

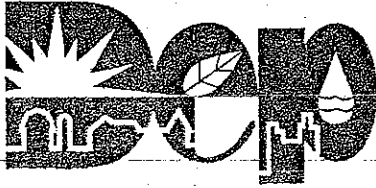
**AMITY TOWNSHIP  
BERKS COUNTY, PENNSYLVANIA**

**OFFICIAL ACT 537 PLAN UPDATE**

**November 2003**

*Prepared for:*  
**Amity Township, Berks County, PA**

*Prepared by:*  
**LTL Consultants, Ltd.  
One Town Centre Drive  
P.O. Box 241  
Oley, PA 19547-0241  
(610)987-9290**



Pennsylvania Department of Environmental Protection

909 Elmerton Avenue  
 Harrisburg, PA 17110-8200  
 December 29, 2004

Southcentral Regional Office

717-705-4707  
 FAX 717-705-4760

Amity Township Supervisors  
 c/o Joanne Sowers Smith, Secretary  
 2004 Weavertown Road  
 Douglassville, PA 19518

Re: Act 537 Planning  
 APS ID No. 541430  
 DEP Code No. A2-06917-ACT  
 Amity Township, Berks County

Ladies and Gentlemen:

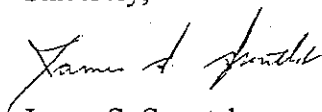
The Department of Environmental Protection (Department) has reviewed your updated Official Act 537 Plan (Plan) dated November 2003 (as amended) and prepared by LTL Consultants, Ltd. The submission is consistent with the planning requirements given in Chapter 71 of the rules and regulations of the Department. The Plan provides for the adoption and implementation of an onlot sewage disposal system management ordinance, the extension of public sewers to serve Bel Air Estates and Valley Road via the proposed Monocacy Interceptor and the expansion and rerating of the Amity Township wastewater treatment facility to a design flow of 2.2 MGD. The Plan is approved with the following comments:

1. The approved project will require an NPDES Permit for the proposed effluent discharge. The permit application must be submitted in the name of the Township.
2. The approved project will require a Water Management Part II Permit for the construction and operation of the proposed sewage facilities. The permit application must be submitted in the name of the Township. Issuance of a Part II Permit will be based upon a technical evaluation of the permit application and supporting documentation. Starting construction prior to obtaining a Part II Permit is a violation of the Clean Streams Law.
3. Other Departmental permits may be required for construction if encroachment to streams or wetlands will result. Information regarding requirements for such permits or approvals can be obtained from the Department's Soils & Waterways Section, Water Management Program, Southcentral Regional Office, 909 Elmerton Avenue, Harrisburg, PA 17110, telephone 717-705-4802.



If you have any questions concerning this letter, please call Mr. Paul Curry at 717-705-4766.

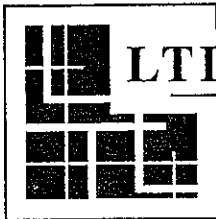
Sincerely,



James S. Spontak  
Program Manager  
Water Management Program

Enclosure

cc: LTL Consultants, Ltd.  
Berks County Planning Commission



**LTL CONSULTANTS, LTD. • ENGINEERS & CODE OFFICIALS**

PO BOX 241 • ONE TOWN CENTRE DRIVE • OLEY, PA 19547  
(610) 987-9290 • FAX: (610) 987-9288

**ADDENDUM "A"**

August 2, 2004

Ms. Renae Wood, Sewage Planning Specialist  
Pennsylvania Department of Environmental Protection  
Water Management Program  
1005 Cross Roads Boulevard  
Reading, PA 19605-9778

RE: ADDENDUM "A" -  
Act 537 Sewage Facilities Plan,  
Amity Township, Berks County

Dear Ms. Wood:

We have received your May 18, 2004 letter commenting on the Amity Township Act 537 Plan, submitted to DEP on November 24, 2003. This response letter will be incorporated into the Act 537 Plan and referenced as Appendix "A". Following below are the responses which match the question numbers from your attached letter:

