



Pennsylvania Department of Environmental Protection

909 Elmerton Avenue  
Harrisburg, PA 17110-8200  
September 9, 2008

Southcentral Regional Office

Amity Township  
c/o Township Secretary  
2004 Weavertown Road  
Douglassville, PA 19518

**RECEIVED**  
SEP 11 2008  
**ARRO**

717-705-4707  
FAX - 717-705-4760

Re: Act 537 Planning (06917)  
Plan of Study and Task/Activity Report  
Amity Township, Berks County

Ladies and Gentlemen:

We received a Plan of Study and Task/Activity Report for preparation of an Act 537 Update Revision, submitted by ARRO Consulting, Inc., under a cover letter dated July 17, 2008.

The Update Revision is to address the planning requirements necessary to meet future public sanitary sewer services needs of the Township and that of the municipalities that are currently served by the Amity Township Wastewater Treatment Plant.

We have approved your Plan of Study for an estimated total cost of \$56,382. The resulting Act 537 Update Revision must be consistent with Act 537, Chapter 71, Sections 71.21 and 71.31 of Department of Environmental Protection (DEP) regulations, and with information contained in both A Guide for Preparing Act 537 Update Revisions (February 1998), and Sewage Disposal Needs Identification Guidance (March 1996). In accordance with your approved Task/Activity Report, your completed planning package will be submitted to DEP for review on December 1, 2009.

Please remember, following adoption and Departmental approval of your completed Act 537 Plan, you may apply for the reimbursement grant. At that time, as part of your grant application, you will find that you must submit cost invoices clearly identifying the task in the approved Task/Activity Report to which they apply, as well as proofs of payment for each invoice claimed.

Please note that if your Authority or County intends to be the applicant for the Act 537 Sewage Facilities Planning Assistance Grant, Chapter 71 to DEP's regulations requires that the application submission be accompanied by written proof that the municipality(ies) has/have authorized the Authority or County to receive the grant.

If you have any questions, please call me at 717-705-4794.

Sincerely,

Timothy Wagner  
Sewage Planning Supervisor  
Water Management Program

cc: ARRO Consulting, Inc.



July 17, 2008

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

*The ARRO Group, Inc.*

*ARRO Consulting, Inc.*

*ARRO Environmental  
Services, Inc.*

*649 North Lewis Road*

*Suite 100*

*Limerick, PA 19468-1234*

*610.495.0303*

*Fax: 610.495.5855*

*info@thearrogroup.com*

*www.thearrogroup.com*

RE: Amity Township Act 537 Plan Update;  
Plan of Study and Task Activity Report  
ARRO # 7026.00

Dear Ms. Wood:

We have prepared a Plan of Study (POS) and Task Activity Report (TAR) for the update of the Amity Township Act 537 Sewage Facilities Plan. This Plan Update is to address the planning requirements necessary to meet future public sanitary sewer service needs of the Township and that of the municipalities that are currently served by the Amity Township Wastewater Treatment Plant. The Township's current Act 537 Plan, approved by the Department in December 2004, will provide much of the base information and data for this planning update. A wastewater treatment plant design study and an evaluation of the existing collection and conveyance system, as they relate to serving projected wastewater needs, will be made a part of the updated document. It is not the intent of the Township to develop a completely new or independent Plan since much of the information in the 2004 Plan remains applicable.

Please give your consideration for approval of this POS and TAR. If you have any questions about these documents, please contact me at 610-495-2102.

Sincerely,

William L. Bohner, Jr., P.E.  
Project Engineer

c: Charles E. Lyon, Township Manager  
Michael D. Sassaman, L.O. – ARRO

ENGINEERING  
CONSULTING  
OPERATIONS

Amity Township  
Act 537 Plan Update; Plan of Study  
**(July 2008)**

In accordance with Title 25, Chapter 71, Administration of the Sewage Facilities Planning Program, of the Pennsylvania Code, a Plan of Study has been developed, for the preparation of an update to an Act 537 Sewage Facilities Plan (Plan). This is being prepared to establish the planning elements that are necessary to meet the requirements of the Pennsylvania Department of Environmental Protection (PADEP) as they relate to this planning document to be prepared by Amity Township (Township). This Plan Update is to address the planning requirements necessary to meet future public sanitary sewer service needs of the Township and that of the municipalities that are currently served by the Amity Township Wastewater Treatment Plant. The Township's November 2003 (approved by PA DEP December 2004) Act 537 Plan will form the basis for this planning update.

