

**Act 537 Sewage Facilities Plan Update  
Amendment  
Finleyville – Elrama Road Planning Area**

**Union Township  
Washington County, PA**

**August 2020 (Initial Plan)  
August 2023 (Plan Revision / Amendment)  
January 2024 (Revised – Twp. Comments / MOU  
Updates)**

**UNION TOWNSHIP  
ACT 537 SEWAGE FACILITIES PLAN UPDATE  
FINLEYVILLE – ELRAMA ROAD PLANNING AREA**

TABLE OF CONTENTS

	<u>PAGE NO.</u>
CHECKLIST	
EXECUTIVE SUMMARY	EX-1 – EX-4
I. Previous Wastewater Planning	1
II. Physical and Demographic Analysis Utilizing Written	4
III. Existing Sewage Facilities in the Planning Area Identifying the Existing Needs	6
IV. Future Growth and Development	8
V. Identify Alternatives to Provide New or Improved Wastewater Disposal Facilities	13
VI. The Evaluation of Alternatives	19
VII. Institutional Evaluation	29
VIII. Implementation Schedule and Justification for Selected Technical and Institutional Alternatives	31
IX. Reference Documents	34

**UNION TOWNSHIP  
ACT 537 SEWAGE FACILITIES PLAN UPDATE  
FINLEYVILLE – ELRAMA ROAD PLANNING AREA**

**FIGURES**

FIGURE 1 – Existing On-Lot Disposal System Area Map

FIGURE 2 – FEPA Map

FIGURE 3.1 – FEPA Topography Map

FIGURE 3.2 – FEPA Topography Map

FIGURE 4 – National Wetlands Inventory Map

FIGURE 5 – PCSA Collection Map

FIGURE 6 – Current Zoning Map

FIGURE 7 – Future Land Use Planning Map

FIGURE 8 – T/AR Draft Concept 1 – Lifting Station

FIGURE 9 – T/AR Draft Concept 2 – Grinder pumps

FIGURE 10 – Pennsylvania State Route 1006 Map

FIGURE 11 – Facility Sewer Routing Map

**UNION TOWNSHIP  
ACT 537 SEWAGE FACILITIES PLAN UPDATE  
FINLEYVILLE – ELRAMA ROAD PLANNING AREA**

**TABLES**

TABLE 3.2 – OLDS Locations and Testing

TABLE 4.1 – Equivalent Dwelling Unit, Gallons per day and BOD per day Summary

TABLE 4.2 – Summary of Additional EDUs/Connections

TABLE 6.1 – Summary of Opinion of Probable Construction Cost

TABLE 6.2 – Summary of Life Cycle Cost Analysis

TABLE 6.3 – Summary of Allocated Shares

TABLE 6.4 – Anticipated Fees/Cost per EDU

TABLE 8.1 – Anticipated Implementation Schedule – Act 537 Plan Update August 2020

TABLE 8.2 – Anticipated Implementation Schedule

**UNION TOWNSHIP  
ACT 537 SEWAGE FACILITIES PLAN UPDATE  
FINLEYVILLE – ELRAMA ROAD PLANNING AREA**

**APPENDICES**

- APPENDIX A – Custom Soil Resource Report for Greene and Washington Counties,  
Pennsylvania – Act 537 Finleyville – Elrama Road Planning Area
- APPENDIX B – Manning’s Analysis – Finleyville-Elrama Road Connection
- APPENDIX C – Manning’s Analysis – Victoria Drive Connection
- APPENDIX D – Customer List
- APPENDIX E – Pennsylvania Natural Diversity Inventory Report
- APPENDIX F – Pennsylvania Historical & Museum Commission Report
- APPENDIX G – Detailed Cost Estimates for each Alternative
- APPENDIX H – Memorandum of Understanding
- APPENDIX I – Life Cycle Cost Analysis Memo Update
- APPENDIX J – Clairton Municipal Authority Letter
- APPENDIX K – Peters Creek Sanitary Authority Letter
- APPENDIX L – Task and Activity Report Approval letter
- APPENDIX M – Approved Act 537 Plan – August 2020
- APPENDIX N – Public Comment Period Documentation
- APPENDIX O – Litigation Settlement March 28, 2023 Court Order
- APPENDIX P – Amendment to March 14, 2023 Memorandum of Understanding for the  
Finleyville-Elrama Road Sewer Line Extension Project
- APPENDIX Q – Capacity Availability Letters

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



## ACT 537 PLAN CONTENT AND ENVIRONMENTAL ASSESSMENT CHECKLIST

### PART 1 GENERAL INFORMATION

#### A. Project Information

1. Project Name Finleyville-Elrama Road Planning Area

2. Brief Project Description The purpose of this Act 537 Plan Update / Amendment is to revise the initial Act 537 Plan Amendment dated January 2020, approved by PADEP by letter dated January 20, 2021 (low-pressure/grinder pump system alternative to a conventional gravity lift station alternative (this Plan).

#### B. Client (Municipality) Information

Municipality Name	County	City	Boro	Twp
Union Township	Washington	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Municipality Contact Individual - Last Name	First Name	MI	Suffix	Title
Dupree	Michalle			Chairperson of Supervisors
Additional Individual Last Name	First Name	MI	Suffix	Title
Municipality Mailing Address Line 1	Mailing Address Line 2			
3094 Finleyville-Elrama Road				
Address Last Line -- City	State	ZIP+4		
Finleyville	PA	15332		
Phone + Ext.	FAX (optional)	Email (optional)		
724-348-4250				

#### C. Site Information

Site (or Project) Name  
Finleyville-Elrama Road Planning Area      Union Township Act 537 Plan Special Study Update

Site Location Line 1	Site Location Line 2

#### D. Project Consultant Information

Last Name	First Name	MI	Suffix
Stanton	Jason	E	P.E.
Title	Consulting Firm Name		
Managing Principal	LSSE, Inc.		
Mailing Address Line 1	Mailing Address Line 2		
846 Fourth Avenue			
Address Last Line -- City	State	ZIP+4	Country
Coraopolis	PA	15108	U.S.
Email	Phone + Ext.	FAX	
jstanton@lsse.com	412-264-4400	412-264-1200	

**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 DEP. Incomplete plans may be <i>denied</i> unless the municipality is clearly requesting an advisory review.
_____	<u>I-iii</u>	1. <b>Table of Contents</b> 2. <b>Plan Summary</b>
_____	<u>EX-1</u>	A. Identify the proposed service areas and major problems evaluated in the plan. (Reference - 25 Pa. Code §71.21(a)(7)(i)).
_____	<u>EX-1 - EX-2</u>	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 - 25 Pa. Code §71.21(a)(7)(ii)).
_____	<u>EX-2 - EX-4</u>	C. Present the estimated cost of implementing the proposed alternative (including the user fees) and the proposed funding method to be used. (Reference - 25 Pa. Code §71.21(a)(7)(ii)).
_____	<u>EX-2 - EX-4</u>	D. Identify the municipal commitments necessary to implement the Plan. (Reference - 25 Pa. Code §71.21(a)(7)(iii)).
_____	<u>EX-1 - EX-4</u>	E. Provide a schedule of implementation for the project that identifies the <i>major</i> milestones with dates necessary to accomplish the project to the point of operational status. (Reference - 25 Pa. Code §71.21(a)(7)(iv)).
_____	<u>App J</u>	3. <b>Municipal Adoption:</b> <i>Original</i> , 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 - 25 Pa. Code §71.31(f)) Section V.F. of the Planning Guide.
_____	<u>N/A</u>	4. <b>Planning Commission / County Health Department Comments:</b> 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 - 25 Pa. Code §71.31(b)) Section V.E.1 of the Planning Guide.
_____	<u>App N</u>	5. <b>Publication:</b> Proof of Public Notice which documents the proposed plan adoption, plan summary, and the establishment and conduct of a 30-day comment period. (Reference - 25 Pa. Code §71.31(c)) Section V.E.2 of the Planning Guide.
_____	<u>N/A</u>	6. <b>Comments and Responses:</b> Copies of <i>all</i> written comments received and municipal response to <i>each</i> comment in relation to the proposed plan. (Reference - 25 Pa. Code §71.31(c)) Section V.E.2 of the Planning Guide.
_____	<u>29</u>	7. <b>Implementation Schedule:</b> 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 - 25 Pa. Code §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 - 25 Pa. Code §71.21(c)).
_____	<u>17-20</u>	8. <b>Consistency Documentation:</b> 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 25 Pa. Code §71.21.(a)(5)(i-iii). (Reference - 25 Pa. Code §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
_____	<u>1-2</u>	<b>I. Previous Wastewater Planning</b>
_____		A. Identify, describe and briefly analyze all past wastewater planning for its impact on the current planning effort:
_____	<u>1</u>	1. Previously undertaken under the Pennsylvania Sewage Facilities Act (Act). (Reference - Act 537, 35 P.S. §750.5(d)(1)).
_____	<u>N/A</u>	2. Has not been carried out according to an approved implementation schedule contained in the plans. (Reference - 25 Pa. Code §71.21(a)(5)(i)(A-D)). Section V.F of the Planning Guide.
_____	<u>2</u>	3. Is anticipated or planned by applicable sewer authorities or approved under a Chapter 94 Corrective Action Plan. (Reference - 25 Pa. Code §71.21(a)(5)(i)(A&B)). Section V.D. of the Planning Guide.
_____	<u>N/A</u>	4. Through planning modules for new land development, planning "exemptions" and addenda. (Reference - 25 Pa. Code §71.21(a)(5)(i)(A)).
_____	<u>3-4</u>	<b>II. Physical and Demographic Analysis utilizing written description and mapping</b> (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).
_____	<u>3</u>	A. Identification of planning area(s), municipal boundaries, Sewer Authority/Management Agency service area boundaries. (Reference - 25 Pa. Code §71.21(a)(1)(i)).
_____	<u>3</u>	B. Identification of physical characteristics (streams, lakes, impoundments, natural conveyance, channels, drainage basins in the planning area). (Reference - 25 Pa. Code §71.21(a)(1)(ii)).
_____	<u>3</u>	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 (IRSIS), and areas unsuitable for soil dependent systems. (Reference - 25 Pa. Code §71.21(a)(1)(iii)). Show Prime Agricultural Soils and any locally protected agricultural soils. (Reference - 25 Pa. Code §71.21(a)(1)(iii)).
_____	<u>3-4</u>	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 - 25 Pa. Code §71.21(a)(1)(iii)).
_____	<u>4</u>	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 - 25 Pa. Code §71.21(a)(1)(ii)).
_____	<u>4</u>	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 - 25 Pa. Code §71.21(a)(1)(vi)). Section V.C. of the Planning Guide.
_____	<u>4</u>	G. Wetlands-Identify wetlands as defined in 25 Pa. Code Chapter 105 by description, analysis and mapping. Include National Wetland Inventory mapping and potential wetland areas per the United States Department of Agricultural (USDA) Natural Resources Conservation Service (NRCS) mapped hydric soils. Proposed collection, conveyance and treatment facilities and lines must be located and labeled, along with the identified wetlands, on the map. (Reference - 25 Pa. Code §71.21(a)(1)(v)). Appendix B, Section II.I of the Planning Guide.

<u>5-6</u>		<b>III.</b>	<b>Existing Sewage Facilities in the Planning Area - Identifying the Existing Needs</b>
		A.	Identify, map and describe municipal and non-municipal, individual and community sewerage systems in the planning area including:
<u>5</u>		1.	Location, size and ownership of treatment facilities, main intercepting lines, pumping stations and force mains including their size, capacity, point of discharge. Also include the name of the receiving stream, drainage basin, and the facility's effluent discharge requirements. (Reference - 25 Pa. Code §71.21(a)(2)(i)(A)).
<u>5</u>		2.	A narrative and schematic diagram of the facility's basic treatment processes including the facility's National Pollutant Discharge Elimination System (NPDES) permitted capacity, and the Clean Streams Law permit number. (Reference - 25 Pa. Code §71.21(a)(2)(i)(A)).
<u>5-6</u>		3.	A description of problems with existing facilities (collection, conveyance and/or treatment), including existing or projected overload under 25 Pa. Code Chapter 94 (relating to municipal wasteload management) or violations of the NPDES permit, Clean Streams Law permit, or other permit, rule or regulation of DEP. (Reference - 25 Pa. Code §71.21(a)(2)(i)(B)).
<u>N/A</u>		4.	Details of scheduled or in-progress upgrading or expansion of treatment facilities and the anticipated completion date of the improvements. Discuss any remaining reserve capacity and the policy concerning the allocation of reserve capacity. Also discuss the compatibility of the rate of growth to existing and proposed wastewater treatment facilities. (Reference - 25 Pa. Code §71.21(a)(4)(i & ii)).
<u>N/A</u>		5.	A detailed description of the municipality's operation and maintenance (O & M) requirements for small flow treatment facility systems, including the status of past and present compliance with these requirements and any other requirements relating to sewage management programs (SMPs). (Reference - 25 Pa. Code §71.21(a)(2)(i)(C)).
<u>N/A</u>		6.	Disposal areas, if other than stream discharge, and any applicable groundwater limitations. (Reference - 25 Pa. Code §71.21(a)(4)(i & ii)).
<u>2</u>		B.	Using DEP's publication titled <i>Act 537 Sewage Disposal Needs Identification</i> (3800-BK-DEP1949), identify, map and describe areas that utilize individual and community onlot sewage disposal and, unpermitted collection and disposal systems ("wildcat" sewers, borehole disposal, etc.) and retaining tank systems in the planning area including:
<u>2</u>		1.	The types of onlot systems in use. (Reference - 25 Pa. Code §71.21(a)(2)(ii)(A)).
<u>2</u>		2.	A sanitary survey complete with description, map and tabulation of documented and potential public health, pollution, and operational problems (including malfunctioning systems) with the systems, including violations of local ordinances, the Act, the Clean Stream Law or regulations promulgated thereunder. (Reference - 25 Pa. Code §71.21(a)(2)(ii)(B)).
<u>2</u>		3.	A comparison of the types of onlot sewage systems installed in an area with the types of systems which are appropriate for the area according to soil, geologic conditions, topographic limitations sewage flows, and 25 Pa. Code Chapter 73 (relating to standards for sewage disposal facilities). (Reference - 25 Pa. Code §71.21(a)(2)(ii)(C)).
<u>2</u>		4.	An individual water supply survey to identify possible contamination by malfunctioning onlot sewage disposal systems consistent with DEP's <i>Act 537 Sewage Disposal Needs Identification</i> publication. (Reference - 25 Pa. Code §71.21(a)(2)(ii)(B)).

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|---------------|-------------|---|
| <u>      </u> | <u>2</u>    | 5. Detailed description of O & M 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 SMPs. (Reference - 25 Pa. Code §71.21(a)(2)(i)(C)).   |
| <u>      </u> | <u>5-6</u>  | C. Identify wastewater sludge and septage generation, transport and disposal methods. Include this information in the sewage facilities alternative analysis including:   |
| <u>      </u> | <u>N/A</u>  | 1. Location of sources of wastewater sludge or septage (Septic tanks, holding tanks, wastewater treatment facilities). (Reference - 25 Pa. Code §71.71).  |
| <u>      </u> | <u>N/A</u>  | 2. Quantities of the types of sludges or septage generated. (Reference - 25 Pa. Code §71.71).   |
| <u>      </u> | <u>5-6</u>  | 3. Present disposal methods, locations, capacities and transportation methods. (Reference - 25 Pa. Code §71.71).  |
| <u>      </u> | <u>7-10</u> | <b>IV. Future Growth and Land Development</b>   |
|               |             | A. Identify and briefly summarize all municipal and county planning documents adopted pursuant to the Pennsylvania Municipalities Planning Code (Act 247) including:  |
| <u>      </u> | <u>8</u>    | 1. All land use plans and zoning maps that identify residential, commercial, industrial, agricultural, recreational and open space areas. (Reference - 25 Pa. Code §71.21(a)(3)(iv)).   |
| <u>      </u> | <u>8</u>    | 2. Zoning or subdivision regulations that establish lot sizes predicated on sewage disposal methods. (Reference - 25 Pa. Code §71.21(a)(3)(iv)).  |
| <u>      </u> | <u>8-9</u>  | 3. All limitations and plans related to floodplain and stormwater management and special protection (25 Pa. Code Chapter 93) areas. (Reference - 25 Pa. Code §71.21(a)(3)(iv)) Appendix B, Section II.F of the Planning Guide.  |
| <u>      </u> | <u>10</u>   | B. Delineate and describe the following through map, text and analysis.   |
| <u>      </u> | <u>N/A</u>  | 1. Areas with existing development or plotted subdivisions. Include the name, location, description, total number of equivalent dwelling units (EDUs) in development, total number of EDUs currently developed and total number of EDUs remaining to be developed (include time schedule for EDUs remaining to be developed). (Reference - 25 Pa. Code §71.21(a)(3)(i)).  |
| <u>      </u> | <u>N/A</u>  | 2. Land use designations established under the Pennsylvania Municipalities Planning Code (35 P.S. 10101-11202), including residential, commercial and industrial areas. (Reference - 25 Pa. Code §71.21(a)(3)(ii)). Include a comparison of proposed land use as allowed by zoning and existing sewage facility planning. (Reference - 25 Pa. Code §71.21(a)(3)(iv)).   |
| <u>      </u> | <u>N/A</u>  | 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 - 25 Pa. Code §71.21(a)(1)(iv) and (a)(3)(iii)).  |
| <u>      </u> | <u>N/A</u>  | 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 - 25 Pa. Code §71.21(a)(3)(iv)).<br>--public ground/surface water supplies<br>--recreational water use areas<br>--groundwater recharge areas<br>--industrial water use<br>--wetlands |

