



APPENDIX G
TASK ACTIVITY REPORT



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DECEMBER 2009

PLAN OF STUDY
ACT 537 PLAN

HOWE TOWNSHIP
PERRY COUNTY, PENNSYLVANIA

HRG Project No. 005366.0425

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INTRODUCTION AND PROJECT SCHEDULE

A. Introduction

Howe Township, Perry County, Pennsylvania wishes to update its Act 537 Sewage Facilities Plan. The original Act 537 Planning for Howe Township was completed as part of the 1994 Perry County Sewerage Plan. The Township commenced with the current Plan Update in 2005 and the Plan was first submitted to DEP in 2008. In order to satisfy the comments identified by the Department of Environmental Protection's (DEP) April 1, 2009 correspondence, Herbert, Rowland & Grubic, Inc. (HRG) is commencing work on completing the Act 537 Plan Update.

The vast majority of the Township is served by on-lot disposal systems (OLDS); however, isolated portions of the Township rely on, or are proposing, packaged wastewater treatment plants and holding tanks.

Approximately 200 residences within the Township utilize OLDS for sewage disposal. The Southern portion of the Township (Juniata Parkway) is one area of the Township where there is a high potential need for new or improved wastewater service. The Pennsylvania State Route 34 (Red Hill Road) corridor is a potential commercial growth area based on zoning. This area currently has one packaged wastewater treatment plant, one holding tank, and one proposed and permitted packaged wastewater treatment plant. The evaluation of alternatives for new or improved wastewater service in these areas of the Township will be included in the Plan. Additionally, the Plan will evaluate the remaining portions of the Township served by OLDS and identify alternatives for OLDS Management.

This plan of study identifies how the Plan will be completed, as well as the projected schedule and cost. The attached Task Activity Report (TAR) is not meant to replace the existing TA; however, it is being submitted as an addition to the existing TAR in order for all planning to remain eligible for 50 percent reimbursement. The Act 537 Plan will be completed in accordance with *The Pennsylvania Sewage Facilities Act – A Guide For Preparing Act 537 Update Revisions (latest version)*. The *Act 537 Plan Content and Environmental Assessment Checklist* (copy attached) will be utilized during Plan preparation.

B. Project Schedule

Submit Task Activity Report (TAR) to DEP	December 2009
Receive TAR Approval from the DEP	December 2009
Prepare and Submit Draft Act 537 Plan to Township	March 2010
Inter-municipal Meetings	March 2010
Address Township Comments	April 2010
Advertise for Public/County Review	April 2010

Public/County Comment and Review Period
Incorporate Comments into Plan and Finalize
Township Adoption of Plan and Submission to DEP

April -May 2010
May 2010
June 2010

I. PREVIOUS WASTEWATER PLANNING

A. Identify and Analyze Existing Wastewater Planning

The latest Act 537 Planning for Howe Township was completed as part of the 1994 Perry County Sewerage Plan. A feasibility study was completed for the Pennsylvania State Route 34 corridor for the Red Hill Development, LP. The study reviewed the feasibility of providing public sanitary sewer to several areas of the Township. Each of these documents will be reviewed and incorporated into the Act 537 Plan.

The current Plan Update was first submitted to DEP in 2008. DEP provided comments on the plan via February 13, 2008 and April 11, 2009 correspondence. The contents of this Plan will be used as much as possible during completion of this Plan Update and all DEP comments will be addressed.

B. Identify and Summarize Planning Documents Adopted Pursuant to the Pennsylvania Municipal Planning Code

The Howe Township Comprehensive Plan, Zoning Ordinance and Subdivision and Land Development Ordinance will be reviewed during preparation of the Act 537 Plan and issues relative to wastewater planning will be included in the Plan.

II. PHYSICAL AND DEMOGRAPHIC ANALYSIS

A. Identification of Planning Areas

The Plan will encompass Howe Township in its entirety. The Plan will include an evaluation of wastewater disposal options for areas identified to have potential needs. Special Study Areas already identified by both the Township and by DEP include Juniata Parkway and the Red Hill Road (S.R. 34) corridor.

The Juniata Parkway Special Study Area involves a medium density residential area where OLDS appear to be inadequate due to lot sizes, soils suitability, slopes, and well sampling results.

The Red Hill Road Special Study Area includes existing and proposed commercial developments. This area was identified by the Township as a potential growth area and currently has one packaged wastewater treatment plant, one holding tank, one proposed and permitted packaged wastewater treatment plant, and a 33 lot subdivision proposing OLDS.

B. Preparation of Maps

The existing Howe Township mapping completed as part of the 2008 Plan submission will be utilized as much as possible to create the necessary maps for the Plan in accordance with Sections II and III of the *Act 537 Plan Content and Environmental Assessment Checklist*.

III. EXISTING SEWAGE FACILITIES
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A. Identify, Map, and Describe Municipal and Non-Municipal, Community, and Individual Systems

As previously identified, the residential portions of the Township (approximately 200 residences) utilize OLDS as the primary method of wastewater treatment. There is currently one existing and one proposed and permitted packaged wastewater treatment plant with surface water discharge located along the Red Road Hill corridor. Two holding tanks were identified in the Township. One is located along the Red Hill Road corridor and the other is located along Juniata Parkway.

A description of all wastewater facilities within the Township will be included in the Plan. The description will include ownership, capacity, point of discharge, existing problems, scheduled or in-progress upgrades or expansions.

The Township does not currently have an OLDS Management Program. The Plan will outline requirements relative to establishing a Program, as well as Operation and Maintenance requirements for OLDS in areas where OLDS will remain.

B. Determine the Type and Investigate the Condition of Existing OLDS

“Tier One” Sanitary Sewage Surveys and Well Water Surveys were conducted by FPE Consulting Engineers as part of the 2008 Plan submission. The results from the sanitary sewage surveys, well water surveys, and SEO reported malfunctions will be reviewed and summarized in context with the Soils and Slopes Maps. The summary will identify properties with confirmed, suspected, potential and no malfunctions. The locations of properties with confirmed, suspected, and potential malfunctions will be presented on maps of the Township.

Based upon the results of the well water surveys, additional sanitary sewage and well water surveys may be required in the Juniata Parkway area to meet "Tier Two" protocol as described in the *Act 537 Sewage Disposal Needs Identification (latest version)*. There are approximately 73 homes served by OLDS in this planning area, 35 percent must be surveyed in accordance with the referenced document to meet "Tier Two" protocol. It is our understanding that 17 homes have already been surveyed in the planning area and therefore an additional 9 homes may need to be surveyed in order to meet the 35 percent required for "Tier Two" protocol. These numbers will be confirmed during completion of the work.

