25 Pa. Code § 71.12 states that municipalities shall review and revise their sewage facilities plans whenever the municipality or the Department determines that the plan is inadequate to meet the existing or future sewage disposal needs of the municipality or portion thereof.

G. The regulation at 25 Pa. Code § 71.13 provides that the Department will require a municipality to revise its sewage facilities plan when it determines that the Act 537 Plan does not meet the requirements of 25 Pa. Code §§ 71.61 through 71.65.

H. Section 5(d)(9) of the Sewage Facilities Act, 35 P.S. § 750.5(d)(9), requires that a municipality designate municipal responsibility for implementation of the sewage facilities plan.

I. The regulation at 25 Pa. Code § 71.21(a)(5)(vi) requires that a municipality include in its completed Act 537 Plan an evaluation of sewage facilities planning alternatives for the “ability to implement” the alternatives.

J. The regulation at 25 Pa. Code § 71.21(a)(7)(iii) requires that a municipality include in its completed Act 537 Plan a summary of the Act 537 Plan that identifies “municipal commitments necessary to implement the plan.”

K. The regulation at 25 Pa. Code § 71.21(a)(7)(iv) requires that a municipality include in its completed Act 537 Plan a schedule for implementing the plan.

L. The regulation at 25 Pa. Code § 71.31(c) specifies that: “A municipality shall submit evidence that documents the publication of the proposed plan adoption action at least once in a newspaper of general circulation in the municipality. The notice shall contain...the plan’s major recommendations, including a list of the sewage facilities alternatives considered. A 30-day public comment period shall be provided. A copy of written comments received and the municipal response to each comment, shall be submitted to the Department with the plan.”

M. The regulation at 25 Pa. Code § 71.31(f) provides that a municipality shall adopt the official sewage facilities plan by resolution with specific reference to the alternatives of choice and “a commitment to implement the plan within the time limits established in an implementation schedule”

N. The regulation at 25 Pa. Code § 71.32(d)(4) provides that in approving or disapproving a sewage facilities plan, the Department shall consider “whether the official plan or official plan revision is able to be implemented.”

O. On January 23, 2006, the Department approved the Township's Official Sewage Facilities Plan entitled "Westtown Township Act 537 Sewage Facilities Plan" ("2006 Act 537 Plan"), which included an addendum entitled "Westtown Township Act 537 Plan Addendum." The 2006 Act 537 Plan provided for the extension of public sewer to approximately 900 existing residences in the eastern portion of the Township and approved an expansion, via a rerate, of the Westtown Chester Creek Wastewater Treatment Plant ("WWTP") to serve the proposed connections. Sanitary sewer service would be provided through an all gravity collection system and 13 pumping stations that would convey sewage to the WWTP. The Township's 2006 Act 537 Plan provided for the Township to implement its plan in four phases,

P. The 2006 Act 537 Plan required the Township to complete all Phase I connections by October 20, 2007. Phase I consisted, in large part, of making connections in portions of the Westtown-Chester Creek Study Area, encompassing Westtown Farms, West Lynn I, Grandview West, Grandview S.E. Butternut, Grandview N.E. West Lynn, and certain infill lots adjacent to or within close proximity to an existing sewer line conveying flow to the Westtown-Chester Creek WWTP.

Q. The 2006 Act 537 Plan required the Township to complete all Phase II connections by June 11, 2010. Phase II consisted, in large part, of making connections in the portions of the Westtown-Chester Creek Study Area, encompassing Edgewood Chase, Avonlea, Cardinal Drive East, Land Grant South, Plumly Farm, Kilduff Circle, Shilo Hills, Carolyn Drive, and Hummingbird.

R. According to the 2006 Act 537 Plan, the Township was to start planning for the Route 202 Study Area after the commencement of Phase 1 by June 7, 2007 with construction beginning approximately in 2009 to 2011. This was identified as Phase 3 in the 2006 Act 537 Plan.

S. According to the 2006 Act 537 Plan, the Township was to have started planning for the West Goshen Study Area after the commencement of Phase 1 by June 7, 2007 with construction beginning approximately in 2009 to 2011. This was identified as Phase 4 in the 2006 Act 537 Plan.

T. According to the 2006 Act 537 Plan, the Township was to implement a phased on-lot sewage management program (Option 3 – "Private Ownership/Private Operation and Certification Program"), starting on January 23, 2007.

U. On December 13, 2006, URS Corporation submitted a report indicating that detailed survey and engineer work revealed that the use of grinder pumps could result in a more cost effective installation of the sewer system.

V. On March 21, 2007, the Department met with the Township to discuss the additional planning necessary to revise the collection and conveyance alternatives to be implemented.

W. On June 6, 2007, the Department approved the Township's April 2007 Act 537 Plan of Study and Task Activity Report. The April 2007 Act 537 Plan of Study called for further evaluation of the collection and conveyance alternatives.

X. On June 11, 2007, URS Corporation received the Department's May 22, 2007, letter, which was issued in response to their request for Preliminary Treatment Requirements (PTR) for the Westtown Chester Creek WWTF for a discharge range of 630,000 to 900,000 gallons of sewage per day. The Department's letter noted that the TMDL for the receiving stream is under development and suggested that the Township delay the expansion of the WWTF until the TMDL is final and a specific PTR can be provided.

Y. On July 11, 2007, the Department met with Westtown to discuss public comments regarding the proposed Plan, the alternatives being considered by the Township, the PTR issued by the Department, and the Township's sewage management program.

Z. On November 14, 2007, the Department met with the Township to discuss the status of their planning effort and the alternatives being considered.

AA. On April 29, 2008, the Department approved the Township's March 2008 revision to the April 2007 Act 537 Plan of Study and Task Activity Report. The March 2008 Act 537 Plan of Study proposed to reevaluate feasibility of providing sewer service to all properties previously included in the Township's sewer service areas. In addition, the Township proposed to reevaluate the costs of an increased discharge to the Chester Creek as a result of the proposed PTRs for the increased discharge to the creek.

BB. On April 2, 2009, the Department met with the Township to discuss previous planning performed under Act 537, challenges faced by the Township to implementing the approved 2006 Act 537 Plan, and the Township's proposal for revising the approved 2006 Act 537 Plan.

CC. In a letter dated June 12, 2009, the Township requested that the Department respond to their proposed course of action with regard to sewage facilities planning.

DD. In a letter dated July 10, 2009, the Department indicated that it supported the Township's proposed course of action but provided several comments for the Township's consideration.

EE. On July 8, 2010, the Department met with the Township to discuss their proposed planning to address existing dwellings, the Lain Property, Westtown-Thornbury Elementary School, and reimbursements under Act 537. The Department discussed the possibility of entering into a Consent Order and Agreement (CO&A), which would detail the milestones to be met by the Township as it prepares its revised Act 537 Plan. The Department agreed to draft a CO&A and provide a copy to the Township for comments.

FF. On August 4, 2010, the Department received a private request from Township residents, John and Maria Lain, asking that the Department order the Township to implement the approved 2006 Act 537 Plan. At that time, the Department deferred preparation of the CO&A until the Department could review and act upon the private request.

GG. In a letter dated January 11, 2011, John R. Embick, Esq., on behalf of his clients John and Maria Lain, requested that the private request be withdrawn.

HH. In a letter dated January 12, 2011, the Department acknowledged that the private request was withdrawn and noted that it would not take any action on the private request.

II. On March 3, 2011, the Department approved the Township's February 2011 revision to the March 2007 Act 537 Plan of Study and Task Activity Report. The February 2011 Act 537 Plan of Study proposes to evaluate collection and conveyance alternatives, and a sewage management program.

JJ. As of the date of this CO&A, the Township has failed to implement various portions of its 2006 Act 537 Plan. The Township has not provided public sewer service to the all of the areas in Phase 1 and Phase 2, has not begun planning for Phases 3 and 4, and has not begun to implement an on-lot sewage management program.

KK. In approving a revised Act 537 Plan, the Department and the Township will have to satisfy all applicable legal requirements, including the implementability requirements set forth in 35 P.S. § 750.5(d)(9), 25 Pa. Code §§ 71.11, 71.21(a)(5)(vi), and 71.21(a)(7)(iii), 71.31(f), and 71.32(d)(4).

LL. The revised Act 537 Plan will update the Township's 2006 Act 537 Plan.

MM. Act 537 specifically sets up a revision and update process to accommodate new development and address local needs and planning. *See* Section 5(a) of the SFA, 35 P.S. § 750.5(a).

NN. Where a municipality fails to implement its Act 537 Plan, the Department has the power "to order the implementation of official plans and revisions thereto." 35 P.S. § 750.10(3).

OO. The failure of a municipality to implement its Act 537 Plan is a violation of Section 5 of the Sewage Facilities Act, 35 P.S. § 750.5, and 25 Pa. Code §§ 71.11 and 71.31(f).

PP. The violations described in Paragraph JJ subject the Township to civil penalty liability under Section 13.1(f) of the Sewage Facilities Act, 35 P.S. § 750.13a(a).

QQ. The Township has been working with the Department since December 13, 2006, to reduce the estimated project cost burden on Township residents presented in the 2006 Act 537 Plan by revising the collection and conveyance alternatives to be implemented and the reprioritization of sewer service areas.

After full and complete negotiation of all matters set forth in this CO&A and upon mutual exchange of covenants contained herein, the parties desiring to avoid litigation and intending to be legally bound, it is hereby **ORDERED** by the Department and **AGREED** to by the Township, as follows:

1. **Authority.** This CO&A is an Order of the Department authorized and issued pursuant to Section 10 of the Pennsylvania Sewage Facilities Act, 35 P.S. § 750.10, and Section 1917-A of the Administrative Code, supra.

2. **Findings.**

a. The Township agrees that the findings in Paragraphs A through QQ are true and correct and, in any matter or proceeding involving the Township and the Department, the Township, shall not challenge the accuracy or validity of these findings.

b. The parties do not authorize any other persons to use the findings in this CO&A in any matter or proceeding.

3. **Corrective Action.** The Township agrees to complete and submit to the Department a revision to the 2006 Act 537 Plan (hereinafter "Act 537 Update") and other tasks specified as set forth in this Paragraph.

The work described above shall be accomplished in accordance with the following schedule:

<u>Milestone Event(s)</u>	<u>Milestone Date</u>
1. The Township shall submit a complete Act 537 Plan Update, officially adopted by resolution of the Township, which satisfies all applicable laws and regulations, to the Department for review.	September 30, 2012
2. The Township shall submit any additional information required by the Department to address the identified deficiencies, commencing the requirements to complete all Milestones again, starting with Milestone No. 1.	If the Department determines that the Act 537 Plan Update is deficient, within the time limits established by the Department in its deficiency letter, or within 30 days, whichever timeframe shall be greater.

Milestone Event(s)

Milestone Date

- | | | |
|----|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 3. | The Township shall submit another complete revised Act 537 Plan Update, addressing any comments made by the Department, and that is officially adopted by resolution of the Township, that satisfies all applicable laws and regulations, commencing the requirements to complete all Milestones again, starting with Milestone No. 1. | If the Department disapproves the Act 537 Plan Update, within the time limits established by the Department in its disapproval letter, or within 60 days, whichever timeframe shall be greater. |
| 4. | The Township shall commence implementation of its approved 2006 Act 537 Plan within 60 days of receipt of the Department's written communication of such deficiency or disapproval. | If the Department determines that the Township's Act 537 Update is deficient on three occasions or disapproves the Act 537 Update two times. |

4. **Civil Penalty Settlement.** Within five (5) days of the date of this Consent Order and Agreement, the Township shall pay a civil penalty of **FIVE THOUSAND DOLLARS (\$5,000.00)**. This payment is in settlement of the Department's claim for civil penalties for the violations set forth in paragraph JJ, above. Any payment of penalties shall be made by the Township, by corporate checks or the like, made payable to the "**Commonwealth of Pennsylvania**" and sent to Mr. Robert Woolston, Environmental Protection Compliance Specialist, Pennsylvania Department of Environmental Protection, 2 East Main Street, Norristown, PA 19401.

5. **Stipulated Penalties.** The Township shall pay stipulated civil penalties in the following amounts and manner which the Department is authorized to pursue under Section 13.1(f) of the Sewage Facilities Act, 35 P.S. § 750.13a(a):

a. In the event that the Township fails to comply in a timely manner with any term or provision of this CO&A, the Township shall be in violation of this CO&A and, in addition to other applicable remedies, shall pay a civil penalty for each violation as specified below:

i. For the first month of non-compliance, the Township shall make a payment to the "**Commonwealth of Pennsylvania**" in the amount of **THREE HUNDRED DOLLARS (\$300.00)** per day for each day of noncompliance with any milestone schedule date specified in Paragraph 3 of this CO&A;

ii. For the second month of non-compliance, the Township shall make a payment to the "**Commonwealth of Pennsylvania**" in the amount of **FIVE**

HUNDRED DOLLARS (\$500.00) per day for each day of noncompliance with any milestone schedule date specified in Paragraph 3 of this CO&A; and

iii. For the third and subsequent months of non-compliance, the Township shall make a payment to the “**Commonwealth of Pennsylvania**” in the amount of **SEVEN HUNDRED DOLLARS (\$700.00)** per day for each day of noncompliance with any milestone schedule date specified in Paragraph 3 of this CO&A.

b. Stipulated penalty payments for schedule violations shall be payable monthly on or before the fifteenth day of each succeeding month, and shall be forwarded as described in Paragraph 4.

c. Any payment under this Paragraph shall neither waive the duties of the Township to meet its obligations under this CO&A nor preclude the Department from commencing an action to compel compliance by the Township with the terms and conditions of this CO&A.

d. Stipulated civil penalties shall be due automatically and without notice.

6. Additional Remedies.

a. In the event the Township fails to comply with any provision of this CO&A, the Department may, in addition to the remedies prescribed herein, pursue any remedy available for a violation of an order of the Department, including an action to enforce this CO&A.

b. The remedies provided by this Paragraph and Paragraph 5 (Stipulated Penalties) are cumulative and the exercise of one does not preclude the exercise of any other. The failure of the Department to pursue any remedy shall not be deemed to be a waiver of that remedy. The payment of a stipulated penalty, however, shall preclude any further assessment of civil penalties for the violation for which the stipulated penalty is paid.

7. **Reservation of Rights.** The Department reserves the right to require additional measures to achieve compliance with applicable law. The Township reserves the right to challenge any action that the Department may take to require those measures.

8. **Liability of Operator.** The Township shall be liable for any violations of the CO&A for which it is responsible, including those caused by, contributed to, or allowed by its officers, agents, employees, or contractors.

9. **Transfer of Interests.**

a. The duties and obligations under this CO&A shall not be modified, diminished, terminated, or otherwise altered by the transfer of any legal or equitable interest in the sewage facilities, land, or any part thereof.

b. If the Township intends to transfer any legal or equitable interest in the sewage facilities, land, or any part thereof, which is affected by this CO&A, the Township shall serve a copy of this CO&A upon the prospective transferee of the legal and equitable interest at least thirty (30) days prior to the contemplated transfer and shall simultaneously inform the Southeast Regional Office of the Department of such intent.

10. **Correspondence with Department.** All correspondence with the Department concerning this CO&A shall be addressed to:

Ms. Jenifer Fields, P.E.
Regional Water Quality Manager
Department of Environmental Protection
Southeast Regional Office
2 East Main Street
Norristown, PA 19401
Phone: 484-250-5970
Fax: 484-250-5971

with a copy sent to:

Adam N. Bram, Esq.
Department of Environmental Protection
Office of Chief Counsel
Southeast Regional Office
2 East Main Street
Norristown, PA 19401
Phone: 484-250-5930
Fax: 484-250-5931

11. **Correspondence with the Township.** All correspondence with the Township concerning this CO&A shall be addressed to:

Mr. Robert Layman
Township Manager
Westtown Township
P.O. Box 79
Westtown, PA 19395-0079

with copies sent to:

Mr. Stan Corbett
Senior Planner
URS Corporation
4051 Ogletown Road, Suite 300
Newark, DE 19713

Robert F. Adams, Esq.
Township Solicitor
Gawthrop Greenwood, PC
17 East Gay Street, Suite 100
West Chester, PA 19381-0562

Service of any notice or any legal process for any purpose under this CO&A, including its enforcement, may be made by mailing a copy by first class mail to the above address.

12. **Severability.** The paragraphs of this CO&A shall be severable and should any part hereof be declared invalid or unenforceable, the remainder shall continue in full force and effect between the parties.

13. **Entire Agreement.** This CO&A shall constitute the entire integrated agreement of the parties. No prior or contemporaneous communications or prior drafts shall be relevant or admissible for purposes of determining the meaning or intent of any provisions herein in any litigation or any other proceeding.

14. **Attorney Fees.** The parties agree to bear their respective attorney fees, expenses, and other costs in the prosecution or defense of this matter or any related matters, arising prior to execution of this CO&A.

15. **Modifications.** No changes, additions, modifications, or amendments of this CO&A shall be effective unless they are set out in writing and signed by the parties hereto.

16. **Titles.** A title used at the beginning of any paragraph of this CO&A may be used to aid in the construction of that paragraph, but shall not be treated as controlling.

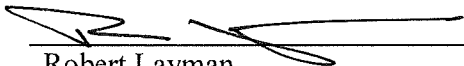
17. **Decisions under Consent Order.** Any decision which the Department makes under the provisions of this CO&A, including a notice that stipulated civil penalties are due, is intended to be neither a final action under 25 Pa. Code § 1021.2, nor an adjudication under 2 Pa.C.S. § 101. Any objection which the Township may have to the decision will be preserved until the Department enforces this CO&A.

18. **Termination.** The obligation of Paragraph 3, 4, and 5 shall terminate when the Department determines that the Township has complied with the requirements of Paragraphs 3, 4, and 5 and the Department has approved the revised Act 537 Plan Update, or the Township has started implementation of the 2006 Act 537 Plan, if required by the Department through the occurrence of conditions in Paragraph 3.4.

IN WITNESS WHEREOF, the parties hereto have caused this CO&A to be executed by their duly authorized representatives. The undersigned representatives of the Township certify under penalty of law, as provided by 18 Pa. C.S. § 4904, that they are authorized to execute this CO&A on behalf of the Township; that the Township consents to the entry of this CO&A as a final ORDER of the Department; and that the Township hereby knowingly waives their right to appeal this CO&A and to challenge its content or validity, which rights may be available under Section 4 of the Environmental Hearing Board Act, the Act of July 13, 1988, P.L. 530, No. 1988-94, 35 P.S. § 7514; the Administrative Agency Law, 2 Pa. C.S. § 103(a); and Chapters 5A and 7A, or any other provision of law.

FOR WESTTOWN TOWNSHIP:

**FOR THE COMMONWEALTH OF
PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL
PROTECTION:**



Robert Layman
Township Manager



Jenifer Fields
Regional Manager
Water Management



Robert F. Adams, Esq.
Township Solicitor



Adam N. Bram, Esq.
Assistant Regional Counsel
Southeast Regional Office

Appendix C:

Chester County Health Department Repair Permit Records

CHESTER COUNTY HEALTH DEPARTMENT SEWAGE SYSTEM REPAIR PERMITTING RECORDS IN WESTTOWN TOWNSHIP ACT 537 STUDY AREA

Parcel No.	Site Address	Permit No.	Permit Status	Application Date	Issued Date	Final Approval Date	Repair Reason	Absorption Area Permitted	Additional File Review Comments
67-2-1.14	932 Tyson Dr	Z086790	HD - Approved	2/19/2010	2/22/2010	4/12/2010	Unsatisfactory Certification	Standard Trench	
67-2-1.15	900 Tyson Dr	R01687	HD - Approved	7/15/1999	7/15/1999	10/7/1999	Malfunction	Std. Trench	
67-2-1.17	806 Little Shiloh Rd	W004398	HD - Approved	2/22/2006	2/22/2006	3/22/2006	Unsatisfactory Certification	Subsurface Sand Filter Bed	
67-2-1.2	909 Oakbourne Rd	Z011248	HD - Approved	11/16/2007	11/16/2007	2/24/2010	Malfunction	Septic Tank Only	
67-2-1.26	912 Tyson Dr	O17688	Not issued	5/6/1997					NO SITE TESTING OR ADDITIONAL INFO PER PERMIT APP, SYSTEM PUMPED 20 TIMES FROM 6/29/05 THRU 5/31/12 PER CCHD DATABASE
67-2-1.42	925 Tyson Dr	W004375	HD - Approved	12/2/2005	12/2/2005	2/27/2006	Unsatisfactory Certification	Std. Bed	
67-2-1.45	915 Oakbourne Rd	Z112114	HD - Approved	4/8/2011	4/12/2011	4/26/2011	Unsatisfactory Certification	Infiltrators(Biodiffusers)	
67-2-1.5	918 Tyson Dr	T023574	HD - Approved	5/26/2004	5/26/2004	4/4/2006	Unsatisfactory Certification	Infiltrator System	
67-2-10	923 Shiloh Rd	Q54940	HD - Approved	12/3/1998	12/3/1998	2/16/1999	Malfunction	Std. Trench	
67-2-100.3	1512 Marlboro Rd	Z65463	HD - Approved	7/13/2009	7/13/2009	11/13/2009	Malfunction	Std. Bed	
67-2-103	1522 Marlboro Rd	R34797	HD - Approved	5/5/1999	5/5/1999	7/2/1999	Malfunction	Std. Bed	
67-2-104	1010 Martone Rd	R34771	HD - Approved	6/1/1999	6/1/1999	6/25/1999	Unsatisfactory Certification	Subsurface Sand Filter Bed	
67-2-108	1519 Overhill Rd	R19289	HD - Approved	12/1/2003	12/1/2003	2/6/2004	Unsatisfactory Certification	Infiltrator System	
67-2-22	936 Westtown Rd	R30274	HD - Approved	2/24/2000	2/24/2000	6/6/2000	Malfunction	Elev. Sand Mound (Bed)	
67-2-22.1	934 Westtown Rd	R31468	HD - Approved	5/5/2000	5/5/2000	5/25/2000	Malfunction	Std. Trench	
67-2-27.13	1409 Carroll Brown Way	W002787	HD - Approved	10/20/2008	10/20/2008	10/22/2008	Malfunction	Septic Tank Only	
67-2-27.16	1415 Carroll Brown Way	Q20584	HD - Expired		4/15/1999			Std. Trench	EXPIRED PERMIT FOR NEW AA, SYSTEM PUMPED 21 TIMES FROM 4/19/05 THRU 5/31/12
67-2-32	1419 Evie La	T078168	HD - Approved	10/15/2004	10/15/2004	1/3/2005	Malfunction	Subsurface Sand Filter Bed	
67-2-32.2	1425 Johnny's Way	N11782	HD - Approved	1/27/1999	1/27/1999	2/17/1999		Subsurface Sand Filter Bed	
67-2-4.1	914 Oakbourne Rd	T079286	HD - Approved	12/7/2005	12/7/2005	1/25/2006	Malfunction	Subsurface Sand Filter Bed	
67-2-4.2J	921 Hunt Dr	R18357	Not issued	9/15/2003			Malfunction		TP'S M@ 3" & 6", NO PERC, NO SUITABLE SITE
67-2-4.2M	927 Hunt Dr	Z112511	Not issued	8/8/2011			Malfunction		TP'S M@16", R@10", M@41" NO PERC/SUITABLE SITE
67-2-4.3	930 Oakbourne Rd	T008484	HD - Approved	6/10/2003	6/10/2003	9/8/2004	Malfunction	Std. Bed	
67-2-47	116 Woodcrest Rd	R35279	HD - Approved	5/9/2000	5/9/2000	9/21/2000	Malfunction	Std. Bed	
67-2-48	118 Woodcrest Rd	R38583	HD - Approved	9/2/2003	9/2/2003	1/16/2004	Unsatisfactory Certification	Std. Bed	
67-2-48	118 Woodcrest Rd	Z097182	Not issued	1/19/2011			Malfunction		TP'S R@36", OK TO 85" NO PERC OR FOLLOW UP INFO
67-2-49	120 Woodcrest Rd	R35773	HD - Approved	9/2/1999	9/2/1999	11/10/1999	Unsatisfactory Certification	Std. Bed	
67-2-52	202 Woodcrest Rd	Q15582	HD - Approved	4/27/1999	4/27/1999	5/17/1999	Unsatisfactory Certification	Std. Bed	
67-2-58	205 Woodcrest Rd	Z086798	HD - Approved	4/8/2010	5/13/2010	6/28/2010	Malfunction	Standard Trench	
67-2-59	203 Woodcrest Rd	T018150	HD - Approved	11/18/2003	11/18/2003	3/24/2004	Malfunction	Subsurface Sand Filter Bed	
67-2-61	905 Shady Grove Way	R35050	HD - Approved	12/21/1999	12/21/1999	3/24/2000	Malfunction	Infiltrator System	
67-2-61	905 Shady Grove Way	T008603	HD - Approved	5/12/2005	5/12/2005	1/26/2009	Malfunction	Infiltrator System	
67-2-62	1404 Johnny's Way	T022108	HD - Approved	10/21/2002	10/21/2002	12/9/2004	Malfunction	Elev. Sand Mound (Bed)	
67-2-62	1402 Johnny's Way	Z011535	Under Review	11/29/2007	11/29/2007	1/1/2999		Septic Tank Only	
67-2-7	1009 Shiloh Rd	Q55270	Not issued	7/29/1998					LZ@84+", PASSED 36" PERC, NO ADDITIONAL INFO
67-2-71	1536 Johnny's Way	R35112	HD - Approved	1/5/2000	1/5/2000	1/27/2000		Subsurface Sand Trench	
67-2-79.4	1517 Carmac Rd	T019218	Not issued	5/21/2003			Malfunction		NO SITE TESTING OR ADDITIONAL INFO
67-2-80.1	1006 Robin Dr	T018514	HD - Approved	3/13/2003	3/13/2003	3/14/2003	Unsatisfactory Certification	Septic Tank Only	
67-2-81.1	1524 Overhill Rd	Z097234	HD - Approved	3/22/2012	3/26/2012	4/4/2012	Unsatisfactory Certification	Standard Bed	
67-2-83.3	1516 Overhill Rd	Z112229	HD - Approved	4/16/2012	4/20/2012	5/2/2012	Unsatisfactory Certification	Subsurface Sand Trench	
67-2-90	1516 Carmac Rd	Z64615	HD - Approved	7/23/2009	7/23/2009	10/12/2009	Unsatisfactory Certification	Std. Bed	
67-2-90.2	1518 Carmac Rd	R34556	HD - Approved	5/6/1999	5/6/1999	6/8/1999	Unsatisfactory Certification	Infiltrator System	
67-2-98	1513 Marlboro Rd	T022866	HD - Approved	9/9/2004	9/9/2004	10/11/2004	Unsatisfactory Certification	Infiltrator System	
67-2G-23	307 Diane Dr	T015429	HD - Approved	5/19/2006	5/19/2006	6/15/2006		Septic Tank Only	TANK ONLY PERMIT FINALED 6/15/06; CCHD DATABASE SHOWS > 1 PUMP/YR, BUT ONLY 1 PUMP SINCE PERMIT FINALED
67-2G-24	305 Diane Dr	Q20057	HD - Approved	8/13/1999	8/13/1999	9/28/1999	Malfunction	Std. Bed	
67-2G-25	303 Diane Dr	R18361	HD - Approved	12/1/2003	12/1/2003	12/17/2003	Malfunction	Std. Trench	
67-2G-5	308 Diane Dr	T021343	Not issued	4/13/2004			Malfunction		FAILED ESM PERC, NO ADDITIONAL INFO
67-2G-7	312 Diane Dr	T008828	Not issued	10/16/2003			Unsatisfactory Certification		LZ@84+", PERC FAILED @ 12"/36", PERC PASSED @ 60", NO ADDITIONAL INFO
67-2H-1	501 Leslie La	R35149	HD - Approved	9/21/2000	9/21/2000	10/24/2000	Malfunction	Septic Tank Only	
67-2H-18	1504 Charles Rd	O17182	HD - Approved	4/9/1997	4/9/1997	5/12/1997		Subsurface Sand Filter Bed	
67-2H-22	1503 Charles Rd	T018739	Not issued	10/12/2004			Malfunction		NO SUITABLE SITE PER CCHD, NO DRIP MICROMOUND SUITABILITY PER CPSS, DEP SFTF PERMIT APP SUBMITTED BUT NOT APPROVED
67-2H-27	419 Leslie La	Z112000	Not issued	11/10/2011			Unsatisfactory Certification		LZ <20" , NO PERC PER PERMIT DATA; SYSTEM PUMPED 8 TIMES FROM 5/12/05 THRU 5/31/12 PER CCHD DATABASE

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Parcel No.	Site Address	Permit No.	Permit Status	Application Date	Issued Date	Final Approval Date	Repair Reason	Absorption Area Permitted	Additional File Review Comments
67-2H-29	1511 Grant Rd	Z64673	Not issued	8/6/2008			Unsatisfactory Certification		NO SUITABLE SITE PER CCHD, CPSS TP'S INDICATE SUITABLE FOR DRIP BUT SEO NOTES SAY INSUFFICIENT AREA FOR DRIP; PUMPED 7 TIMES FROM 12/1/05 THRU 1/16/12 PER CCHD DATABASE
67-2H-31	1507 Grant Rd	Z056922	HD - Approved	5/5/2010	10/18/2010	11/16/2010	Unsatisfactory Certification	Standard Bed	
67-2H-32	1505 Grant Rd	Q19688	HD - Approved	9/27/1999	9/27/1999	10/7/1999	Unsatisfactory Certification	Std. Bed	
67-2H-5	415 Leslie La	T008783	HD - Approved	10/29/2003	10/29/2003	12/15/2003	Unsatisfactory Certification	Std. Trench	
67-2M-1	412 Diane Dr	Z057223	HD - Approved	1/7/2009	1/7/2009	3/25/2009	Malfunction	Std. Bed	SYSTEM PUMPED 9 TIMES FROM 10/6/05 THRU 2/6/09 PER CCHD DATABASE;
67-2M-6	903 Chickadee La	W004435	HD - Approved	5/3/2007	5/3/2007	7/2/2007	Unsatisfactory Certification	Std. Trench	
67-2N-11	922 Shiloh Rd	Q19971	HD - Approved	4/12/1999	4/12/1999	9/1/1999	Unsatisfactory Certification	Std. Bed	
67-2N-2	908 Oakbourne Rd	T022149	HD - Approved	4/14/2003	4/14/2003	4/26/2006		Septic Tank Only	
67-2N-20	904 Shiloh Rd	Q55225	HD - Approved	12/18/1998	12/18/1998	4/16/1999		Std. Bed	
67-2N-21	902 Shiloh Rd	Z64679	HD - Approved	8/19/2008	8/19/2008	9/24/2008	Malfunction	Std. Bed	
67-2N-26	903 Hummingbird La	N11885	HD - Approved	7/26/1999	7/26/1999	7/30/1999	Malfunction	Septic Tank Only	
67-2N-26	903 Hummingbird La	T022818	HD - Approved	5/7/2004	5/7/2004	5/13/2004	Unsatisfactory Certification	Infiltrator System	
67-2N-28	907 Hummingbird Ln	Q19682	HD - Approved	5/11/1999	5/11/1999	7/2/1999	Unsatisfactory Certification	Subsurface Sand Filter Bed	
67-2N-3	910 Oakbourne Rd	Q20191	HD - Approved	4/26/1999	4/26/1999	5/14/1999	Malfunction	Subsurface Sand Filter Bed	
67-2N-30	911 Hummingbird La	Z125921	HD - Issued	5/21/2012	5/21/2012	1/1/2999	Component Replacement	Septic Tank Only	
67-2N-32	915 Hummingbird La	Z106819	HD - Approved	9/17/2010	9/23/2010	11/4/2010	Malfunction	Standard Bed	SYSTEM PUMPED 17 TIMES FROM 6/6/05 THRU 10/19/10 PER CCHD
67-2N-33	917 Hummingbird La	R36283	HD - Approved	7/10/2000	7/10/2000	7/11/2000		Septic Tank Only	
67-2N-35	921 Hummingbird La	T023970	HD - Approved	6/30/2006	6/30/2006	8/22/2006	Unsatisfactory Certification	Subsurface Sand Filter Bed	
67-2N-45	906 Hummingbird La	T008657	HD - Approved	6/5/2003	6/5/2003	6/20/2003	Malfunction	Infiltrator System	
67-2N-48	900 Hummingbird La	Z65426	HD - Approved	10/29/2008	10/29/2008	11/10/2008	Malfunction	Septic Tank Only	SYSTEM PUMPED 8 TIMES 5/8/06 THRU 5/1/12 PER CCHD DATABASE; PERMIT FOR NEW TANK FINALED 11/10/08, 4 SUBSEQUENT PUMPINGS
67-2N-60	919 Shiloh Rd	Z057039	HD - Approved	4/19/2010	7/8/2010	8/4/2010	Unsatisfactory Certification	Standard Trench	
67-2N-7	923 Oakbourne Rd	Z097336	HD - Issued	11/29/2010	11/29/2010	1/1/2999	Malfunction	delivery line only	
67-2N-9	926 Shiloh Rd	Q21794	Not issued	6/21/1996					NO SITE TESTING OR ADDITIONAL INFO
67-2Q-1	911 Shady Grove Way	Q44505	HD - Approved	6/8/1998	6/8/1998	5/26/1999		Std. Bed	
67-2Q-13	1418 Johnny's Way	R20483	HD - Approved	4/2/2002	4/2/2002	4/12/2002	Unsatisfactory Certification	Septic Tank Only	
67-2Q-15	901 Robin Dr	Z047580	HD - Approved	6/21/2010	6/22/2010	10/29/2010	Malfunction	Drip	BTG to site drip 1' from PL instead of 12' min iso distance per CCHD files; SYSTEM PUMPED 16 TIMES 6/7/05 THRU 1/18/10, NO PUMPING SINCE NEW AA PERMIT FINALED 10/29/10
67-2Q-16	1407 Thrush La	Z111922	HD - Approved	3/15/2012	3/19/2012	5/9/2012	Unsatisfactory Certification	Subsurface Sand Filter Bed	
67-2Q-19	917 Shady Grove Way	Z057241	HD - Approved	7/3/2008	7/3/2008	11/10/2008	Malfunction	Std. Bed	SYSTEM PUMPED 7 TIMES FROM 8/25/05 THRU 1/30/12 PER CCHD DATABASE; NEW AA FINALED 11/10/08, ONLY 2 SUBSEQUENT PUMPINGS
67-2Q-5	1406 Wren La	R09446	HD - Approved	2/15/2000	2/15/2000	3/8/2000	Unsatisfactory Certification	Subsurface Sand Filter Bed	
67-2Q-6	1407 Wren La	Z82065	HD - Approved	8/11/2008	8/11/2008	8/15/2008	Unsatisfactory Certification	Drip	
67-2R-13.1	905 Robin Dr.	Z65558	HD - Approved	2/17/2009	2/17/2009	9/9/2010	Malfunction	At-Grade (Bed)	CCHD Alternate technology acknowledgement (@grade bed w/ peat filter) - no BTG or release agreement per CCHD files
67-2R-18	1426 Bobolink Lane	R18442	HD - Expired		12/9/2004		Unsatisfactory Certification	Std. Bed	
67-2R-3	904 Chickadee La	T008654	HD - Approved	8/12/2002	8/12/2002	8/27/2002	Unsatisfactory Certification	Std. Bed	
67-2R-30	1103 Cardinal Dr	Z086963	HD - Approved	5/14/2010	6/18/2010	7/8/2010	Malfunction	Standard Trench	SYSTEM PUMPED 16 TIMES FROM 5/5/05 THRU 5/17/10 PER CCHD DATABASE; NEW AA FINALED 7/8/10, NO SUBSEQUENT PUMPING
67-2R-35	1018 Robin Dr	Z097058	Not issued	12/23/2010			Unsatisfactory Certification		NO SITE TESTING OR ADDITIONAL INFO
67-2R-39	1402 Thrush La	W002498	HD - Approved	1/24/2005	1/24/2005	1/31/2005	Unsatisfactory Certification	Subsurface Sand Trench	
67-2R-47	1106 Cardinal Dr	Z086366	HD - Approved	2/19/2010	3/10/2010	4/2/2010	Unsatisfactory Certification	Standard Trench	
67-2R-59	1500 Woodland Rd	Q19686	HD - Approved	8/24/1999	8/24/1999	9/3/1999	Malfunction	Std. Trench	
67-2R-69	1156 Cardinal Dr	Q15522	HD - Approved	5/21/1999	5/21/1999	7/1/1999		Infiltrator System	
67-2R-79	1108 Cardinal Dr	R35258	HD - Expired		1/24/2000		Unsatisfactory Certification	Std. Trench	
67-2R-85	1133 Cardinal Dr	Z057284	Under Review	10/30/2008	10/30/2008	1/1/2999	Unsatisfactory Certification	Septic Tank Only	
67-2R-93	1138 Cardinal Dr	Z65481	HD - Issued	1/1/2999	10/26/2010	1/1/2999		At-Grade (Bed)	
67-2R-97	1130 Cardinal Dr	R02924	HD - Approved	6/28/2000	6/28/2000	7/7/2000	Malfunction	Infiltrator System	
67-3-100	1557 Overhill Rd	Q44552	HD - Approved	7/20/1998	7/20/1998	5/24/1999		Std. Trench	
67-3-107	1543 Overhill Rd	Z096629	HD - Approved	6/4/2010	6/9/2010	6/24/2010		Septic Tank Only	
67-3-11	114 W Hilltop Rd	Z057224	Under Review	6/5/2009	6/5/2009	1/1/2999	Malfunction	Subsurface Sand Filter Bed	
67-3-111	1011 Martone Rd	W002413	Not issued	2/6/2006			Unsatisfactory Certification		PASSING TP'S & PERC FOR INGROUND SYSTEM, CCHD NOTES SAY WELL MUST BE ABANDONED/RELOCATED
67-3-113	1534 Overhill Rd	R14306	HD - Approved	9/19/2000	9/19/2000	11/8/2000		Std. Bed	
67-3-118	1546 Overhill Road	Q32947	HD - Expired		8/18/1999		Malfunction	Std. Trench	

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67-3-125.13	1510 Woodland Rd	Z65430	HD - Approved	8/12/2009	8/12/2009	8/20/2009		Std. Trench	BTG: AA to PL (4.5'), water supply line (8'), and >25% slopes (retaining wall - 4'). Std trenches, well abandonment to fit
67-3-125.15	1514 Woodland Rd	Q15191	HD - Approved	12/18/1998	12/18/1998	9/30/1999	Malfunction	Std. Bed	
67-3-125.17	1518 Woodland Rd	R01594	HD - Approved	9/2/1999	9/2/1999	11/4/1999	Malfunction	Std. Trench	
67-3-125.31	1528 Woodland Road	W004123	HD - Expired		10/5/2006		Malfunction	Std. Trench	
67-3-125.8	1521 Woodland Rd	R20454	HD - Approved	10/3/2001	10/3/2001	10/25/2001	Unsatisfactory Certification	Std. Trench	
67-3-126.25	1188 Avonlea Cl	R19741	HD - Approved	7/24/2002	7/24/2002	10/22/2002	Unsatisfactory Certification	Subsurface Sand Filter Bed	
67-3-138.13	909 Louise La	Q20577	HD - Approved	1/7/1999	1/7/1999	4/30/1999	Unsatisfactory Certification	Elev. Sand Mound (Bed)	
67-3-138.16	917 S Chester Rd	R35108	HD - Approved	9/24/1999	9/24/1999	9/27/1999		Septic Tank Only	
67-3-138.17	1003 S Chester Rd	Z063530	HD - Approved	7/11/2008	7/11/2008	11/18/2008	Malfunction	Std. Bed	
67-3-138.25	913 Louise La	R20591	HD - Approved	7/17/2002	7/17/2002	1/27/2003	Unsatisfactory Certification	Std. Trench	
67-3-138.27	1607 W Lynn Dr	R34740	HD - Approved	5/5/2000	5/5/2000	5/8/2000		Septic Tank Only	
67-3-138.28	1609 West Lynn Dr	T008712	HD - Approved	4/26/2006	4/26/2006	4/27/2006		Septic Tank Only	
67-3-138.7	633 S Chester Rd	O60681	HD - Expired		10/27/1997		Malfunction	Elevated Sand Mound (Bed)	
67-3-138.9	701 S Chester Rd	O59602	HD - Approved	1/14/1999	1/14/1999	2/10/1999	Unsatisfactory Certification	Subsurface Sand Filter Bed	
67-3-140.2B	1017 S Chester Rd	R38586	HD - Approved	8/4/2003	8/4/2003	8/19/2003		Septic Tank Only	
67-3-144.13	1075 Powderhorn Dr	R35266	HD - Approved	6/26/2000	6/26/2000	7/14/2000		Septic Tank Only	
67-3-144.24	1044 Edgewood Chase Dr	Q20572	HD - Approved	11/24/1998	11/24/1998	1/20/1999	Malfunction	Std. Bed	
67-3-144.27	1037 Edgewood Chase Dr	Q17054	HD - Approved	12/22/1998	12/22/1998	1/7/1999	Unsatisfactory Certification	Std. Trench	
67-3-144.29	1055 Edgewood Chase Dr	R18395	HD - Approved	5/23/2011	5/24/2011	6/20/2011	Malfunction	Standard Bed	
67-3-144.35	1083 Edgewood Chase Dr	Z014425	HD - Approved	5/18/2007	5/18/2007	6/15/2007		Septic Tank Only	
67-3-144.38	1090 Edgewood Chase Dr	T019034	Not issued	2/10/2006			Unsatisfactory Certification		EIGHT TP'S EVALUATED, LZ < 20" FOR ALL, NO PERC OR SUITABLE SITE IDENTIFIED
67-3-144.47	1068 Edgewood Chase Dr	R02870	HD - Approved	12/11/2000	12/11/2000	1/5/2001	Unsatisfactory Certification	Std. Trench	
67-3-144.49	1043 Powderhorn Dr	Z062570	HD - Approved	5/12/2008	5/12/2008	5/21/2008	Unsatisfactory Certification	Infiltrator System	
67-3-148	1642 E Street Rd	R19649	Not issued	11/27/2002			Malfunction		TP'S M@ 8", 16", & 18", NO PERC POSSIBLE, NO ADDITIONAL INFO
67-3-21	115 Hilltop Rd	Z086796	HD - Approved	5/28/2009	6/7/2010	8/3/2010	Unsatisfactory Certification	Drip micro mound	
67-3-29.3	190 Pheasant Run Rd	R34574	HD - Approved	9/2/1999	9/2/1999	9/13/1999	Unsatisfactory Certification	Std. Bed	
67-3-3	115 Woodcrest Rd	Z086741	HD - Approved	4/7/2010	4/12/2010	4/20/2010	Unsatisfactory Certification	Septic Tank Only	
67-3-43	115 W Hilltop Rd	Z087042	Not issued	8/29/2009			Malfunction		NO SITE TESTING OR ADDITIONAL INFO
67-3-45	119 Hilltop Rd	Z062522	HD - Approved	5/4/2009	5/4/2009	12/22/2009	Unsatisfactory Certification	Std. Bed	SYSTEM PUMPED 13 TIMES FROM 2/9/06 THRU 4/3/12 PER CCHD DATABASE; NEW AA PERMIT FINALED 12/22/09, ONLY 1 SUBSEQUENT PUMPING
67-3-53	912 S Chester Rd	Q44536	Not issued	6/15/1998					NO SITE TESTING OR ADDITIONAL INFO
67-3-55	1555 Carmac Rd	Z112541	HD - Approved	7/29/2011	8/4/2011	8/18/2011	Malfunction	Standard Trench	
67-3-75	1557 Marlboro Rd	R01582	HD - Approved	9/20/1999	9/20/1999	10/15/1999	Malfunction	Std. Bed	
67-3-77	1553 Marlboro Rd	Z015426	Not issued	4/24/2006			Unsatisfactory Certification		PASSING TP'S & PERC FOR INGROUND SYSTEM, WELL
67-3-78.1	1547 Marlboro Rd	Z015436	HD - Approved	6/13/2006	6/13/2006	10/4/2007	Malfunction	Std. Bed	
67-3-80	1543 Marlboro Rd	T078777	Not issued	6/12/2006			Malfunction		PASSING TP'S & PERC FOR INGROUND SYSTEM, CCHD NOTES SAY WELL MUST BE LOCATED; SYSTEM PUMPED 39 TIMES 3/7/05 THRU 4/17/12 PER CCHD DATABASE
67-3-84.1	1533 Marlboro Rd	Z112140	HD - Approved	5/11/2011	5/20/2011	5/25/2011	Unsatisfactory Certification	Standard Trench	
67-3-85	1005 Martone Dr	Z105857	HD - Approved	7/7/2011	7/11/2011	8/5/2011	Malfunction	Standard Trench	SYSTEM PUMPED 13 TIMES FROM 10/8/05 THRU 7/18/11 PER CCHD DATABASE; NEW AA PERMIT FINALED 8/5/11, NO SUBSEQUENT PUMPING
67-3-88	1536 Marlboro Rd	T023277	HD - Expired		11/17/2004		Malfunction	Subsurface Sand Filter Bed	
67-3-89	1538 Marlboro Rd	W003850	HD - Approved	12/7/2007	12/7/2007	1/10/2008	Unsatisfactory Certification	Std. Bed	
67-3-97	1554 Marlboro Rd	U001862	HD - Approved	3/17/2006	3/17/2006	3/30/2006	Malfunction	Infiltrator System	
67-3-98	1556 Marlboro Rd	O21522	Not issued	3/3/1997					TP'S SHOW LZ 72", NO PERC OR ADDITIONAL INFO
67-5-21	1029 Shiloh Rd	R20830	HD - Approved	7/15/2002	7/15/2002	7/25/2002	Malfunction	Drip	
67-5-25	1009 E Street Rd	T019077	HD - Approved	5/16/2003	5/16/2003	1/13/2004	Malfunction	Std. Trench	
67-5-26.2	1151 Westtown Rd	Q15773	HD - Approved	6/14/1999	6/14/1999	7/30/1999	Unsatisfactory Certification	Subsurface Sand Trench	
67-5-26.3	1153 Westtown Rd	Z112118	HD - Issued	4/15/2011	4/19/2011	1/1/2009	Malfunction	Standard Trench	
67-5-29.2	918 Hunt Dr	T078492	HD - Approved	7/1/2005	7/1/2005	8/8/2005	Unsatisfactory Certification	Infiltrator System	
67-5-6.8	1050 Farmview Dr	T018130	HD - Approved	3/10/2004	3/10/2004	3/12/2004		Septic Tank Only	
67-5A-14	1020 Carolyn Dr	R01673	HD - Approved	7/6/1999	7/6/1999	8/10/1999	Unsatisfactory Certification	Elev. Sand Mound (Bed)	
67-5A-17	1026 Carolyn Dr	Z112008	HD - Approved	9/20/2011	9/23/2011	10/4/2011	Unsatisfactory Certification	Subsurface Sand Trench	
67-5A-2	902 Oakbourn Rd	T018185	HD - Approved	8/21/2003	8/21/2003	8/27/2003	Unsatisfactory Certification	Infiltrator System	
67-5A-22	1032 Carolyn Dr	W002464	HD - Approved	12/10/2004	12/10/2004	1/24/2005	Unsatisfactory Certification	Infiltrator System	