- |       |              |   |   |
|-------|--------------|---|---|
|       |              |   | 5. Sewage planning necessary to provide adequate wastewater treatment for 5 and 10-year future planning periods based on projected growth of existing and proposed wastewater collection and treatment facilities. (Reference - 25 Pa. Code §71.21(a)(3)(v)). |
| _____ | _____        |   |   |
| _____ | <u>11-16</u> | <b>V. Identify Alternatives to Provide New or Improved Wastewater Disposal Facilities</b>   |   |
|       |              | <b>A. Conventional collection, conveyance, treatment and discharge alternatives including:</b>  |   |
| _____ | <u>11</u>    | 1. The potential for regional wastewater treatment. (Reference - 25 Pa. Code §71.21(a)(4)).   |   |
| _____ | <u>12</u>    | 2. The potential for extension of existing municipal or non-municipal sewage facilities to areas in need of new or improved sewage facilities. (Reference - 25 Pa. Code §71.21(a)(4)(i)). |   |
| _____ | <u>13</u>    | 3. The potential for the continued use of existing municipal or non-municipal sewage facilities through one or more of the following: (Reference - 25 Pa. Code §71.21(a)(4)(ii)).         |   |
| _____ | <u>13</u>    | a. Repair. (Reference - 25 Pa. Code §71.21(a)(4)(ii)(A)).   |   |
| _____ | <u>13</u>    | b. Upgrading. (Reference - 25 Pa. Code §71.21(a)(4)(ii)(B)).  |   |
| _____ | <u>13</u>    | c. Reduction of hydraulic or organic loading to existing facilities. (Reference - 25 Pa. Code §71.71).  |   |
| _____ | <u>13</u>    | d. Improved O & M. (Reference - 25 Pa. Code §71.21(a)(4)(ii)(C)).   |   |
| _____ | <u>N/A</u>   | e. Other applicable actions that will resolve or abate the identified problems. (Reference - 25 Pa. Code §71.21(a)(4)(ii)(D)).  |   |
| _____ | <u>14</u>    | 4. Repair or replacement of existing collection and conveyance system components. (Reference - 25 Pa. Code §71.21(a)(4)(ii)(A)).  |   |
| _____ | <u>14</u>    | 5. The need for construction of new community sewage systems including sewer systems and/or treatment facilities. (Reference - 25 Pa. Code §71.21(a)(4)(iii)).                            |   |
| _____ | <u>14</u>    | 6. Use of innovative/alternative methods of collection/conveyance to serve needs areas using existing wastewater treatment facilities. (Reference - 25 Pa. Code §71.21(a)(4)(ii)(B)).     |   |
| _____ | <u>14</u>    | <b>B. The use of individual sewage disposal systems including IRSIS systems based on:</b>   |   |
| _____ | _____        | 1. Soil and slope suitability. (Reference - 25 Pa. Code §71.21(a)(2)(ii)(C)).   |   |
| _____ | _____        | 2. Preliminary hydrogeologic evaluation. (Reference - 25 Pa. Code §71.21(a)(2)(ii)(C)).   |   |
| _____ | _____        | 3. The establishment of a SMP. (Reference - 25 Pa. Code §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 - 25 Pa. Code §71.21(a)(4)).                      |   |
| _____ | _____        | a. Existing technology and sizing requirements of 25 Pa. Code Chapter 73. (Reference - 25 Pa. Code §73.31-§73.72).  |   |
| _____ | _____        | b. Use of expanded absorption areas or alternating absorption areas. (Reference - 25 Pa. Code §73.16).  |   |
| _____ | _____        | c. Use of water conservation devices. (Reference - 25 Pa. Code §71.73(b)(2)(iii)).  |   |

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|---------------|---------------|---|
| <u>      </u> | <u>14</u>     | 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 - 25 Pa. Code §71.64(d)).                                       |
| <u>      </u> | <u>N/A</u>    | 1. Treatment and discharge requirements. (Reference - 25 Pa. Code §71.64(d)).   |
| <u>      </u> | <u>N/A</u>    | 2. Soil suitability. (Reference - 25 Pa. Code §71.64(c)(1)).  |
| <u>      </u> | <u>N/A</u>    | 3. Preliminary hydrogeologic evaluation. (Reference - 25 Pa. Code §71.64(c)(2)).  |
| <u>      </u> | <u>N/A</u>    | 4. Municipal, Local Agency or other controls over O & M requirements through a SMP. (Reference - 25 Pa. Code §71.64(d)). See Part "F" below.  |
| <u>      </u> | <u>14</u>     | D. The use of community land disposal alternatives including:   |
| <u>      </u> | <u>N/A</u>    | 1. Soil and site suitability. (Reference - 25 Pa. Code §71.21(a)(2)(ii)(C)).  |
| <u>      </u> | <u>N/A</u>    | 2. Preliminary hydrogeologic evaluation. (Reference - 25 Pa. Code §71.21(a)(2)(ii)(C)).   |
| <u>      </u> | <u>N/A</u>    | 3. Municipality, Local Agency or other controls over O & M requirements through a SMP. (Reference - 25 Pa. Code §71.21(a)(2)(ii)(C)). See Part "F" below.   |
| <u>      </u> | <u>N/A</u>    | 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.  |
| <u>      </u> | <u>15</u>     | E. The use of retaining tank alternatives on a temporary or permanent basis including: (Reference - 25 Pa. Code §71.21(a)(4)).  |
| <u>      </u> | <u>      </u> | 1. Commercial, residential and industrial use. (Reference - 25 Pa. Code §71.63(e)).   |
| <u>      </u> | <u>      </u> | 2. Designated conveyance facilities (pumper trucks). (Reference - 25 Pa. Code §71.63(b)(2)).  |
| <u>      </u> | <u>      </u> | 3. Designated treatment facilities or disposal site. (Reference - 25 Pa. Code §71.63(b)(2)).  |
| <u>      </u> | <u>      </u> | 4. Implementation of a retaining tank ordinance by the municipality. (Reference - 25 Pa. Code §71.63(c)(3)). See Part "F" below.  |
| <u>      </u> | <u>      </u> | 5. Financial guarantees when retaining tanks are used as an interim sewage disposal measure. (Reference - 25 Pa. Code §71.63(c)(2)).  |
| <u>      </u> | <u>15-16</u>  | F. SMPs to assure the future O & M of existing and proposed sewage facilities through:  |
| <u>      </u> | <u>15</u>     | 1. Municipal ownership or control over the O & M of individual onlot sewage disposal systems, small flow treatment facilities, or other traditionally non-municipal treatment facilities. (Reference - 25 Pa. Code §71.21(a)(4)(iv)). |
| <u>      </u> | <u>15</u>     | 2. Required inspection of sewage disposal systems on a schedule established by the municipality. (Reference - 25 Pa. Code §71.73(b)(1)).  |
| <u>      </u> | <u>15</u>     | 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 - 25 Pa. Code §71.73(b)(2)).                    |
| <u>      </u> | <u>15</u>     | 4. Repair, replacement or upgrading of malfunctioning onlot sewage systems. (Reference - 25 Pa. Code §71.21(a)(4)(iv) and §71.73(b)(5)) through:  |
| <u>      </u> | <u>N/A</u>    | a. Aggressive pro-active enforcement of ordinances that require O & M and prohibit malfunctioning systems. (Reference - 25 Pa. Code §71.73(b)(5)).  |
| <u>      </u> | <u>N/A</u>    | b. Public education programs to encourage proper O & M and repair of sewage disposal systems.   |
| <u>      </u> | <u>N/A</u>    | 5. Establishment of joint municipal SMPs. (Reference - 25 Pa. Code  |

- §71.73(b)(8)).
- \_\_\_\_\_ N/A 6. Requirements for bonding, escrow accounts, management agencies or associations to assure O & M for non-municipal facilities. (Reference - 25 Pa. Code §71.71).
  - \_\_\_\_\_ 16 G. Non-structural comprehensive planning alternatives that can be undertaken to assist in meeting existing and future sewage disposal needs including: (Reference - 25 Pa. Code §71.21(a)(4)).
    - \_\_\_\_\_ N/A 1. Modification of existing comprehensive plans involving:
      - \_\_\_\_\_ N/A a. Land use designations. (Reference - 25 Pa. Code §71.21(a)(4)).
      - \_\_\_\_\_ N/A b. Densities. (Reference - 25 Pa. Code §71.21(a)(4)).
      - \_\_\_\_\_ N/A c. Municipal ordinances and regulations. (Reference - 25 Pa. Code §71.21(a)(4)).
      - \_\_\_\_\_ N/A d. Improved enforcement. (Reference - 25 Pa. Code §71.21(a)(4)).
      - \_\_\_\_\_ N/A e. Protection of drinking water sources. (Reference - 25 Pa. Code §71.21(a)(4)).
    - \_\_\_\_\_ N/A 2. Consideration of a local comprehensive plan to assist in producing sound economic and consistent land development. (Reference - 25 Pa. Code §71.21(a)(4)).
    - \_\_\_\_\_ N/A 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 - 25 Pa. Code §71.21(a)(4)).
    - \_\_\_\_\_ N/A 4. Evaluation of existing local agency programs and the need for technical or administrative training. (Reference - 25 Pa. Code §71.21(a)(4)).
  - \_\_\_\_\_ 16 H. A no-action alternative which includes discussion of both short-term and long-term impacts on: (Reference - 25 Pa. Code §71.21(a)(4)).
    - \_\_\_\_\_ N/A 1. Water quality/public health. (Reference - 25 Pa. Code §71.21(a)(4)).
    - \_\_\_\_\_ N/A 2. Growth potential (residential, commercial, industrial). (Reference - 25 Pa. Code §71.21(a)(4)).
    - \_\_\_\_\_ N/A 3. Community economic conditions. (Reference - 25 Pa. Code §71.21(a)(4)).
    - \_\_\_\_\_ N/A 4. Recreational opportunities. (Reference - 25 Pa. Code §71.21(a)(4)).
    - \_\_\_\_\_ N/A 5. Drinking water sources. (Reference - 25 Pa. Code §71.21(a)(4)).
    - \_\_\_\_\_ N/A 6. Other environmental concerns. (Reference - 25 Pa. Code §71.21(a)(4)).
  - \_\_\_\_\_ 17-26 VI. **Evaluation of Alternatives**
    - A. Technically feasible alternatives identified in Section V of this checklist must be evaluated for consistency with respect to the following: (Reference - 25 Pa. Code §71.21(a)(5)(i)).
      - \_\_\_\_\_ 17 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 - 25 Pa. Code §71.21(a)(5)(i)(A)). Appendix B, Section II.A of the Planning Guide.
      - \_\_\_\_\_ 17 2. Municipal wasteload management **Corrective Action Plans or Annual Reports** developed under 25 Pa. Code Chapter 94. (Reference - 25 Pa. Code §71.21(a)(5)(i)(B)). The municipality's recent Wasteload Management (25 Pa. Code 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.
      - \_\_\_\_\_ 17 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 - 25 Pa. Code §71.21(a)(5)(i)(C)). Appendix B, Section II.E of the Planning Guide.

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| _____ | <u>18</u>    | 4. <b>Comprehensive plans</b> developed under the Pennsylvania Municipalities Planning Code. (Reference - 25 Pa. Code §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.  |
| _____ | <u>18</u>    | 5. <b>Antidegradation requirements</b> as contained in 25 Pa. Code Chapters 93, 95 and 102 (relating to water quality standards, wastewater treatment requirements and erosion control) and the Clean Water Act. (Reference - 25 Pa. Code §71.21(a)(5)(i)(E)). Appendix B, Section II.F of the Planning Guide.  |
| _____ | <u>18-19</u> | 6. <b>State Water Plans</b> developed under the Water Resources Planning Act (42 U.S.C.A. 1962-1962 d-18). (Reference - 25 Pa. Code §71.21(a)(5)(i)(F)). Appendix B, Section II.C of the Planning Guide.  |
| _____ | <u>19-20</u> | 7. <b>Pennsylvania Prime Agricultural Land Policy</b> 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 - 25 Pa. Code §71.21(a)(5)(i)(G)). Appendix B, Section II.G of the Planning Guide.   |
| _____ | <u>20</u>    | 8. <b>County Stormwater Management Plans</b> approved by DEP under the Storm Water Management Act (32 P.S. 680.1-680.17). (Reference - 25 Pa. Code §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.   |
| _____ | <u>20</u>    | 9. <b>Wetland Protection.</b> 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 - 25 Pa. Code §71.21(a)(5)(i)(I)) Appendix B, Section II.I of the Planning Guide.  |
| _____ | <u>20</u>    | 10. <b>Protection of rare, endangered or threatened plant and animal species</b> as identified by the Pennsylvania Natural Diversity Inventory (PNDI). (Reference - 25 Pa. Code §71.21(a)(5)(i)(J)). Provide DEP with a copy of the completed <i>PNDI Manual Project Submission Form</i> . Also provide a copy of the response letters from the 4 jurisdictional agencies regarding the findings of the PNDI search. Appendix B, Section II.J of the Planning Guide.  |
| _____ | <u>20</u>    | 11. <b>Historical and archaeological resource protection</b> under P.C.S. Title 37, Section 507 relating to cooperation by public officials with the Pennsylvania Historical and Museum Commission (PHMC). (Reference - 25 Pa. Code §71.21(a)(5)(i)(K)). Provide DEP with a completed copy of a <i>Cultural Resource Notice</i> and a return receipt for its submission to PHMC. Provide a copy of the response letter or review stamp from the Bureau of Historic Preservation (BHP) indicating the project will have no effect on, or that there may be potential impacts on, known archaeological and historical sites and any avoidance and mitigation measures required. Appendix B, Section II.K of the Planning Guide. |

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| <hr/> | <u>20</u>    | 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 - 25 Pa. Code §71.21(a)(5)(ii)). Appendix B of the Planning Guide.  |
| <hr/> | <u>N/A</u>   | 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 - 25 Pa. Code §71.21(a)(5)(iii)).   |
| <hr/> | <u>21-24</u> | D. Provide cost estimates using present worth analysis for construction, financing, ongoing administration, O & M 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 5 years from the date of plan submission. (Reference - 25 Pa. Code §71.21(a)(5)(iv)).   |
| <hr/> | <u>24-25</u> | 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 5 years from the date of the plan submission. (Reference - 25 Pa. Code §71.21(a)(5)(v)). |
| <hr/> | <u>24</u>    | F. Analyze the need for immediate or phased implementation of each alternative proposed in Section V of this checklist including: (Reference - 25 Pa. Code §71.21(a)(5)(vi)).   |
| <hr/> | <u>24</u>    | 1. A description of any activities necessary to abate critical public health hazards pending completion of sewage facilities or implementation of SMPs. (Reference - 25 Pa. Code §71.21(a)(5)(vi)(A)).  |
| <hr/> | <u>24</u>    | 2. A description of the advantages, if any, in phasing construction of the facilities or implementation of a SMP justifying time schedules for each phase. (Reference - 25 Pa. Code §71.21(a)(5)(vi)(B)).   |
| <hr/> | <u>24-25</u> | G. Evaluate administrative organizations and legal authority necessary for plan implementation. (Reference - 25 Pa. Code §71.21(a)(5)(vi)(D)).  |
| <hr/> | <u>27</u>    | <b>VII. Institutional Evaluation</b>  |
| <hr/> |              | A. Provide an analysis of all existing wastewater treatment authorities, their past actions and present performance including:  |
| <hr/> | <u>27</u>    | 1. Financial and debt status. (Reference - 25 Pa. Code §71.61(d)(2)).   |
| <hr/> | <u>27</u>    | 2. Available staff and administrative resources. (Reference - 25 Pa. Code §71.61(d)(2))   |
| <hr/> | <u>27</u>    | 3. Existing legal authority to:   |
| <hr/> | <u>27</u>    | a. Implement wastewater planning recommendations. (Reference - 25 Pa. Code §71.61(d)(2)).   |
| <hr/> | <u>27</u>    | b. Implement system-wide O & M activities. (Reference - 25 Pa. Code §71.61(d)(2)).  |
| <hr/> | <u>27</u>    | c. Set user fees and take purchasing actions. (Reference - 25 Pa. Code §71.61(d)(2)).   |
| <hr/> | <u>27</u>    | d. Take enforcement actions against ordinance violators. (Reference - 25 Pa. Code §71.61(d)(2)).  |
| <hr/> | <u>27</u>    | e. Negotiate agreements with other parties. (Reference - 25 Pa. Code §71.61(d)(2)).   |



- \_\_\_\_\_ 27 f. Raise capital for construction and O & M of facilities. (Reference - 25 Pa. Code §71.61(d)(2)).
- \_\_\_\_\_ 27 B. Provide an analysis and description of the various institutional alternatives necessary to implement the proposed technical alternatives including:
  - \_\_\_\_\_ N/A 1. Need for new municipal departments or municipal authorities. (Reference - 25 Pa. Code §71.61(d)(2)).
  - \_\_\_\_\_ 27 2. Functions of existing and proposed organizations (sewer authorities, onlot maintenance agencies, etc.). (Reference - 25 Pa. Code §71.61(d)(2)).
  - \_\_\_\_\_ N/A 3. Cost of administration, implementability, and the capability of the authority/agency to react to future needs. (Reference - 25 Pa. Code §71.61(d)(2)).
- \_\_\_\_\_ 27 C. Describe all necessary administrative and legal activities to be completed and adopted to ensure the implementation of the recommended alternative including:
  - \_\_\_\_\_ 27 1. Incorporation of authorities or agencies. (Reference - 25 Pa. Code §71.61(d)(2)).
  - \_\_\_\_\_ 27 2. Development of all required ordinances, regulations, standards and inter-municipal agreements. (Reference - 25 Pa. Code §71.61(d)(2)).
  - \_\_\_\_\_ 27 3. Description of activities to provide rights-of-way, easements and land transfers. (Reference - 25 Pa. Code §71.61(d)(2)).
  - \_\_\_\_\_ 27 4. Adoption of other municipal sewage facilities plans. (Reference - 25 Pa. Code §71.61(d)(2)).
  - \_\_\_\_\_ N/A 5. Any other legal documents. (Reference - 25 Pa. Code §71.61(d)(2)).
  - \_\_\_\_\_ N/A 6. Dates or timeframes for items 1-5 above on the project's implementation schedule.
- \_\_\_\_\_ n/a 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 - 25 Pa. Code §71.61(d)(2)).
  