Based on the PADEP Act 537 Plan Content and Environmental Assessment Checklist, the following addresses the planning requirements necessary to complete the proposed Plan update:

**ACT 537 PLAN EXECUTIVE SUMMARY**

1. Prepare a table of contents for the document.
2. Prepare a plan summary (Executive Summary)
  - A. Identify the planning area to be served by the future collection and conveyance system.
  - B. Identify the selected technical and financial alternative.
  - C. Include the cost opinion for implementing the proposed alternative.
  - D. Identify the municipal commitments necessary to implement the plan.
  - E. Provide a schedule for implementing the proposed project.
  - F. Provide a statement of the Township's commitment to implement the project in accordance with the proposed implementation schedule.
3. Provide original signed and sealed Resolutions of Adoption by participating municipalities.
4. Provide comments by appropriate municipal planning agencies and the Berks County Planning Commission.

5. Provide Proof of Public Notice.
6. Provide a copy of all written comments received and written responses to each comment.
7. Provide a project implementation schedule.
8. If any planning inconsistencies are identified, documentation will be provided discussing the resolution of the inconsistencies. If none are identified, a statement will be made to that effect.

## **GENERAL PLAN**

### **I. Previous Wastewater Planning**

- A. Identify and discuss existing wastewater planning.
  1. Discuss previous Act 537 planning with the focus on the November 2003 Amity Township 537 Plan (Approved by PA DEP in December 2004).
  2. Discuss planning that has not been done in accordance with an approved implementation schedule.
  3. Discuss additional planning, if any, that is anticipated or planned by Amity Township.
  4. Discuss planning that has been done via official plan revision such as planning modules or addenda.

### **II. Physical and Demographic Analysis**

Utilizing the information provided in the approved 2004 Amity Township Act 537 Plan as a basis:

- A. Identify the planning area, municipal boundaries and Township's existing service area boundaries.
- B. Identify physical characteristics of the planning area. USGS and National Wetlands Inventory Maps will form the basis for this identification.
- C. Soils.

- D. Discuss geological features in the service area.
- E. Discuss topographic features in the service area.
- F. Potable water supply information will be identified through the obtaining of service area mapping from the water supplier in the planning area.
- G. Identify wetlands in the area utilizing a National Wetlands Inventory Map.

### **III. Existing Sewage Facilities in the Planning Area**

- A. Identify and describe municipal sewerage systems in the planning area.
  - 1. Discuss location, size and ownership of treatment, conveyance, and collection facilities. A map will be provided to show the location of the interceptors, pumping stations and force mains.
  - 2. Provide a narrative and schematic diagram of the basic treatment process.
  - 3. Provide a description of the problems, if any, with the existing treatment plant as well as the existing collection and conveyance system.
  - 4. Provide details, if any, relative to ongoing upgrading or expansion of the treatment facilities.
  - 5. Provide a description of operation and maintenance requirements and the status of past and present compliance with these requirements.
  - 6. Ultimate disposal is a stream discharge. Identification of other ultimate disposal areas is not applicable.
- B. Utilize the Township's 2003 (amended and approved 2004) to identify, map, and describe areas that utilize individual and community onlot disposal systems (OLDS) in accordance with the Department's Sewage Needs Identification Guidance Document. *Use the approved 2004 Plan to:*
  - 1. Discuss the types of on-lot systems in use.
  - 2. Address the sanitary survey complete with description, map, and tabulation of documented health, pollution, and operation problems.

3. Compare types of systems that are existing versus types that are appropriate for the area.
4. Identify Individual water supply areas.
5. Provide a description of operation and maintenance requirements of the Township for OLDS.

**No additional OLDS surveys or well sampling is planned beyond what was completed in the 2004 Plan.**

- A. Identify wastewater sludge and septage generation.
  1. Location of wastewater sludge or septage.
  2. Quantities of the types of sludges or septage generated
  3. Present disposal methods, locations, capacities, and transportation methods.

#### **IV. Future Growth and Development**

- A. Identification of Municipal and County planning documents.
  1. Identify land use plans and zoning maps as they pertain to Bethlehem Township.
  2. Identify the zoning regulations that establish lot sizes.
  3. All limitations and plans related to floodplain and stormwater management.
- B. Describe future growth and development through mapping, text and analysis.
  1. Discuss areas with existing development or plotted subdivisions.
  2. Discuss land use designations including residential, commercial and industrial areas.
  4. Discuss future growth areas, population and EDU projections for these areas. Note: Flow projections and wastewater needs will be obtained from contributing adjacent municipalities. This 537 Plan update is not meant to be an update for those adjacent municipalities.