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67-5A-25	1039 Carolyn Dr	Q21298	HD - Approved	10/4/1999	10/4/1999	10/7/1999	Malfunction	Septic Tank Only	
67-5A-27	1047 Carolyn Dr	Z112509	Not issued	5/29/2012			Malfunction		NO SITE TESTING OR ADDITIONAL INFO
67-5A-28	1051 Carolyn Dr	T023999	HD - Approved	4/28/2010	5/18/2010	6/9/2010	Malfunction	Drip	
67-5A-30	1015 Carolyn Dr	Q21293	HD - Approved	12/17/1999	12/17/1999	3/20/2000	Malfunction	Std. Trench	
67-5A-35	1035 Carolyn Dr	T023670	HD - Approved	7/14/2004	7/14/2004	7/22/2004	Unsatisfactory Certification	Subsurface Sand Filter Bed	
67-5A-36	1038 Carolyn Dr	R35751	HD - Approved	9/2/1999	9/2/1999	9/3/1999	Malfunction	Std. Bed	
67-5A-46	1009 Carolyn Dr	Z027750	HD - Approved	4/1/2008	4/1/2008	7/2/2008	Malfunction	Infiltrator System	SYSTEM PUMPED 8 TIMES FROM 6/14/06 THRU 3/12/12 PER CCHD DATABASE; NEW AA PERMIT FINALED 7/2/08, ONLY 2 SUBSEQUENT PUMPINGS
67-5A-47	1007 Carolyn Dr	N11879	HD - Approved	1/19/1999	1/19/1999	1/26/1999		Septic Tank Only	
67-5A-47	1007 Carolyn Dr	R19645	HD - Approved	7/19/2002	7/19/2002	7/24/2002	Malfunction	Std. Trench	
67-5A-48	1005 Carolyn Dr	Z056975	HD - Issued	11/8/2010	11/16/2010	1/1/2999	Unsatisfactory Certification	Elevated Sand Mound Bed	
67-5A-49	1003 Carolyn Dr	T008709	HD - Approved	10/7/2004	10/7/2004	10/8/2004		Septic Tank Only	
67-5A-8	1008 Carolyn Dr	R01593	HD - Approved	5/18/1999	5/18/1999	6/22/1999	Unsatisfactory Certification	Subsurface Sand Filter Bed	
67-5A-8	1008 Carolyn Dr	R02747	HD - Approved	4/26/2001	4/26/2001	5/3/2001		Std. Trench	
67-5B-11	1021 Ashley Rd	R19667	HD - Approved	8/7/2001	8/7/2001	10/30/2001	Malfunction	Std. Bed	
67-5B-18	1050 Stable La	R13890	HD - Revoked	4/16/2001	4/16/2001	1/1/2999	Unsatisfactory Certification	Std. Bed	
67-5B-18	1050 Stable La	R13933	HD - Approved	5/23/2001	5/23/2001	6/26/2001	Unsatisfactory Certification	Std. Bed	
67-5B-21	1004 Ashley Rd	Z056297	HD - Approved	2/28/2008	2/28/2008	3/19/2008	Malfunction	Infiltrator System	
67-5B-24	1001 Plumly Rd	R38195	HD - Approved	1/3/2002	1/3/2002	2/5/2002	Unsatisfactory Certification	Std. Bed	
67-5B-64	1002 Plumly Rd	Z131095	Not issued	4/4/2012			Malfunction		LZ@84+", FAILED 36" PERC, NO ADDITIONAL INFO
67-5B-77	1004 Farm La	R18444	HD - Approved	2/2/2005	2/2/2005	2/17/2005	Unsatisfactory Certification	Std. Bed	
67-5B-8	1064 Stable La	R14088	Not issued	5/1/2003					LZ@84+", PASSED 24"/36" PERC, NO ADDITIONAL INFO
67-5B-9	1017 Ashley Rd	Q15504	HD - Approved	1/6/1999	1/6/1999	4/14/1999	Unsatisfactory Certification	Std. Trench	
67-5D-1	1024 Robin Dr	Z047665	HD - Approved	10/22/2008	10/22/2008	1/16/2009	Unsatisfactory Certification	At-Grade	BTG: @grade bed to road r.o.w (5') System: @grade bed w/peat filter
67-5D-14	1120 Cardinal Dr	Q32979	HD - Approved	6/9/1999	6/9/1999	7/8/1999	Malfunction	Subsurface Sand Filter Bed	
67-5D-4	1111 Shady Grove Way	U001311	Not issued	6/9/2005					LZ@84+", PASSED 30"/36" PERC, NO ADDITIONAL INFO
67-5D-5	1408 Favonius Way	Z111942	HD - Approved	6/13/2011	6/14/2011	1/12/2012	Malfunction	Standard Bed	
67-5D-9	1410 Favonius Way	Z056114	HD - Approved	3/5/2007	3/5/2007	3/12/2007	Unsatisfactory Certification	Infiltrator System	
67-5F-19	1001 Dunning Dr	R02718	HD - Approved	12/6/2000	12/6/2000	1/23/2001	Unsatisfactory Certification	Std. Bed	
67-5F-24	1000 Dunning Dr	T079073	HD - Approved	8/26/2009	8/26/2009	12/9/2009	Malfunction	Std. Bed	

Appendix D:

NRCS On-Lot System Soil Limitations Reports

Selected Soil Interpretations

This report allows the customer to produce a report showing the results of the soil interpretation(s) of his or her choice. It is useful when a standard report that displays the results of the selected interpretation(s) is not available.

When customers select this report, they are presented with a list of interpretations with results for the selected map units. The customer may select up to three interpretations to be presented in table format.

For a description of the particular interpretations and their criteria, use the "Selected Survey Area Interpretation Descriptions" report.

Report—Selected Soil Interpretations

Selected Soil Interpretations— Chester County, Pennsylvania							
Map symbol and soil name	Pct. of map unit	Septic system at-grade bed (alternate) (pa)		Septic system drip irrigation (alternate) (pa)		Septic system peat based option1 w/at-grade bed (alt.) (pa)	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
Ba—Baile silt loam							
Baile	85	Very limited		Very limited		Very limited	
		Seasonal high water table	1.00	Seasonal high water table	1.00	Seasonal high water table	1.00
		Slow percolation 12-20"	1.00	Slope	0.01	Slow percolation 12-20"	1.00
		Slope	0.18			Slope	0.18
CaA—Califon loam, 0 to 3 percent slopes							
Califon	90	Very limited		Very limited		Very limited	
		Seasonal high water table	1.00	Seasonal high water table	1.00	Seasonal high water table	1.00
		Slope	0.18	Slope	0.01	Slope	0.18
CaB—Califon loam, 3 to 8 percent slopes							
Califon	82	Very limited		Very limited		Very limited	
		Seasonal high water table	1.00	Seasonal high water table	1.00	Seasonal high water table	1.00
		Slope	0.35	Slope	0.08	Slope	0.35
CaC—Califon loam, 8 to 15 percent slopes							
Califon	85	Very limited		Very limited		Very limited	
		Seasonal high water table	1.00	Seasonal high water table	1.00	Seasonal high water table	1.00
		Too steep	0.85	Slope	0.46	Too steep	0.85

Selected Soil Interpretations— Chester County, Pennsylvania							
Map symbol and soil name	Pct. of map unit	Septic system at-grade bed (alternate) (pa)		Septic system drip irrigation (alternate) (pa)		Septic system peat based option1 w/at-grade bed (alt.) (pa)	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
CdB—Chester silt loam, 3 to 8 percent slopes							
Chester	91	Slightly limited		Slightly limited		Slightly limited	
		Slope	0.31	Slope	0.05	Slope	0.31
Co—Codorus silt loam							
Codorus	85	Very limited		Very limited		Very limited	
		Seasonal high water table	1.00	Flooding	1.00	Flooding	1.00
		Flooding	1.00	Low potential seasonal high water table	0.67	Low potential seasonal high water table	0.67
		Slope	0.18	Slope	0.01	Slope	0.18
CpA—Cokesbury silt loam, 0 to 3 percent slopes							
Cokesbury	85	Very limited		Very limited		Very limited	
		Seasonal high water table	1.00	Seasonal high water table	1.00	Seasonal high water table	1.00
		Slow percolation 12-20"	0.50	Slope	0.01	Slow percolation 12-20"	0.50
		Slope	0.18			Slope	0.18
CpB—Cokesbury silt loam, 3 to 8 percent slopes							
Cokesbury	90	Very limited		Very limited		Very limited	
		Seasonal high water table	1.00	Seasonal high water table	1.00	Seasonal high water table	1.00
		Slow percolation 12-20"	0.50	Slope	0.08	Slow percolation 12-20"	0.50
		Slope	0.35			Slope	0.35
CqB—Cokesbury silt loam, 0 to 8 percent slopes, very stony							
Cokesbury, very stony	90	Very limited		Very limited		Very limited	
		Seasonal high water table	1.00	Seasonal high water table	1.00	Seasonal high water table	1.00
		Slow percolation 12-20"	0.50	Slope	0.05	Slow percolation 12-20"	0.50
		Slope	0.31			Slope	0.31

Selected Soil Interpretations— Chester County, Pennsylvania							
Map symbol and soil name	Pct. of map unit	Septic system at-grade bed (alternate) (pa)		Septic system drip irrigation (alternate) (pa)		Septic system peat based option1 w/at-grade bed (alt.) (pa)	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
GdA—Gladstone gravelly loam, 0 to 3 percent slopes							
Gladstone	90	Moderately limited		Slightly limited		Moderately limited	
		Slow percolation 12-20"	0.50	Slope	0.01	Slow percolation 12-20"	0.50
		Slope	0.18			Slope	0.18
GdB—Gladstone gravelly loam, 3 to 8 percent slopes							
Gladstone	93	Slightly limited		Slightly limited		Slightly limited	
		Slope	0.40	Slope	0.12	Slope	0.40
GdC—Gladstone gravelly loam, 8 to 15 percent slopes							
Gladstone	90	Moderately limited		Slightly limited		Moderately limited	
		Too steep	0.85	Slope	0.46	Too steep	0.85
GdD—Gladstone gravelly loam, 15 to 25 percent slopes							
Gladstone	90	Very limited		Moderately limited		Very limited	
		Too steep	1.00	Too steep	0.92	Too steep	1.00
GeD—Gladstone-Parker gravelly loams, 15 to 25 percent slopes							
Gladstone	58	Very limited		Moderately limited		Very limited	
		Too steep	1.00	Too steep	0.92	Too steep	1.00
Parker	42	Very limited		Moderately limited		Very limited	
		Too steep	1.00	Too steep	0.92	Too steep	1.00
		Slight voided fragments	0.08	Slight voided fragments	0.08	Slight voided fragments	0.08
GfD—Gladstone gravelly loam, 8 to 25 percent slopes, very bouldery							
Gladstone, very bouldery	90	Very limited		Moderately limited		Very limited	
		Too steep	1.00	Slope	0.80	Too steep	1.00
GgB—Glenelg silt loam, 3 to 8 percent slopes							
Glenelg	92	Slightly limited		Slightly limited		Slightly limited	
		Slope	0.40	Slope	0.12	Slope	0.40

Selected Soil Interpretations— Chester County, Pennsylvania							
Map symbol and soil name	Pct. of map unit	Septic system at-grade bed (alternate) (pa)		Septic system drip irrigation (alternate) (pa)		Septic system peat based option1 w/at-grade bed (alt.) (pa)	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
GgC—Glenelg silt loam, 8 to 15 percent slopes							
Glenelg	90	Moderately limited		Slightly limited		Moderately limited	
		Too steep	0.85	Slope	0.46	Too steep	0.85
GIB—Glenville silt loam, 3 to 8 percent slopes							
Glenville	90	Very limited		Moderately limited		Moderately limited	
		Seasonal high water table	1.00	Potential seasonal high water table	0.98	Potential seasonal high water table	0.98
		Slow percolation 12-20"	0.79	Slope	0.12	Slow percolation 12-20"	0.79
		Slope	0.40			Slope	0.40
GIC—Glenville silt loam, 8 to 15 percent slopes							
Glenville	100	Very limited		Moderately limited		Moderately limited	
		Seasonal high water table	1.00	Potential seasonal high water table	0.98	Potential seasonal high water table	0.98
		Too steep	0.85	Slope	0.46	Too steep	0.85
		Slow percolation 12-20"	0.79			Slow percolation 12-20"	0.79
Ha—Hatboro silt loam							
Hatboro	95	Very limited		Very limited		Very limited	
		Seasonal high water table	1.00	Seasonal high water table	1.00	Seasonal high water table	1.00
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Slope	0.18	Slope	0.01	Slope	0.18
MaA—Manor loam, 0 to 3 percent slopes							
Manor	100	Slightly limited		Slightly limited		Slightly limited	
		Slope	0.18	Slope	0.01	Slope	0.18
MaB—Manor loam, 3 to 8 percent slopes							
Manor	95	Slightly limited		Slightly limited		Slightly limited	
		Slope	0.40	Slope	0.12	Slope	0.40
MaC—Manor loam, 8 to 15 percent slopes							
Manor	95	Moderately limited		Slightly limited		Moderately limited	
		Too steep	0.85	Slope	0.46	Too steep	0.85

Selected Soil Interpretations— Chester County, Pennsylvania							
Map symbol and soil name	Pct. of map unit	Septic system at-grade bed (alternate) (pa)		Septic system drip irrigation (alternate) (pa)		Septic system peat based option1 w/at-grade bed (alt.) (pa)	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
MaD—Manor loam, 15 to 25 percent slopes							
Manor	97	Very limited		Moderately limited		Very limited	
		Too steep	1.00	Too steep	0.92	Too steep	1.00
MaE—Manor loam, 25 to 35 percent slopes							
Manor	98	Very limited		Very limited		Very limited	
		Too steep	1.00	Too steep	1.00	Too steep	1.00
MnB—Mount Lucas silt loam, 0 to 8 percent slopes, extremely stony							
Mount lucas, extremely stony	91	Very limited		Moderately limited		Moderately limited	
		Seasonal high water table	1.00	Potential seasonal high water table	0.98	Potential seasonal high water table	0.98
		Slow percolation 12-20"	0.79	Slope	0.05	Slow percolation 12-20"	0.79
		Slope	0.31			Slope	0.31
NvB—Neshaminy silt loam, very deep over mafic gneiss, 3 to 8 percent slopes							
Neshaminy, very deep over gabbro	90	Moderately limited		Slightly limited		Moderately limited	
		Slow percolation 12-20"	0.50	Slope	0.05	Slow percolation 12-20"	0.50
		Slope	0.31			Slope	0.31
NvC—Neshaminy silt loam, very deep over mafic gneiss, 8 to 15 percent slopes							
Neshaminy, very deep over gabbro	90	Moderately limited		Slightly limited		Moderately limited	
		Too steep	0.85	Slope	0.46	Too steep	0.85
		Slow percolation 12-20"	0.50			Slow percolation 12-20"	0.50

Selected Soil Interpretations— Chester County, Pennsylvania							
Map symbol and soil name	Pct. of map unit	Septic system at-grade bed (alternate) (pa)		Septic system drip irrigation (alternate) (pa)		Septic system peat based option1 w/at-grade bed (alt.) (pa)	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
PaC—Parker gravelly loam, 8 to 15 percent slopes							
Parker	97	Moderately limited		Slightly limited		Moderately limited	
		Too steep	0.85	Slope	0.46	Too steep	0.85
		Fast percolation 12-20"	0.50	Slight voided fragments	0.08	Fast percolation 12-20"	0.50
		Slight voided fragments	0.08			Slight voided fragments	0.08
PaD—Parker gravelly loam, 15 to 25 percent slopes							
Parker	97	Very limited		Moderately limited		Very limited	
		Too steep	1.00	Too steep	0.92	Too steep	1.00
		Fast percolation 12-20"	0.50	Slight voided fragments	0.08	Fast percolation 12-20"	0.50
		Slight voided fragments	0.08			Slight voided fragments	0.08
PaE—Parker gravelly loam, 25 to 35 percent slopes							
Parker	98	Very limited		Very limited		Very limited	
		Too steep	1.00	Too steep	1.00	Too steep	1.00
		Fast percolation 12-20"	0.50	Slight voided fragments	0.08	Fast percolation 12-20"	0.50
		Slight voided fragments	0.08			Slight voided fragments	0.08
UrB—Urban land, 0 to 8 percent slopes							
Urban land	85	Not rated		Not rated		Not rated	
UrcB—Urban land-Califon complex, 0 to 8 percent slopes							
Urban land	50	Not rated		Not rated		Not rated	
Califon	30	Very limited		Very limited		Very limited	
		Seasonal high water table	1.00	Seasonal high water table	1.00	Seasonal high water table	1.00
		Slope	0.31	Slope	0.05	Slope	0.31
UriB—Urban land-Gladstone complex, 0 to 8 percent slopes							
Urban land	65	Not rated		Not rated		Not rated	
Gladstone	25	Slightly limited		Slightly limited		Slightly limited	
		Slope	0.31	Slope	0.05	Slope	0.31

Selected Soil Interpretations— Chester County, Pennsylvania							
Map symbol and soil name	Pct. of map unit	Septic system at-grade bed (alternate) (pa)		Septic system drip irrigation (alternate) (pa)		Septic system peat based option1 w/at-grade bed (alt.) (pa)	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
UrID—Urban land-Gladstone complex, 8 to 25 percent slopes							
Urban land	65	Not rated		Not rated		Not rated	
Gladstone	25	Very limited		Moderately limited		Very limited	
		Too steep	1.00	Slope	0.80	Too steep	1.00
UrmB—Urban land-Glenelg complex, 0 to 8 percent slopes							
Urban land	65	Not rated		Not rated		Not rated	
Glenelg	30	Slightly limited		Slightly limited		Slightly limited	
		Slope	0.31	Slope	0.05	Slope	0.31
UrnB—Urban land-Glenville complex, 0 to 8 percent slopes							
Urban land	65	Not rated		Not rated		Not rated	
Glenville	25	Very limited		Moderately limited		Moderately limited	
		Seasonal high water table	1.00	Potential seasonal high water table	0.98	Potential seasonal high water table	0.98
		Slow percolation 12-20"	0.79	Slope	0.05	Slow percolation 12-20"	0.79
		Slope	0.31			Slope	0.31
Uro—Urban land-Hatboro complex							
Urban land	50	Not rated		Not rated		Not rated	
Hatboro	30	Very limited		Very limited		Very limited	
		Seasonal high water table	1.00	Seasonal high water table	1.00	Seasonal high water table	1.00
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Slope	0.18	Slope	0.01	Slope	0.18
UrtB—Urban land-Mount Lucas complex, 0 to 8 percent slopes							
Urban land	50	Not rated		Not rated		Not rated	
Mount lucas	30	Very limited		Moderately limited		Moderately limited	
		Seasonal high water table	1.00	Potential seasonal high water table	0.98	Potential seasonal high water table	0.98
		Slow percolation 12-20"	0.79	Slope	0.05	Slow percolation 12-20"	0.79
		Slope	0.31			Slope	0.31

Selected Soil Interpretations— Chester County, Pennsylvania							
Map symbol and soil name	Pct. of map unit	Septic system at-grade bed (alternate) (pa)		Septic system drip irrigation (alternate) (pa)		Septic system peat based option1 w/at-grade bed (alt.) (pa)	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
UruB—Urban land- Neshaminy complex, 0 to 8 percent slopes							
Urban land	65	Not rated		Not rated		Not rated	
Neshaminy	30	Moderately limited		Slightly limited		Moderately limited	
		Slow percolation 12-20"	0.50	Slope	0.05	Slow percolation 12-20"	0.50
		Slope	0.31			Slope	0.31
UugB—Urban land- Udorthents, schist and gneiss complex, 0 to 8 percent slopes							
Urban land	80	Not rated		Not rated		Not rated	
Udorthents, schist and gneiss	15	Very limited		Very limited		Very limited	
		Slow percolation 12-20"	1.00	Miscellaneous area	1.00	Slow percolation 12-20"	1.00
		Miscellaneous area	1.00	Slope	0.05	Miscellaneous area	1.00
		Bedrock, above 48"	1.00			Slope	0.31
		Slope	0.31				
UugD—Urban land- Udorthents, schist and gneiss complex, 8 to 25 percent slopes							
Urban land	80	Not rated		Not rated		Not rated	
Udorthents, schist and gneiss	15	Very limited		Very limited		Very limited	
		Too steep	1.00	Miscellaneous area	1.00	Too steep	1.00
		Slow percolation 12-20"	1.00	Slope	0.80	Slow percolation 12-20"	1.00
		Miscellaneous area	1.00			Miscellaneous area	1.00
		Bedrock, above 48"	1.00				
W—Water							
Water	99	Not rated		Not rated		Not rated	

Data Source Information

Soil Survey Area: Chester County, Pennsylvania
 Survey Area Data: Version 3, Dec 3, 2008

Selected Soil Interpretations

Chester County, Pennsylvania

[The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The table shows only the top five limitations for any given soil. The soil may have additional limitations]

*This soil interpretation was designed as a "limitation" as opposed to a "suitability". The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the potential limitation.

