



**APPENDIX B
TASK ACTIVITY REPORT**



pennsylvania

DEPARTMENT OF ENVIRONMENTAL PROTECTION

WATER MANAGEMENT PROGRAM

3

December 21, 2011

Londonderry Township
783 South Geyers Church Road
Middletown, PA 17057

Re: Act 537 Planning (22920)
Plan of Study and Task/Activity Report
Londonderry Township, Dauphin County

Ladies and Gentlemen:

We received a Plan of Study and Task/Activity Report for preparation of an Act 537 Update Revision, submitted by HRG Engineering, under a cover letter dated December 12, 2011.

The proposed Update Revision includes Sewer Districts No. 2 and 3 and the Londonderry Estates area of the Township.

We have approved your Plan of Study for an estimated total cost of \$80,393. The resulting Act 537 Update Revision must be consistent with Act 537, Chapter 71, Sections 71.21 and 71.31 of the Department's regulations, and with information contained in both A Guide for Preparing Act 537 Update Revisions (January 2003), and Sewage Disposal Needs Identification Guidance. In accordance with your approved Task/Activity Report, your completed planning package will be submitted to the Department for review in November 2012.

These two guide documents are important. Appendix I in the first guide contains a comprehensive "Plan Content and Environmental Assessment Checklist" that details information required for a successful Act 537 Plan submission. This checklist is critical. Strictly following it will minimize the chance of submitting an incomplete plan and incurring untimely project delay. The second guide provides valuable insight about proper sewage disposal needs identification and documentation procedures. This "needs" information is not only used to determine whether a project is required, but it is also used when rating projects for priority based funding such as PENNVEST. Copies of either document can be obtained from the Department.

Please be advised the approval of this scope of work is not a guarantee of eligibility of planning costs for reimbursement by the Commonwealth pursuant to Section 6 (a) of Act 537 and 25 Pa Code Chapter 71 of the Department's regulations.

Following Act 537 plan approval, the Department administers grants for up to 50 percent of planning costs to municipalities with approved Task/Activity Reports. Costs for completion of any planning activities outside the scope of the originally proposed plan, or costs in excess of

those previously approved, are not automatically eligible for grant participation. These additional activities must be within the scope of Act 537. Costs must be submitted as revised Task/Activity Reports and receive Departmental approval.

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.

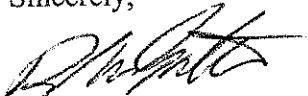
Applications for PENNVEST for new or expanded wastewater projects in the Chesapeake Bay Watershed that involve nutrient reduction activities, must include, as part of the alternatives analysis, a nutrient trading alternative. The appropriate time to complete this analysis would be as part of the 537 Plan. A supplement to the Handbook for PENNVEST Wastewater Projects entitled "Nutrient Trading Cost-Effectiveness Analysis Examples" is available. Please contact us if you would like a copy of this supplement.

Note that Plans identifying public funding as the source of financing for a sewerage project must include a completed Uniform Environmental Review document with the planning submission. Refer to the Act 537 Plan Content and Environmental Assessment Checklist (Rev. 9/2005). A copy of this may be downloaded from the Department's website at www.dep.state.pa.us.

Please be advised that costs associated with the use of municipal staff for Act 537 planning activities must be well documented. Staff activities must be specifically for preparation of the Act 537 Official Plan and specifically may not be associated with the staff member's normal duties.

If you have any questions, please call me at 717.705.4766.

Sincerely,



David W. Gates
Sewage Planning Specialist
Water Management Program

cc: HRG Engineering

December 9, 2011

Mr. David W. Gates
Water Management Program
Pennsylvania Department of Environmental Protection
909 Elmerton Avenue
Harrisburg, Pennsylvania 17110

Re: Londonderry Township Act 537 Plan
Task Activity Report

Dear Mr. Gates:

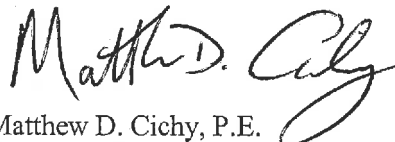
In order to satisfy the comments identified in our October 12, 2011 meeting, Herbert, Rowland & Grubic, Inc. (HRG) is commencing work to complete the Act 537 Plan Update for Londonderry Township, Dauphin County. The Study Areas will include Sewer Districts No. 2 and 3, as well as the Londonderry Estates development located in On-Lot Management District B.