IV. FUTURE GROWTH AND DEVELOPMENT

The Howe Township Comprehensive Plan, along with work already completed during preparation of the 2008 Plan submission, will be used to identify future land use, projected growth, and development areas. Projected population and flows will be estimated and used to examine the feasibility of proposed wastewater treatment alternatives.

V. ALTERNATIVES TO PROVIDE NEW OR IMPROVED WASTEWATER DISPOSAL FACILITIES

A. Juniata Parkway Study Area

This area of the Township will be evaluated based on historical SEO records, general suitability for OLDS and the Sanitary Sewage Surveys and Well Water Surveys. Alternatives to be evaluated during plan preparation include:

1. No Action.
2. Increased OLDS/Decentralized System Management.
3. Alternative Wastewater Disposal Methods such as Small Flow Treatment Facilities.
4. Community On-lot Disposal Systems (COLDS).
5. Construct public sewers with connection to the Newport Borough Municipal Authority system.
6. Construct public sewers with connection to a new wastewater treatment facility owned/operated by the Howe Township Municipal Authority.

These alternatives will be evaluated during Plan preparation. Additional alternatives may be identified and evaluated during Plan preparation.

B. Red Hill Road (S.R. 34) Study Area

This area of the Township will be evaluated based on historical SEO records, general suitability for OLDS and the Sanitary Sewage Surveys and Well Water Surveys, as well as discussions with developers and existing commercial entities. Alternatives to be evaluated during plan preparation include:

1. No Action.
2. Increased OLDS/Decentralized System Management.
3. Construct public sewers with connection to the Newport Borough Municipal Authority system.
4. Construct public sewers with connection to a new wastewater treatment facility owned/operated by the Howe Township Municipal Authority.

These alternatives will be evaluated during Plan preparation. Additional alternatives may be identified and evaluated during Plan preparation.

C. Remaining Unsewered Portion of the Township

The remaining portion of the Township served by OLDS outside of the special study areas will be evaluated based on historical SEO records, general suitability for OLDS and the Sanitary Sewage Surveys and Well Water Surveys.

1. No Action.
2. Increased OLDS/Decentralized System Management.

VI. EVALUATION OF ALTERNATIVES

A. Consistency

Technically feasible alternative(s) will be evaluated for consistency with respect to the following:

1. Applicable plans developed and approved under Sections 4 and 5 of the Clean Streams Law or Section 208 of the Clean Water Act.
2. Municipal wasteload management plans.
3. The Howe Township Comprehensive Plan.
4. Anti-degradation requirements as contained in PA Code, Title 25, Chapter 93, 95, and 102.
5. State Water Plans.
6. Pennsylvania Prime Agricultural Land Policy.
7. Act 167 Stormwater Management Plans.
8. Wetland protection regulations.
9. Rare, endangered, or threatened plant and animal species protection regulations.
10. Historical and archaeological resource protection requirements.

B. Cost Evaluation

Technically feasible alternative(s) will be evaluated based on cost effectiveness. The 20-year present worth for construction, financing, administration, operation and maintenance of the technically feasible alternative(s) will be calculated and evaluated.

C. Coordination

Meetings will be required with the Howe Township Board of Supervisors, Newport Borough Municipal Authority, and existing commercial entities and proposed developers along Red Hill Road throughout Plan preparation and specifically during the evaluation of alternatives.

VII. INSTITUTIONAL EVALUATION

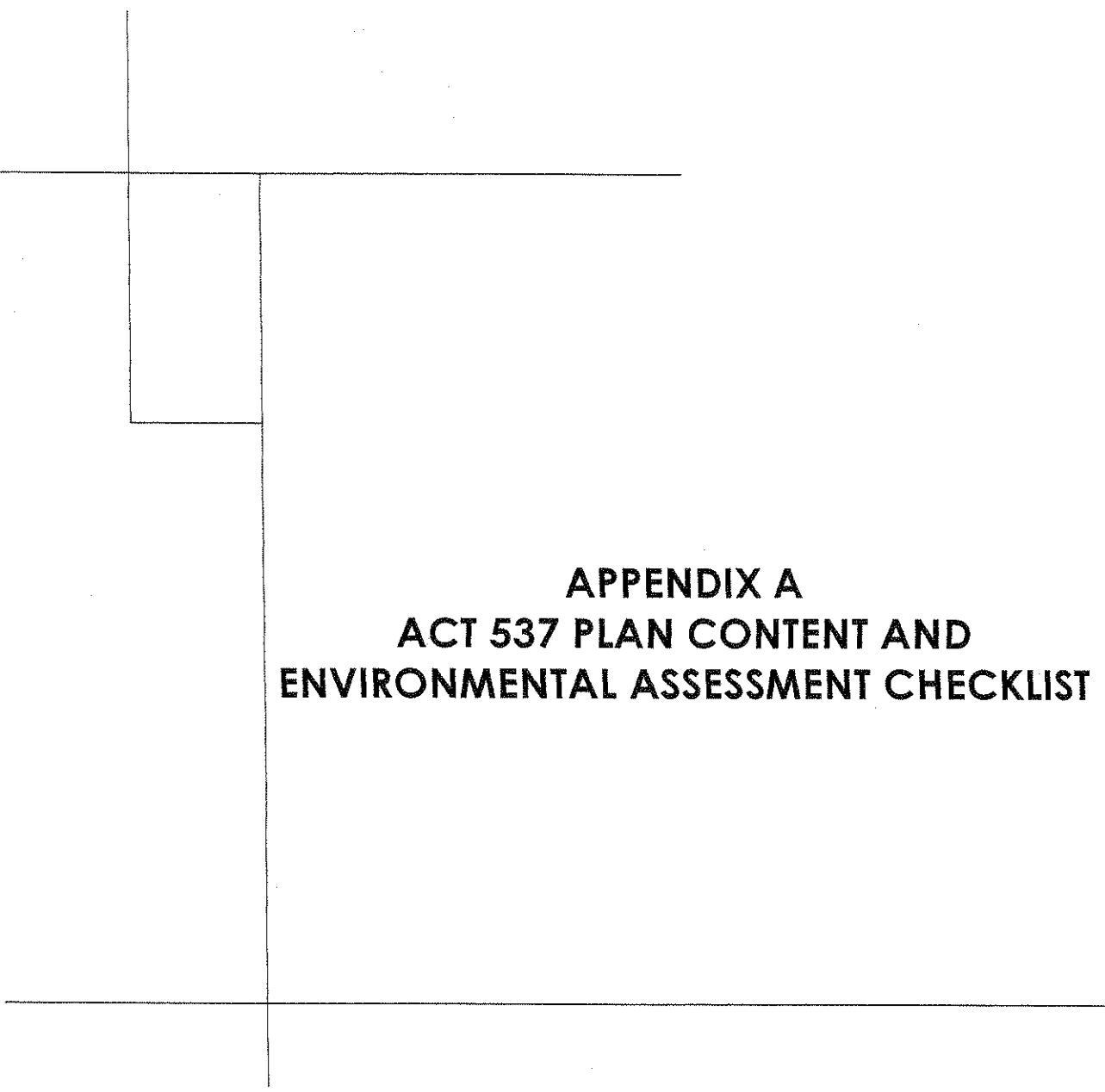
During Plan preparation the ordinances, regulations, inter-municipal agreement(s) and other legal and administrative measures necessary to implement the selected technical alternative(s) will be identified. Howe Township and The Howe Township Municipal Authority will be evaluated for financial and administrative resources necessary to implement and fund the selected alternative(s) identified in the Plan.