Map symbol and soil name	Pct. of map unit	Septic System In Ground Trench (conventional) (PA) *		Septic System Sand Mound Bed or Trench (PA) *		Septic System Subsurface Sand Filter Trench (standard) (PA) *	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
Ba:							
Baile	85	Very limited		Very limited		Very limited	
		Seasonal high water table	1.00	Seasonal high water table	1.00	Seasonal high water table	1.00
		Slow percolation >12"	1.00	Slow percolation 12-20"	1.00	Slow percolation 12-36"; can not use system	1.00
		Slope	0.01	Slope	0.18	Slow percolation 36-60"	1.00
						Slope	0.01
CaA:							
Califon	90	Very limited		Very limited		Very limited	
		Seasonal high water table	1.00	Seasonal high water table	1.00	Seasonal high water table	1.00
		Slow percolation >12"	1.00	Slope	0.18	Slow percolation 12-36"; can not use system	1.00
		Slope	0.01			Slow percolation 36-60"	1.00
						Slope	0.01
CaB:							
Califon	82	Very limited		Very limited		Very limited	
		Seasonal high water table	1.00	Seasonal high water table	1.00	Seasonal high water table	1.00
		Slow percolation >12"	1.00	Slope	0.35	Slow percolation 12-36"; can not use system	1.00
		Slope	0.08			Slow percolation 36-60"	1.00
						Slope	0.08
CaC:							
Califon	85	Very limited		Very limited		Very limited	
		Seasonal high water table	1.00	Seasonal high water table	1.00	Seasonal high water table	1.00
		Slow percolation >12"	1.00	Too steep	0.85	Slow percolation 12-36"; can not use system	1.00
		Slope	0.46			Slow percolation 36-60"	1.00
						Slope	0.46

Selected Soil Interpretations

Chester County, Pennsylvania

Map symbol and soil name	Pct. of map unit	Septic System In Ground Trench (conventional) (PA) *		Septic System Sand Mound Bed or Trench (PA) *		Septic System Subsurface Sand Filter Trench (standard) (PA) *	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
CdB:							
Chester	91	Moderately limited		Slightly limited		Very limited	
		Slow percolation >12"	0.89	Slope	0.31	Slow percolation 12-36"; see criteria	0.99
		Slope	0.05			Slow percolation 36-60"	0.97
						Slope	0.05
Co:							
Codorus	85	Very limited		Very limited		Very limited	
		Seasonal high water table	1.00	Flooding	1.00	Seasonal high water table	1.00
		Flooding	1.00	Low potential seasonal high water table	0.67	Flooding	1.00
		Fast percolation >12"	1.00	Slope	0.18	Slow percolation 12-36"; see criteria	0.99
		Slope	0.01			Slow percolation 36-60"	0.97
						Potential fast percolation 36-60"	0.02
CpA:							
Cokesbury	85	Very limited		Very limited		Very limited	
		Seasonal high water table	1.00	Seasonal high water table	1.00	Seasonal high water table	1.00
		Slow percolation >12"	1.00	Slow percolation 12-20"	0.50	Slow percolation 12-36"; can not use system	1.00
		Slope	0.01	Slope	0.18	Slow percolation 36-60"	1.00
						Slope	0.01
CpB:							
Cokesbury	90	Very limited		Very limited		Very limited	
		Seasonal high water table	1.00	Seasonal high water table	1.00	Seasonal high water table	1.00
		Slow percolation >12"	1.00	Slow percolation 12-20"	0.50	Slow percolation 12-36"; can not use system	1.00
		Slope	0.08	Slope	0.35	Slow percolation 36-60"	1.00
						Slope	0.08

Selected Soil Interpretations

Chester County, Pennsylvania

Map symbol and soil name	Pct. of map unit	Septic System In Ground Trench (conventional) (PA) *		Septic System Sand Mound Bed or Trench (PA) *		Septic System Subsurface Sand Filter Trench (standard) (PA) *	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
CqB:							
Cokesbury, very stony	90	Very limited		Very limited		Very limited	
		Seasonal high water table	1.00	Seasonal high water table	1.00	Seasonal high water table	1.00
		Slow percolation >12"	1.00	Slow percolation 12-20"	0.50	Slow percolation 12-36"; can not use system	1.00
		Slope	0.05	Slope	0.31	Slow percolation 36-60"	1.00
						Slope	0.05
GdA:							
Gladstone	90	Slightly limited		Moderately limited		Very limited	
		Potential bedrock near 60"	0.33	Slow percolation 12-20"	0.50	Slow percolation 12-36"; can not use system	1.00
		Slope	0.01	Slope	0.18	Slow percolation 36-60"	1.00
						Bedrock, above 72"	1.00
						Slope	0.01
GdB:							
Gladstone	93	Slightly limited		Slightly limited		Very limited	
		Potential bedrock near 60"	0.33	Slope	0.40	Bedrock, above 72"	1.00
		Slope	0.12			Slow percolation 12-36"; see criteria	0.96
						Slow percolation 36-60"	0.49
						Slope	0.12
GdC:							
Gladstone	90	Slightly limited		Moderately limited		Very limited	
		Slope	0.46	Too steep	0.85	Bedrock, above 72"	1.00
		Potential bedrock near 60"	0.33			Slow percolation 12-36"; see criteria	0.96
						Slow percolation 36-60"	0.49
						Slope	0.46
GdD:							
Gladstone	90	Moderately limited		Very limited		Very limited	
		Too steep	0.92	Too steep	1.00	Bedrock, above 72"	1.00
		Potential bedrock near 60"	0.33			Slow percolation 12-36"; see criteria	0.96
						Too steep	0.92
						Slow percolation 36-60"	0.49

Selected Soil Interpretations

Chester County, Pennsylvania

Map symbol and soil name	Pct. of map unit	Septic System In Ground Trench (conventional) (PA) *		Septic System Sand Mound Bed or Trench (PA) *		Septic System Subsurface Sand Filter Trench (standard) (PA) *	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
GeD:							
Gladstone	58	Moderately limited		Very limited		Very limited	
		Too steep	0.92	Too steep	1.00	Bedrock, above 72"	1.00
		Potential bedrock near 60"	0.33			Slow percolation 12-36"; see criteria	0.96
		Potential slow percolation >12"	0.01			Too steep	0.92
						Potential slow percolation 36-60"	0.27
Parker	42	Very limited		Very limited		Very limited	
		Fast percolation >12"	1.00	Too steep	1.00	Bedrock, above 72"	1.00
		Too steep	0.92	Slight voided fragments	0.08	Slow percolation 12-36"; see criteria	0.94
		Slight voided fragments	0.08			Too steep	0.92
		Potential bedrock near 60"	0.03			Potential fast percolation 36-60"	0.18
						Slight voided fragments	0.08
GfD:							
Gladstone, very bouldery	90	Moderately limited		Very limited		Very limited	
		Slope	0.80	Too steep	1.00	Bedrock, above 72"	1.00
		Potential bedrock near 60"	0.33			Slow percolation 12-36"; see criteria	0.96
						Slope	0.80
						Slow percolation 36-60"	0.49
GgB:							
Glenelg	92	Moderately limited		Slightly limited		Very limited	
		Slow percolation >12"	0.89	Slope	0.40	Slow percolation 12-36"; see criteria	0.99
		Slope	0.12			Slow percolation 36-60"	0.97
						Slope	0.12
GgC:							
Glenelg	90	Moderately limited		Moderately limited		Very limited	
		Slow percolation >12"	0.89	Too steep	0.85	Slow percolation 12-36"; see criteria	0.99
		Slope	0.46			Slow percolation 36-60"	0.97
						Slope	0.46

Selected Soil Interpretations

Chester County, Pennsylvania

Map symbol and soil name	Pct. of map unit	Septic System In Ground Trench (conventional) (PA) *		Septic System Sand Mound Bed or Trench (PA) *		Septic System Subsurface Sand Filter Trench (standard) (PA) *	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
GIB:							
Glenville	90	Very limited		Moderately limited		Very limited	
		Seasonal high water table	1.00	Potential seasonal high water table	0.98	Seasonal high water table	1.00
		Slow percolation >12"	1.00	Slow percolation 12-20"	0.79	Slow percolation 12-36"; can not use system	1.00
		Slope	0.12	Slope	0.40	Slow percolation 36-60"	1.00
						Slope	0.12
GIC:							
Glenville	100	Very limited		Moderately limited		Very limited	
		Seasonal high water table	1.00	Potential seasonal high water table	0.98	Seasonal high water table	1.00
		Slow percolation >12"	1.00	Too steep	0.85	Slow percolation 12-36"; can not use system	1.00
		Slope	0.46	Slow percolation 12-20"	0.79	Slow percolation 36-60"	1.00
						Slope	0.46
Ha:							
Hatboro	95	Very limited		Very limited		Very limited	
		Seasonal high water table	1.00	Seasonal high water table	1.00	Seasonal high water table	1.00
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Slow percolation >12"	0.89	Slope	0.18	Slow percolation 12-36"; see criteria	0.99
		Slope	0.01			Slow percolation 36-60"	0.97
				Slope	0.01		
MaA:							
Manor	100	Slightly limited		Slightly limited		Very limited	
		Potential slow percolation >12"	0.01	Slope	0.18	Slow percolation 12-36"; see criteria	0.99
		Slope	0.01			Slow percolation 36-60"	0.49
				Slope	0.01		
MaB:							
Manor	95	Slightly limited		Slightly limited		Very limited	
		Slope	0.12	Slope	0.40	Slow percolation 12-36"; see criteria	0.99
		Potential slow percolation >12"	0.01			Slow percolation 36-60"	0.49
				Slope	0.12		

Selected Soil Interpretations

Chester County, Pennsylvania

Map symbol and soil name	Pct. of map unit	Septic System In Ground Trench (conventional) (PA) *		Septic System Sand Mound Bed or Trench (PA) *		Septic System Subsurface Sand Filter Trench (standard) (PA) *	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
MaC:							
Manor	95	Slightly limited		Moderately limited		Very limited	
		Slope	0.46	Too steep	0.85	Slow percolation 12-36"; see criteria	0.99
		Potential slow percolation >12"	0.01			Slow percolation 36-60"	0.49
						Slope	0.46
MaD:							
Manor	97	Moderately limited		Very limited		Very limited	
		Too steep	0.92	Too steep	1.00	Slow percolation 12-36"; see criteria	0.99
		Potential slow percolation >12"	0.01			Too steep	0.92
						Slow percolation 36-60"	0.49
MaE:							
Manor	98	Very limited		Very limited		Very limited	
		Too steep	1.00	Too steep	1.00	Too steep	1.00
		Potential slow percolation >12"	0.01			Slow percolation 12-36"; see criteria	0.99
						Slow percolation 36-60"	0.49
MIB:							
Mount Lucas	94	Very limited		Moderately limited		Very limited	
		Seasonal high water table	1.00	Potential seasonal high water table	0.98	Seasonal high water table	1.00
		Slope	0.12	Slow percolation 12-20"	0.79	Slow percolation 12-36"; can not use system	1.00
		Potential slow percolation >12"	0.06	Slope	0.40	Slow percolation 36-60"	0.59
						Slope	0.12
NvB:							
Neshaminy, very deep over gabbro	90	Very limited		Moderately limited		Very limited	
		Slow percolation >12"	1.00	Slow percolation 12-20"	0.50	Slow percolation 12-36"; can not use system	1.00
		Slope	0.05	Slope	0.31	Slow percolation 36-60"	1.00
						Potential bedrock near 72"	0.60
						Slope	0.05

Selected Soil Interpretations

Chester County, Pennsylvania

Map symbol and soil name	Pct. of map unit	Septic System In Ground Trench (conventional) (PA) *		Septic System Sand Mound Bed or Trench (PA) *		Septic System Subsurface Sand Filter Trench (standard) (PA) *			
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value		
NvC:									
Neshaminy, very deep over gabbro	90	Very limited		Moderately limited		Very limited			
			Slow percolation >12"	1.00	Too steep	0.85	Slow percolation	1.00	
			Slope	0.46	Slow percolation 12-20"	0.50	12-36"; can not use system		
							Slow percolation 36-60"	1.00	
							Potential bedrock near 72"	0.60	
							Slope	0.46	
PaC:									
Parker	97	Very limited		Moderately limited		Very limited			
			Fast percolation >12"	1.00	Too steep	0.85	Bedrock, above 72"	1.00	
			Slope	0.46	Fast percolation 12-20"	0.50	Slow percolation 12-36"; see criteria	0.94	
			Slight voided fragments	0.08	Slight voided fragments	0.08	Slope	0.46	
			Potential bedrock near 60"	0.03			Potential fast percolation 36-60"	0.18	
							Slight voided fragments	0.08	
PaD:									
Parker	97	Very limited		Very limited		Very limited			
			Fast percolation >12"	1.00	Too steep	1.00	Bedrock, above 72"	1.00	
			Too steep	0.92	Fast percolation 12-20"	0.50	Slow percolation 12-36"; see criteria	0.94	
			Slight voided fragments	0.08	Slight voided fragments	0.08	Too steep	0.92	
			Potential bedrock near 60"	0.03			Potential fast percolation 36-60"	0.18	
							Slight voided fragments	0.08	
PaE:									
Parker	98	Very limited		Very limited		Very limited			
			Too steep	1.00	Too steep	1.00	Too steep	1.00	
			Fast percolation >12"	1.00	Fast percolation 12-20"	0.50	Bedrock, above 72"	1.00	
			Slight voided fragments	0.08	Slight voided fragments	0.08	Slow percolation 12-36"; see criteria	0.94	
			Potential bedrock near 60"	0.03			Potential fast percolation 36-60"	0.18	
							Slight voided fragments	0.08	

Selected Soil Interpretations

Chester County, Pennsylvania

Map symbol and soil name	Pct. of map unit	Septic System In Ground Trench (conventional) (PA) *		Septic System Sand Mound Bed or Trench (PA) *		Septic System Subsurface Sand Filter Trench (standard) (PA) *	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
PaF:							
Parker	85	Very limited		Very limited		Very limited	
		Too steep	1.00	Too steep	1.00	Too steep	1.00
		Fast percolation >12"	1.00	Slight voided fragments	0.08	Bedrock, above 72"	1.00
		Slight voided fragments	0.08			Slow percolation 12-36"; see criteria	0.94
		Potential bedrock near 60"	0.03			Potential fast percolation 36-60"	0.18
						Slight voided fragments	0.08
UrB:							
Urban land	85	Not rated		Not rated		Not rated	
UrcB:							
Urban land	50	Not rated		Not rated		Not rated	
Califon							
	30	Very limited		Very limited		Very limited	
		Seasonal high water table	1.00	Seasonal high water table	1.00	Seasonal high water table	1.00
		Slow percolation >12"	1.00	Slope	0.31	Slow percolation 12-36"; can not use system	1.00
		Slope	0.05			Slow percolation 36-60"	1.00
						Slope	0.05
UrlB:							
Urban land	65	Not rated		Not rated		Not rated	
Gladstone							
	25	Slightly limited		Slightly limited		Very limited	
		Potential bedrock near 60"	0.33	Slope	0.31	Bedrock, above 72"	1.00
		Slope	0.05			Slow percolation 12-36"; see criteria	0.96
						Slow percolation 36-60"	0.49
						Slope	0.05
UrlD:							
Urban land	65	Not rated		Not rated		Not rated	
Gladstone							
	25	Moderately limited		Very limited		Very limited	
		Slope	0.80	Too steep	1.00	Bedrock, above 72"	1.00
		Potential bedrock near 60"	0.33			Slow percolation 12-36"; see criteria	0.96
						Slope	0.80
						Slow percolation 36-60"	0.49

Selected Soil Interpretations

Chester County, Pennsylvania

Map symbol and soil name	Pct. of map unit	Septic System In Ground Trench (conventional) (PA) *		Septic System Sand Mound Bed or Trench (PA) *		Septic System Subsurface Sand Filter Trench (standard) (PA) *	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
UrmB:							
Urban land	65	Not rated		Not rated		Not rated	
Glenelg	30	Moderately limited Slow percolation >12" 0.89 Slope 0.05		Slightly limited Slope 0.31		Very limited Slow percolation 12-36"; see criteria 0.99 Slow percolation 36-60" 0.97 Slope 0.05	
UrnB:							
Urban land	65	Not rated		Not rated		Not rated	
Glenville	25	Very limited Seasonal high water table 1.00 Slow percolation >12" 1.00 Slope 0.05		Moderately limited Potential seasonal high water table 0.98 Slow percolation 12-20" 0.79 Slope 0.31		Very limited Seasonal high water table 1.00 Slow percolation 12-36"; can not use system 1.00 Slow percolation 36-60" 1.00 Slope 0.05	
Uro:							
Urban land	50	Not rated		Not rated		Not rated	
Hatboro	30	Very limited Seasonal high water table 1.00 Flooding 1.00 Slow percolation >12" 0.89 Slope 0.01		Very limited Seasonal high water table 1.00 Flooding 1.00 Slope 0.18		Very limited Seasonal high water table 1.00 Flooding 1.00 Slow percolation 12-36"; see criteria 0.99 Slow percolation 36-60" 0.97 Slope 0.01	
UrtB:							
Urban land	50	Not rated		Not rated		Not rated	
Mount Lucas	30	Very limited Seasonal high water table 1.00 Potential slow percolation >12" 0.06 Slope 0.05		Moderately limited Potential seasonal high water table 0.98 Slow percolation 12-20" 0.79 Slope 0.31		Very limited Seasonal high water table 1.00 Slow percolation 12-36"; can not use system 1.00 Slow percolation 36-60" 1.00 Slope 0.05	

Selected Soil Interpretations

Chester County, Pennsylvania

Map symbol and soil name	Pct. of map unit	Septic System In Ground Trench (conventional) (PA) *		Septic System Sand Mound Bed or Trench (PA) *		Septic System Subsurface Sand Filter Trench (standard) (PA) *	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
UruB:							
Urban land	65	Not rated		Not rated		Not rated	
Neshaminy	30	Very limited Bedrock, above 60" 1.00 Slope 0.05		Moderately limited Slow percolation 12-20" 0.50 Slope 0.31		Very limited Bedrock, above 72" 1.00 Slow percolation 12-36"; can not use system 1.00 Slow percolation 36-60" 1.00 Slope 0.05	
UugB:							
Urban land	80	Not rated		Not rated		Not rated	
Udorthents, schist and gneiss	15	Very limited Seasonal high water table 1.00 Miscellaneous area 1.00 Bedrock, above 60" 1.00 Slope 0.05		Very limited Slow percolation 12-20" 1.00 Miscellaneous area 1.00 Slope 0.31		Very limited Seasonal high water table 1.00 Bedrock, above 72" 1.00 Slow percolation 12-36"; can not use system 1.00 Slow percolation 36-60" 1.00 Miscellaneous area 1.00	
UugD:							
Urban land	80	Not rated		Not rated		Not rated	
Udorthents, schist and gneiss	15	Very limited Seasonal high water table 1.00 Miscellaneous area 1.00 Bedrock, above 60" 1.00 Slope 0.80		Very limited Too steep 1.00 Slow percolation 12-20" 1.00 Miscellaneous area 1.00		Very limited Seasonal high water table 1.00 Bedrock, above 72" 1.00 Slow percolation 12-36"; can not use system 1.00 Slow percolation 36-60" 1.00 Miscellaneous area 1.00	
W:							
Water	99	Not rated		Not rated		Not rated	

Appendix E:

2011 Westtown-Chester Creek WWTP Chapter 94 Report

Applied Water Management

March 27, 2012

OVERNIGHT

Ms. Sara Abraham
Pennsylvania Department of Environmental Protection
Southeast Regional Office
2 East Main Street
Norristown, PA 19401-4915

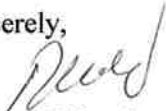
RE: Westtown Township;
2011 Chapter 94 Wasteload Management Report

Dear Ms. Abraham:

On the behalf of Westtown Township, enclosed are two (2) copies of the 2011 Chapter 94 Wasteload Management Report for your use. The 2011 East Goshen Township Chapter 94 Wasteload Management Report will be submitted under a separate cover by the East Goshen Township.

Please contact me at 484-612-0052 if you have any questions.

Sincerely,



Preethy Dileepkumar.
Senior Project Engineer

ATTACHMENTS

Cc: Stephen A. Marcino, P.E. – AWM

2011 CHAPTER 94 ANNUAL REPORT

FOR THE

**WESTTOWN-CHESTER CREEK
WASTEWATER TREATMENT PLANT**

**NPDES PERMIT NO.
PA 0031771**

**WESTTOWN TOWNSHIP
CHESTER COUNTY, PENNSYLVANIA**

Prepared by:

NATURAL SYSTEMS UTILITIES

**Applied Water Management, Inc.
Valley Forge Square II
661 Moore Road, Suite 110
King of Prussia, PA 19460
484-612-0050**

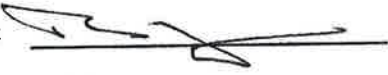
2011 CHAPTER 94 REPORT

SIGNATURES

PERMITTEE:

NAME: Mr. Robert Layman, Township Manager
ORGANIZATION: Westtown Township
ADDRESS: 1039 Wilmington Pike
West Chester, Pa 19382
610.692.1930 610.692.9651
PHONE FAX


This Chapter 94 Report prepared by Applied Water Management, Inc. has been reviewed and as a representative of the permittee, I am satisfied with its content.

AUTHORIZED SIGNATURE:  3-15-12
DATE
TITLE TOWNSHIP MANAGER

PREPARER:

NAME: Stephen A. Marcino, P.E.
ORGANIZATION: Applied Water Management, Inc.
ADDRESS: Valley Forge Square, II
661 Moore Road, Suite 110
King of Prussia, PA 19406
484-612-0050 484-612-0055
PHONE FAX

This report has been prepared in accordance with Title 25, Part 1, Subpart C, Article II, Chapter 94, of the Commonwealth of Pennsylvania Regulations.

AUTHORIZED SIGNATURE:  March 25, 2012
DATE
TITLE Engineering Manager

**WESTTOWN-CHESTER CREEK WASTEWATER TREATMENT PLANT
2011 WASTELOAD MANAGEMENT REPORT
CHESTER COUNTY, PENNSYLVANIA**

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Appendix A	Flow Meter Calibration Certificates
Appendix B	Sanitary Sewer Collection System Map

**WESTTOWN-CHESTER CREEK WASTEWATER TREATMENT PLANT
2011 WASTELOAD MANAGEMENT REPORT
CHESTER COUNTY, PENNSYLVANIA**

1.0 GENERAL INFORMATION

This report has been prepared for the wastewater treatment plant and collection systems serving portions of Westtown Township, Chester County, in accordance with Chapter 94, Title 25 of the Rules and Regulations of the Pennsylvania Department of Environmental Protection (PADEP). The report is for the calendar year 2011. The Chester Creek Wastewater Treatment plant operates under sewage NPDES Permit Number PA 0031771 (Amendment No. 3), which is valid through March 31, 2016. The facility was constructed by a private entity as part of a residential development in the mid 1970's. In 1997, Westtown Township assumed ownership of the facility and collection system. The plant is described as an extended aeration treatment process, followed by tertiary filtration, which discharges treated effluent to Chester Creek.

In 2003, Westtown Township completed construction of the new extended aeration activated sludge system with a permitted average daily flow capacity of 495,000 GPD. The system includes: headworks screening, grit separation, flow equalization, extended aeration, clarification, effluent filtration and ultraviolet disinfection. Effluent discharge limits that the plant needs to meet are listed in Table 1 below:

TABLE 1			
CHESTER CREEK WWTP			
NPDES EFFLUENT WATER QUALITY LIMITS			
PARAMETER	MONTHLY AVERAGE	WEEKLY AVERAGE	INSTANTANEOUS MAXIMUM
CBOD ₅ (05-01 to 10-31)	15 mg/l	23 mg/l	30 mg/l
CBOD ₅ (11-01 to 4-30)	25 mg/l	40 mg/l	50 mg/l
Total Suspended Solids	30 mg/l	45 mg/l	60 mg/l
Ammonia Nitrogen (05-01 to 10-31)	2.5 mg/l		5.0 mg/l
Ammonia Nitrogen (11-01 to 4-30)	7.5 mg/l		15.0 mg/l
Copper	0.028 mg/l	0.056 mg/l (daily max)	0.07 mg/l
pH	6.0 to 9.0		
Fecal Coliform	< 200 #/100 ml		
Phosphorus (May 1 st – Oct 31 st)	1 mg/l *	—	2 mg/l*
Phosphorus (Nov 1 st – Apr 30 th)	2 mg/l*	—	4 mg/l*

*Note: Phosphorous limits shown above are effective starting May 1st, 2013.

2.0 CURRENT HYDRAULIC LOADING (Permit 0.495 MGD)

The WWTP is equipped with influent and effluent flow meters to continuously measure and record flow. The meters are calibrated annually and the calibration records for 2011 are provided in the Appendix A.