We anticipate the Act 537 Plan Update will be submitted to DEP in November 2012 following the required municipal and public comment periods. Attached are the Task Activity Report (TAR) and Preliminary Cost Worksheet for the Act 537 Plan Update.

Please review the attached information at your earliest convenience. If you have any questions, please feel free to call me at 717.564.1121. Thank you for your timely consideration of this matter.

Very truly yours,

Herbert, Rowland & Grubic, Inc.



Matthew D. Cichy, P.E.
Water and Energy Project Manager

MDC/JKB/vjm
001068.0430 Ph. 10

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Enclosure

c: Mr. Stephen Letavic, Manager, Londonderry Township (w/Encl.)
File (w/Encl.)



Herbert, Rowland & Grubic, Inc.
Engineering & Related Services

369 East Park Drive
Harrisburg, PA 17111
(717) 564-1121
www.hrg-inc.com

DECEMBER 2011

LONDONDERRY TOWNSHIP
TASK ACTIVITY REPORT (TAR)

FOR

ACT 537 SEWAGE FACILITIES PLAN UPDATE

LONDONDERRY TOWNSHIP
DAUPHIN COUNTY, PENNSYLVANIA

HRG Project No. 001068.0430

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**Task Activity Report
Act 537 Official Sewage Facilities Plan Update
Londonderry Township, Dauphin County, Pennsylvania**

INTRODUCTION AND PROJECT SCHEDULE
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A. Introduction

The purpose of this Task Activity Report (TAR) is to provide the Pennsylvania Department of Environmental Protection (DEP) and Londonderry Township (Township) with a record of the specific content to be included in the Township's Act 537 Official Sewage Facilities Plan Update (Plan Update), as well as a cost estimate for completion of the Plan Update. The Plan Update will address the wastewater disposal needs of Londonderry Township located in Dauphin County, Pennsylvania. Two proposed Traditional Neighborhood Developments (TND) and DEP's identification of concern areas have led to the Township's need to update their Act 537 Official Sewage Facilities Plan.

Two pre-planning meetings were held at the DEP Southcentral Regional Office on June 23, 2009 and October 12, 2011 to discuss the Township's scope of work associated with the Plan Update. The Township identified the study areas for the Plan Update as Sewer District No. 2, Sewer District No. 3, and a small area of On-Lot Management District No. B referred to as Londonderry Estates. At these meetings, DEP identified three main areas of concern within the study area: Breaburn, the SR 230 corridor, and the mobile home parks (MHP). Refer to the attached Act 537 Study Areas map for the general project location.

The Township does not own or operate any public sewage facilities. The only public sewer in the Township, located in Sewer District No. 1, is owned and operated by the Derry Township Municipal Authority (DTMA). Wastewater flows from Sewer District No. 1 are conveyed to the DTMA Southwest Wastewater Treatment Plant (WWTP) for treatment.

The Plan Update will be completed in accordance with DEP Document No. 362-0300-003 "Pennsylvania Sewage Facilities Act: A Guide for Preparing Act 537 Update Revisions" as revised, and DEP Document No. 3800-BK-DEP1949 "Act 537 Sewage Disposal Needs Identification". The DEP Act 537 Plan Content and Environmental Assessment Checklist is attached to this TAR and will be utilized during the Plan Update preparation.

B. Project Schedule

<u>Project Milestone</u>	<u>Date</u>
• Authorization to Proceed with work on Act 537 Plan Update	September 2011
• Pre-Planning Meeting with PA DEP	October 2011
• Submit Task Activity Report to PA DEP	December 2011

- Receive DEP Approval of the Task Activity Report December 2011
- Submit Draft Act 537 Plan Update to Board of Supervisors June 2012
- Respond to Comments and Revise Plan July 2012
- Submit Updated Act 537 Plan Update to Board of Supervisors August 2012
- Public Review and Comment Period September 2012
- Londonderry Township Supervisors Adopt Act 537 Plan Update and Submit to DEP November 2012

I. PREVIOUS WASTEWATER AND MUNICIPAL PLANNING

A. Identify and Analyze Existing Wastewater Planning

Previous Londonderry Township Act 537 Sewage Facilities Plans, Updates and Feasibility Studies will be reviewed and summarized. Sewage facility planning modules for new residential subdivisions and other land development projects in Londonderry Township will be reviewed. The review of these files will identify wastewater planning information that should be considered during the preparation of the Township's Plan Update.