- 1) Amity Township does not administer the daily operation of private small flow treatment facilities (SFTF). The Township has the NPDES permits on file, however, annual maintenance records cannot be located as of this time. A sewage management program would mandate that the Township more closely monitor these facilities and keep up-to-date records.
- 2) The malfunctions at Nos. 35, 39, and 47 Benjamin Franklin Highway occurred in 2002 and resulted in two system replacements and one holding tank. The units are located between 3000 and 3500 feet west of the Monocacy Creek between the separated highway lanes of Route 422, within the proposed sewer service area. It is not practical to serve the units in this area at this time, as there exists few dwellings and there are State highway concerns with the long sewer extension that would be required. It may be practical, however, to connect these units at such time as a line is extended to serve a development in the future.
- 3) See attached revised Implementation Schedule.
- 4) The last sentence of page 8-1 should be replaced with the following revision: "Therefore, the only viable options are to construct a centralized collection system, and treat the sewage locally at a new package type sewage treatment plant, or, convey the collected sewage to connection with the existing sewerage system."

- 5) The five malfunctions listed in the 1989 Act 537 Plan on Limekiln Road have been repaired. Two of the malfunctions (No. 12 and 13) are located on Amity Park Road. Constructing a public sewerage system along Limekiln Road was investigated in the plan and discounted as not feasible (see page 5-2). The main reasons for the Limekiln alternative rejection are conflict with Township comprehensive plan, limited service area (would not access Valley Road), high cost along state roadways, and need for a pump station.
- 6) There has been no further discussion with Oley Township concerning extending public sewer service to Yellow House. There are approximately 30 existing EDUs in Oley Township adjacent to Yellow House. The existing developed area is surrounded by agricultural preservation land in Oley Township, therefore, further development is not possible. There should be adequate capacity to serve this limited area in the future.
- 7) The population projection scenario used in the Act 537 Plan for Amity Township is the most severe case out of four different trends, and is based on the rate of recent EDU connections to the sewerage system. The growth rate trend used exceeds rates based on historical growth for the periods of 1970 to 2000, 1980 to 2000, and 1990 to 2000, and also exceeds Berks County Planning Commission growth projections. Prior discussions with Paul Curry of DEP have indicated that DEP does not mandate the use of any particular growth scenario. We have used the trend which shows more aggressive growth.

The selected population projection scenario is used to determine sewage treatment capacity needs for the next ten (10) years. It is shown in section 4.6 that the required plant capacity to accommodate the ten year growth is 2.2 million gallons a day (mgd). The existing plant is permitted at 1.6 mgd.

Table 4-1A in the Act 537 Plan lists approved subdivisions as of 1/1/03 and their status' of connection to the sewerage system. Attached is an updated Table 4-1A showing subdivision status to 1/1/04, along with updated hookup projections. There is shown to be 1300 "reserved remaining" EDU's, for developments which have been previously approved to be connected and can be hooked up without additional planning. Examination of last year's (2003) Discharge Monitoring Reports for the Amity Township Sewage Treatment Plant will reveal a potential hydraulic overload condition if all these approved, reserved remaining EDU's were to connect at one time. It should be noted that 2003 was an extremely wet year.

The reserve capacity status of the Amity Township Sewage Treatment Plant needs to be addressed. There has been no connection moratorium issued by DEP for prohibiting future system connections. Table 3.4 in the 2004 Chapter 94 Municipal Wasteload Management Report shows projected average annual hydraulic loading figures for the next five (5) years. The projected flows for each year were taken directly from future EDU connections in the approved subdivisions table (see attached) that appears in the Chapter 94 Report. The average flows are shown to be within the 1.6 mgd permit limit for the next five years, during which it is anticipated that approximately 1187 new EDU connections will be made (out of 1300 reserved remaining EDU's). The Chapter 94 Report shows the year 2008 projected average flow (with leachate) to be 1,585,070 gallons per day, approximately at capacity.