VIII. IMPLEMENTATION SCHEDULE AND JUSTIFICATION

The most technically and economically feasible alternative(s) will be determined based on existing and future wastewater disposal needs, operation and maintenance, cost-effectiveness, available management, available financing, and environmental considerations. A schedule for implementation of the selected alternative(s) will be provided in the Plan.

IX. ENVIRONMENTAL REPORT (ER)

Due to potential PENNVEST funding for selected alternative(s) identified in the Plan, an Environmental Report (ER) generated from the Uniform Environmental Review (UER) process will be prepared as part of the Plan. The ER will be prepared in accordance with *DEP technical guidance 381-5511-111*.



**APPENDIX A
ACT 537 PLAN CONTENT AND
ENVIRONMENTAL ASSESSMENT CHECKLIST**



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

Instructions for Completing Act 537 Plan Content and Environmental Assessment Checklist

Remove and recycle these instructions prior to submission

CHECKLIST INSTRUCTIONS

These instructions are designed to assist the applicant in completing the Act 537 Plan Content and Environmental Assessment Checklist.

This checklist is composed of three parts: one for "General Information," one for "Administrative Completeness," and one for "General Plan Content". A plan must be "administratively complete" in order to be formally reviewed by DEP. The General Plan Content portion of the checklist identifies each of the issues that must be addressed in your Act 537 Plan Update based on the pre-planning meeting between you and/or your consultant and DEP.

Use the right-hand column blanks in the checklist to identify the page in the plan on which each planning issue is found or to reference a previously approved update or special study (title and page number).

If you determine a planning issue is not applicable even though it was previously thought to be needed, please explain your decision within the text of the plan (or as a footnote) and indicate the page number where this documentation is found.

When information required as part of an official plan update revision has been developed separately or in a previous update revision, incorporate the information by reference to the planning document and page.

For specific details covering the Act 537 planning requirements, refer to Chapters 71 and 73 of DEP's regulations.

Wastewater projects proposing funding through the following sources must prepare an "Environmental Report" as described in the Uniform Environmental Review Process (UER) and include it with the plan submission designated as "Plan-Appendix A". The following funding programs use the UER process.

- The Clean Water State Revolving Loan Fund (PENNVEST, DEP, EPA)
- The RUS Water and Waste Disposal Grant and Loan Program (USDA-RD)
- The Community Development Block Grant Program (DCED, HUG)
- Other Federal Funding Efforts (EPA)

The checklist items or portions of checklist items required in the Act 537 Plan Update revision and that are also included in the UER process are indicated by **shading**. Most of the "Environmental Report" document may be constructed from the Act 537 Official Plan Update revision by using "copy & paste" techniques. The technical guidance document *Uniform Environmental Review Process* (UER) (DEP ID. 381-5511-111) is available electronically on DEP's website at www.depweb.state.pa.us.

After Municipal Adoption by Resolution, submit three copies of the plan, any attachments or addenda and this checklist to DEP.

A copy of this completed checklist must be included with your Act 537 plan. DEP will use the "DEP USE ONLY" column during the completeness evaluation of the plan. This column may also be used by DEP during the pre-planning meeting with the municipality to identify planning elements that are not required to be included in the plan.



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

Act 537 Plan Content and Environmental Assessment Checklist

PART 1 GENERAL INFORMATION

A. Project Information

1. Project Name Howe Township Act 537 Plan
2. Brief Project Description Township-wide study of sewage facilities needs

B. Client (Municipality) Information

Municipality Name	County	City	Boro	Twp
Howe Township	Perry	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Municipality Contact Individual - Last Name	First Name	MI	Suffix	Title
Beaver	Dale			Chairman
Additional Individual Last Name	First Name	MI	Suffix	Title
Municipality Mailing Address Line 1		Mailing Address Line 2		
22 Cherry Road				
Address Last Line -- City		State	ZIP+4	
Liverpool		PA	17045	
Phone + Ext.	FAX (optional)	Email (optional)		
717-567-3424		howetwp@pa.net		

C. Site Information

Site (or Project) Name	(Municipal Name) Act 537 Plan
Howe Township	
Site Location Line 1	Site Location Line 2

D. Project Consultant Information

Last Name	First Name	MI	Suffix
Fox	Joshua	T	E.I.T.
Title	Consulting Firm Name		
Water and Energy Staff Professional	Herbert, Rowland & Grubic, Inc.		
Mailing Address Line 1	Mailing Address Line 2		
369 East Park Drive			
Address Last Line - City	State	ZIP+4	Country
Harrisburg	PA	17111	
Email	Phone + Ext.	FAX	
jfox@hrg-inc.com	717-564-1121	717-564-1158	