B. Identify and Summarize Municipal Planning Documents

Existing Township Ordinances and Comprehensive Plans will be summarized; specifically how they relate to sewage facilities planning.

II. PHYSICAL AND DEMOGRAPHIC ANALYSIS USING MAPS AND TEXT

A. Identification of Sewage Facility Planning Areas

Based on Township and DEP input, the planning areas will be identified using written descriptions and maps.

B. Preparation of Maps

In addition to preparing maps, the sources used to prepare the maps and the maps' relation to sewage facility planning will be described. At a minimum, the following maps will be provided:

1. Physical Characteristics – Streams, lakes, ponds, water impoundments, and drainage basins will be presented.
2. Soils – Analysis of soils in the study area will be performed to determine suitability or unsuitability of in-ground sewage disposal systems.
3. Geologic Features – Geologic features as they relate to sewage facilities and drinking water sources will be identified and discussed.
4. Topography – Analysis will identify slopes suitable for on-lot disposal systems (OLDS), slopes suitable for elevated sand mounds, and slopes unsuitable for OLDS.
5. Potable Water Supplies – Potable water sources will be mapped and discussed.
6. Wetlands – National Wetlands Inventory mapping will be used to show wetlands and hydric soils in the Township.

III. EXISTING SEWAGE FACILITIES AND NEEDS

A. Identify, Map and Describe Municipal and Non-Municipal, Individual and Community Sewage Systems

The Plan will include analysis of the existing sewage facilities in the Township. With the exception of Sewer District No. 1, which has public sewer, the Township is served by on-lot sewage disposal systems (OLDS) and community treatment facilities. Existing package and community WWTPs will be discussed and mapped.

B. Sewage Disposal Needs Identification

Problems with existing sewer facilities and malfunctions as reported by residents, the Township's Sewage Enforcement Officer (SEO), and DEP will be summarized. Known or potential use of holding tanks, privies, and "wildcat" sewers will be documented. Areas of concern as identified by DEP will be discussed.

Existing sewage disposal needs and future needs resulting from Traditional Neighborhood Developments (TNDs) will be addressed.

Tier one sanitary and well water surveys will be performed in Londonderry Estates and Sewer District Nos. 2 and 3 in accordance with DEP guidance. Based on the results of the tier one surveys, tier two surveys may be performed in specific problem areas. The results will be summarized and mapped as a part of this Plan Update. Previous OLDS surveys will be summarized and counted towards meeting tier one and tier two sampling percentage criteria listed in DEP's Act 537 Sewage Disposal Needs Identification document.

IV. FUTURE GROWTH AND LAND DEVELOPMENT

A. Existing Development

Existing Township development will be discussed as it relates to sanitary sewer facilities.

B. Land Use Designations and Future Growth

The Township is working with two TND developers within the study area. Coordination with TND developers will ensure the adequate sewage facilities are incorporated in the Act 537 Plan Update alternatives. The number of developed and undeveloped lots in the approved subdivisions will be tabulated.

The Dauphin County Comprehensive Plan and Londonderry Township Comprehensive Plan, Subdivision and Land Development Ordinance, and Zoning Ordinance will be used to identify land use, projected growth, and future development areas in the Township. Future land use, as well as projected population growth and associated Equivalent Dwelling Units (EDUs) will be used to assist in sewage facilities planning.

V. IDENTIFY ALTERNATIVES FOR NEW OR IMPROVED SEWAGE FACILITIES

A. Collection, Conveyance and Treatment Alternatives

Using sewage disposal needs identified in Chapter 3 in coordination with projected growth and land development from Chapter 4, sewage disposal alternatives will be developed. These alternatives will be developed for study areas which show needs for new or improved collection, conveyance and/or treatment facilities or where public health concerns have been identified. DEP suggests development of both structural and non-structural alternatives to meet sewage disposal needs. Structural alternatives may include:

1. Construction of new collection and conveyance facilities designed to connect to one or more existing wastewater treatment plant(s) located in the vicinity of the Township (i.e., regional treatment).
2. Construction of new collection and conveyance facilities to serve new small flow treatment or package facilities.
3. Construction of small diameter pressure systems for collection and conveyance facilities in areas where the use of conventional gravity sewers and pump stations would not be cost effective.