Monthly hydraulic loadings to the treatment plant during the years 2007 through 2011 are presented in Table 2 and graphically in Figure 1. The average hydraulic loading for 2011 was 0.303 MGD. 2011 flow data is now based upon influent meter readings to the plant (not effluent). The average of the highest three consecutive months for 2011 was 0.335 MGD that occurred in March, April and May of 2011. The flow projection factor (average of the ratio of maximum three-month average flow to average annual flow) for the last five years is 1.18.

The precipitation data for 2011 is provided in Table 3. This data is gathered from the Westtown Waste Water Treatment Plant. Snowfall was converted into inches of precipitation by dividing inches of snowfall by 10. It is observed from the table that the highest precipitation was in August 2011 and the corresponding monthly flow in October at the plant was 0.291 MGD. This flow is lower than the maximum monthly average in 2011, which indicates a sound collection system.

3.0 CURRENT INFLUENT ORGANIC LOADING (Permit 1,030 lb/day)

The 2011 organic loadings are summarized in Table 4.1. Monthly organic loadings to the treatment plant from 2007 through 2011 are presented in Table 4.2 and graphically in Figure 2. Influent organic loadings were calculated using the influent BOD₅ results. The average organic loading for 2011 was 333 lbs/day. The highest average monthly loading for 2011 was 892 lbs/day, which occurred in March, 2011. The organic loading projection factor for 2011 (average of the ratio of highest monthly loading to annual average loading) is 2.7. The graph indicates that the WWTP meets its BOD₅ effluent limit and has sufficient capacity to treat the influent organic loadings.

4.0 FLOW PER EDU

For the past several years, the Township has been updating its Act 537 Plan. In March 2005, the Township adopted a plan addendum to the original base plan that was adopted on June 3, 2002. The addendum has been approved by the PADEP.

The Base Plan Addendum calls for all unsewered areas of the Township to be connected to public sewers. Proposed gravity collection system and sanitary pump stations that will be built to serve these future connections use a design flow projection value of 250 GPD/EDU. Therefore, this flow allocation will be used for projecting future flow in this report.

5.0 DISCUSSION OF BASIS FOR PROJECTION

The Township's 2002 Act 537 Base Plan, as amended by the 2005 Act 537 Plan Addendum, was approved by PADEP in 2006. This planning provided for a phased connection of existing residences in the eastern portion of the township to the Westtown Chester Creek WWTP.

Specific projections for connections within the next 5 years are listed in Table 5. The projects scheduled for connection include the Westtown School, Sharon Savings Bank, and the Westtown-Thornbury Elementary School, which received Act 537 planning module approvals, and several existing homes (need ACT 537 approval).

The Westtown-Thornbury Elementary School is currently serviced by the neighboring Township but an agreement has been made to connect it to the Westtown Collection System in 2012. The Westtown-Thornbury Elementary School intends to use 18 EDU to make the connection into the Westtown Collection System. No additional EDUs will be accounted for the future connections to the Westtown Collection System, as the Westtown-Thornbury Elementary School is using 18 EDUs connections from the Bayard Rustin High School's share of the unused EDUs (approximately 40 unused EDUs). However, flows corresponding to 18EDUs have been included in the flow projection calculation. Projected flows for these projects are in accordance with planning module information provided to the Township.

Westtown Township anticipates connecting several existing homes to their system per the Act 537 plan over the next 5 years upon approval from PADEP. However, the number of connections and timeframe are unknown at this point and dependant upon PADEP approval. For projection purposes, it is assumed that 25 units per year will be connected, starting in 2014.

An estimated unit flow of 250 GPD per EDU from Section 4 was used to project future flows for all proposed projects. The estimated flow per connection was calculated by dividing the average daily flow for the year by the number of EDUs proposed to be connected that year.

6.0 PROJECTED HYDRAULIC LOADING

Currently, Westtown School, Westtown-Thornbury Elementary School, Sharon Savings Bank, and several existing homes (upon approval from PADEP) are to be connected, as described in Section 5. Projected hydraulic loadings are provided in Table 6 and are depicted graphically in Figure 1. Projected average flow to the treatment plant at the end of the next five-year period is 0.322 MGD, which is approximately 65 percent of the permitted capacity (0.495 MGD). Similarly, the 5-year projected three month maximum hydraulic loading is 0.380 GPD or 77 percent of the rated capacity. The projected average flow and three month maximum are below the plants permitted capacity of 0.495 MGD. Since projections calculated are within WWTP's hydraulic capacity, the wastewater treatment plant is capable of meeting the projected hydraulic loading requirements. Hence, there is no projected hydraulic overload condition anticipated at the Chester Creek WWTP.

The WWTP flow meter recorded a peak instantaneous flow rate of 858 gpm on February 2nd, 2011. The average flow rate at the plant in 2011 was 210 GPM, which gives a peaking factor is 4.1. The influent line to the wastewater treatment plant is 16-inch diameter pipe, which has the capacity to convey over 2,400 GPM flow at 80% pipe capacity. This indicates the influent sewer line has the capacity to handle peak flow conditions during storm events or extreme flow conditions.

7.0 PROJECTED ORGANIC LOADING

The five year projected organic loading was developed by multiplying the projected average daily flow over five years by the average historic organic loading rate, which is the five year average

influent organic loading over the annual average flows. It is projected that the average organic loading to the treatment plant at the end of the next five year planning period cycle will be 326 pounds per day (lbs/day), which is 32 percent of its permitted capacity. Projected three month maximum loading is 629 lbs/day or 63 percent of permitted capacity. These values are lower than the plants permitted capacity of 1030 lbs/day. The projected organic loadings are provided in Table 7 and are depicted graphically in Figure 2. The calculations indicate that the wastewater treatment plant is sufficiently capable of meeting the projected organic loading requirements. Hence, there is no projected organic overload condition anticipated at the Chester Creek WWTP.

8.0 SEWER EXTENSIONS

There was one sewer extensions, a car dealership at 1631 West Chester Pike, east end of the Township, extended to connect to the sewer collection system in 2011. Please refer to Appendix B for the sewer extension location on the Sanitary Sewer Collection System Map.

9.0 CONDITION OF THE SEWER COLLECTION SYSTEM

There is an estimated 55,000 feet (10.5 miles) of sewer collection gravity sewer lines serving the Township. Please refer to Appendix B for the Sanitary Sewer Collection System Map. Pipe material consists of asbestos cement pipe, DIP and PVC ranging in size from 6" through 16". In previous years the Township has investigated and performed smoke testing on the majority of the sewer system to help identify sources of inflow and infiltration (I&I). A few physical I&I improvements were performed in 2011; one entire manhole at Cider Knoll, Manhole # 113-012 was replaced and six manhole frame and cover with gaskets were replaced. The Township will continue ongoing I&I reduction efforts, targeting specific areas of the collection system as deemed necessary by the Township. I&I reduction is a part of accomplishing Act 537 planning objectives, even though I&I is not a pressing issue specific to this system, based upon hydraulic data presented in this report. Act 537 plan is expected to be completed in September 2012 and will provide further details on the specific areas the Township will target for their I&I improvements. The sanitary sewer collection system is in fairly good condition.

10.0 SEWAGE PUMPING STATIONS

There is only one sewer pump station; the Kirkwood Pump Station located in the collection system that is owned and maintained by the Township that is tributary to the Chester Creek WWTP. The Kirkwood Pump Station consists of two (2) constant speed Myers solids handling pumps, each with a rated capacity of 190 GPM. At the station, a diesel powered emergency generator provides auxiliary power in the event of a power failure, and in addition, operations personnel are alerted of emergency conditions via an auto dialer.

Table 8 provides characteristics of the Kirkwood Pump Station and Table 9 presents average monthly and maximum day flows recorded at Kirkwood Pump Station, based upon meter readings. The areas tributary to the Kirkwood Pump Station are portions of the Chesterfield Subdivision, Green Lane Subdivision, and an office complex that includes the Kirkwood Fitness Center. In 2011, the average monthly flow was 0.048 MGD or 33 GPM. The maximum monthly flow occurred in April 2011 with a flow of 0.074 MGD or 51 GPM, which is significantly less (or 27%) than the rated capacity of 190 GPM. The ratio of maximum monthly flow to average monthly flow is 1.54. In the near future, the Township anticipates that no connections will be made to this station over the next 2 years as indicated in Table 5.

The projected average 2-year flow to the station is 0.048 MGD or 33 GPM. In 2011, peak daily flow at the station was 296,590 gallons per day, which provides a peaking factor 6.2. Note, this peaking factor is high as the pump station experienced unusually high flow on April 13, 2011. However, this peaking factor of 6.2 is used for projection purposes (as directed by PADEP) and therefore, the projected 2-year peak flow is 0.296 MGD or 206 GPM (removing the peak daily flow from the analysis, yields a peaking factor of 3.84). Currently, there is no means to meter/record instantaneous peak flow at the station. With one pump out of service, the pump station has sufficient capacity to meet the anticipated average flow but not the peak flow condition. The second pump will have to come on to handle a peak condition. Table 10 presents the 2-year flow projection for Kirkwood Pump Station. Note Westtown Township intends to upgrade Kirkwood pump station and the improvements to address the capacity of the pump station to handle peak flow will be included in the Act 537 Plan, which is expected to be completed September 2012.

Private pump stations contributing flow to the plant include: Windermere Place, Westtown Mews, Bayard Rustin High School, and an unnamed pump station located in East Goshen Township.

TABLE 8 KIRKWOOD PUMP STATION CHARACTERISTICS 2011	
Description	Serves residential and commercial properties, constructed 2001.
Pumps	Two Myers Solids Handling Pumps
Model Number	4VH100M4-43
Flowrate and Head	190 GPM at 55ft. TDH
Horse Power	10 HP
Force Main	4" SDR-11
Auxiliary Power	Diesel 23 KW Generator
Emergency Condition Alert System	Auto Dialer
Meter	Pump data logger is used.
Peak Instantaneous Flow	Not Available
2011 Average Monthly Flow	0.048 MGD or 33 GPM
2011 Highest Monthly Flow	0.074 MGD or 51 GPM - April 2011
2011 Peak Daily Flow	0.296 MGD or 206 GPM - April 13 th , 2011
2-Year Projected Flow	0.048 MGD or 33 GPM
2011 Peaking Factor	6.2
Projected 2-Year Peak Flow	0.296 MGD or 206 GPM

11.0 INDUSTRIAL WASTEWATER

There is no industrial wastewater discharged to the Chester Creek wastewater treatment plant nor is any planned for the immediate and foreseeable future. In 2009 the Township adopted ordinance No. 2011, titled "Pretreatment Standards and Regulations for Industrial Wastewater Discharges". Refer to the 2009 Chapter 94 Report for a copy of the ordinance.

TABLES

(Except for Table 1 and Table 8, which are part of the report narrative)

**WESTTOWN-CHESTER CREEK WASTEWATER TREATMENT PLANT
2011 WASTELOAD MANAGEMENT REPORT**

TABLE 2

SUMMARY OF MONTHLY HYDRAULIC LOADINGS

MONTH	YEAR							5 Year Average
	2007	2008	2009	2010	2011			
January	0.313	0.234	0.284	0.323	0.238			
February	0.284	0.270	0.245	0.320	0.292			
March	0.328	0.301	0.221	0.445	0.371			
April	0.354	0.257	0.248	0.358	0.340			
May	0.303	0.278	0.277	0.281	0.294			
June	0.272	0.237	0.260	0.235	0.243			
July	0.246	0.219	0.221	0.216	0.205			
August	0.236	0.206	0.237	0.206	0.300			
September	0.213	0.215	0.259	0.215	0.387			
October	0.226	0.218	0.283	0.249	0.291			
November	0.227	0.221	0.256	0.241	0.284			
December	0.290	0.283	0.339	0.256	0.387			
Minimum	0.213	0.206	0.221	0.206	0.205			
Average	0.274	0.245	0.261	0.279	0.303		0.272	
Maximum	0.354	0.301	0.339	0.445	0.387			
Max 3 Months Average ¹	0.328	0.279	0.293	0.374	0.335			
Flow Projection Factor ²	1.20	1.14	1.12	1.34	1.11		1.18	

1. Represents the five year rolling average of the highest three consecutive month's flows (shaded).

2. Ratio between the max 3- month average flow and the annual average flow .

**WESTTOWN-CHESTER CREEK WASTEWATER TREATMENT PLANT
2011 WASTELOAD MANAGEMENT REPORT**

**TABLE 3
2011 PRECIPITATION DATA**

Month	Precipitation (inches)		
	Rain	Snow	Total Precipitation
January	1.1	26.5	3.78
February	2.6	4.0	3.02
March	6.4	-	6.4
April	5.5	-	5.5
May	4.2	-	4.2
June	1.9	-	1.9
July	3.5	-	3.5
August	19.1	-	19.1
September	7.1	-	7.1
October	3.8	3.0	3.8
November	4.4	-	4.4
December	4.9	-	4.89
Yearly Totals	64.5	33.5	67.58

Note: Rainfall and snow data taken from Westtown Water Treatment Plant

**WESTTOWN-CHESTER CREEK WASTEWATER TREATMENT PLANT
2011 WASTELOAD MANAGEMENT REPORT**

TABLE 4.1

SUMMARY OF 2011 ORGANIC LOADING

	BOD₅ (mg/l)	Flow (MGD)	BOD (lbs/day)
January	134	0.238	266
February	118	0.292	288
March	290	0.371	898
April	158	0.340	447
May	120	0.294	295
June	38.2	0.243	78
July	221	0.205	378
August	151	0.300	377
September	49	0.387	158
October	84.8	0.291	206
November	102	0.284	241
December	114	0.387	368

**WESTTOWN-CHESTER CREEK WASTEWATER TREATMENT PLANT
2011 WASTELOAD MANAGEMENT REPORT**

TABLE 4.2

SUMMARY OF MONTHLY ORGANIC LOADINGS (lbs/day)

MONTH	YEAR					5 Year Average
	2007	2008	2009	2010	2011	
January	177	227	213	251	266	
February	223	268	267	304	288	
March	391	231	226	312	898	
April	764	188	182	314	447	
May	460	295	240	289	295	
June	225	241	269	322	78	
July	179	249	279	-	378	
August	161	284	194	230	377	
September	244	272	195	167	158	
October	249	233	184	142	206	
November	219	238	128	207	241	
December	300	324	534	216	368	
Minimum	161	188	128	142	78	
Average	299	254	243	250	333	276
Maximum	764	324	534	322	898	
Peak Factor ¹	2.6	1.3	2.2	1.3	2.7	2.0

¹ Ratio between the max monthly average flow and the annual average flow.

**WESTTOWN-CHESTER CREEK WASTEWATER TREATMENT PLANT
2011 WASTELOAD MANAGEMENT REPORT**

TABLE 5

KNOWN FUTURE GROWTH FOR THE NEXT FIVE YEARS

		EDU CONNECTIONS						
CURRENT		PROJECTIONS ¹						
	2011	2012	2013	2014	2015	2016	PROJECTED INCREASE BY 2016	
EDU CONNECTIONS BEING SERVED	1,191						1,371	
PROPOSED DEVELOPMENTS:								
Sharon Savings Bank	0	0	5	0	0	0	5	
Westtown School	0	100	0	0	0	0	100	
Westtown - Thornbury Elementary School 2	0	18	0	0	0	0	0	
Act 537 connections ³	0	0	0	25	25	25	75	
TOTAL	0	118	5	25	25	25	180	

1. 250 gallons/EDU is used for future projections.

2. Westtown - Thornbury Elementary School flow calculated as (450 students x 13gpd x 3/4 year) 250gal/EDU. No additional EDUs are accounted for future connections as Thornbury Elementary School is using (18 EDUs) from Bayard Rustin High School's share of unused EDUs (approximately 40 EDUs).

3. Westtown Township and PADEP currently have ongoing discussions about the future connections to the system. 25 EDU's per year starting in 2014 is an estimated number.

**WESTTOWN-CHESTER CREEK WASTEWATER TREATMENT PLANT
2011 WASTELOAD MANAGEMENT REPORT**

**TABLE 6
SUMMARY OF THE HYDRAULIC LOADINGS PROJECTIONS**

	2012	2013	2014	2015	2016	5 Year Average
Projected EDU Growth ¹	118	5	25	25	25	
Projected Annual Average Flow	0.302	0.303	0.309	0.316	0.322	0.310
Projected Max 3 Months Average	0.357	0.358	0.365	0.373	0.380	0.367
Projected Hydraulic Peak Factor ²	1.18	1.18	1.18	1.18	1.18	1.18
Projected Connected Units	1,309	1,314	1,339	1,364	1,389	
Projected Flow Per EDU Connection (gpd)	250	250	250	250	250	250

1. Refer to Table 5
2. Ratio of Projected Annual Average Flow and Projected Max 3 Months

**WESTTOWN-CHESTER CREEK WASTEWATER TREATMENT PLANT
2011 WASTELOAD MANAGEMENT REPORT**

**TABLE 7
SUMMARY OF PLANT ORGANIC LOADINGS PROJECTIONS**

MONTH	2012	2013	2014	2015	2016	5 Year Average
Projected EDU Growth ¹	118	5	25	25	25	
Projected Annual Flow	0.302	0.303	0.309	0.316	0.322	
Projected Annual Organic Loading	306	307	313	320	326	314
Projected Max 3 Months Average	612	615	627	640	653	629
Projected Organic Peak Factor	2.0	2.0	2.0	2.0	2.0	2.0

1. Refer to Table 5

**KIRKWOOD PUMP STATION
2011 WASTELOAD MANAGEMENT REPORT**

Table 9

2011 KIRKWOOD PUMP STATION FLOWS

MONTH	KIRKWOOD PUMP STATION	
	Monthly Total (MG)	Average Monthly (MGD)
January	1.197	0.039
February	1.439	0.051
March	1.749	0.056
April	2.215	0.074
May	1.406	0.045
June	1.187	0.040
July	1.123	0.036
August	1.434	0.046
September	1.498	0.050
October	1.415	0.046
November	1.309	0.044
December	1.454	0.047
Min month		0.036
Avg annual		0.048
Max month		0.074

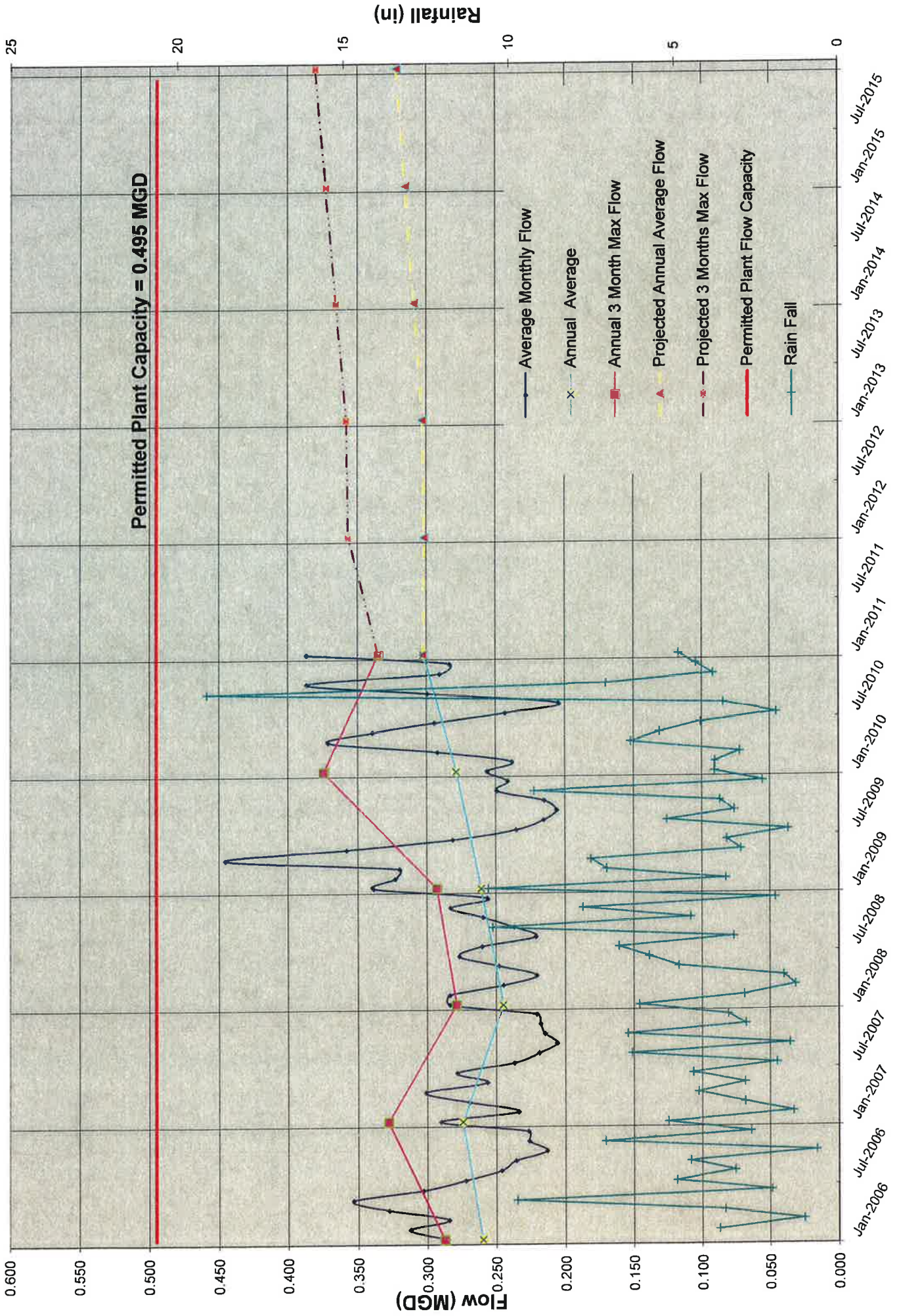
**KIRKWOOD PUMP STATION
2011 WASTELOAD MANAGEMENT REPORT**

**TABLE 10
PUMP STATION 2 YEAR PROJECTION**

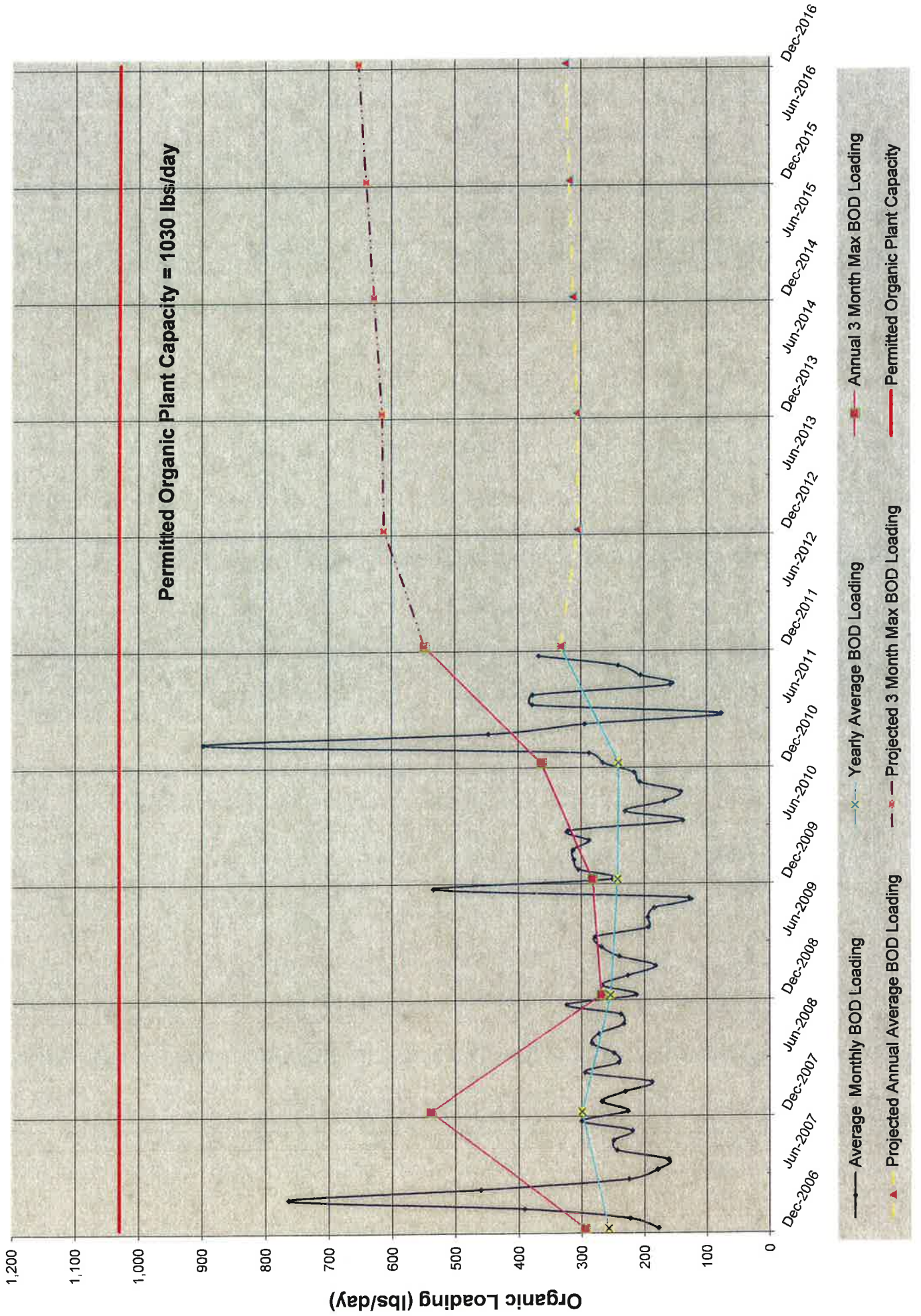
Pump Station Name	Number of Pumps	Permitted Capacity		Present Flows		2-Year Projected Flow	
		Permitted Capacity (gpd)	Hydraulic Design Capacity (Excluding capacity of backup pump) (gpm)	Average Annual Flows (gpd)	Peak Daily Flow (gpd)	Average Annual Flows (gpd)	Peak Daily Flow (gpd)
Kirkwood Pump Station	2	273,600	190	47,817	296,590	48,000	296,590
Peaking Factor					6.2		