PART 2 ADMINISTRATIVE COMPLETENESS CHECKLIST

DEP Use Only	Indicate Page #(s) in Plan	In addition to the main body of the plan, the plan must include items one through eight listed below to be accepted for formal review by the department. Incomplete Plans will be returned unless the municipality is clearly requesting an advisory review.
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|-------|-------|--|
| _____ | _____ | 1. Table of Contents |
| _____ | _____ | 2. Plan Summary |
| _____ | _____ | A. Identify the proposed service areas and major problems evaluated in the plan. (Reference - Title 25, §71.21.a.7.i). |
| _____ | _____ | B. Identify the alternative(s) chosen to solve the problems and serve the areas of need identified in the plan. Also, include any institutional arrangements necessary to implement the chosen alternative(s). (Reference Title 25 §71.21.a.7.ii). |
| _____ | _____ | C. Present the estimated cost of implementing the proposed alternative (including the user fees) and the proposed funding method to be used. (Reference Title 25, §71.21.a.7.ii). |
| _____ | _____ | D. Identify the municipal commitments necessary to implement the Plan. (Reference Title 25, §71.21.a.7.iii). |
| _____ | _____ | E. Provide a schedule of implementation for the project that identifies the MAJOR milestones with dates necessary to accomplish the project to the point of operational status. (Reference Title 25, §71.21.a.7.iv). |
| _____ | _____ | 3. Municipal Adoption: Original , signed and sealed Resolution of Adoption by the municipality which contains, at a minimum, alternatives chosen and a commitment to implement the Plan in accordance with the implementation schedule. (Reference Title 25, §71.31.f) Section V.F. of the Planning Guide. |
| _____ | _____ | 4. Planning Commission / County Health Department Comments: Evidence that the municipality has requested, reviewed and considered comments by appropriate official planning agencies of the municipality, planning agencies of the county, planning agencies with area wide jurisdiction (where applicable), and any existing county or joint county departments of health. (Reference-Title 25, §71.31.b) Section V.E.1 of the Planning Guide. |
| _____ | _____ | 5. Publication: Proof of Public Notice which documents the proposed plan adoption, plan summary, and the establishment and conduct of a 30 day comment period. (Reference-Title 25, §71.31.c) Section V.E.2 of the Planning Guide. |
| _____ | _____ | 6. Comments and Responses: Copies of ALL written comments received and municipal response to EACH comment in relation to the proposed plan. (Reference-Title 25, §71.31.c) Section V.E.2 of the Planning Guide. |
| _____ | _____ | 7. Implementation Schedule: A complete project implementation schedule with milestone dates specific for each existing and future area of need. Other activities in the project implementation schedule should be indicated as occurring a finite number of days from a major milestone. (Reference-Title 25, §71.31.d) Section V.F. of the Planning Guide. Include dates for the future initiation of feasibility evaluations in the project's implementation schedule for areas proposing completion of sewage facilities for planning periods in excess of five years. (Reference Title 25, §71.21.c). |
| _____ | _____ | 8. Consistency Documentation: Documentation indicating that the appropriate agencies have received, reviewed and concurred with the method proposed to resolve identified inconsistencies within the proposed alternative and consistency requirements in 71.21.(a)(5)(i-iii). (Reference-Title 25, §71.31.e). Appendix B of the Planning Guide. |

PART 3 GENERAL PLAN CONTENT CHECKLIST

DEP Use Only	Indicate Page #(s) in Plan	Item Required
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I. Previous Wastewater Planning

A. Identify, describe and briefly analyze all past wastewater planning for its impact on the current planning effort:

1. Previously undertaken under the Sewage Facilities Act (Act 537). (Reference-Act 537, Section 5 §d.1).

2. Has not been carried out according to an approved implementation schedule contained in the plans. (Reference-Title 25, §71.21.a.5.i.A-D). Section V.F of the Planning Guide.

3. Is anticipated or planned by applicable sewer authorities or approved under a Chapter 94 Corrective Action Plan. (Reference-Title 25, §71.21.a.5.i.A&B). Section V.D. of the Planning Guide.

4. Through planning modules for new land development, planning "exemptions" and addenda. (Reference-Title 25, §71.21.a.5.i.A).

II. Physical and Demographic Analysis utilizing written description and mapping

(All items listed below require maps, and all maps should show all current lots and structures and be of appropriate scale to clearly show significant information).

A. Identification of planning area(s), municipal boundaries, Sewer Authority/Management Agency service area boundaries. (Reference-Title 25, §71.21.a.1.i).

B. Identification of physical characteristics (streams, lakes, impoundments, natural conveyance, channels, drainage basins in the planning area). (Reference-Title 25, §71.21.a.1.ii).

C. Soils - Analysis with description by soil type and soils mapping for areas not presently served by sanitary sewer service. Show areas suitable for in-ground onlot systems, elevated sand mounds, individual residential spray irrigation systems, and areas unsuitable for soil dependent systems. (Reference-Title 25, §71.21.a.1.iii). Show Prime Agricultural Soils and any locally protected agricultural soils. (Reference-Title 25, §71.21.a.1.iii).

D. Geologic Features - (1) Identification through analysis, (2) mapping and (3) their relation to existing or potential nitrate-nitrogen pollution and drinking water sources. Include areas where existing nitrate-nitrogen levels are in excess of 5 mg/L. (Reference-Title 25, §71.21.a.1.iii).

E. Topography - Depict areas with slopes that are suitable for conventional systems; slopes that are suitable for elevated sand mounds and slopes that are unsuitable for onlot systems. (Reference-Title 25, §71.21.a.1.ii).

F. Potable Water Supplies - Identification through mapping, description and analysis. Include public water supply service areas and available public water supply capacity and aquifer yield for groundwater supplies. (Reference-Title 25 §71.21.a.1.vi). Section V.C. of the Planning Guide.

- 4. An individual water supply survey to identify possible contamination by malfunctioning onlot sewage disposal systems consistent with DEP's *Sewage Disposal Needs Identification* publication. (Reference-Title 25 §71.21.a.2.ii.B).
 - 5. Detailed description of operation and maintenance requirements of the municipality for individual and small volume community onlot systems, including the status of past and present compliance with these requirements and any other requirements relating to sewage management programs. (Reference-Title 25, §71.21.a.2.i.C).
- C. Identify wastewater sludge and septage generation, transport and disposal methods. Include this information in the sewage facilities alternative analysis including:
- 1. Location of sources of wastewater sludge or septage (Septic tanks, holding tanks, wastewater treatment facilities). (Reference-Title 25 §71.71).
 - 2. Quantities of the types of sludges or septage generated. (Reference-Title 25 §71.71).
 - 3. Present disposal methods, locations, capacities and transportation methods. (Reference-Title 25 §71.71).

IV. Future Growth and Land Development

- A. Identify and briefly summarize all municipal and county planning documents adopted pursuant to the Pennsylvania Municipalities Planning Code (Act 247) including:
- 1. All land use plans and zoning maps that identify residential, commercial, industrial, agricultural, recreational and open space areas. (Reference-Title 25, §71.21.a.3.iv).
 - 2. Zoning or subdivision regulations that establish lot sizes predicated on sewage disposal methods. (Reference – Title 25§71.21.a.3.iv).
 - 3. All limitations and plans related to floodplain and stormwater management and special protection (Ch. 93) areas. (Reference-Title 25 §71.21.a.3.iv) Appendix B, Section II.F of the Planning Guide.
- B. Delineate and describe the following through map, text and analysis.
- 1. Areas with existing development or plotted subdivisions. Include the name, location, description, total number of EDU's in development, total number of EDU's currently developed and total number of EDU's remaining to be developed (include time schedule for EDU's remaining to be developed). (Reference-Title 25, §71.21.a.3.i).
 - 2. Land use designations established under the Pennsylvania Municipalities Planning Code (35 P.S. 10101-11202), including residential, commercial and industrial areas. (Reference-Title 25,§71.21.a.3.ii). Include a comparison of proposed land use as allowed by zoning and existing sewage facility planning. (Reference-Title 25, §71.21.a.3.iv).
 - 3. Future growth areas with population and EDU projections for these areas using historical, current and future population figures and projections of the municipality. Discuss and evaluate discrepancies between local, county, state and federal projections as they relate to sewage facilities. (Reference-Title 25, §71.21.a.1.iv). (Reference-Title 25, §71.21.a.3.iii).