- \_\_\_\_\_ 28-29 **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:
    - \_\_\_\_\_ 28 1. Existing wastewater disposal needs. (Reference - 25 Pa. Code §71.21(a)(6)).
    - \_\_\_\_\_ 28 2. Future wastewater disposal needs. (5 and 10 year growth areas). (Reference - 25 Pa. Code §71.21(a)(6)).
    - \_\_\_\_\_ 28-29 3. O & M considerations. (Reference - 25 Pa. Code §71.21(a)(6)).
    - \_\_\_\_\_ 28 4. Cost-effectiveness. (Reference - 25 Pa. Code §71.21(a)(6)).
    - \_\_\_\_\_ 28 5. Available management and administrative systems. (Reference - 25 Pa. Code §71.21(a)(6)).
    - \_\_\_\_\_ 28-29 6. Available financing methods. (Reference - 25 Pa. Code §71.21(a)(6)).
    - \_\_\_\_\_ N/A 7. Environmental soundness and compliance with natural resource planning and preservation programs. (Reference - 25 Pa. Code §71.21(a)(6)).

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| _____ | <u>28-29</u> | 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 - 25 Pa. Code §71.21(a)(6))   |
| _____ | <u>29</u>    | C. Designate and describe the implementation schedule for the recommended alternative, including justification for any proposed phasing of construction or implementation of a SMP. (Reference – 25 Pa. Code §71.31(d))  |
| _____ | <u>N/A</u>   | <b>IX. Environmental Report (ER) generated from the UER Process</b>  |
| _____ | _____        | 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. <b>Note: An ER is required only for Wastewater projects proposing funding through any of the funding sources identified in the UER.</b> |

**ADDITIONAL REQUIREMENTS FOR PENNVEST PROJECTS**

Municipalities that propose to implement their official sewage facilities plan updates with PENNVEST funds must meet 6 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 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)



# **EXECUTIVE SUMMARY**

**UNION TOWNSHIP  
ACT 537 SEWAGE FACILITIES PLAN UPDATE  
FINLEYVILLE – ELRAMA ROAD PLANNING AREA  
JANUARY 2024 (REVISED)  
EXECUTIVE SUMMARY**

Union Township (Township) is in the northeast corner of Washington County, Pennsylvania. The Borough of Finleyville lies entirely within the west-northwest section of the Township. The Borough of Jefferson Hills and the Township of South Park, Allegheny County border the Township on the north. Forward Township, Allegheny County borders the Township on the east. Peters Township and Nottingham Township, Washington County border the Township on the west. The Borough of New Eagle and Carroll Township, Washington County border the Township on the south.

Most of the Township sewer service is provided by on lot disposal systems (OLDS) with some limited areas served by municipal sewage authorities. The Peters Creek Sanitary Authority (PCSA) has a sanitary line termination at the northern side of the Finleyville-Elrama Road Planning Area (FEPA).

This Act 537 Sewage Facilities Plan Update Amendment (Act 537 Plan Update Amendment) focuses on the area in the vicinity of Finleyville-Elrama Road approximately 1/2 mile northeast along Finleyville-Elrama Road from the Union Township Municipal Building. None of FEPA is currently served by the PCSA. The Pennsylvania Department of Environmental Protection (PaDEP) has approved a Task and Activity Report (T/AR) for the FEPA. The T/AR approves examining further the use of a lift station and/or grinder pumps. A survey within the FEPA indicates OLDS failures. As documented in previous FEPA planning efforts, the continued use of failing OLDS pose a threat to the health and safety of the Township residents.

The Union Township Zoning Map indicates an 'R1' Low Density Single Family Residential District for the FEPA. Any Act 537 Plan Update needs to consider alternatives that meet the economic growth potential in the area and the goals of the

existing zoning ordinance. The FEPA consists of an estimated 33 equivalent dwelling units (EDU) with 30 physical connections being provided at this time.

This Act 537 Plan Update Amendment for the FEPA is to reconsider various alternatives of;

1. Conventional gravity collection system with a lift station and forcemain for conveyance to the PCSA system.
2. Collection system consisting of individual grinder pumps per EDU for conveyance to the PCSA system.

An act 537 Update dated August 2020 was previously filed by Union Township in September 2020 and approved by PaDEP in January 2021 which recommended proposed sewage facilities via a low-pressure grinder pump system. Following a period of enhanced planning, negotiation, discussion and litigation, a Memorandum of Understanding (MOU) was later executed between Union Township and PCSA to proceed with completion of the project for the mutual benefit of the Township and PCSA (refer to Appendix H). Following MOU execution, a Court Order was issued (refer to Appendix O). The MOU was amended by Union Township and PCSA in November 2023 (refer to Appendix P).

By this MOU, this Act 537 Report Update Amendment was prepared by PCSA on behalf of Union Township for the purposes of revising the PaDEP approved Act 537 Plan Update previously filed by Union Township. This update has been prepared to expand the FEPA from 19 EDUs to 33 EDUs with 30 physical connections proposed at this time.

The “Custom Soil Resource Report for Greene and Washington Counties, Pennsylvania – Act 537 Finleyville – Elrama Road Area” report indicates that the soils in the FEPA provided a ‘very limited’ ability for conventional type subsurface OLDS such as septic tank and/or sewage lagoon effluent absorption. Therefore, the use OLDS, Small Flow Treatment Facilities (SFTF), community land disposal alternatives and/or use of retaining tanks within the FEPA generally do not meet the health and safety, land use planning

and/or environmental goals of the sewage facilities planning process. These alternatives are not feasible solutions to the FEPA.

This Act 537 Plan Update Amendment considers mutually exclusive alternatives to provide the same remedial solution for currently failing on lot systems within the FEPA. The alternatives generally include connection to the regional sewage authority systems for conventional collection and conveyance of residential wastewater for treatment. The PCSA provides a feasible alternative to sewage remediation for the FEPA. The uniform topology in the FEPA allows for use of wastewater lifting devices to convey the sanitary wastewater from the point of discharge of the EDU to the PCSA conveyance system. Through the utilization of either a lifting station, Alternative 1, or a grinder pumps, Alternative 2, sanitary wastewater from 30 connections would be collected.

The PaDEP approved Act 537 Update reflected selection of Alternative 2 (grinder pump collection). This revised Act 537 update amendment proposes Alternative 1 (gravity collection system to a central lift station to be owned and operated by PCSA), a mutually agreed upon alternative as selected by PCSA and Union Township and documented in the executed MOU (Appendix H). An updated life cycle cost analysis memo indicating the cost breakdown on a total present worth value basis for each alternative is appended to the report as Appendix I. The construction cost of Alternative 1 is estimated to be \$2,130,000.00 (including 25% construction cost contingency and soft costs).

In terms of the impact to the FEPA customers, proposed user rates are to be \$51.50/month/EDU (based on a \$20 minimum charge, a \$15 debt service charge and \$8.25 per 1,000 gallons in excess of 2,000 gallons using the PCSA customer average water consumption of 4,000 gallons/month). These user rates are in accordance with the current PCSA rate schedule applicable to all customers as of August 2023. The current PCSA rate schedule was adopted in July 2014 and has been maintained since that time.

The proposed tapping fee applicable to FEPA residents follows the PCSA tapping fee schedule that has been in effect since September 2016. This schedule is \$3,259/EDU

(based on a \$2,250 PCSA tap fee, a \$200 PCSA three-part inspection fee and a \$809 Clairton Municipal Authority capacity replenishment fee).

Costs associated with the private lateral to connect the structure served to the proposed PCSA mainline gravity sewer is also an obligation of the property owner in accordance with existing PCSA policy. Per the PCSA Rules and Regulations, 2.09 “...*Minimum charges will be made against all Premises that abut on sewage facilities of the Authority and are located within 150’ (feet) thereof...*”. It is noted that costs will vary depending on location of connection in reference to the main line.

The executed MOU includes an implementation schedule for construction to be completed by December 2025. This schedule is appended as Table 8.1. The monthly schedule update shared with PCSA and Union Township is provided as Table 8.2 (effective date is December 2023).



# **REPORT**

**UNION TOWNSHIP  
ACT 537 SEWAGE FACILITIES PLAN UPDATE  
FINLEYVILLE – ELRAMA ROAD PLANNING AREA (FEPA)**

*NOTE: ITALICIZED FONT REFLECTS NARRATIVE FROM THE INITIAL ACT 537 PLAN UPDATE PREPARED BY  
SENATE ENGINEERING DATED AUGUST 2020; APPROVED BY PaDEP BY LETTER DATED JANUARY 20, 2021*

**JANUARY 2024 (REVISED)**

**I. Previous Wastewater Planning**

1.1. Previous Wastewater Planning

*"The Washington County Sewerage Facilities Plan and Technical Report" was prepared in January 1972 by the Washington County Planning Commission. This plan was financed by a planning grant from the Pennsylvania Department of Environmental Resources (DER) under the Pennsylvania Sewage Facilities Act. The study divided Washington County into sewerage district planning areas.*

*The Township Updated the Official Act 537 Sewage Facilities Plan for the Township on March 2000. This update sets forth findings, data, conclusions and recommendations for a 455-acre watershed of Union Township Washington County called "Elrama and Surrounding Area". In 2009, a \$4.1 million project was constructed providing sewage to 226 residential and 14 businesses. The project involved building a sewage conveyance system in the Village of Elrama. This system conveys sewage to the West Elizabeth Sewage Treatment Plant.*

*The Township adopted the "On-Lot Sewage Administration Ordinance" on February 9, 2009. This Ordinance reaffirms the Township's delegation to the Washington County Sewage Council (WCSC) to administer the requirements of Act 537 and the Union Township ordinances governing all aspects of on-lot sewage collection, treatment and discharge.*

*In 2014, Washington County developed the "Sewage Provider Inventory and Assessment" document. This document was created to better prepare for short- and long-term plans of the authority and municipal sewage providers in the county. This document provides a guide for development of wastewater facilities in the County.*

The Overlook Sewage Project has been completed by Union Township which addressed sewage mitigation planning for the northwest portion of the Township.

### 1.2 Previous Wastewater Planning that has not been implemented

Union Township submitted an Act 537 Plan Task/Activity Report (T/AR) for the FEPA on September 13, 2015 to the Pennsylvania Department of Environmental Protection (PaDEP) as prepared by Harshman CE Group. The T/AR was prepared to evaluate sanitary sewer options to replace failing on lot disposal systems (OLDS). Union Township received approval of the T/AR for the FEPA from the PaDEP by letter dated October 5, 2016. It is noted the Peters Creek Sanitary Authority (PCSA) Act 537 Plan (Final) dated August 2011 identified FEPA as an existing on-lot disposal system area within the PCSA service area. The area is highlighted in Figure 1 and is attached to this report.

In 2020, Senate Engineering filed an Act 537 Report dated August 2020 which evaluated several alternatives (lift station and/or grinder pumps) to connect the FEPA to existing PCSA sanitary sewers at the top of Finleyville-Elrama Road. The selected alternative was to provide a collection system consisting of individual grinder pumps to the FEPA and was submitted by Union Township in September 2020 for PaDEP Approval. PaDEP approved the Act 537 Report by letter dated January 20, 2021.

In 2023, Union Township and PCSA entered into a Memorandum of Understanding (MOU), attached as Appendix H, setting forth the terms and conditions under which Union Township and PCSA will proceed to complete the work required to provide a public sanitary sewer system to the FEPA per the approved T/AR. The MOU was amended by Union Township and PCSA in November 2023 (refer to Appendix P).

### 1.3 Anticipated or Planned Wastewater Planning

There are no known other active Sewage Facilities Planning efforts in Union Township at this time.

### 1.4 Planning and Land Development

*The FEPA is zoned 'R1 – Low Density Single Family Residential District' and a portion of the Planning Area has a zoning classification of RD – Rural Development District as per the Union Township Zoning Map. Union Township adopted the 'Township of Union Subdivision and Land*

*Development Ordinance'. The WCSC indicates that all subdivisions require a sewage planning module.*



## II. Physical and Demographic Analysis

### 2.1 Planning Area Identification

*The entirety of the FEPA considered under this Act 537 Plan Update is within Union Township, Washington County. The PCSA has sanitary sewer infrastructure that terminates near the FEPA in Union Township, Washington County. Reference Figure 2, which outlines FEPA.*

### 2.2 Geographic Features

*The geographic features in the immediate area generally lower in topographic elevation from the northwest corner of the FEPA to the southeast corner of the FEPA. With a total drop of roughly 60 feet over 1/2 mile with respect to mean sea elevation. The boundary of the Peters Creek watershed exists just outside of the FEPA. The FEPA exists at the top of a watershed that drains directly to the Monongahela River.*

### 2.3 Soils

*The USDA Web Soil Survey was utilized to create the soil maps as required by Title 25 §71.21.a.1.iii and as shown in Appendix A. Six different soil types and combination of soil types exist within the FEPA. The primary soil type is silt loam and various mixtures of silty loam. The soils in the FEPA are generally unsuitable for use with conventional in-ground and elevated mound septic systems and provide a 'very limited' ability for septic tank and/or sewage lagoon effluent absorption. It may be possible that more specific soil analysis of specific parcels would identify locations within an individual parcel that utilize spray or drip irrigation on individual OLDS.*

*The FEPA contains approximately 52% of soils considered to be Farmland of Statewide Importance and 28% considered Prime Farmland. A map showing properties under the agricultural security program can also be found in Appendix A.*

### 2.4 Geologic Features

*According to the 'Geologic Map of Pennsylvania' published by the DCNR, the Township is in the Appalachian plateau section of the Appalachian Plateaus physiographic province. The*

*Waynesburg Formation and the Monongahela Group comprises the bedrock general categories in the FEPA. The bedrock lithology for the general area to include the FEPA consists of sandstone, shale and limestone. The Pittsburgh and Upper Freeport coal reserves exist in the subsurface as well as a few oil/gas wells located in the vicinity.*

#### 2.5 Topography

*The FEPA contains a uniform topography from a high of 1175 feet above mean sea level (FAMSL) to a low of 1115 FAMSL. An elevation drops from northwest to southeast of approximately 60 feet. Based on the FEPA topography and location to the PCSA, Alternative 1 and Alternative 2 are feasible. Figures 3.1 and 3.2 provides topography mapping.*

#### 2.6 Potable Water Supplies

*Public water services provide potable water supplies in the FEPA. The Pennsylvania American Water Company (PAWC) provides public water to the FEPA and throughout the surrounding area.*

#### 2.7 Wetlands

*The FEPA and the surrounding areas do not contain identified wetlands. Figure 4 provides a map of the National Wetlands Inventory for the area.*

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

#### **3.1 Existing Systems**

*There are no municipally owned treatment facilities within the FEPA. However, the PCSA has a branch of the gravity collection system that terminates on the boundary of the FEPA within the Peters Creek Watershed. These lines service the northern and western portion of the Township to include Finleyville. The PCSA collects wastewater primarily through a gravity system with two pumping stations to ultimately discharge for treatment to the Clairton Municipal Authority (CMA). Figure 5 provides maps of the PCSA collection system.*

*The Township maintains an Act 537 Sewage Facilities Plan. The most recent update to the plan occurred in March of 2000 when the Elrama and Surrounding Area was analyzed for sewage upgrade efforts. The alternative chosen, and ultimately implemented, was to discharge the sewage flow to an existing interceptor in Jefferson Hills Borough with treatment at an existing sewage treatment plant in West Elizabeth Borough in Allegheny County. This system resides in the northeastern most portion of the Township. Due to the distance of the Elrama collection system to the FEPA as well as the interlaying topography, connecting the properties in the FEPA to the Elrama collection system is not a feasible alternative.*

A review of available capacity was conducted for several connection points from the FEPA to the PCSA Interceptor using Manning's Analysis. The primary evaluation point is located along Finleyville-Elrama Road. A location map and the analysis are appended as Appendix B; this analysis concludes that downstream capacity is available from the FEPA to the PCSA Interceptor. This analysis was also performed at an alternate evaluation/connection point near Coal Bluff Road adjacent to Victoria Drive. A location map and the results of this analysis are appended as Appendix C. Following analysis of the two possible connection points from the FEPA to the PCSA Interceptor, it was concluded that the primary connection point along Finleyville-Elrama Road was preferred from a downstream pipe slope perspective.