FIGURES

WESTTOWN-CHESTER CREEK WASTEWATER TREATMENT PLANT
 2011 WASTELOAD MANAGEMENT REPORT
 WWTP HYDRAULIC LOADINGS AND PROJECTIONS
 FIGURE 1



WESTTOWN-CHESTER CREEK WASTEWATER TREATMENT PLANT
 2011 WASTELOAD MANAGEMENT REPORT
 WWTP ORGANIC LOADINGS AND PROJECTIONS
 FIGURE 2



APPENDIX A

Flow Meter Calibration Certificates

W.G. MALDEN

P.O. BOX 196, EAST EARL, PA 17519
PHONE: (717) 768-0800 FAX: (717) 768-0802

SERVICE REPORT

CHRIS CULBERTSON
WESTTOWN TOWNSHIP
1039 WILMINGTON PIKE
WEST CHESTER, PA 19385

SERVICE DATE: 2/4/2011
METER#: C2136 AF
LOCATION: WWTP INFLUENT
SERIAL #: 197A00498/201H01851
MANUFACTURER: ISCO/HONEYWELL
RECORDER: DR4300
TRANSMITTER: 4210
PRIMARY: H 1.5'
MAXIMUM CAPACITY: 941 GPM
SERVICE CONTRACT: QUARTERLY

WORK PERFORMED

RECORDER CALIBRATION CHECKED AT: OPERATING RATE
ERROR: 0% CORRECTED ACCURACY: $\pm 1\%$

TOTALIZER CALIBRATION CHECKED AT: OPERATING RATE
ERROR: 0% CORRECTED ACCURACY: $\pm 1\%$

TRANSMITTER CALIBRATION
FLOW MEASUREMENTS
ERROR: 0% CORRECTED ACCURACY: $\pm 1\%$

COMMENTS: PERFORMED QUARTERLY CALIBRATION, CLEANED PRIMARY AND APPROACH
AREA LEFT EQUIPMENT OPERATING PROPERLY.

SERVICE REPRESENTATIVE: BOB
copies:

PERSON SEEN: CHRIS

COPY

W.G. MALDEN

P.O. BOX 196, EAST EARL, PA 17519
PHONE: (717) 768-0800 FAX: (717) 768-0802

SERVICE REPORT

CHRIS CULBERTSON
WESTTOWN TOWNSHIP
1039 WILMINGTON PIKE
WEST CHESTER, PA 19385

SERVICE DATE: 11/17/2010
METER#: C2136 AF
LOCATION: WWTP INFLUENT
SERIAL #: 197A00498/201H01851
MANUFACTURER: ISCO/HONEYWELL
RECORDER: DR4300
TRANSMITTER: 4210
PRIMARY: H 1.5'
MAXIMUM CAPACITY: 941 GPM
SERVICE CONTRACT: QUARTERLY

WORK PERFORMED

RECORDER CALIBRATION CHECKED AT: OPERATING RATE
ERROR: 0% CORRECTED ACCURACY: $\pm 1\%$

TOTALIZER CALIBRATION CHECKED AT: OPERATING RATE
ERROR: 0% CORRECTED ACCURACY: $\pm 1\%$

TRANSMITTER CALIBRATION
FLOW MEASUREMENTS
ERROR: 0% CORRECTED ACCURACY: $\pm 1\%$

COMMENTS: PERFORMED QUARTERLY CALIBRATION. CLEANED PRIMARY AND APPROACH AREA. LEFT EQUIPMENT OPERATING PROPERLY.

SERVICE REPRESENTATIVE: JERRY
copies:

PERSON SEEN: CHRIS

COPY

PROTECHS, LLC dba

W.G. MALDEN

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*****SERVICE REPORT*****

CHRIS CULBERTSON
WESTTOWN TOWNSHIP
1039 WILMINGTON PIKE
WEST CHESTER, PA 19385

SERVICE DATE: 8/3/2010
METER#: C2136 AF
LOCATION: WWTP INFLUENT
SERIAL #: 197A00498/201H01851
MANUFACTURER: ISCO/HONEYWELL
RECORDER: DR4300
TRANSMITTER: 4210
PRIMARY: H 1.5'
MAXIMUM CAPACITY: 941 GPM
SERVICE CONTRACT: QUARTERLY

WORK PERFORMED

RECORDER CALIBRATION CHECKED AT: OPERATING RATE
ERROR: +1% CORRECTED ACCURACY: $\pm 1\%$

TOTALIZER CALIBRATION CHECKED AT: OPERATING RATE
ERROR: 0% CORRECTED ACCURACY: $\pm 1\%$

TRANSMITTER CALIBRATION
FLOW MEASUREMENTS
ERROR: 0% CORRECTED ACCURACY: $\pm 1\%$

COMMENTS: PERFORMED QUARTERLY CALIBRATION. CLEANED PRIMARY AND APPROACH.
GRIT BUILT UP IN CHANNEL. LEFT EQUIPMENT OPERATING PROPERLY.

SERVICE REPRESENTATIVE: JERRY/DENNIS
copies:

PERSON SEEN: CHRIS

COPY

W.G. MALDEN

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SERVICE REPORT

CHRIS CULBERTSON
WESTTOWN TOWNSHIP
1039 WILMINGTON PIKE
WEST CHESTER, PA 19385

SERVICE DATE: 2/4/2011
METER#: C2136 AH
LOCATION: WWTF EFFLUENT
SERIAL #: 1274797D08091
MANUFACTURER: EASTECH/PARTLOW
RECORDER: MRC5000
TRANSMITTER: 2210
PRIMARY: 23.625" SUPPRESSED
MAXIMUM CAPACITY: 1.5 MGD
SERVICE CONTRACT: QUARTERLY

WORK PERFORMED

RECORDER CALIBRATION CHECKED AT: 0, 50 & 100%
ERROR: N/A CORRECTED ACCURACY: $\pm 1\%$

TOTALIZER CALIBRATION CHECKED AT: 0, 50 & 100%
ERROR: 0% CORRECTED ACCURACY: $\pm 1\%$

TRANSMITTER CALIBRATION
SIMULATED HEAD RISES AND FLOW MEASUREMENTS
ERROR: 0% CORRECTED ACCURACY: $\pm 1\%$

COMMENTS: PERFORMED QUARTERLY CALIBRATION ON TEMPORARY EASTECH METER. LEFT EQUIPMENT OPERATING PROPERLY.

SERVICE REPRESENTATIVE: BOB
copies:

PERSON SEEN: CHRIS

COPIES

PROTECHS, LLC dba

W.G. MALDEN

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*****SERVICE REPORT*****

CHRIS CULBERTSON
WESTTOWN TOWNSHIP
1039 WILMINGTON PIKE
WEST CHESTER, PA 19385

SERVICE DATE: 5/28/2010
METER#: C2136 AH
LOCATION: WWTF EFFLUENT
SERIAL #: 98714401/97D08091
MANUFACTURER: BADGER/PARTLOW
RECORDER: MRC5000
TRANSMITTER: 2100
PRIMARY: 23.625" SUPPRESSED
MAXIMUM CAPACITY: 1.5 MGD
SERVICE CONTRACT: QUARTERLY

WORK PERFORMED

RECORDER CALIBRATION CHECKED AT: 0.50 & 100%
ERROR: 0% CORRECTED ACCURACY: $\pm 1\%$

TOTALIZER CALIBRATION CHECKED AT: 0.50 & 100%
ERROR: 0% CORRECTED ACCURACY: $\pm 1\%$

TRANSMITTER CALIBRATION
SIMULATED HEAD RISES AND FLOW MEASUREMENTS.
ERROR: * CORRECTED ACCURACY: $\pm 1\%$

COMMENTS: *SERVICE REQUESTED. METER NOT OPERATING CORRECTLY. REPLACED FAULTY POWER SUPPLY. CALIBRATED AND LEFT EQUIPMENT OPERATING PROPERLY.

SERVICE REPRESENTATIVE: JERRY
copies:

PERSON SEEN:

COPY

PROTECHS, LLC dba

W.G. MALDEN

P.O. BOX 196, EAST EARL, PA 17519

PHONE: (717) 768-0800 FAX: (717) 768-0802

SERVICE REPORT

CHRIS CULBERTSON
WESTTOWN TOWNSHIP
1039 WILMINGTON PIKE
WEST CHESTER, PA 19385

SERVICE DATE: 5/4/2010
METER#: C2136 AF
LOCATION: WWTP INFLUENT
SERIAL #: 197A00498/201H01851
MANUFACTURER: ISCO/HONEYWELL
RECORDER: DR4300
TRANSMITTER: 4210
PRIMARY: H 1.5'
MAXIMUM CAPACITY: 941 GPM
SERVICE CONTRACT: QUARTERLY

WORK PERFORMED

RECORDER CALIBRATION CHECKED AT: OPERATING RATE
ERROR: 0% CORRECTED ACCURACY: $\pm 1\%$

TOTALIZER CALIBRATION CHECKED AT: OPERATING RATE
ERROR: 0% CORRECTED ACCURACY: $\pm 1\%$

TRANSMITTER CALIBRATION
FLOW MEASUREMENTS
ERROR: 0% CORRECTED ACCURACY: $\pm 1\%$

COMMENTS: PERFORMED QUARTERLY CALIBRATION. LEFT EQUIPMENT OPERATING PROPERLY.

SERVICE REPRESENTATIVE: DENNIS

PERSON SEEN: CHRIS

copies:

COPY

W.G. MALDEN

P.O. BOX 196, EAST EARL, PA 17519
PHONE: (717) 768-0800 FAX: (717) 768-0802

SERVICE REPORT

CHRIS CULBERTSON
WESTTOWN TOWNSHIP
1039 WILMINGTON PIKE
WEST CHESTER, PA 19385

SERVICE DATE: 12/15/2010
METER#: C2136 AH
LOCATION: WWTF EFFLUENT
SERIAL #: 98714401/97D08091
MANUFACTURER: BADGER/PARTFLOW
RECORDER: MRC5000
TRANSMITTER: 2100
PRIMARY: 23.625" SUPPRESSED
MAXIMUM CAPACITY: 1.5 MGD
SERVICE CONTRACT: QUARTERLY

WORK PERFORMED

RECORDER CALIBRATION CHECKED AT: 0.50 & 100%
ERROR: * CORRECTED ACCURACY: $\pm 1\%$

TOTALIZER CALIBRATION CHECKED AT: 0.50 & 100%
ERROR: * CORRECTED ACCURACY: $\pm 1\%$

TRANSMITTER CALIBRATION
SIMULATED HEAD RISES AND FLOW MEASUREMENTS.
ERROR: 0% CORRECTED ACCURACY: $\pm 1\%$

COMMENTS: *REQUESTED SERVICE: FLOW METER ERRATIC. FLOW METER UNREPAIRABLE.
TEMPORARILY INSTALLED A FLOW METER AT EFFLUENT UNTIL WE GET A NEW METER
INSTALLED PERMANENTLY. LEFT EQUIPMENT OPERATING PROPERLY.

SERVICE REPRESENTATIVE: DENNIS
copies:

PERSON SEEN: CHRIS

COPY

Appendix F:

Probable Costs for Alternative A.2

**SUMMARY OF TOTAL COSTS
CONSTRUCTION COSTS FOR DEVELOPMENTS & CONVEYANCE UPGRADES
PRELIMINARY ENGINEERING ESTIMATE OF PROBABLE PROJECT COSTS
WESTTOWN TOWNSHIP**

Development Name	Number of Dwelling Units	Construction Cost Estimate*	Cost per EDU	Total Flow @ 250 gpd/EDU (gpd)
West Wynn I	56	\$ 1,069,000.00	\$ 19,100.00	14,000
Grandview Acres, Westover Farms, Johnny's Way East, and S. Chester Rd. North	201	\$ 3,367,000.00	\$ 16,800.00	50,250
West Lynn	24	\$ 385,000.00	\$ 16,000.00	6,000
Pennwood (West Johnny's Way)	8	\$ 208,000.00	\$ 26,000.00	2,000
Carroll Brown Way & Carter Place	19	\$ 442,000.00	\$ 23,300.00	4,750
Pennwood South	84	\$ 1,945,000.00	\$ 23,200.00	21,000
Total Construction Developments	392	\$ 7,416,000.00	\$ 18,900.00	98,000
Total Construction Conveyance	392	\$ 3,333,000.00	\$ 8,500.00	98,000
Grand Total Construction	392	\$ 10,749,000.00	\$ 27,400.00	98,000
Legal, Administrative, Engineering, and Inspection		\$ 1,542,900.00	\$ 3,900.00	
Total Project Cost		\$ 12,291,900.00	\$ 31,300.00	

An engineering estimate of probable construction cost is made by an engineer, not a professional construction cost estimator or construction contractor. The accuracy of the engineering estimate can not be guaranteed.

*Includes grinder pump purchase and assumes homeowner responsible for installation of grinder pump and lateral to street

**SUMMARY COSTS FOR COLLECTION SYSTEM
CONSTRUCTION COSTS FOR DEVELOPMENTS
PRELIMINARY ENGINEERING ESTIMATE OF PROBABLE CONSTRUCTION COSTS
WESTTOWN TOWNSHIP**

Development Name	Number of Dwelling Units	Construction Cost Estimate*	Construction Cost per EDU	Total Flow @ 250 gpd/EDU (gpd)
West Wynn I	56	\$ 1,068,624.25	\$ 19,100.00	14,000
Grandview Acres, Westover Farms, Johnny's Way East, and S. Chester Rd. North	201	\$ 3,366,871.25	\$ 16,800.00	50,250
West Lynn	24	\$ 385,368.75	\$ 16,100.00	6,000
Pennwood (West Johnny's Way)	8	\$ 208,165.00	\$ 26,000.00	2,000
Carroll Brown Way & Carter Place	19	\$ 442,021.25	\$ 23,300.00	4,750
Pennwood South	84	\$ 1,944,630.00	\$ 23,200.00	21,000
Total Developments	392	\$ 7,415,680.50	\$ 18,900.00	98,000

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*Assumes homeowner responsible for installation of grinder pump and force main lateral to street

**UPGRADE INTERCEPTOR TO 18" MH 112 TO WWTF
PRELIMINARY ENGINEERING ESTIMATE OF PROBABLE CONSTRUCTION COSTS
WESTTOWN TOWNSHIP**

ASSUME REMOVE AND REPLACE EXISTING PIPE & MH'S

Item	Description	Units	Quantity	Unit Cost	Total
1	Survey, Layout	LS	1	\$5,000	\$5,000
2	E&S Controls	LS	1	\$8,000	\$8,000
3	Clearing in Easement	LS	1	\$14,000	\$14,000
4	18" Sewer 0 - 8' Deep	LF	1,300	\$100	\$130,000
5	18" Sewer 8.1' - 10' Deep	LF	300	\$130	\$39,000
6	18" Sewer 10.1' - 12' Deep	LF	675	\$160	\$108,000
7	18" Sewer 12.1' - 15' Deep	LF	686	\$200	\$137,200
8	18" Sewer 15.1' - 18' Deep	LF	0	\$240	\$0
9	18" Sewer 18.1' - 21' Deep	LF	0	\$280	\$0
10	18" Sewer 21.1' - 25.02' Deep	LF	0	\$300	\$0
11	Lateral Connections w/ C.O. *	EA	0	\$2,500	\$0
12	5' MH 0 - 8' Deep	EA	5	\$5,000	\$25,000
13	5' MH 8.1' - 10' Deep	EA	1	\$5,500	\$5,500
14	5' MH 10.1' - 12' Deep	EA	2	\$6,000	\$12,000
15	5' MH 12.1' - 15' Deep	EA	2	\$7,000	\$14,000
16	5' MH 15.1' - 18' Deep	EA	0	\$10,000	\$0
17	5' MH 18.1' - 21' Deep	EA	0	\$12,000	\$0
18	5' MH 21.1' - 25.02' Deep	EA	0	\$15,000	\$0
19	Bypass Pumping	Days	20	\$500	\$10,000
20	Stream or Wetland Crossing	LF	1,100	\$100	\$110,000
21	Dewatering	LS	1	\$5,000	\$5,000
22	Rock Excavation	CY	50	\$300	\$15,000
23	Utility Location Test Pits	EA	2	\$500	\$1,000
24	Sewer Testing	LS	1	\$5,000	\$5,000
25	MH Testing	EA	10	\$500	\$5,000
26	Compaction Testing	LS	1	\$5,000	\$5,000
27	Traffic Control	Day	2	\$650	\$1,300
28	Saw Cut	LF	200	\$2	\$400
29	Select Backfill in ROW	CY	100	\$25	\$2,500
30	Haul Off Spoils	CY	100	\$8	\$800
31	Paving - Permanent	SY	80	\$80	\$6,400
32	Restoration Non-paving	SY	6,000	\$6	\$36,000
33	As-Built Drawings	LS	1	\$5,000	\$5,000
	Subtotal				\$706,100
	Bonds & Insurance	2%			\$14,122
	Mobilization	5%			\$35,305
	Contingency	25%			\$188,882
	Total Estimate				\$930,287

An engineering estimate of probable construction cost is made by an engineer, not a professional construction cost estimator or construction contractor. The accuracy of the engineering estimate can not be guaranteed.