Non-structural alternatives may include:

1. Development or modification of Sewage Management Programs to ensure proper function of OLDS. (The Township's OLDS Management Program Ordinance will be finalized and adopted prior to submission of the Plan Update to DEP).
2. Modification of comprehensive plans, ordinances, and zoning to meet existing and future sewage disposal needs.

Implementation of a no-action alternative will be discussed in regard to short-term and long-term impacts on water quality and public health, population growth, community economic conditions, recreational opportunities, drinking water and other environmental concerns.

VI. EVALUATION OF ALTERNATIVES

A. Consistency

Alternatives identified in Chapter 5 will be evaluated on the basis of technical and economic feasibility. Technical feasibility includes compliance with environmental and regulatory agencies as follows:

1. Applicable plans developed under sections of the Clean Streams Law, Section 208 of the Clean Water Act, or Titles II and VI of the Water Quality Act of 1987.
2. The Township does not own or operate any wastewater treatment facilities in the Township. Any potential effects of the identified alternatives on WWTPs in surrounding Townships and Boroughs will be discussed.
3. The Londonderry Township Comprehensive Plan.
4. PA Code, Title 25, Chapter 93, 95 and 102 regulations.
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. The costs for any required Archaeological Surveys are not included in the budget for the Plan Update.

B. Present Worth and User Fees

1. Analysis of economic feasibility of selected alternatives will include cost estimates using present worth analysis for construction, financing, administration, and operation and maintenance.
2. User fee estimates for technically feasible alternatives which would be constructed upon approval of the Plan Update will be determined. The calculation of the user fees will be based on the consideration of phasing and funding options including PENNVEST loans and grants, Rural Utilities Service loans and grants, Community Development Block Grants, DEP Safe Water Grants, and other federal grants.

C. Administrative Organizations and Legal Authority

The type of administrative organization and legal authority required for the implementation of feasible alternatives will be determined.

Meetings with surrounding Municipalities and Authorities may be required throughout preparation of the plan. If any alternatives would require inter-municipal agreements, they will be addressed in this Chapter.

VII. INSTITUTIONAL EVALUATION

A. Analysis of Existing Wastewater Treatment Authorities

Analysis of existing wastewater treatment authorities and their financial and debt status, ability to implement sewage facility plans, set user fees, and generate capital for construction and operation and maintenance costs will be discussed.

B. Identify, Evaluate and Select Institutional Alternatives

The need for institutional alternatives will be compared to the functions of existing authorities. Upon evaluation, the best suited institutional alternative with administrative and legal authority to implement the Plan Update alternatives will be selected. Operation of the proposed sanitary sewer facilities will be investigated and discussed.

VIII. ALTERNATIVES SELECTION AND IMPLEMENTATION SCHEDULE

A. Identification and Justification of Selected Alternatives

The alternatives which best meet the wastewater disposal needs of the study areas will be identified. The recommendation of selected alternatives will be justified with thorough discussion of existing and future wastewater needs, operation and maintenance, capital costs and available financing, user fees, and environmental considerations.

B. Capital Financing Plan

A capital financing plan will be developed to implement each of the selected alternatives. Again, funding sources may include PENNVEST loans and grants, Rural Utilities Service loans and grants, Community Development Block Grants, DEP Safe Water Grants and other federal grants.

C. Implementation Schedule

An implementation schedule (including phased implementation if necessary) will be provided with dates for the completion of administrative, legal, planning, design, and construction activities.

IX. ENVIRONMENTAL REPORT

An Environmental Report will be generated from the Uniform Environmental Review (UER) Process as described in DEP Document No. 381-5511-111 "Guidelines for the Uniform Environmental Review Process in Pennsylvania". Financial assistance sources that may utilize the UER include PENNVEST, USDA-RD, DCED, HUD, and EPA.



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



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

- Project Name Londonderry Township Act 537 Plan Update
- Brief Project Description Update the Township's Act 537 Plan with focus on Sewer Districts 2 and 3, as well as Londonderry Estates located in On-Lot Management District B.

B. Client (Municipality) Information

Municipality Name	County	City	Boro	Twp
Londonderry Township	Dauphin	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Municipality Contact Individual - Last Name	First Name	MI	Suffix	Title
Letavic	Stephen			Manager
Additional Individual Last Name	First Name	MI	Suffix	Title

Municipality Mailing Address Line 1

783 South Geyers Church Road

Mailing Address Line 2

Address Last Line -- City

Middletown

State

PA

ZIP+4

17057

Phone + Ext.