4. Briefly discuss zoning and subdivision regulations as they pertain to planned development.
5. Discuss the sewage planning required to provide adequate wastewater treatment for planned development.
  - a. Address 5-year growth impacts
  - b. Address 10-year growth impacts

## **V. Alternatives to Provide New or Improved Wastewater Disposal Facilities**

- A. Identify the alternative to provide for improved sewage facilities  
*(As noted above, the approved 2004 Plan will be utilized as the basis for much of this effort. The exception to this will be the preparation of a design study that will address the requirements of A.3., below, and the use of the Township's current sanitary sewer hydraulic model to address the requirements of A.5. below.)*
  1. Identification of regional wastewater treatment concepts as an alternative.
  2. The potential for extension of existing municipal or non-municipal sewage facilities to areas in need.
  3. Identifying the potential for continued use of the existing treatment facility through upgrading of the facility. A design study will be prepared to address this alternative and will be made a part of this Plan Update.
  4. Discussion of alternatives based on the need for new community sewage systems.
  5. Analysis of alternatives as they relate to repair, replacement, and upgrade of collection and conveyance system components will be addressed. The Township's current hydraulic model will be utilized to address these issues.
  6. Discussion of alternatives as they relate to use of alternate methods of collection/conveyance to serve needs areas using existing wastewater treatment facilities will be addressed.

- B. The continued use of individual sewage disposal systems.
- C. Discussion of alternatives based on the use of small flow sewage treatment facilities, land treatment alternatives or package treatment facilities to serve individual homes or clusters.
- D. Discussion of alternatives based on the use of community land disposal.
- E. The use of retaining tank alternatives.
- F. A discussion of the current sewage management program.
- G. Non-structural comprehensive planning alternatives.
- H. Provide a no-action alternative, which includes impacts on:
  - 1. Water Quality and Public Health
  - 2. Growth Potential
  - 3. Community and economic conditions
  - 4. Recreational opportunities
  - 5. Drinking water sources
  - 6. Other environmental concerns.

## **VI. The Evaluation of Alternatives**

- A. Evaluate the alternatives, identified in Section V, for consistency with respect to the following:
  - 1. Plans developed under the Clean Streams Law.
  - 2. Plans developed under the Municipal Wasteload Management Plan (Chapter 94).
  - 3. Plans developed under Title II of the Clean Water Act.
  - 4. Comprehensive plans developed under the Pennsylvania Municipalities Planning Code.
  - 5. Antidegradation requirements as contained in PA Code, Title 25, Chapters 93, 95 and 102 and the Clean Water Act.
  - 6. State water plans developed under the Water Resources Planning Act.
  - 7. Pennsylvania Prime Agricultural Land Policy.



8. The County Stormwater Management Plan.
  9. Wetlands Protection. A Federal National Wetlands Inventory Map will be included.
  10. Protection of rare, endangered or threatened plant and animal species as identified by the PNLI.
  11. Historical and Archeological Resource Protection.
- B. Provide for the resolution of any inconsistencies with items 1 through 11 above, if necessary.
  - C. Evaluate the alternative with respect to applicable water quality standards and effluent limitations.
  - D. Provide a preliminary cost opinion for construction, financing, and administrative engineering fees for the alternative identified in Section V.
  - E. Provide an analysis of funding methods available to finance the proposed alternative.
  - F. Analyze the need for immediate or phased implementation.
  - G. Analyze the ability of the Township to implement the alternatives.

## **VII. Institutional Evaluation**

- A. Provide an analysis of the Authority, their past actions and present performance including:
  1. Financial and debt status.
  2. Available staff and administrative resources.
  3. Existing legal authority to implement wastewater planning recommendations, implement system-wide operation and maintenance activities, set user fees, take purchasing actions, take actions against ordinance violators, negotiate agreements with other parties and raise capital for construction, operation and maintenance of facilities.
- B. Describe the various institutional alternatives necessary to implement the technical alternative, including:

1. Since the Authority currently exists, there is no need for a new authority. No analysis will be completed for this.
  2. Function of Authority.
  3. Cost of administration, implementability, and capability of the Authority to react to future needs.
- C. Describe necessary administrative and legal activities, if any, to be completed and adopted to ensure the implementation of the alternative, including:
1. Legal authorities of incorporation.
  2. Required ordinances, standards, regulations and intermunicipal agreements.
  3. Provisions of rights-of-way, easements, and land transfers.
  4. Other sewage facilities plan adoptions.
  5. Legal documents, if any.
  6. Dates or timeframes of 1-5 above on the implementation schedule.
- D. Identify the proposed institutional alternative

### **VIII. Selected Wastewater Treatment and Institutional Alternative**

- A. Identify the chosen technical alternative. Justify the choice based on:
1. Existing wastewater disposal needs.
  2. Future wastewater disposal needs.
  3. Operations and maintenance considerations.
  4. Cost effectiveness.
  5. Availability management and administrative systems.
  6. Available finance methods.
  7. Environmental Soundness.
- A. Describe the capital-financing plan chosen to implement the selected alternative.
- C. Designate and describe the implementation schedule.