- 4. Zoning, and/or subdivision regulations; local, county or regional comprehensive plans; and existing plans of any other agency relating to the development, use and protection of land and water resources with special attention to: (Reference-Title 25, §71.21.a.3.iv).
 - public ground/surface water supplies
 - recreational water use areas
 - groundwater recharge areas
 - industrial water use
 - wetlands

- 5. Sewage planning necessary to provide adequate wastewater treatment for five and ten year future planning periods based on projected growth of existing and proposed wastewater collection and treatment facilities. (Reference-Title 25, §71.21.a.3.v).

V. Identify Alternatives to Provide New or Improved Wastewater Disposal Facilities

A. Conventional collection, conveyance, treatment and discharge alternatives including:

- 1. The potential for regional wastewater treatment. (Reference-Title 25, §71.21.a.4).
- 2. The potential for extension of existing municipal or non-municipal sewage facilities to areas in need of new or improved sewage facilities. (Reference-Title 25, §71.21.a.4.i).
- 3. The potential for the continued use of existing municipal or non-municipal sewage facilities through one or more of the following: (Reference-Title 25, §71.21.a.4.ii).
 - a. Repair. (Reference-Title 25, §71.21.a.4.ii.A).
 - b. Upgrading. (Reference-Title 25, §71.21.a.4.ii.B).
 - c. Reduction of hydraulic or organic loading to existing facilities. (Reference-Title 25, §71.71).
 - d. Improved operation and maintenance. Reference-Title 25, §71.21.a.4.ii.C).
 - e. Other applicable actions that will resolve or abate the identified problems. (Reference-Title 25, §71.21.a.4.ii.D).
- 4. Repair or replacement of existing collection and conveyance system components. (Reference-Title 25, §71.21.a.4.ii.A).
- 5. The need for construction of new community sewage systems including sewer systems and/or treatment facilities. (Reference-Title 25, §71.21.a.4.iii).
- 6. Use of innovative/alternative methods of collection/conveyance to serve needs areas using existing wastewater treatment facilities. (Reference-Title 25, §71.21.a.4.ii.B).

B. The use of individual sewage disposal systems including individual residential spray irrigation systems based on:

- 1. Soil and slope suitability. (Reference-Title 25, §71.21.a.2.ii.C).
- 2. Preliminary hydrogeologic evaluation. (Reference-Title 25, §71.21.a.2.ii.C).
- 3. The establishment of a sewage management program. (Reference-Title 25, §71.21.a.4.iv). See also Part "F" below.
- 4. The repair, replacement or upgrading of existing malfunctioning systems in

- areas suitable for onlot disposal considering: (Reference-Title 25, §71.21.a.4).
- a. Existing technology and sizing requirements of Title 25 Chapter 73. (Reference-Title 25, §73.31-73.72).
- b. Use of expanded absorption areas or alternating absorption areas. (Reference-Title 25, §73.16).
- c. Use of water conservation devices. (Reference-Title 25, §71.73.b.2.iii).

- C. The use of small flow sewage treatment facilities or package treatment facilities to serve individual homes or clusters of homes with consideration of: (Reference-Title 25, §71.64.d).
 - 1. Treatment and discharge requirements. (Reference-Title 25, §71.64.d).
 - 2. Soil suitability. (Reference-Title 25, §71.64.c.i).
 - 3. Preliminary hydrogeologic evaluation. (Reference-Title 25, §71.64.c.2).
 - 4. Municipal, Local, Agency or other controls over operation and maintenance requirements through a Sewage Management Program. (Reference-Title 25, §71.64.d). See Part "F" below.
- D. The use of community land disposal alternatives including:
 - 1. Soil and site suitability. (Reference-Title 25, §71.21.a.2.ii.C).
 - 2. Preliminary hydrogeologic evaluation. (Reference-Title 25, §71.21.a.2.ii.C).
 - 3. Municipality, Local Agency or Other Controls over operation and maintenance requirements through a Sewage Management Program (Reference-Title 25, §71.21.a.2.ii.C). See Part "F" below.
 - 4. The rehabilitation or replacement of existing malfunctioning community land disposal systems. (See Part "V", B, 4, a, b, c above). See also Part "F" below.
- E. The use of retaining tank alternatives on a temporary or permanent basis including: (Reference- Title 25, §71.21.a.4).
 - 1. Commercial, residential and industrial use. (Reference-Title 25, §71.63.e).
 - 2. Designated conveyance facilities (pumper trucks). (Reference-Title 25, §71.63.b.2).
 - 3. Designated treatment facilities or disposal site. (Reference-Title 25, §71.63.b.2).
 - 4. Implementation of a retaining tank ordinance by the municipality. (Reference-Title 25, §71.63.c.3). See Part "F" below.
 - 5. Financial guarantees when retaining tanks are used as an interim sewage disposal measure. (Reference-Title 25, §71.63.c.2).
- F. Sewage Management Programs to assure the future operation and maintenance of existing and proposed sewage facilities through:
 - 1. Municipal ownership or control over the operation and maintenance of individual onlot sewage disposal systems, small flow treatment facilities, or other traditionally non-municipal treatment facilities. (Reference-Title 25, §71.21.a.4.iv).
 - 2. Required inspection of sewage disposal systems on a schedule established by the municipality. (Reference-Title 25, §71.73.b.1.).
 - 3. Required maintenance of sewage disposal systems including septic and aerobic treatment tanks and other system components on a schedule

established by the municipality. (Reference-Title 25, §71.73.b.2).