*Assumes homeowner responsible for installation of lateral from house to street

**KIRKWOOD PUMP STATION FORCE MAIN EXTENSION TO MH 112
PRELIMINARY ENGINEERING ESTIMATE OF PROBABLE CONSTRUCTION COSTS
WESTTOWN TOWNSHIP**

**ASSUME FM ROUTE IS IN PUBLIC ROW
Assume Directional Drilling in Shoulder of Streets**

Item	Description	Units	Quantity	Unit Cost	Total
1	Survey, Layout	LS	1	\$10,000	\$10,000
2	E&S Controls	LS	1	\$3,000	\$3,000
3	Directional Drill 8" F.M.*	LF	12,000	\$90	\$1,080,000
4	In-Line Clean Outs	EA	24	\$5,000	\$120,000
5	Air Release Valve	EA	9	\$5,000	\$45,000
6	Wetland or Stream Crossings	LF	460	\$100	\$46,000
7	Tie Into Existing MH	EA	1	\$5,000	\$5,000
8	Utility Location Test Pits	EA	10	\$500	\$5,000
9	FM Testing	LS	1	\$8,000	\$8,000
10	Traffic Control	Day	46	\$650	\$29,900
11	Saw Cut	LF	1,000	\$2	\$2,000
12	Select Backfill in ROW	CY	150	\$25	\$3,750
13	Paving - Permanent	SY	350	\$80	\$28,000
14	Restoration Non-paving	SY	500	\$6	\$3,000
15	As-Built Drawings	LS	1	\$10,000	\$10,000
16	Connection to Existing Force Main	LS	1	\$5,000	\$5,000
17	Rock Excavation	CY	180	\$300	\$54,000
	Subtotal				\$1,457,650
	Bonds & Insurance	2%			\$29,153
	Mobilization	5%			\$72,883
	Contingency	25%			\$389,921
	Total Estimate				\$1,920,454

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*Approximately 11,800' of extension is along pavement, 200' is in unpaved area

**KIRKWOOD PUMP STATION UPGRADE
PRELIMINARY ENGINEERING ESTIMATE OF PROBABLE CONSTRUCTION COSTS
WESTTOWN TOWNSHIP**

ITEM	DESCRIPTION	UNITS	QUANTITY	UNIT PRICE	TOTAL
1	E & S Controls	L.S.	1	\$1,000	\$1,000
2	Site Preparation	L.S.	1	\$1,000	\$1,000
3	Demolition	L.S.	1	\$5,000	\$5,000
4	Bypass Pumping	day	30	\$2,000	\$60,000
5	New Pumps & Controls	L.S.	1	\$100,000	\$100,000
6	Installation of New Pumps	L.S.	1	\$20,000	\$20,000
7	Installation of New Controls	L.S.	1	\$10,000	\$10,000
8	Piping Modifications	L.S.	1	\$5,000	\$5,000
9	New Generator and Transfer Switch	L.S.	1	\$115,000	\$115,000
10	Larger Diesel Fuel Tank/Piping	L.S.	1	\$4,000	\$4,000
11	Building Modifications	L.S.	1	\$10,000	\$10,000
12	Concrete Equipment Pads	L.S.	1	\$4,000	\$4,000
13	Electric Service & Distrib. Upgrade	L.S.	1	\$18,000	\$18,000
14	Intake/Exhaust Louver Replacement	L.S.	1	\$6,000	\$6,000
15	Power Co. Charges	L.S.	1	\$5,000	\$5,000
16	Site Restoration	L.S.	1	\$2,000	\$2,000
	Subtotal				\$366,000
	Bonds & Insurance	2%			\$7,320
	Mobilization	5%			\$18,300
	Contingency	25%			\$97,905
	Total Estimate				\$482,205

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**SUMMARY COSTS FOR COLLECTION SYSTEM
CONSTRUCTION COSTS FOR DEVELOPMENTS
PRELIMINARY ENGINEERING ESTIMATE OF PROBABLE CONSTRUCTION COSTS
WESTTOWN TOWNSHIP**

Development Name	Number of Dwelling Units	Construction Cost Estimate*	Construction Cost per EDU	Total Flow @ 250 gpd/EDU (gpd)
West Wynn I	56	\$ 1,068,624.25	\$ 19,100.00	14,000
Grandview Acres, Westover Farms, Johnny's Way East, and S. Chester Rd. North	201	\$ 3,366,871.25	\$ 16,800.00	50,250
West Lynn	24	\$ 385,368.75	\$ 16,100.00	6,000
Pennwood (West Johnny's Way)	8	\$ 208,165.00	\$ 26,000.00	2,000
Carroll Brown Way & Carter Place	19	\$ 442,021.25	\$ 23,300.00	4,750
Pennwood South	84	\$ 1,944,630.00	\$ 23,200.00	21,000
Total Developments	392	\$ 7,415,680.50	\$ 18,900.00	98,000

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*Assumes homeowner responsible for installation of grinder pump and force main lateral to street

**WEST WYNN I
PRELIMINARY ENGINEERING ESTIMATE OF PROBABLE CONSTRUCTION COSTS
WESTTOWN TOWNSHIP**

**ASSUME 56 GRINDER PUMP CONNECTIONS WITH FM DISCHARGE TO EXISTING MH 125-000
Assume Directional Drilling in Shoulder of Streets**

Item	Description	Units	Quantity	Unit Cost	Total
1	Survey, Layout	LS	1	\$6,000	\$6,000
2	E&S Controls	LS	1	\$2,000	\$2,000
3	Clearing in Easement	LS	0	\$1,000	\$0
4	Directional Drill F.M. 3" and Less	LF	5,650	\$30	\$169,500
5	Directional Drill F.M. 4"	LF	300	\$45	\$13,500
6	In-Line Clean Outs	EA	13	\$5,000	\$65,000
7	Terminal Clean Outs	EA	4	\$2,500	\$10,000
8	Air Release Valve	EA	10	\$5,000	\$50,000
9	Lateral Connections	EA	56	\$2,500	\$140,000
10	Tie Into Existing MH	EA	1	\$5,000	\$5,000
11	MH Lining	EA	3	\$3,000	\$9,000
12	Stream Crossing	EA	4	\$7,500	\$30,000
13	Utility Location Test Pits	EA	7	\$1,000	\$7,000
14	FM Testing	LS	1	\$6,000	\$6,000
15	Traffic Control	Day	40	\$650	\$26,000
16	Saw Cut	LF	1000	\$2	\$2,000
17	Select Backfill in ROW	CY	148	\$25	\$3,700
18	Paving - Permanent	SY	400	\$80	\$32,000
19	Restoration Non-paving	LS	400	\$6	\$2,400
20	As-Built Drawings	LS	1	\$6,000	\$6,000
21	Simplex Grinder Pumps*	EA	56	\$3,500	\$196,000
22	Rock Excavation	CY	100	\$300	\$30,000
	Subtotal				\$811,100
	Bonds & Insurance	2%			\$16,222
	Mobilization	5%			\$40,555
	Contingency	25%			\$216,969
	Total Estimate				\$1,068,624

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*Assumes homeowner responsible for installation of grinder pump and force main lateral to street

**WEST LYNN
PRELIMINARY ENGINEERING ESTIMATE OF PROBABLE CONSTRUCTION COSTS
WESTTOWN TOWNSHIP**

**ASSUME 24 GRINDER PUMP CONNECTIONS WITH FM DISCHARGE TO GRANDVIEW FM
Assume Directional Drilling in Shoulder of Streets**

Item	Description	Units	Quantity	Unit Cost	Total
1	Survey, Layout	LS	1	\$3,000	\$3,000
2	E&S Controls	LS	1	\$500	\$500
3	Clearing	LS	1	\$500	\$500
4	Directional Drill F.M. 3" and Less	LF	2,400	\$30	\$72,000
5	In-Line Clean Outs	EA	4	\$5,000	\$20,000
6	Terminal Clean Outs	EA	2	\$2,500	\$5,000
7	Air Release Valve	EA	1	\$5,000	\$5,000
8	Lateral Connections	EA	24	\$2,500	\$60,000
9	Tie Into Grandview FM	EA	1	\$5,000	\$5,000
10	Stream Crossing	EA	0	\$7,500	\$0
11	Utility Location Test Pits	EA	6	\$500	\$3,000
12	FM Testing	LS	1	\$3,000	\$3,000
13	Traffic Control	Day	12	\$650	\$7,800
14	Saw Cut	LF	250	\$2	\$500
15	Select Backfill in ROW	CY	40	\$25	\$1,000
16	Paving - Permanent	SY	100	\$80	\$8,000
17	Restoration Non-paving	SY	200	\$6	\$1,200
18	As-Built Drawings	LS	1	\$4,000	\$4,000
19	Simplex Grinder Pumps*	EA	24	\$3,500	\$84,000
20	Rock Excavation	CY	30	\$300	\$9,000
	Subtotal				\$292,500
	Bonds & Insurance	2%			\$5,850
	Mobilization	5%			\$14,625
	Contingency	25%			\$78,244
	Total Estimate				\$385,369

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*Assumes homeowner responsible for installation of grinder pump and force main lateral to street

**GRANDVIEW ACRES AND WESTOVER FARMS
INCLUDES JOHNNY'S WAY EAST AND S. CHESTER RD. NORTH
PRELIMINARY ENGINEERING ESTIMATE OF PROBABLE CONSTRUCTION COSTS
WESTTOWN TOWNSHIP**

**ASSUME 225 GRINDER PUMP CONNECTIONS
WITH FM DISCHARGE TO MH 148-201 NEAR KIRKWOOD PUMP STATION
Assume Directional Drilling in Shoulder of Streets**

Item	Description	Units	Quantity	Unit Cost	Total
1	Survey, Layout	LS	1	\$20,000	\$20,000
2	E&S Controls	LS	1	\$10,000	\$10,000
3	Clearing in Easement	LS	1	\$1,000	\$1,000
4	Directional Drill F.M. 3" and Less	LF	12,100	\$30	\$363,000
5	Directional Drill F.M. 4"	LF	2,500	\$45	\$112,500
6	Directional Drill F.M. 6"	LF	3,800	\$65	\$247,000
7	In-Line Clean Outs	EA	33	\$5,000	\$165,000
8	Terminal Clean Outs	EA	10	\$2,500	\$25,000
9	Air Release Valve	EA	16	\$5,000	\$80,000
10	Lateral Connections	EA	201	\$2,500	\$502,500
11	Tie Into Existing MH	EA	1	\$5,000	\$5,000
12	MH Lining	EA	3	\$3,000	\$9,000
12	Stream Crossing	EA	1	\$7,500	\$7,500
13	Utility Location Test Pits	EA	24	\$500	\$12,000
14	FM Testing	LS	1	\$20,000	\$20,000
15	Traffic Control	Day	100	\$650	\$65,000
16	Saw Cut	LF	2000	\$2	\$4,000
17	Select Backfill in ROW	CY	300	\$25	\$7,500
18	Paving - Permanent	SY	1000	\$80	\$80,000
19	Restoration Non-paving	SY	1000	\$6	\$6,000
20	As-Built Drawings	LS	1	\$20,000	\$20,000
21	Simplex Grinder Pumps*	EA	201	\$3,500	\$703,500
22	Rock Excavation	CY	300	\$300	\$90,000
	Subtotal				\$2,555,500
	Bonds & Insurance	2%			\$51,110
	Mobilization	5%			\$127,775
	Contingency	25%			\$683,596
	Total Estimate				\$3,366,871

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*Assumes homeowner responsible for installation of grinder pump and force main lateral to street

**PENNWOOD SOUTH
PRELIMINARY ENGINEERING ESTIMATE OF PROBABLE CONSTRUCTION COSTS
WESTTOWN TOWNSHIP**

**ASSUME 84 GRINDER PUMP CONNECTIONS WITH FM DISCHARGE TO EXISTING MH 112
Assume Directional Drilling in Shoulder of Streets**

Item	Description	Units	Quantity	Unit Cost	Total
1	Survey, Layout	LS	1	\$15,000	\$15,000
2	E&S Controls	LS	1	\$8,000	\$8,000
3	Clearing	LS	0	\$1,000	\$0
4	Directional Drill F.M. 3" and Less	LF	10,300	\$30	\$309,000
5	Directional Drill F.M. 4"	LF	3,300	\$45	\$148,500
6	In-Line Clean Outs	EA	28	\$5,000	\$140,000
7	Terminal Clean Outs	EA	8	\$2,500	\$20,000
8	Air Release Valve	EA	15	\$5,000	\$75,000
9	Lateral Connections	EA	84	\$2,500	\$210,000
10	Tie Into Existing MH	EA	1	\$5,000	\$5,000
11	Stream & Wetland Crossings	LF	550	\$100	\$55,000
12	Utility Location Test Pits	EA	20	\$500	\$10,000
13	FM Testing	LS	1	\$10,000	\$10,000
14	Traffic Control	Day	66	\$650	\$42,900
15	Saw Cut	LF	1700	\$2	\$3,400
16	Select Backfill in ROW	CY	240	\$25	\$6,000
17	Paving - Permanent	SY	600	\$80	\$48,000
18	Restoration Non-paving	SY	700	\$6	\$4,200
19	As-Built Drawings	LS	1	\$12,000	\$12,000
20	Simplex Grinder Pumps*	EA	84	\$3,500	\$294,000
21	Rock Excavation	CY	200	\$300	\$60,000
	Subtotal				\$1,476,000
	Bonds & Insurance	2%			\$29,520
	Mobilization	5%			\$73,800
	Contingency	25%			\$394,830
	Total Estimate				\$1,944,630

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*Assumes homeowner responsible for installation of grinder pump and force main lateral to street

**PENNWOOD (WEST JOHNNY'S WAY)
PRELIMINARY ENGINEERING ESTIMATE OF PROBABLE CONSTRUCTION COSTS
WESTTOWN TOWNSHIP**

**ASSUME 8 GRINDER PUMP CONNECTIONS
WITH FM DISCHARGE TO PENNWOOD SOUTH FORCE MAIN
Assume Directional Drilling in Shoulder of Streets**

Item	Description	Units	Quantity	Unit Cost	Total
1	Survey, Layout	LS	1	\$4,000	\$4,000
2	E&S Controls	LS	1	\$1,000	\$1,000
3	Clearing	LS	0	\$500	\$0
4	Directional Drill F.M. 3" and Less	LF	1,000	\$30	\$30,000
5	In-Line Clean Outs	EA	4	\$5,000	\$20,000
6	Terminal Clean Outs	EA	2	\$2,500	\$5,000
7	Air Release Valve	EA	2	\$5,000	\$10,000
8	Lateral Connections	EA	8	\$2,500	\$20,000
9	Tie Into Existing MH	EA	0	\$5,000	\$0
10	Stream Crossing	EA	0	\$7,500	\$0
11	Utility Location Test Pits	EA	6	\$500	\$3,000
12	FM Testing	LS	1	\$4,000	\$4,000
13	Traffic Control	Day	12	\$650	\$7,800
14	Saw Cut	LF	300	\$2	\$600
15	Select Backfill in ROW	CY	40	\$25	\$1,000
16	Paving - Permanent	SY	100	\$80	\$8,000
17	Restoration Non-paving	SY	100	\$6	\$600
18	As-Built Drawings	LS	1	\$3,000	\$3,000
19	Simplex Grinder Pumps*	EA	8	\$3,500	\$28,000
20	Rock Excavation	CY	40	\$300	\$12,000
	Subtotal				\$158,000
	Bonds & Insurance	2%			\$3,160
	Mobilization	5%			\$7,900
	Contingency	25%			\$42,265
	Total Estimate				\$208,165

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*Assumes homeowner responsible for installation of grinder pump and force main lateral to street

**CARROLL BROWN WAY & CARTER PLACE
PRELIMINARY ENGINEERING ESTIMATE OF PROBABLE CONSTRUCTION COSTS
WESTTOWN TOWNSHIP**

**ASSUME 19 GRINDER PUMP CONNECTIONS
WITH FM DISCHARGE TO EXISTING MH'S 118 and 112
Assume Directional Drilling in Shoulder of Streets**

Item	Description	Units	Quantity	Unit Cost	Total
1	Survey, Layout	LS	1	\$4,000	\$4,000
2	E&S Controls	LS	1	\$1,000	\$1,000
3	Clearing	LS	1	\$500	\$500
4	Directional Drill F.M. 3" and Less	LF	2,700	\$30	\$81,000
5	In-Line Clean Outs	EA	3	\$5,000	\$15,000
6	Terminal Clean Outs	EA	6	\$2,500	\$15,000
7	Air Release Valve	EA	3	\$5,000	\$15,000
8	Lateral Connections	EA	19	\$2,500	\$47,500
9	Tie Into Existing MH	EA	6	\$5,000	\$30,000
10	Stream Crossing	EA	0	\$7,500	\$0
11	Utility Location Test Pits	EA	8	\$500	\$4,000
12	FM Testing	LS	1	\$5,000	\$5,000
13	Traffic Control	Day	22	\$650	\$14,300
14	Saw Cut	LF	600	\$2	\$1,200
15	Select Backfill in ROW	CY	80	\$25	\$2,000
16	Paving - Permanent	SY	200	\$80	\$16,000
17	Restoration Non-paving	SY	250	\$6	\$1,500
18	As-Built Drawings	LS	1	\$4,000	\$4,000
19	Simplex Grinder Pumps*	EA	19	\$3,500	\$66,500
20	Rock Excavation	CY	40	\$300	\$12,000
	Subtotal				\$335,500
	Bonds & Insurance	2%			\$6,710
	Mobilization	5%			\$16,775
	Contingency	25%			\$89,746
	Total Estimate				\$442,021

An engineering estimate of probable construction cost is made by an engineer, not a professional construction cost estimator or construction contractor. The accuracy of the engineering estimate can not be guaranteed.

*Assumes homeowner responsible for installation of grinder pump and force main lateral to street

**GRANDVIEW ACRES AND WESTOVER FARMS
INCLUDES JOHNNY'S WAY EAST AND S. CHESTER RD. NORTH
PRELIMINARY ENGINEERING ESTIMATE OF PROBABLE CONSTRUCTION COSTS
WESTTOWN TOWNSHIP**

**ASSUME 225 GRINDER PUMP CONNECTIONS
WITH FM DISCHARGE TO MH 148-201 NEAR KIRKWOOD PUMP STATION
Assume Directional Drilling in Shoulder of Streets**

Item	Description	Units	Quantity	Unit Cost	Total
1	Survey, Layout	LS	1	\$20,000	\$20,000
2	E&S Controls	LS	1	\$10,000	\$10,000
3	Clearing in Easement	LS	1	\$1,000	\$1,000
4	Directional Drill F.M. 3" and Less	LF	12,100	\$30	\$363,000
5	Directional Drill F.M. 4"	LF	2,500	\$45	\$112,500
6	Directional Drill F.M. 6"	LF	3,800	\$65	\$247,000
7	In-Line Clean Outs	EA	33	\$5,000	\$165,000
8	Terminal Clean Outs	EA	10	\$2,500	\$25,000
9	Air Release Valve	EA	16	\$5,000	\$80,000
10	Lateral Connections	EA	201	\$2,500	\$502,500
11	Tie Into Existing MH	EA	1	\$5,000	\$5,000
12	MH Lining	EA	3	\$3,000	\$9,000
12	Stream Crossing	EA	1	\$7,500	\$7,500
13	Utility Location Test Pits	EA	24	\$500	\$12,000
14	FM Testing	LS	1	\$20,000	\$20,000
15	Traffic Control	Day	100	\$650	\$65,000
16	Saw Cut	LF	2000	\$2	\$4,000
17	Select Backfill in ROW	CY	300	\$25	\$7,500
18	Paving - Permanent	SY	1000	\$80	\$80,000
19	Restoration Non-paving	SY	1000	\$6	\$6,000
20	As-Built Drawings	LS	1	\$20,000	\$20,000
21	Simplex Grinder Pumps*	EA	201	\$3,500	\$703,500
22	Rock Excavation	CY	300	\$300	\$90,000
	Subtotal				\$2,555,500
	Bonds & Insurance	2%			\$51,110
	Mobilization	5%			\$127,775
	Contingency	25%			\$683,596
	Total Estimate				\$3,366,871

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*Assumes homeowner responsible for installation of grinder pump and force main lateral to street

**PENNWOOD SOUTH
PRELIMINARY ENGINEERING ESTIMATE OF PROBABLE CONSTRUCTION COSTS
WESTTOWN TOWNSHIP**

**ASSUME 84 GRINDER PUMP CONNECTIONS WITH FM DISCHARGE TO EXISTING MH 112
Assume Directional Drilling in Shoulder of Streets**

Item	Description	Units	Quantity	Unit Cost	Total
1	Survey, Layout	LS	1	\$15,000	\$15,000
2	E&S Controls	LS	1	\$8,000	\$8,000
3	Clearing	LS	0	\$1,000	\$0
4	Directional Drill F.M. 3" and Less	LF	10,300	\$30	\$309,000
5	Directional Drill F.M. 4"	LF	3,300	\$45	\$148,500
6	In-Line Clean Outs	EA	28	\$5,000	\$140,000
7	Terminal Clean Outs	EA	8	\$2,500	\$20,000
8	Air Release Valve	EA	15	\$5,000	\$75,000
9	Lateral Connections	EA	84	\$2,500	\$210,000
10	Tie Into Existing MH	EA	1	\$5,000	\$5,000
11	Stream & Wetland Crossings	LF	550	\$100	\$55,000
12	Utility Location Test Pits	EA	20	\$500	\$10,000
13	FM Testing	LS	1	\$10,000	\$10,000
14	Traffic Control	Day	66	\$650	\$42,900
15	Saw Cut	LF	1700	\$2	\$3,400
16	Select Backfill in ROW	CY	240	\$25	\$6,000
17	Paving - Permanent	SY	600	\$80	\$48,000
18	Restoration Non-paving	SY	700	\$6	\$4,200
19	As-Built Drawings	LS	1	\$12,000	\$12,000
20	Simplex Grinder Pumps*	EA	84	\$3,500	\$294,000
21	Rock Excavation	CY	200	\$300	\$60,000
	Subtotal				\$1,476,000
	Bonds & Insurance	2%			\$29,520
	Mobilization	5%			\$73,800
	Contingency	25%			\$394,830
	Total Estimate				\$1,944,630

An engineering estimate of probable construction cost is made by an engineer, not a professional construction cost estimator or construction contractor. The accuracy of the engineering estimate can not be guaranteed.

*Assumes homeowner responsible for installation of grinder pump and force main lateral to street

**PENNWOOD (WEST JOHNNY'S WAY)
PRELIMINARY ENGINEERING ESTIMATE OF PROBABLE CONSTRUCTION COSTS
WESTTOWN TOWNSHIP**

**ASSUME 8 GRINDER PUMP CONNECTIONS
WITH FM DISCHARGE TO PENNWOOD SOUTH FORCE MAIN
Assume Directional Drilling in Shoulder of Streets**

Item	Description	Units	Quantity	Unit Cost	Total
1	Survey, Layout	LS	1	\$4,000	\$4,000
2	E&S Controls	LS	1	\$1,000	\$1,000
3	Clearing	LS	0	\$500	\$0
4	Directional Drill F.M. 3" and Less	LF	1,000	\$30	\$30,000
5	In-Line Clean Outs	EA	4	\$5,000	\$20,000
6	Terminal Clean Outs	EA	2	\$2,500	\$5,000
7	Air Release Valve	EA	2	\$5,000	\$10,000
8	Lateral Connections	EA	8	\$2,500	\$20,000
9	Tie Into Existing MH	EA	0	\$5,000	\$0
10	Stream Crossing	EA	0	\$7,500	\$0
11	Utility Location Test Pits	EA	6	\$500	\$3,000
12	FM Testing	LS	1	\$4,000	\$4,000
13	Traffic Control	Day	12	\$650	\$7,800
14	Saw Cut	LF	300	\$2	\$600
15	Select Backfill in ROW	CY	40	\$25	\$1,000
16	Paving - Permanent	SY	100	\$80	\$8,000
17	Restoration Non-paving	SY	100	\$6	\$600
18	As-Built Drawings	LS	1	\$3,000	\$3,000
19	Simplex Grinder Pumps*	EA	8	\$3,500	\$28,000
20	Rock Excavation	CY	40	\$300	\$12,000
	Subtotal				\$158,000
	Bonds & Insurance	2%			\$3,160
	Mobilization	5%			\$7,900
	Contingency	25%			\$42,265
	Total Estimate				\$208,165

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*Assumes homeowner responsible for installation of grinder pump and force main lateral to street

**CARROLL BROWN WAY & CARTER PLACE
PRELIMINARY ENGINEERING ESTIMATE OF PROBABLE CONSTRUCTION COSTS
WESTTOWN TOWNSHIP**

**ASSUME 19 GRINDER PUMP CONNECTIONS
WITH FM DISCHARGE TO EXISTING MH'S 118 and 112
Assume Directional Drilling in Shoulder of Streets**

Item	Description	Units	Quantity	Unit Cost	Total
1	Survey, Layout	LS	1	\$4,000	\$4,000
2	E&S Controls	LS	1	\$1,000	\$1,000
3	Clearing	LS	1	\$500	\$500
4	Directional Drill F.M. 3" and Less	LF	2,700	\$30	\$81,000
5	In-Line Clean Outs	EA	3	\$5,000	\$15,000
6	Terminal Clean Outs	EA	6	\$2,500	\$15,000
7	Air Release Valve	EA	3	\$5,000	\$15,000
8	Lateral Connections	EA	19	\$2,500	\$47,500
9	Tie Into Existing MH	EA	6	\$5,000	\$30,000
10	Stream Crossing	EA	0	\$7,500	\$0
11	Utility Location Test Pits	EA	8	\$500	\$4,000
12	FM Testing	LS	1	\$5,000	\$5,000
13	Traffic Control	Day	22	\$650	\$14,300
14	Saw Cut	LF	600	\$2	\$1,200
15	Select Backfill in ROW	CY	80	\$25	\$2,000
16	Paving - Permanent	SY	200	\$80	\$16,000
17	Restoration Non-paving	SY	250	\$6	\$1,500
18	As-Built Drawings	LS	1	\$4,000	\$4,000
19	Simplex Grinder Pumps*	EA	19	\$3,500	\$66,500
20	Rock Excavation	CY	40	\$300	\$12,000
	Subtotal				\$335,500
	Bonds & Insurance	2%			\$6,710
	Mobilization	5%			\$16,775
	Contingency	25%			\$89,746
	Total Estimate				\$442,021

An engineering estimate of probable construction cost is made by an engineer, not a professional construction cost estimator or construction contractor. The accuracy of the engineering estimate can not be guaranteed.