Based on the Chapter 94 Report projections, it can be concluded that the existing plant will be at capacity roughly at the end of the year 2008. That leaves 113 EDU's (out of 1300 EDU's) that are reserved remaining and will require additional plant capacity in order to connect. This situation has created an urgency on the part of the Township to re-rate the plant, as it presents potential litigation from developers who have reserved EDUs.

The total sewage treatment plant capacity required to support the ten (10) year growth projection is identified in the Act 537 Plan as 2.2 million gallons per day, or 600,000 gallons per day (gpd) additional flow over the existing 1.6 mgd permit limit. At 250 gpd/EDU, 600,000 gpd represents 2400 EDU's. Subtracting 113 reserved remaining EDU's that cannot be accommodated by the existing plant, yields a net amount of 2287 EDU's for future growth.

Subdivisions in the planning phase were identified by DEP in the 5/18/04 letter and quantified as a total of 577 EDU's. This figure incorrectly includes 73 EDU's from Highmeadow Estates, which is already included in Table 4-1 and 4-1A in the Act 537 Plan. This number should then be adjusted to 504 EDU's for subdivisions in the planning phase, which are likely to be entirely connected within the ten year planning period.

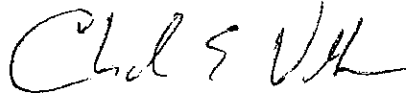
The ten year planning period also must include EDU's to be connected from the implementation of the recommended sewerage alternative from the Act 537 Plan. The Monocacy Creek Interceptor will connect 74 existing EDU's to the system.

The net "unclaimed" EDU figure for the ten year growth period is determined by subtracting from 2287 EDU's the numbers 504 EDU's and 74 EDU's, which results in 1709 EDU's. It must be emphasized that the 1709 EDU's are free and clear of any future planned or approved subdivisions or sewer system extension.

A build-out analysis was performed of the residential zoned areas within the existing and proposed sewer service areas. Vacant tracts over 10 acres in size were identified from tax maps and overlaid onto the sewer service area map (Figure 3-2A). All of these tracts fall within low and medium density residential zoning areas and are not currently on an EDU reservation list. A total of 1300 acres of land was identified as potentially available for development, 402 acres MDR and 798 acres LDR zoned land. It must be noted that several tracts of Light Industrial zoned land within the sewer service area were not factored into the buildout calculations, due to the difficulty in estimating this future demand. Using 80,000 square foot per EDU per the ordinance for LDR, and allowing a 15% reduction of buildable area due to roads and open space, yields a total buildout figure of 370 EDUs within the LDR sewer service areas. Using 12,000 sf/EDU per the ordinance for MDR, and allowing a 20% reduction in buildable area, a buildout figure of 1170 EDUs results. A total buildout figure of combined LDR and MDR land is 1540 EDUs. Comparing this figure to 1709 EDUs available capacity for the 10 year growth period, it appears that the re-rated plant should adequately accommodate significant growth in Amity Township.

I hope this adequately addresses your concerns.

Sincerely,



Charles E. Volk, P.E.  
LTL Consultants, Ltd.  
Amity Township Engineer

cc: Mr. Paul Curry, DEP Harrisburg  
Charles E. Lyon, Township Manager  
Brian Boland, Esquire, Township Solicitor  
Amity Township Board of Supervisors  
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**IMPLEMENTATION SCHEDULE  
ACT 537 SEWAGE FACILITIES PLAN  
AMITY TOWNSHIP, BERKS COUNTY  
(revised per 5/18/04 DEP letter)**