- 4. Repair, replacement or upgrading of malfunctioning onlot sewage systems. (Reference-Title 25, §71.21.a.4.iv) and §71.73.b.5 through:
 - a. Aggressive pro-active enforcement of ordinances that require operation and maintenance and prohibit malfunctioning systems. (Reference-Title 25, §71.73.b.5).
 - b. Public education programs to encourage proper operation and maintenance and repair of sewage disposal systems.
- 5. Establishment of joint municipal sewage management programs. (Reference-Title 25, §71.73.b.8).
- 6. Requirements for bonding, escrow accounts, management agencies or associations to assure operation and maintenance for non-municipal facilities. (Reference-Title 25, §71.71).
- G. Non-structural comprehensive planning alternatives that can be undertaken to assist in meeting existing and future sewage disposal needs including: (Reference-Title 25, §71.21.a.4).
 - 1. Modification of existing comprehensive plans involving:
 - a. Land use designations. (Reference-Title 25, §71.21.a.4).
 - b. Densities. (Reference-Title 25, §71.21.a.4).
 - c. Municipal ordinances and regulations. (Reference-Title 25, §71.21.a.4).
 - d. Improved enforcement. (Reference-Title 25, §71.21.a.4).
 - e. Protection of drinking water sources. (Reference-Title 25, §71.21.a.4).
 - 2. Consideration of a local comprehensive plan to assist in producing sound economic and consistent land development. (Reference-Title 25, §71.21.a.4).
 - 3. Alternatives for creating or changing municipal subdivision regulations to assure long-term use of on-site sewage disposal that consider lot sizes and protection of replacement areas. (Reference-Title 25, §71.21.a.4).
 - 4. Evaluation of existing local agency programs and the need for technical or administrative training. (Reference-Title 25, §71.21.a.4).
- H. A no-action alternative which includes discussion of both short-term and long-term impacts on: (Reference-Title 25, §71.21.a.4).
 - 1. Water Quality/Public Health. (Reference-Title 25, §71.21.a.4).
 - 2. Growth potential (residential, commercial, industrial). (Reference-Title 25, §71.21.a.4).
 - 3. Community economic conditions. (Reference-Title 25, §71.21.a.4).
 - 4. Recreational opportunities. (Reference-Title 25, §71.21.a.4).
 - 5. Drinking water sources. (Reference-Title 25, §71.21.a.4).
 - 6. Other environmental concerns. (Reference-Title 25, §71.21.a.4).

VI. Evaluation of Alternatives

A. Technically feasible alternatives identified in Section V of this check-list must be evaluated for consistency with respect to the following: (Reference-Title 25, §71.21.a.5.i.).

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

Planning Guide

2. **Municipal wasteload management Corrective Action Plans or Annual Reports** developed under PA Code, Title 25, Chapter 94. (Reference-Title 25, §71.21.a.5.i.B). The municipality's recent Wasteload Management (Chapter 94) Reports should be examined to determine if the proposed alternative is consistent with the recommendations and findings of the report. Appendix B, Section II.B of the Planning Guide.
3. Plans developed under **Title II of the Clean Water Act** (33 U.S.C.A. 1281-1299) or **Titles II and VI of the Water Quality Act of 1987** (33 U.S.C.A 1251-1376). (Reference-Title 25, §71.21.a.5.i.C). Appendix B, Section II.E of the Planning Guide.
4. **Comprehensive plans** developed under the Pennsylvania Municipalities Planning Code. (Reference-Title 25, §71.21.a.5.i.D). The municipality's comprehensive plan must be examined to assure that the proposed wastewater disposal alternative is consistent with land use and all other requirements stated in the comprehensive plan. Appendix B, Section II.D of the Planning Guide.
5. **Antidegradation requirements** as contained in PA Code, Title 25, Chapters 93, 95 and 102 (relating to water quality standards, wastewater treatment requirements and erosion control) and the Clean Water Act. (Reference-Title 25, §71.21.a.5.i.E). Appendix B, Section II.F of the Planning Guide.
6. **State Water Plans** developed under the Water Resources Planning Act (42 U.S.C.A. 1962-1962 d-18). (Reference-Title 25, §71.21.a.5.i.F). Appendix B, Section II.C of the Planning Guide.
7. **Pennsylvania Prime Agricultural Land Policy** contained in Title 4 of the Pennsylvania Code, Chapter 7, Subchapter W. Provide narrative on local municipal policy and an overlay map on prime agricultural soils. (Reference-Title 25, §71.21.a.5.i.G). Appendix B, Section II.G of the Planning Guide.
8. **County Stormwater Management Plans** approved by DEP under the Storm Water Management Act (32 P.S. 680.1-680.17). (Reference-Title 25, §71.21.a.5.i.H). Conflicts created by the implementation of the proposed wastewater alternative and the existing recommendations for the management of stormwater in the county Stormwater Management Plan must be evaluated and mitigated. If no plan exists, no conflict exists. Appendix B, Section II.H of the Planning Guide.
9. **Wetland Protection**. Using wetland mapping developed under Checklist Section II.G, identify and discuss mitigative measures including the need to obtain permits for any encroachments on wetlands from the construction or operation of any proposed wastewater facilities. (Reference-Title 25, §71.21.a.5.i.I) Appendix B, Section II.I of the Planning Guide.
10. **Protection of rare, endangered or threatened plant and animal species** as identified by the Pennsylvania Natural Diversity Inventory (PNDI). (Reference-Title 25, §71.21.a.5.i.J). Provide DEP with a copy of the completed Request For PNDI Search document. Also provide a copy of the response letter from the Department of Conservation and Natural Resources' Bureau of Forestry regarding the findings of the PNDI search. Appendix B, Section II.J of the Planning Guide.
11. **Historical and archaeological resource protection** under P.C.S. Title 37, Section 507 relating to cooperation by public officials with the Pennsylvania Historical and Museum Commission. (Reference-Title 25, §71.21.a.5.i.K). Provide the department with a completed copy of a Cultural Resource Notice

request of the Bureau of Historic Preservation (BHP) to provide a listing of known historical sites and potential impacts on known archaeological and historical sites. Also provide a copy of the response letter from the BHP. Appendix B, Section II.K of the Planning Guide.

- B. Provide for the resolution of any inconsistencies in any of the points identified in Section VI.A. of this checklist by submitting a letter from the appropriate agency stating that the agency has received, reviewed and concurred with the resolution of identified inconsistencies. (Reference-Title 25, §71.21.a.5.ii). Appendix B of the Planning Guide.
- C. Evaluate alternatives identified in Section V of this checklist with respect to applicable water quality standards, effluent limitations or other technical, legislative or legal requirements. (Reference-Title 25, §71.21.a.5.iii).
- D. Provide cost estimates using present worth analysis for construction, financing, on going administration, operation and maintenance and user fees for alternatives identified in Section V of this checklist. Estimates shall be limited to areas identified in the plan as needing improved sewage facilities within five years from the date of plan submission. (Reference-Title 25, §71.21.a.5.iv).
- E. Provide an analysis of the funding methods available to finance the proposed alternatives evaluated in Section V of this checklist. Also provide documentation to demonstrate which alternative and financing scheme combination is the most cost-effective; and a contingency financial plan to be used if the preferred method of financing cannot be implemented. The funding analysis shall be limited to areas identified in the plan as needing improved sewage facilities within five years from the date of the plan submission. (Reference-Title 25, §71.21.a.5.v).
- F. Analyze the need for immediate or phased implementation of each alternative proposed in Section V of this checklist including: (Reference-Title 25, §71.21.a.5.vi).
 - 1. A description of any activities necessary to abate critical public health hazards pending completion of sewage facilities or implementation of sewage management programs. (Reference-Title 25, §71.21.a.5.vi.A).
 - 2. A description of the advantages, if any, in phasing construction of the facilities or implementation of a sewage management program justifying time schedules for each phase. (Reference-Title 25, §71.21.a.5.vi.B).
- G. Evaluate administrative organizations and legal authority necessary for plan implementation. (Reference - Title 25, §71.21.a.5.vi.D.).