### 3.2 Sewage Disposal Needs Identification

*USDA Web Soil Survey indicates that the soils in the FEPA are generally unsuitable for use with conventional in-ground and elevated mound septic systems and provide a 'very limited' ability for conventional septic tank and/or sewage lagoon effluent absorption. The majority of the OLDS in the FEPA are in-ground conventional systems. The FEPA lacks adequate sewage facilities to meet the needs of the properties.*

*Eighteen properties in the FEPA contain an OLDS. Three properties have received dye testing by the Washington County Sewage Enforcement Officer because of suspected malfunctions. One property failed the dye test due to malfunctions and received a violation from the Washington County Sewage Council. This results in a failure rate of 5%. Table 3.2 provides for the locations of the OLDS and the testing locations.*



## IV. Future Growth and Development

### 4.1 Act 247 Planning

*Regional Future Growth and Land Development planning which encompasses the FEPA involves two documents created in accordance with the Pennsylvania Municipalities Planning Code – Act 247. The 'Washington County Comprehensive Plan, adopted in November 2005, and the 'Carroll Township – Union Township Joint Comprehensive Plan', adopted in November 2012. The Washington County Comprehensive Plan contains historical, social, public facilities, public infrastructure, housing characteristics, transportation, parks and recreation, economic development and land use information, data and maps as well as a Vision Statement and Live/Work Analysis in the County as a whole. Chapter 5c. of this document outlines the Public Sewerage for the County. This document outlines 35 Sewerage Districts in the County.*

*The 'Carroll Township-Union Township Joint Comprehensive Plan' was adopted from the 'Multi-Municipal Comprehensive Plan for Carroll Township, Finleyville Borough, Union Township and Nottingham Township in Washington County, Pennsylvania' dated August 2007. These four communities belong to the same local school district and share common interests as the foundation for development of the multi-municipal plan. The 'Multi-Municipal Comprehensive Plan for Carroll Township, Finleyville Borough, Union Township and Nottingham Township in Washington County, Pennsylvania' contains regional profiles, land use, housing, historic & cultural resources, parks and recreation, natural resources, community facilities, transportation, economic development and energy conservation planning as well as a Vision Statement and maps. These documents identify lack of sewer service as a weakness and inadequate infrastructure, to include sewer, as a threat within the in the documents SWOT analysis. Section 8 of this document indicates that "...concentrating new [public sewage] service areas around the periphery of existing service areas." reduces sprawl and preserves valuable farmland. The FEPA exists at the periphery of the PCSA service area.*

*The current Township Zoning Map indicates a 'R1' or Low-Density Single-Family Residential District zone. This zoning designation indicates that low-density single-family residential development may occur where public sewers are not available. The document 'Carroll Township – Union Township Joint Comprehensive Plan' September 2012 indicates that future land use planning for the FEPA and immediate surrounding area involves 'Single Family Residential' zoning. Single Family Residential zoning allows for one (1) dwelling unit per 0.25 - .5 acre with public sewer service. Generally, the existing parcels within the FEPA meet these criteria. Please refer to Figure 6 for current Township zoning and Figure 7 for future land use planning.*

*Washington County maintains two complementary local planning governing documents for sewage systems, 'Sewage Provider Inventory Project Summary Sheets' as well as 'Sewage Provider Inventory and Assessment' guides. These guides provide information based on active Act 537 Plans, Long Term Control Plans and Corrective Action Plans (CAP). The guides provide general information regarding the 34 Washington County Sewage Providers. This plan identifies the CAP for the PCSA. The CAP remediates Inflow/Infiltration with the PCSA and CMA system. This remediation involves pipe lining and interceptor piping rehabilitation. Projects also include sanitary sewer extensions to eliminate failing septic systems.*

*In addition to the Commonwealth of Pennsylvania Codes/Regulations, Union Township Code 202-12 Chapter 211 governs sewers within the Township. Article III Section 211-23 of the Code identifies sewage management districts for installation, rehabilitation or repairing on-lot sewage disposal systems with new alternative type systems, to include holding tanks. Article IV of the Code governs sewage holding tanks. Section 211-33 indicates the requirement for a permit, Section 211-39 outlines the use and maintenance of holding tanks and disposal of sewage and Section 211-44 establishes the function of the Township responsibilities.*

#### 4.2 Development, Land Use, and Zoning

*As indicated in Section 4.1, current Township zoning establishes an 'RI' zone in the FEPA. Future land use planning establishes a 'Single Family Residential' zone in the FEPA. Generally, the existing parcels in the FEPA meet the current zoning and future land use planning criteria. Therefore, the 33 existing parcels determine the Equivalent Dwelling Unit (EDU) calculation as referenced on the customer list provided as Appendix D. Generally, the parcels within the FEPA comply with the established zone of low-density single family residential.*

*25 Pa Code Section 71.1 defines one EDU as "...that part of a family dwelling or commercial or industrial establishment with flows equal to 400 gallons per day". 25 Pa Code Section 73.17 determines that a single-family residence with three bedrooms or less establishes a 400 gallon per day of sewage flow. Therefore, for this project one parcel equals one EDU with a total EDU of 33 and 30 proposed connections at this time.*

*The calculated GPD and BOD based on Pa Code and Township zoning is 13,200 gallons per day and 30 mg/L of BOD per day, respectively. Please refer to Table 4.1 for tabulation of GPD and BOD.*

Table 4.2 below summarizes existing/future EDU's and proposed connections to the public PCSA sanitary sewer system for the FEPA. It is noted that an additional 30 connections are proposed however 33 existing EDUs are encompassed by this project. Refer to the customer list and location map as Appendix D. To summarize, customers that are to be proposed to be connected to the proposed public sanitary sewer system are counted as such. EDU count however is based on parcels within the FEPA that could be serviced as part of the project. Please note Item No. 13 on Table 4.2 below is an existing parcel where connection is not proposed at this time. It is further acknowledged that this existing parcel is subject to deed restrictions pertaining to future use. However, this parcel was allotted an additional 36 EDUs for future development. It is noted that Item 2 and Item 7 currently have sanitary sewer service from PCSA via a dual grinder pump system. To facilitate potential future real estate transactions and to afford the opportunity

of gravity service, these two properties are included in the scope of work. However, considering these two properties are currently connected, a tapping fee charge identified in Table 6.4 would not apply. As shown on Table 4.2, there are 69 EDUs anticipated within the FEPA when considering existing and future EDUs.

**Table 4.2 – Summary of FEPA EDUs/Connections**

Item #	Parcel ID	Proposed Connection	Existing EDU	Future EDU
1	181 GILMORE RD, FINLEYVILLE PA 15332 640-008-02-01-0001-00	1	1	0
2	185 GILMORE ROAD, FINLEYVILLE PA 15332 640-008-00-00-0079-02	1	1	0
3	180 GILMORE RD, FINLEYVILLE PA 15332 640-005-00-00-0021-01	1	1	0
4	GILMORE RD, FINLEYVILLE PA 15332 640-005-00-00-0021-00	1	1	0
5	175 GILMORE RD, FINLEYVILLE PA 15332 640-008-02-01-0002-00	1	1	0
6	174 GILMORE RD, FINLEYVILLE PA 15332 640-005-00-00-0036-00	1	1	0
7	4042 FINLEYVILLE ELRAMA RD, FINLEYVILLE PA 15332 640-008-00-00-0079-01	1	1	0
8	4035 FINLEYVILLE ELRAMA RD, FINLEYVILLE PA 15332 640-008-00-00-0080-00	1	1	0
9	4038 FINLEYVILLE ELRAMA RD, FINLEYVILLE PA 15332 640-008-00-00-0079-00	1	1	0
10	4032 FINLEYVILLE ELRAMA RD, FINLEYVILLE PA 15332 640-008-00-00-0078-00	1	1	0
11	4028 FINLEYVILLE ELRAMA RD, FINLEYVILLE PA 15332 640-008-00-00-0077-00	1	1	0
12	4026 FINLEYVILLE ELRAMA RD, FINLEYVILLE PA 15332 640-005-02-00-0015-00	1	1	0
13	4011 FINLEYVILLE ELRAMA RD, FINLEYVILLE PA 15332 640-005-00-00-0022-01	0	1	36
14	4016 FINLEY ELRAMA RD, FINLEYVILLE PA 15332 640-005-00-00-0026-07	1	1	0
15	4014 FINLEYVILLE ELRAMA RD, FINLEYVILLE PA 15332 640-005-02-00-0014-00	1	1	0
16	4008 FINLEYVILLE RD, FINLEYVILLE PA 15332 640-005-02-00-0013-00	1	1	0
17	4004 FINLEYVILLE ELRAMA RD, FINLEYVILLE PA 15332 640-005-02-00-0012-00	1	1	0
18	3998 FINLEYVILLE ELRAMA RD, FINLEYVILLE PA 15332 640-005-02-00-0011-00	1	1	0

Item #	Parcel ID	Proposed Connection	Existing EDU	Future EDU
19	FINLEYVILLE ELRAMA RD, FINLEYVILLE PA 15332 640-005-00-00-0026-00	1	1	0
20	3994 FINLEYVILLE ELRAMA RD, FINLEYVILLE PA 15332 640-005-02-00-0009-00	1	1	0
21	4083 FINLEYVILLE ELRAMA RD, FINLEYVILLE PA 15332 640-005-00-00-0022-00	1	1	0
22	3997 FINLEYVILLE ELRAMA RD, FINLEYVILLE PA 15332 640-005-01-00-0015-00	1	1	0
23	3993 FINLEYVILLE ELRAMA RD, FINLEYVILLE PA 15332 640-005-01-00-0014-00	1	1	0
24	3991 FINLEYVILLE ELRAMA RD, FINLEYVILLE PA 15332 640-005-01-00-0013-00	1	1	0
25	3990 FINLEYVILLE ELRAMA RD, FINLEYVILLE PA 15332 640-005-02-00-0008-00	1	1	0
26	3985 FINLEYVILLE ELRAMA RD, FINLEYVILLE PA 15332 640-005-01-00-0009-01	1	1	0
27	3984 FINLEYVILLE ELRAMA RD, FINLEYVILLE PA 15332 640-005-02-00-0007-00	1	1	0
28	9 ROBB LN, FINLEYVILLE PA 15332 640-005-01-00-0009-00	1	1	0
29	ROBB LN, FINLEYVILLE PA 15332 640-005-01-00-0012-00	1	1	0
30	26 ROBB LN, FINLEYVILLE PA 15332 640-005-01-00-0011-00	1	1	0
31	30 ROBB LN, FINLEYVILLE PA 15332 640-005-01-00-0010-00	1	1	0
32	4086 FINLEYVILLE ELRAMA RD FINLEYVILLE PA 15332 640-005-07-00-0017-00	0	1	0
33	FINLEYVILLE ELRAMA RD, FINLEYVILLE PA 15332 640-006-00-00-0001-00	0	1	0
<b>Total</b>		30	33	36
<b>Total Anticipated EDU Count (Existing and Future)</b>			69	

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

*The following presents alternatives considered as outlined and required by Title 25 Pa. Code §71.21. This Act 537 Plan Update presents two alternatives; 1 – Conventional gravity collection system and central lift station, and 2 – Individual Grinder pumps for providing new or improved sanitary wastewater disposal for the FEPA. Figures 8 and 9 (prepared by others) respectively provide a draft concept of each alternative.*

### 5.1 Regional Collection, Conveyance, and Treatment

#### 5.1.1 Regional Wastewater Treatment

*The regional wastewater treatment facility within proximity of the FEPA is the CMA. The Clairton Wastewater Treatment Plant (CWWTP) is located along North State Street in Clairton and discharges to Peters Creek. The plant is owned by the CMA and operates under NPDES Permit No. PA0026824. The existing WWTP process consists of preliminary screening, grit removal, comminutor, pre-aeration, primary settling, activated sludge, final clarifiers and chlorine disinfection. The solids handling system consists of thickening, aerobic digestion, centrifuge dewatering, and ultimate disposal of the sludge at a landfill.*

*The upstream communities' conveyance systems are owned and operated by each independent community. The upstream communities consist of the Borough of Jefferson Hills, the Township of South Park and the PCSA. The PCSA service area consists of customers located within the Borough of Finleyville, Nottingham, Peters, and Union Township. All flows from the upstream communities are classified as strictly sanitary.*

*This Act 537 Plan Update considers utilizing the PCSA collection system to convey sanitary flows from the FEPA to the CMA CWWTP. The CMA CWWTP operates at 6 million gallons per day and 10 million during wet weather conditions. Currently the CWWTP is under expansion. The expansion will make the CMA the third largest treatment plant in Allegheny County.*

The CWWTP expansion is split into two phases and will ultimately result in an increase in treatment capacity of 10.83 million gallons per day during average flow and 38.23 million gallons per day during wet weather flow. Phase 1 upgrades for the CWWTP expansion include: new raw sewage pump station, new headworks, new aerobic digester and new dewatering equipment. Construction of the Phase 1 upgrades are largely complete. Phase 2 upgrades for the CWWTP expansion include: conversion of existing aeration tanks into membrane bioreactors (MBR), conversion of existing secondary clarifiers into flow storage/primary clarifiers for wet weather excess of MBR peak capacity and upgrade of existing chlorine contact tanks for disinfection of flow in excess of MBR peak capacity. Construction of the Phase 2 upgrades are underway with an anticipated projected completion date of third quarter 2025.

#### 5.1.2 Extension of Existing Municipal or Non-Municipal Systems

*Gravity sanitary collection lines from the PCSA exist near the FEPA. Feasible alternatives for utilization of the PCSA involves installation of gravity mains, lift stations, grinder pumps and forcemains.*

#### Alternatives approved by PaDEP in T/AR

*Connect new sanitary sewer lines to Peters Creek Sanitary Authority (PCSA)*

#### Alternative 1

Alternative 1A: Install one lifting station with connection to existing PCSA system along Finleyville-Elrama Road

- gravity flow to southeast portion of FEPA
  - provide 30 service connections
  - 3,179 linear feet of gravity line
- one lifting station at southeast portion of FEPA
  - 33 EDU's with capacity for a total of 69 EDU's (projected build-out)
  - 13,200 gallons per day of flow
  - 30 mg/L BOD per day

- Forcemain from lifting station to PCSA connection point at northwest portion of FEPA (along Finleyville-Elrama Road)
- 2,200 linear feet of forcemain line

Alternative 1B: Install one lifting station with connection to existing PCSA system along Victoria Drive

- gravity flow to southeast portion of FEPA
  - provide 30 service connections
  - 3,179 linear feet of gravity line
- one lifting station at southeast portion of FEPA
  - 33 EDU's with capacity for a total of 69 EDU's (projected build-out)
  - 13,200 gallons per day of flow
  - 30 mg/L BOD per day
- Forcemain from lifting station to PCSA connection point at southwest portion of FEPA (adjacent to Victoria Drive)
- 600 linear feet of forcemain line

### Alternative 2

Install grinder pumps at each EDU

- 33 EDU's
  - 4,000 linear feet of pressure lines
- Connect to PCSA connection point at northwest portion of FEPA
  - Approximately 13,200 gallons per day of flow
  - 30 mg/L BOD per day

### 5.1.3 Continued Use of Existing Municipal or Non-Municipal Facilities

*All the properties within the FEPA are served by OLDS and an existing Municipal or Non-Municipal Facilities do not exist within the FEPA. Therefore, the continued use of Existing Municipal or Non-Municipal Facilities was not considered a viable alternative for this Act 537 Plan Update.*



#### 5.1.4 Repair or Replace Existing Collection System

*All the properties within the FEPA are served by OLDS and a sanitary collection system with the FEPA does not exist. Therefore, the repair or replacement of an existing collection and conveyance systems was not considered a viable alternative for this Act 537 Plan Update.*

#### 5.1.5 Community Sewage Systems and Treatment

*Community Sewage system alternative does not seem feasible with the situation of the proximity to the PCSA conveyance system.*

#### 5.1.6 Innovative or Alternative Methods of Collection/Conveyance

*The topography of the FEPA provides relatively straightforward alternatives for connecting to an existing collection/conveyance system.*

#### 5.2 Individual Systems

*Individual systems broadly include the use of OLDS, either a type of absorption field/area or holding tanks. This Act 537 Update Plan presents alternatives based on the PaDEP approved T/AR.*

#### 5.3 Small Flow Treatment Facilities

*This Act 537 Update Plan presents alternatives based on the DEP approved T/AR.*

#### 5.4 Community Land Disposal

*The USDA Web Soil Survey was utilized to create the soil maps as required by Title 25 §71.21.a.1.iii and as shown in Appendix A. Six different soil types and combination of soil types exist within the FEPA. The primary soil type is silt loam and various mixtures of silty loam. The soils in the FEPA are generally unsuitable for use with conventional in-ground and elevated mound septic systems and provide a 'very limited' ability for conventional septic tank and/or sewage lagoon effluent absorption. Based on this report finding, sewage disposal plans that relied on the use of community land disposal within the FEPA was not considered a feasible solution.*

## 5.5 Holding Tanks

*The Act 537 Update Plan presents alternatives based on the PaDEP approved T/AR.*

## 5.6 Sewage Management Programs

*Union Township Sewage Management Program (SMP) consists of*

- *Peters Creek Sanitary Authority*
- *West Elizabeth Sanitary Authority*
- *Home septic systems*

*PCSA maintains collection, transmission, a pump station and conveyance lines in the Township. Primarily in the north and west portions of the Township. The Township maintains a three-seat membership through five-year terms within the PCSA Board of Directors.*

*West Elizabeth Sanitary Authority (WESA) serves the needs of the Township in the north and east section for the community of Elrama. The Township maintains a one-seat membership through a five-year term on the WESA Board of Directors.*

*The home septic systems are governed through the Township by the WCSC SEO. The SEO provides inspection and enforcement capabilities of the OLDS for the FEPA. Additionally, Union Township has a set of codes to govern sanitary sewers;*

*Union Township Code Chapter 211:*

- *Article I; "Union Township Dye Test Ordinance" – adopted September 1994*
- *Article II; "Sewer Connections" – adopted April 2008*
- *Article III; "On-Lot Sewage Administration Ordinance" – adopted February 2009*
- *Article IV; "Holding Tank and Privy Ordinance" – adopted December 2011*
- *Article V; "Union Township Sewage Documentation Ordinance" – adopted April 2015*

In accordance with the MOU, PCSA will be responsible for the scope of work modification, development, coordination, surveying, design, mapping, revised planning, revised permitting, bidding, and construction phase of the Project. PCSA will be responsible for both the installation of the gravity main line sewers and lift station as well as long-term operation and maintenance of the proposed public facilities. Each property owner will bear the responsibility of the full cost for installation of the private building sewer lateral to the public main line and for future maintenance of the private building sewer lateral in accordance with PCSA rules and regulations.