717-944-1803

FAX (optional)

717-944-1926

Email (optional)

C. Site Information

Site (or Project) Name

Londonderry Township

(Municipal Name) Act 537 Plan

Site Location Line 1

Site Location Line 2

D. Project Consultant Information

Last Name	First Name	MI	Suffix
Bowra	Jeffrey		K
Title	Consulting Firm Name		
Water & Energy Staff Professional	Herbert, Rowland and 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	USA
Email	Phone + Ext.	FAX	
jbowra@hrg-inc.com	717-564-1121 Ext. 126	717-564-1158	

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).

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

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

§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).

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)



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

PRELIMINARY COST WORKSHEET - ACT 537 PLAN UPDATE

November 21, 2011
Date of Report

Dauphin County
Sewer Districts 2 and 3, Portion of On-Lot Management District B
Proposed Planning Area

Londonderry Township
Applicant

Date Completed Plan will be sent to DEP: November 2012 Estimated Cost of Act 537 Plan Update: \$89,000

Task Activity Number From Appendix I	Principal		Senior Professional		Project Professional		Staff Professional		Senior Technician		Administration Staff		Legal		Totals	
	Rate/Hour	Hours	Rate/Hour	Hours	Rate/Hour	Hours	Rate/Hour	Hours	Rate/Hour	Hours	Rate/Hour	Hours	Rate/Hour	Hours	Cost	Cost
I. Prelims Wastewater Planning	\$0.00		\$0.00		\$840.00	6	\$1,840.00	16	\$0.00		\$140.00	2	\$0.00		\$2,820.00	
II. Physical and Demographic Analysis	\$0.00		\$320.00	2	\$420.00	3	\$1,552.50	13.5	\$3,240.00	27	\$0.00		\$0.00		\$5,532.50	
III. Existing Sewage Facilities	\$0.00		\$320.00	2	\$2,800.00	20	\$13,685.00	119	\$1,680.00	14	\$0.00		\$620.00		\$18,905.00	
IV. Future Growth & Land Development	\$0.00		\$0.00		\$380.00	2	\$3,105.00	27	\$1,560.00	13	\$0.00		\$0.00		\$4,945.00	
V. Identify Alternatives to Provide New/Improved Wastewater Disposal	\$0.00		\$320.00	2	\$13,720.00	98	\$13,340.00	116	\$2,880.00	24	\$0.00		\$0.00		\$30,260.00	
VI. Evaluation of Alternatives	\$0.00		\$0.00		\$280.00	2	\$1,150.00	10	\$0.00		\$0.00		\$0.00		\$1,430.00	
VII. Institutional Evaluation	\$0.00		\$0.00		\$280.00	2	\$1,150.00	10	\$0.00		\$0.00		\$1,500		\$2,930.00	
VIII. Implementation Schedule and Justification	\$0.00		\$0.00		\$280.00	2	\$690.00	6	\$0.00		\$0.00		\$0.00		\$970.00	
IX. Environmental Report	\$0.00		\$0.00		\$260.00	2	\$1,610.00	14	\$0.00		\$0.00		\$0.00		\$1,870.00	
TAR Preparation	\$0.00		\$0.00		\$840.00	6	\$920.00	8	\$1,200.00	1	\$140.00	2	\$0.00		\$2,020.00	
Project Meetings	\$0.00		\$320.00	2	\$2,340.00	16	\$1,840.00	16	\$0.00		\$0.00		\$0.00		\$4,400.00	
Plan Copying	\$0.00		\$0.00		\$140.00	1	\$230.00	2	\$560.00	2	\$0.00		\$0.00		\$1,170.00	
Submit DEP Reimbursement	\$0.00		\$0.00		\$140.00	1	\$460.00	4	\$0.00		\$280.00	4	\$0.00		\$880.00	
Project Website for Public Participation	\$0.00		\$0.00		\$1,120.00	8	\$0.00		\$0.00		\$1,120.00	16	\$0.00		\$2,240.00	
Totals	\$0	0	\$1,280	8	\$21,660	169	\$41,573	362	\$9,728	81	\$2,660	38	\$1,500		\$89,393	

Mr. Stephen Letovic
Londonderry Township Manager
Londonderry Township Representative