VII. Institutional Evaluation

- A. Provide an analysis of all existing wastewater treatment authorities, their past actions and present performance including:
 - 1. Financial and debt status. (Reference-Title 25, §71.61.d.2).
 - 2. Available staff and administrative resources. (Reference-Title 25, §71.61.d.2)
 - 3. Existing legal authority to:
 - a. Implement wastewater planning recommendations. (Reference-Title 25, §71.61.d.2).
 - b. Implement system-wide operation and maintenance activities. (Reference-Title 25, §71.61.d.2).
 - c. Set user fees and take purchasing actions. (Reference-Title 25, §71.61.d.2).
 - d. Take enforcement actions against ordinance violators. (Reference-Title 25,

§71.61.d.2).

e. Negotiate agreements with other parties. (Reference-Title 25, §71.61.d.2).

f. Raise capital for construction and operation and maintenance of facilities. (Reference-Title 25, §71.61.d.2).

B. Provide an analysis and description of the various institutional alternatives necessary to implement the proposed technical alternatives including:

1. Need for new municipal departments or municipal authorities. (Reference-Title 25, §71.61.d.2).

2. Functions of existing and proposed organizations (sewer authorities, onlot maintenance agencies, etc.). (Reference-Title 25, §71.61.d.2).

3. Cost of administration, implementability, and the capability of the authority/agency to react to future needs. (Reference-Title 25, §71.61.d.2).

C. Describe all necessary administrative and legal activities to be completed and adopted to ensure the implementation of the recommended alternative including:

1. Incorporation of authorities or agencies. (Reference-Title 25, §71.61.d.2).

2. Development of all required ordinances, regulations, standards and inter-municipal agreements. (Reference-Title 25, §71.61.d.2).

3. Description of activities to provide rights-of-way, easements and land transfers. (Reference-Title 25, §71.61.d.2).

4. Adoption of other municipal sewage facilities plans. (Reference-Title 25, §71.61.d.2).

5. Any other legal documents. (Reference-Title 25, §71.61.d.2).

6. Dates or timeframes for items 1-5 above on the project's implementation schedule.

D. Identify the proposed institutional alternative for implementing the chosen technical wastewater disposal alternative. Provide justification for choosing the specific institutional alternative considering administrative issues, organizational needs and enabling legal authority. (Reference-Title 25, §71.61.d.2).

VIII. Implementation Schedule and Justification for Selected Technical & Institutional Alternatives

A. Identify the technical wastewater disposal alternative which best meets the wastewater treatment needs of each study area of the municipality. Justify the choice by providing documentation which shows that it is the best alternative based on:

1. Existing wastewater disposal needs. (Reference-Title 25, §71.21.a.6).

2. Future wastewater disposal needs. (five and ten years growth areas). (Reference-Title 25, §71.21.a.6).

3. Operation and maintenance considerations. (Reference-Title 25, §71.21.a.6).

4. Cost-effectiveness. (Reference-Title 25, §71.21.a.6).

5. Available management and administrative systems. (Reference-Title 25, §71.21.a.6).

6. Available financing methods. (Reference-Title 25, §71.21.a.6).

7. Environmental soundness and compliance with natural resource planning and preservation programs. (Reference-Title 25, §71.21.a.6).

- B. Designate and describe the capital financing plan chosen to implement the selected alternative(s). Designate and describe the chosen back-up financing plan. (Reference-Title 25, §71.21.a.6)
- C. Designate and describe the implementation schedule for the recommended alternative, including justification for any proposed phasing of construction or implementation of a Sewage Management Program. (Reference - Title 25 §71.31d)

IX. Environmental Report (ER) generated from the Uniform Environmental Review Process (UER)

- A. Complete an ER as required by the UER process and as described in the DEP Technical Guidance 381-5511-111. Include this document as "Appendix A" to the Act 537 Plan Update Revision. Note: *An ER is required only for Wastewater projects proposing funding through any of the funding sources identified in the UER.*

ADDITIONAL REQUIREMENTS FOR PENNVEST PROJECTS

Municipalities that propose to implement their official sewage facilities plan updates with PENNVEST funds must meet six additional requirements to be eligible for such funds. See A Guide for Preparing Act 537 Update Revisions (362-0300-003), Appendix N for greater detail or contact the DEP regional office serving your county listed in Appendix J of the same publication.

DEP Use Only	Indicate Page #(s) in Plan	Item Required
_____	_____	1. Environmental Impact Assessment. (Planning Phase) The Uniform Environment Review (UER) replaces the Environmental Impact Assessment that was a previous requirement for PENNVEST projects.
_____	_____	2. Cost Effectiveness (Planning Phase) The cost-effectiveness analysis should be a present-worth (or equivalent uniform annual) cost evaluation of the principle alternatives using the interest rate that is published annually by the Water Resources Council. Normally, for PENNVEST projects the applicant should select the most cost-effective alternative based upon the above analysis. Once the alternative has been selected the user fee estimates should be developed based upon interest rates and loan terms of the selected funding method.
_____	_____	3. Second Opinion Project Review. (Design Phase)
_____	_____	4. Minority Business Enterprise/Women's Business Enterprise (Construction Phase)
_____	_____	5. Civil Rights. (Construction Phase)
_____	_____	6. Initiation of Operation/Performance Certification. (Post-construction Phase)

WATER TECHNOLOGIES
PARTIAL LISTING OF INNOVATIVE AND ALTERNATIVE TECHNOLOGIES

TREATMENT TECHNOLOGIES

- Aquaculture
- Aquifer Recharge
- Biological Aerated Filters
- Constructed Wetlands
- Direct Reuse (NON-POTABLE)
- Horticulture
- Overland Flow
- Rapid Infiltration
- Silviculture
- Microscreens
- Controlled Release Lagoons
- Swirl Concentrator