#### 5.7 Non-Structural Comprehensive Planning

*Non-structural comprehensive planning alternatives can be used to meet existing and future sewage disposal needs by controlling and limiting development. In the case of Union Township, many of these strategies exist due to the current zoning and future land use planning. Two documents outlined in Section 4.1, the Washington County Comprehensive Plan and Carroll Township – Union Township Joint Comprehensive Plan, as well as the current Township Zoning map provide planning structure for the FEPA. Township zoning is periodically reviewed by the Township Supervisors. Generally, the existing parcels within the FEPA currently comply with future land use planning. Drinking water supply occurs through Monongahela River water treatment and distribution through water mains managed by the PAWC.*

#### 5.8 No Action Alternative

*The No Action Alternative involves maintaining the status of the FEPA. The relatively straightforward process involved in providing a public sewage system to the FEPA does not support a 'no action alternative'.*

## VI. The Evaluation of Alternatives

### A. CONSISTENCY DETERMINATION

*Technically feasible alternatives must be evaluated for consistency with the requirements of Pennsylvania Code Title 25, §71.21. a.5. These are discussed in the following sections.*

1. Clean Streams Law- Sections 4 and 5 and Clean Water Act – Section 208

*The alternatives presented within this Act 537 Update Plan; 1 and 2, reduce the number of malfunctioning OLDS and improve the quality of the Commonwealth waters. Alternatives considered are consistent with the Clean Streams Law and Clean Water Act.*

2. Municipal Wasteload Management Plan (Chapter 94)

*Alternatives 1 and 2 (as described in Section 5.1.2) utilizes existing facilities. These alternatives propose developing a new lifting stations or grinder pumps, forcemains and gravity mains to connect to the nearby PCSA gravity system. The FEPA supplies a maximum flow rate of approximately 13,200 additional gallons per day to the PCSA system. PCSA provides conveyance infrastructure to CMA WWTP. In addition to the flow rate demand from the FEPA, the CMA WWTP capacity includes a maximum of approximately 30 mg/L of BOD per day. Since the current zoning and future land use planning align, projected flow rates and BOD values remain constant. The alternatives provide sanitary waste load consistent with applicable Municipal Waste load Management reports.*

3. Clean Water Act - Title II/Water Quality Act of 1987 - Titles II and VI

*Alternatives reduce the number of malfunctioning OLDS and improve the quality of Commonwealth waters. These alternatives provide the best practicable waste management options for the FEPA. Alternatives are considered consistent with Title II of the Clean Water Act and Titles II and VI of the Water Quality Act.*

4. Pennsylvania Municipalities Planning Code/ Comprehensive Planning

*Two documents outlined in Section 4.1, the Washington County Comprehensive Plan and Carroll Township – Union Township Joint Comprehensive Plan, as well as the current Township Zoning map provide planning structure for the FEPA. Township zoning is periodically reviewed by the Township Supervisors. Generally, the existing parcels within the FEPA currently comply with future land use planning. Drinking water supply occurs through Monongahela River water treatment and distribution through water mains managed by the Pennsylvania American Water Company. The alternatives proposed within this Act 537 Update Plan are consistent with the Township and County Comprehensive Planning documents.*

5. Anti-Degradation Requirements as Contained in 25 Pa. Code Chapters 93, 95 and 102

*The FEPA resides near the 'headwaters' of the Monongahela River Watershed. The alternatives presented within this Act 537 Update Plan do not discharge wastewaters into the unnamed headwater tributaries. These alternatives are consistent with the water quality criteria of the referenced Pa Code 25 Chapters.*

6. State Water Plans

*The State Water Plan protects and enhances Pennsylvania's water resources. The State Water Plan addresses each of the six major water drainage basins<sup>1</sup> in Pennsylvania. Ohio Regional Water Resources Committee considers proper sewage disposal to be among the top issues to address in the Ohio River Drainage Basin<sup>2</sup>. The State Water Plan indicates water resource management on a watershed scale.*

*The existing situation involves potable water being supplied by the Monongahela River and not by groundwater wells. Once this potable water is utilized by the residential property, this used grey and black water is discharged via OLDS to the nearby ground as wastewater. This relatively untreated wastewater enters the local water cycle. Based on*

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<sup>1</sup> Commonwealth of Pennsylvania State Water Plan Principles – Executive Summary 2009

<sup>2</sup> Commonwealth of Pennsylvania State Water Plan Principles, Page 4 – Executive Summary 2009

wastewater planning references<sup>3</sup>, approximately 13,200 gallons per day of potable water may currently be provided to the FEPA by the PAWC. A large percentage of this potable water enters the local water cycle as wastewater. This quantity of wastewater introduces compounds/pollutants as well as the associated BOD of 30 mg/L to the watershed water cycle that are the direct result of human activity. This wastewater changes the quantity and quality of the water in the watershed water cycle. Since groundwater is not to be extracted for potable water, the quantity of wastewater entering the water cycle is essentially additional water supplied by the Monongahela River. The compounds/pollutants within this wastewater may enter the subsurface groundwater, enter the nearby internment streams and/or bio accumulate in the flora and fauna of the area.

Alternatives 1 and 2 utilize connecting to the existing PCSA conveyance system. Residential wastewater is conveyed from the FEPA using sanitary gravity mains and service connections, sanitary forcemains and lift stations. The PCSA conveyed wastewater enters the CMA CWWTP and discharges back into the Monongahela River. Use of the PCSA conveyance system to the CMA CWWTP does not introduce additional quantities of wastewater, additional compounds/pollutants and BOD into the watershed. Essentially the supplied potable water from the Monongahela River is conveyed by the PCSA as wastewater treated and returned to the Monongahela River. This supply/treatment and proper disposal architecture complies with the water conservation aspect of the State Water Plan. Therefore, these alternatives would be consistent with the State Water Plan.

7. Pennsylvania Prime Agricultural Land Policy

The USDA Web Soil Survey was utilized to create the soil maps as required by Title 25 §71.21.a.1.iii and as shown in Appendix A. The FEPA contains approximately 52% of soils considered to be Farmland of Statewide Importance and 28% considered Prime Farmland. The Pennsylvania Prime Agricultural Land Policy orders and directs the prevention of the irreversible conversion of prime agricultural land to uses that result in

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<sup>3</sup> Domestic Wastewater Facilities Manual/Title 25 Pa Code 73.17

*its loss as an environmental or essential food production resource<sup>4</sup>. The alternatives presented within this Act 537 Update Plan do not proposed to convert the prime agricultural land identified in the USDA Web Soil Survey to another use. Therefore, these alternatives would be consistent with the Pennsylvania Prime Agriculture Land Policy.*

8. Stormwater Management Act

*The alternative presented within this Act 537 Update Plan comply with the existing County and Union Township Stormwater Management plans.*

9. Wetlands

*Reviews of Bureau of Watershed Management Division of Waterways, Wetlands and Erosion Control Maps in conjunction with the National Wetlands Inventory Maps indicates that wetlands do not exist within the FEPA or within in any areas potentially disturbed by implementing the alternatives.*

10. Pennsylvania Natural Diversity Inventory (PNDI)

*A Pennsylvania Natural Diversity Inventory (PNDI) search for the FEPA was completed and is attached as Appendix E. The PNDI Conservation Planning Report indicated no known impact with respect to the habitats regulated.*

11. Pennsylvania Historical & Museum Commission

A Pennsylvania Historical & Museum Commission (PHMC) search for the FEPA was completed. The PHMC Report indicated no known impact with respect to historical structures. Appendix F provides a copy of this report.

6.2 Inconsistency Resolution

*The presented alternatives do not require inconsistency resolutions.*

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<sup>4</sup> Pennsylvania Sewage Facilities Act, Appendix B, Section II.G page 18. – PaDEP

B. COST ANALYSIS

An opinion of probable cost (OPC) for each of the considered alternatives for the FEPA can be found in Appendix G. Section 5.1.2 describes each of the alternatives. The cost estimates provide the capital construction based on recent LSSE bidding experience, supplier quotes as well as a 25% construction contingency and soft cost allowance. These OPCs are summarized and tabulated below on Table 6.1.

It is noted that the OPCs summarized in Table 6.1 below vary from the OPCs that were included in the MOU. These variations are attributed to the following:

- Eight (8) existing parcels within FEPA were factored into the customer list following execution of the MOU that were not originally contemplated.
- Six (6) additional existing parcels along Gilmore Road that are currently on OLDS were also factored into the customer list as approved by both Union Township and PCSA. These six (6) existing parcels were added to provide service to the remaining properties near FEPA within the PCSA service area.
- Design consideration of potential future growth associated with properties located within FEPA (i.e. 69 EDUs anticipated as shown on Table 4.2 above).
- The additional parcels and future EDUs as outlined in the first three bullet points result in variations to the overall project design including wet well depth, total sewer length, number of grinder pumps, etc.
- Variations to the overall project design not originally contemplated due to topographic features and location of existing utilities (multiple gas and water lines, etc.).
- A volatile construction industry market and inflationary economy based on recent bidding experience.



**Table 6.1 – Summary of Opinion of Probable Construction Cost**

	<u>Alternative 1; One lifting station; gravity flow along road to lifting station and forcemain to PCSA preferred connection point</u>	<u>Alternative 2; Grinding pumps to PCSA connection point</u>
Construction Cost Total	\$1,703,875.00	\$851,750.00
25% Construction Contingency and Soft Costs	\$426,125.00	\$213,000.00
Total	\$2,130,000.00	\$1,064,750.00

**6.3 Annual Operation and Maintenance – Life Cycle Cost Analysis**

A detailed capital cost estimate for each of the considered alternatives can be found in Appendix G. Section 5.1.2 describes each of the alternatives. The selection of Alternative 1 vs. Alternative 2 not only must consider the capital costs but also a life cycle cost of operation and maintenance costs over a defined planning period.

Within the MOU, a Life Cycle Cost Analysis had been conducted to evaluate the Total Present Worth of each alternative. This cost analysis is intended to factor in operation and maintenance costs as they relate to maintenance/replacement, electricity usage, repair, etc. over a 30-year planning period. Capital costs, operation and maintenance costs, and salvage values are computed to reach a Total Present Worth for both alternatives. This cost analysis was also revised to account for updated capital costs. The results of this analysis indicate that the Total Present Worth for both alternatives are essentially the same and within an approximate 9% range. In terms of sewage facility planning, it is a generally accepted rule of thumb that alternatives within a 15% differential from a life cycle cost/present worth value perspective can be considered an economically equivalent alternative. As such, Alternative 1 is the selected alternative for implementation. Refer to Table 6.2 below. The MOU is attached as Appendix H; the updated Life Cycle Cost Analysis has been included as Appendix I; the Amendment to the MOU is attached as Appendix P.

**Table 6.2 – Summary of Life Cycle Cost Analysis**

	Lift Station Alternative	Grinder Pump Alternative
Opinion of Probable Capital Construction Project Cost (Appended)	\$ 2,130,000	\$ 1,064,750
Present Worth Value of O&M <sup>(1)</sup>	\$ 172,117	\$ 688,183
Subtotal	\$ 2,302,117	\$ 1,752,933
Less Salvage Value	(\$ 852,000)	(\$ 425,900)
<b>TOTAL PRESENT WORTH VALUE</b>	<b>\$ 1,450,117</b>	<b>\$ 1,327,033</b>

**6.6 Funding Evaluation**

The executed Amendment to the MOU outlines financial commitments from both Union Township and PCSA utilizing general funds. Union Township initially obtained a Washington County Local Share Account Grant in the amount of \$200,000.00 that has since been transferred to PCSA for use in this project. The share allocation is summarized below in Table 6.3.

**Table 6.3 – Summary of Allocated Shares**

		<u>Alternative 1</u> ; One lifting station; gravity flow along road to lifting station and forcemain to preferred PCSA connection point
LSA Grant	Committed	\$200,000.00
PCSA Share – Amendment to the MOU	Committed	\$1,430,000.00
Union Township Share - MOU	Committed	\$500,000.00
Approved Total per Amendment to the MOU		\$2,130,000.00

In terms of funding for this project, traditional rates for the PCSA will be in effect for all who connect to the project. Anticipated fees applicable to each customer are summarized below on Table 6.4. PCSA does not anticipate any user rate modifications as a result of this project. It is proposed that both Union Township and PCSA seek grant funding opportunities to cover the remaining cost of the implementation of the public gravity sanitary sewer, lift station, connection to the existing PCSA sanitary sewer system, and appurtenances necessary for construction.

**Table 6.4 – Anticipated Fees/Cost per EDU**

Type	Breakdown of Anticipated Fees/Cost	Cost per EDU
User Rates	<ul style="list-style-type: none"> <li>• Based on:                             <ul style="list-style-type: none"> <li>- \$20 minimum charge</li> <li>- \$15 debt service charge</li> <li>- \$8.25 per 1,000 gallons/month in excess of 2,000 gallons (calculated using the PCSA customer average water consumption of 4,000 gallons/month)</li> </ul> </li> <li>• Rate schedule adopted July 2014</li> </ul>	\$51.50/month/EDU
Tapping Fee	<ul style="list-style-type: none"> <li>• Based on:                             <ul style="list-style-type: none"> <li>- \$2,250.00 PCSA tap fee</li> <li>- \$200 PCSA three-part inspection fee</li> <li>- \$809 Clairton Municipal Authority tap fee</li> </ul> </li> <li>• Fee schedule adopted September 2016</li> </ul>	\$3,259/EDU
Private Building Sewer Lateral Costs	<ul style="list-style-type: none"> <li>• Varies based on distance from public main line. Property owner bears responsibility of the full cost for installation of private building sewer lateral to the public main line</li> </ul>	\$8,000 - \$20,000/EDU (.est)

This project is eligible for several funding opportunities through grant programs such as the Local Share Account (LSA) County and Statewide programs, PA Small Water and Sewer program, etc. to account for the remaining cost of the project. PCSA and Union Township submitted applications to the 2024 Statewide LSA Grant Program in November 2023 for the collection system and lift station portions of the project, respectively. Should grant award funding not be received, PCSA and Union Township could perhaps utilize cash reserves to complete the project and/or seek grant/loan funding programs such as PENNVEST, USDA Rural Utilities Services or a potential short-term bank loan.

**6.7 Implementation Method**

*The selected alternative would be constructed as in accordance with the most feasible installation method suitable for the alternative. Both Alternatives 1 and 2 will be constructed as a complete project, therefore phasing would not be applicable. The existing malfunctioning OLDS present a public health risk and will continue to negatively impact water quality and health standards in the FEPA.*

As noted in Section 5.6, PCSA will be responsible for the scope of work modification, development, coordination, surveying, design, mapping, revised planning, revised permitting, bidding, and construction phase of the Project. PCSA will be responsible to acquire the parcel of land required for the lift station for the project. PCSA will be responsible for both the installation of the gravity sewers and lift station as well as long-term operation and maintenance of the proposed public facilities with the property owner's being responsible for the private facilities in accordance with PCSA rules and regulations. Whereby Union Township shall be responsible for obtaining any and all ROWs and easements from residents, and to reimburse PCSA for the cost to acquire the parcel of land required for the lift station for the project, all of which shall be conveyed to PCSA.

#### 6.8 Administrative and Legal Authority Requirements

*Union Township currently utilizes both the PCSA collection system and OLDS for sewage management. PCSA maintains collection, transmission, a pump station and conveyance lines in the Township. Primarily in the north and west. The Township maintains a three-seat membership through five-year terms within the PCSA Board of Directors. The OLDS are governed through the Township by the WCSC SEO. The SEO provides inspection and enforcement capabilities of the on lot systems for the FEPA. Additionally, Union Township has a set of codes to govern sewers;*

*Union Township Code Chapter 211:*

- o Article I; "Union Township Dye Test Ordinance" – adopted September 1994*
- o Article II; "Sewer Connections" – adopted April 2008*
- o Article III; "On-Lot Sewage Administration Ordinance" – adopted February 2009*
- o Article IV; "Holding Tank and Privy Ordinance" – adopted December 2011*
- o Article V; "Union Township Sewage Documentation Ordinance" – adopted April 2015*

*Administrative and Legal Authority structure exist with the Township to encompass each of the proposed alternatives for the FEPA. Specific details regarding Administrative and Legal*

*Authority requirements of the final selected alternative for the FEPA would need to be determined.*

PCSA currently owns, operates and maintains the existing sanitary sewer collection system. PCSA has the full-time management, administration and operating staff necessary to own, operate and maintain the proposed collection/conveyance system improvements.

PCSA has the legal authority to do the following:

1. Implement wastewater planning recommendations,
2. Operate and maintain existing facilities,
3. Set user fees,
4. Enforce sewer use ordinances,
5. Negotiate agreements, and
6. Raise capital for construction of sewage facilities via government-sponsored funding programs (i.e., PENNVEST) or through private financing (i.e., revenue bond issue).

## VII. Institutional Evaluation

### 7.1 Existing Authority Evaluation

In accordance with the MOU, PCSA will own and/or operate the proposed gravity collection system and lift station. PCSA currently owns, operates and maintains the existing sanitary sewer collection system. PCSA has the full-time management, administration and operating staff necessary to own, operate and maintain the proposed collection/conveyance system improvements. PCSA has the legal authority to; Implement wastewater planning recommendations; Operate and maintain existing facilities; Set user fees; Enforce sewer use ordinances; Negotiate agreements; and Raise capital for construction of sewage facilities via government-sponsored funding programs (i.e., PENNVEST) or through private financing (i.e., revenue bond issue).