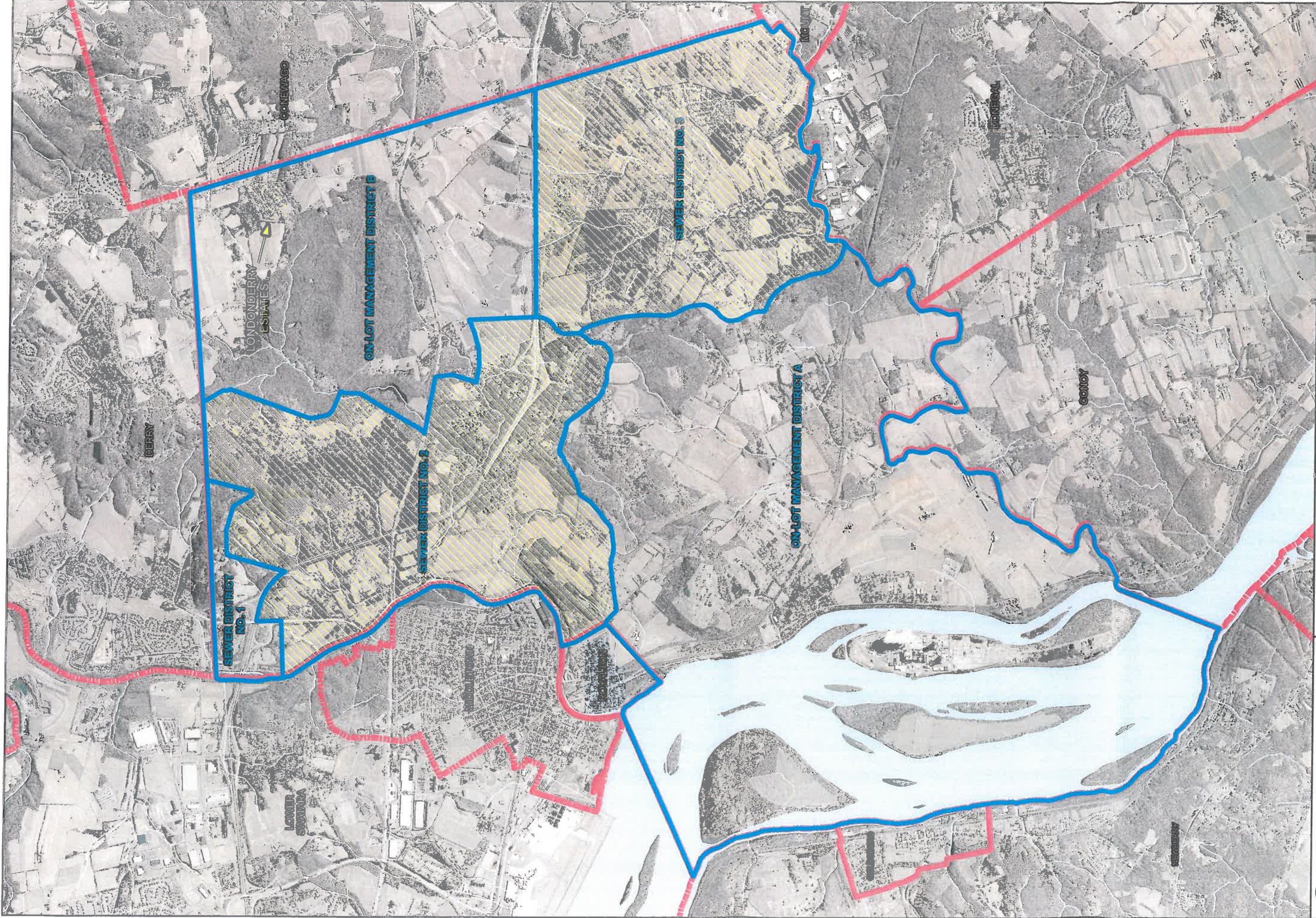
Jeffrey K. Brown, E.I.T. - Staff Professional
Name and Title of Person Completing Report

Salary Cost \$80,393
Expenses 38,607
Total \$119,000

SUMMARY



**APPENDIX C
STUDY AREAS MAP FOR
LONDONDERRY TOWNSHIP
ACT 537 PLAN UPDATE**



3,500 0 3,500 Feet

Mapping derived from data provided by Dauphin County and PAMAP

10/5/2011 PM: JKB GIS: BLS R001068.0430



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Act 537 Study Areas

Londonderry Township
Dauphin County, Pennsylvania