SLUDGE TREATMENT TECHNOLOGIES

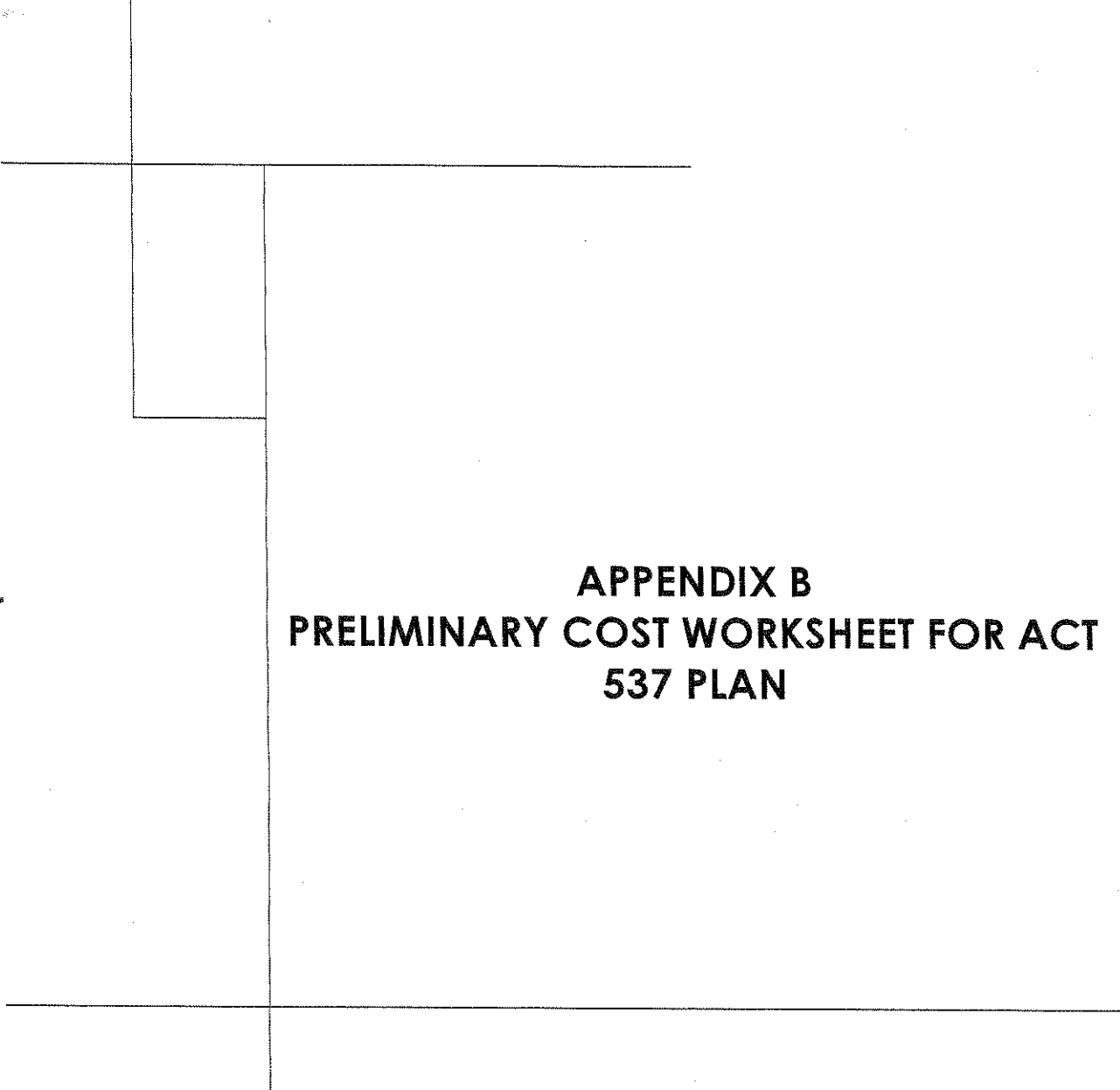
- Aerated Static Pile Composting
- Enclosed Mechanical Composting (In vessel)
- Revegetation of Disturbed Land
- Aerated Windrow Composting

ENERGY RECOVERY TECHNOLOGIES

- Anaerobic Digestion with more than 90 percent
- Methane Recovery
- Cogeneration of Electricity
- Self-Sustaining Incineration

**INDIVIDUAL & SYSTEM-WIDE
COLLECTION TECHNOLOGIES**

- Cluster Systems
- Septage Treatment
- Small Diameter Gravity Sewers
- Step Pressure Sewers
- Vacuum Sewers
- Variable Grade Sewers
- Septic Tank Effluent Pump with
- Pressure Sewers



**APPENDIX B
PRELIMINARY COST WORKSHEET FOR ACT
537 PLAN**

PRELIMINARY COST WORKSHEET FOR ACT 537 PLAN

12/2/2009
Date of Report

Howe Township (Entire)
Proposed Planning Area

Perry
County

Estimated Cost of Plan \$23,300

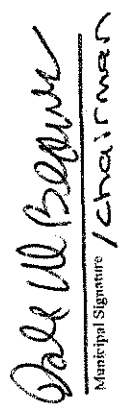
6/15/2010

Date Completed Plan will be submitted to DEP

Task Activity Number From Appendix I	Senior Professional		Staff Professional		Senior Technician		Technician		Clerical		HRG Subtotal	
	Rate/Hours	Cost	Rate/Hours	Cost	Rate/Hours	Cost	Rate/Hours	Cost	Rate/Hours	Cost	Hours	Cost
I. Previous Wastewater Planning	1.00	\$155.00	8.00	\$840.00			2.00	\$170.00			11.00	\$1,165.00
II. Physical and Demographic Analysis	1.00	\$155.00	6.00	\$630.00					2.00	\$130.00	9.00	\$915.00
III. Existing Sewage Facilities	8.00	\$1,240.00	10.00	\$1,050.00			2.00	\$170.00	2.00	\$130.00	22.00	\$2,590.00
IV. Future Growth and Development	2.00	\$310.00	13.00	\$1,365.00	3.00	\$330.00			1.50	\$97.50	19.50	\$2,102.50
V. Alternatives to Provide New/Improved Wastewater Disposal	24.00	\$3,720.00	46.00	\$4,830.00	15.00	\$1,650.00	1.00	\$85.00	6.00	\$390.00	92.00	\$10,675.00
VI. Evaluation of Alternatives	8.00	\$1,240.00	17.00	\$1,785.00					2.00	\$130.00	27.00	\$3,155.00
VII. Institutional Evaluation	2.00	\$310.00	4.00	\$420.00							6.00	\$730.00
VIII. Implementation Schedule & Justification	2.00	\$310.00	3.00	\$315.00					2.00	\$130.00	7.00	\$755.00
IX. Environmental Report (ER)	1.00	\$155.00	4.00	\$420.00					1.00	\$65.00	6.00	\$640.00
Totals	49.00	\$7,595.00	111.00	\$11,655.00	18.00	\$1,980.00	5.00	\$425.00	16.50	\$1,072.50	199.50	\$22,727.50

Edward A. Ellinger, P.E., Project Manager
Name and Title of Person Completing Report


Signature


Municipal Chairman

SUMMARY	Engineering Fees	\$22,727.50
	Expenses	\$572.50
	TOTAL	\$23,300