*This Act 537 Plan Update considers utilizing the PCSA collection system to convey sanitary flows from the FEPA to the CMA CWWTP. The CMA CWWTP operates at 6 million gallons per day and 10 million during wet weather conditions. Currently the CWWTP is under expansion. The estimated treatment capacity of the plant will increase treatment capacity by 10.83 million gallons per day during average flow and 38.23 million gallons per day during wet weather flow. The expansion will make the CMA the third largest treatment plant in Allegheny County. It is acknowledged that CMA issued a letter dated May 27, 2020 indicating that CMA did not have treatment capacity at that time. Please refer to Appendix J for a copy of the CMA letter. However, the CMA WWTP is currently in Phase 2 of construction specific to additional secondary treatment plant capacity. PCSA submitted requests for capacity availability in October 2023 to CMA, the Borough of Jefferson Hills and the Township of South Park. Responses from each can be found in Appendix Q.*

Additionally, PCSA noted in a letter dated May 21, 2020 that the additional properties included within the original submission of the Act 537 Plan Update would not create a hydraulic overload to their collection and conveyance system during dry weather conditions nor projected within the next five years. This letter is appended as Appendix K. This capacity certification in terms of

PCSA currently remaining under a PaDEP Corrective Action Plan and the addition 69 EDUs proposed as part of this project would not create a hydraulic overload still applies.



## **VIII. Implementation Schedule and Justification for Selected Technical and Institutional Alternatives**

### 8.1 Proposed Alternative

Residents along Finleyville-Elrama Road and Gilmore Road are currently within the PCSA service area and are not connected to the PCSA system. Following the PaDEP approved Act 537 Plan in 2021, PCSA and Union Township entered into an MOU which definitively selected Alternative 1 over the previously PaDEP approved Alternative 2. Following the addition of several properties along Finleyville-Elrama Road and Gilmore Road, it is noted the project proposes to connect 30 current residents proposed lift station. This lift station and gravity sewer are designed to be capable of handling flows from up to of a total of 69 EDUs.

A detailed capital cost estimate for each of the considered alternatives can be found in Appendix G. Section 5.1.2 describes each of the alternatives. The selection of Alternative 1 vs. Alternative 2 not only must consider the capital costs but also a life cycle cost of operation and maintenance costs over a defined planning period. This life cycle cost analysis had been updated and determined that the results for both alternatives are considered essentially the same and within an approximate 9% range. In terms of sewage facility planning, it is a generally accepted rule of thumb that alternatives within a 15% differential from a life cycle cost/present worth value perspective can be considered an economically equivalent alternative. As such, Alternative 1 is the selected alternative for implementation.

Alternative 1 consists of the construction of two sanitary sewer collection sewers on either side of Finleyville-Elrama Road and one sewer collection system along Gilmore Road that provides a cost-effective solution as well as preferred main line operation and maintenance (minimizing sewer installation depth) and provides reasonable access to the main line for property owner lateral connection. It is comprised of approximately 3,200 linear feet of gravity sewer and approximately 2,200 linear feet of 6" diameter forcemain connecting to the existing PCSA system along Finleyville-Elrama Road. It is anticipated that the forcemain will be installed integral with the gravity sewer along the easterly side of Finleyville-Elrama Road. The gravity



collection system will be tributary to a central lift station towards the southerly boundary of FEPA.

The project area associated with the chosen alternative was analyzed for all required environmental compliance measures, as noted in Section VI of this report.

### 8.2 Capital Financing Plan

The executed Amendment to the MOU outlines financial commitments from both Union Township and PCSA utilizing general funds. Union Township initially obtained a Washington County Local Share Account Grant in the amount of \$200,000.00 that has since been transferred to PCSA for use in this project. The share allocation is summarized below in Table 6.3.

In terms of funding for this project, traditional rates for the PCSA will be in effect for all who connect to the project. Anticipated fees applicable to each customer are summarized in Table 6.4. PCSA does not anticipate any user rate modifications as a result of this project. It is proposed that both Union Township and PCSA seek grant funding opportunities to cover the remaining cost of the implementation of the public gravity sanitary sewer, lift station, connection to the existing PCSA sanitary sewer system, and appurtenances necessary for construction.

This project is eligible for several funding opportunities through grant programs such as the Local Share Account (LSA) County and Statewide programs, PA Small Water and Sewer program, etc. to account for the remaining cost of the project. PCSA and Union Township submitted applications to the 2024 Statewide LSA Grant Program in November 2023 for the collection system and lift station portions of the project, respectively. Should grant award funding not be received, PCSA and Union Township could perhaps utilize cash reserves to complete the project and/or seek grant/loan funding programs such as PENNVEST, USDA Rural Utilities Services or a potential short-term bank loan.

In terms of financing for this project, it is proposed that both PCSA and Union Township seek grant funding opportunities to cover the remaining cost of implementation of the conventional gravity system and central lift station. Traditional rates for the PCSA will be in effect for all

who connect to the project. A cost breakdown of rates is referenced in Table 6.4. PCSA does not anticipate any user rate modifications as a result of this project.

### 8.3 Implementation Schedule

Table 8.1 appended to this report presents an estimated implementation schedule from the initial executed MOU. For the purposes of implementation planning, Table 8.2 (effective December 2023) provides the most recent projected schedule.

## **IX. References Documents**

### Washington County

- “The Washington County Sewerage Facility Plan and Technical Report” – January 1972
- “Sewage Provider Inventory & Assessment – A guide for the development of wastewater facilities and projects in Washington County, PA” – December 2014
- “Sewage Provider Inventory – Project Summary Sheets” – Washington County Planning Commission 2014
- “Washington County Comprehensive Plan” – adopted November 2005

### Union Township

- “Union Township Updated Official Act 537 Sewage Facilities Plan – Elrama and Surrounding Area” – March 2000
- “Carroll Township – Union Township Joint Comprehensive Plan” – adopted September 2012
- “Act 537 Sewage Facilities Plan Update Finleyville - Elrama Road Planning Area” – August 2020; Senate Engineering
- Union Township Code Chapter 211:
  - Article I; “Union Township Dye Test Ordinance” – adopted September 1994
  - Article II; “Sewer Connections” – adopted April 2008
  - Article III; “On-Lot Sewage Administration Ordinance” – adopted February 2009
  - Article IV; “Holding Tank and Privy Ordinance” – adopted December 2011
  - Article V; “Union Township Sewage Documentation Ordinance” – adopted April 2015

### Pennsylvania Department of Environmental Protection

- “Domestic Wastewater Facilities Manual” – October 1997; PaDEP
- “Domestic Wastewater Facilities Manual” – August 2017 draft; PaDEP
- “Pennsylvania Sewage Facilities Act – A Guide for Preparing Act 537 Update Revisions” – January 2003; PaDEP
- State Water Plan Update of 2009 – PaDEP

- Domestic Wastewater Facilities Manual – PaDEP 362-0300-001

#### Pennsylvania Regulations

- 25 Pa Code Subpart C Article I Chapter 71 “Administration of Sewage Facilities Planning Program” – adopted August 1971 and subsequent amendments
- P.L. 1987 Act 394 of 1937 as amended (35 Pennsylvania Statute Section 691.1) “Clean Streams Law”
- 25 Pa Code Section 73.62(b)

#### United States Environmental Protection Agency

- Clean Water Act; Sec. 208 [33 U.S.C. 1288] Area wide Waste Treatment Management

#### General

- Geologic Map of Pennsylvania – Department of Conservation and Natural Resources
- “Custom Soil Resource Report for Greene and Washington Counties, Pennsylvania – Act 537 Finleyville – Elrama Road Planning Area” – October 2018; United States Department of Agriculture

# FIGURES

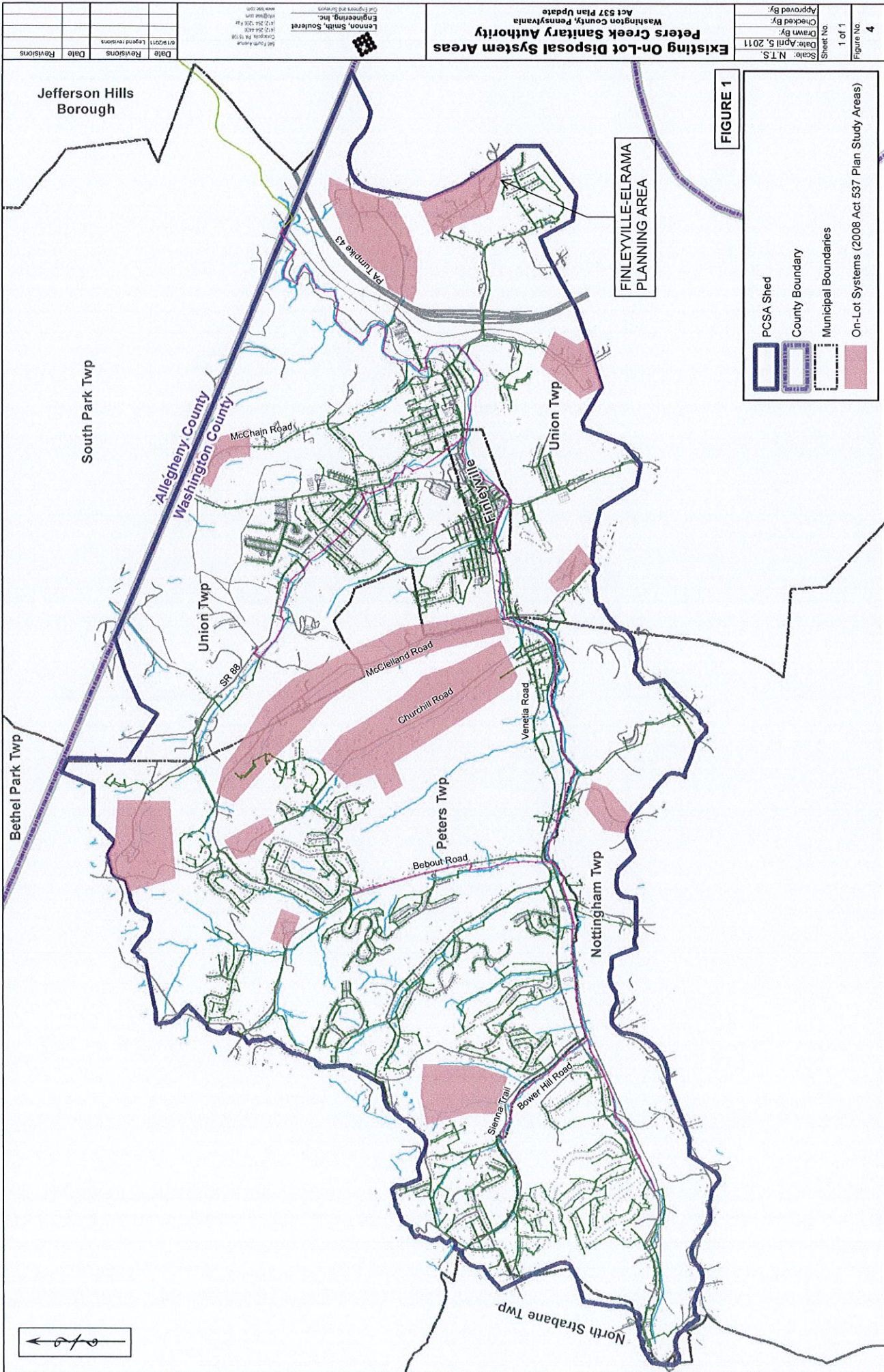


FIGURE 1

**FIGURE 1**

PCSA Shed  
County Boundary  
Municipal Boundaries  
On-Lot Systems (2008 Act 537 Plan Study Areas)

**Existing On-Lot Disposal System Areas**  
**Peters Creek Sanitary Authority**  
 Washington County, Pennsylvania  
 Act 537 Plan Update

Approved By: \_\_\_\_\_  
 Checked By: \_\_\_\_\_  
 Drawn By: \_\_\_\_\_  
 Date: April 5, 2011  
 Scale: N.T.S.  
 Sheet No. 1 of 1  
 Figure No. 4

Date	Revisions	Date	Revisions
07/19/2011	Legend Revisions		

Lennon, Smith, Souleiret  
 Engineering, Inc.  
 1412 20th Ave. E.  
 Erie, PA 16510  
 Phone: 814.833.1100  
 Fax: 814.833.1101  
 www.lse.com

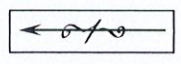



Figure 2 - FEPA Map

Legend

 Finleyville-Elrama Planning Area

 Peters Creek  
Sanitary Authority  
Connection Point

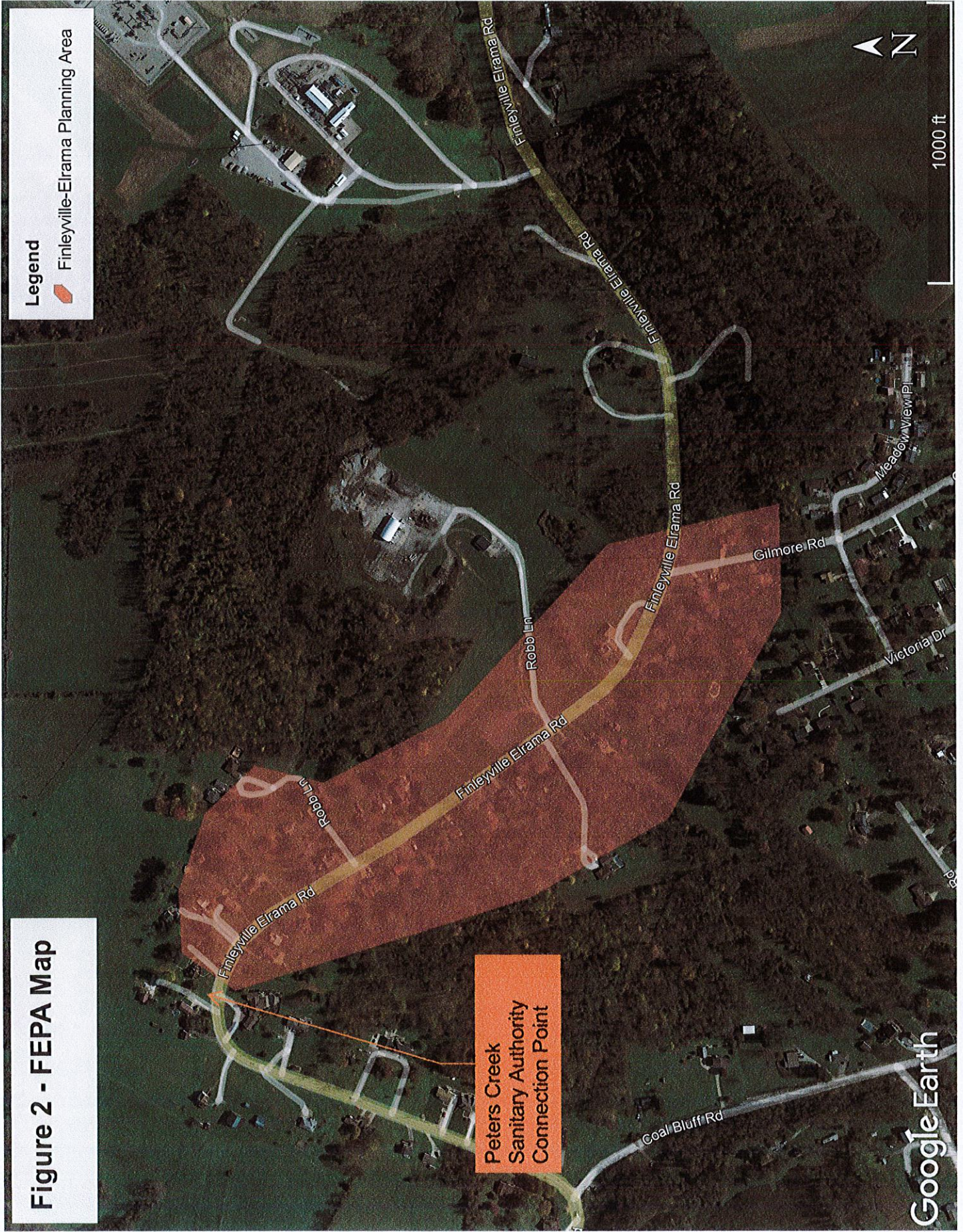


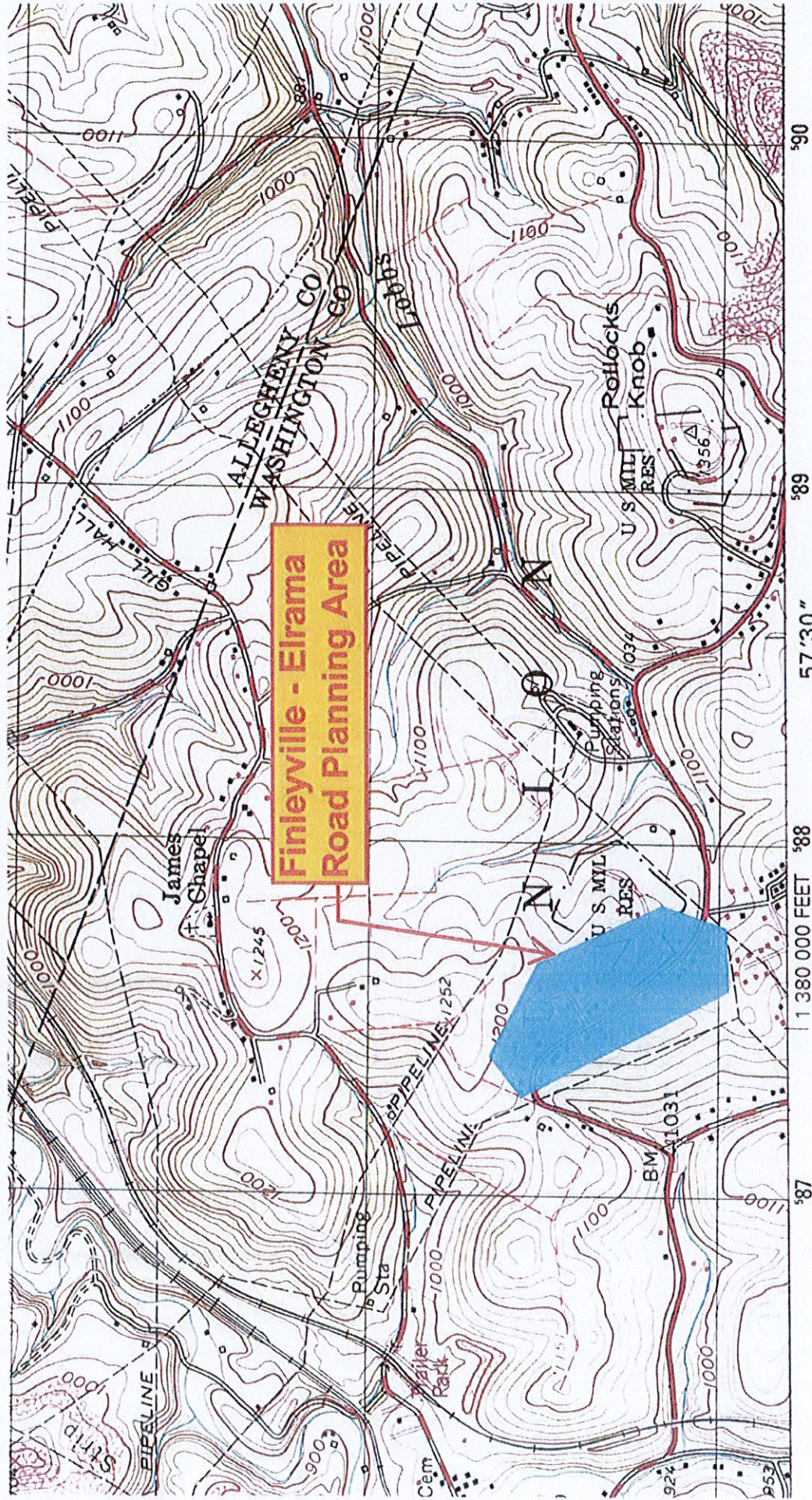
Figure 2 - FEPA Map







Figure 3.2 - FEPA Topography Map



SCALE 1:

KILOMET

0

0.5

1

1380 000 FEET

587

57'30"

588

589

590

ological Survey  
partment of Conservation

\*



U.S. Fish and Wildlife Service

# National Wetlands Inventory









## Finleyville - Elrama Road Planning Area Figure 4



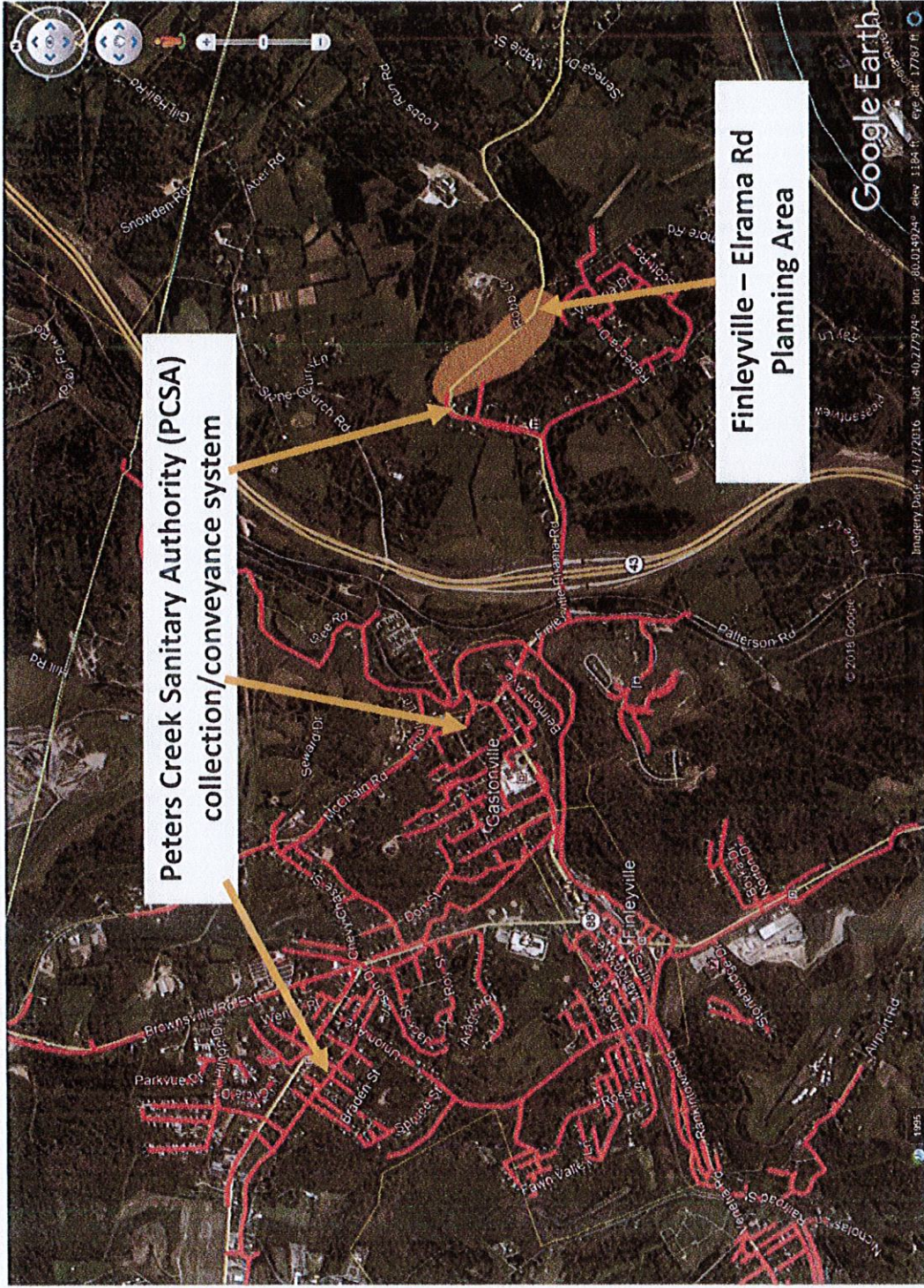
This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.

January 25, 2019

### Wetlands

-  Estuarine and Marine Deepwater
-  Estuarine and Marine Wetland
-  Freshwater Emergent Wetland
-  Freshwater Forested/Shrub Wetland
-  Freshwater Pond
-  Lake
-  Other
-  Riverine

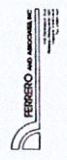
**Figure 5 - PCSA Collection Map**



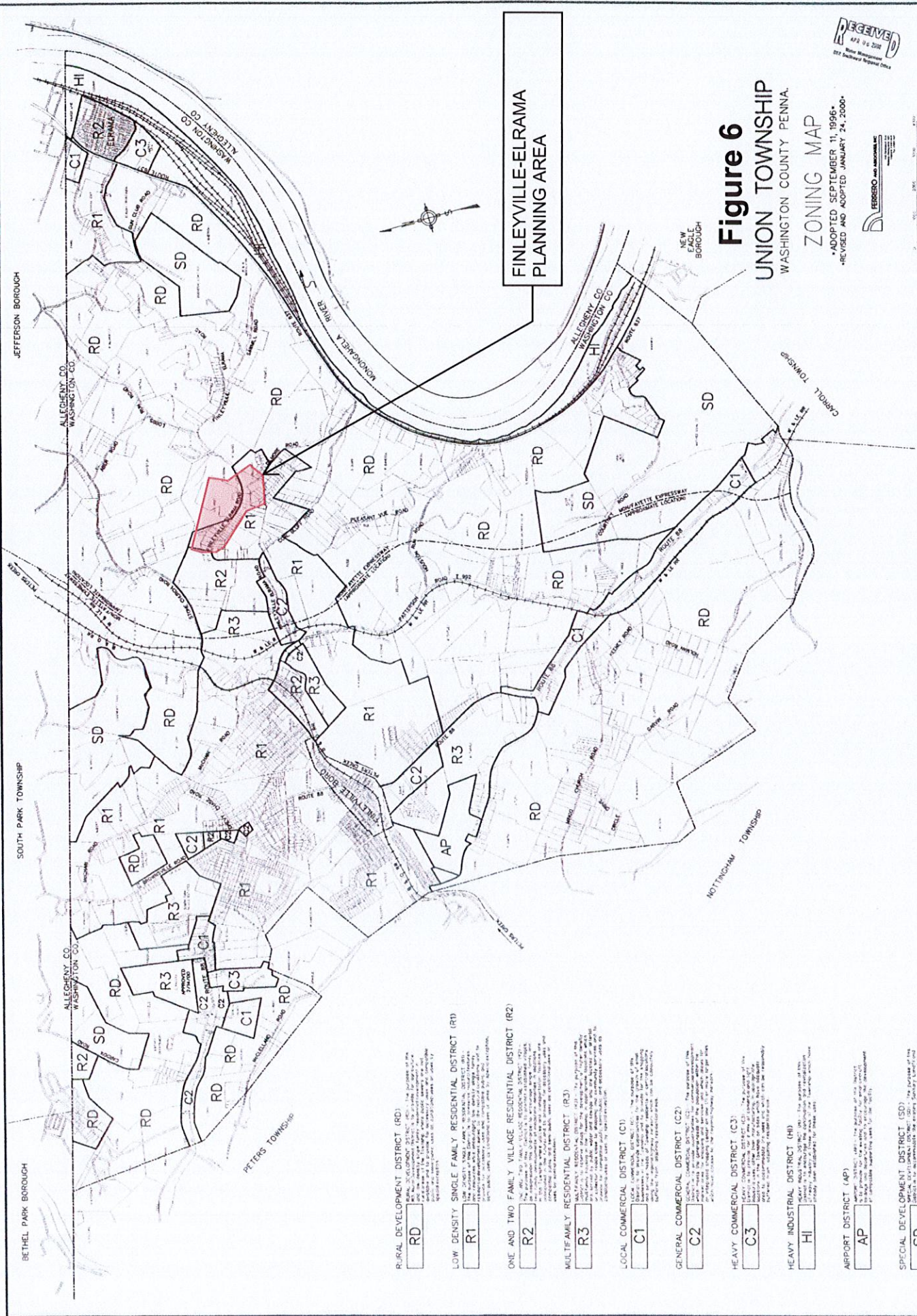


# Figure 6 ZONING MAP UNION TOWNSHIP WASHINGTON COUNTY, PENNSA.

\*ADOPTED SEPTEMBER 11, 1996\*  
\*REVISED AND ADOPTED JANUARY 24, 2000\*

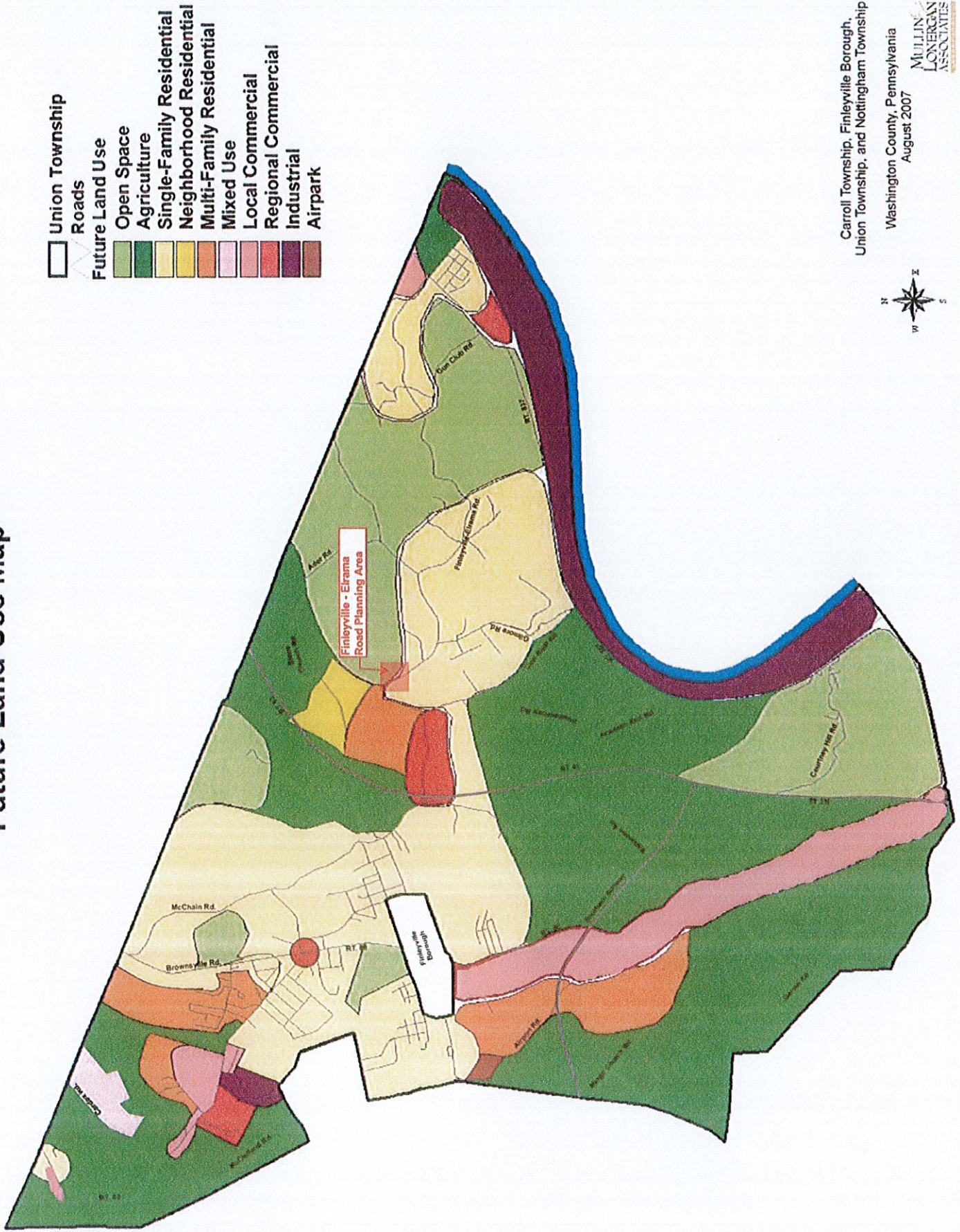


FINLEYVILLE-ELRAMA  
PLANNING AREA



- RURAL DEVELOPMENT DISTRICT (RD)**  
The purpose of this district is to provide for the orderly development of rural areas and to preserve the rural character of the township. It is intended for use in areas where the primary use is agriculture, forestry, or other rural activities.
- LOW DENSITY SINGLE FAMILY RESIDENTIAL DISTRICT (R1)**  
The purpose of this district is to provide for the orderly development of single family residential areas. It is intended for use in areas where the primary use is single family residential development.
- ONE AND TWO FAMILY VILLAGE RESIDENTIAL DISTRICT (R2)**  
The purpose of this district is to provide for the orderly development of one and two family residential areas. It is intended for use in areas where the primary use is one and two family residential development.
- MULTIFAMILY RESIDENTIAL DISTRICT (R3)**  
The purpose of this district is to provide for the orderly development of multifamily residential areas. It is intended for use in areas where the primary use is multifamily residential development.
- LOCAL COMMERCIAL DISTRICT (C1)**  
The purpose of this district is to provide for the orderly development of local commercial areas. It is intended for use in areas where the primary use is local commercial development.
- GENERAL COMMERCIAL DISTRICT (C2)**  
The purpose of this district is to provide for the orderly development of general commercial areas. It is intended for use in areas where the primary use is general commercial development.
- HEAVY COMMERCIAL DISTRICT (C3)**  
The purpose of this district is to provide for the orderly development of heavy commercial areas. It is intended for use in areas where the primary use is heavy commercial development.
- HEAVY INDUSTRIAL DISTRICT (HI)**  
The purpose of this district is to provide for the orderly development of heavy industrial areas. It is intended for use in areas where the primary use is heavy industrial development.
- AIRPORT DISTRICT (AP)**  
The purpose of this district is to provide for the orderly development of airport areas. It is intended for use in areas where the primary use is airport development.
- SPECIAL DEVELOPMENT DISTRICT (SD)**  
The purpose of this district is to provide for the orderly development of special development areas. It is intended for use in areas where the primary use is special development.