<u>Task</u>	<u>Milestone Date From DEP Plan Approval</u>
1. Complete Preliminary Engineering Design and Cost Estimate for Bel Air Estates/Valley Road Sewer Extension	8 months
2. Initiate Sewer Extension Funding Investigation based on Preliminary Engineering	9 months
3. Complete Draft of Sewage Management Program Ordinance	9 months
4. Advertise Sewage Management Program Ordinance	11 months
5. Secure Funding Commitment for Sewer Extension Project	12 months
6. Adopt Sewage Management Ordinance	12 months
7. Initiate Easement Procurement Process for Sewer Extension	12 months
8. Present Final Design Sewer Extension to Township for approval	14 months
9. Notify Residents of Sewage Management Program Obligations and Requirements	14 months
10. Submit E & S Plan to County for Sewer Extension	14 months
11. Submit WQM Part II Permit Application to DEP for Sewer Extension	16 months
12. Begin OLDS inspection program	16 months
13. Obtain Easements and Permit Approval for Sewer Extension	18 months
14. Bid Phase Sewer Extension Project	20 - 22 months
15. Construction Phase Sewer Extension Project	24-34 months
16. Complete First Round OLDS Inspections	24 months
17. Initiate Mandatory Septic Tank Pumping Cycle	26 months
18. Connect new EDUs to Sewer Extension	34 - 38 months

TABLE 4-1A (revised)

SUBDIVISION AND LAND DEVELOPMENT ACTIVITY  
 APPROVED DEVELOPMENTS WHICH HAVE RESERVED CAPACITY  
 AS OF JANUARY 1, 2004  
 AMITY TOWNSHIP BERKS COUNTY

DEVELOPMENT	Reserved EDU's	Connected EDU's	Reserved Remainin g EDU's	Connected in 2003	Projections (By EDU's)				
					2004	2005	2006	2007	2008
Westridge	222	222	0	5	-	-	-	-	-
Greenbriar	321	316	5	41	5	-	-	-	-
Victoria Hill	32	32	0	2	-	-	-	-	-
Amity Gardens	12	10	2	0	2	-	-	-	-
#3 Riga Lane	2	0	2	0	-	-	-	-	-
Woods Edge	331	181	150	36	30	30	30	30	30
Far Hills Farm	58	58	0	29	-	-	-	-	-
Winding Creek Estates	6	5	1	0	1	-	-	-	-
Rosecliff Pointe	165	78	87	57	35	35	18	-	-
Union Township	360	167	193	0	5	20	40	40	40
Miscellaneous Singles	11	11	0	11	-	-	-	-	-
Douglass Township	602	146	456	1	102	129	124	20	20
Douglassville Shopping Ctr Lt 4	3	0	3	0	-	3	-	-	-
Hope Methodist church	5	3	2	3	-	-	2	-	-
Pleasant Meadows	44	41	3	19	3	-	-	-	-
American Crane	3	0	3	0	-	3	-	-	-
Gerald Behney Riga Lane	2	0	2	0	-	2	-	-	-
Pine Lane Subdivision	22	0	22	0	7	10	-	-	-
Highmeadow Estates	73	0	73	0	20	40	13		-
Sunset Knoll	100	3	97	3	30	40	27	-	-
Earl Township	175	0	175	0	88	87	-	-	-
McDonalds/Bank	6	0	6	0	5	1	-	-	-
Villa at Morlatton	18	0	18	0	-	18	-	-	-
<b>TOTALS</b>	<b>2,573</b>	<b>1,273</b>	<b>1,300</b>	<b>207</b>	<b>333</b>	<b>420</b>	<b>254</b>	<b>90</b>	<b>90</b>



Pennsylvania Department of Environmental Protection

1005 Cross Roads Boulevard

Reading, PA 19605-9778

May 18, 2004

Reading District Office

610-916-0100

FAX: 610-916-0110

Amity Township  
2004 Weavertown Road  
Douglassville, PA 19518

Re: Act 537 Planning  
DEP Code No. A1-06917-ACT  
Amity Township, Berks County

Ladies and Gentlemen:

The Department of Environmental Protection (Department) reviewed your November 2003, Act 537 update revision, received on November 24, 2003, and determined that it is incomplete for the following reasons:

1. As per Section III. A. 5. of the Guidance and Chapter 71.21 (a). (2). (i). (c)., a more detailed description of the existing small flow treatment facilities located in your township is needed. Four SFTF were listed were listed in Section 3. 1. 1. of your plan. Please include the status of the past and present compliance with the Operation and Maintenance agreements by including the maintenance records for each of these small flow treatment facilities.
2. On page 3-6 of the plan, there are three on-lot septic system malfunctions listed along the Benjamin Franklin Highway. This area is indicated as an existing sewer service area in Figure 3-2A. At least one of these properties currently has a holding tank according to the table. Since these malfunctions occurred in an existing sewer service area, will sewers be extended to provide long-term sewage disposal to serve these properties?
3. Please organize the implementation schedule based on days from DEP approval etc., instead of specific months.
4. The last sentence of page 8-1 of your plan seems to have been cut off mid sentence. Please provide the rest of the sentence.
5. In Figure 16 of Amity Township's 1989 537 Plan there are 5 malfunctions shown along Limekiln Road. Have these malfunctions been repaired? Since there are poor soils and a history of malfunctions along Limekiln Road, please justify why this area is not being considered for sewers.
6. What is the status of the discussions with Oley Township regarding sewerage the Yellowhouse area? Was this area calculated in the flow projections for the re-rating of the plant? If this area is going to be submitted under a different plan, please indicate when it is expected to be submitted in the implementation schedule.



May 18, 2004

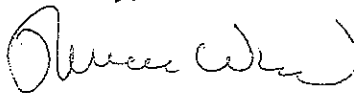
7. Based on our calculations it seems that the future capacity calculations may not allow for any growth during the planning period of 10 years. In Section 4.5 of the 537 Plan it is stated that future flows are based on population projections into 2013. Does this include all of the flows in Tables 4.1 and Tables 4.1 A as well as future flows? Tables 4.1 and 4.1 A list projects with reserved capacity and the projected build out by 2007. All of the projects seem to already have planning approval. Please include in your flow projection a list of flows from projects that are being planned but do not have reserved capacity yet. Most notably include the Amity Lea Subdivision, Highmeadow Estates Subdivision, the Denicco, Body, and Kutz Subdivision, and the Monocacy Subdivision which are planning a total of 577 housing units. These subdivisions do not appear on Table 4.1 and Table 4.1A but known to be currently in the planning stages. Also, please include future flows based on the mathematical build out as determined by zoning. Be sure to list any flows from lots that are being added to the sewer district.

The deficiencies identified in this letter must be addressed and a plan resubmitted to the Department within 90 days of the date of this letter. Failure to respond during this time frame may result in Departmental action resulting in disapproval of your currently incomplete plan submission.

The 120-day review period for this Plan will not begin until the Department has received a complete plan submission. Please submit 4 complete copies of all plan resubmissions.

If you have any questions concerning this letter, please call me at the above telephone number.

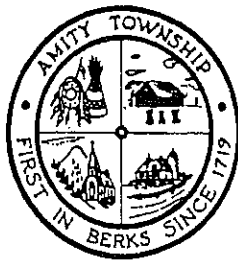
Sincerely,



Renae Wood  
Sewage Planning Specialist  
Water Management Program

cc: Dan Levengood, LTL Consultants, Ltd. ✓

Township Office:  
2004 Weavertown Road  
Douglassville, PA 19518-8971



Phone: 610-689-6000  
Fax: 610-689-9870

AMITY TOWNSHIP  
Board of Supervisors

August 5, 2004

Ms. Renae Wood, Sewage Planning Specialist  
Pennsylvania Department of Environmental Protection  
Water Management Program  
1005 Cross Roads Boulevard  
Reading, Pa. 19605-9778

In re: Addendum "A", Act 537 Sewage facilities Plan,  
Amity Township, Berks County

Dear Ms. Wood:

This letter is to certify that the Amity Township Board of Supervisors concurs with the incorporation of Addendum "A" in Its 537 Plan submission. They Supervisors memorialized their affirmation by adopting resolution 04-28 at their July 20, 2004 public meeting.

Should there be any questions, or if further information is needed, please contact the undersigned. Thank you for your consideration.

Yours very truly,

  
Charles E. Lyon  
Township Manager

Cc: Charles Volk, LTL Consultants, LTD.  
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