*Assumes homeowner responsible for installation of grinder pump and force main lateral to street

SUMMARY OF TOTAL CONVEYANCE COSTS
INCLUDES KIRKWOOD PUMP STATION UPGRADE
INCLUDES EXTENSION OF KIRKWOOD FORCE MAIN FROM PS TO MH 112
INCLUDES UPGRADE OF TRUNKLINE/INTERCEPTOR FROM MH 112 TO WWTP
PRELIMINARY ENGINEERING ESTIMATE OF PROBABLE CONSTRUCTION COSTS
WESTTOWN TOWNSHIP

Item	Description	Estimated Cost
1	Upgrade Kirkwood Pump Station	\$482,205
2	Extend KW PS Force Main to MH 112	\$1,920,454
3	Upgrade Trunkline and Interceptor From MH 112 to WWTP	\$930,287
	Total Conveyance	\$3,332,946

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 a professional construction cost estimator or construction contractor.
 The accuracy of the engineering estimate can not be guaranteed.

**UPGRADE INTERCEPTOR TO 18" MH 112 TO WWTF
PRELIMINARY ENGINEERING ESTIMATE OF PROBABLE CONSTRUCTION COSTS
WESTTOWN TOWNSHIP**

ASSUME REMOVE AND REPLACE EXISTING PIPE & MH'S

Item	Description	Units	Quantity	Unit Cost	Total
1	Survey, Layout	LS	1	\$5,000	\$5,000
2	E&S Controls	LS	1	\$8,000	\$8,000
3	Clearing in Easement	LS	1	\$14,000	\$14,000
4	18" Sewer 0 - 8' Deep	LF	1,300	\$100	\$130,000
5	18" Sewer 8.1' - 10' Deep	LF	300	\$130	\$39,000
6	18" Sewer 10.1' - 12' Deep	LF	675	\$160	\$108,000
7	18" Sewer 12.1' - 15' Deep	LF	686	\$200	\$137,200
8	18" Sewer 15.1' - 18' Deep	LF	0	\$240	\$0
9	18" Sewer 18.1' - 21' Deep	LF	0	\$280	\$0
10	18" Sewer 21.1' - 25.02' Deep	LF	0	\$300	\$0
11	Lateral Connections w/ C.O. *	EA	0	\$2,500	\$0
12	5' MH 0 - 8' Deep	EA	5	\$5,000	\$25,000
13	5' MH 8.1' - 10' Deep	EA	1	\$5,500	\$5,500
14	5' MH 10.1' - 12' Deep	EA	2	\$6,000	\$12,000
15	5' MH 12.1' - 15' Deep	EA	2	\$7,000	\$14,000
16	5' MH 15.1' - 18' Deep	EA	0	\$10,000	\$0
17	5' MH 18.1' - 21' Deep	EA	0	\$12,000	\$0
18	5' MH 21.1' - 25.02' Deep	EA	0	\$15,000	\$0
19	Bypass Pumping	Days	20	\$500	\$10,000
20	Stream or Wetland Crossing	LF	1,100	\$100	\$110,000
21	Dewatering	LS	1	\$5,000	\$5,000
22	Rock Excavation	CY	50	\$300	\$15,000
23	Utility Location Test Pits	EA	2	\$500	\$1,000
24	Sewer Testing	LS	1	\$5,000	\$5,000
25	MH Testing	EA	10	\$500	\$5,000
26	Compaction Testing	LS	1	\$5,000	\$5,000
27	Traffic Control	Day	2	\$650	\$1,300
28	Saw Cut	LF	200	\$2	\$400
29	Select Backfill in ROW	CY	100	\$25	\$2,500
30	Haul Off Spoils	CY	100	\$8	\$800
31	Paving - Permanent	SY	80	\$80	\$6,400
32	Restoration Non-paving	SY	6,000	\$6	\$36,000
33	As-Built Drawings	LS	1	\$5,000	\$5,000
	Subtotal				\$706,100
	Bonds & Insurance	2%			\$14,122
	Mobilization	5%			\$35,305
	Contingency	25%			\$188,882
	Total Estimate				\$930,287

An engineering estimate of probable construction cost is made by an engineer, not a professional construction cost estimator or construction contractor. The accuracy of the engineering estimate can not be guaranteed.

*Assumes homeowner responsible for installation of lateral from house to street

**KIRKWOOD PUMP STATION FORCE MAIN EXTENSION TO MH 112
PRELIMINARY ENGINEERING ESTIMATE OF PROBABLE CONSTRUCTION COSTS
WESTTOWN TOWNSHIP**

**ASSUME FM ROUTE IS IN PUBLIC ROW
Assume Directional Drilling in Shoulder of Streets**

Item	Description	Units	Quantity	Unit Cost	Total
1	Survey, Layout	LS	1	\$10,000	\$10,000
2	E&S Controls	LS	1	\$3,000	\$3,000
3	Directional Drill 8" F.M.*	LF	12,000	\$90	\$1,080,000
4	In-Line Clean Outs	EA	24	\$5,000	\$120,000
5	Air Release Valve	EA	9	\$5,000	\$45,000
6	Wetland or Stream Crossings	LF	460	\$100	\$46,000
7	Tie Into Existing MH	EA	1	\$5,000	\$5,000
8	Utility Location Test Pits	EA	10	\$500	\$5,000
9	FM Testing	LS	1	\$8,000	\$8,000
10	Traffic Control	Day	46	\$650	\$29,900
11	Saw Cut	LF	1,000	\$2	\$2,000
12	Select Backfill in ROW	CY	150	\$25	\$3,750
13	Paving - Permanent	SY	350	\$80	\$28,000
14	Restoration Non-paving	SY	500	\$6	\$3,000
15	As-Built Drawings	LS	1	\$10,000	\$10,000
16	Connection to Existing Force Main	LS	1	\$5,000	\$5,000
17	Rock Excavation	CY	180	\$300	\$54,000
	Subtotal				\$1,457,650
	Bonds & Insurance	2%			\$29,153
	Mobilization	5%			\$72,883
	Contingency	25%			\$389,921
	Total Estimate				\$1,920,454

An engineering estimate of probable construction cost is made by an engineer, not a professional construction cost estimator or construction contractor. The accuracy of the engineering estimate can not be guaranteed.

*Approximately 11,800' of extension is along pavement, 200' is in unpaved area

Appendix G:

Draft On-Lot Sewage Management Ordinance

**WESTTOWN TOWNSHIP
CHESTER COUNTY, PENNSYLVANIA**

ORDINANCE No. __

**AN ORDINANCE GOVERNING MUNICIPAL MANAGEMENT
OF ON-LOT SEWAGE DISPOSAL FACILITIES IN
THE TOWNSHIP OF WESTTOWN, COUNTY OF CHESTER, PA**

NOW, THEREFORE, BE IT ENACTED AND ORDAINED, by the Board of Supervisors of the Township of Westtown, County of Chester, Commonwealth of Pennsylvania, and it is hereby enacted and ordained by its authority as follows:

Section I. Short Title: Introduction; Purpose

- A. This Ordinance shall be known and may be cited as “An Ordinance providing for an On-Lot Sewage Management Program for Westtown Township.”
- B. In accordance with the Second Class Township Code (53 PS §65101, et seq.), 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 Westtown Township to provide for adequate sewage treatment and disposal 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 Westtown 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.
- C. The purpose of this ordinance is to provide for the regulation, inspection, maintenance and rehabilitation of On-lot Sewage Disposal Systems; to further allow 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.

Section II. Definitions

- A. Act 537: The Act of January 24, 1966, P.L. 1535, as amended, 35 P.S. § 750.1 et seq., known as the “Pennsylvania Sewage Facilities Act.”
- B. Authorized Agent: A person with demonstrated knowledge and experience regarding On-lot Sewage Disposal System design, operation, and maintenance who is authorized to function within specified limits as an agent of Westtown Township to administer or enforce the provisions of this Ordinance.
- C. Board: The Board of Supervisors, Westtown Township, Chester County, Pennsylvania.

- D. Community Onlot Sewage System: A sewage system which serves two or more lots, or two or more equivalent dwelling units, and uses a system of piping, tanks, or other facilities for collecting, treating, and disposing of sewage into a soil absorption area, retaining tank, or cesspool.
- E. Department: The Department of Environmental Protection of the Commonwealth of Pennsylvania (DEP).
- F. Individual Residential Spray Irrigation System (IRSIS): An individual sewage system which serves a single dwelling and which treats and disposes of sewage through using a system of piping, treatment tanks, and soil renovation through spray irrigation.
- G. Individual Onlot Sewage System: A sewage system which serves a single lot and a single equivalent dwelling unit, and uses a system of piping, tanks, or other facilities for collecting, treating, and disposing of sewage into a soil absorption area, spray field, retaining tank, or cesspool.
- H. Initial Treatment Unit: Term used to describe the on-lot disposal system receiving unit to which sewage is delivered from a sewage generating facility. The term includes, but is not limited to, septic tanks, aerobic treatment units, and cesspools.
- I. Liquid Waste: Septage pumped from septic tanks, cesspools, holding tanks, privies, or chemical toilets which does not include any toxic, industrial, or hazardous wastes.
- J. Liquid Waste Hauler: Any person engaged in the business of pumping and transporting liquid waste within Chester County using vehicles licensed by the Chester County Health Department.
- K. Lot: A part of a subdivision or a parcel of land used as a building site or intended to be used for building purposes, whether immediate or future, which would not be further subdivided. Whenever a lot is used for a multiple family dwelling or for commercial or industrial purposes, the lot shall be deemed to have been subdivided into an equivalent number of single-family residential lots as determined by estimated sewage flows.
- L. Maintenance Contractor: A private independent contractor who has been given training by the original equipment manufacturer on the operations of applicable sewage system components, has been authorized by the manufacturer to service said components, or has demonstrated technical expertise in the field of on-lot sewage system maintenance. All Maintenance Contractors shall be approved by the Township to provide such maintenance services within the borders of the Township.
- M. 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 occurs for any length of time during any period of the year.

- N. Retaining Tank: A watertight receptacle that receives and retains sewage and is designed and constructed to facilitate the ultimate disposal of the sewage at another site. This term is synonymous with the term Holding Tank.
- O. Official Sewage Facilities Act 537 Plan: A comprehensive plan for the provisions of adequate sewage disposal systems, adopted by the Board and approved by the Pennsylvania Department of Environmental Protection, pursuant to the Pennsylvania Sewage Facilities Act.
- P. On-Lot Sewage Disposal System: Any Community Onlot Sewage System or Individual Onlot Sewage System as defined herein.
- Q. 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.
- R. Rehabilitation: Work done to modify, alter, repair, enlarge or replace an existing On-Lot Sewage Disposal System.
- S. Septage: The residual scum, sludge, and other materials pumped from, but not limited to, Initial Treatment Units, other treatment tanks, Retaining Tanks, pump tanks, and the systems they serve.
- T. 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 (P.L. 1987, No. 394), known as “The Clean Streams Law,” as amended.
- U. Sewage Enforcement Officer (SEO) — A person certified by DEP who is employed by the Chester County Health Department. Such person is authorized to conduct investigations and inspections, review permit applications, 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 the Township or Chester County Health Department.
- V. 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 to effectively enforce and administer this Ordinance.
- W. 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.

X. Township: The Township of Westtown, 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 Regulations promulgated thereto.

Section III. Applicability

A. From the effective date of this ordinance, its provisions shall apply to all portions of the Township served by On-Lot Sewage Disposal Systems. 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.

Section IV. Permit Requirements

A. No building permit shall be issued for a new building which will utilize an On-lot Sewage Disposal System until an On-lot Sewage Disposal System permit has been issued by the Chester County Health Department SEO. Proof of On-lot Sewage Disposal System permit issuance shall be presented to the Township in the form of a properly executed permit signed by the Chester County Health Department SEO.

B. No occupancy permit shall be issued for a new building which will utilize an On-lot Sewage Disposal System until the sewage disposal system has been installed and the completed installation is approved by the Chester County Health Department SEO. Proof of On-Lot Sewage Disposal System final installation approval shall be presented to the Township in the form of a properly executed permit signed by the Chester County Health Department SEO.

C. No building or occupancy permit 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 from the Chester County Health Department SEO 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 the Chester County Health Department SEO that such a permit will not be required. The Chester County Health Department SEO shall determine whether the proposed alteration or conversion of the structure will result in increased sewage flows.

D. Sewage permits may be issued only by a Sewage Enforcement Officer employed by the Chester County Health Department.

Section V. Inspections

A. Initial inspections.

1. Each person owning a building served by an On-Lot Sewage Disposal System shall employ a qualified Maintenance Contractor to complete an initial inspection within three (3) years of the effective date of this ordinance for the purpose of determining the type, condition, and maintenance needs of each On-lot Sewage Disposal System.

2. Initial inspections may be conducted concurrent with the pumping requirements of Section VII.A or Section VII.B, as applicable.
2. The Board may further define geographic subsets of the Township and associated timing of initial inspections to facilitate administration.
3. A written inspection report signed by the Maintenance Contractor shall be furnished to the Township and the owner of each property inspected within thirty (30) days of the inspection. All written inspection reports shall be on a form provided by the Township.
4. Initial inspection requirements may be waived if a person owning a lot served by an On-lot Sewage Disposal System has had a new system installed in accordance with all Chester County Health Department and DEP standards within one year prior to the effective date of this ordinance. Copies of all approved Chester County Health Department permit data, including plot plan, design specifications, percolation test reports, and installation inspection reports must be submitted to the Township to qualify for a waiver from the initial inspection requirements.

B. Routine inspections.

1. Each person owning a building served by an On-Lot Sewage Disposal System shall employ a qualified Maintenance Contractor to complete routine inspections for the purpose of evaluating ongoing condition and maintenance needs of each On-lot Sewage Disposal System in the Township.
2. Routine inspections shall be completed every three (3) years after either the date of initial inspection or a new On-lot Sewage Disposal System installation pursuant to Section V.D.4, as applicable. Routine inspections shall also be completed every three (3) years after final installation approval by the Chester County Health Department SEO for all On-lot Sewage Disposal Systems constructed after the effective date of this ordinance.
3. Routine inspections may be conducted concurrent with the pumping requirements of Section VII.A or Section VII.B, as applicable.
4. A written inspection report signed by the Maintenance Contractor shall be furnished to the Township and the owner of each property inspected within thirty (30) days of the inspection. All written inspection reports shall be on a form provided by the Township.

Section VI. Operation

- A. Only normal domestic wastes shall be discharged into any On-Lot Sewage Disposal System. The following shall not be discharged into the System:
1. Industrial waste.
 2. Automobile oil and other non-domestic oil.

3. 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.
 4. Clean surface or ground water, including water from roof or cellar drains, springs, basement sump pumps and french drains.
 5. Wastewater resulting from hair treatment at a multi-chaired beauty shops.
 6. Any non-biodegradable materials.
- B. The Township may require other operation or maintenance procedures to ensure proper On-Lot Sewage Disposal System performance.

Section VII. Maintenance

- A. Each person owning a building served by an On-Lot Sewage Disposal System shall have the Initial Treatment Unit pumped within three years of the effective date of this ordinance by a Chester County Health Department licensed Liquid Waste Hauler. Thereafter, the property owner shall have the System pumped at least once every three years. Receipts from the Chester County Health Department licensed Liquid Waste Hauler shall be submitted to the Township within the prescribed one year and three year pumping periods.
- B. The required pumping frequency may be modified at the discretion of the Board of Supervisors or the Township's Authorized Agent if the Initial Treatment Unit is undersized, if an inspection reveals solids or scum in excess of 1/3 of the liquid depth of the Tank, 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.
- C. All On-lot Sewage Disposal System pumping shall be performed in accordance with Chapter 504 of the Chester County Health Department regulations and shall also conform to the following minimum standards, unless other standards are specified by an equipment manufacturer:
1. At all times, the pumper truck operator's personal safety, as well as protection of the environment and the landowner's property, shall receive the highest priority.
 2. Tanks shall only be pumped from or through the manhole or access port (i.e., the largest tank opening).
 3. Tanks shall not be pumped from or through the observation or inspection port.
 4. When necessary to break up solids, backwashing with clean water or material of a similar nature already on board the pumper truck may be employed. Mechanical means (scraping, raking, etc.) are not necessary but may be employed, provided that appropriate safeguards are taken to prevent injury.
 5. When backwashing, care shall be taken not to fill or refill the tank to a level greater than 12 inches below the elevation of the outlet pipe.
 6. No liquids or solids are to be discharged into or through the outlet pipe.
 7. Tanks shall be deemed to be cleaned when all organic solids are removed and the total average liquid depth remaining in the tank is less than one inch.
 8. At all times, and in all phases of operations, the Liquid Waste Hauler shall comply with all laws and regulations regarding the activities associated with On-Lot Sewage Disposal System maintenance and disposal of materials removed therefrom.

- D. Any person owning a building served by an On-Lot Sewage Disposal System which utilizes any components or technologies deemed by DEP to require more detailed operation and maintenance requirements than provided for in this ordinance, including but not limited to Individual Residential Spray Irrigation Systems (IRSIS), Alternate Systems, or Experimental Systems shall be further subject to the maintenance responsibilities recommended by DEP for said system. The Township may impose additional requirements as deemed necessary to provide for the increased oversight inherent in these cases, including but not limited to collection of an annual fee and additional financial security.
- E. Surface contouring shall be required as necessary to direct surface water and drainageways away from all components of On-Lot Sewage Disposal Systems.
- F. Additional maintenance activity may be required as needed including, but not limited to, providing reasonable access to Initial Treatment Unit, cleaning and unclogging of piping, servicing and the repair of mechanical and electrical equipment, leveling of distribution boxes, tanks and lines, removal of obstructing roots or trees, etc.

Section VIII. System Rehabilitation

- A. No person shall operate or maintain an On-lot Sewage Disposal System in such a manner to constitute a Malfunction. Any suspected Malfunction shall be reported to the Chester County Health Department SEO, who shall make a final determination as to functional status and rehabilitation measures required. Any person owning a building served by an On-lot Sewage Disposal System determined to be in a state of Malfunction by the Chester County Health Department SEO shall perform all corrective measures required by the SEO to abate the Malfunction. The Chester County Health Department SEO shall have the authority to require abatement 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 Initial Treatment Unit, expanding the existing disposal areas, replacing the existing disposal area, replacing the system with a Retaining Tank, frequent pumping, or any other alternative appropriate for the specific site.
- B. In the event other remedies described in this Section fail to abate a Malfunction, the Chester County Health Department's Sewage Enforcement Officer and/or the Township's Authorized Agent 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.
- C. 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 and the Chester County Health Department may require whatever action is necessary to lessen or mitigate the Malfunction to the extent necessary.

- D. There may arise geographic areas where numerous On-Lot Sewage Disposal Systems are known or are suspected to be 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 the Chester County Health Department and/or the Department, represents a serious public health or environmental threat.

Section IX. Retaining Tanks

- A. Retaining Tanks shall only be utilized as a remedy for a Malfunctioning On-Lot Sewage Disposal System when it has been determined by the Chester County Health Department SEO and the Township that no other remedy is viable.
- B. Retaining Tank installation and use shall be subject to all the requirements of Pa Code Title 25, Chapter 71.63 (relating to Retaining Tanks) and the requirements of the Chester County Health Department.
- C. Any person owning a building served by a Retaining Tank shall annually provide to the Township a copy of a maintenance contract with a Liquid Waste Hauler licensed by the Chester County Health Department. The contract shall provide for regular removal of the Retaining Tank contents in accordance with Section XI and with a frequency sufficient to prevent the contents from overflowing on the ground surface. The contract shall also specify the Chester County Health Department license number of the Liquid Waste Hauler and the disposal site(s) of the Retaining Tank contents.
- D. Retaining Tanks shall only be permitted to serve a building without a Malfunctioning On-Lot Sewage Disposal System when approved by the Board, the Chester County Health Department, and DEP. Board approval shall be further predicated upon a satisfactory operation and maintenance agreement specific to each use, to which both the Township and the property owner shall be party. The Township may impose additional requirements as deemed necessary, including but not limited to collection of financial security and an annual fee.
- E. Holding tank use shall be further subject to the provisions of the Code of the Township of Westtown, Chapter 132, Article II which governs holding tank use.

Section X. Liens

- A. The Township, upon written notice from the Chester County Health Department's Sewage Enforcement Officer that an imminent health hazard exists due to failure of property owner to maintain an On-Lot Sewage Disposal System, shall have the authority to perform, or contract to have performed, the work required by the Chester County Health Department's Sewage Enforcement Officer. The owner shall be charged for the work performed and, if necessary, a lien shall be entered therefor in accordance with applicable law.

Section XI. Disposal of Septage

- A. All Septage originating within the Sewage Management District 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.) and all other applicable laws and at sites or facilities approved by DEP.
- B. Pumper/haulers operating within the Township 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), all other applicable laws, and Chester County Health Department regulations.

Section XII. Administration

- A. The Township shall fully utilize those powers it possesses through enabling statutes and ordinances to effect the purposes of this ordinance.
- B. The Township shall employ qualified individuals to carry out the provisions of this ordinance. Those employees shall include an Authorized Agent 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.
- C. The Township's Authorized Agent shall have the right to enter upon land for the purpose of administering the provisions of this ordinance.
- D. All records pertaining to sewage permits, building permits, occupancy permits and all other aspects of the Sewage Management Program shall be made available for inspection consistent with the provisions of the Open Records Law.
- E. The Board shall establish all administrative procedures necessary to properly carry out the provisions of this Ordinance.
- F. The Board may by resolution establish a fee schedule, and authorize the collection of fees, to cover the cost to the Township of administering this Ordinance.

Section XIII. Appeals

- A. Appeals from final decisions of the Township or any of its Authorized Agents under this Ordinance shall be made to the Board of Supervisors in writing within thirty (30) days from the date of written notification of the decision in question.
- B. The appellant shall be entitled to a hearing before the Board of Supervisors at its next regularly scheduled meeting, if a written appeal is received at least fourteen (14) days prior to that meeting. If the appeal is received within fourteen (14) days of the next regularly scheduled meeting, the appeal shall be heard at the next regularly scheduled 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.

- C. A decision shall be rendered in writing within thirty (30) days of the date of the hearing.
- D. Hearings under this subsection shall be conducted pursuant to the Act of December 2, 1968 (P.L. 1133, No. 353) known as the "Pennsylvania Local Agency Act".

Section XIV. Penalties

- A. In addition to a proceeding under any other remedy available to the Township at law or in equity for a violation of any provision of this Ordinance or any rule or regulation promulgated under this Ordinance or any order issued by the Township or any permit issued by the Chester County Health Department and/or the Township pursuant to this Ordinance, the Township, after notices and hearing, may assess a civil penalty against any person for that violation. All proceedings by the Township to impose civil penalties pursuant to this section shall be governed in all respects by the provisions of §13.1 of Act 537 (35 P.S. §750.13a) which are incorporated herein by reference in their entirety.

Section XV. Repealer

- A. All ordinances or parts of ordinances inconsistent with the provisions of this ordinance are hereby repealed to the extent of such inconsistency.

Section XVI. Severability

- A. 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.

Duly Enacted and Ordained this _____ day of _____, 20____ by the Board of Supervisors of the Township of Westtown, Chester County, Pennsylvania, in lawful sessions duly assembled.

ATTEST:

BY:

 Secretary

 Chairman of the Board of Supervisors