**Figure 7 - Union Township  
Future Land Use Map**



Carroll Township, Finleyville Borough,  
Union Township, and Nottingham Township  
Washington County, Pennsylvania  
August 2007  
MULLIN &  
LONERGAN  
ASSOCIATES

Table 4.1 Future Land Use Designations

Land Use Category	Purpose	Appropriate Land Uses	Recommended Minimum Lot Size
AGRICULTURE	Areas designated as rural resource areas where the preservation of agricultural lands, scenic landscapes and rural open spaces can continue and expand, protected from the encroachment of higher density and incompatible uses	Agricultural uses and associated structures, Single-family detached dwellings, Agricultural-related businesses, Woodlands, Parks, Community facilities, Greenways	1 dwelling unit per 2 acres with on-lot septic; 1 dwelling unit per 1 acre with sewer
SINGLE FAMILY RESIDENTIAL	Designated growth areas where the greatest amount of residential development has and should occur	Single family detached and attached dwellings, Agricultural uses and associated structures, Mobile home parks, Parks, Community facilities, Greenways	1 dwelling unit per 0.25-0.5 acres with sewer, depending on municipality; 1 dwelling unit per 2 acres with on-lot septic
NEIGHBORHOOD RESIDENTIAL	Designated growth areas where the greatest amount of residential development has and should occur	Single family detached and attached dwellings, Assisted living facilities, Parks, Community Facilities, Planned residential developments, Greenways	1 dwelling unit per 6,000 to 8,000 square feet with sewer, depending on municipality; 1 dwelling unit per 2 acres with on-lot septic
MULTI-FAMILY RESIDENTIAL	Designated growth areas where the greatest amount of residential development has and should occur	Single family detached and attached dwellings, Townhouses, Apartments, Assisted living facilities, Parks, Community facilities, Cluster housing developments, Duplexes, Personal care homes, Group care homes, Nursing homes (depending on municipality), Greenways	8-12 dwelling units per 1 acre with sewer, depending on municipality





Draft

NO.	DESCRIPTION	DATE

Finleyville Erama Road Sewage  
Concept Sewer Routing  
Finleyville Erama Road  
Union Township, Washington County, PA

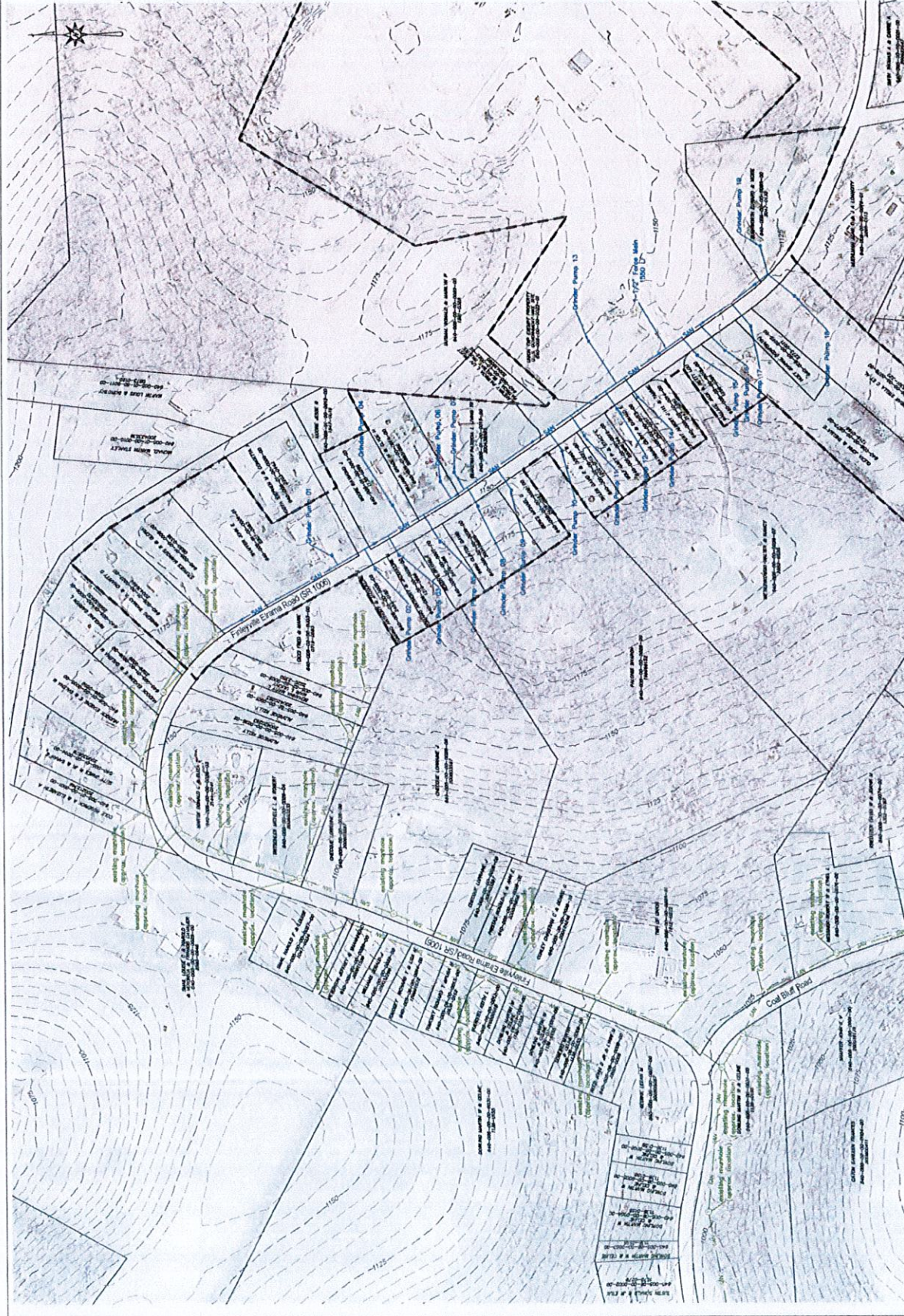
PROJECT NO.	0344
DATE	08/20/2016
SCALE	1"=40'
DRAWN BY	SPW
CHECKED BY	AL



10 COURSON HILL ROAD  
WASHINGTON, PA 15301

15,044.25

Figure 9



**EXISTING LEGEND:**

- CONTOUR (5 FT)
- CONTOUR (20 FT)
- PROPERTY BOUNDARY
- UTILITY LINE (STORM SEWER) IN MANHOLE AND CLEANOUT
- UTILITY LINE (SEWER) IN MANHOLE AND CLEANOUT
- UTILITY LINE (ELECTRIC OVERHEAD)
- UTILITY LINE (GAS)
- UTILITY LINE (SANITARY SEWER) IN MANHOLE AND CLEANOUT
- PROPERTY BOUNDARY

**PROPOSED LEGEND:**

- PROPOSED UTILITY LINE (SANITARY SEWER) IN MANHOLE AND CLEANOUT
- PROJECT BOUNDARY

**REFERENCE:**

- This is not a survey.
- Contours are approximate and are derived from PLS/DA data.
- Property boundaries are approximate and are derived from PLS/DA, Survey Mapping and Google Earth.
- Lot lines are approximate and are derived from Washington County, Pa. records.

**PROPERTY OWNER:**  
2007 Finleyville Erama Road  
Finleyville, PA 15301

**Plan View**

SCALE: 1" = 40'

Figure 10 - Pennsylvania State Route 1006 Map

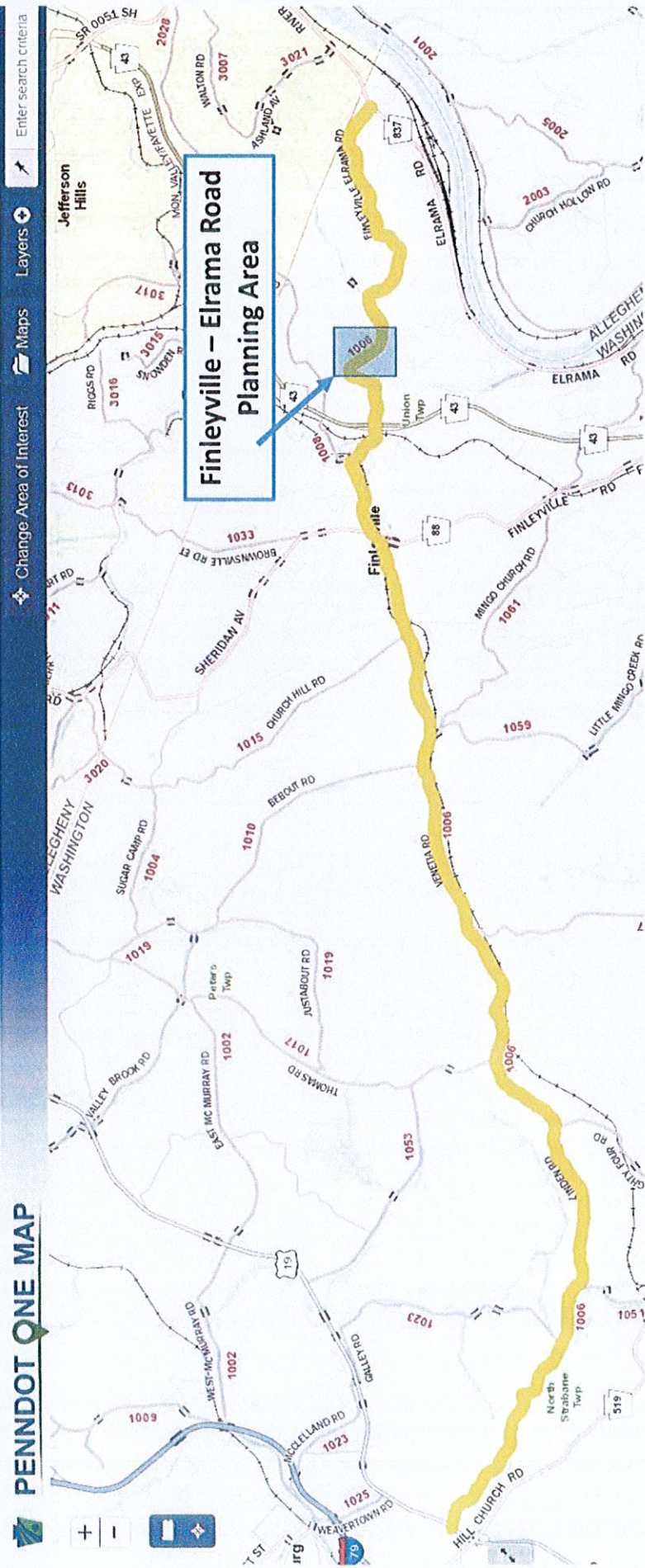
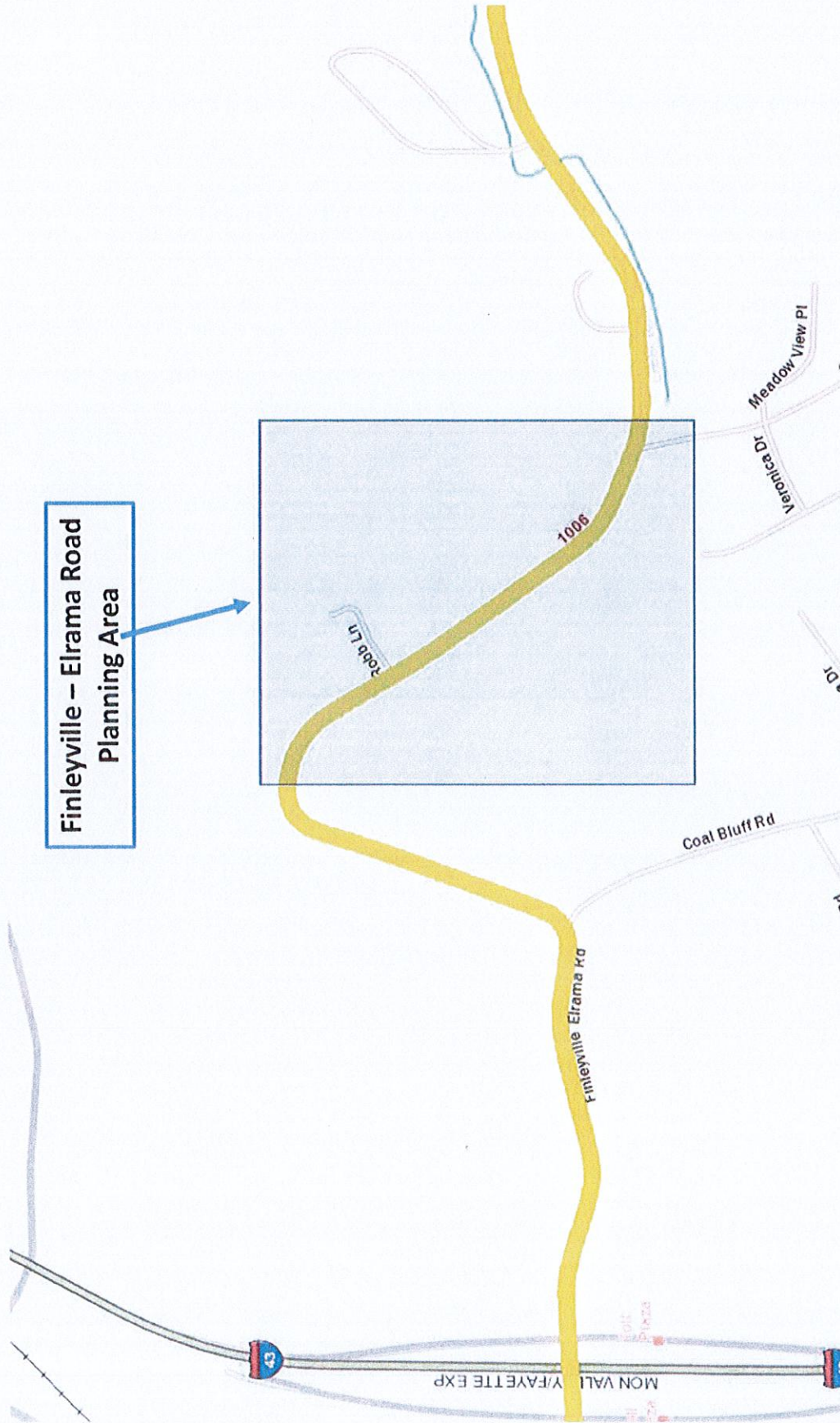


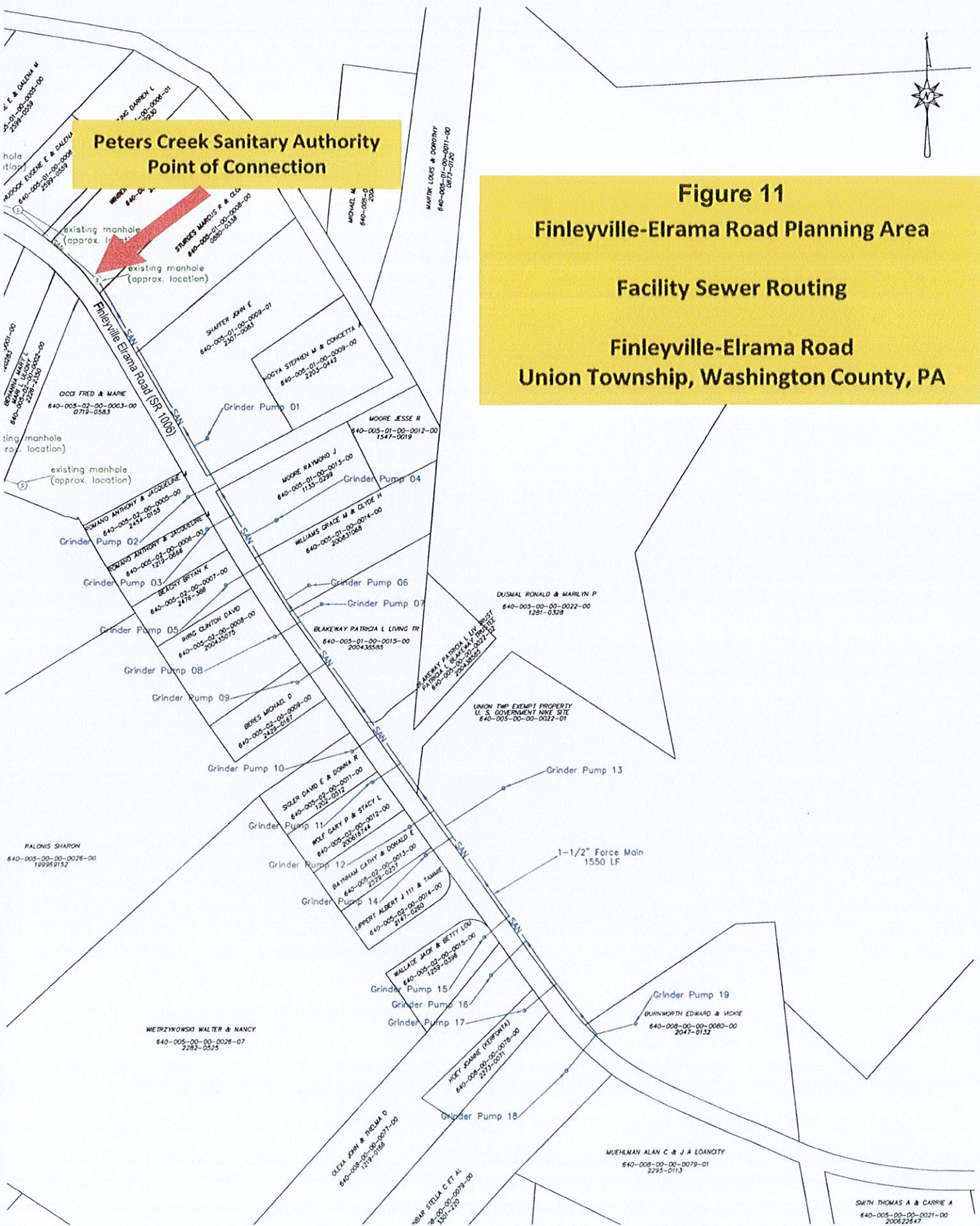
Figure 10 - Pennsylvania State Route 1006 Map



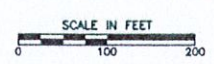


**Peters Creek Sanitary Authority  
Point of Connection**

**Figure 11  
Finleyville-Elrama Road Planning Area  
Facility Sewer Routing  
Finleyville-Elrama Road  
Union Township, Washington County, PA**



Plan View



- SAN — SAN — (S) PROPOSED UTILITY LINE (SANITARY SEWER) W/ MANHOLE AND CLEANOUT
- SAV — SAV — (S) EXISTING UTILITY LINE (SANITARY SEWER) W/ MANHOLE AND CLEANOUT

**REFERENCE**

1. This is not a survey.
2. Existing sanitary line and manhole locations are approximate and are derived from PCSA Sewer Mapping and Google Earth.
3. Lot lines are approximate and are derived from Washington County Tax Maps.